

MD ANDERSON Project No. XXXXXX
A/E Name
A/E Project No.

MD ANDERSON PROJECT NAME
Issue Description
Month 00, 0000

SECTION 26 51 00.2 RECOMMENDED MASTER LIGHTING FIXTURE PRODUCT INFORMATION

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DOCUMENT REVISION HISTORY

PART 1 -

Issue	Date	Revision Description	Author
	20190301	Original Issuance	
Rev. 1		.	
Rev. 2			
Rev. 3			
Rev. 4			
Rev. 5			



LIGHTING
ASSOCIATES, INC.

Transmittal

Lighting Associates
10692 Haddington Drive
Houston Tx 77043
Phone: (713) 467-6436
From: CODY HALL

Project MDACC MASTER SCHEDULE

Quote# LAIHOU18-45878

Location HOUSTON TX

Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|---|--------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|---------------------------------|
| <input type="checkbox"/> Prior Approval | <input type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input type="checkbox"/> Review and Comment | |

Qty	Type	MFG	Part
1	FA	Columbia Lighting	LLT24-40HLG-RAA19-EDU
1	FB	Columbia Lighting	LLT24-40MLG-RAA19-EDU
1	FC	Columbia Lighting	LLT14-40MLG-RAA19-EDU
1	FD	Columbia Lighting	LLT22-40HLG-RAA19-EDU
1	FE	Columbia Lighting	LLT22-40MLG-RAA19-EDU
1	FF	Columbia Lighting	LSTE22-40HLG-MPO-EDU
1	FF1	Columbia Lighting	LSTE22-40MLG-MPO-EDU
1	FG	Columbia Lighting	LSTE24-40HLG-MPO-EDU
1	FG1	Columbia Lighting	LSTE24-40MLG-MPO-EDU
1	FM	New Star Lighting	MUS4-HC-L1-40-A-UN-RS
1	FM	New Star Lighting	MUS3-HC-L1-40-A-UN-RS
1	FM	New Star Lighting	MUS2-HC-L1-40-A-UN-RS
1	FN	Columbia Lighting	LLT24-40HLG-FSA19-EDU
1	FO	Columbia Lighting	LLT24-40MLG-FSA19-EDU
1	FP	Columbia Lighting	LLT14-40MLF-FSA19-EDU
1	FR	Prescolite	LC8MLDM/8LCML24L40K8-WT
1	FR1	Prescolite	LC8SLDM/8LCSL14L40K8-WT
1	FR2	Prescolite	LC8MLDM/8LCML24L40K8-WT
1	FS	Prescolite	LC8SLDM/8LCSL18L40K8-WT
1	FS2	Prescolite	LC8SLDM/8LCSL18L40K8-WT
1	FT	Prescolite	LC8SLDM/8LCSL18L40K8-WT
1	M1	Kim Lighting	EL807/9L4KUV/BL
1	M2		COULDN'T FIND CUT SHEET
1	M2P		STAYS THE SAME. JUST A POLE
1	BOLLARD	Kim Lighting	VRB1C/20L4KUV/BL
1	M3	B-K Lighting	DE-LED-X66-FL-BLW-9-11-B-HP2-D27INC-MT
1	XA	Dual Lite	EVEURB
1	XB	Dual Lite	EVEURB
1	XC	Dual Lite	EVEURB-SW3
1	XC	Dual Lite	EVEURB-SW4



LIGHTING
ASSOCIATES, INC.

Transmittal

Lighting Associates
10692 Haddington Drive
Houston Tx 77043
Phone: (713) 467-6436
From: CODY HALL

Qty	Type	MFG	Part
1		Hubbell Lighting Outdoor	CL1-A-60LU-4K-2-105-FINISH ON 20' ROUND TAPERED STEEL POLE
1		Hubbell Lighting Outdoor	CL1-A-90LU-4K-X-105-FINISH ON 30' STRAIGHT SQUARE STEEL POLE
1		Hubbell Lighting Outdoor	LNC3-24L-4K050-4-U-FINISH
1		Hubbell Lighting Outdoor	LNC-9LU-4K-4-FINISH
1		Kim Lighting	EL807/9L4KUV/BL
1		Hubbell	NW-V-1-FINISH
1		Columbia Lighting	LXEM4-40ML-RFA-EDU
1			VERAILLES #1105 COULDN'T FIND PRODUCT INFORMATION
1		Columbia Lighting	CWM2-40MW-SM-DIC-EDU
1		Columbia Lighting	LCR4-40ML-EDU
1		Columbia Lighting	LXEM4-40ML-RFA-EDU
1		Columbia Lighting	LXEM4-40HL-RFA-EDU
1		Columbia Lighting	LBIL4-40ML-EDU
1			COULD NOT FIND PRODUCT INFORMATION
1		Hubbell	CL1-A-90LU-4K-X-105-FINISH ON 20' STRAIGHT SQUARE STEEL POLE
1		Insight	NO PRODUCT INFO GIVEN. INSIGHT LIGHTING IS OUR EQUIVALENT TO CK
1		Columbia Lighting	LBIL4-40ML-EDU
1		Alera Lighting	LCV-4-40-ML-S-WM-EDU-MW
1		Lumenwerx, Inc.	CAMPICL-PMO-LED-80-875-750-35- LENGTH-UNV-D1-2-53WAC36-W

Columbia LIGHTING

LED



createchange

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

LLT24

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks. Spring loaded latches optional on steel door, standard on aluminum doors.

FINISH

Door frame is powder coat paint after fabrication. All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel. For a post painted housing finish suffix catalog number with PAF.

SHIELDING

Lenses are high transmission extruded acrylic. Lens selections are Pattern 12 frosted acrylic (A12F), Pattern 19 frosted acrylic .156" (A19F), or Smooth Frosted Acrylic (SFA).

INSTALLATION

An access plate or mounting collar is furnished with each fixture for fast wiring connections without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed grid ceilings (G); four integral T-Bar clips standard. A flange kit (FK) option is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement on ceiling plane. Cable Mount option (CM) allows suspension below ceiling plane. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Hubbell Lighting representative.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. UL Sanitation Approved.

WARRANTY

Five year warranty. (Terms and Conditions Apply)

FEATURES

- Full distribution provides controlled high angle light for visual comfort
- Long-life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- Lens design and materials provide uniform appearance without pixilation
- Three lens choices
- Three door frame choices
- Excellent color consistency and 82 CRI
- Fixed output or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED boards and drivers from below the ceiling; modular replaceability of components
- Low W/ft2 ratio typically meets the most restrictive lighting power density codes
- All models standard with IC rating
- Recessed, surface or cable mount

ORDERING INFORMATION

EXAMPLE LLT24-35LWG-FSA12F-EU

LLT	24	-	-	-	-	-
MODEL	COLOR TEMP	CEILING TYPE	SHIELDING	DRIVER	VOLTAGE	OPTIONS
LLT LED Lensed Troffer	30 3000K 35 3500K 40 4000K 50 5000K	G Grid ¹ SM Surface Mount CM Cable Mount ²	A12F Pattern 12 Frosted Acrylic Lens A19F Pattern 19 Frosted Acrylic Lens .156" SFA Smooth Frosted Acrylic	E Fixed Output ED 0-10V Dimming ED1 0-10V 1% Dimming LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology LUTS 5-Series EcoSystem LED driver	U 120V-277V 347 347V	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex ELL14 Emergency Battery Pack Installed, 1400 Lumens ⁴ PAF Paint After Fabrication SLL Spring Loaded Latches GTD Generator Transfer Device G1 Single Gasket (door to housing) G2 Double Gasketing (G1 and lens to door) G3 Triple Gasketing (G2 and housing to ceiling) GLR Fast Blow Fuse EOR End of Row (SM/CM only) ⁵ INT Intermediate (SM/CM only) ⁵
SIZE	LUMEN OUTPUT	DOOR				
24 2' x 4'	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen XL Extra High Lumen	FS White Flush Steel FA White Flush Aluminum ³ RA White Regressed Aluminum ³				
ACCESSORIES (ORDER SEPARATELY)						
FK24 2' x 4' Flange Kit, Single Mounting (for rows add FKCR)						
FKCR Flange Kit Row Adaptor						
CM 48Y25C3F-KIT 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-Wire Feed Cord						

For more door options contact factory.

PRODUCT AVAILABILITY

SIZE	OUTPUT	NOMINAL LUMENS (3500K)	NOMINAL WATTS	LUMENS PER WATT
2' x 4'	LW	4300	33	130
	ML	4900	38	129
	HL	5600	45	124
	VL	7200	61	118
	XL	8700	75	116

Lumens vary according to color temperature and other factors. See specific photometric test(s).

¹ For drywall order Flange Kit accessories separately.

² Order hanger accessories separately.

³ Standard with Spring Loaded Latches.

⁴ For compatibility with Dual-Lite LiteGear™ inverters in lieu of installed battery pack, contact Hubbell Lighting representative.

⁵ Provides ends with wiring access for continuous row mounting. Damp Label - standard. IC Rating - standard.



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LLT24-40HLG-RAA19-EDU

Notes:

Type:**FA**

LAIHOU18-45878

Columbia

LIGHTING

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

LLT24

PHOTOMETRIC DATA

Test 5602 Test Date 8/17/12

LUMINAIRE DATA

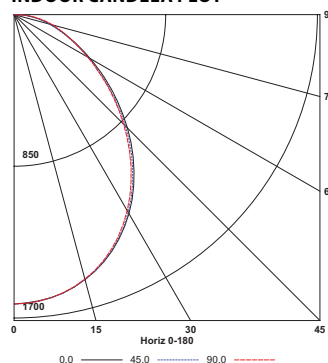
Luminaire	LLT24-35LWG-A12F-ESD LLT LED, Lensed Troffer 2 x 4 LED with frosted A12 lens
Ballast	D255CQ42UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3856
Watts	40.80
Mounting	Recessed
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.18 90° = 1.17
Luminous Opening in Feet	Length: 3.81 Width: 1.81 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1223	31.7	31.7
0-40	1946	50.5	50.5
0-60	3171	82.2	82.2
0-90	3856	100.0	100.0
0-180	3856	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	95
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.55 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	2530	2530	2530	2530	2530
30	2320	2320	2305	2293	2284
40	2113	2109	2086	2062	2054
45	1982	1973	1947	1920	1916
50	1836	1826	1797	1773	1770
55	1687	1671	1641	1622	1622
60	1539	1523	1495	1486	1489
65	1411	1392	1367	1378	1389
70	1314	1296	1278	1314	1337
75	1266	1248	1242	1303	1345
80	1267	1258	1285	1366	1420
85	1361	1343	1415	1558	1594

COEFFICIENTS OF UTILIZATION (%)

	RC	RCR - RC (RCR - RC) (%)														
		80					70					50				0
		RW	70	50	30	10	70	50	30	10	50	30	10	0		
RCR	1	109	105	100	97	106	102	99	95	98	95	92	85			
	2	100	92	85	80	97	90	84	79	87	82	77	72			
	3	92	81	74	67	89	80	73	67	77	71	66	61			
	4	84	73	64	58	82	71	64	57	69	62	57	53			
	5	78	65	57	50	76	64	56	50	62	55	50	46			
	6	72	59	51	44	70	58	50	44	56	49	44	41			
	7	67	54	45	39	65	53	45	39	52	44	39	37			
	8	63	49	41	35	61	49	41	35	47	40	35	33			
	9	59	45	37	32	57	45	37	32	44	37	32	30			
	10	55	42	34	29	54	42	34	29	41	34	29	27			

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

LUMINAIRE DATA

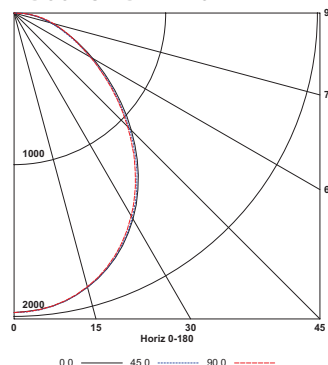
Luminaire	LLT24-35MLG-A12F-ESD LLT LED, Lensed Troffer 2 x 4 LED with frosted A12 lens
Ballast	D310CQ50UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4696
Watts	51.40
Mounting	Recessed
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.18 90° = 1.17
Luminous Opening in Feet	Length: 3.81 Width: 1.81 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1489	31.7	31.7
0-40	2370	50.5	50.5
0-60	3862	82.2	82.2
0-90	4696	100.0	100.0
0-180	4696	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	91
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.61 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	3081	3081	3081	3081	3081
30	2824	2824	2808	2792	2783
40	2573	2569	2543	2512	2504
45	2413	2406	2373	2342	2335
50	2236	2224	2188	2159	2156
55	2055	2036	2000	1976	1976
60	1876	1854	1820	1807	1814
65	1717	1699	1666	1677	1692
70	1602	1579	1556	1597	1625
75	1538	1520	1514	1586	1628
80	1546	1528	1564	1663	1726
85	1666	1630	1719	1881	1934

COEFFICIENTS OF UTILIZATION (%)

		RCR - RANK (70) - RANK (50) - RANK (30) - RANK (10) - RANK (0)															
RCR	RC	80					70					50					0
	RW	70	50	30	10	0	70	50	30	10	0	50	30	10	0		
	1	109	105	100	97	106	102	99	95	98	95	92	85				
	2	100	92	85	80	97	90	84	79	87	82	77	72				
	3	92	81	74	67	89	80	73	67	77	71	66	61				
	4	84	73	64	58	82	71	64	57	69	62	57	53				
	5	78	65	57	50	76	64	56	50	62	55	50	46				
	6	72	59	51	44	70	58	50	44	56	49	44	41				
	7	67	54	45	39	65	53	45	39	52	44	39	37				
	8	63	49	41	35	61	49	41	35	47	40	35	33				
	9	59	45	37	32	57	45	37	32	44	37	32	30				
10	55	42	34	29	54	42	34	29	41	34	29	27					

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance



HUBBELL
Lighting

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LLT24-40HLG-RAA19-EDU

Notes:

Type:**FA**

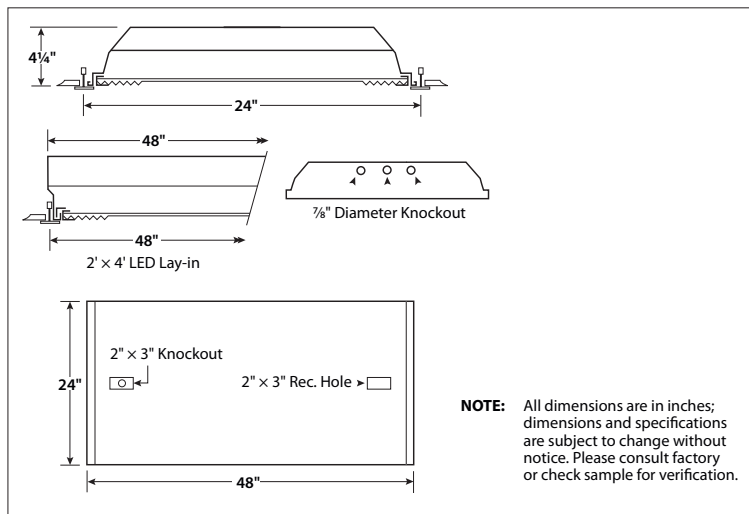
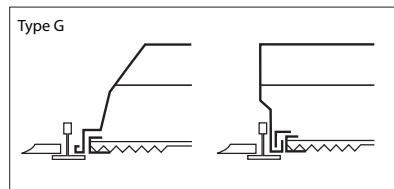
LAIHOU18-45878

Columbia

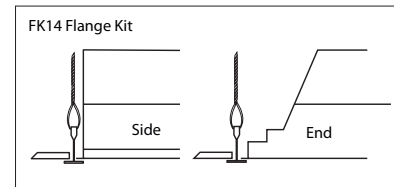
LIGHTING

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

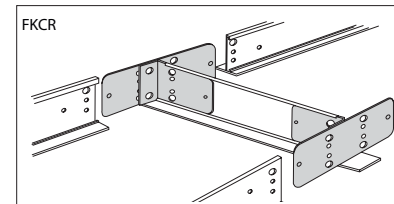
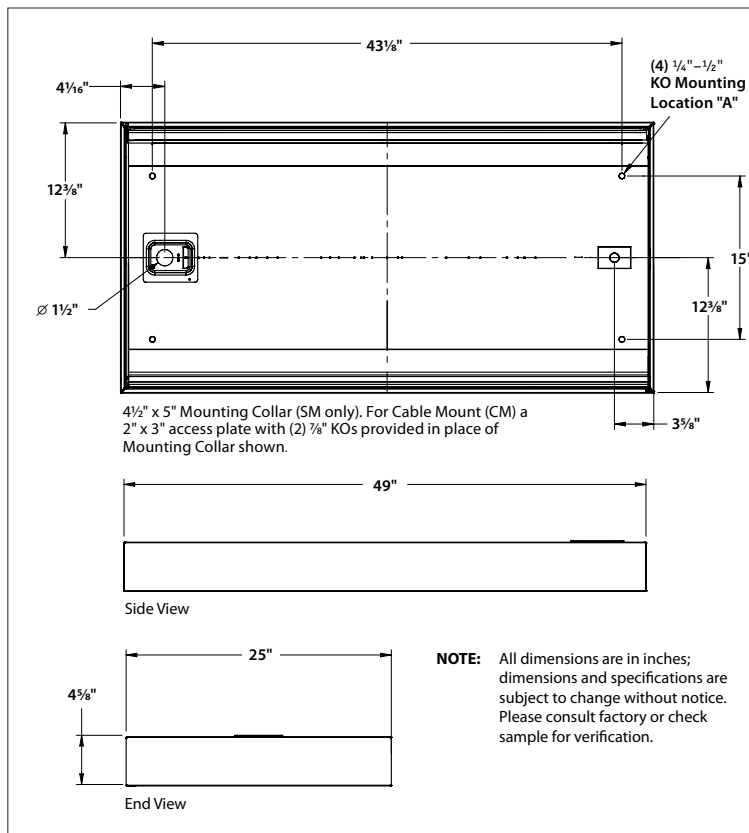
LLT24

DIMENSIONAL DATA**CEILING COMPATIBILITY**

For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed. Shown with flush lens.



For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance. Shown with flush lens.

DIMENSIONAL DATA - SURFACE OR CABLE MOUNT

For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14 & FKCR adapters:
Width 24 3/8", Length [48" x (# in row)] + 3/8" = 96 3/8"

Flange kit rough in dimensions for single unit only: 24 3/8" x 48 3/8"

Surface Mount

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting KOs, 1/4" to 1/2" provided as shown at left, marked "A".

Cable Mount

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2C3F-KIT 48" Cable Mount Kit. Includes 3-wire feed cord. For other wiring needs, contact Hubbell representative. Mounting KOs, 1/4" to 1/2", provided as shown at left, marked "A".



Columbia LIGHTING

LED



createchange

FEATURES

- Full distribution provides controlled high angle light for visual comfort
- Long-life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- Lens design and materials provide uniform appearance without pixilation
- Three lens choices
- Three door frame choices
- Excellent color consistency and 82 CRI
- Fixed output or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED boards and drivers from below the ceiling; modular replaceability of components
- Low W/ft2 ratio typically meets the most restrictive lighting power density codes
- All models standard with IC rating
- Recessed, surface or cable mount

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks. Spring loaded latches optional on steel door, standard on aluminum doors.

FINISH

Door frame is powder coat paint after fabrication. All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel. For a post painted housing finish suffix catalog number with PAF.

SHIELDING

Lenses are high transmission extruded acrylic. Lens selections are Pattern 12 frosted acrylic (A12F), Pattern 19 frosted acrylic .156" (A19F), or Smooth Frosted Acrylic (SFA).

INSTALLATION

An access plate or mounting collar is furnished with each fixture for fast wiring connections without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed grid ceilings (G); four integral T-Bar clips standard. A flange kit (FK) option is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement on ceiling plane. Cable Mount option (CM) allows suspension below ceiling plane. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Hubbell Lighting representative.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. UL Sanitation Approved.

WARRANTY

Five year warranty. (Terms and Conditions Apply)

ORDERING INFORMATION

EXAMPLE LLT24-35LWG-FSA12F-EU

LLT		24		-		-		-		-		-	
MODEL		COLOR TEMP		CEILING TYPE		SHIELDING		DRIVER		VOLTAGE		OPTIONS	
LLT	LED Lensed Troffer	30	3000K	G	Grid ¹	A12F	Pattern 12 Frosted Acrylic Lens	E	Fixed Output	U	120V-277V	C388	3-Wire Flex
		35	3500K	SM	Surface Mount			ED	0-10V Dimming	347	347V	C488	4-Wire Flex
		40	4000K	CM	Cable Mount ²	A19F	Pattern 19 Frosted Acrylic Lens .156"	ED1	0-10V 1% Dimming			C588	5-Wire Flex
		50	5000K					LUTH	Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology			ELL14	Emergency Battery Pack Installed, 1400 Lumens ⁴
SIZE		LUMEN OUTPUT		DOOR									
24		2' x 4'		LW	Low Watt	FS	White Flush Steel	SFA	Smooth Frosted Acrylic			PAF	Paint After Fabrication
		ML		Medium Lumen	FA	White Flush Aluminum ³					SLL	Spring Loaded Latches	
		HL		High Lumen	RA	White Regressed Aluminum ³					GTD	Generator Transfer Device	
		VL		Very High Lumen							G1	Single Gasket (door to housing)	
		XL		Extra High Lumen							G2	Double Gasketing (G1 and lens to door)	
												G3	Triple Gasketing (G2 and housing to ceiling)
												GLR	Fast Blow Fuse
												EOR	End of Row (SM/CM only) ⁵
												INT	Intermediate (SM/CM only) ⁵

¹ For drywall order Flange Kit accessories separately.

² Order hanger accessories separately.

³ Standard with Spring Loaded Latches.

⁴ For compatibility with Dual-Lite LiteGear™ inverters in lieu of installed battery pack, contact Hubbell Lighting representative.

⁵ Provides ends with wiring access for continuous row mounting. Damp Label - standard. IC Rating - standard.

PRODUCT AVAILABILITY				
SIZE	OUTPUT	NOMINAL LUMENS (3500K)	NOMINAL WATTS	LUMENS PER WATT
2' x 4'	LW	4300	33	130
	ML	4900	38	129
	HL	5600	45	124
	VL	7200	61	118
	XL	8700	75	116

Lumens vary according to color temperature and other factors. See specific photometric test(s).



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LLT24-40MLG-RAA19-EDU

Notes:

Type:**FB**

LAIHOU18-45878

Columbia

LIGHTING

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

PHOTOMETRIC DATA

Test 5602 Test Date 8/17/12

LUMINAIRE DATA

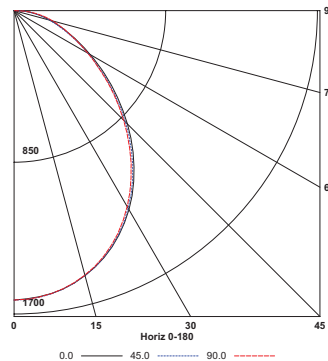
Luminaire	LLT24-35LWG-A12F-ESD LLT LED, Lensed Troffer 2 x 4 LED with frosted A12 lens
Ballast	D255CQ42UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3856
Watts	40.80
Mounting	Recessed
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.18 90° = 1.17
Luminous Opening in Feet	Length: 3.81 Width: 1.81 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1223	31.7	31.7
0-40	1946	50.5	50.5
0-60	3171	82.2	82.2
0-90	3856	100.0	100.0
0-180	3856	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	95
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.55 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	2530	2530	2530	2530	2530
30	2320	2320	2305	2293	2284
40	2113	2109	2086	2062	2054
45	1982	1973	1947	1920	1916
50	1836	1826	1797	1773	1770
55	1687	1671	1641	1622	1622
60	1539	1523	1495	1486	1489
65	1411	1392	1367	1378	1389
70	1314	1296	1278	1314	1337
75	1266	1248	1242	1303	1345
80	1267	1258	1285	1366	1420
85	1361	1343	1415	1558	1594

COEFFICIENTS OF UTILIZATION (%)

RCR	RC	80					70					50					0
	RW	70	50	30	10	70	50	30	10	50	30	10	0				
	1	109	105	100	97	106	102	99	95	98	95	92	85				
	2	100	92	85	80	97	90	84	79	87	82	77	72				
	3	92	81	74	67	89	80	73	67	77	71	66	61				
	4	84	73	64	58	82	71	64	57	69	62	57	53				
	5	78	65	57	50	76	64	56	50	62	55	50	46				
	6	72	59	51	44	70	58	50	44	56	49	44	41				
	7	67	54	45	39	65	53	45	39	52	44	39	37				
	8	63	49	41	35	61	49	41	35	47	40	35	33				
9	59	45	37	32	57	45	37	32	44	37	32	30					
10	55	42	34	29	54	42	34	29	41	34	29	27					

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

LUMINAIRE DATA

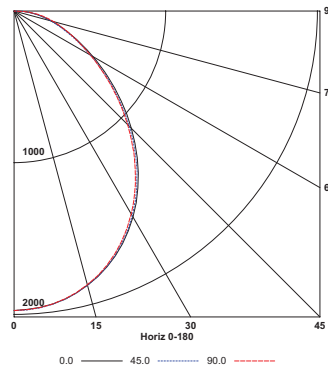
Luminaire	LLT24-35MLG-A12F-ESD LLT LED, Lensed Troffer 2 x 4 LED with frosted A12 lens
Ballast	D310CQ50UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4696
Watts	51.40
Mounting	Recessed
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.18 90° = 1.17
Luminous Opening in Feet	Length: 3.81 Width: 1.81 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1489	31.7	31.7
0-40	2370	50.5	50.5
0-60	3862	82.2	82.2
0-90	4696	100.0	100.0
0-180	4696	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	91
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.61 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	3081	3081	3081	3081	3081
30	2824	2824	2808	2792	2783
40	2573	2569	2543	2512	2504
45	2413	2406	2373	2342	2335
50	2236	2224	2188	2159	2156
55	2055	2036	2000	1976	1976
60	1876	1854	1820	1807	1814
65	1717	1699	1666	1677	1692
70	1602	1579	1556	1597	1625
75	1538	1520	1514	1586	1628
80	1546	1528	1564	1663	1726
85	1666	1630	1719	1881	1934

COEFFICIENTS OF UTILIZATION (%)

RCR	RC	80					70					50					0
	RW	70	50	30	10	0	70	50	30	10	0	50	30	10	0		
	1	109	105	100	97	106	102	99	95	98	95	92	85				
	2	100	92	85	80	97	90	84	79	87	82	77	72				
	3	92	81	74	67	89	80	73	67	77	71	66	61				
	4	84	73	64	58	82	71	64	57	69	62	57	53				
	5	78	65	57	50	76	64	56	50	62	55	50	46				
	6	72	59	51	44	70	58	50	44	56	49	44	41				
	7	67	54	45	39	65	53	45	39	52	44	39	37				
	8	63	49	41	35	61	49	41	35	47	40	35	33				
9	59	45	37	32	57	45	37	32	44	37	32	30					
10	55	42	34	29	54	42	34	29	41	34	29	27					

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance



HUBBELL
Lighting

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LLT24-40MLG-RAA19-EDU

Notes:

Type:**FB**

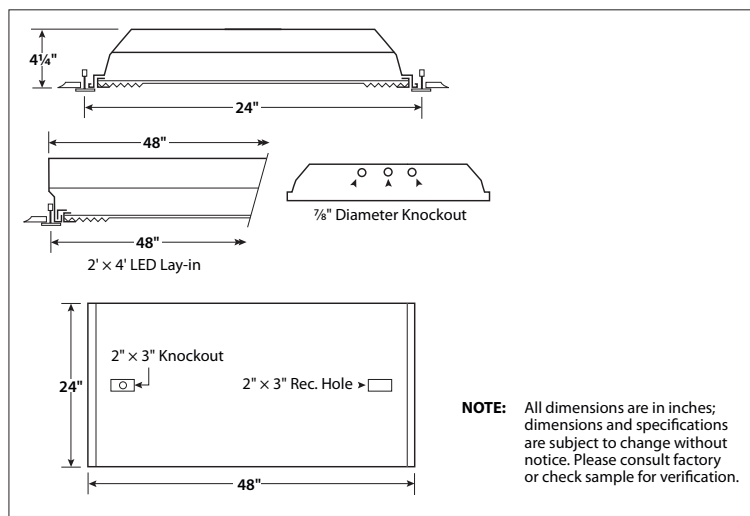
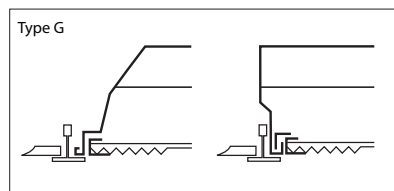
LAIHOU18-45878

Columbia

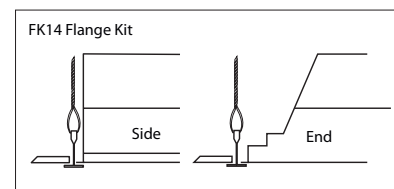
LIGHTING

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

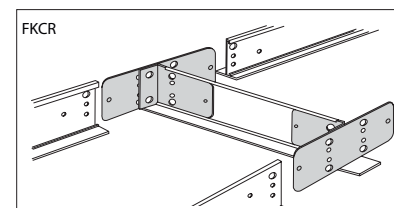
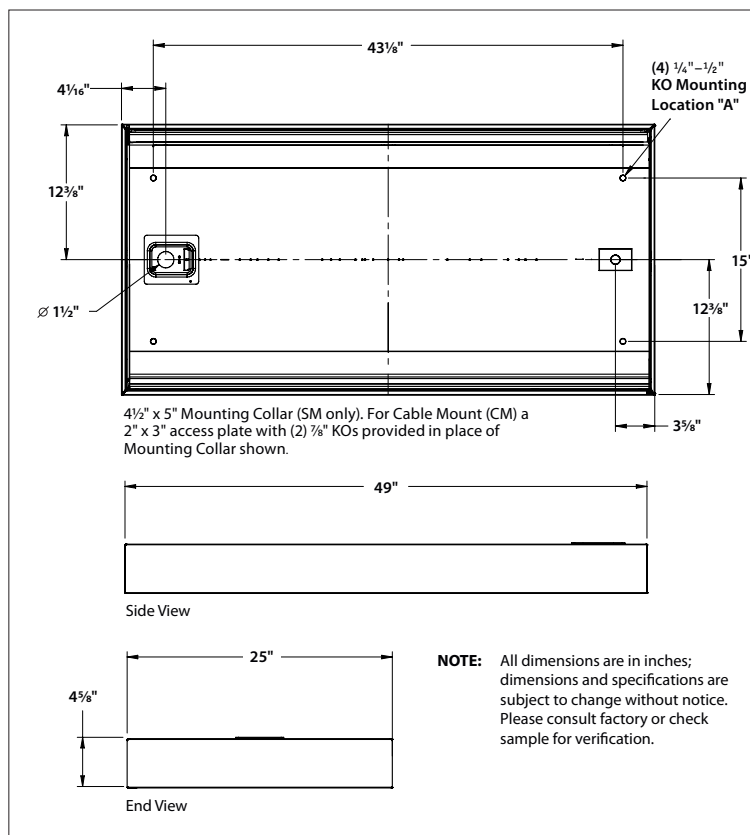
LLT24

DIMENSIONAL DATA**CEILING COMPATIBILITY**

For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed. Shown with flush lens.



For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance. Shown with flush lens.

DIMENSIONAL DATA - SURFACE OR CABLE MOUNT

For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14 & FKCR adapters:
Width 24 3/8", Length [48" x (# in row)] + 3/8" = 96 3/8"

Flange kit rough in dimensions for single unit only: 24 3/8" x 48 3/8"

Surface Mount

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting KOs, 1/4" to 1/2" provided as shown at left, marked "A".

Cable Mount

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2C3F-KIT 48" Cable Mount Kit. Includes 3-wire feed cord. For other wiring needs, contact Hubbell representative. Mounting KOs, 1/4" to 1/2", provided as shown at left, marked "A".



Columbia LIGHTING

LLT14

1' x 4', LED Lensed Troffer with Advanced Solid State Technology

LED



createchange

FEATURES

- Full distribution provides controlled high angle light for visual comfort
- Long-life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- Lens design and materials provide uniform appearance without pixilation
- Three lens choices
- Three door frame choices
- Excellent color consistency and 82 CRI
- Fixed output or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED boards and drivers from below the ceiling; modular replaceability of components
- Low W/Ft2 ratio typically meets the most restrictive lighting power density codes
- Recessed, surface or cable mount
- All models standard with IC rating

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks.

FINISH

Door frame is powder coat paint after fabrication. All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel. For a post painted housing finish suffix catalog number with PAF.

SHIELDING

Lenses are high transmission extruded acrylic. Lens selections are Pattern 12 frosted acrylic (A12F), Pattern 19 frosted acrylic .156" (A19F), or Smooth Frosted Acrylic (SFA).

INSTALLATION

An access plate or mounting collar is furnished with each fixture for fast wiring connections without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed grid ceilings (G). Four integral T-bar clips standard. A flange kit (FK) option is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement on ceiling plane. Cable Mount option (CM) allows suspension below ceiling plane. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Hubbell Lighting representative.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. UL Sanitation Approved.

WARRANTY

Five year warranty. (Terms and Conditions Apply)

ORDERING INFORMATION

EXAMPLE LLT14-35MLG-FSA12F-EU

LLT		14											
MODEL		COLOR TEMP		CEILING TYPE		SHIELDING		DRIVER		VOLTAGE		OPTIONS	
LLT LED Lensed Troffer		30 3000K	35 3500K	G Grid ¹	SM Surface Mount	A12F Pattern 12 Frosted Acrylic Lens	E Fixed Output	U 120V-277V	C388 3-Wire Flex				
		40 4000K		CM Cable Mount ²		A19F Pattern 19 Frosted Acrylic Lens .156"	ED 0-10V Dimming	347 347V	C488 4-Wire Flex				
		50 5000K					LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology		C588 5-Wire Flex				
						SFA Smooth Frosted Acrylic	LUTS 5-Series EcoSystem LED driver		ELL14 Emergency Battery Pack Installed, 1400 Lumens ³				
									PAF Paint After Fabrication				
SIZE		LUMEN OUTPUT		DOOR									
14 1' x 4'		LW Low Watt	ML Medium Lumen	FS White Flush Steel	FA White Flush Aluminum								
		HL High Lumen	VL Very High Lumen	RA White Regressed Aluminum									
ACCESSORIES (ORDER SEPARATELY)													
FK14 1' x 4' Flange Kit, Single Mounting (for rows add FKCR)													
FKCR Flange Kit Row Adaptor													
CM 48Y15C3F-KIT 48" Cable Mount Kit for 1' wide Cable Mount fixtures, 3-Wire Feed Cord													
For more door options contact factory.													
PRODUCT AVAILABILITY													
SIZE		OUTPUT		NOMINAL LUMENS (3500K)		NOMINAL WATTS		LUMENS PER WATT					

¹ For drywall order Flange Kit accessories separately.

² Order hanger accessories separately.

³ For compatibility with Dual-Lite LiteGear[®] inverters in lieu of installed battery pack, contact Hubbell Lighting representative.

⁴ Provides ends with wiring access for continuous row mounting. Damp Label - standard. IC Rating - standard.

PRODUCT AVAILABILITY

SIZE	OUTPUT	NOMINAL LUMENS (3500K)	NOMINAL WATTS	LUMENS PER WATT
1' x 4'	LW	1900	22	86
	ML	2400	27	88
	HL	3100	36	86
	VL	3800	45	84

Lumens vary according to color temperature and other factors. See specific photometric test(s).



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LLT14-40MLG-RAA19-EDU

Notes:

Type:**FC**

LAIHOU18-45878

Columbia

LIGHTING

1' x 4', LED Lensed Troffer with Advanced Solid State Technology

PHOTOMETRIC DATA

Test 6007 Test Date 10/24/12

LUMINAIRE DATA

Luminaire	LLT14-35MLG-A12F-ESD
	LLT LED, Lensed Troffer 1 x 4 LED with frosted A12 lens
Ballast	D185CQ30UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	2397
Watts	26.40
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.19 90° = 1.13
Luminous Opening in Feet	Length: 3.81 Width: 0.81 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	786	32.8	32.8
0-40	1241	51.8	51.8
0-60	1989	83.0	83.0
0-90	2397	100.0	100.0
0-180	2397	100.0	100.0

ENERGY DATA

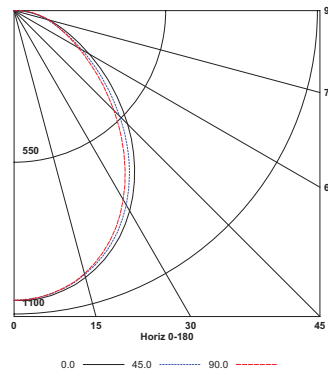
Total Luminaire Efficiency	100%
Total Lumens Per Watt	91
ANSI/IESNA RP-1-2004 Compliance	Yes - VDT Normal Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.61 based on 3000 hrs. and \$0.08 per KWH

COEFFICIENTS OF UTILIZATION (%)

RCR	RW	80				70				50				0
		70	50	30	10	70	50	30	10	50	30	10	0	0
1	109	105	101	97	107	103	99	95	98	95	92	85		
2	100	92	86	81	98	90	85	80	87	82	78	72		
3	92	82	74	68	89	80	73	67	77	71	66	62		
4	85	73	65	59	82	72	64	58	69	63	57	54		
5	78	66	57	51	76	65	57	51	63	56	50	47		
6	73	60	51	45	71	59	51	45	57	50	45	42		
7	68	55	46	40	66	54	46	40	52	45	40	37		
8	63	50	42	36	62	49	42	36	48	41	36	34		
9	59	46	38	33	58	46	38	33	44	37	33	30		
10	55	43	35	30	54	42	35	30	41	34	30	28		

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	3662	3662	3662	3662	3662
30	3375	3335	3274	3206	3186
40	3069	3010	2900	2800	2764
45	2871	2802	2673	2565	2525
50	2648	2572	2431	2322	2284
55	2420	2335	2195	2092	2055
60	2197	2114	1974	1897	1870
65	1989	1915	1799	1758	1750
70	1846	1774	1683	1683	1693
75	1765	1711	1644	1698	1725
80	1768	1727	1707	1788	1868
85	1921	1841	1881	2121	2081

LUMINAIRE DATA

Luminaire	LLT14-35HLG-A12F-ESD
	LLT LED, Lensed Troffer 1 x 4 LED with frosted A12 lens
Ballast	D255CQ42UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3099
Watts	34.70
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.19 90° = 1.13
Luminous Opening in Feet	Length: 3.81 Width: 0.81 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1016	32.8	32.8
0-40	1606	51.8	51.8
0-60	2572	83.0	83.0
0-90	3099	100.0	100.0
0-180	3099	100.0	100.0

ENERGY DATA

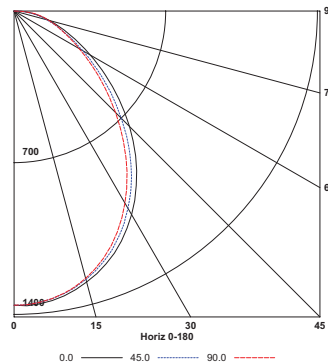
Total Luminaire Efficiency	100%
Total Lumens Per Watt	89
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.70 based on 3000 hrs. and \$0.08 per KWH

COEFFICIENTS OF UTILIZATION (%)

RCR	RW	80				70				50				0
		70	50	30	10	70	50	30	10	50	30	10	0	0
1	109	105	101	97	107	103	99	96	98	95	92	85		
2	100	92	86	81	98	90	85	80	87	82	78	72		
3	92	82	74	68	90	80	73	67	77	71	66	62		
4	85	73	65	59	82	72	64	58	69	63	57	54		
5	78	66	57	51	76	65	57	51	63	56	50	47		
6	73	60	51	45	71	59	51	45	57	50	45	42		
7	68	55	46	40	66	54	46	40	52	45	40	37		
8	63	50	42	36	62	49	42	36	48	41	36	34		
9	59	46	38	33	58	46	38	33	44	37	33	30		
10	55	43	35	30	54	42	35	30	41	34	30	28		

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	4733	4733	4733	4733	4733
30	4366	4313	4233	4148	4120
40	3970	3893	3752	3620	3574
45	3714	3621	3453	3315	3265
50	3429	3326	3147	3001	2952
55	3126	3016	2834	2700	2663
60	2839	2728	2553	2448	2421
65	2583	2476	2327	2270	2261
70	2386	2295	2172	2182	2193
75	2277	2197	2116	2183	2224
80	2290	2230	2209	2310	2410
85	2481	2361	2441	2721	2721



HUBBELL
Lighting



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

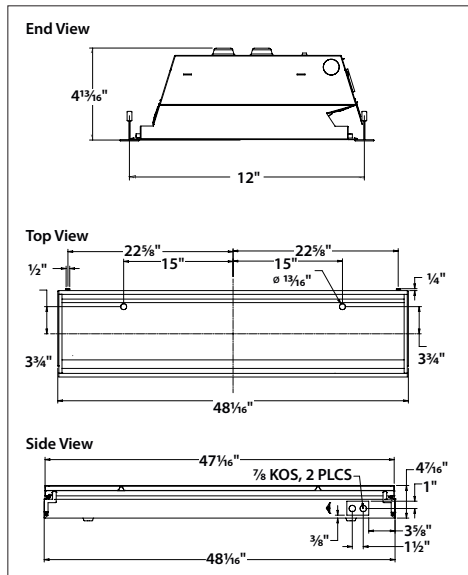
LLT14-40MLG-RAA19-EDU

Notes:

Type:**FC**

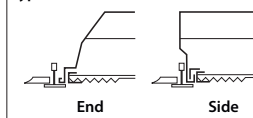
LAIHOU18-45878

Columbia
LIGHTING

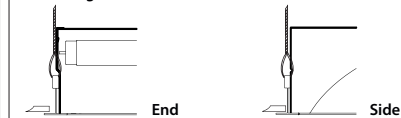
1' x 4', LED Lensed Troffer with Advanced Solid State Technology**LLT14****DIMENSIONAL DATA**

A: 7/8" Diameter knockout
K: 2" x 3" through hole for access plate.

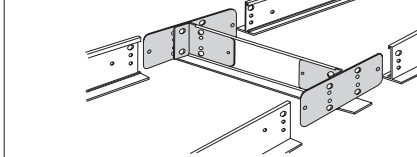
NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

CEILING COMPATIBILITY**Type G**

For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.

FK14 Flange Kit

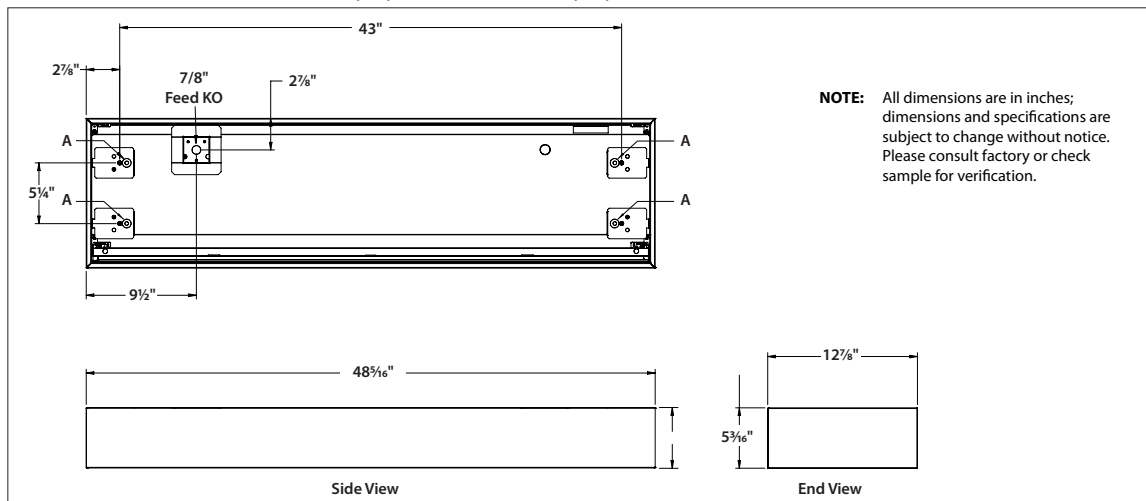
For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

FKCR

For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14s & FKCR adapters:
Width 12 3/8", Length $[48" \times (\# \text{ in row})] + 3/8"$. Example: $(48" \times 2) + 3/8" = 96 3/8"$

Flange kit rough in dimensions for single unit only: 12 3/8" x 48 3/8"

DIMENSIONAL DATA - SURFACE MOUNT (SM) AND CABLE MOUNT (CM)**SURFACE MOUNT**


Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 1/4" to 1/2" provided as shown, marked "A".

CABLE MOUNT

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y1 C3F-KIT 48" cable mount kit. Includes 3 wire feed cord. For other wiring needs, contact Hubbell Lighting representative. Mounting knock-outs, 1/4" to 1/2", provided as shown, marked "A".

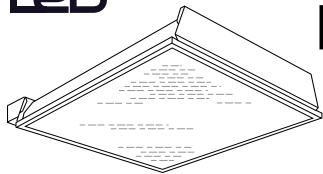


HUBBELL
Lighting

Submitted by Lighting Associates		Catalog Number: LLT22-40HLG-RAA19-EDU	Type: FD
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

Columbia LIGHTING

LED



createchange

FEATURES

- Full distribution provides controlled high angle light for visual comfort
- Long-life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- Lens design and materials provide uniform appearance without pixilation
- Three lens choices
- Three door frame choices
- Excellent color consistency and 82 CRI
- Fixed output or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED boards and drivers from below the ceiling; modular replaceability of components
- Low W/ft2 ratio typically meets the most restrictive lighting power density codes
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- Recessed, surface or cable mount
- All models standard with IC rating

2' x 2', LED Lensed Troffer with Advanced Solid State Technology

PROJECT INFORMATION

Project Name _____

Catalog No. _____

Type _____

Date _____

CONSTRUCTION

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks. Spring loaded latches optional on steel door, standard on aluminum doors.

FINISH

Door frame is powder coat paint after fabrication. All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel. For a post painted housing finish suffix catalog number with PAF.

SHIELDING

Lenses are high transmission extruded acrylic. Lens selections are Pattern 12 frosted acrylic (A12F), Pattern 19 frosted acrylic .156" (A19F), or Smooth Frosted Acrylic (SFA).

INSTALLATION

An access plate or mounting collar is furnished with each fixture for fast wiring connections without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed grid ceilings (G); for (4) field installable T-Bar clips, order option 4TB. A flange kit (FK) option is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement on ceiling plane. Cable Mount option (CM) allows suspension below ceiling plane. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Hubbell Lighting representative.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org. UL Sanitation Approved.

WARRANTY

Five year warranty. (Terms and Conditions Apply)

ORDERING INFORMATION

EXAMPLE LLT22-35HLG-FSA12F-EU

MODEL	COLOR TEMP	CEILING TYPE	SHIELDING	DRIVER	VOLTAGE	OPTIONS
LLT LED Lensed Troffer	30 3000K 35 3500K 40 4000K 50 5000K	G Grid ¹ SM Surface Mount CM Cable Mount ²	A12F Pattern 12 Frosted Acrylic Lens A19F Pattern 19 Frosted Acrylic Lens .156" SFA Smooth Frosted Acrylic	E Fixed Output ED 0-10V Dimming ED1 0-10V 1% Dimming LUTH Lutron H Series LUTS Lutron S Series	U 120V-277V 347 347V	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex ELL14 Emergency Battery Pack Installed, 1400 Lumens ⁴ PAF Paint After Fabrication SLL Spring Loaded Latches 4TB Four T-Bar Clips GTD Generator Transfer Device G1 Single Gasket (door to housing) G2 Double Gasketing (G1 and lens to door) G3 Triple Gasketing (G2 and housing to ceiling) GLR Fast Blow Fuse NYC NYC Compliant
SIZE	LUMEN OUTPUT	DOOR				
22 2' x 2'	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen	FS White Flush Steel FA White Flush Aluminum ³ RA White Regressed Aluminum ³ For more door options contact factory.				

¹ For drywall order Flange Kit accessories separately.

² Order hanger accessories separately.

³ Standard with Spring Loaded Latches.

⁴ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed battery pack, contact Hubbell Lighting representative.
Damp Label - standard. IC Rating - standard.

ACCESSORIES (ORDER SEPARATELY)		PRODUCT AVAILABILITY				
		SIZE	OUTPUT	NOMINAL LUMENS (3500K)	NOMINAL WATTS	LUMENS PER WATT
	FK22 2' x 2' Flange Kit, Single Mounting (for rows add FKCR)	2' x 2'	LW	2100	22	95
	FKCR Flange Kit Row Adaptor		ML	2500	27	93
CM 48Y2SC3F-KIT	48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3- Wire Feed Cord		HL	3300	36	92
			VL	4000	45	89
	Lumens vary according to color temperature and other factors. See specific photometric test(s).					

Lumens vary according to color temperature and other factors. See specific photometric test(s).

LED / LLT22



HUBBELL
Lighting



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LLT22-40HLG-RAA19-EDU

Notes:

Type:**FD**

LAIHOU18-45878

Columbia

LIGHTING

2' x 2', LED Lensed Troffer with Advanced Solid State Technology

PHOTOMETRIC DATA

Test 5366 Test Date 7/9/12

LUMINAIRE DATA

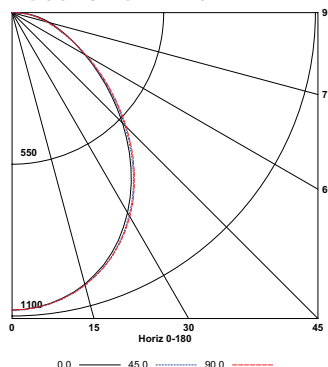
Luminaire	LLT22-35MLG-A12F-ESD LLT LED, Lensed Troffer 2 x 2 LED with frosted A12 lens
Ballast	D185CQ30UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	2520
Watts	26.70
Mounting	Recessed
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.16 90° = 1.18
Luminous Opening in Feet	Length: 1.83 Width: 1.83 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	812	32.2	32.2
0-40	1289	51.2	51.2
0-60	2084	82.7	82.7
0-90	2520	100.0	100.0
0-180	2520	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	94
ANSI/IESNA RP-1-2004 Compliance	Yes - VDT Normal Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.58 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	3465	3465	3465	3465	3465
30	3106	3121	3151	3162	3170
40	2773	2794	2832	2853	2862
45	2573	2591	2632	2650	2664
50	2355	2370	2410	2430	2445
55	2146	2157	2185	2208	2225
60	1961	1961	1974	1993	2012
65	1825	1810	1795	1810	1833
70	1757	1729	1663	1682	1710
75	1763	1714	1627	1614	1639
80	1888	1795	1684	1629	1666
85	2102	2065	1881	1733	1807

COEFFICIENTS OF UTILIZATION (%)

RCR	80					70					50					0
	RW	70	50	30	10	70	50	30	10	50	30	10	0	0	0	0
1	109	105	101	97	107	102	99	95	98	95	92	85				
2	100	92	86	80	97	90	84	79	87	82	77	72				
3	92	82	74	68	89	80	73	67	77	71	66	62				
4	84	73	65	58	82	72	64	58	69	62	57	53				
5	78	66	57	51	76	65	57	50	63	55	50	47				
6	72	60	51	45	70	59	50	45	57	50	44	41				
7	67	54	46	40	66	53	45	40	52	45	39	37				
8	63	50	41	36	61	49	41	36	48	41	36	33				
9	59	46	38	32	57	45	38	32	44	37	32	30				
10	55	42	35	30	54	42	35	30	41	34	29	27				

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

LUMINAIRE DATA

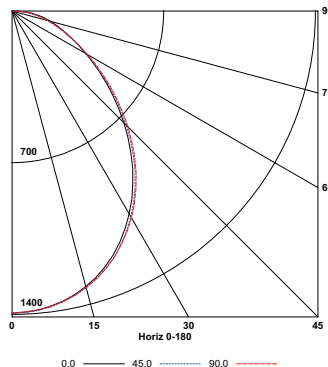
Luminaire	LLT22-35HLG-A12F-ESD LLT LED, Lensed Troffer 2 x 2 LED with frosted A12 lens
Ballast	D255CQ42UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3251
Watts	35.50
Mounting	Recessed
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.16 90° = 1.18
Luminous Opening in Feet	Length: 1.83 Width: 1.83 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1049	32.3	32.3
0-40	1665	51.2	51.2
0-60	2690	82.8	82.8
0-90	3251	100.0	100.0
0-180	3251	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	92
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.67 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	4477	4477	4477	4477	4477
30	4008	4027	4068	4083	4090
40	3575	3600	3650	3680	3692
45	3318	3336	3391	3423	3436
50	3040	3060	3105	3140	3150
55	2768	2779	2819	2852	2869
60	2520	2526	2539	2571	2597
65	2350	2327	2312	2335	2365
70	2255	2218	2143	2161	2199
75	2285	2211	2086	2086	2111
80	2425	2314	2166	2110	2147
85	2729	2692	2434	2287	2360

COEFFICIENTS OF UTILIZATION (%)

RCR	80					70					50					0
	RW	70	50	30	10	70	50	30	10	50	30	10	0	0	0	0
1	109	105	101	97	107	102	99	95	98	95	92	85				
2	100	92	86	80	97	90	84	79	87	82	77	72				
3	92	82	74	68	89	80	73	67	77	71	66	62				
4	84	73	65	58	82	72	64	58	69	62	57	53				
5	78	66	57	51	76	65	57	50	63	55	50	47				
6	72	60	51	45	70	59	50	45	57	50	44	41				
7	67	54	46	40	66	53	45	40	52	45	39	37				
8	63	50	42	36	61	49	41	36	48	41	36	33				
9	59	46	38	32	57	45	38	32	44	37	32	30				
10	55	42	35	30	54	42	35	30	41	34	29	27				

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance



HUBBELL
Lighting

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LLT22-40HLG-RAA19-EDU

Notes:**Type:****FD**

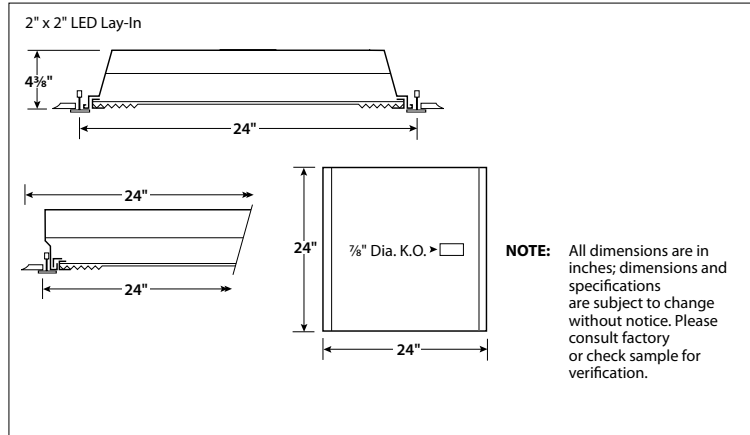
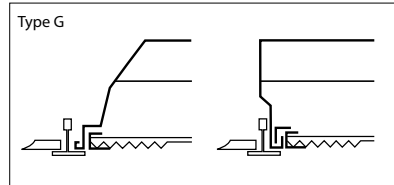
LAIHOU18-45878

Columbia

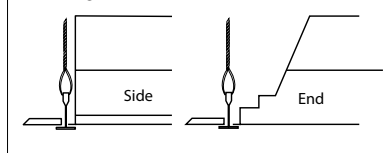
LIGHTING

2' x 2', LED Lensed Troffer with Advanced Solid State Technology

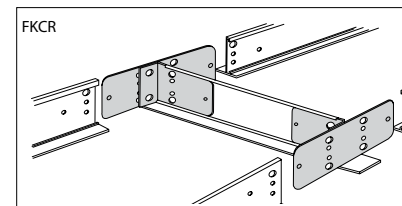
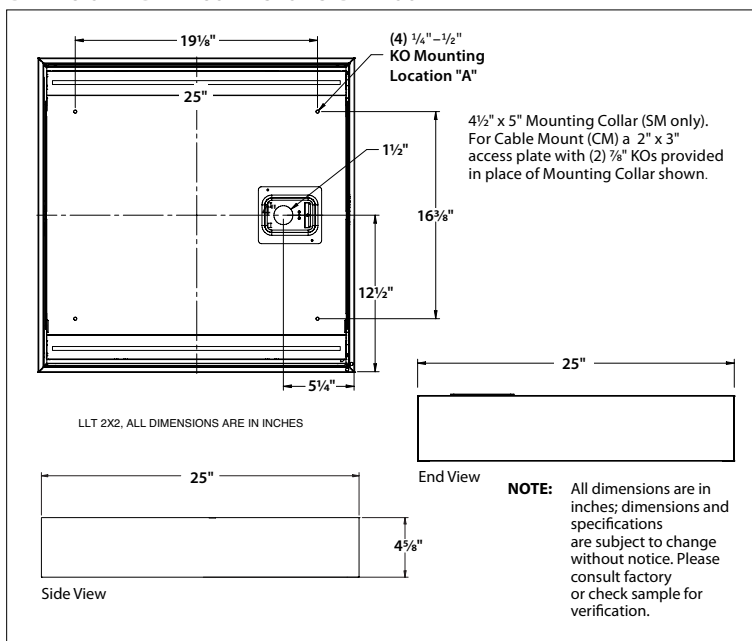
LLT22

DIMENSIONAL DATA**CEILING COMPATIBILITY**

For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed. Shown with flush lens.

FK14 Flange Kit

For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance. Shown with flush lens.

DIMENSIONAL DATA - SURFACE OR CABLE MOUNT

For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14 & FKCR adapters:
Width 12 3/8", Length [48" x (# in row)] + 3/8" = 96 3/8"

Flange kit rough in dimensions for single unit only: 12 3/8" x 48 3/8"

Surface Mount

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting KOs, 1/4" to 1/2" provided as shown at left, marked "A".

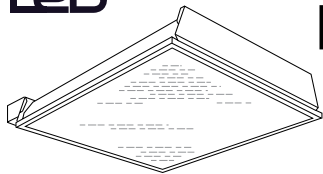
Cable Mount

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2C3F-KIT 48" Cable Mount Kit. Includes 3-wire feed cord. For other wiring needs, contact Hubbell representative. Mounting KOs, 1/4" to 1/2", provided as shown at left, marked "A".


HUBBELL
Lighting

Columbia LIGHTING

LED



createchange

FEATURES

- Full distribution provides controlled high angle light for visual comfort
- Long-life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- Lens design and materials provide uniform appearance without pixilation
- Three lens choices
- Three door frame choices
- Excellent color consistency and 82 CRI
- Fixed output or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED boards and drivers from below the ceiling; modular replaceability of components
- Low W/ft2 ratio typically meets the most restrictive lighting power density codes
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- Recessed, surface or cable mount
- All models standard with IC rating

2' x 2', LED Lensed Troffer with Advanced Solid State Technology

LLT22

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks. Spring loaded latches optional on steel door, standard on aluminum doors.

FINISH

Door frame is powder coat paint after fabrication. All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel. For a post painted housing finish suffix catalog number with PAF.

SHIELDING

Lenses are high transmission extruded acrylic. Lens selections are Pattern 12 frosted acrylic (A12F), Pattern 19 frosted acrylic .156" (A19F), or Smooth Frosted Acrylic (SFA).

INSTALLATION

An access plate or mounting collar is furnished with each fixture for fast wiring connections without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed grid ceilings (G); for (4) field installable T-Bar clips, order option 4TB. A flange kit (FK) option is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement on ceiling plane. Cable Mount option (CM) allows suspension below ceiling plane. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Hubbell Lighting representative.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org. UL Sanitation Approved.

WARRANTY

Five year warranty. (Terms and Conditions Apply)

ORDERING INFORMATION

EXAMPLE LLT22-35HLG-FSA12F-EU

MODEL	COLOR TEMP	CEILING TYPE	SHIELDING	DRIVER	VOLTAGE	OPTIONS
LLT LED Lensed Troffer	30 3000K 35 3500K 40 4000K 50 5000K	G Grid ¹ SM Surface Mount CM Cable Mount ²	A12F Pattern 12 Frosted Acrylic Lens A19F Pattern 19 Frosted Acrylic Lens .156" SFA Smooth Frosted Acrylic	E Fixed Output ED 0-10V Dimming ED1 0-10V 1% Dimming LUTH Lutron H Series LUTS Lutron S Series	U 120V-277V 347 347V	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex ELL14 Emergency Battery Pack Installed, 1400 Lumens ⁴ PAF Paint After Fabrication SLL Spring Loaded Latches 4TB Four T-Bar Clips GTD Generator Transfer Device G1 Single Gasket (door to housing) G2 Double Gasketing (G1 and lens to door) G3 Triple Gasketing (G2 and housing to ceiling) GLR Fast Blow Fuse NYC NYC Compliant
SIZE	LUMEN OUTPUT	DOOR				
22 2' x 2'	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen	FS White Flush Steel FA White Flush Aluminum ³ RA White Regressed Aluminum ³ For more door options contact factory.				

¹ For drywall order Flange Kit accessories separately.

² Order hanger accessories separately.

³ Standard with Spring Loaded Latches.

⁴ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed battery pack, contact Hubbell Lighting representative.
Damp Label - standard. IC Rating - standard.

ACCESSORIES (ORDER SEPARATELY)		PRODUCT AVAILABILITY				
		SIZE	OUTPUT	NOMINAL LUMENS (3500K)	NOMINAL WATTS	LUMENS PER WATT
	FK22 2' x 2' Flange Kit, Single Mounting (for rows add FKCR)	2' x 2'	LW	2100	22	95
	FKCR Flange Kit Row Adaptor		ML	2500	27	93
CM 48Y2SC3F-KIT	48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3- Wire Feed Cord		HL	3300	36	92
			VL	4000	45	89
	Lumens vary according to color temperature and other factors. See specific photometric test(s).					

Lumens vary according to color temperature and other factors. See specific photometric test(s).





LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LLT22-40MLG-RAA19-EDU

Notes:

Type:**FE**

LAIHOU18-45878

Columbia

LIGHTING

2' x 2', LED Lensed Troffer with Advanced Solid State Technology

PHOTOMETRIC DATA

Test 5366 Test Date 7/9/12

LUMINAIRE DATA

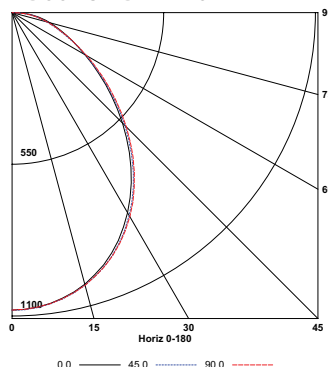
Luminaire	LLT22-35MLG-A12F-ESD
	LLT LED, Lensed Troffer
	2 x 2 LED with frosted A12 lens
Ballast	D185CQ30UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	2520
Watts	26.70
Mounting	Recessed
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.16 90° = 1.18
Luminous Opening in Feet	Length: 1.83 Width: 1.83 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	812	32.2	32.2
0-40	1289	51.2	51.2
0-60	2084	82.7	82.7
0-90	2520	100.0	100.0
0-180	2520	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	94
ANSI/IESNA RP-1-2004 Compliance	Yes - VDT Normal Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.58 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	3465	3465	3465	3465	3465
30	3106	3121	3151	3162	3170
40	2773	2794	2832	2853	2862
45	2573	2591	2632	2650	2664
50	2355	2370	2410	2430	2445
55	2146	2157	2185	2208	2225
60	1961	1961	1974	1993	2012
65	1825	1810	1795	1810	1833
70	1757	1729	1663	1682	1710
75	1763	1714	1627	1614	1639
80	1888	1795	1684	1629	1666
85	2102	2065	1881	1733	1807

COEFFICIENTS OF UTILIZATION (%)

RCR	80					70					50					0
	RW	70	50	30	10	70	50	30	10	50	30	10	0	0	0	0
1	109	105	101	97	107	102	99	95	98	95	92	85				
2	100	92	86	80	97	90	84	79	87	82	77	72				
3	92	82	74	68	89	80	73	67	77	71	66	62				
4	84	73	65	58	82	72	64	58	69	62	57	53				
5	78	66	57	51	76	65	57	50	63	55	50	47				
6	72	60	51	45	70	59	50	45	57	50	44	41				
7	67	54	46	40	66	53	45	40	52	45	39	37				
8	63	50	41	36	61	49	41	36	48	41	36	33				
9	59	46	38	32	57	45	38	32	44	37	32	30				
10	55	42	35	30	54	42	35	30	41	34	29	27				

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

LUMINAIRE DATA

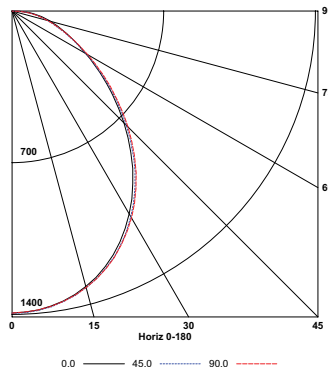
Luminaire	LLT22-35HLG-A12F-ESD
	LLT LED, Lensed Troffer
	2 x 2 LED with frosted A12 lens
Ballast	D255CQ42UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3251
Watts	35.50
Mounting	Recessed
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.16 90° = 1.18
Luminous Opening in Feet	Length: 1.83 Width: 1.83 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1049	32.3	32.3
0-40	1665	51.2	51.2
0-60	2690	82.8	82.8
0-90	3251	100.0	100.0
0-180	3251	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	92
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.67 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	4477	4477	4477	4477	4477
30	4008	4027	4068	4083	4090
40	3575	3600	3650	3680	3692
45	3318	3336	3391	3423	3436
50	3040	3060	3105	3140	3150
55	2768	2779	2819	2852	2869
60	2520	2526	2539	2571	2597
65	2350	2327	2312	2335	2365
70	2255	2218	2143	2161	2199
75	2285	2211	2086	2086	2111
80	2425	2314	2166	2110	2147
85	2729	2692	2434	2287	2360

COEFFICIENTS OF UTILIZATION (%)

RCR	80					70					50					0
	RW	70	50	30	10	70	50	30	10	50	30	10	0	0	0	0
1	109	105	101	97	107	102	99	95	98	95	92	85				
2	100	92	86	80	97	90	84	79	87	82	77	72				
3	92	82	74	68	89	80	73	67	77	71	66	62				
4	84	73	65	58	82	72	64	58	69	62	57	53				
5	78	66	57	51	76	65	57	50	63	55	50	47				
6	72	60	51	45	70	59	50	45	57	50	44	41				
7	67	54	46	40	66	53	45	40	52	45	39	37				
8	63	50	42	36	61	49	41	36	48	41	36	33				
9	59	46	38	32	57	45	38	32	44	37	32	30				
10	55	42	35	30	54	42	35	30	41	34	29	27				

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance



HUBBELL
Lighting



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LLT22-40MLG-RAA19-EDU

Notes:**Type:****FE**

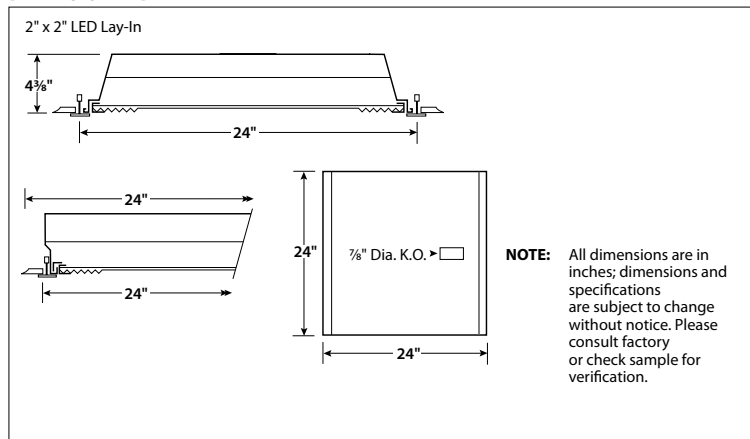
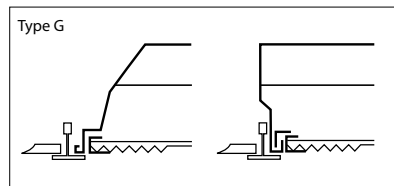
LAIHOU18-45878

Columbia

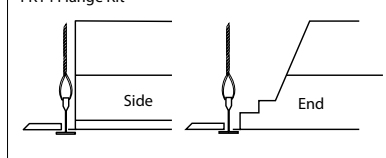
LIGHTING

2' x 2', LED Lensed Troffer with Advanced Solid State Technology

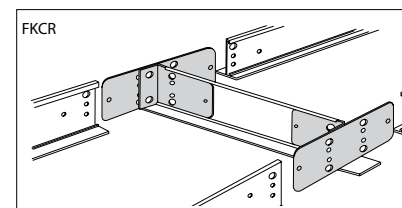
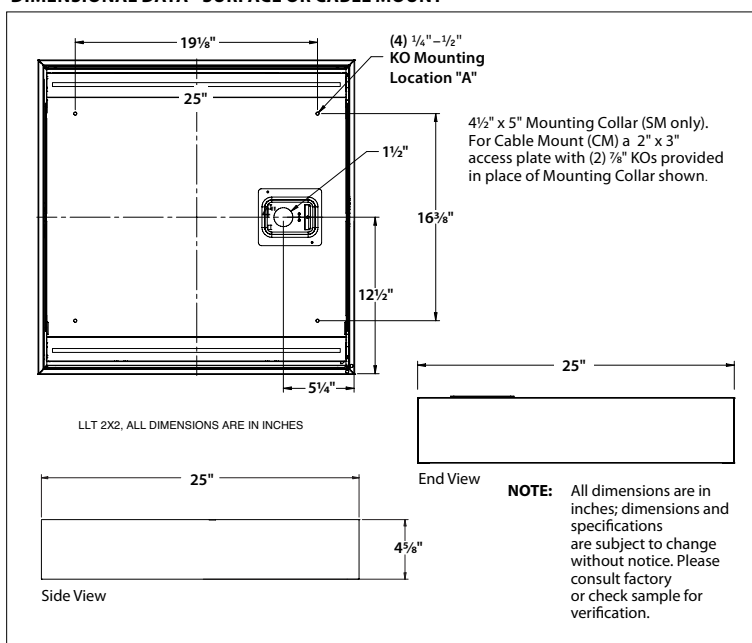
LLT22

DIMENSIONAL DATA**CEILING COMPATIBILITY**

For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed. Shown with flush lens.

FK14 Flange Kit

For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance. Shown with flush lens.

DIMENSIONAL DATA - SURFACE OR CABLE MOUNT

For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14 & FKCR adapters:
Width 12 3/8", Length [48" x (# in row)] + 3/8" = 96 3/8"

Flange kit rough in dimensions for single unit only: 12 3/8" x 48 3/8"

Surface Mount

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting KO's, 1/4" to 1/2" provided as shown at left, marked "A".

Cable Mount

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2C3F-KIT 48" Cable Mount Kit. Includes 3-wire feed cord. For other wiring needs, contact Hubbell representative. Mounting KO's, 1/4" to 1/2", provided as shown at left, marked "A".



HUBBELL
Lighting

Columbia LIGHTING

LSTE22

2' x 2' Stratus® LED Architectural Recessed

LED



createchange

FEATURES

- Direct/indirect luminaire with popular metal perforated basket shielding
- 60,000 hour LEDs at L80 (up to 107,000 projected life) for reduced maintenance
- Four LED color choices and 80 CRI
- Six lumen packages
- Multiple driver options to satisfy different applications
- LED modules and electrical accessible from below
- Precision optical design produces high efficiency in a high visual comfort architecturally styled direct/indirect distribution
- Optimized coating process and unique paint formulation provide exceptional reflectivity in a matte finish for a soft visual image and balanced basket and reflector illumination
- Completely recessed, provides a clean ceiling with uniform illumination at mounting heights as low as 8 feet
- QR code traceability
- Integral battery pack optional on most models
- Compatible with Dual-Lite inverters
- Recessed, surface or cable mount
- DesignLights Consortium® (DLC) qualified
- Five year warranty (Terms and Conditions apply)

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Luminaire housing and end caps are die formed code gauge cold rolled steel. The sturdy reflector is stiffened with linear forms, profiled to a precision curve. Perforated basket with high transmission overlay for improved optical efficiency plus lamp obscuration. Basket and all reflective surfaces are finished after fabrication with unique formula high reflectivity matte white paint for soft, uniform indirect illumination. Thermoplastic light traps snap into the housing at both ends of the basket to prevent light leaks. Basket hinges down for easy access to center wireway.

INSTALLATION

An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard. Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane. A Flange Kit (FK) accessory is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement below ceiling plane. Cable Mount (CM) option allows suspension below ceiling plane.

CERTIFICATION

All luminaires are built to UL1598 and 2108 standards, and bear appropriate CSA labels. Damp location is standard. Emergency-equipped fixtures labeled UL 924 and Dry Location unless specified. Adheres to LM79, LM80, and TM21 industry standards. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

IC RATING

IC label is standard for recessed products. IC label is void on VL if product is installed on site with through wiring.

WARRANTY

Five year warranty (Terms and Conditions apply).

ORDERING INFORMATION

EXAMPLE LSTE22-35HLG-MPO-ESDU

MODEL	COLOR TEMP	LUMEN OUTPUT	SHIELDING	DRIVER	OPTIONS
LSTE Stratus® LED Recessed Architectural	30 3000K 35 3500K 40 4000K 50 5000K	VW Very Low Watt MW Medium Low Watt LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen See Product Availability Table below.	MPO Metal Perf w/ Overlay CEILING TYPE G Grid Lay-in¹ SM Surface Mount CM Cable Suspended Mount²	E Fixed Output ESD Step Dimming³ ED 0-10V Dimming ED1 0-10V 1% Dimming LUTH Lutron H Series 1% Dimming³⁴ LUTS Lutron S Series 5% Dimming³⁴	ELL14 Emergency Battery Pack Installed, 1400 Lumens³⁴ C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex GLR Fast Blow Fuse CP Chicago Plenum NYC NYC Compliant EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.) INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.) AM Antimicrobial® Paint
SIZE	VOLTAGE				
22 2' x 2'	U 120V-277V 347 347V				

PRODUCT AVAILABILITY				
SIZE	OUTPUT	LUMENS	WATTS	LPW
22	VW	1575-1700	18	88-96
22	MW	1925-2075	22	88-95
22	LW	2475-2700	29	86-93
22	ML	3325-3625	40	83-91
22	HL	3500-3800	42	84-91
22	VL	4175-4700	52	81-90

Nominal lumen range represents 3000K through 5000K. Lumens vary according to color temperatures and other factors. See specific photometric test(s).

2X2 DRIVER AVAILABILITY TABLE						
	VW	MW	LW	ML	HL	VL
E	X	X	X	X	X	X
ED	X	X	X	X	X	X
ED1	X	X	X	X	X	X
ESD			X	X	X	
LUTS	X	X	X	X		
LUTH	X	X	X	X		

LUTS and LUTH not available in 347V

ACCESSORIES (ORDER SEPARATELY)

FK22 2' x 2' Single Flange Kit (Shipped separately)

CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3 Wire

¹ For drywall, order G with Flange Kit Accessory.

² Order hanger accessories separately

³ Not available in 347V

⁴ For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative

For questions about configuration options, contact Hubbell Representative.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LSTE22-40HLG-MPO-EDU

Notes:**Type:****FF**

LAIHOU18-45878

Columbia

LIGHTING

LSTE22

2' x 2' Stratus® LED Architectural Recessed

Test #16059 Test Date 3/31/2016

PHOTOMETRIC DATA**LUMINAIRE DATA**

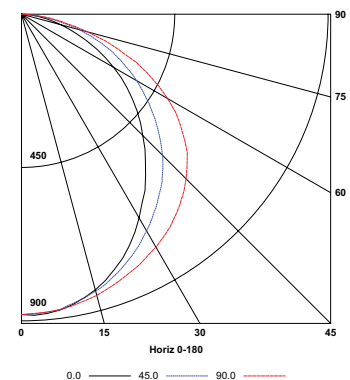
Luminaire	LSTE22-35LWG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x2 with Perforated Basket and Overlay
Ballast	XI040C110V54BPT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	2535
Watts	29.30
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.17 90° = 1.34
Luminous Opening in Feet	Length: 1.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	680	26.8	26.8
0-40	1113	43.9	43.9
0-60	1985	78.3	78.3
0-90	2535	100.0	100.0
0-180	2535	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	87
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.76 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #16060 Test Date 3/31/2016

LUMINAIRE DATA

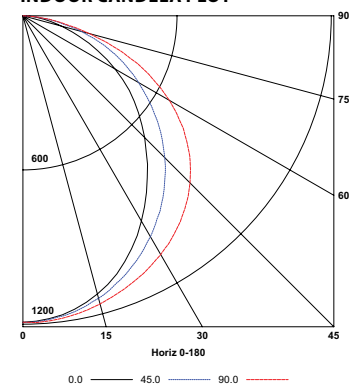
Luminaire	LSTE22-35MLG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x2 with Perforated Basket and Overlay
Ballast	XI040C110V54BPT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3395
Watts	39.90
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.15 90° = 1.34
Luminous Opening in Feet	Length: 1.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	918	27.1	27.1
0-40	1501	44.2	44.2
0-60	2665	78.5	78.5
0-90	3395	100.0	100.0
0-180	3395	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	85
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.82 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #16061 Test Date 3/31/2016

LUMINAIRE DATA

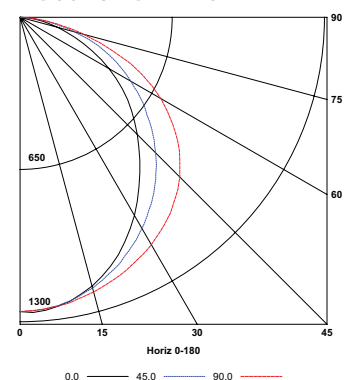
Luminaire	LSTE22-35HLG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x2 with Perforated Basket and Overlay
Ballast	XI054C150V054DNT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3567
Watts	41.70
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.16 90° = 1.33
Luminous Opening in Feet	Length: 1.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	966	27.1	27.1
0-40	1578	44.2	44.2
0-60	2800	78.5	78.5
0-90	3567	100.0	100.0
0-180	3567	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	86
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.82 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LSTE22-40HLG-MPO-EDU

Notes:

Type:**FF**

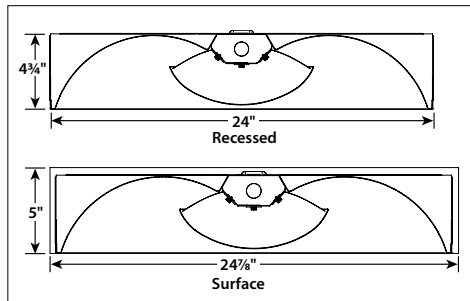
LAIHOU18-45878

Columbia

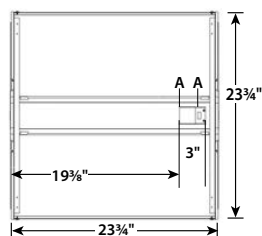
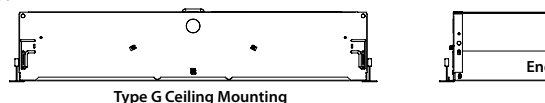
LIGHTING

LSTE22

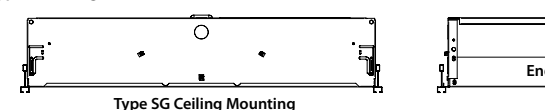
2' x 2' Stratus® LED Architectural Recessed

DIMENSIONAL DATA**Top View****Surface K.O. Dimensions**

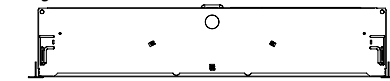
A: 2" x 3" Access with (2) 7/8" Mount Supply Knockouts

**CEILING COMPATIBILITY****Type G Side**

For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum heights of 1 1/2" allowed.

Type SG Ceiling

For 3/4" slot grid type ceilings. Luminaire will be regressed 3/8" horizontal surface of the tee.

FK Flange Kit

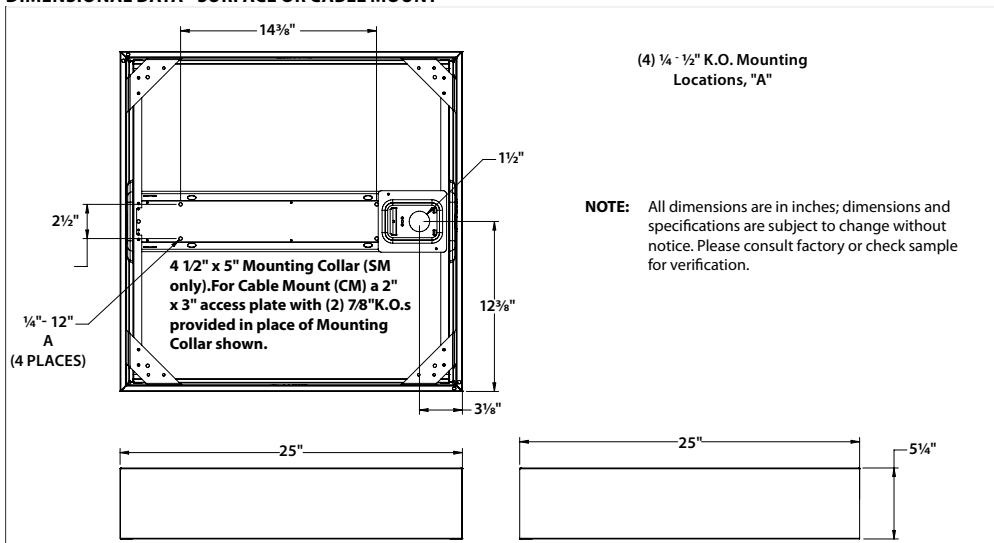
For hard ceiling applications, fixtures must be ordered with a flange kit that wires directly into the concealed ceiling opening for a clean finished appearance. For row configurations contact your local Columbia Representative.

Row cut out dimensions using FK22s & FKCR adapters:

Width 24 3/8", Length [24" x (# in row)] + 3/8".

Example: (24" x 2) + 3/8" = 48 3/8"

Flange kit cut out dimension for single FK22 only: 24 3/8" x 24 3/8"

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.**DIMENSIONAL DATA - SURFACE OR CABLE MOUNT**(4) 1/4" x 1/2" K.O. Mounting
Locations, "A"**NOTE:** All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.**SURFACE MOUNT**

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock outs, 1/4" to 1/2" provided as shown, marked "A".

CABLE MOUNT

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2C3F-KIT 48" cable mount kit. Includes 3 wire feed cord. For other wiring needs, contact Hubbell representative.

**HUBBELL**
Lighting

Columbia LIGHTING

LSTE22

2' x 2' Stratus® LED Architectural Recessed

LED



createchange

FEATURES

- Direct/indirect luminaire with popular metal perforated basket shielding
- 60,000 hour LEDs at L80 (up to 107,000 projected life) for reduced maintenance
- Four LED color choices and 80 CRI
- Six lumen packages
- Multiple driver options to satisfy different applications
- LED modules and electrical accessible from below
- Precision optical design produces high efficiency in a high visual comfort architecturally styled direct/indirect distribution
- Optimized coating process and unique paint formulation provide exceptional reflectivity in a matte finish for a soft visual image and balanced basket and reflector illumination
- Completely recessed, provides a clean ceiling with uniform illumination at mounting heights as low as 8 feet
- QR code traceability
- Integral battery pack optional on most models
- Compatible with Dual-Lite inverters
- Recessed, surface or cable mount
- DesignLights Consortium® (DLC) qualified
- Five year warranty (Terms and Conditions apply)

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Luminaire housing and end caps are die formed code gauge cold rolled steel. The sturdy reflector is stiffened with linear forms, profiled to a precision curve. Perforated basket with high transmission overlay for improved optical efficiency plus lamp obscuration. Basket and all reflective surfaces are finished after fabrication with unique formula high reflectivity matte white paint for soft, uniform indirect illumination. Thermoplastic light traps snap into the housing at both ends of the basket to prevent light leaks. Basket hinges down for easy access to center wireway.

INSTALLATION

An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard. Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane. A Flange Kit (FK) accessory is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement below ceiling plane. Cable Mount (CM) option allows suspension below ceiling plane.

CERTIFICATION

All luminaires are built to UL1598 and 2108 standards, and bear appropriate CSA labels. Damp location is standard. Emergency-equipped fixtures labeled UL 924 and Dry Location unless specified. Adheres to LM79, LM80, and TM21 industry standards. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

IC RATING

IC label is standard for recessed products. IC label is void on VL if product is installed on site with through wiring.

WARRANTY

Five year warranty (Terms and Conditions apply).

ORDERING INFORMATION

EXAMPLE LSTE22-35HLG-MPO-ESDU

MODEL	COLOR TEMP	LUMEN OUTPUT	SHIELDING	DRIVER	OPTIONS
LSTE Stratus® LED Recessed Architectural	30 3000K 35 3500K 40 4000K 50 5000K	VW Very Low Watt MW Medium Low Watt LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen See Product Availability Table below.	MPO Metal Perf w/ Overlay CEILING TYPE G Grid Lay-in¹ SM Surface Mount CM Cable Suspended Mount²	E Fixed Output ESD Step Dimming³ ED 0-10V Dimming ED1 0-10V 1% Dimming LUTH Lutron H Series 1% Dimming³⁴ LUTS Lutron S Series 5% Dimming³⁴	ELL14 Emergency Battery Pack Installed, 1400 Lumens³⁴ C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex GLR Fast Blow Fuse CP Chicago Plenum NYC NYC Compliant EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.) INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.) AM Antimicrobial® Paint
SIZE	VOLTAGE				
22 2' x 2'	U 120V-277V 347 347V				

PRODUCT AVAILABILITY				
SIZE	OUTPUT	LUMENS	WATTS	LPW
22	VW	1575-1700	18	88-96
22	MW	1925-2075	22	88-95
22	LW	2475-2700	29	86-93
22	ML	3325-3625	40	83-91
22	HL	3500-3800	42	84-91
22	VL	4175-4700	52	81-90

Nominal lumen range represents 3000K through 5000K. Lumens vary according to color temperatures and other factors. See specific photometric test(s).

2X2 DRIVER AVAILABILITY TABLE						
	VW	MW	LW	ML	HL	VL
E	X	X	X	X	X	X
ED	X	X	X	X	X	X
ED1	X	X	X	X	X	X
ESD			X	X	X	
LUTS	X	X	X	X		
LUTH	X	X	X	X		

LUTS and LUTH not available in 347V

ACCESSORIES (ORDER SEPARATELY)

FK22 2' x 2' Single Flange Kit (Shipped separately)

CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3 Wire

¹ For drywall, order G with Flange Kit Accessory.

² Order hanger accessories separately

³ Not available in 347V

⁴ For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative

For questions about configuration options, contact Hubbell Representative.



HUBBELL
Lighting

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LSTE22-40MLG-MPO-EDU

Notes:**Type:****FF1**

LAIHOU18-45878

Columbia

LIGHTING

LSTE22

2' x 2' Stratus® LED Architectural Recessed

Test #16059 Test Date 3/31/2016

PHOTOMETRIC DATA**LUMINAIRE DATA**

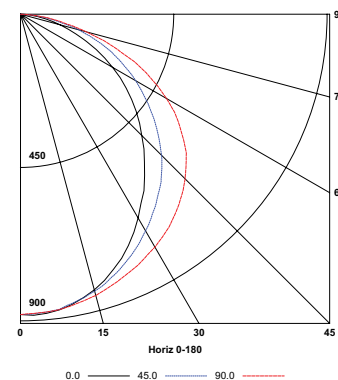
Luminaire	LSTE22-35LWG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x2 with Perforated Basket and Overlay
Ballast	XI040C110V54BPT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	2535
Watts	29.30
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.17 90° = 1.34
Luminous Opening in Feet	Length: 1.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	680	26.8	26.8
0-40	1113	43.9	43.9
0-60	1985	78.3	78.3
0-90	2535	100.0	100.0
0-180	2535	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	87
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.76 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #16060 Test Date 3/31/2016

LUMINAIRE DATA

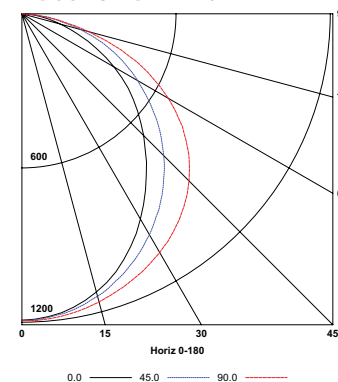
Luminaire	LSTE22-35MLG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x2 with Perforated Basket and Overlay
Ballast	XI040C110V54BPT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3395
Watts	39.90
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.15 90° = 1.34
Luminous Opening in Feet	Length: 1.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	918	27.1	27.1
0-40	1501	44.2	44.2
0-60	2665	78.5	78.5
0-90	3395	100.0	100.0
0-180	3395	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	85
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.82 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #16061 Test Date 3/31/2016

LUMINAIRE DATA

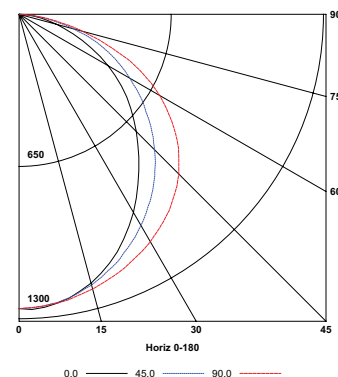
Luminaire	LSTE22-35HLG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x2 with Perforated Basket and Overlay
Ballast	XI054C150V054DNT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3567
Watts	41.70
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.16 90° = 1.33
Luminous Opening in Feet	Length: 1.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	966	27.1	27.1
0-40	1578	44.2	44.2
0-60	2800	78.5	78.5
0-90	3567	100.0	100.0
0-180	3567	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	86
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.82 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LSTE22-40MLG-MPO-EDU

Notes:

Type:**FF1**

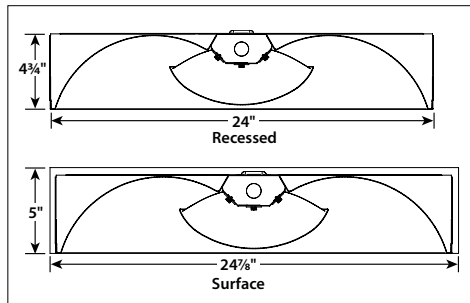
LAIHOU18-45878

Columbia

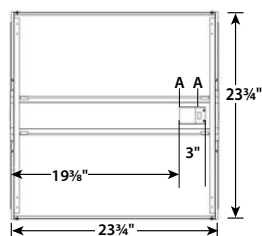
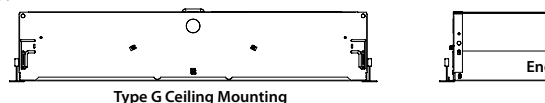
LIGHTING

LSTE22

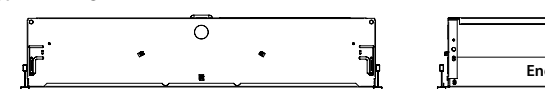
2' x 2' Stratus® LED Architectural Recessed

DIMENSIONAL DATA**Top View****Surface K.O. Dimensions**

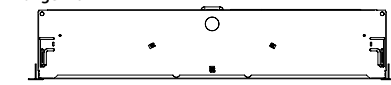
A: 2" x 3" Access with (2) 7/8" Mount Supply Knockouts

**NOTE:** All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.**CEILING COMPATIBILITY****Type G Side****Type G Ceiling Mounting**

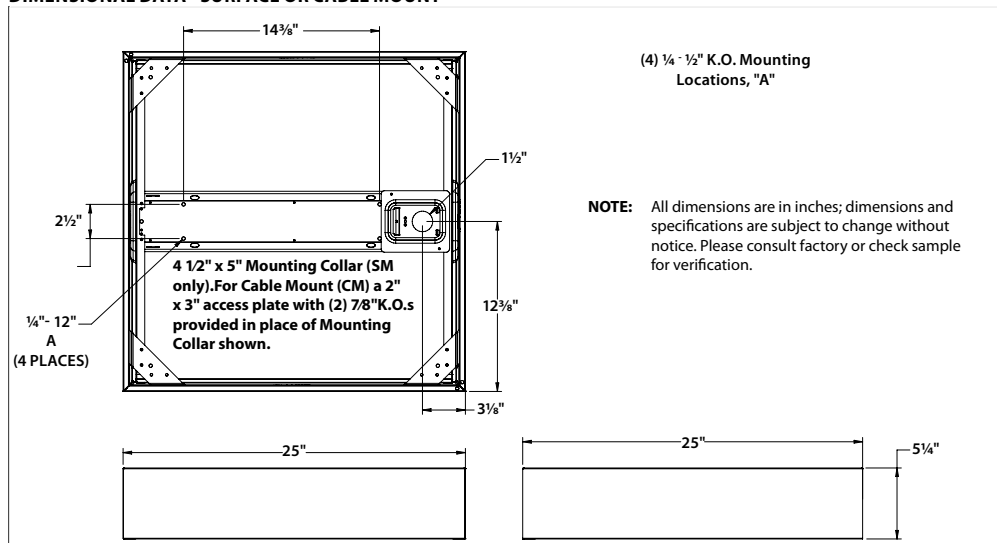
For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum heights of 1 1/2" allowed.

Type SG Ceiling**Type SG Ceiling Mounting**

For 3/4" slot grid type ceilings. Luminaire will be recessed 3/8" horizontal surface of the tee.

FK Flange Kit

For hard ceiling applications, fixtures must be ordered with a flange kit that wires directly into the concealed ceiling opening for a clean finished appearance. For row configurations contact your local Columbia Representative.

Row cut out dimensions using FK22s & FKCR adapters:**Width** 24 3/8", **Length** [24" x (# in row)] + 3/8".**Example:** (24" x 2) + 3/8" = 48 3/8"**Flange kit cut out dimension for single FK22 only:** 24 3/8" x 24 3/8"**DIMENSIONAL DATA - SURFACE OR CABLE MOUNT**(4) 1/4" x 1/2" K.O. Mounting
Locations, "A"**NOTE:** All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.**SURFACE MOUNT**

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock outs, 1/4" to 1/2" provided as shown, marked "A".

CABLE MOUNT

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2C3F-KIT 48" cable mount kit. Includes 3 wire feed cord. For other wiring needs, contact Hubbell representative.



Columbia LIGHTING

LSTE24

2' x 4' Stratus® LED Architectural Recessed

LED



createchange

FEATURES

- Direct/indirect luminaire with popular metal perforated basket shielding
- 60,000 hour LEDs at L80 (up to 200,000 projected life) for reduced maintenance
- Four LED color choices and 80 CRI
- Eight lumen packages
- Multiple driver options to satisfy different applications
- LED modules and electrical accessible from below
- Precision optical design produces high efficiency in a high visual comfort architecturally styled direct/indirect distribution
- Optimized coating process and unique paint formulation provide exceptional reflectivity in a matte finish for a soft visual image and balanced basket and reflector illumination
- Completely recessed, provides a clean ceiling with uniform illumination at mounting heights as low as 8 feet
- QR code traceability
- Integral battery pack optional on most models
- Compatible with Dual-Lite inverters
- Recessed, surface or cable mount
- DesignLights Consortium® (DLC) qualified
- Five year warranty (Terms and Conditions apply)

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Luminaire housing and end caps are die formed code gauge cold rolled steel. The sturdy reflector is stiffened with linear forms, profiled to a precision curve. Perforated basket with high transmission overlay for improved optical efficiency plus lamp obscuration. Basket and all reflective surfaces are finished after fabrication with unique formula high reflectivity matte white paint for soft, uniform indirect illumination. Thermoplastic light traps snap into the housing at both ends of the basket to prevent light leaks. Basket hinges down for easy access to center wireway.

INSTALLATION

An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard. Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane. A Flange Kit (FK) accessory is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement below ceiling plane. Cable Mount (CM) option allows suspension below ceiling plane.

CERTIFICATION

All luminaires are built to UL1598 and 2108 standards, and bear appropriate CSA labels. Damp location is standard. Emergency-equipped fixtures labeled UL 924 and Dry Location unless specified. Adheres to LM79, LM80, and TM21 industry standards. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

IC RATING

IC label is standard for recessed products. Note that IC label is void on HL, VL, and XL if product is installed on site with through wiring.

WARRANTY

Five year warranty (Terms and Conditions apply).

ORDERING INFORMATION

EXAMPLE LSTE24-35MLG-MPO-ESDU

LSTE

24 -

MODEL

LSTE Stratus® LED Recessed Architectural

COLOR TEMP

30 3000K
35 3500K
40 4000K
50 5000K

LUMEN OUTPUT

XW Extra Low Watt
VW Very Low Watt
MW Medium Low Watt
LW Low Watt
ML Medium Lumen
HL High Lumen
VL Very High Lumen
XL Extra High Lumen

SHIELDING

MPO Metal Perf w/ Overlay

CEILING TYPE

G Grid Lay-in¹
SM Surface Mount
CM Cable Suspended Mount²

DRIVER

E Fixed Output
ESD Step Dimming³
ED 0-10V Dimming
ED1 0-10V 1% Dimming
LUTH Lutron H Series 1% Dimming^{3,4}
LUT5 Lutron 5 Series 5% Dimming^{3,4}

OPTIONS

ELL14 Emergency Battery Pack Installed, 1400 Lumens^{3,4}
C388 3-Wire Flex
C488 4-Wire Flex
C588 5-Wire Flex
GLR Fast Blow Fuse
CP Chicago Plenum
NYC NYC Compliant
EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.)
INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.)
AM Antimicrobial® Paint

SIZE

24 2' x 4'

VOLTAGE

U 120V-277V
347 347V

PRODUCT AVAILABILITY

SIZE	OUTPUT	LUMENS	WATTS	LPW
24	XW	2325-2525	24	98-106
24	VW	3275-3550	33	99-108
24	MW	3625-3950	37	98-107
24	LW	4200-4550	43	98-106
24	ML	4725-5125	50	95-103
24	HL	5525-6000	61	91-98
24	VL	7025-7650	76	92-100
24	XL	7900-8575	88	90-98

2X4 DRIVER AVAILABILITY TABLE

	XW	VW	MW	LW	ML	HL	VL	XL
E	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X
ESD			X	X	X	X	X	X
LUT5		X	X	X	X	X	X	
LUTH		X	X	X	X	X	X	

LUT5 and LUTH not available in 347V

Nominal lumen range represents 3000K through 5000K.
Lumens vary according to color temperatures and other factors.
See specific photometric test(s).

1 For drywall, order G with Flange Kit Accessory.
2 Order hanger accessories separately
3 Not available in 347V
4 For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative

For questions about configuration options, contact Hubbell Representative



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LSTE24-40HLG-MPO-EDU

Notes:**Type:****FG**

LAIHOU18-45878

Columbia

LIGHTING

LSTE24

2' x 4' Stratus® LED Architectural Recessed

Test #16062 Test Date 3/31/2016

PHOTOMETRIC DATA**LUMINAIRE DATA**

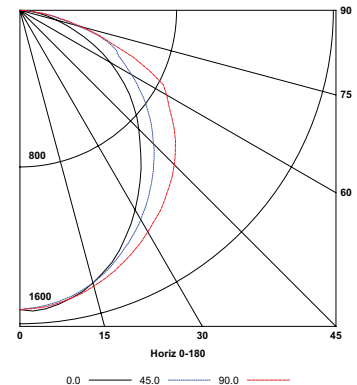
Luminaire	LSTE24-35LWG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x4 with Perforated Basket and Overlay
Ballast	XI054C150V054DNT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4285
Watts	43.20
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.15 90° = 1.27
Luminous Opening in Feet	Length: 1.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1158	27.0	27.0
0-40	1880	43.9	43.9
0-60	3337	77.9	77.9
0-90	4285	100.0	100.0
0-180	4285	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	99
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.40 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #16063 Test Date 3/31/2016

LUMINAIRE DATA

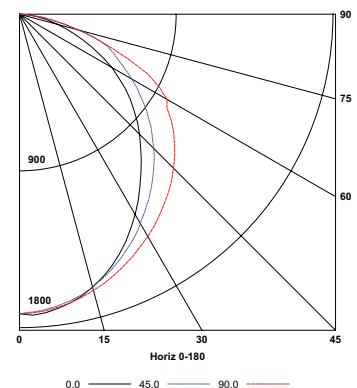
Luminaire	LSTE24-35MLG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x4 with Perforated Basket and Overlay
Ballast	XI054C150V054DNT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4818
Watts	49.60
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.15 90° = 1.28
Luminous Opening in Feet	Length: 3.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1303	27.0	27.0
0-40	2116	43.9	43.9
0-60	3757	78.0	78.0
0-90	4818	100.0	100.0
0-180	4818	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	97
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.50 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #16064 Test Date 3/31/2016

LUMINAIRE DATA

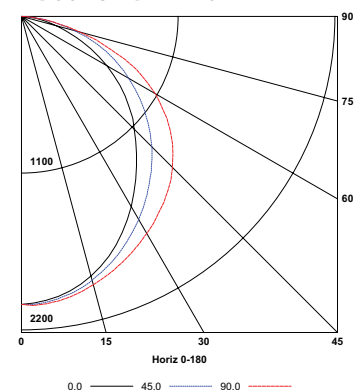
Luminaire	LSTE24-35HLG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x4 with Perforated Basket and Overlay
Ballast	XI040C110V054BPT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5630
Watts	61.40
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.14 90° = 1.30
Luminous Opening in Feet	Length: 3.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1536	27.3	27.3
0-40	2498	44.4	44.4
0-60	4425	78.6	78.6
0-90	5630	100.0	100.0
0-180	5630	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	92
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.61 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

HUBBELL
Lighting

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LSTE24-40HLG-MPO-EDU

Notes:**Type:****FG**

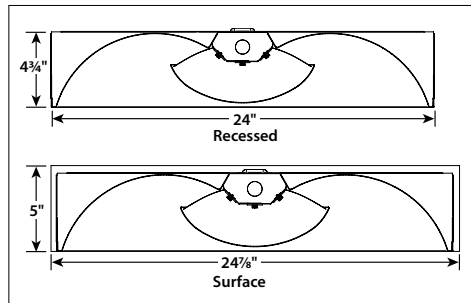
LAIHOU18-45878

Columbia

LIGHTING

LSTE24

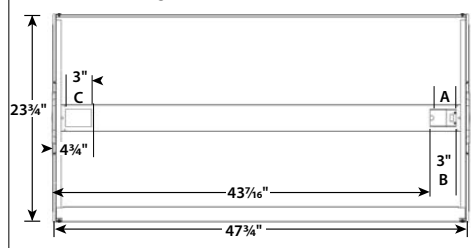
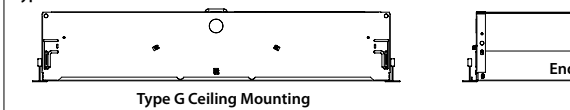
2' x 4' Stratus® LED Architectural Recessed

DIMENSIONAL DATA**Top View****Surface Mount K.O. Dimensions**

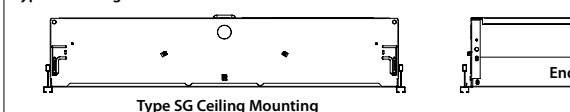
A: 7/8" K.O.

B: 2" x 3" Access (Cover Removed)

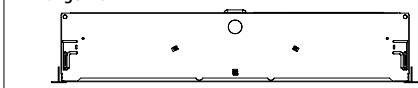
C: 2" x 3" Rectangular Knockout

**NOTE:** All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.**CEILING COMPATIBILITY****Type G Side**

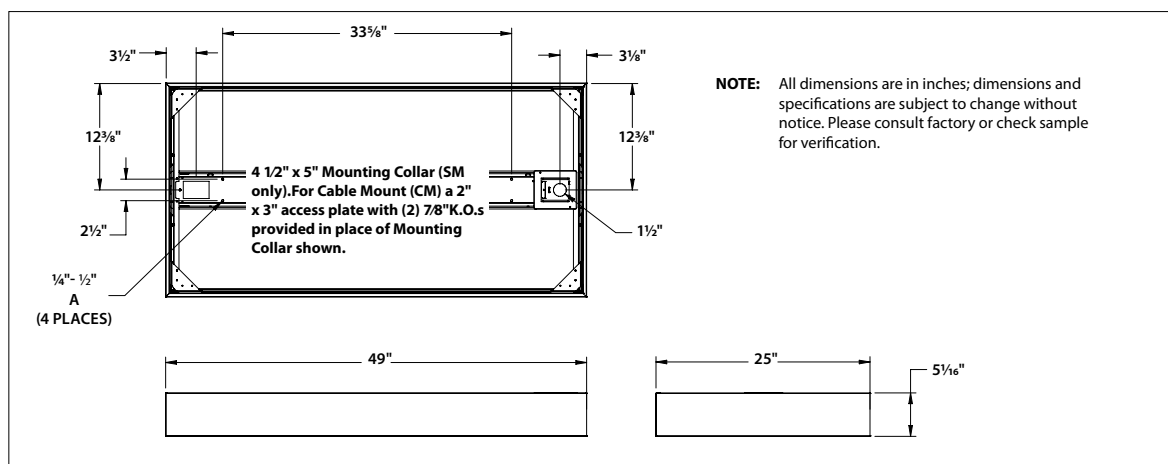
For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum heights of 1 1/2" allowed.

Type SG Ceiling

For 5/8" slot grid type ceilings. Luminaire will be regressed 3/8" horizontal surface of the tee.

FK Flange Kit

For hard ceiling applications, fixtures must be ordered with a flange kit that wires directly into the concealed ceiling opening for a clean finished appearance. For row configurations contact your local Columbia Representative.

Row cut out dimensions using FK24s & FKCR adapters:**Width 24 3/8", Length [48" x (# in row)] + 3/8".****Example: (48" x 2) + 3/8" = 96 3/8"****Flange kit cut out dimension for single FK24 only: 24 3/8" x 48 3/8"****DIMENSIONAL DATA - SURFACE OR CABLE MOUNT****NOTE:** All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.**SURFACE MOUNT**

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock outs, 1/4" to 1/2" provided as shown, marked "A".

CABLE MOUNT

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2C3F-KIT 48" cable mount kit. Includes 3 wire feed cord. For other wiring needs, contact Hubbell representative.



Columbia LIGHTING

LSTE24

2' x 4' Stratus® LED Architectural Recessed

LED



createchange

FEATURES

- Direct/indirect luminaire with popular metal perforated basket shielding
- 60,000 hour LEDs at L80 (up to 200,000 projected life) for reduced maintenance
- Four LED color choices and 80 CRI
- Eight lumen packages
- Multiple driver options to satisfy different applications
- LED modules and electrical accessible from below
- Precision optical design produces high efficiency in a high visual comfort architecturally styled direct/indirect distribution
- Optimized coating process and unique paint formulation provide exceptional reflectivity in a matte finish for a soft visual image and balanced basket and reflector illumination
- Completely recessed, provides a clean ceiling with uniform illumination at mounting heights as low as 8 feet
- QR code traceability
- Integral battery pack optional on most models
- Compatible with Dual-Lite inverters
- Recessed, surface or cable mount
- DesignLights Consortium® (DLC) qualified
- Five year warranty (Terms and Conditions apply)

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Luminaire housing and end caps are die formed code gauge cold rolled steel. The sturdy reflector is stiffened with linear forms, profiled to a precision curve. Perforated basket with high transmission overlay for improved optical efficiency plus lamp obscuration. Basket and all reflective surfaces are finished after fabrication with unique formula high reflectivity matte white paint for soft, uniform indirect illumination. Thermoplastic light traps snap into the housing at both ends of the basket to prevent light leaks. Basket hinges down for easy access to center wireway.

INSTALLATION

An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard. Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane. A Flange Kit (FK) accessory is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement below ceiling plane. Cable Mount (CM) option allows suspension below ceiling plane.

CERTIFICATION

All luminaires are built to UL1598 and 2108 standards, and bear appropriate CSA labels. Damp location is standard. Emergency-equipped fixtures labeled UL 924 and Dry Location unless specified. Adheres to LM79, LM80, and TM21 industry standards. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

IC RATING

IC label is standard for recessed products. Note that IC label is void on HL, VL, and XL if product is installed on site with through wiring.

WARRANTY

Five year warranty (Terms and Conditions apply).

ORDERING INFORMATION

EXAMPLE LSTE24-35MLG-MPO-ESDU

LSTE

24 -

MODEL

LSTE Stratus® LED Recessed Architectural

COLOR TEMP

30 3000K
35 3500K
40 4000K
50 5000K

LUMEN OUTPUT

XW Extra Low Watt
VW Very Low Watt
MW Medium Low Watt
LW Low Watt
ML Medium Lumen
HL High Lumen
VL Very High Lumen
XL Extra High Lumen

SHIELDING

MPO Metal Perf w/ Overlay

DRIVER

E Fixed Output
ESD Step Dimming¹
ED 0-10V Dimming
ED1 0-10V 1% Dimming
LUTH Lutron H Series 1% Dimming^{3,4}
LUT5 Lutron 5 Series 5% Dimming^{3,4}

OPTIONS

ELL14 Emergency Battery Pack Installed, 1400 Lumens^{3,4}
C388 3-Wire Flex
C488 4-Wire Flex
C588 5-Wire Flex
GLR Fast Blow Fuse
CP Chicago Plenum
NYC NYC Compliant
EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.)
INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.)
AM Antimicrobial® Paint

SIZE

24 2' x 4'

CEILING TYPE

G Grid Lay-in¹
SM Surface Mount
CM Cable Suspended Mount²

VOLTAGE

U 120V-277V
347 347V

PRODUCT AVAILABILITY

SIZE	OUTPUT	LUMENS	WATTS	LPW
24	XW	2325-2525	24	98-106
24	VW	3275-3550	33	99-108
24	MW	3625-3950	37	98-107
24	LW	4200-4550	43	98-106
24	ML	4725-5125	50	95-103
24	HL	5525-6000	61	91-98
24	VL	7025-7650	76	92-100
24	XL	7900-8575	88	90-98

2X4 DRIVER AVAILABILITY TABLE

	XW	VW	MW	LW	ML	HL	VL	XL
E	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X
ESD			X	X	X	X	X	X
LUT5		X	X	X	X	X	X	
LUTH		X	X	X	X	X	X	

LUT5 and LUTH not available in 347V

ACCESSORIES (ORDER SEPARATELY)

FK24 2' x 4' Single Flange Kit (Shipped separately)
CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3 Wire

Nominal lumen range represents 3000K through 5000K. Lumens vary according to color temperatures and other factors. See specific photometric test(s).

¹ For drywall, order G with Flange Kit Accessory.
² Order hanger accessories separately
³ Not available in 347V
⁴ For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative

For questions about configuration options, contact Hubbell Representative



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LSTE24-40MLG-MPO-EDU

Notes:**Type:****FG1**

LAIHOU18-45878

Columbia

LIGHTING

LSTE24

2' x 4' Stratus® LED Architectural Recessed

Test #16062 Test Date 3/31/2016

PHOTOMETRIC DATA**LUMINAIRE DATA**

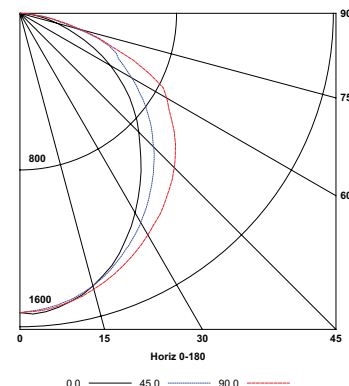
Luminaire	LSTE24-35LWG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x4 with Perforated Basket and Overlay
Ballast	XI054C150V054DNT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4285
Watts	43.20
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.15 90° = 1.27
Luminous Opening in Feet	Length: 1.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1158	27.0	27.0
0-40	1880	43.9	43.9
0-60	3337	77.9	77.9
0-90	4285	100.0	100.0
0-180	4285	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	99
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.40 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #16063 Test Date 3/31/2016

LUMINAIRE DATA

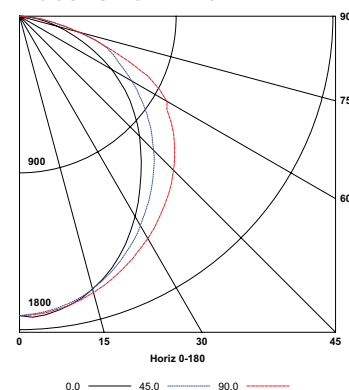
Luminaire	LSTE24-35MLG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x4 with Perforated Basket and Overlay
Ballast	XI054C150V054DNT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4818
Watts	49.60
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.15 90° = 1.28
Luminous Opening in Feet	Length: 3.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1303	27.0	27.0
0-40	2116	43.9	43.9
0-60	3757	78.0	78.0
0-90	4818	100.0	100.0
0-180	4818	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	97
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.50 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #16064 Test Date 3/31/2016

LUMINAIRE DATA

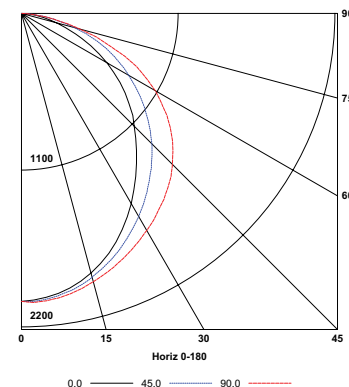
Luminaire	LSTE24-35HLG-MPO-EDU LSTE Stratus E-Series LED, Recessed Architectural 2x4 with Perforated Basket and Overlay
Ballast	XI040C110V054BPT1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5630
Watts	61.40
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.14 90° = 1.30
Luminous Opening in Feet	Length: 3.92 Width: 1.92 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1536	27.3	27.3
0-40	2498	44.4	44.4
0-60	4425	78.6	78.6
0-90	5630	100.0	100.0
0-180	5630	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	92
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.61 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

HUBBELL
Lighting

2' x 4' Stratus® LED Architectural Recessed



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

MUS4-HC-L1-40-A-UN-RS

Notes:

Type:**FM**

LAIHOU18-45878

STARMed MUS 2-3-4

HEALTHCARE SERIES

UNDER CABINET LUMINAIRE

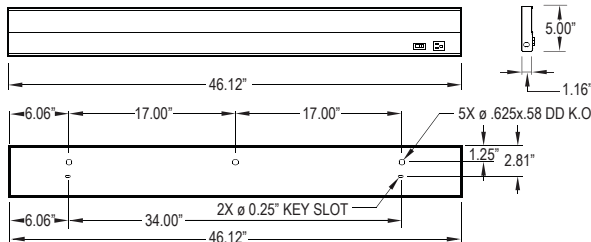
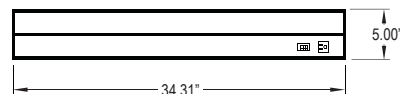
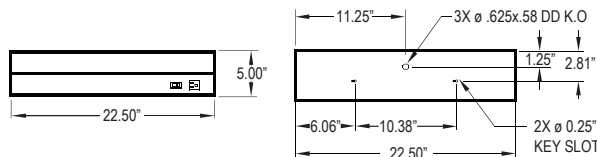
FLUORESCENT / LED



Made in America



PROJECT:
TYPE:
PRODUCT:
APPROVED:
DATE:

DIMENSION DATA**MUS4****MUS3****MUS2****FEATURES**

The New Star "Star Med MUS 2-3-4" Healthcare fixture is designed for use in patient rooms, surgical suites, and medical settings

- Excellent task lighting
- Available in 2', 3' and 4' lengths
- Solid front integrates with casework & reduces glare
- Easy access to electrical compartment
- T5 and LED
- Can be continuous row mounted

APPLICATION

- Patient Rooms
- Nurse Stations
- Desk Lighting
- Office Cabinet Lighting
- Laboratorys
- Research Facilities
- Kitchens
- Backlighting
- Cove Lighting
- Shelf Lighting
- Display Cases

SPECIFICATION**HOUSING:**

20 gauge formed cold rolled steel housing
seamed welded & ground smooth (standard)
Aluminium option available

FINISH:

White Antimicrobial powdercoat finish
following an iron phosphate pre-treatment

LENS:

.125 thk. Prismatic Acrylic

LABEL:

Damp
Location

ELECTRONICS:

Electronic Ballast <10% THD (standard)
Constant Current Driver
Lamp by others

ORDERING INFORMATION

Product Family	Housing	#Lamps	Lamp Type	Lens
MUS_				A
MUS2 MUS3 MUS4	HC = Housing 20 Gauge CRS Standard HA = Housing 16 Gauge Aluminum	Fluorescent: 2-3-4: 1 = 1 Lamp LED: 2FT. Fixture L1 = LED 1 Rw(8.0W) Δ	Fluorescent 2-3-4: 14 = Lin 14W T5(MUS2) 21 = Lin 21W T5(MUS3) 28 = Lin 28W T5(MUS4)	A = .125 Prismatic Acrylic
		LED: 3FT. Fixture L1 = LED 1 Rw(12.0W) Δ LED: 4FT. Fixture L1 = LED 1 Rw(15.0 W) Δ	LED 2-3-4: 30 = White 3000° K 35 = White 3500° K 40 = White 4000° K	

Voltage	Options
12 = 120V 27 = 277V 34 = 347V ♦ UN = Universal (120V-277V)	FZ = Fuse * RW = Row Mounting ** RS = Rocker Switch (120V only) CO = Convenience Outlet (120V only)
* Cannot use with Universal Voltage ** Consult factory for row mounting configurations Δ Not Available in 347V	OC = Motion Sensor(Integral) Δ CP = 6 FT. Cord with Plug (120V only) Specify Location - R (Right)-L (Left)-C (Center) DM = Dimming LED Driver • ▲ ♦ Housing size for 347V is 1.50" deep • MUS2 uses CV Driver

Notes:

Specifications and Dimensions are subject to change without notice. For additional options and dimensional details please consult your New Star Lighting Representative. For specific electronic ballast, specify brand and catalog number.

New Star
www.newstarlighting.com

New Star - 4000 S. Bell St. - Chicago, IL 60609 - TEL (773) 847-1400 - FAX (773) 254-6811 - V013



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

MUS3-HC-L1-40-A-UN-RS

Notes:

Type:**FM**

LAIHOU18-45878

STARMed MUS 2-3-4

HEALTHCARE SERIES

UNDER CABINET LUMINAIRE

FLUORESCENT / LED



Made in America



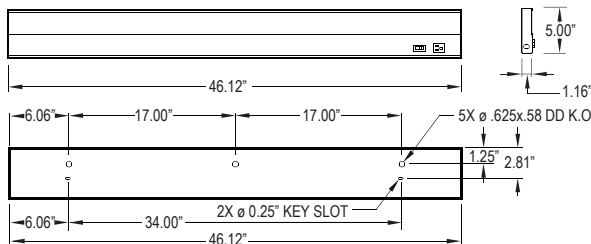
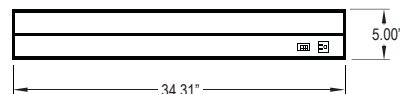
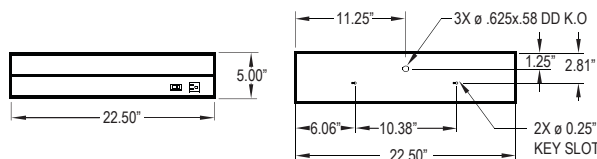
PROJECT:

TYPE:

PRODUCT:

APPROVED:

DATE:

DIMENSION DATA**MUS4****MUS3****MUS2****FEATURES**

The New Star "Star Med MUS 2-3-4" Healthcare fixture is designed for use in patient rooms, surgical suites, and medical settings

- Excellent task lighting
- Available in 2', 3' and 4' lengths
- Solid front integrates with casework & reduces glare
- Easy access to electrical compartment
- T5 and LED
- Can be continuous row mounted

APPLICATION

- Patient Rooms
- Nurse Stations
- Desk Lighting
- Office Cabinet Lighting
- Laboratorys
- Research Facilities
- Kitchens
- Backlighting
- Cove Lighting
- Shelf Lighting
- Display Cases

SPECIFICATION**HOUSING:**

20 gauge formed cold rolled steel housing
seamed welded & ground smooth (standard)
Aluminium option available

FINISH:

White Antimicrobial powdercoat finish
following an iron phosphate pre-treatment

LENS:

.125 thk. Prismatic Acrylic

LABEL:

Damp
Location

ELECTRONICS:

Electronic Ballast <10% THD (standard)
Constant Current Driver
Lamp by others

ORDERING INFORMATION

Product Family	Housing	#Lamps	Lamp Type	Lens
MUS_				A
MUS2	HC = Housing 20 Gauge CRS Standard	Fluorescent: 2-3-4: 1 = 1 Lamp	LED: 3FT. Fixture L1 = LED 1 Rw(12.0W)Δ	A = .125 Prismatic Acrylic
MUS3	HA = Housing 16 Gauge Aluminum	LED: 2FT. Fixture L1 = LED 1 Rw(8.0W) Δ	LED: 2-3-4: 14 = Lin 14W T5(MUS2) 21 = Lin 21W T5(MUS3) 28 = Lin 28W T5(MUS4)	30 = White 3000° K 35 = White 3500° K 40 = White 4000° K
MUS4				

Voltage	Options
12 = 120V 27 = 277V 34 = 347V ♦ UN = Universal (120V-277V)	FZ = Fuse * RW = Row Mounting ** RS = Rocker Switch (120V only) CO = Convenience Outlet (120V only)
* Cannot use with Universal Voltage ** Consult factory for row mounting configurations Δ Not Available in 347V	OC = Motion Sensor(Integral) Δ CP = 6 FT. Cord with Plug (120V only) Specify Location - R (Right)-L (Left)-C (Center) DM = Dimming LED Driver • ▲ ♦ Housing size for 347V is 1.50" deep • MUS2 uses CV Driver

Notes:

Specifications and Dimensions are subject to change without notice. For additional options and dimensional details please consult your New Star Lighting Representative. For specific electronic ballast, specify brand and catalog number.

New Star
www.newstarlighting.com

New Star - 4000 S. Bell St. - Chicago, IL 60609 - TEL (773) 847-1400 - FAX (773) 254-6811 - V013



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

MUS2-HC-L1-40-A-UN-RS

Notes:

Type:**FM**

LAIHOU18-45878

STARMed MUS 2-3-4

HEALTHCARE SERIES

UNDER CABINET LUMINAIRE

FLUORESCENT / LED



Made in America



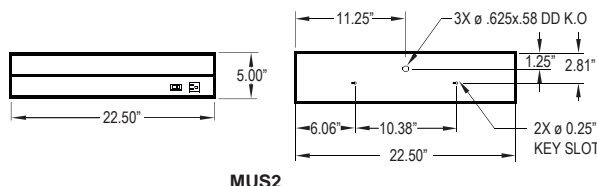
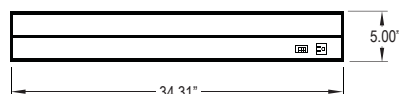
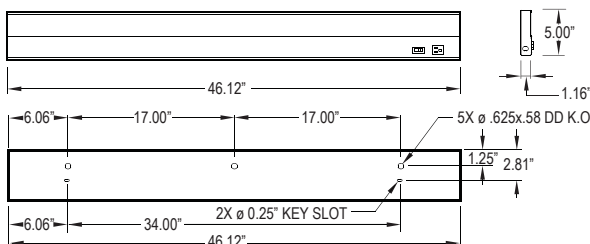
PROJECT:

TYPE:

PRODUCT:

APPROVED:

DATE:

DIMENSION DATA**FEATURES**

The New Star "Star Med MUS 2-3-4" Healthcare fixture is designed for use in patient rooms, surgical suites, and medical settings

- Excellent task lighting
- Available in 2', 3' and 4' lengths
- Solid front integrates with casework & reduces glare
- Easy access to electrical compartment
- T5 and LED
- Can be continuous row mounted

APPLICATION

- Patient Rooms
- Nurse Stations
- Desk Lighting
- Office Cabinet Lighting
- Laboratorys
- Research Facilities
- Kitchens
- Backlighting
- Cove Lighting
- Shelf Lighting
- Display Cases

SPECIFICATION**HOUSING:**

20 gauge formed cold rolled steel housing
seamed welded & ground smooth (standard)
Aluminium option available

FINISH:

White Antimicrobial powdercoat finish
following an iron phosphate pre-treatment

LENS:

.125 thk. Prismatic Acrylic

LABEL:

Damp
Location

ELECTRONICS:

Electronic Ballast <10% THD (standard)
Constant Current Driver
Lamp by others

ORDERING INFORMATION

Product Family	Housing	#Lamps	Lamp Type	Lens
MUS_				A
MUS2	HC = Housing 20 Gauge	Fluorescent:	Fluorescent	A = .125 Prismatic Acrylic
MUS3	CRS Standard	2-3-4:	2-3-4:	
MUS4	HA = Housing 16 Gauge	1 = 1 Lamp	14 = Lin 14W T5(MUS2)	
	Aluminum	LED: 2FT. Fixture	21 = Lin 21W T5(MUS3)	
		L1 = LED 1 Rw(8.0W) Δ	28 = Lin 28W T5(MUS4)	
		LED: 4FT. Fixture	30 = White 3000° K	
		L1 = LED 1 Rw(15.0 W) Δ	35 = White 3500° K	
			40 = White 4000° K	

Voltage	Options
12 = 120V	FZ = Fuse *
27 = 277V	RW = Row Mounting **
34 = 347V ♦	RS = Rocker Switch
UN = Universal	(120V only)
(120V-277V)	CO = Convenience Outlet
	(120V only)
	* Cannot use with Universal Voltage
	** Consult factory for row mounting configurations
	Δ Not Available in 347V
	OC = Motion Sensor(Integral) Δ
	CP = 6 FT. Cord with Plug
	(120V only) Specify Location
	- R (Right)-L (Left)-C (Center)
	DM = Dimming LED Driver • ▲
	♦ Housing size for 347V is 1.50" deep
	• MUS2 uses CV Driver

Notes:

Specifications and Dimensions are subject to change without notice. For additional options and dimensional details please consult your New Star Lighting Representative. For specific electronic ballast, specify brand and catalog number.

New Star
www.newstarlighting.com

New Star - 4000 S. Bell St. - Chicago, IL 60609 - TEL (773) 847-1400 - FAX (773) 254-6811 - V013

Columbia LIGHTING

LED



createchange

FEATURES

- Full distribution provides controlled high angle light for visual comfort
- Long-life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- Lens design and materials provide uniform appearance without pixilation
- Three lens choices
- Three door frame choices
- Excellent color consistency and 82 CRI
- Fixed output or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED boards and drivers from below the ceiling; modular replaceability of components
- Low W/ft2 ratio typically meets the most restrictive lighting power density codes
- All models standard with IC rating
- Recessed, surface or cable mount

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks. Spring loaded latches optional on steel door, standard on aluminum doors.

FINISH

Door frame is powder coat paint after fabrication. All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel. For a post painted housing finish suffix catalog number with PAF.

SHIELDING

Lenses are high transmission extruded acrylic. Lens selections are Pattern 12 frosted acrylic (A12F), Pattern 19 frosted acrylic .156" (A19F), or Smooth Frosted Acrylic (SFA).

INSTALLATION

An access plate or mounting collar is furnished with each fixture for fast wiring connections without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed grid ceilings (G); four integral T-Bar clips standard. A flange kit (FK) option is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement on ceiling plane. Cable Mount option (CM) allows suspension below ceiling plane. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Hubbell Lighting representative.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. UL Sanitation Approved.

WARRANTY

Five year warranty. (Terms and Conditions Apply)

ORDERING INFORMATION

EXAMPLE LLT24-35LWG-FSA12F-EU

LLT	24	-	-	-	-	-
MODEL	COLOR TEMP	CEILING TYPE	SHIELDING	DRIVER	VOLTAGE	OPTIONS
LLT LED Lensed Troffer	30 3000K 35 3500K 40 4000K 50 5000K	G Grid ¹ SM Surface Mount CM Cable Mount ²	A12F Pattern 12 Frosted Acrylic Lens A19F Pattern 19 Frosted Acrylic Lens .156" SFA Smooth Frosted Acrylic	E Fixed Output ED 0-10V Dimming ED1 0-10V 1% Dimming LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology LUTS 5-Series EcoSystem LED driver	U 120V-277V 347 347V	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex ELL14 Emergency Battery Pack Installed, 1400 Lumens ⁴ PAF Paint After Fabrication SLL Spring Loaded Latches GTD Generator Transfer Device G1 Single Gasket (door to housing) G2 Double Gasketing (G1 and lens to door) G3 Triple Gasketing (G2 and housing to ceiling) GLR Fast Blow Fuse EOR End of Row (SM/CM only) ⁵ INT Intermediate (SM/CM only) ⁵
SIZE	LUMEN OUTPUT	DOOR				
24 2' x 4'	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen XL Extra High Lumen	FS White Flush Steel FA White Flush Aluminum ³ RA White Regressed Aluminum ³				
ACCESSORIES (ORDER SEPARATELY)						
FK24 2' x 4' Flange Kit, Single Mounting (for rows add FKCR)						
FKCR Flange Kit Row Adaptor						
CM 48Y25C3F-KIT 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-Wire Feed Cord						

¹ For drywall order Flange Kit accessories separately.

² Order hanger accessories separately.

³ Standard with Spring Loaded Latches.

⁴ For compatibility with Dual-Lite LiteGear™ inverters in lieu of installed battery pack, contact Hubbell Lighting representative.

⁵ Provides ends with wiring access for continuous row mounting. Damp Label - standard. IC Rating - standard.

PRODUCT AVAILABILITY				
SIZE	OUTPUT	NOMINAL LUMENS (3500K)	NOMINAL WATTS	LUMENS PER WATT
2' x 4'	LW	4300	33	130
	ML	4900	38	129
	HL	5600	45	124
	VL	7200	61	118
	XL	8700	75	116

Lumens vary according to color temperature and other factors. See specific photometric test(s).



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LLT24-40HLG-FSA19-EDU

Notes:

Type:**FN**

LAIHOU18-45878

Columbia

LIGHTING

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

PHOTOMETRIC DATA

Test 5602 Test Date 8/17/12

LUMINAIRE DATA

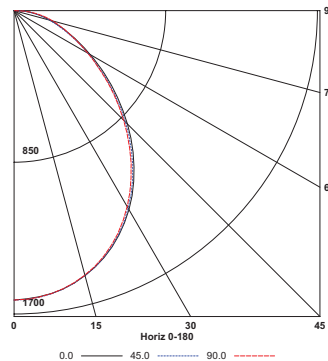
Luminaire	LLT24-35LWG-A12F-ESD LLT LED, Lensed Troffer 2 x 4 LED with frosted A12 lens
Ballast	D255CQ42UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3856
Watts	40.80
Mounting	Recessed
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.18 90° = 1.17
Luminous Opening in Feet	Length: 3.81 Width: 1.81 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1223	31.7	31.7
0-40	1946	50.5	50.5
0-60	3171	82.2	82.2
0-90	3856	100.0	100.0
0-180	3856	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	95
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.55 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	2530	2530	2530	2530	2530
30	2320	2320	2305	2293	2284
40	2113	2109	2086	2062	2054
45	1982	1973	1947	1920	1916
50	1836	1826	1797	1773	1770
55	1687	1671	1641	1622	1622
60	1539	1523	1495	1486	1489
65	1411	1392	1367	1378	1389
70	1314	1296	1278	1314	1337
75	1266	1248	1242	1303	1345
80	1267	1258	1285	1366	1420
85	1361	1343	1415	1558	1594

COEFFICIENTS OF UTILIZATION (%)

RCR	RC	80				70				50				0
	RW	70	50	30	10	70	50	30	10	50	30	10	0	
	1	109	105	100	97	106	102	99	95	98	95	92	85	
	2	100	92	85	80	97	90	84	79	87	82	77	72	
	3	92	81	74	67	89	80	73	67	77	71	66	61	
	4	84	73	64	58	82	71	64	57	69	62	57	53	
	5	78	65	57	50	76	64	56	50	62	55	50	46	
	6	72	59	51	44	70	58	50	44	56	49	44	41	
	7	67	54	45	39	65	53	45	39	52	44	39	37	
	8	63	49	41	35	61	49	41	35	47	40	35	33	
9	59	45	37	32	57	45	37	32	44	37	32	30		
10	55	42	34	29	54	42	34	29	41	34	29	27		

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

LUMINAIRE DATA

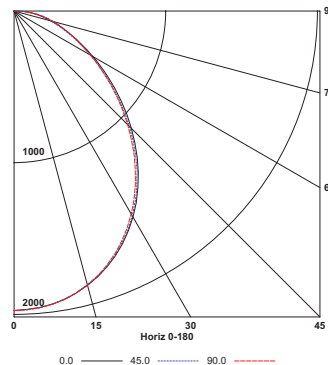
Luminaire	LLT24-35MLG-A12F-ESD LLT LED, Lensed Troffer 2 x 4 LED with frosted A12 lens
Ballast	D310CQ50UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4696
Watts	51.40
Mounting	Recessed
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.18 90° = 1.17
Luminous Opening in Feet	Length: 3.81 Width: 1.81 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1489	31.7	31.7
0-40	2370	50.5	50.5
0-60	3862	82.2	82.2
0-90	4696	100.0	100.0
0-180	4696	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	91
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.61 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	3081	3081	3081	3081	3081
30	2824	2824	2808	2792	2783
40	2573	2569	2543	2512	2504
45	2413	2406	2373	2342	2335
50	2236	2224	2188	2159	2156
55	2055	2036	2000	1976	1976
60	1876	1854	1820	1807	1814
65	1717	1699	1666	1677	1692
70	1602	1579	1556	1597	1625
75	1538	1520	1514	1586	1628
80	1546	1528	1564	1663	1726
85	1666	1630	1719	1881	1934

COEFFICIENTS OF UTILIZATION (%)

RCR	RC	80				70				50				0
	RW	70	50	30	10	70	50	30	10	50	30	10	0	
	1	109	105	100	97	106	102	99	95	98	95	92	85	
	2	100	92	85	80	97	90	84	79	87	82	77	72	
	3	92	81	74	67	89	80	73	67	77	71	66	61	
	4	84	73	64	58	82	71	64	57	69	62	57	53	
	5	78	65	57	50	76	64	56	50	62	55	50	46	
	6	72	59	51	44	70	58	50	44	56	49	44	41	
	7	67	54	45	39	65	53	45	39	52	44	39	37	
	8	63	49	41	35	61	49	41	35	47	40	35	33	
9	59	45	37	32	57	45	37	32	44	37	32	30		
10	55	42	34	29	54	42	34	29	41	34	29	27		

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance



HUBBELL
Lighting

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LLT24-40HLG-FSA19-EDU

Notes:**Type:****FN**

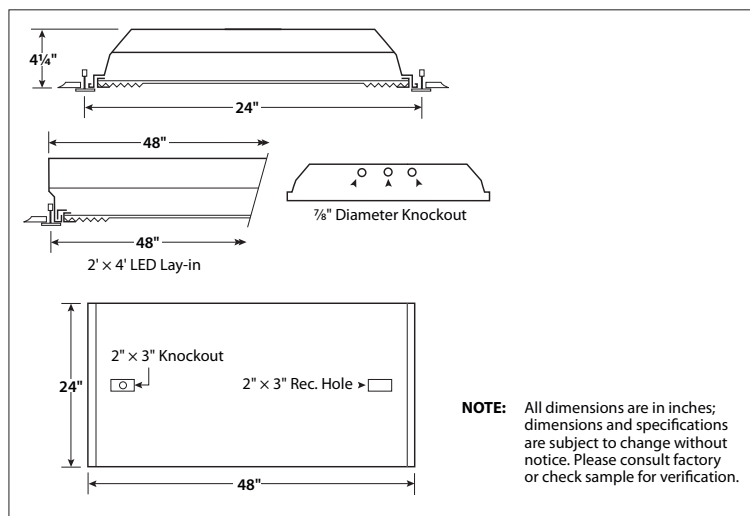
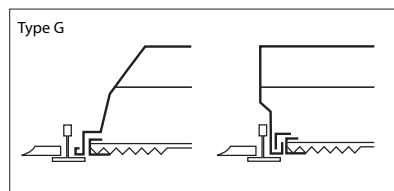
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Columbia

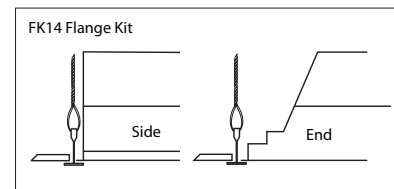
LIGHTING

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

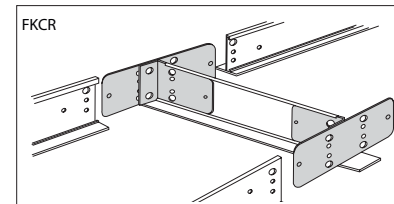
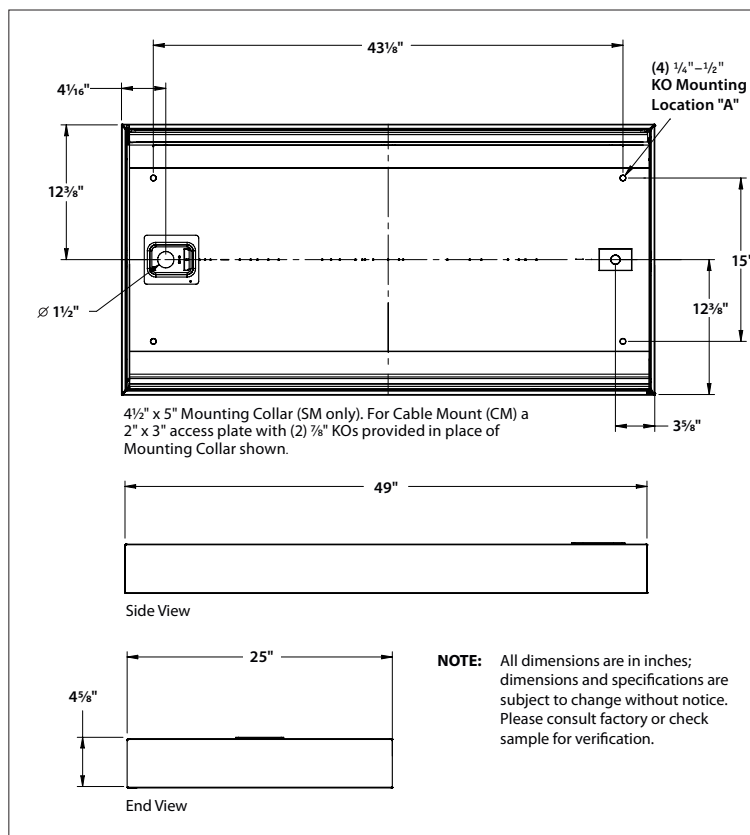
LLT24

DIMENSIONAL DATA**CEILING COMPATIBILITY**

For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed. Shown with flush lens.



For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance. Shown with flush lens.

DIMENSIONAL DATA - SURFACE OR CABLE MOUNT

For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14 & FKCR adapters:
Width 24 3/8", Length [48" x (# in row)] + 3/8" = 96 3/8"

Flange kit rough in dimensions for single unit only: 24 3/8" x 48 3/8"

Surface Mount

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting KOs, 1/4" to 1/2" provided as shown at left, marked "A".

Cable Mount

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2C3F-KIT 48" Cable Mount Kit. Includes 3-wire feed cord. For other wiring needs, contact Hubbell representative. Mounting KOs, 1/4" to 1/2", provided as shown at left, marked "A".



Columbia LIGHTING

LED



createchange

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

LLT24

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks. Spring loaded latches optional on steel door, standard on aluminum doors.

FINISH

Door frame is powder coat paint after fabrication. All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel. For a post painted housing finish suffix catalog number with PAF.

SHIELDING

Lenses are high transmission extruded acrylic. Lens selections are Pattern 12 frosted acrylic (A12F), Pattern 19 frosted acrylic .156" (A19F), or Smooth Frosted Acrylic (SFA).

INSTALLATION

An access plate or mounting collar is furnished with each fixture for fast wiring connections without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed grid ceilings (G); four integral T-Bar clips standard. A flange kit (FK) option is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement on ceiling plane. Cable Mount option (CM) allows suspension below ceiling plane. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Hubbell Lighting representative.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. UL Sanitation Approved.

WARRANTY

Five year warranty. (Terms and Conditions Apply)

FEATURES

- Full distribution provides controlled high angle light for visual comfort
- Long-life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- Lens design and materials provide uniform appearance without pixilation
- Three lens choices
- Three door frame choices
- Excellent color consistency and 82 CRI
- Fixed output or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED boards and drivers from below the ceiling; modular replaceability of components
- Low W/ft2 ratio typically meets the most restrictive lighting power density codes
- All models standard with IC rating
- Recessed, surface or cable mount

ORDERING INFORMATION

EXAMPLE LLT24-35LWG-FSA12F-EU

LLT	24	-	-	-	-	-	-
MODEL	COLOR TEMP	CEILING TYPE	SHIELDING	DRIVER	VOLTAGE	OPTIONS	
LLT LED Lensed Troffer	30 3000K 35 3500K 40 4000K 50 5000K	G Grid ¹ SM Surface Mount CM Cable Mount ²	A12F Pattern 12 Frosted Acrylic Lens A19F Pattern 19 Frosted Acrylic Lens .156" SFA Smooth Frosted Acrylic	E Fixed Output ED 0-10V Dimming ED1 0-10V 1% Dimming LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology LUTS 5-Series EcoSystem LED driver	U 120V-277V 347 347V	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex ELL14 Emergency Battery Pack Installed, 1400 Lumens ⁴ PAF Paint After Fabrication SLL Spring Loaded Latches GTD Generator Transfer Device G1 Single Gasket (door to housing) G2 Double Gasketing (G1 and lens to door) G3 Triple Gasketing (G2 and housing to ceiling) GLR Fast Blow Fuse EOR End of Row (SM/CM only) ⁵ INT Intermediate (SM/CM only) ⁵	
SIZE	LUMEN OUTPUT	DOOR					
24 2' x 4'	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen XL Extra High Lumen	FS White Flush Steel FA White Flush Aluminum ³ RA White Regressed Aluminum ³					
ACCESSORIES (ORDER SEPARATELY)			For more door options contact factory.				
FK24 2' x 4' Flange Kit, Single Mounting (for rows add FKCR)							
FKCR Flange Kit Row Adaptor							
CM 48Y25C3F-KIT 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-Wire Feed Cord							

PRODUCT AVAILABILITY				
SIZE	OUTPUT	NOMINAL LUMENS (3500K)	NOMINAL WATTS	LUMENS PER WATT
2' x 4'	LW	4300	33	130
	ML	4900	38	129
	HL	5600	45	124
	VL	7200	61	118
	XL	8700	75	116

Lumens vary according to color temperature and other factors. See specific photometric test(s).

¹ For drywall order Flange Kit accessories separately.

² Order hanger accessories separately.

³ Standard with Spring Loaded Latches.

⁴ For compatibility with Dual-Lite LiteGear™ inverters in lieu of installed battery pack, contact Hubbell Lighting representative.

⁵ Provides ends with wiring access for continuous row mounting. Damp Label - standard. IC Rating - standard.

Columbia

LIGHTING

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

PHOTOMETRIC DATA

Test 5602 Test Date 8/17/12

LUMINAIRE DATA

Luminaire	LLT24-35LWG-A12F-ESD LLT LED, Lensed Troffer 2 x 4 LED with frosted A12 lens
Ballast	D255CQ42UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3856
Watts	40.80
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.18 90° = 1.17
Luminous Opening in Feet	Length: 3.81 Width: 1.81 Height: 0.00

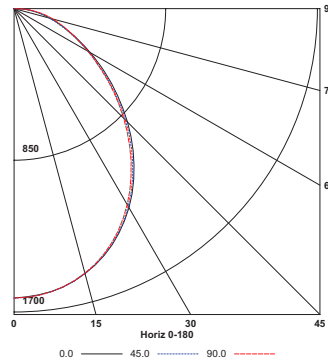
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1223	31.7	31.7
0-40	1946	50.5	50.5
0-60	3171	82.2	82.2
0-90	3856	100.0	100.0
0-180	3856	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	95
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.55 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT



AVG. LUMINANCE (Candela/Sq. M.)

	0.0	22.5	45.0	67.5	90.0
0	2530	2530	2530	2530	2530
30	2320	2320	2305	2293	2284
40	2113	2109	2086	2062	2054
45	1982	1973	1947	1920	1916
50	1836	1826	1797	1773	1770
55	1687	1671	1641	1622	1622
60	1539	1523	1495	1486	1489
65	1411	1392	1367	1378	1389
70	1314	1296	1278	1314	1337
75	1266	1248	1242	1303	1345
80	1267	1258	1285	1366	1420
85	1361	1343	1415	1558	1594

COEFFICIENTS OF UTILIZATION (%)

RCR	RC	80					70					50					0
	RW	70	50	30	10	70	50	30	10	50	30	10	0				
	1	109	105	100	97	106	102	99	95	98	95	92	85				
	2	100	92	85	80	97	90	84	79	87	82	77	72				
	3	92	81	74	67	89	80	73	67	77	71	66	61				
	4	84	73	64	58	82	71	64	57	69	62	57	53				
	5	78	65	57	50	76	64	56	50	62	55	50	46				
	6	72	59	51	44	70	58	50	44	56	49	44	41				
	7	67	54	45	39	65	53	45	39	52	44	39	37				
	8	63	49	41	35	61	49	41	35	47	40	35	33				
9	59	45	37	32	57	45	37	32	44	37	32	30					
10	55	42	34	29	54	42	34	29	41	34	29	27					

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

LUMINAIRE DATA

Luminaire	LLT24-35MLG-A12F-ESD LLT LED, Lensed Troffer 2 x 4 LED with frosted A12 lens
Ballast	D310CQ50UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4696
Watts	51.40
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.18 90° = 1.17
Luminous Opening in Feet	Length: 3.81 Width: 1.81 Height: 0.00

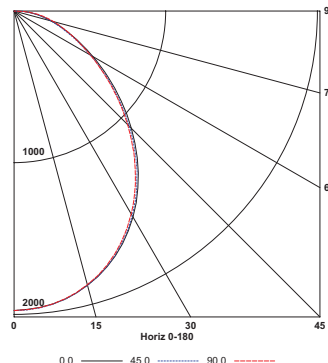
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1489	31.7	31.7
0-40	2370	50.5	50.5
0-60	3862	82.2	82.2
0-90	4696	100.0	100.0
0-180	4696	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	91
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.61 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT



AVG. LUMINANCE (Candela/Sq. M.)

	0.0	22.5	45.0	67.5	90.0
0	3081	3081	3081	3081	3081
30	2824	2824	2808	2792	2783
40	2573	2569	2543	2512	2504
45	2413	2406	2373	2342	2335
50	2236	2224	2188	2159	2156
55	2055	2036	2000	1976	1976
60	1876	1854	1820	1807	1814
65	1717	1699	1666	1677	1692
70	1602	1579	1556	1597	1625
75	1538	1520	1514	1586	1628
80	1546	1528	1564	1663	1726
85	1666	1630	1719	1881	1934

COEFFICIENTS OF UTILIZATION (%)

RCR	RC	80					70					50					0
	RW	70	50	30	10	0	70	50	30	10	0	50	30	10	0		
	1	109	105	100	97	106	102	99	95	98	95	92	85				
	2	100	92	85	80	97	90	84	79	87	82	77	72				
	3	92	81	74	67	89	80	73	67	77	71	66	61				
	4	84	73	64	58	82	71	64	57	69	62	57	53				
	5	78	65	57	50	76	64	56	50	62	55	50	46				
	6	72	59	51	44	70	58	50	44	56	49	44	41				
	7	67	54	45	39	65	53	45	39	52	44	39	37				
	8	63	49	41	35	61	49	41	35	47	40	35	33				
9	59	45	37	32	57	45	37	32	44	37	32	30					
10	55	42	34	29	54	42	34	29	41	34	29	27					

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LLT24-40MLG-FSA19-EDU

Notes:

Type:**FO**

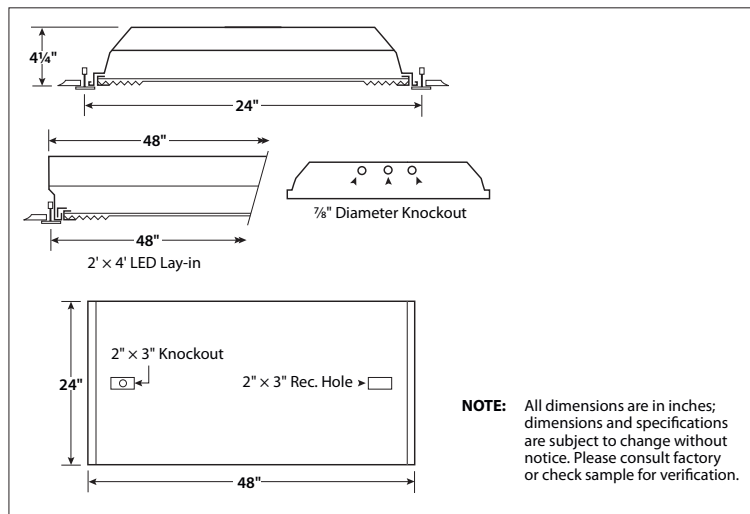
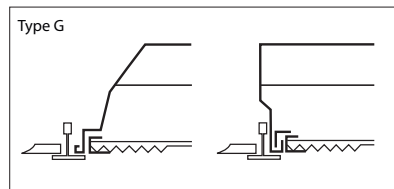
LAIHOU18-45878

Columbia

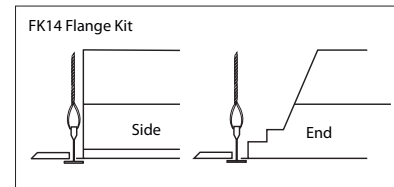
LIGHTING

2' x 4', LED Lensed Troffer with Advanced Solid State Technology

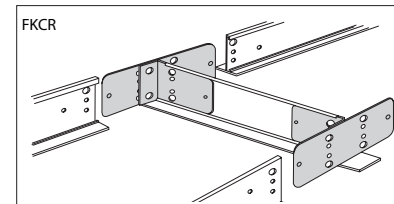
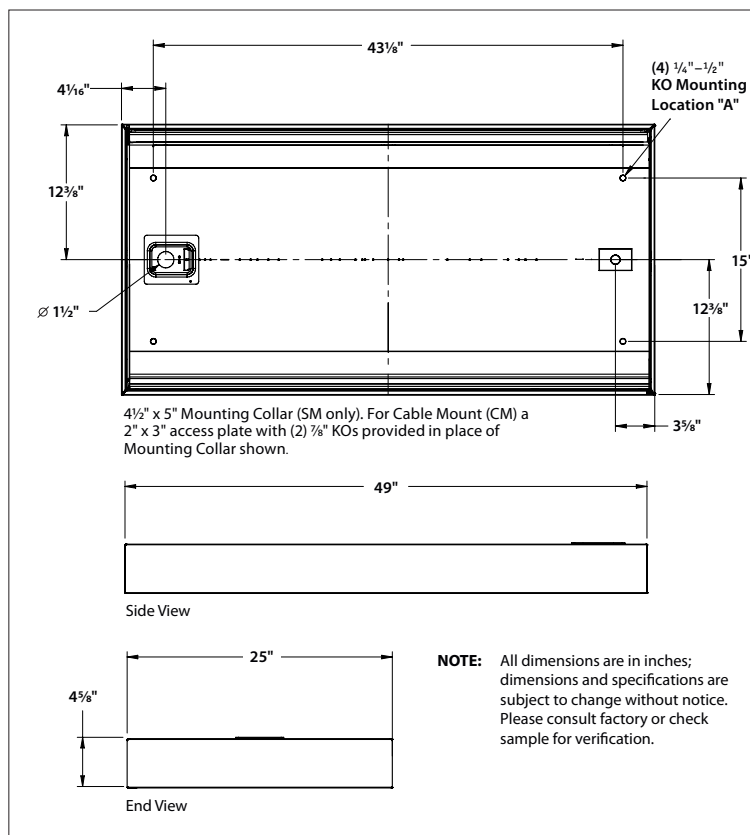
LLT24

DIMENSIONAL DATA**CEILING COMPATIBILITY**

For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed. Shown with flush lens.



For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance. Shown with flush lens.

DIMENSIONAL DATA - SURFACE OR CABLE MOUNT

For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14 & FKCR adapters:
Width 24 3/8", Length [48" x (# in row)] + 3/8" = 96 3/8"

Flange kit rough in dimensions for single unit only: 24 3/8" x 48 3/8"

Surface Mount

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting KOs, 1/4" to 1/2" provided as shown at left, marked "A".

Cable Mount

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2C3F-KIT 48" Cable Mount Kit. Includes 3-wire feed cord. For other wiring needs, contact Hubbell representative. Mounting KOs, 1/4" to 1/2", provided as shown at left, marked "A".



HUBBELL
Lighting

Columbia LIGHTING

LLT14

1' x 4', LED Lensed Troffer with Advanced Solid State Technology

LED



createchange

FEATURES

- Full distribution provides controlled high angle light for visual comfort
- Long-life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- Lens design and materials provide uniform appearance without pixilation
- Three lens choices
- Three door frame choices
- Excellent color consistency and 82 CRI
- Fixed output or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED boards and drivers from below the ceiling; modular replaceability of components
- Low W/Ft2 ratio typically meets the most restrictive lighting power density codes
- Recessed, surface or cable mount
- All models standard with IC rating

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks.

FINISH

Door frame is powder coat paint after fabrication. All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel. For a post painted housing finish suffix catalog number with PAF.

SHIELDING

Lenses are high transmission extruded acrylic. Lens selections are Pattern 12 frosted acrylic (A12F), Pattern 19 frosted acrylic .156" (A19F), or Smooth Frosted Acrylic (SFA).

INSTALLATION

An access plate or mounting collar is furnished with each fixture for fast wiring connections without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed grid ceilings (G). Four integral T-bar clips standard. A flange kit (FK) option is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement on ceiling plane. Cable Mount option (CM) allows suspension below ceiling plane. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Hubbell Lighting representative.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. UL Sanitation Approved.

WARRANTY

Five year warranty. (Terms and Conditions Apply)

ORDERING INFORMATION

EXAMPLE LLT14-35MLG-FSA12F-EU

LLT	14	-	-	-	-	-
MODEL	COLOR TEMP	CEILING TYPE	SHIELDING	DRIVER	VOLTAGE	OPTIONS
LLT LED Lensed Troffer	30 3000K 35 3500K 40 4000K 50 5000K	G Grid ¹ SM Surface Mount CM Cable Mount ²	A12F Pattern 12 Frosted Acrylic Lens A19F Pattern 19 Frosted Acrylic Lens .156" SFA Smooth Frosted Acrylic	E Fixed Output ED 0-10V Dimming LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology LUTS 5-Series EcoSystem LED driver	U 120V-277V 347 347V	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex ELL14 Emergency Battery Pack Installed, 1400 Lumens ³ PAF Paint After Fabrication G1 Single Gasket (door to housing) G2 Double Gasketing (G1 and lens to door) G3 Triple Gasketing (G2 and housing to ceiling) GLR Fast Blow Fuse EOR End of Row (SM/CM only) ⁴ INT Intermediate (SM/CM only) ⁴
SIZE	LUMEN OUTPUT	DOOR				
14 1' x 4'	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen	FS White Flush Steel FA White Flush Aluminum RA White Regressed Aluminum				
ACCESSORIES (ORDER SEPARATELY)						
FK14 1' x 4' Flange Kit, Single Mounting (for rows add FKCR)						
FKCR Flange Kit Row Adaptor						
CM48Y15C3F-KIT 48" Cable Mount Kit for 1' wide Cable Mount fixtures, 3-Wire Feed Cord						

PRODUCT AVAILABILITY				
SIZE	OUTPUT	NOMINAL LUMENS (3500K)	NOMINAL WATTS	LUMENS PER WATT
1' x 4'	LW	1900	22	86
	ML	2400	27	88
	HL	3100	36	86
	VL	3800	45	84

Lumens vary according to color temperature and other factors. See specific photometric test(s).

¹ For drywall order Flange Kit accessories separately.

² Order hanger accessories separately.

³ For compatibility with Dual-Lite LiteGear[®] inverters in lieu of installed battery pack, contact Hubbell Lighting representative.

⁴ Provides ends with wiring access for continuous row mounting. Damp Label - standard. IC Rating - standard.



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LLT14-40MLF-FSA19-EDU

Notes:

Type:**FP**

LAIHOU18-45878

Columbia

LIGHTING

1' x 4', LED Lensed Troffer with Advanced Solid State Technology

PHOTOMETRIC DATA

Test 6007 Test Date 10/24/12

LUMINAIRE DATA

Luminaire	LLT14-35MLG-A12F-ESD
	LLT LED, Lensed Troffer 1 x 4 LED with frosted A12 lens
Ballast	D185CQ30UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	2397
Watts	26.40
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.19 90° = 1.13
Luminous Opening in Feet	Length: 3.81 Width: 0.81 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	786	32.8	32.8
0-40	1241	51.8	51.8
0-60	1989	83.0	83.0
0-90	2397	100.0	100.0
0-180	2397	100.0	100.0

ENERGY DATA

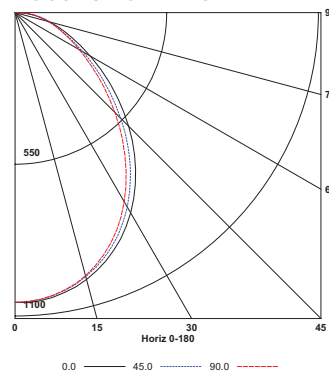
Total Luminaire Efficiency	100%
Total Lumens Per Watt	91
ANSI/IESNA RP-1-2004 Compliance	Yes - VDT Normal Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.61 based on 3000 hrs. and \$0.08 per KWH

COEFFICIENTS OF UTILIZATION (%)

RCR	RW	80				70				50				0
		70	50	30	10	70	50	30	10	50	30	10	0	0
1	109	105	101	97	107	103	99	95	98	95	92	85		
2	100	92	86	81	98	90	85	80	87	82	78	72		
3	92	82	74	68	89	80	73	67	77	71	66	62		
4	85	73	65	59	82	72	64	58	69	63	57	54		
5	78	66	57	51	76	65	57	51	63	56	50	47		
6	73	60	51	45	71	59	51	45	57	50	45	42		
7	68	55	46	40	66	54	46	40	52	45	40	37		
8	63	50	42	36	62	49	42	36	48	41	36	34		
9	59	46	38	33	58	46	38	33	44	37	33	30		
10	55	43	35	30	54	42	35	30	41	34	30	28		

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	3662	3662	3662	3662	3662
30	3375	3335	3274	3206	3186
40	3069	3010	2900	2800	2764
45	2871	2802	2673	2565	2525
50	2648	2572	2431	2322	2284
55	2420	2335	2195	2092	2055
60	2197	2114	1974	1897	1870
65	1989	1915	1799	1758	1750
70	1846	1774	1683	1683	1693
75	1765	1711	1644	1698	1725
80	1768	1727	1707	1788	1868
85	1921	1841	1881	2121	2081

LUMINAIRE DATA

Luminaire	LLT14-35HLG-A12F-ESD
	LLT LED, Lensed Troffer 1 x 4 LED with frosted A12 lens
Ballast	D255CQ42UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3099
Watts	34.70
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.19 90° = 1.13
Luminous Opening in Feet	Length: 3.81 Width: 0.81 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1016	32.8	32.8
0-40	1606	51.8	51.8
0-60	2572	83.0	83.0
0-90	3099	100.0	100.0
0-180	3099	100.0	100.0

ENERGY DATA

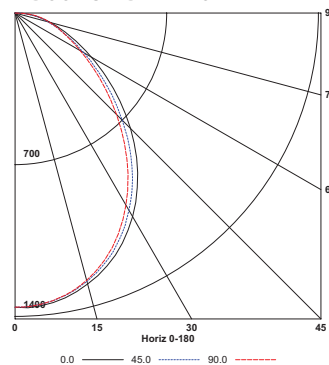
Total Luminaire Efficiency	100%
Total Lumens Per Watt	89
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.70 based on 3000 hrs. and \$0.08 per KWH

COEFFICIENTS OF UTILIZATION (%)

RCR	RW	80				70				50				0
		70	50	30	10	70	50	30	10	50	30	10	0	0
1	109	105	101	97	107	103	99	96	98	95	92	85		
2	100	92	86	81	98	90	85	80	87	82	78	72		
3	92	82	74	68	90	80	73	67	77	71	66	62		
4	85	73	65	59	82	72	64	58	69	63	57	54		
5	78	66	57	51	76	65	57	51	63	56	50	47		
6	73	60	51	45	71	59	51	45	57	50	45	42		
7	68	55	46	40	66	54	46	40	52	45	40	37		
8	63	50	42	36	62	49	42	36	48	41	36	34		
9	59	46	38	33	58	46	38	33	44	37	33	30		
10	55	43	35	30	54	42	35	30	41	34	30	28		

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

INDOOR CANDELA PLOT**AVG. LUMINANCE (Candela/Sq. M.)**

	0.0	22.5	45.0	67.5	90.0
0	4733	4733	4733	4733	4733
30	4366	4313	4233	4148	4120
40	3970	3893	3752	3620	3574
45	3714	3621	3453	3315	3265
50	3429	3326	3147	3001	2952
55	3126	3016	2834	2700	2663
60	2839	2728	2553	2448	2421
65	2583	2476	2327	2270	2261
70	2386	2295	2172	2182	2193
75	2277	2197	2116	2183	2224
80	2290	2230	2209	2310	2410
85	2481	2361	2441	2721	2721



HUBBELL
Lighting



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

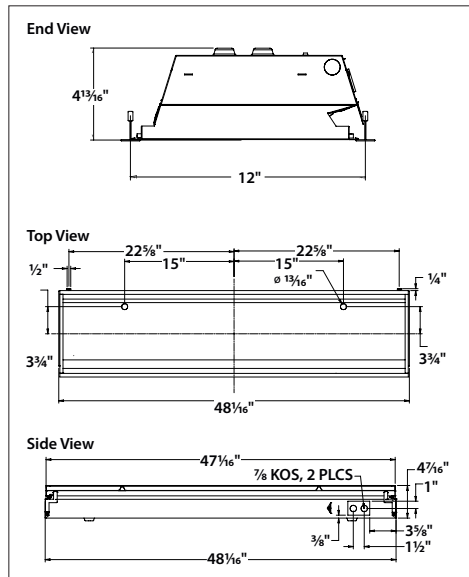
LLT14-40MLF-FSA19-EDU

Notes:

Type:**FP**

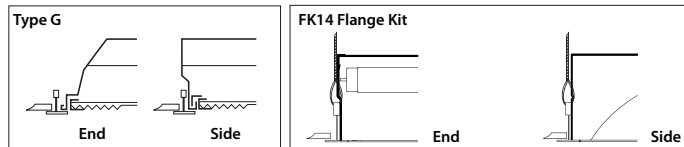
LAIHOU18-45878

Columbia
LIGHTING

1' x 4', LED Lensed Troffer with Advanced Solid State Technology**LLT14****DIMENSIONAL DATA**

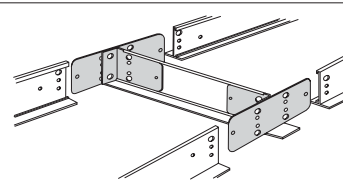
A: 7/8" Diameter knockout
K: 2" x 3" through hole for access plate.

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

CEILING COMPATIBILITY

For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.

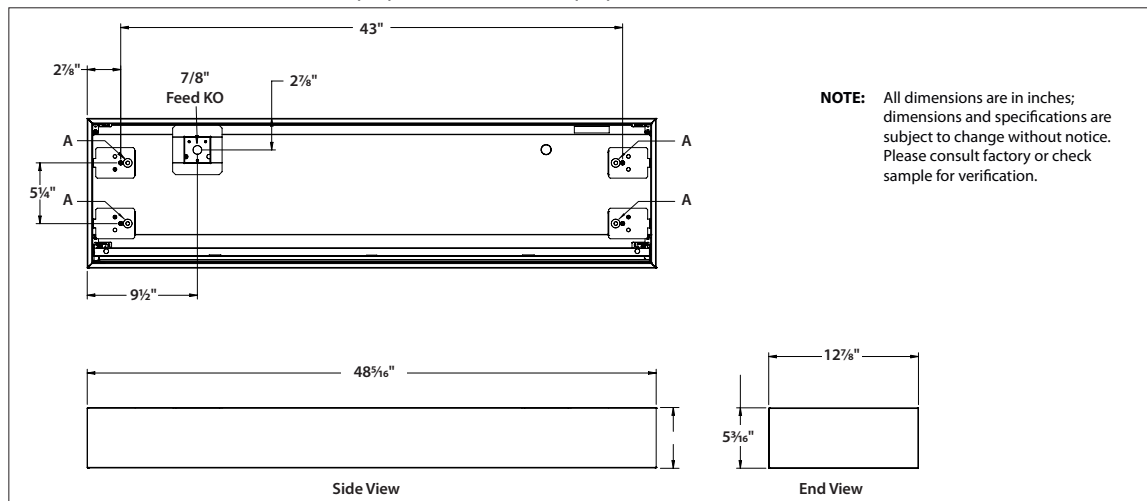
For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

FKCR

For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14s & FKCR adapters:
Width 12 3/8", Length [48" x (# in row)] + 3/8". Example: (48" x 2) + 3/8" = 96 3/8"

Flange kit rough in dimensions for single unit only: 12 3/8" x 48 3/8"

DIMENSIONAL DATA - SURFACE MOUNT (SM) AND CABLE MOUNT (CM)

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

SURFACE MOUNT

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 1/4" to 1/2" provided as shown, marked "A".

CABLE MOUNT

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y1 C3F-KIT 48" cable mount kit. Includes 3 wire feed cord. For other wiring needs, contact Hubbell Lighting representative. Mounting knock-outs, 1/4" to 1/2", provided as shown, marked "A".



HUBBELL
Lighting



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LC8MLDM/8LCML24L40K8-WT

Notes:

Type:

FR

LAIHOU18-45878

**8" LED Downlight****LC8ML**

2400 & 3000 Lumens

120V-277V, 347V

0-10V Dimming

APPLICATIONS:

LiteFrame Commercial LC8ML is a 8" commercial grade LED downlight with available outputs between 2400-3000 lumens. This is suitable to replace most CFL downlighting applications, while realizing substantial energy and maintenance savings. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 35°C (24L) or 25°C (30L). Free Air Flow around fixture is required for optimal life performance. This product is not recommended for use with 3rd party "FIREHAT" or insulation barriers.

HOUSING:

One-piece 22 gauge non-corrosive steel platform. Pre-wired J-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:

High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard. Painted white self-trim (WT) available as option.

LED LIGHT ENGINE:

The LC8ML uses mid power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SDCM color consistency. The use of multiple mid power LEDs allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LEDs. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

LED DRIVER:

The LC8ML utilizes a constant current LED driver that is capable of running both lumen outputs, resulting in a reduction of housing skus and simplified specification. The driver is UL8750, Class II compliant and universal 120V-277V.

DIMMING:

Comes standard with 0-10V dimming, providing flicker-free dimming down to 10%. See list of compatible dimmers on page (3). For the sizing of the control circuit, the dimming circuit may require up to 1.2mA of sink current.

INSTALLATION:

Light commercial bar hangers included. Universal adjustable mounting brackets also accept 1/2" EMT conduit or 1 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6).

CERTIFICATIONS:

CSA certified to US and Canadian safety standards. Suitable for wet locations.

WARRANTY:

5 year warranty. See www.prescolite.com for details.

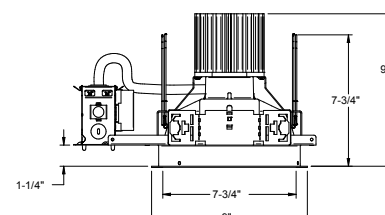
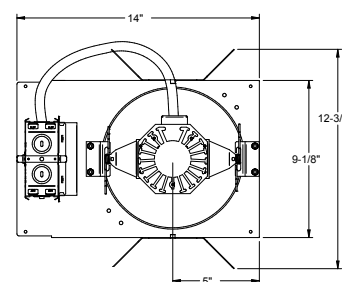
DATE: TYPE:

FIRM NAME:

PROJECT:

LiteFrame

Ceiling Cutout: 8 1/4"
Maximum Ceiling Thickness 1 1/4"
For conversion to millimeters,
multiply inches by 25.4
Not to Scale



Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: LC8MLDM1-8LCML30L35K9WH

HOUSING	DRIVER OPTIONS	VOLTAGE	HOUSING OPTION	TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/COLOR OPTION	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> LC8ML Medium Lumen 0-10V Dimming to 10% 120V-277V	<input type="checkbox"/> DM1 0-10V 1% Dimming	<input type="checkbox"/> 347⁴ 347V	<input type="checkbox"/> CP³ Chicago Plenum	<input type="checkbox"/> 8LCML Medium Lumen Clear Alzak Reflector	<input type="checkbox"/> 24L 2400 Lumen	<input type="checkbox"/> 27K 2700 Kelvin	<input type="checkbox"/> 8 80+ CRI	<input type="checkbox"/> WH Painted Matte White Reflector and Flange	<input type="checkbox"/> WT Painted White Flange only	<input type="checkbox"/> B24 Set of two(2) 24" bar hangers for T-bar ceilings
					<input type="checkbox"/> 30L 3000 Lumen	<input type="checkbox"/> 30K 3000 Kelvin	<input type="checkbox"/> 9² 90+ CRI		<input type="checkbox"/> WF Wide Flange	<input type="checkbox"/> B6 Set of two (2) bar hangers for ceiling joist up to 24" centers
						<input type="checkbox"/> 35K 3500 Kelvin			<input type="checkbox"/> CP³ Chicago Plenum	<input type="checkbox"/> SCABD Sloped ceiling adapter (see note on page 4)
						<input type="checkbox"/> 40K 4000 Kelvin				<input type="checkbox"/> LiteGear¹ Inverter, single phase central lighting, 125VA-250VA
						<input type="checkbox"/> 50K 5000 Kelvin				<input type="checkbox"/> LPS Series¹ LitePower micro-inverter, 20VA-55VA

¹ See Central Inverter compatibility note and web links on page 4.

² Not available in 40K or 50K

³ CP must be selected on both housing and trim

⁴ Not available with CP

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LFR-LED-044

PHOTOMETRIC DATA

LiteFrame - 8" LC8ML Downlight

DRIVER DATA	8LCML24Lxxx	8LCML30Lxxx
Input Voltage	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz
Input Current	0.267 (120v) 0.116 (277v)	0.337 (120v) 0.146 (277v)
Input Power	32.0W	40.4W
Constant Current Output	675mA	675mA
Power Factor	≥0.90	≥0.90
THD	<20%	<20%
EMI Filtering	FCC 47CFR Part 15, Class A	FCC 47CFR Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +25°C
Dimming	0-10V to 10%	0-10V to 10%

Over-voltage, over-current, short-circuit protected

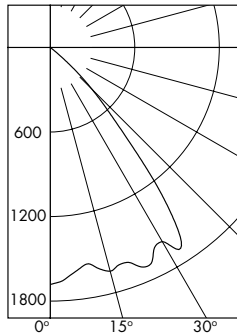
Lumen Multiplier Table

Photometrics for the LC8ML are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.14
4000 Kelvin	1.03
3500 Kelvin	1.00
3000 Kelvin	1.00
2700 Kelvin	0.91

LC8ML 8LCML24L35K8

LED Light Engine: 3500K, 80+ CRI
System Wattage: 32.0W
Fixture Delivered Lumens: 2625
Fixture Efficacy: 82.0
Spacing Criteria: 1.2



CANDELA DISTRIBUTION	
DEG	CANDELA
0	1682
5	1623
15	1644
25	1693
35	1582
45	419
55	6
65	2
75	1
85	1
90	0

Test No. 15.00537

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1373	52.3
0-40	2270	86.5
0-60	2621	99.8
0-90	2625	100.0
90-180	0	0.0
0-180	2625	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	AVERAGE
45°	18266
55°	322
65°	146
75°	119
85°	354

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

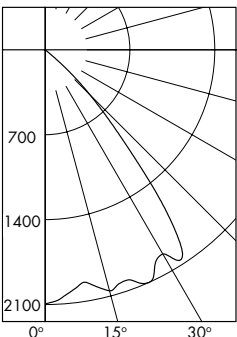
Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																		% Effective Floor Cavity Reflectance																		% Wall Reflectance																																			
	80%						70%						50%						30%						10%						80%						70%						50%						30%						10%																	
	20% Effective Floor Cavity Reflectance																		50% Effective Floor Cavity Reflectance																		70% Effective Floor Cavity Reflectance																		90% Effective Floor Cavity Reflectance																	
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10																																				
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94																																					
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	90	88	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86																																				
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79																																				
4	94	86	80	75	92	85	79	74	82	77	74	80	76	73	78	75	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72																																				
5	89	79	73	68	87	78	72	68	76	71	67	75	70	66	73	69	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66																																				
6	83	73	67	62	82	72	66	61	71	65	61	69	64	61	68	64	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60																																				
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55																																					
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51																																					
9	69	59	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47																																					
10	66	55	48	44	65	54	48	44	53	48	44	52	47	43	52	47	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43																																					

LC8ML 8LCML24L35K8

Test No. 15.00537

LC8ML 8LCML30L35K8

LED Light Engine: 3500K, 80+ CRI
System Wattage: 40.4W
Fixture Delivered Lumens: 3256
Fixture Efficacy: 80.6
Spacing Criteria: 1.2



CANDELA DISTRIBUTION	
DEG	CANDELA
0	2095
5	2025
15	2057
25	2093
35	1940
45	524
55	7
65	3
75	2
85	1
90	0

Test No. 15.00538

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1702	52.3
0-40	2806	86.2
0-60	3250	99.8
0-90	3256	100.0
90-180	0	0
0-180	3256	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	AVERAGE
45°	22843
55°	376
65°	219
75°	238
85°	354

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																% Effective Floor Cavity Reflectance																							
	80%				70%				50%				30%				10%				80%				70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance																20% Effective Floor Cavity Reflectance																							
	% Wall Reflectance																% Wall Reflectance																							
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10								
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80								
2	107	101	97	93	104	99	95	92	96	93	90	87	83	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	35	32	29	26								
3	100	93	88	83	98	92	87	83	89	85	81	77	73	69	65	61	57	53	50	46	43	40	37	34	31	28	25	22	19	16	13	10								
4	94	86	80	75	92	85	79	74	82	77	74	70	66	62	58	54	50	46	43	40	37	34	31	28	25	22	19	16	13	10	7	4								
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6	83	73	67	62	82	72	66	61	71	65	61	57	53	49	45	41	37	34	31	28	25	22	19	16	13	10	7	4	1	-2	-5	-8								
7	78	68	61	56	77	67	61	56	66	60	56	52	48	44	40	36	32	29	26	23	20	17	14	11	8	5	2	-1	-4	-7	-10	-13								
8	74	63	56	52	72	62	56	51	61	55	51	47	43	39	35	31	27	24	21	18	15	12	9	6	3	0	-3	-6	-9	-12	-15	-18								
9	69	59	52	47	68	58	52	47	57	51	47	43	39	35	31	27	23	20	17	14	11	8	5	2	-1	-4	-7	-10	-13	-16	-19	-22								
10	66	55	48	44	65	54	48	44	53	48	44	40	36	32	28	24	20	17	14	11	8	5	2	-1	-4	-7	-10	-13	-16	-19	-22	-25								

LC8ML 8LCML30L35K8

Test No. 15.00538



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HUBBELL
Lighting, Inc.

Submitted by Lighting Associates		Catalog Number: LC8MLDM/8LCML24L40K8-WT	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	FR LAIHOU18-45878

LiteFrame - 8" LC8ML Downlight

Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTV	http://bit.ly/11jSvZg
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1BJn2R9

Central Inverters

For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series

LPS Series: www.dual-lite.com/products/lps

SCA8D

When ordering a sloped ceiling adapter, specify the degree of slope in 1° increments, maximum of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.



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LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LC8SLDM/8LCSSL14L40K8-WT

Notes:

Type:**FR1**

LAIHOU18-45878



8" LED Downlight LC8SL

1000/1400/1800 Lumens
120V-277V, 347V
0-10V Dimming Option

APPLICATIONS:

LiteFrame Commercial LC8SL is a 8" commercial grade LED downlight with available outputs between 1000-1800 lumens. This is suitable to replace most CFL downlighting applications, while realizing substantial energy and maintenance savings. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 35°C (10L), 28°C (14L), 25°C (18L). Free Air Flow around the fixture is required for optimal life performance. This product is not recommended for use with 3rd party "FIREHAT" or insulation barriers.

HOUSING:

One-piece 22 gauge non-corrosive steel platform. Pre-wired J-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:

High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard. Painted white self-trim (WT) available as option.

LED LIGHT ENGINE:

The LC8SL uses mid power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SDCM color consistency. The use of multiple mid power LEDs allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LEDs. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

LED DRIVER:

The LC8SL utilizes a constant current LED driver. This same driver is capable of running all three different lumen outputs, resulting in a reduction of housing skus and simplified specification. The driver is UL8750, Class II compliant and universal 120V-277V.

DIMMING:

0-10V dimming options are available (DM/DM1), providing flicker-free dimming at 10% and 1% respectively. See list of compatible dimmers on page 3. For the sizing of the control circuit, the dimming circuit may require up to 2mA of sink current.

INSTALLATION:

Light commercial bar hangers included. Universal adjustable mounting brackets also accept 1/2" EMT conduit or 1 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6).

CERTIFICATIONS:

CSA certified to US and Canadian safety standards. Suitable for wet locations (EM and EMR damp location). ENERGY STAR Qualified.

WARRANTY:

5 year warranty. See www.prescolite.com for details.

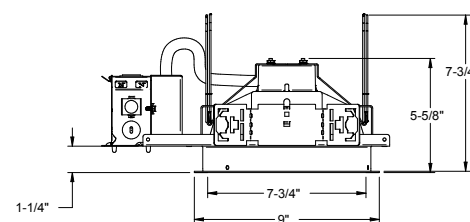
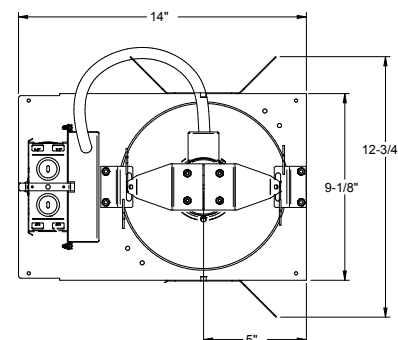
DATE: TYPE:

FIRM NAME:

PROJECT:

LiteFrame

Ceiling Cutout: 8 1/4"
Maximum Ceiling Thickness 1 1/4"
For conversion to millimeters,
multiply inches by 25.4
Not to Scale

**LC8SL 10L & 14L**

*See page 4 for LC8SL 18L line art

*See page 4 for LC8SLEM line art

*See page 4 for LC8SLCP line art

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: LC8SLDM-8LCSSL14L35K9WT

HOUSING	DRIVER OPTIONS	VOLTAGE	HOUSING OPTION	TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/ COLOR OPTION	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> LC8SL Standard Lumen Non Dimming 120V-277V	<input type="checkbox"/> DM 0-10V 10% Dimming <input type="checkbox"/> DM1 0-10V 1% Dimming	<input type="checkbox"/> 347^{1,7} 347V	<input type="checkbox"/> EM^{2,4} Integral Battery Pack <input type="checkbox"/> EMR⁴ Remote Battery Pack <input type="checkbox"/> CP^{3,6} Chicago Plenum	<input type="checkbox"/> 8LCSL Standard Lumen Clear Alzak Reflector	<input type="checkbox"/> 10L 1000 Lumen <input type="checkbox"/> 14L 1400 Lumen <input type="checkbox"/> 18L 1800 Lumen	<input type="checkbox"/> 27K 2700 Kelvin <input type="checkbox"/> 30K 3000 Kelvin <input type="checkbox"/> 35K 3500 Kelvin <input type="checkbox"/> 40K 4000 Kelvin <input type="checkbox"/> 50K 5000 Kelvin	<input type="checkbox"/> 8 80+ CRI <input type="checkbox"/> 9 90+ CRI	<input type="checkbox"/> WH Painted Matte White Reflector and Flange	<input type="checkbox"/> WT Painted White Flange only <input type="checkbox"/> WF Wide Flange <input type="checkbox"/> EM^{2,4} Integral Battery Pack <input type="checkbox"/> CP^{3,6} Chicago Plenum	<input type="checkbox"/> B24 Set of two(2) 24" bar hangers for T-bar ceilings <input type="checkbox"/> B6 Set of two (2) bar hangers for ceiling joist up to 24" centers <input type="checkbox"/> SCA8D Sloped ceiling adapter (see note on page 4) <input type="checkbox"/> LiteGear¹ Inverter, single phase central lighting, 125VA-250VA <input type="checkbox"/> LPS Series¹ LitePower micro-inverter, 20VA- 55VA

¹ See Central Inverter compatibility note and web links on page 3.² EM must be selected on both the housing and the trim.³ Not compatible with EM or EMR⁴ Damp location only⁵ Compatible with EMR only⁶ CP must be selected on both the housing and the trim⁷ Not compatible with CP

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LFR-LED-042



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LC8SLDM/8LCSL14L40K8-WT

Notes:

Type:**FR1**

LAIHOU18-45878

PHOTOMETRIC DATA

LiteFrame - 8" LC8SL Downlight

DRIVER DATA	8LCSL10Lxxx	8LCSL14Lxxx	8LCSL18Lxxx
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.111 (120v)	0.148 (120v)	0.185 (120v)
	0.048 (277v)	0.064 (277v)	0.080 (277v)
Input Power	13.3W	17.7W	22.0W
Constant Current Output	700mA	700mA	700mA
Power Factor	≥0.90	≥0.90	≥0.90
THD	<25%	<20%	<20%
EMI Filtering	FCC 47CFR	FCC 47CFR	FCC 47CFR
	Part 15, Class A	Part 15, Class A	Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +28°C	-30°C to +25°C
Dimming	0-10V	0-10V	0-10V

Over-voltage, over-current, short-circuit protected

When operating in EM mode, the fixture will deliver approximately 30% of the published full lumen output.

Lumen Multiplier Table

Photometrics for the LC8SL are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.09
4000 Kelvin	1.00
3500 Kelvin	1.00
3000 Kelvin	0.99
2700 Kelvin	0.96

LC8SL 8LCSL18L35K8

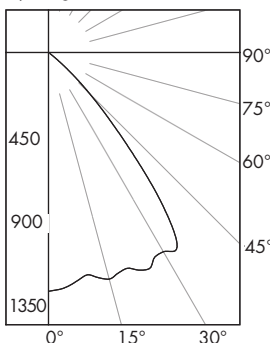
LED Light Engine: 3500K, 80+ CRI

System Wattage: 22.1W

Fixture Delivered Lumens: 1973

Fixture Efficacy: 89.3

Spacing Criteria: 1.2



Test No. 16.03295

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	CANDELA
0	1263
5	1239
15	1241
25	1262
35	1158
45	309
55	8
65	3
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1035	52.5
0-40	1702	86.3
0-60	1968	99.7
0-90	1973	100.0
90-180	0	0.0
0-180	1973	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	13470
55°	430
65°	219
75°	119
85°	0

COEFFICIENTS OF UTILIZATION**Zonal Cavity Method**

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80%		70%				50%				30%				10%		
	20% Effective Floor Cavity Reflectance																
	% Wall Reflectance																
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86
3	100	93	88	83	98	92	87	82	89	85	81	87	83	80	84	81	79
4	94	86	80	75	92	85	79	74	82	77	74	80	76	73	78	75	72
5	89	79	73	68	87	78	72	68	76	71	67	75	70	66	73	69	66
6	83	73	67	62	82	72	66	61	71	65	61	69	64	61	68	64	60
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55
8	74	63	56	52	72	62	56	52	61	55	51	60	55	51	59	54	51
9	69	59	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47
10	66	55	48	44	64	54	48	44	53	48	44	52	47	43	52	47	43

LC8SL 8LCSL18L35K8

Test No. 16.03295

LC8SL 8LCSL14L35K8

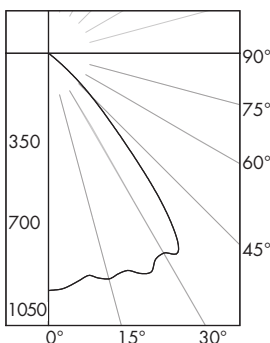
LED Light Engine: 3500K, 80+ CRI

System Wattage: 17.8W

Fixture Delivered Lumens: 1547

Fixture Efficacy: 86.9

Spacing Criteria: 1.2



Test No. 16.03296

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	CANDELA
0	976
5	962
15	961
25	995
35	914
45	245
55	6
65	2
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	809	52.3
0-40	1333	86.2
0-60	1544	99.8
0-90	1547	100.0
90-180	0	0.0
0-180	1547	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	10680
55°	322
65°	146
75°	119
85°	0

COEFFICIENTS OF UTILIZATION**Zonal Cavity Method**

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																			
	80%				70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance																			
	% Wall Reflectance																			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94			
2	107	101	97	93	104	99	95	92	96	93	90	87	83	80	81	79	77			
3	100	93	88	83	98	92	87	82	89	85	81	77	73	69	70	67	64			
4	94	86	80	75	92	85	79	74	82	77	74	80	76	73	78	75	72			
5	89	79	73	68	87	78	72	67	76	71	67	75	70	66	73	69	66			
6	83	73	67	62	82	72	66	61	71	65	61	69	64	61	68	64	60			
7	78	68	61	56	77	67	61	56	66	60	56	64	59	56	63	59	55			
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51			
9	69	59	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47			
10	66	55	48	44	64	54	48	44	53	47	43	52	47	43	52	47	43			

LC8SL 8LCSL14L35K8

Test No. 16.03296

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HUBBELL
Lighting, Inc.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8SLDM/8LC8SL14L40K8-WT

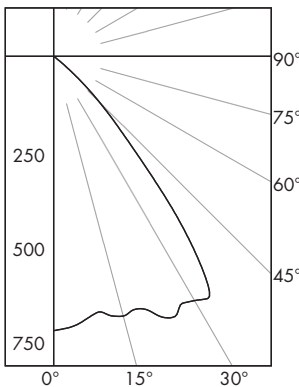
Notes:

Type:**FR1**

LAIHOU18-45878

PHOTOMETRIC DATA

LiteFrame - 8" LC8SL Downlight

LC8SL 8LC8SL10L35K8LED Light Engine: 3500K, 80+ CRI
System Wattage: 13.4W
Fixture Delivered Lumens: 1126
Fixture Efficacy: 84.0
Spacing Criteria: 1.2**CANDELA DISTRIBUTION****DEG CANDELA**

0	709
5	696
15	695
25	742
35	669
45	166
55	4
65	2
75	1
85	0
90	0

Test No. 16.03297

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	597	53.0
0-40	982	87.2
0-60	1124	99.8
0-90	1126	100.0
90-180	0	0.0
0-180	1126	100.0

**LUMINANCE DATA IN CANDELA/
SQ. METER**

Angle in Vertical	Average
45°	7236
55°	215
65°	146
75°	119
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance															
	70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance															
	% Wall Reflectance															
	70	50	30	10	70	50	30	10	50	30	10	50	30	10		
1	113	110	107	105	110	108	105	103	104	102	100	98	97	96		
2	107	101	97	93	104	99	95	92	96	93	90	88	87	86		
3	100	93	88	83	98	92	87	83	89	85	81	79	78	77		
4	94	86	80	75	92	85	79	75	83	78	74	73	72	71		
5	89	79	73	68	87	78	72	68	77	71	67	75	73	69		
6	83	73	67	62	82	73	66	62	71	65	61	68	64	64		
7	78	68	61	57	77	67	61	56	66	60	56	63	59	59		
8	74	63	56	52	72	63	56	51	61	55	51	59	54	54		
9	70	59	52	48	68	58	52	48	57	51	47	55	51	50		
10	66	55	48	44	65	54	48	44	53	47	43	52	47	47		

LC8SL 8LC8SL10L35K8

Test No. 16.03297

Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTV	http://bit.ly/11jSvZg
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1BJn2R9

Central Inverters

For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series

LPS Series: www.dual-lite.com/products/lps

SCA8D

When ordering a sloped ceiling adapter, specify the degree of slope in 1° increments, maximum of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.

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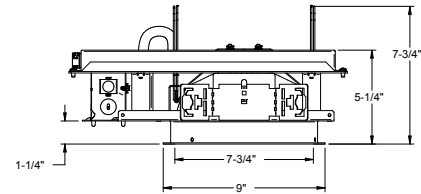
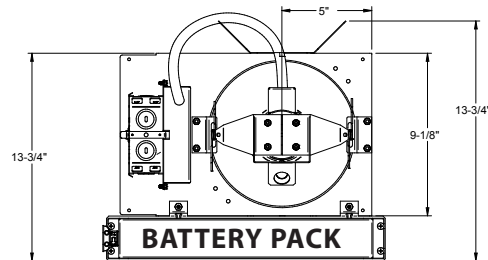
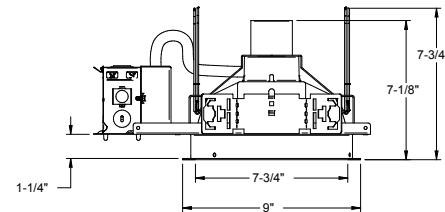
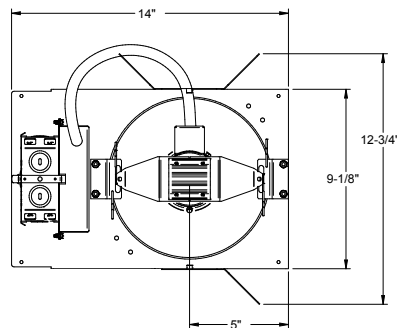
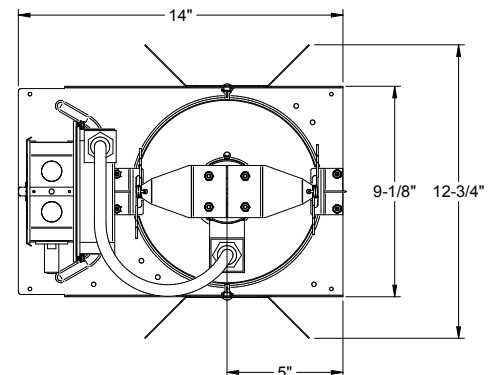
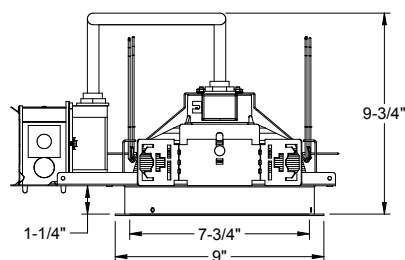
**HUBBELL**
Lighting, Inc.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8SLDM/8LC8SL14L40K8-WT

Notes:**Type:****FR1**

LAIHOU18-45878

LiteFrame - 8" LC8SL Downlight**LC8SLEM****LC8SL18L****LC8SLCP**Web: www.prescolite.com • Tech Support: (888) 777-4832

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**HUBBELL**
Lighting, Inc.

LIGHTING
ASSOCIATES, INC.**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8MLDM/8LCML24L40K8-WT

Notes:

Type:**FR2**

LAIHOU18-45878

**8" LED Downlight****LC8ML**

2400 & 3000 Lumens

120V-277V, 347V

0-10V Dimming

APPLICATIONS:

LiteFrame Commercial LC8ML is a 8" commercial grade LED downlight with available outputs between 2400-3000 lumens. This is suitable to replace most CFL downlighting applications, while realizing substantial energy and maintenance savings. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 35°C (24L) or 25°C (30L). Free Air Flow around fixture is required for optimal life performance. This product is not recommended for use with 3rd party "FIREHAT" or insulation barriers.

HOUSING:

One-piece 22 gauge non-corrosive steel platform. Pre-wired J-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:

High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard. Painted white self-trim (WT) available as option.

LED LIGHT ENGINE:

The LC8ML uses mid power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SDCM color consistency. The use of multiple mid power LEDs allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LEDs. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

LED DRIVER:

The LC8ML utilizes a constant current LED driver that is capable of running both lumen outputs, resulting in a reduction of housing skus and simplified specification. The driver is UL8750, Class II compliant and universal 120V-277V.

DIMMING:

Comes standard with 0-10V dimming, providing flicker-free dimming down to 10%. See list of compatible dimmers on page (3). For the sizing of the control circuit, the dimming circuit may require up to 1.2mA of sink current.

INSTALLATION:

Light commercial bar hangers included. Universal adjustable mounting brackets also accept 1/2" EMT conduit or 1 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6).

CERTIFICATIONS:

CSA certified to US and Canadian safety standards. Suitable for wet locations.

WARRANTY:

5 year warranty. See www.prescolite.com for details.

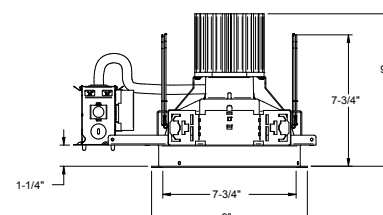
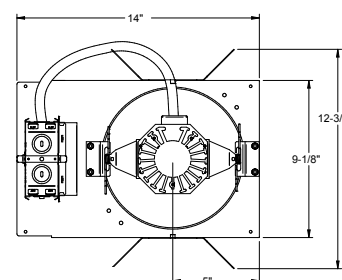
DATE: TYPE:

FIRM NAME:

PROJECT:

LiteFrame

Ceiling Cutout: 8 1/4"
Maximum Ceiling Thickness 1 1/4"
For conversion to millimeters,
multiply inches by 25.4
Not to Scale



Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: LC8MLDM1-8LCML30L35K9WH

HOUSING	DRIVER OPTIONS	VOLTAGE	HOUSING OPTION	TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/COLOR OPTION	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> LC8ML Medium Lumen 0-10V Dimming to 10% 120V-277V	<input type="checkbox"/> DM1 0-10V 1% Dimming	<input type="checkbox"/> 347⁴ 347V	<input type="checkbox"/> CP³ Chicago Plenum	<input type="checkbox"/> 8LCML Medium Lumen Clear Alzak Reflector	<input type="checkbox"/> 24L 2400 Lumen	<input type="checkbox"/> 27K 2700 Kelvin	<input type="checkbox"/> 8 80+ CRI	<input type="checkbox"/> WH Painted Matte White Reflector and Flange	<input type="checkbox"/> WT Painted White Flange only	<input type="checkbox"/> B24 Set of two(2) 24" bar hangers for T-bar ceilings
					<input type="checkbox"/> 30L 3000 Lumen	<input type="checkbox"/> 30K 3000 Kelvin	<input type="checkbox"/> 9² 90+ CRI		<input type="checkbox"/> WF Wide Flange	<input type="checkbox"/> B6 Set of two (2) bar hangers for ceiling joist up to 24" centers
						<input type="checkbox"/> 35K 3500 Kelvin			<input type="checkbox"/> CP³ Chicago Plenum	<input type="checkbox"/> SCABD Sloped ceiling adapter (see note on page 4)
						<input type="checkbox"/> 40K 4000 Kelvin				<input type="checkbox"/> LiteGear¹ Inverter, single phase central lighting, 125VA-250VA
						<input type="checkbox"/> 50K 5000 Kelvin				<input type="checkbox"/> LPS Series¹ LitePower micro-inverter, 20VA-55VA

¹ See Central Inverter compatibility note and web links on page 4.² Not available in 40K or 50K³ CP must be selected on both housing and trim⁴ Not available with CP

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In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.
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LFR-LED-044

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8MLDM/8LCML24L40K8-WT

Notes:

Type:**FR2**

LAIHOU18-45878

PHOTOMETRIC DATA

LiteFrame - 8" LC8ML Downlight

DRIVER DATA	8LCML24Lxxx	8LCML30Lxxx
Input Voltage	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz
Input Current	0.267 (120v)	0.337 (120v)
	0.116 (277v)	0.146 (277v)
Input Power	32.0W	40.4W
Constant Current Output	675mA	675mA
Power Factor	≥0.90	≥0.90
THD	<20%	<20%
EMI Filtering	FCC 47CFR	FCC 47CFR
	Part 15, Class A	Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +25°C
Dimming	0-10V to 10%	0-10V to 10%

Over-voltage, over-current, short-circuit protected

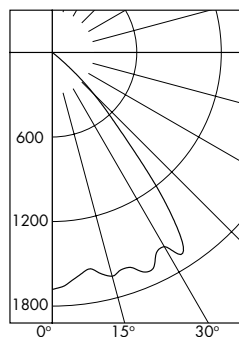
Lumen Multiplier Table

Photometrics for the LC8ML are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.14
4000 Kelvin	1.03
3500 Kelvin	1.00
3000 Kelvin	1.00
2700 Kelvin	0.91

LC8ML 8LCML24L35K8

LED Light Engine: 3500K, 80+ CRI
System Wattage: 32.0W
Fixture Delivered Lumens: 2625
Fixture Efficacy: 82.0
Spacing Criteria: 1.2



CANDELA DISTRIBUTION	
DEG	CANDELA
0	1682
5	1623
15	1644
25	1693
35	1582
45	419
55	6
65	2
75	1
85	1
90	0

Test No. 15.00537

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1373	52.3
0-40	2270	86.5
0-60	2621	99.8
0-90	2625	100.0
90-180	0	0.0
0-180	2625	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	AVERAGE
45°	18266
55°	322
65°	146
75°	119
85°	354

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

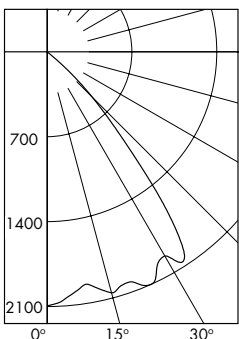
Room Cavity Ratio	% Effective Ceiling Cavity Reflectance										% Effective Floor Cavity Reflectance																			
	80%					70%					50%					30%					10%									
	20% Effective Floor Cavity Reflectance										20% Effective Floor Cavity Reflectance										20% Effective Floor Cavity Reflectance									
	% Wall Reflectance										% Wall Reflectance										% Wall Reflectance									
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10										
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	94	94	94										
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	86	86	86										
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	79	79	79										
4	94	86	80	75	92	85	79	74	82	77	74	80	76	73	78	75	72	72	72	72										
5	89	79	73	68	87	78	72	68	76	71	67	75	70	66	73	69	66	66	66	66										
6	83	73	67	62	82	72	66	61	71	65	61	69	64	61	68	64	60	60	60	60										
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55	55	55	55										
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	51	51	51										
9	69	59	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47	47	47	47										
10	66	55	48	44	65	54	48	44	53	48	44	52	47	43	52	47	43	43	43	43										

LC8ML 8LCML24L35K8

Test No. 15.00537

LC8ML 8LCML30L35K8

LED Light Engine: 3500K, 80+ CRI
System Wattage: 40.4W
Fixture Delivered Lumens: 3256
Fixture Efficacy: 80.6
Spacing Criteria: 1.2



CANDELA DISTRIBUTION	
DEG	CANDELA
0	2095
5	2025
15	2057
25	2093
35	1940
45	524
55	7
65	3
75	2
85	1
90	0

Test No. 15.00538

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1702	52.3
0-40	2806	86.2
0-60	3250	99.8
0-90	3256	100.0
90-180	0	0
0-180	3256	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	AVERAGE
45°	22843
55°	376
65°	219
75°	238
85°	354

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance										% Effective Floor Cavity Reflectance														
	80%					70%					50%					30%					10%				
	20% Effective Floor Cavity Reflectance																								
	% Wall Reflectance																								
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10				
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	94	94	92	90				
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	86	86	84	82				
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	79	79	77	74				
4	94	86	80	75	92	85	79	74	82	77	74	80	76	73	78	75	72	72	72	70	67				
5	89	79	73	68	87	78	72	68	76	71	67	75	70	66	73	69	66	66	66	64	61				
6	83	73	67	62	82	72	66	61	71	65	61	69	64	61	68	64	60	60	60	58	55				
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9	69	59	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47	47	47	45	42				
10	66	55	48	44	64	54	48	44	53	48	44	52	47	43	52	47	43	43	43	41	38				

LC8ML 8LCML30L35K8

Test No. 15.00538


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**HUBBELL**
Lighting, Inc.

Submitted by Lighting Associates		Catalog Number: LC8MLDM/8LCML24L40K8-WT	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	FR2 LAIHOU18-45878

LiteFrame - 8" LC8ML Downlight

Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTV	http://bit.ly/11jSvZg
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1BJn2R9

Central Inverters

For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series

LPS Series: www.dual-lite.com/products/lps

SCA8D

When ordering a sloped ceiling adapter, specify the degree of slope in 1° increments, maximum of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.



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LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LC8SLDM/8LCSSL18L40K8-WT

Notes:**Type:****FS**

LAIHOU18-45878



8" LED Downlight LC8SL

1000/1400/1800 Lumens
120V-277V, 347V
0-10V Dimming Option

APPLICATIONS:

LiteFrame Commercial LC8SL is a 8" commercial grade LED downlight with available outputs between 1000-1800 lumens. This is suitable to replace most CFL downlighting applications, while realizing substantial energy and maintenance savings. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 35°C (10L), 28°C (14L), 25°C (18L). Free Air Flow around the fixture is required for optimal life performance. This product is not recommended for use with 3rd party "FIREHAT" or insulation barriers.

HOUSING:

One-piece 22 gauge non-corrosive steel platform. Pre-wired J-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:

High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard. Painted white self-trim (WT) available as option.

LED LIGHT ENGINE:

The LC8SL uses mid power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SDCM color consistency. The use of multiple mid power LEDs allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LEDs. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

LED DRIVER:

The LC8SL utilizes a constant current LED driver. This same driver is capable of running all three different lumen outputs, resulting in a reduction of housing skus and simplified specification. The driver is UL8750, Class II compliant and universal 120V-277V.

DIMMING:

0-10V dimming options are available (DM/DM1), providing flicker-free dimming at 10% and 1% respectively. See list of compatible dimmers on page 3. For the sizing of the control circuit, the dimming circuit may require up to 2mA of sink current.

INSTALLATION:

Light commercial bar hangers included. Universal adjustable mounting brackets also accept 1/2" EMT conduit or 1 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6).

CERTIFICATIONS:

CSA certified to US and Canadian safety standards. Suitable for wet locations (EM and EMR damp location). ENERGY STAR Qualified.

WARRANTY:

5 year warranty. See www.prescolite.com for details.

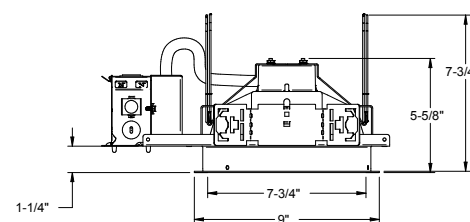
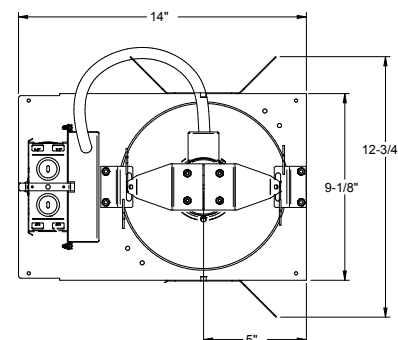
DATE: TYPE:

FIRM NAME:

PROJECT:

LiteFrame

Ceiling Cutout: 8 1/4"
Maximum Ceiling Thickness 1 1/4"
For conversion to millimeters,
multiply inches by 25.4
Not to Scale

**LC8SL 10L & 14L**

*See page 4 for LC8SL 18L line art

*See page 4 for LC8SLEM line art

*See page 4 for LC8SLCP line art

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: LC8SLDM-8LCSSL14L35K9WT

HOUSING	DRIVER OPTIONS	VOLTAGE	HOUSING OPTION	TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/ COLOR OPTION	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> LC8SL Standard Lumen Non Dimming 120V-277V	<input type="checkbox"/> DM 0-10V 10% Dimming <input type="checkbox"/> DM1 0-10V 1% Dimming	<input type="checkbox"/> 347^{1,7} 347V	<input type="checkbox"/> EM^{2,4} Integral Battery Pack <input type="checkbox"/> EMR⁴ Remote Battery Pack <input type="checkbox"/> CP^{3,6} Chicago Plenum	<input type="checkbox"/> 8LCSL Standard Lumen Clear Alzak Reflector	<input type="checkbox"/> 10L 1000 Lumen <input type="checkbox"/> 14L 1400 Lumen <input type="checkbox"/> 18L 1800 Lumen	<input type="checkbox"/> 27K 2700 Kelvin <input type="checkbox"/> 30K 3000 Kelvin <input type="checkbox"/> 35K 3500 Kelvin <input type="checkbox"/> 40K 4000 Kelvin <input type="checkbox"/> 50K 5000 Kelvin	<input type="checkbox"/> 8 80+ CRI <input type="checkbox"/> 9 90+ CRI	<input type="checkbox"/> WH Painted Matte White Reflector and Flange	<input type="checkbox"/> WT Painted White Flange only <input type="checkbox"/> WF Wide Flange <input type="checkbox"/> EM^{2,4} Integral Battery Pack <input type="checkbox"/> CP^{3,6} Chicago Plenum	<input type="checkbox"/> B24 Set of two(2) 24" bar hangers for T-bar ceilings <input type="checkbox"/> B6 Set of two (2) bar hangers for ceiling joist up to 24" centers <input type="checkbox"/> SCA8D Sloped ceiling adapter (see note on page 4) <input type="checkbox"/> LiteGear¹ Inverter, single phase central lighting, 125VA-250VA <input type="checkbox"/> LPS Series¹ LitePower micro-inverter, 20VA- 55VA

¹ See Central Inverter compatibility note and web links on page 3.

² EM must be selected on both the housing and the trim.

³ Not compatible with EM or EMR

⁴ Damp location only

⁵ Compatible with EMR only

⁶ CP must be selected on both the housing and the trim

⁷ Not compatible with CP



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Web: www.prescolite.com • Tech Support: (888) 777-4832

LFR-LED-042



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LC8SLDM/8LCSL18L40K8-WT

Notes:

Type:**FS**

LAIHOU18-45878

PHOTOMETRIC DATA

LiteFrame - 8" LC8SL Downlight

DRIVER DATA	8LCSL10Lxxx	8LCSL14Lxxx	8LCSL18Lxxx
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.111 (120v)	0.148 (120v)	0.185 (120v)
	0.048 (277v)	0.064 (277v)	0.080 (277v)
Input Power	13.3W	17.7W	22.0W
Constant Current Output	700mA	700mA	700mA
Power Factor	≥0.90	≥0.90	≥0.90
THD	<25%	<20%	<20%
EMI Filtering	FCC 47CFR	FCC 47CFR	FCC 47CFR
	Part 15, Class A	Part 15, Class A	Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +28°C	-30°C to +25°C
Dimming	0-10V	0-10V	0-10V

Over-voltage, over-current, short-circuit protected

When operating in EM mode, the fixture will deliver approximately 30% of the published full lumen output.

Lumen Multiplier Table

Photometrics for the LC8SL are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.09
4000 Kelvin	1.00
3500 Kelvin	1.00
3000 Kelvin	0.99
2700 Kelvin	0.96

LC8SL 8LCSL18L35K8

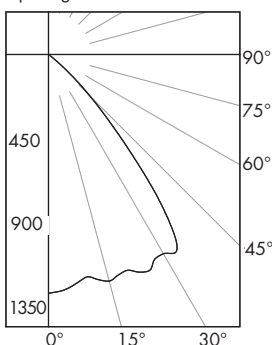
LED Light Engine: 3500K, 80+ CRI

System Wattage: 22.1W

Fixture Delivered Lumens: 1973

Fixture Efficacy: 89.3

Spacing Criteria: 1.2

**CANDELA DISTRIBUTION**

DEG	CANDELA
0	1263
5	1239
15	1241
25	1262
35	1158
45	309
55	8
65	3
75	1
85	0
90	0

Test No. 16.03295

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1035	52.5
0-40	1702	86.3
0-60	1968	99.7
0-90	1973	100.0
90-180	0	0.0
0-180	1973	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	13470
55°	430
65°	219
75°	119
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance														
	80%		70%		50%		30%		10%						
	20% Effective Floor Cavity Reflectance														
	% Wall Reflectance														
	70	50	30	10	70	50	30	10	50	30	10				
1	113	110	107	105	110	108	105	103	104	102	100	98	96	95	94
2	107	101	97	93	104	99	95	92	96	93	90	88	86	85	84
3	100	93	88	83	98	92	87	82	89	85	83	81	80	79	78
4	94	86	80	75	92	85	79	74	82	77	74	73	72	71	70
5	89	79	73	68	87	78	72	68	76	71	67	65	64	63	62
6	83	73	67	62	82	72	66	61	71	65	61	60	59	58	57
7	78	68	61	56	77	67	61	56	66	59	54	53	52	51	50
8	74	63	56	52	72	62	56	51	61	55	50	49	48	47	46
9	69	59	52	47	68	58	52	47	57	51	47	45	44	43	42
10	66	55	48	44	64	54	48	44	53	48	44	42	41	40	39

LC8SL 8LCSL18L35K8

Test No. 16.03295

LC8SL 8LCSL14L35K8

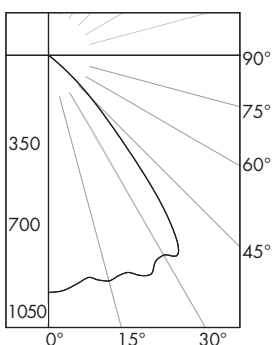
LED Light Engine: 3500K, 80+ CRI

System Wattage: 17.8W

Fixture Delivered Lumens: 1547

Fixture Efficacy: 86.9

Spacing Criteria: 1.2

**CANDELA DISTRIBUTION**

DEG	CANDELA
0	976
5	962
15	961
25	995
35	914
45	245
55	6
65	2
75	1
85	0
90	0

Test No. 16.03296

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	809	52.3
0-40	1333	86.2
0-60	1544	99.8
0-90	1547	100.0
90-180	0	0.0
0-180	1547	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	10680
55°	322
65°	146
75°	119
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance											
	80%		70%		50%		30%		10%			
	20% Effective Floor Cavity Reflectance											
	% Wall Reflectance											
	70	50	30	10	70	50	30	10	70	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100	98
2	107	101	97	93	104	99	95	92	96	93	90	88
3	100	93	88	83	98	92	87	82	89	85	82	80
4	94	86	80	75	92	85	79	74	82	77	74	72
5	89	79	73	68	87	78	72	67	76	71	67	65
6	83	73	67	62	82	72	66	61	71	65	61	58
7	78	68	61	56	77	67	61	56	66	59	55	53
8	74	63	56	52	72	62	56	51	61	55	51	48
9	69	59	52	47	68	58	52	47	57	51	47	45
10	66	55	48	44	64	54	48	44	53	47	43	41

LC8SL 8LCSL14L35K8

Test No. 16.03296

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HUBBELL
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**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8SLDM/8LC8SL18L40K8-WT

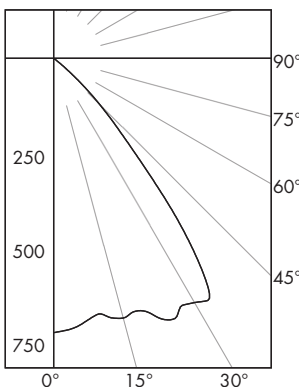
Notes:

Type:**FS**

LAIHOU18-45878

PHOTOMETRIC DATA

LiteFrame - 8" LC8SL Downlight

LC8SL 8LC8SL10L35K8LED Light Engine: 3500K, 80+ CRI
System Wattage: 13.4W
Fixture Delivered Lumens: 1126
Fixture Efficacy: 84.0
Spacing Criteria: 1.2

Test No. 16.03297

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	597	53.0
0-40	982	87.2
0-60	1124	99.8
0-90	1126	100.0
90-180	0	0.0
0-180	1126	100.0

**LUMINANCE DATA IN CANDELA/
SQ. METER**

Angle in Vertical	Average
45°	7236
55°	215
65°	146
75°	119
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance											
	80%		70%		50%		30%		10%			
	20% Effective Floor Cavity Reflectance											
	% Wall Reflectance											
	70	50	30	10	70	50	30	10	70	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100	98
2	107	101	97	93	104	99	95	92	96	93	90	88
3	100	93	88	83	98	92	87	83	89	85	81	79
4	94	86	80	75	92	85	79	75	83	78	74	71
5	89	79	73	68	87	78	72	68	77	71	67	63
6	83	73	67	62	82	73	66	62	71	65	61	58
7	78	68	61	57	77	67	61	56	66	60	56	53
8	74	63	56	52	72	63	56	51	61	55	51	48
9	70	59	52	48	68	58	52	48	57	51	47	44
10	66	55	48	44	65	54	48	44	53	47	43	40

LC8SL 8LC8SL10L35K8

Test No. 16.03297

Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTV	http://bit.ly/11jSvZg
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1BJn2R9

Central Inverters

For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series

LPS Series: www.dual-lite.com/products/lps

SCA8D

When ordering a sloped ceiling adapter, specify the degree of slope in 1° increments, maximum of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.

Web: www.prescolite.com • Tech Support: (888) 777-4832

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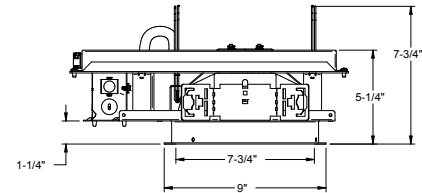
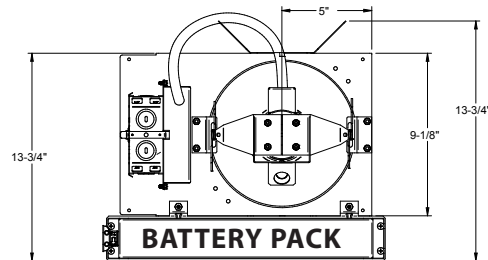
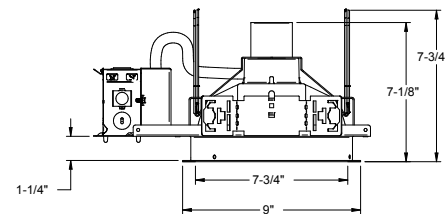
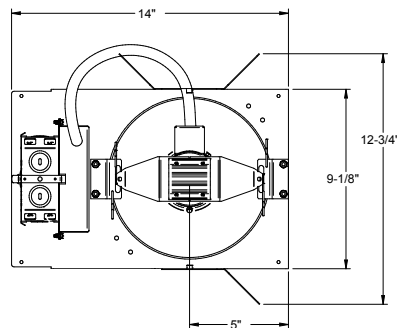
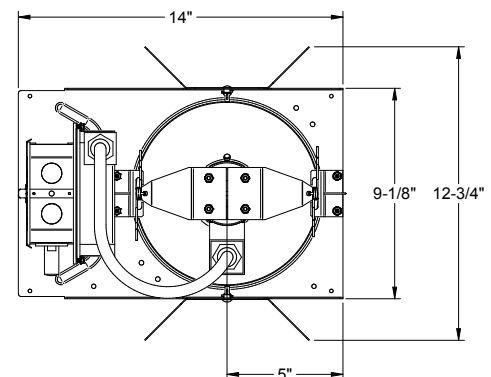
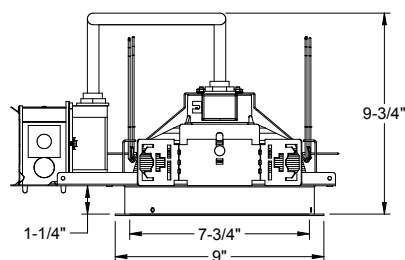
**HUBBELL**
Lighting, Inc.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8SLDM/8LC8SL18L40K8-WT

Notes:**Type:****FS**

LAIHOU18-45878

LiteFrame - 8" LC8SL Downlight**LC8SLEM****LC8SL18L****LC8SLCP**Web: www.prescolite.com • Tech Support: (888) 777-4832

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**HUBBELL**
Lighting, Inc.



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LC8SLDM/8LCSL18L40K8-WT

Notes:

Type:**FS2**

LAIHOU18-45878



8" LED Downlight LC8SL

1000/1400/1800 Lumens
120V-277V, 347V
0-10V Dimming Option

APPLICATIONS:

LiteFrame Commercial LC8SL is a 8" commercial grade LED downlight with available outputs between 1000-1800 lumens. This is suitable to replace most CFL downlighting applications, while realizing substantial energy and maintenance savings. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 35°C (10L), 28°C (14L), 25°C (18L). Free Air Flow around the fixture is required for optimal life performance. This product is not recommended for use with 3rd party "FIREHAT" or insulation barriers.

HOUSING:

One-piece 22 gauge non-corrosive steel platform. Pre-wired J-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:

High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard. Painted white self-trim (WT) available as option.

LED LIGHT ENGINE:

The LC8SL uses mid power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SDCM color consistency. The use of multiple mid power LEDs allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LEDs. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

LED DRIVER:

The LC8SL utilizes a constant current LED driver. This same driver is capable of running all three different lumen outputs, resulting in a reduction of housing skus and simplified specification. The driver is UL8750, Class II compliant and universal 120V-277V.

DIMMING:

0-10V dimming options are available (DM/DM1), providing flicker-free dimming at 10% and 1% respectively. See list of compatible dimmers on page 3. For the sizing of the control circuit, the dimming circuit may require up to 2mA of sink current.

INSTALLATION:

Light commercial bar hangers included. Universal adjustable mounting brackets also accept 1/2" EMT conduit or 1 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6).

CERTIFICATIONS:

CSA certified to US and Canadian safety standards. Suitable for wet locations (EM and EMR damp location). ENERGY STAR Qualified.

WARRANTY:

5 year warranty. See www.prescolite.com for details.

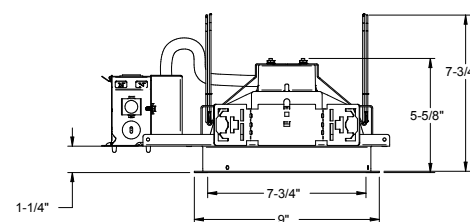
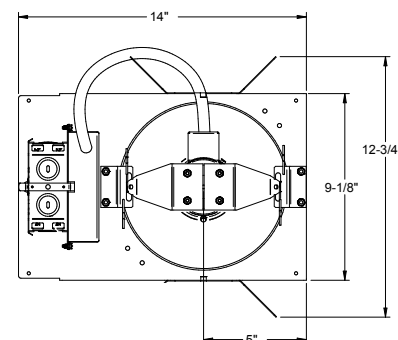
DATE: TYPE:

FIRM NAME:

PROJECT:

LiteFrame

Ceiling Cutout: 8 1/4"
Maximum Ceiling Thickness 1 1/4"
For conversion to millimeters,
multiply inches by 25.4
Not to Scale

**LC8SL 10L & 14L**

*See page 4 for LC8SL 18L line art

*See page 4 for LC8SLEM line art

*See page 4 for LC8SLCP line art

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: LC8SLDM-8LCSL14L35K9WT

HOUSING	DRIVER OPTIONS	VOLTAGE	HOUSING OPTION	TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/ COLOR OPTION	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> LC8SL Standard Lumen Non Dimming 120V-277V	<input type="checkbox"/> DM 0-10V 10% Dimming <input type="checkbox"/> DM1 0-10V 1% Dimming	<input type="checkbox"/> 347^{4,7} 347V	<input type="checkbox"/> EM^{2,4} Integral Battery Pack <input type="checkbox"/> EMR⁴ Remote Battery Pack <input type="checkbox"/> CP^{3,6} Chicago Plenum	<input type="checkbox"/> 8LCSL Standard Lumen Clear Alzak Reflector	<input type="checkbox"/> 10L 1000 Lumen <input type="checkbox"/> 14L 1400 Lumen <input type="checkbox"/> 18L 1800 Lumen	<input type="checkbox"/> 27K 2700 Kelvin <input type="checkbox"/> 30K 3000 Kelvin <input type="checkbox"/> 35K 3500 Kelvin <input type="checkbox"/> 40K 4000 Kelvin <input type="checkbox"/> 50K 5000 Kelvin	<input type="checkbox"/> 8 80+ CRI <input type="checkbox"/> 9 90+ CRI	<input type="checkbox"/> WH Painted Matte White Reflector and Flange	<input type="checkbox"/> WT Painted White Flange only <input type="checkbox"/> WF Wide Flange <input type="checkbox"/> EM^{2,4} Integral Battery Pack <input type="checkbox"/> CP^{3,6} Chicago Plenum	<input type="checkbox"/> B24 Set of two(2) 24" bar hangers for T-bar ceilings <input type="checkbox"/> B6 Set of two (2) bar hangers for ceiling joist up to 24" centers <input type="checkbox"/> SCA8D Sloped ceiling adapter (see note on page 4) <input type="checkbox"/> LiteGear¹ Inverter, single phase central lighting, 125VA-250VA <input type="checkbox"/> LPS Series¹ LitePower micro-inverter, 20VA- 55VA

¹ See Central Inverter compatibility note and web links on page 3.

² EM must be selected on both the housing and the trim.

³ Not compatible with EM or EMR

⁴ Damp location only

⁵ Compatible with EMR only

⁶ CP must be selected on both the housing and the trim

⁷ Not compatible with CP



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In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.

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LFR-LED-042

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8SLDM/8LCSL18L40K8-WT

Notes:

Type:**FS2**

LAIHOU18-45878

PHOTOMETRIC DATA

LiteFrame - 8" LC8SL Downlight

DRIVER DATA	8LCSL10Lxxx	8LCSL14Lxxx	8LCSL18Lxxx
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.111 (120v)	0.148 (120v)	0.185 (120v)
	0.048 (277v)	0.064 (277v)	0.080 (277v)
Input Power	13.3W	17.7W	22.0W
Constant Current Output	700mA	700mA	700mA
Power Factor	≥0.90	≥0.90	≥0.90
THD	<25%	<20%	<20%
EMI Filtering	FCC 47CFR	FCC 47CFR	FCC 47CFR
	Part 15, Class A	Part 15, Class A	Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +28°C	-30°C to +25°C
Dimming	0-10V	0-10V	0-10V

Over-voltage, over-current, short-circuit protected

When operating in EM mode, the fixture will deliver approximately 30% of the published full lumen output.

Lumen Multiplier Table

Photometrics for the LC8SL are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.09
4000 Kelvin	1.00
3500 Kelvin	1.00
3000 Kelvin	0.99
2700 Kelvin	0.96

LC8SL 8LCSL18L35K8

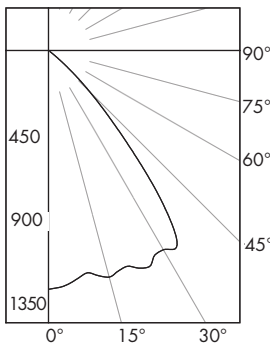
LED Light Engine: 3500K, 80+ CRI

System Wattage: 22.1W

Fixture Delivered Lumens: 1973

Fixture Efficacy: 89.3

Spacing Criteria: 1.2



Test No. 16.03295

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	CANDELA
0	1263
5	1239
15	1241
25	1262
35	1158
45	309
55	8
65	3
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1035	52.5
0-40	1702	86.3
0-60	1968	99.7
0-90	1973	100.0
90-180	0	0.0
0-180	1973	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	13470
55°	430
65°	219
75°	119
85°	0

COEFFICIENTS OF UTILIZATION**Zonal Cavity Method**

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance										
	80%		70%		50%		30%		10%		
	20% Effective Floor Cavity Reflectance										
	% Wall Reflectance										
	70	50	30	10	70	50	30	10	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100
2	107	101	97	93	104	99	95	92	96	93	90
3	100	93	88	83	98	92	87	82	89	84	81
4	94	86	80	75	92	85	79	74	82	77	74
5	89	79	73	68	87	78	72	68	76	71	67
6	83	73	67	62	82	72	66	61	71	65	61
7	78	68	61	56	77	67	61	56	66	61	56
8	74	63	56	52	72	62	56	51	61	55	50
9	69	59	52	47	68	58	52	47	57	51	46
10	66	55	48	44	64	54	48	44	53	47	43

LC8SL 8LCSL18L35K8

Test No. 16.03295

LC8SL 8LCSL14L35K8

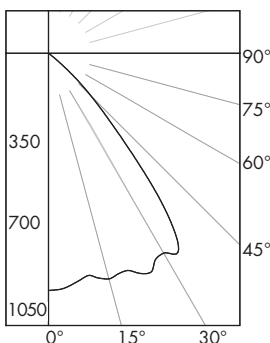
LED Light Engine: 3500K, 80+ CRI

System Wattage: 17.8W

Fixture Delivered Lumens: 1547

Fixture Efficacy: 86.9

Spacing Criteria: 1.2



Test No. 16.03296

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	CANDELA
0	976
5	962
15	961
25	995
35	914
45	245
55	6
65	2
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	809	52.3
0-40	1333	86.2
0-60	1544	99.8
0-90	1547	100.0
90-180	0	0.0
0-180	1547	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	10680
55°	322
65°	146
75°	119
85°	0

COEFFICIENTS OF UTILIZATION**Zonal Cavity Method**

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance											
	80%		70%		50%		30%		10%			
	20% Effective Floor Cavity Reflectance											
	% Wall Reflectance											
	70	50	30	10	70	50	30	10	70	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100	98
2	107	101	97	93	104	99	95	92	96	93	90	88
3	100	93	88	83	98	92	87	82	89	84	81	78
4	94	86	80	75	92	85	79	74	82	77	74	70
5	89	79	73	68	87	78	72	67	76	71	67	63
6	83	73	67	62	82	72	66	61	71	65	61	58
7	78	68	61	56	77	67	61	56	66	59	55	52
8	74	63	56	52	72	62	56	51	61	55	51	48
9	69	59	52	47	68	58	52	47	57	51	47	44
10	66	55	48	44	64	54	48	44	53	47	43	40

LC8SL 8LCSL14L35K8

Test No. 16.03296

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**HUBBELL**
Lighting, Inc.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8SLDM/8LC8SL18L40K8-WT

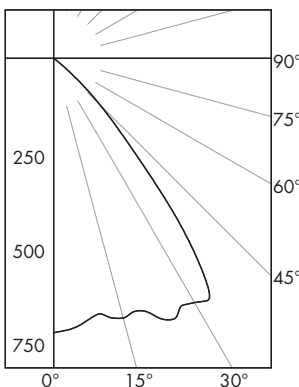
Notes:

Type:**FS2**

LAIHOU18-45878

PHOTOMETRIC DATA

LiteFrame - 8" LC8SL Downlight

LC8SL 8LC8SL10L35K8LED Light Engine: 3500K, 80+ CRI
System Wattage: 13.4W
Fixture Delivered Lumens: 1126
Fixture Efficacy: 84.0
Spacing Criteria: 1.2**CANDELA DISTRIBUTION**

DEG	CANDELA
0	709
5	696
15	695
25	742
35	669
45	166
55	4
65	2
75	1
85	0
90	0

Test No. 16.03297

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	597	53.0
0-40	982	87.2
0-60	1124	99.8
0-90	1126	100.0
90-180	0	0.0
0-180	1126	100.0

**LUMINANCE DATA IN CANDELA/
SQ. METER**

Angle in Vertical	Average
45°	7236
55°	215
65°	146
75°	119
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance															
	70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance															
	% Wall Reflectance															
	70	50	30	10	70	50	30	10	50	30	10	50	30	10		
1	113	110	107	105	110	108	105	103	104	102	100	98	97	96		
2	107	101	97	93	104	99	95	92	96	93	90	88	87	86		
3	100	93	88	83	98	92	87	83	89	85	82	80	79	78		
4	94	86	80	75	92	85	79	75	83	78	74	70	73	71		
5	89	79	73	68	87	78	72	68	77	71	67	75	70	68		
6	83	73	67	62	82	73	66	62	71	65	61	68	64	64		
7	78	68	61	57	77	67	61	56	66	60	56	63	59	59		
8	74	63	56	52	72	63	56	51	61	55	51	59	54	54		
9	70	59	52	48	68	58	52	48	57	51	47	55	50	50		
10	66	55	48	44	65	54	48	44	53	47	43	52	47	47		

LC8SL 8LC8SL10L35K8

Test No. 16.03297

Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTVT	http://bit.ly/11jSvZg
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1BJn2R9

Central Inverters

For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series

LPS Series: www.dual-lite.com/products/lps

SCA8D

When ordering a sloped ceiling adapter, specify the degree of slope in 1° increments, maximum of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.

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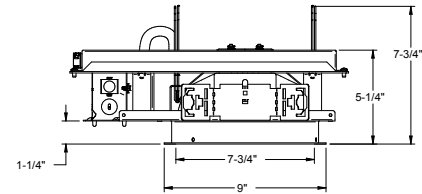
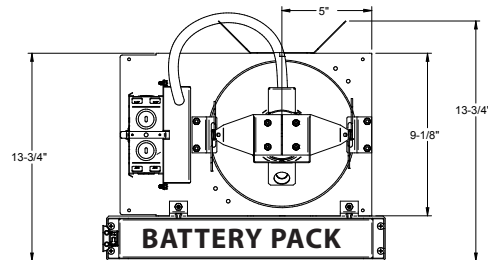
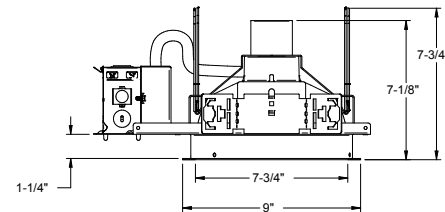
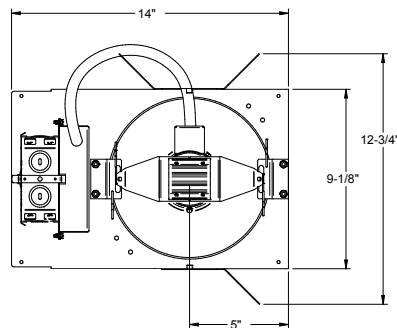
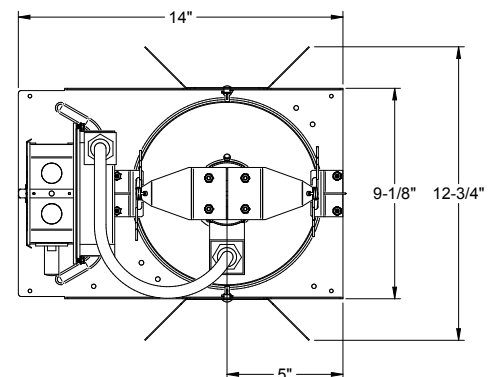
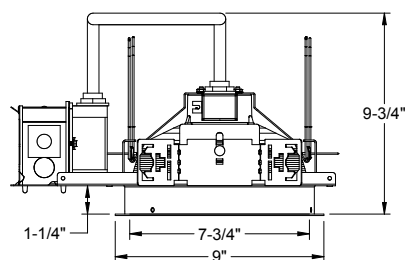
**HUBBELL**
Lighting, Inc.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8SLDM/8LC8SL18L40K8-WT

Notes:**Type:****FS2**

LAIHOU18-45878

LiteFrame - 8" LC8SL Downlight**LC8SLEM****LC8SL18L****LC8SLCP**Web: www.prescolite.com • Tech Support: (888) 777-4832

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**HUBBELL**
Lighting, Inc.



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LC8SLDM/8LCSL18L40K8-WT

Notes:

Type:**FT**

LAIHOU18-45878

**8" LED Downlight****LC8SL**

1000/1400/1800 Lumens

120V-277V, 347V

0-10V Dimming Option

APPLICATIONS:

LiteFrame Commercial LC8SL is a 8" commercial grade LED downlight with available outputs between 1000-1800 lumens. This is suitable to replace most CFL downlighting applications, while realizing substantial energy and maintenance savings. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 35°C (10L), 28°C (14L), 25°C (18L). Free Air Flow around the fixture is required for optimal life performance. This product is not recommended for use with 3rd party "FIREHAT" or insulation barriers.

HOUSING:

One-piece 22 gauge non-corrosive steel platform. Pre-wired J-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:

High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard. Painted white self-trim (WT) available as option.

LED LIGHT ENGINE:

The LC8SL uses mid power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SDCM color consistency. The use of multiple mid power LEDs allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LEDs. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

LED DRIVER:

The LC8SL utilizes a constant current LED driver. This same driver is capable of running all three different lumen outputs, resulting in a reduction of housing skus and simplified specification. The driver is UL8750, Class II compliant and universal 120V-277V.

DIMMING:

0-10V dimming options are available (DM/DM1), providing flicker-free dimming at 10% and 1% respectively. See list of compatible dimmers on page 3. For the sizing of the control circuit, the dimming circuit may require up to 2mA of sink current.

INSTALLATION:

Light commercial bar hangers included. Universal adjustable mounting brackets also accept 1/2" EMT conduit or 1 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6).

CERTIFICATIONS:

CSA certified to US and Canadian safety standards. Suitable for wet locations (EM and EMR damp location). ENERGY STAR Qualified.

WARRANTY:

5 year warranty. See www.prescolite.com for details.

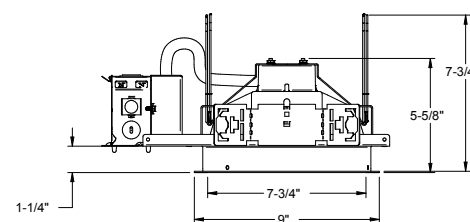
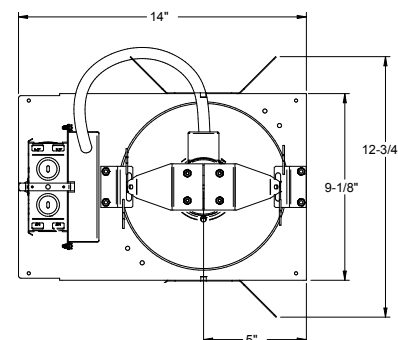
DATE: TYPE:

FIRM NAME:

PROJECT:

LiteFrame

Ceiling Cutout: 8 1/4"
Maximum Ceiling Thickness 1 1/4"
For conversion to millimeters,
multiply inches by 25.4
Not to Scale

**LC8SL 10L & 14L**

*See page 4 for LC8SL 18L line art

*See page 4 for LC8SLEM line art

*See page 4 for LC8SLCP line art

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: LC8SLDM-8LCSL14L35K9WT

HOUSING	DRIVER OPTIONS	VOLTAGE	HOUSING OPTION	TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/COLOR OPTION	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> LC8SL Standard Lumen Non Dimming 120V-277V	<input type="checkbox"/> DM 0-10V 10% Dimming <input type="checkbox"/> DM1 0-10V 1% Dimming	<input type="checkbox"/> 347^{4,7} 347V	<input type="checkbox"/> EM^{2,4} Integral Battery Pack <input type="checkbox"/> EMR⁴ Remote Battery Pack <input type="checkbox"/> CP^{3,6} Chicago Plenum	<input type="checkbox"/> 8LCSL Standard Lumen Clear Alzak Reflector	<input type="checkbox"/> 10L 1000 Lumen <input type="checkbox"/> 14L 1400 Lumen <input type="checkbox"/> 18L 1800 Lumen	<input type="checkbox"/> 27K 2700 Kelvin <input type="checkbox"/> 30K 3000 Kelvin <input type="checkbox"/> 35K 3500 Kelvin <input type="checkbox"/> 40K 4000 Kelvin <input type="checkbox"/> 50K 5000 Kelvin	<input type="checkbox"/> 8 80+ CRI <input type="checkbox"/> 9 90+ CRI	<input type="checkbox"/> WH Painted Matte White Reflector and Flange	<input type="checkbox"/> WT Painted White Flange only <input type="checkbox"/> WF Wide Flange <input type="checkbox"/> EM^{2,4} Integral Battery Pack <input type="checkbox"/> CP^{3,6} Chicago Plenum	<input type="checkbox"/> B24 Set of two(2) 24" bar hangers for T-bar ceilings <input type="checkbox"/> B6 Set of two (2) bar hangers for ceiling joist up to 24" centers <input type="checkbox"/> SCA8D Sloped ceiling adapter (see note on page 4) <input type="checkbox"/> LiteGear¹ Inverter, single phase central lighting, 125VA-250VA <input type="checkbox"/> LPS Series¹ LitePower micro-inverter, 20VA- 55VA

¹ See Central Inverter compatibility note and web links on page 3.

² EM must be selected on both the housing and the trim.

³ Not compatible with EM or EMR

⁴ Damp location only

⁵ Compatible with EMR only

⁶ CP must be selected on both the housing and the trim

⁷ Not compatible with CP



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In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.

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LFR-LED-042

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8SLDM/8LCSL18L40K8-WT

Notes:

Type:**FT**

LAIHOU18-45878

PHOTOMETRIC DATA

LiteFrame - 8" LC8SL Downlight

DRIVER DATA	8LCSL10Lxxx	8LCSL14Lxxx	8LCSL18Lxxx
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.111 (120v)	0.148 (120v)	0.185 (120v)
	0.048 (277v)	0.064 (277v)	0.080 (277v)
Input Power	13.3W	17.7W	22.0W
Constant Current Output	700mA	700mA	700mA
Power Factor	≥0.90	≥0.90	≥0.90
THD	<25%	<20%	<20%
EMI Filtering	FCC 47CFR	FCC 47CFR	FCC 47CFR
	Part 15, Class A	Part 15, Class A	Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +28°C	-30°C to +25°C
Dimming	0-10V	0-10V	0-10V

Over-voltage, over-current, short-circuit protected

When operating in EM mode, the fixture will deliver approximately 30% of the published full lumen output.

Lumen Multiplier Table

Photometrics for the LC8SL are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.09
4000 Kelvin	1.00
3500 Kelvin	1.00
3000 Kelvin	0.99
2700 Kelvin	0.96

LC8SL 8LCSL18L35K8

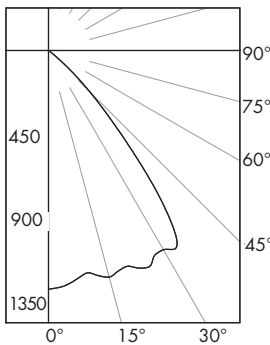
LED Light Engine: 3500K, 80+ CRI

System Wattage: 22.1W

Fixture Delivered Lumens: 1973

Fixture Efficacy: 89.3

Spacing Criteria: 1.2



Test No. 16.03295

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	CANDELA
0	1263
5	1239
15	1241
25	1262
35	1158
45	309
55	8
65	3
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1035	52.5
0-40	1702	86.3
0-60	1968	99.7
0-90	1973	100.0
90-180	0	0.0
0-180	1973	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	13470
55°	430
65°	219
75°	119
85°	0

COEFFICIENTS OF UTILIZATION**Zonal Cavity Method**

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance										
	80%		70%		50%		30%		10%		
	20% Effective Floor Cavity Reflectance										
	% Wall Reflectance										
	70	50	30	10	70	50	30	10	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100
2	107	101	97	93	104	99	95	92	96	93	90
3	100	93	88	83	98	92	87	82	89	85	81
4	94	86	80	75	92	85	79	74	82	77	73
5	89	79	73	68	87	78	72	68	76	71	67
6	83	73	67	62	82	72	66	61	71	65	61
7	78	68	61	56	77	67	61	56	66	59	55
8	74	63	56	52	72	62	56	52	61	55	51
9	69	59	52	47	68	58	52	47	57	51	47
10	66	55	48	44	64	54	48	44	53	47	43

LC8SL 8LCSL18L35K8

Test No. 16.03295

LC8SL 8LCSL14L35K8

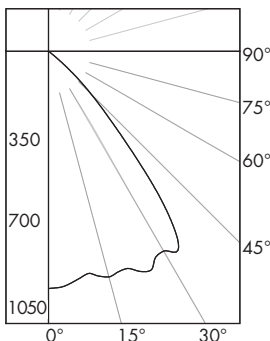
LED Light Engine: 3500K, 80+ CRI

System Wattage: 17.8W

Fixture Delivered Lumens: 1547

Fixture Efficacy: 86.9

Spacing Criteria: 1.2



Test No. 16.03296

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	CANDELA
0	976
5	962
15	961
25	995
35	914
45	245
55	6
65	2
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	809	52.3
0-40	1333	86.2
0-60	1544	99.8
0-90	1547	100.0
90-180	0	0.0
0-180	1547	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	10680
55°	322
65°	146
75°	119
85°	0

COEFFICIENTS OF UTILIZATION**Zonal Cavity Method**

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance										
	80%		70%		50%		30%		10%		
	20% Effective Floor Cavity Reflectance										
	% Wall Reflectance										
	70	50	30	10	70	50	30	10	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100
2	107	101	97	93	104	99	95	92	96	93	90
3	100	93	88	83	98	92	87	82	89	85	81
4	94	86	80	75	92	85	79	74	82	77	73
5	89	79	73	68	87	78	72	67	76	71	67
6	83	73	67	62	82	72	66	61	71	65	61
7	78	68	61	56	77	67	61	56	66	60	56
8	74	63	56	52	72	62	56	51	61	55	51
9	69	59	52	47	68	58	52	47	57	51	47
10	66	55	48	44	64	54	48	44	53	47	44

LC8SL 8LCSL14L35K8

Test No. 16.03296

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**HUBBELL**
Lighting, Inc.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8SLDM/8LC8SL18L40K8-WT

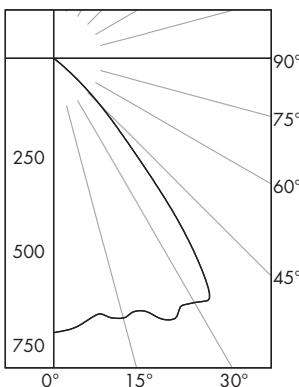
Notes:

Type:**FT**

LAIHOU18-45878

PHOTOMETRIC DATA

LiteFrame - 8" LC8SL Downlight

LC8SL 8LC8SL10L35K8LED Light Engine: 3500K, 80+ CRI
System Wattage: 13.4W
Fixture Delivered Lumens: 1126
Fixture Efficacy: 84.0
Spacing Criteria: 1.2**CANDELA DISTRIBUTION**

DEG	CANDELA
0	709
5	696
15	695
25	742
35	669
45	166
55	4
65	2
75	1
85	0
90	0

Test No. 16.03297

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	597	53.0
0-40	982	87.2
0-60	1124	99.8
0-90	1126	100.0
90-180	0	0.0
0-180	1126	100.0

**LUMINANCE DATA IN CANDELA/
SQ. METER**

Angle in Vertical	Average
45°	7236
55°	215
65°	146
75°	119
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance															
	70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance															
	% Wall Reflectance															
	70	50	30	10	70	50	30	10	50	30	10	50	30	10		
1	113	110	107	105	110	108	105	103	104	102	100	98	97	96		
2	107	101	97	93	104	99	95	92	96	93	90	88	87	86		
3	100	93	88	83	98	92	87	83	89	85	81	79	78	77		
4	94	86	80	75	92	85	79	75	83	78	74	70	70	70		
5	89	79	73	68	87	78	72	68	77	71	67	75	73	69		
6	83	73	67	62	82	73	66	62	71	65	61	68	64	64		
7	78	68	61	57	77	67	61	56	66	60	56	63	59	59		
8	74	63	56	52	72	63	56	51	61	55	51	59	54	54		
9	70	59	52	48	68	58	52	48	57	51	47	55	51	50		
10	66	55	48	44	65	54	48	44	53	47	43	52	47	47		

LC8SL 8LC8SL10L35K8

Test No. 16.03297

Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTV	http://bit.ly/11jSvZg
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1BJn2R9

Central Inverters

For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series

LPS Series: www.dual-lite.com/products/lps

SCA8D

When ordering a sloped ceiling adapter, specify the degree of slope in 1° increments, maximum of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.

Web: www.prescolite.com • Tech Support: (888) 777-4832

701 Millennium Boulevard • Greenville, SC 29607 U.S.A. • Phone (864) 678-1000

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Specifications subject to change without notice. • Printed in U.S.A. • LFR-LED-042 • 3/15/17

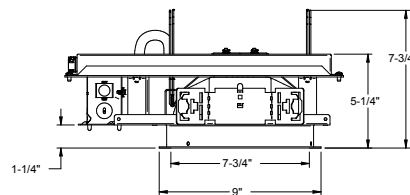
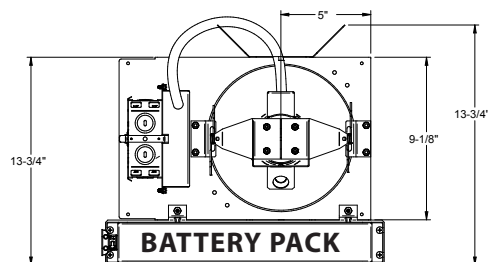
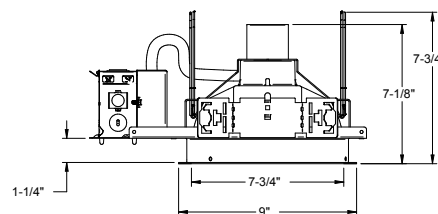
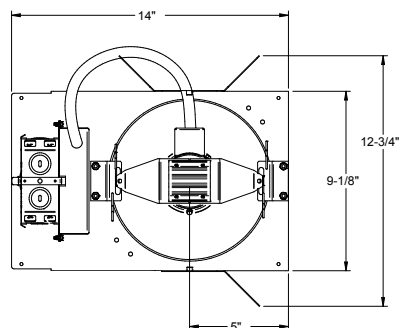
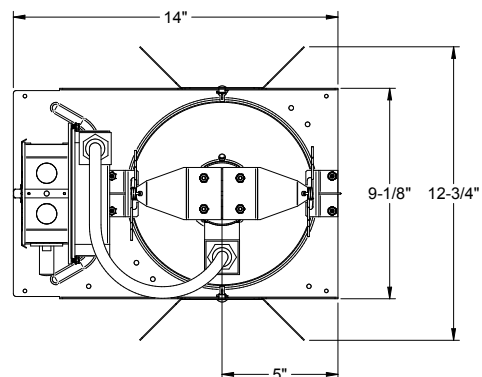
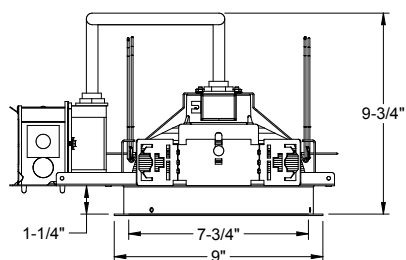
**HUBBELL**
Lighting, Inc.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LC8SLDM/8LC8SL18L40K8-WT

Notes:**Type:****FT**

LAIHOU18-45878

LiteFrame - 8" LC8SL Downlight**LC8SLEM****LC8SL18L****LC8SLCP**Web: www.prescolite.com • Tech Support: (888) 777-4832

701 Millennium Boulevard • Greenville, SC 29607 U.S.A. • Phone (864) 678-1000

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**HUBBELL**
Lighting, Inc.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**
EL807/9L4KUV/BL

Notes:

Type:**M1**

LAIHOU18-45878

**KIM LIGHTING****Wall, Step, Path Light EL807**
120 / 277 Volt Die-Cast Aluminum LED

revision 2/11/15 • kl_el807_spec.pdf

Type:**Job:****Fixture Catalog number:**

_____	/	_____
Fixture	Mode	Finish

Approvals:**Date:**
Page: 1 of 2**Specifications**

Housing: Die-cast low copper alloy (<0.6% Cu) aluminum with clear anodized finish. Two 1/2" NPT in sides. Housing mounts into concrete, brick, or masonry (non-combustible materials). Internal splice area provided behind lamp plate.

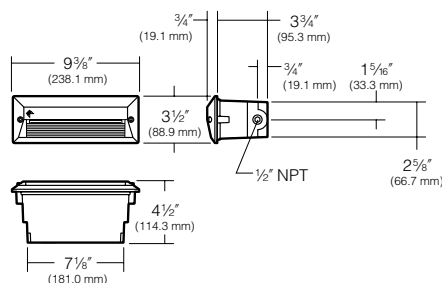
Lens Frame: Die-cast aluminum, with silicone gasket, attaches to housing with two captive 10-32 stainless steel, hex socket cap screws.

Lens: Tempered prismatic glass with silicone gasket, concealed above lens frame opening.

Finish: On lens frame only, each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat finish. Standard colors are Black (BL), Dark Bronze (DB), and Verde Green (GR).

Optical System: A total of 3 or 9 LED emitters are configured together as a module. Available in 3000K, 4200K, and 5100K.

Driver: Universal Voltage from 120 to 277V with a ±10% tolerance. -40° F. starting temperature. All drivers are Underwriters Laboratories recognized.

**ORDERING INFORMATION**

Fixture	Source
<input type="checkbox"/> EL807 / 3L3KUV ¹	5.3W, 3 LED's, 3000K
<input type="checkbox"/> EL807 / 3L4KUV ¹	5.3W, 3 LED's, 4200K
<input type="checkbox"/> EL807 / 3L5KUV ¹	5.3W, 3 LED's, 5100K

Fixture	Source
<input type="checkbox"/> EL807 / 9L3KUV ¹	10.5W, 9 LED's, 3000K
<input type="checkbox"/> EL807 / 9L4KUV ¹	10.5W, 9 LED's, 4200K
<input type="checkbox"/> EL807 / 9L5KUV ¹	10.5W, 9 LED's, 5100K

¹ Universal Voltage from 120 to 277V with a ±10% tolerance.
For 5.3W, Max Amps. are .13 for 120V, .080 for 208V, .080 for 240V, .060 for 277V. For 10.8W, Max Amps. are .090 for 120V, .050 for 208V, .040 for 240V, .040 for 277V..

Finish

- ☐ BL - Black
☐ DB - Dark Bronze
☐ GR - Verde Green

Hubbell
Lighting, Inc.**Listings and Ratings**

UL cUL 1598 ¹	IP66 Rated	25C Ambient
--------------------------	------------	-------------

¹Suitable for wet locations

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

EL807/9L4KUV/BL

Notes:

Type:**M1**

LAIHOU18-45878

**KIM LIGHTING****Wall, Step, Path Light EL807**

120 / 277 Volt Die-Cast Aluminum LED

revision 2/11/15 • kl_el807_spec.pdf

Type:**Job:****Page: 2 of 2****Lumen Data****Spectroradiometric**

	3000K	4200K	5100K
Correlated Color Temp. CCT (K)	2800 to 3175K	3800 to 4600K	4600 to 5600K
Color Rendering Index (CRI)	≥75	≥70	≥65

ELECTRICAL - Drive Current @350mA (3 LEDs)

Volts -AC	Amps - AC	System Watts
120	0.13	5.3
208	0.08	5.3
240	0.08	5.3
277	0.06	5.3

ELECTRICAL - Drive Current @350mA (9 LEDs)

Volts -AC	Amps - AC	System Watts
120	0.09	10.5
208	0.05	10.5
240	0.04	10.5
277	0.04	10.5

Absolute Lumens (3 LEDs)

Temperature	EL807/3L*K
3000K	61
4200K	71
5100K	78

Absolute Lumens (9 LEDs)


Temperature	EL807/9L*K
3000K	167
4200K	188
5100K	211


Lumens Per Watt (3 LEDs)

Temperature	EL807/3L*K
3000K	11.5
4200K	13.4
5100K	14.7

Lumens Per Watt (9 LEDs)

Temperature	EL807/9L*K
3000K	15.9
4200K	17.9
5100K	20.1

Submitted by Lighting Associates		Catalog Number: COULDN'T FIND CUT SHEET	Type: M2
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878
<div>COULDN'T FIND CUT SHEET</div>			

Submitted by Lighting Associates		Catalog Number: STAYS THE SAME. JUST A POLE	Type: M2P
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878
<div>STAYS THE SAME. JUST A POLE.</div>			

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

VRB1C/20L4KUV/BL

Notes:**Type:****BOLLARD**

LAIHOU18-45878

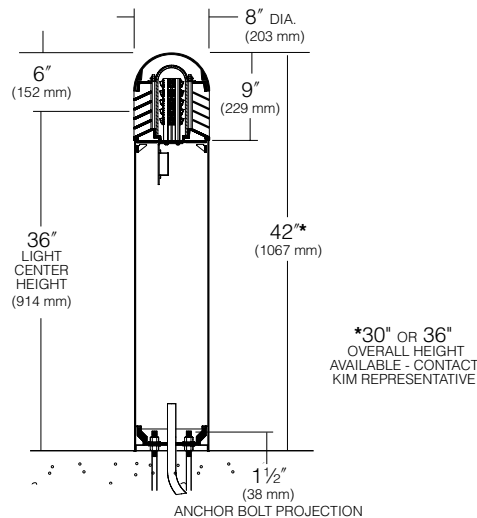
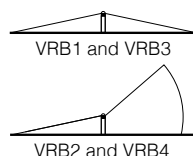
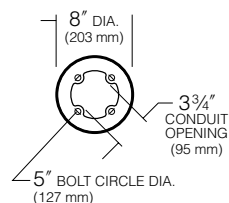
**KIM LIGHTING****VRB1 LED Round Bollard**

Single Function, Vandal-Resistant, Aluminum Shaft

revision 8/7/14 • kl_vrb1led_spec.pdf

Type:**Job:****Catalog number:**

VRB1	/	/	/
Fixture	Electrical Module	Luminaire Finish (includes top cap and shaft)	Option
		See page 2	

Approvals:**Date:****Page: 1 of 3****Specifications****VRB-LED Models**
10 - 20 Diodes**VRB1- Single Function Luminaire (Aluminum Shaft)**
Maximum weight: 30 lb**BASE PLAN VRB
ALUMINUM SHAFT****HUBBELL
Lighting****Domed Top Cap:** One-piece die-cast aluminum secured to louvers by concealed allen screws in keyhole slots. For relamping access, allen screws shall not require complete removal.**Louvers:** Aluminum die-cast with vertical support ribs at 90° intervals. Horizontal louver blades shall have a 1 3/4" depth, a 65° upward pitch and provide light source cutoff above horizontal. Louver assembly shall be secured to shaft by four internal tie rods.**Lamp Enclosure:** One-piece tempered molded glass with internal flutes and full gasketing at bottom edge.**Fixture Head:** Allows flow-through ventilation around and above the lamp enclosure.**Shaft:** One-piece extruded aluminum, .125" wall thickness with a heavy cast aluminum twist-lock anchor base concealed within the shaft. Concealed set screws shall lock shaft onto the cast anchor base.**Electronic Module:** All electrical components are either UL or ETL recognized, mounted on a single plate and factory prewired with quick disconnect plugs. Driver is rated for -40°F starting and has a 0-10V dimming interface for multi-level illumination options.**Optical Module:** Each LED equipped with a directional optic for maximum beam angle projecting through louver stack spacings. LED boards to be mounted to an anodized inter-locking heat sink extrusion. (Type I) two 5-LED boards for a total of 10-LED. (Type III) three 5-LED boards for a total of 15-LED. (Type V) four 5-LED boards for a total of 20-LED. Available in 580nm Amber, 3000K, 4200K and 5100K color temperatures.**Anchor Bolts:** Four 3/8" x 10" + 2" zinc plated L-hooks, each with two nuts, washers and a rigid pressed board template.**Finish:** Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidyl isocyanurate (TGIC) polyester powdercoat finish. Standard colors include (BL) Black, (DB) Dark Bronze, (WH) White, (PS) Platinum Silver, (SG) Stealth Gray, (LG) Light Gray, and (CC) Custom Color (Include RAL#).**Listed to:** UL 1598 Standard for Luminaires - UL 8750 Standard for Safety for Light Emitting Diode (LED) Equipment for use in Lighting Products and CSA C22.2#250.0 Luminaires. RoHS compliant. Meets Buy American provisions within ARRA.**Warranty:** Kim Lighting warrants Bollard LED products sold by Kim Lighting to be free from defects in material and workmanship for (i) a period of five (5) years for metal parts, (ii) a period of five (5) years for exterior housing paint finish(s), (iii) a period of five (5) years for LED Light Engines and, (iv) a period of five (5) years for LED power components (driver, surge protector and LifeShield® device), from the date of sale of such goods to the buyer as specified in Kim Lighting shipment documents for each product.**CAUTION:** Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

VRB1C/20L4KUV/BL

Notes:

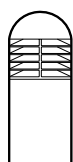
Type:**BOLLARD**

LAIHOU18-45878

**KIM LIGHTING****VRB1 LED Round Bollard**

Single Function, Vandal-Resistant, Aluminum Shaft

revision 8/7/14 • kl_vrb1led_spec.pdf

Type:**Job:****Page: 2 of 3****Standard and Optional Features****Fixture**Cat. No. **VRB1** Single Function, Aluminum Shaft, Domed Top**Electrical Module****LED** = Light Emitting Diode

Cat. Nos. for LED Electrical Modules available:

xL**Source:**

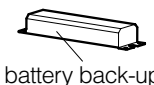
- ☐ **10L** = 10 LED
(IES Type I)
- ☐ **15L** = 15 LED
(IES Type III)
- ☐ **20L** = 20 LED
(IES Type V)

xK**Color Temperature:**

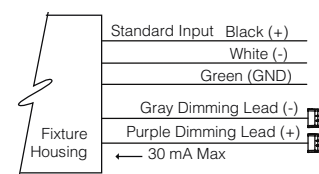
- ☐ 2K = 580nm - Amber
- ☐ 3K = 3000K
- ☐ **4K = 4200K**
- ☐ 5K = 5100K

UV**Voltage:**

- ☐ **UV** Universal Voltage
shall range from
120V-277V

FinishTGIC thermoset polyester
powder coat paint
applied over a titanated
zirconium conversion
coating on fixture and shaft.Color: Black Dark Bronze Light Gray Stealth Gray Platinum Silver White Custom Color¹Cat. No.: ☐ **BL** ☐ **DB** ☐ **LG** ☐ **SG** ☐ **PS** ☐ **WH** ☐ **CC****NOTE:** Black and Dark Bronze colors will produce slightly less louver brightness than Light Gray or White.¹Custom colors subject to additional charges, minimum quantities and extended lead times.
Consult representative. Custom color description: _____**Battery Back-up**Cat. No. ☐ **EM**
☐ **No Option**Internal battery pack provides 90 minutes of supplemental
light at 50% of initial lamp lumens.

battery back-up

**Optional Duplex
Receptacle**Cat. No. ☐ **DR**
☐ **DR-GFI**
☐ **No Option**Mounted 18" from bottom of shaft, in a cast aluminum box that is internally welded and sealed
with a gasketed While-In-Use cover with locking tab. Painted to match bollard.**DR** weather proof duplex receptacle rated 20A, 125V.**DR-GFI** weather proof duplex receptacle with ground fault circuit interrupter rated 20A, 125V.**0-10V Dimming Interface**Driver has a 0-10V dimming interface with a dimming
range of 10-100%. Is compatible with most control
systems including Hubbell Building Automation
wiHUBB™. Approved dimmers include Lutron Diva
AVTV, Lutron Nova NFTV and NTFTV. Note: Not
compatible with current sourcing dimmers. Controls
compatible via Gray and Purple dimming lead.



VRB1 LED Round Bollard

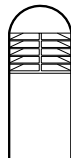
Single Function, Vandal-Resistant, Aluminum Shaft

revision 8/7/14 • kl_vrb1led_spec.pdf

Type:

Job:

Page: 3 of 3



Lumen Data

Spectroradiometric			
	3000K Average	4200K Average	5100K Average
Correlated Color Temp. CCT (K)	2800K - 3175K	3800K - 4600K	4600K - 5600K
Color Rendering Index (CRI)	≥75	≥70	≥65
Power Factor	>.90	>.90	>.90

Projected Lumen Maintenance		
mA	50,000 hrs	100,000 hrs
350mA	N/A	N/A

Based on 20LED version.

Electrical Drive Current - @350mA						
	Type 1		Type 3		Type 5	
Volts - AC	Amps - AC	System Watts	Amps - AC	System Watts	Amps - AC	System Watts
120	0.11	13	0.16	19	0.21	25
208	0.06	13	0.09	19	0.12	25
240	0.05	13	0.08	19	0.10	25
277	0.05	13	0.07	19	0.09	25

B.U.G. Rating (TM15) in Lumens where B = Backlight, U = Uplight, G = Glare			
Temperature	TYPE 1	TYPE 3	TYPE 5
3000K	B1 U2 G1	B1 U2 G1	B1 U2 G1
4200K	B1 U2 G1	B1 U2 G1	B1 U2 G1
5100K	B1 U2 G1	B1 U2 G1	B1 U2 G1

Absolute Lumens			
Temperature	TYPE 1	TYPE 3	TYPE 5
3000K	396	567	811
4200K	491	703	1005
5100K	515	739	1057

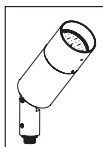
LED performance and lumen output continues to improve at a rapid pace. Log onto www.kimlighting.com to download the most current photometric files from Kim Lighting's IES File Library. For custom optics and color temperature configurations, contact factory.

LIGHTING
ASSOCIATES, INC.**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**DE-LED-X66-FL-BLW-9-11-B-HP2-
D27INC-MT

Notes:

Type:**M3**

LAIHOU18-45878



12-27W LED
**DENALI SERIES™ FLOODLIGHT**

PROJECT:

TYPE:

CATALOG
NUMBER:

SOURCE:

NOTES:

CATALOG NUMBER LOGIC

Example: DE - LED - x58 - FL - SAP - 12 - 11 - C

Series **DE** - Denali Series™ Floodlight

Source **LED** - 'X' Module with Cold Phosphor Technology

LED Type
 x58 - 12WLED/2.7K
 x59 - 12WLED/3K
 x60 - 12WLED/4K
 x61 - 20WLED/2.7K
 x62 - 20WLED/3K
 x63 - 20WLED/4K
 x64 - 27WLED/2.7K
 x65 - 27WLED/3K
 x66 - 27WLED/4K

Optics
 SP - Spot (15°)
 FL - Flood (35°)
 WFL - Wide Flood (60°)

Finish

Configure Driver Housing Separately
Driver Housing Required**INTEGRAL DRIVER HOUSINGS:**

HP2 - HP2 Housing
 PM2 - Universal Power Module 2
 PM2D - Universal Power Module 2 Dual
 PC - Power Canopy
 PPII - Power Pipe II
 TMB - Pole Mount or Tenon Mount

REMOTE DRIVER HOUSINGS:

HP2RM - HP2 Remote Housing
 PM2RM - Universal Power Module 2 Remote
 PM2DRM - Universal Power Module 2 Dual Remote
 RM - Remote Wall Mount
 DRM - Dual Remote Wall Mount

Aluminum Finish

Powder Coat Color	Satin	Wrinkle
Bronze	BZP	BZW
Black	BLP	BLW
White (Gloss)	WHP	WHW
Aluminum	SAP	—
Verde	—	VER

Premium Finish

ABP	Antique Brass Powder	CMG	Cascade Mountain Granite	RMG	Rocky Mountain Granite
AMG	Aleutian Mountain Granite	CRI	Cracked Ice	SDS	Sonoran Desert Sandstone
AQW	Antique White	CRM	Cream	SMG	Sierra Mountain Granite
BCM	Black Chrome	HUG	Hunter Green	TXF	Textured Forest
BGE	Beige	MDS	Mojave Desert Sandstone	WCP	Weathered Copper
BPP	Brown Patina Powder	NBP	Natural Brass Powder	WIR	Weathered Iron
CAP	Clear Anodized Powder	OCP	Old Copper	Also available in RAL Finishes See submittal SUB-1439-00	

Lens Type **9** - Clear (Standard) **10** - Spread Lens* **12** - Soft Focus Lens* **13** - Rectilinear Lens*

Shielding **11** - Honeycomb Baffle*

*Accommodates up to 2 Lens/Shielding media

Cap Style **A** - 45° **B** - 90° **C** - Flush **D** - 45° less Weep Hole (Interior Use Only) **E** - 90° less Weep Hole (Interior Use Only)

B-K LIGHTING40429 Brickyard Drive • Madera, CA 93636 • USA
559.438.5800 • FAX 559.438.5900
www.bklighting.com • info@bklighting.comRELEASED
11-7-17DRAWING NUMBER
SUB001113

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LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

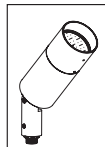
Catalog Number:

DE-LED-X66-FL-BLW-9-11-B-HP2-
D27INC-MT

Notes:

Type:**M3**

LAIHOU18-45878

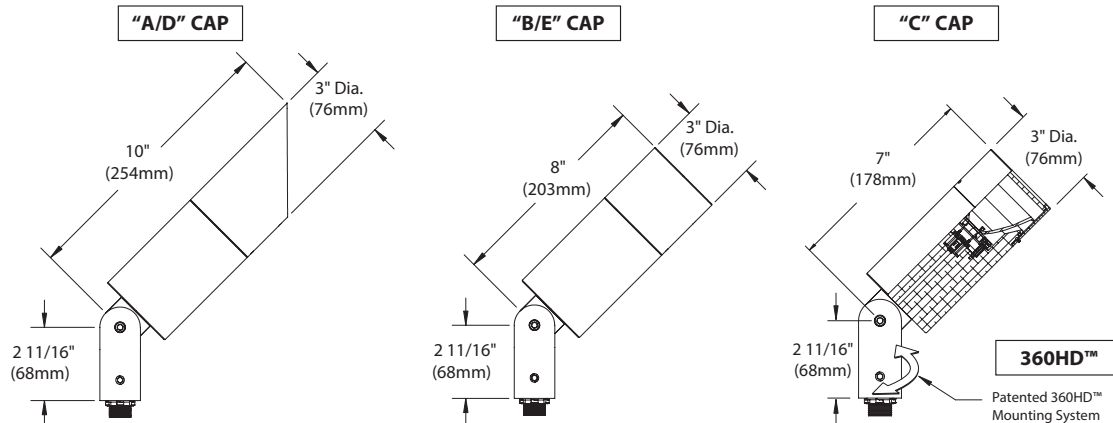


BKSSL
BOLD STATE LIGHTING
12-27W LED

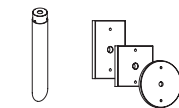
**DENALI SERIES™ FLOODLIGHT**

PROJECT:

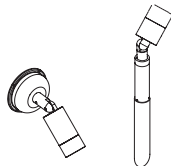
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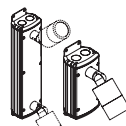
All dimensions indicated on this submittal are nominal.
Contact Technical Sales if you require more stringent specifications.

Accessories (Configure separately)**Drivers (Configure separately)****Mounting:**

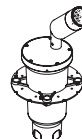
Power Pipe™ Canopies



Power Canopy™ Power Pipe™



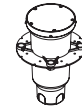
PM2D & PM2



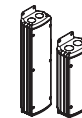
HP2



TMB



HP2RM



PM2DRM & PM2RM



RM & DRM

Drivers:**SPECIFICATIONS****GreenSource Initiative™**

Metal and packaging components are made from recycled materials. Manufactured using renewable solar energy, produced on site. Returnable to manufacturer at end of life to ensure cradle-to-cradle handling. Packaging contains no chlorofluorocarbons (CFC's). Use of this product may qualify for GreenSource efficacy and recycling rebate(s). Consult www.bklighting.com/greensource for program requirements.

Materials

Furnished in Copper-Free Aluminum (Type 6061-T6).

Body

Fully machined from solid billet. Unibody design provides enclosed, water-proof wireway and integral heat sink for maximum component life. Integral knuckle for maximum mechanical strength. High temperature, silicone 'O' Ring provides water-tight seal.

Knuckle

Patented 360HD™ Mounting System features a mechanical taper-lock, which allows a full 180° vertical adjustment without the use of serrated teeth, which inherently limit aiming. High temperature, silicone 'O' Ring provides water-tight seal and compressive resistance to maintain fixture position. Design withstands 73 lb. static load prior to movement to ensure decades of optical alignment. 1/2" pipe thread for mounting. Biaxial source control additionally provides 360° horizontal rotation in addition to vertical adjustment. 'Aim-And-Lock' Technology allows precision adjustment without the redundant tightening and loosening of knuckle screw.

Cap

Fully machined. Accommodates [2] lens or louver media. Choose from 45° cutoff ('A' or 'D'), 1" deep bezel with 90° cutoff ('B' or 'E') or flush lens ('C') cap styles. 'A' and 'B' caps include weep-hole for water and debris drainage. 'D' and 'E' caps exclude weep-hole and are for interior use only.

Lens

Shock resistant, tempered, glass lens is factory adhered to fixture cap and provides hermetically sealed optical compartment.

BKSSL®

Integrated solid state system with 'X' technology is scalable for field upgrade. Modular design with electrical quick disconnects permit field maintenance.

LM-80 certified. Minimum 50,000 hour rated life at 70% of initial lumens (L70). BKSSL technology provides long life, significant energy reduction and exceptional thermal management.

Color Management

Corrected cold phosphor technology delivers near-perfect natural white light. Long term phosphor maintenance over product life. Exact color point conformity exceeds ANSI C78.377 standard. Provides uniform beam with no color variation over angle. Module exceeds 80 CRI (RA>80, R9>16).

Remote Driver

For use with remote LED driver. See remote driver submittal to determine remote distance and wiring requirements prior to detailing field installation of any remote wiring.

Optics

Interchangeable OPTIKIT™ modules permit field changes to optical distribution.

Wiring

Teflon® coated, 18AWG, 600V, 250° C rated and certified to UL 1659 standard.

Hardware

Tamper-resistant, stainless steel hardware. 360HD™ hardware is additionally black oxide treated for additional corrosion resistance.

Finish

StarGuard®, our exclusive RoHS compliant, 15 stage chromate-free process cleans and conversion coats aluminum components prior to application of Class 'A' TGIC polyester powder coating.

Warranty

5 year limited warranty.

Certification and Listing

UL tested to IESNA LM-79. UL Listed. Certified to CAN/CSA/ANSI Standards. RoHS compliant. Suitable for indoor or outdoor use. Suitable for use in wet locations. Additionally suitable for installation within 4' of the ground. IP66 Rated. Made in USA.



*Teflon is a registered trademark of DuPont Corporation.

*Energy Star is a registered trademark of the United States Environmental Protection Agency.


B-K LIGHTING

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www.bklighting.com • info@bklighting.com

RELEASED
11-7-17

DRAWING NUMBER
SUB001113

360HD Patent is covered in whole or in part by U.S. Patent No. 6,161,948

Submitted by Lighting Associates		Catalog Number: DE-LED-X66-FL-BLW-9-11-B-HP2-D27INC-MT	Type: M3
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878



LAMP DATA

x58, x59, x60, x61, x62, x63, x64, x65, x66

LM79 DATA				L70 DATA		OPTICAL DATA		
BK No.	CCT (Typ.)	CRI (Typ.)	Input Watts (Typ.)	Minimum Rated Life (hrs.) 70% of initial lumens (L ₇₀)		Angle	CBCP	Delivered Lumens
x58	2700K	80	12W	50,000		15°	3877	724
	2700K	80	12W	50,000		35°	1498	663
	2700K	80	12W	50,000		60°	629	625
x59	3000K	80	12W	50,000		15°	4059	758
	3000K	80	12W	50,000		35°	1568	694
	3000K	80	12W	50,000		60°	659	655
x60	4000K	80	12W	50,000		15°	4561	851
	4000K	80	12W	50,000		35°	1762	780
	4000K	80	12W	50,000		60°	740	736
x61	2700K	80	20W	50,000		15°	7098	1306
	2700K	80	20W	50,000		35°	2621	1124
	2700K	80	20W	50,000		60°	1048	1063
x62	3000K	80	20W	50,000		15°	7488	1378
	3000K	80	20W	50,000		35°	2765	1186
	3000K	80	20W	50,000		60°	1106	1121
x63	4000K	80	20W	50,000		15°	7800	1435
	4000K	80	20W	50,000		35°	2880	1235
	4000K	80	20W	50,000		60°	1152	1168
x64	2700K	80	27W	50,000		15°	15679	1769
	2700K	80	27W	50,000		35°	4656	1588
	2700K	80	27W	50,000		60°	1517	1386
x65	3000K	80	27W	50,000		15°	16190	1827
	3000K	80	27W	50,000		35°	4808	1640
	3000K	80	27W	50,000		60°	1567	1431
x66	4000K	80	27W	50,000		15°	17042	1923
	4000K	80	27W	50,000		35°	5061	1726
	4000K	80	27W	50,000		60°	1649	1506

OPTICS


Optic	Angle
Spot	15°
Flood	35°
Wide Flood	60°

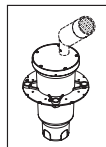
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RELEASED
11-20-2017

DRAWING NUMBER
SUB-2581-00

Submitted by Lighting Associates		Catalog Number: DE-LED-X66-FL-BLW-9-11-B-HP2-D27INC-MT Notes:	Type: M3 LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		



HP² DRIVER HOUSING

PROJECT:	
TYPE:	
CATALOG NUMBER:	
LAMP(S):	
NOTES:	

CATALOG NUMBER LOGIC

Example

HP2 - D12INC - MT - GM-R

Driver Housing **HP2** - In-Grade (Flush) Driver Housing

Driver Type (Driver Wattage must match Fixture Wattage)

For use with Incandescent Dimmer. 120V only for Dimming:
D12INC - 12W Dimming Driver (for use with Incandescent Dimmer. 120V only)
D20INC - 20W Dimming Driver (for use with Incandescent Dimmer. 120V only)
D27INC - 27W Dimming Driver (for use with Incandescent Dimmer. 120V only)

Input Voltage **MT** - 120-277 VAC Input

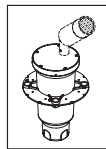
Option
GM-R - Round Grout Mask
GM-S - Square Grout Mask

DRIVER ELECTRICAL DATA

TYPE	AC INPUT RANGE	FREQUENCY HZ	DIMMING	POWER FACTOR AT FULL LOAD	THD	OPERATING AMBIENT TEMPERATURE	DIMMER TYPE	DIMMER RANGE	IN RUSH CURRENT
D12INC	105-305	50/60	YES	≥0.94	≤5%	-30°C to 50°C (-22°F to 122°F)	Incandescent	10-100%	<250mA
D20INC	105-305	50/60	YES	≥0.94	≤5%	-30°C to 50°C (-22°F to 122°F)	Incandescent	10-100%	<250mA
D27INC	100-277	50/60	YES	≥0.90	≤20%	-30°C to 60°C (-22°F to 140°F)	Incandescent	10-100%	<15A

B-K LIGHTING	40429 Brickyard Drive • Madera, CA 93636 • USA 559.438.5800 • FAX 559.438.5900 www.bklighting.com • info@bklighting.com	RELEASED 11-7-17	DRAWING NUMBER SUB-2612-00
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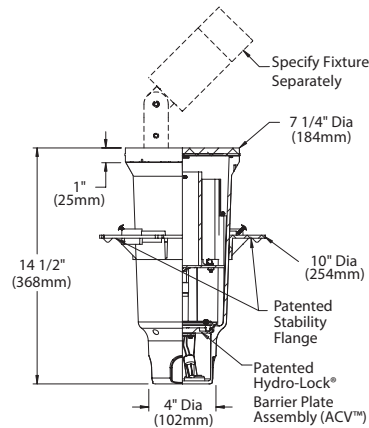
Constant Current Driver



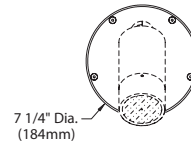
HP² DRIVER HOUSING

PROJECT:	
TYPE:	

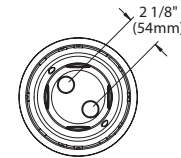
SIDE VIEW



TOP VIEW



BOTTOM VIEW



All dimensions indicated on this submittal are nominal.
Contact Technical Sales if you require more stringent specifications.

SPECIFICATIONS

GreenSource Initiative™

Metal and packaging components are made from recycled materials. Manufactured using renewable solar energy, produced on site. Returnable to manufacturer at end of life to ensure cradle-to-cradle handling. Packaging contains no chlorofluorocarbons (CFC's). Use of this product may qualify for GreenSource efficacy and recycling rebate(s). Consult www.bklighting.com/greensource for program requirements.

Faceplate

Solid, 1/2" machined 6061T6 copper-free aluminum with (5) black oxide, captive, stainless steel mounting screws.

Housing

Corrosion-free composite, made from high strength, thermoformed, sheet molded polyester compound. Glass reinforced, flame retardant and UV stabilized. (2) Bottom-Entry, 3/4" NPT female conduit entries with knockout plugs and (4) side flats for 1/2" or 3/4" conduit adapters.

Patented Stability Flange

Corrosion-free composite flange projects into installation substrate to reinforce housing stability. Integral REBAR saddles simplify installation onto concrete form. (4) Orthogonal bosses permit use of 1/2" PCV conduit or EMT to simplify vertical position and leveling of housing. Pre-set self-tapping screws anchor housing at proper elevation.

Installation

Integral, copper-free aluminum concrete pour collar (CPC), furnished in Black finish, permits for direct burial installation in soil or concrete. Consult Drainage Installation Guide for In-Grade Fixtures (DIG-IT) for compliance with proper soil preparation and drainage requirements prior to installation.

Driver (12-27W)

For use with [1] 700mA (D12, D20, D27), Class A, constant current driver. 120-277VAC (nominal) primary input voltage. 50/60Hz. >0.94 Power Factor, <15.0A in-rush current, 0.25A input current, ≤20%THD (nominal at 120VAC full load). Output over-voltage, over-current, and short circuit protection with auto recovery. EMC: FCC47CFR Part 15 Class B compliant. Dimming driver for use with standard incandescent dimmers. 10-100% range. Driver Wattage must match Fixture Wattage.

Water Management

Self Evacuating Airtight Lamp Module (S.E.A.L.™). IP-68 rated, vacuum sealed enclosure. Patented Anti-Condensation Valve (ACV™) eliminates condensation on interior components. Hightemperature silicone O'Ring at faceplate. Patented HydroLock® technology provides fail safe water barrier between junction box and interior components. Anti-siphon valve (ASV™) prevents "wicking" through conductor insulation.

Wiring / Connectors

Teflon® coated wire, 18 gauge, 600V, 250°C rated and certified to UL1659 standard. OptiLock® and gear tray quick disconnects. [3] Water-Tight connectors supplied for line connection. Maximum [2] #10 & [1] #18. Minimum [1] #12 & [1] #18.

Finish

StarGuard®, our exclusive RoHS compliant, 15 stage chromate-free process cleans and conversion coats aluminum components prior to application of Class 'A' TGIC polyester powder coating. Finish to match fixture (specified separately).

Warranty

5 year limited warranty.

Listings

IP-68 Rated Enclosure. UL Listed. Certified to CAN/CSA/ANSI Standards. RoHS compliant. Made in the USA.



*Teflon is a registered trademark of DuPont Corporation.

B-K LIGHTING

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RELEASED
11-7-17

DRAWING NUMBER
SUB-2612-00

Precision2® and its features are covered in whole or in part by U.S. Patent Nos. 7,033,038; 6,254,258 B1; 7,249,867 B2; 7,370,988 B2; 7,553,042; 7,560,148; and 7,699,489



EVE Series

LED Exit Sign

FEATURES

Application

The EVE series is a compact architectural LED exit sign designed for fast installation and reliable service. The EVE Series has a flame-rated, UV stable thermoplastic housing with a lightly textured white or black finish. Available in AC only or emergency operation which includes a nickel metal hydride(NiMH) battery and provides a full 90 minutes of emergency exit illumination in the event of power failure. Includes a constant current charger. The EVE accepts 120/277VAC input at 60Hz and optional 220-240VAC input at 50 or 60 Hz with self-diagnostics option. Available with special worded options.

Construction

The EVE series housing and canopy are made from durable injection molded ABS thermoplastic

Installation

EVE can be wall mounted by use of back-plate with molded-in template, ceiling or end mounted with the use of supplied canopy to standard 3-1/2" or 4" square or octagonal electrical boxes. Pre-stripped AC input leads provided.

Illumination

The EVE series provides bright and uniform exit panel illumination by using energy saving, long-life red or green LEDs with a 10 year lifecycle. The panel face exceeds UL924 requirements for brightness and uniformity.

Compliances

Listed to UL924 Standard
NFPA 101
NFPA 70
UL Damp Location Listed

Warranty

EVE Full 5 year warranty
Battery, 3 years full, 7 years pro-rata

Catalog Number	
Comments	Type



ACCESSORIES

EV Unit	2 LED Indoor Emergency Light
EVC	Exit Sign/ LED Emergency Light
VR3	Vandal Resistant Shield
WGLX	Wire Guard (Wall Mount)
WGLXC	Wire Guard (Ceiling Mount)
PMLXB	12 1/2" Pendant Mounting Kit (black)
PMLXW	12 1/2" Pendant Mounting Kit (white)



EVO Outdoor Remote



EVR2 Indoor Remote



EVC Combo Exit/ Light

ORDERING GUIDE

EVE						
Model	Faces	Letter Color	Finish	Operation	Self-Diagnostics	Options
	U Universal Face	R Red G Green	W White B Black	Blank Standard Model E Emergency	Blank No Self-Diagnostics I Spectron® Self-Diagnostics ⁶	2C 2 circuit operation ^{2,5} FAP Fire Alarm Panel ^{1,3,5,6} FM Flasher Module ^{1,6} AF Audible Flasher ^{1,6} DC Remote DC Operation ^{2,4,5} 24K 220-240VAC 50,60Hz with Spectron® SW Special Wordings ^{7,8}

¹ For use with Spectron self-diagnostic models only

² For use with AC models only

³ Operates with 24 volt AC or DC fire alarm panels

⁴ For emergency illumination of sign from remote 6-24 VDC power source

⁵ DC option may not be specified with 2C or FAP options

⁶ AF, FM and FAP options may not be specified together

⁷ AF, FM and FAP options may not be specified together

⁸ SW option limited to selections on pg.2

⁹ Special worded sign ships as a universal single or double face

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

EVEURB

Notes:

Type:**XA**

LAIHOU18-45878

**EVE Series**
LED Exit Sign**SPECIFICATIONS****Electronics**

- Upon failure of the normal utility power, a solid-state transfer switch automatically activates the exit LEDs. Upon resumption of the normal utility power, the battery is disconnected from the load and recharged through a constant current charger. The battery is a maintenance-free Nickel Metal Hydride(NiMH) type. The EVE series accepts 120/ 277VAC at 60 Hz, or an optional 220-240VAC input (-24K option)at 50 or 60 Hz. A low voltage battery disconnect(LVD) feature protects the battery from damage during prolonged power failures. Manual testing is available at any time using the push-to-test button. Rated LED lifecycle-greater than 100,000hrs. or 10 years.

Standard Features Include:

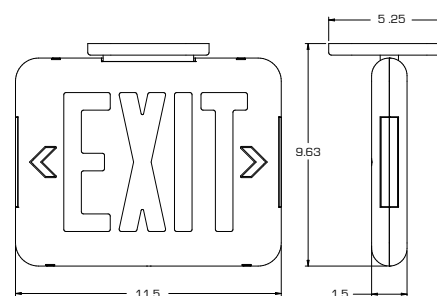
- External push-to-test switch and AC-on indicator
- Battery re-charge within 24 hours
- AC Lock-out circuit
- Low voltage battery disconnect

Optional Spectron Feature:

- Self-diagnostics monitors LED status, LED load transfer circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and an alternating 30 or 60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status User initiated 1 or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions(below 80% of nominal AC input voltage)

Operating Temperature Range:

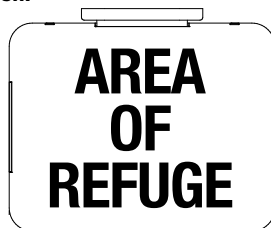
20° to 30°C

Weight: 2.5 lbs**DIMENSIONS****POWER CONSUMPTION**

Model	120VAC, 60Hz			277VAC, 60Hz		
	A	W	PF	A	W	PF
Red AC Only	0.02	1.42	0.59	0.009	1.36	0.54
Green AC Only	0.02	1.36	0.57	0.009	1.30	0.57
Red Emergency	0.027	2.01	0.62	0.0127	1.94	0.55
Green Emergency	0.027	2.01	0.62	0.0127	1.94	0.55

Special Worded Option Selection:

SW13



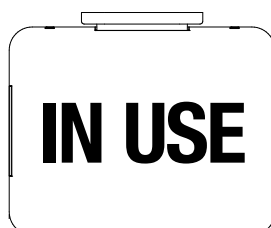
SW10



SW11



SW69



SW3



SW4

* All special worded selections ship as a universal sign for single or double-face application.

Web: www.dual-lite.com • Tech Support: (866)-313-3909

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**HUBBELL**
Lighting

0603570_EVE_Spec 12/15



EVE Series

LED Exit Sign

FEATURES

Application

The EVE series is a compact architectural LED exit sign designed for fast installation and reliable service. The EVE Series has a flame-rated, UV stable thermoplastic housing with a lightly textured white or black finish. Available in AC only or emergency operation which includes a nickel metal hydride(NiMH) battery and provides a full 90 minutes of emergency exit illumination in the event of power failure. Includes a constant current charger. The EVE accepts 120/277VAC input at 60Hz and optional 220-240VAC input at 50 or 60 Hz with self-diagnostics option. Available with special worded options.

Construction

The EVE series housing and canopy are made from durable injection molded ABS thermoplastic

Installation

EVE can be wall mounted by use of back-plate with molded-in template, ceiling or end mounted with the use of supplied canopy to standard 3-1/2" or 4" square or octagonal electrical boxes. Pre-stripped AC input leads provided.

Illumination

The EVE series provides bright and uniform exit panel illumination by using energy saving, long-life red or green LEDs with a 10 year lifecycle. The panel face exceeds UL924 requirements for brightness and uniformity.

Compliances

Listed to UL924 Standard
NFPA 101
NFPA 70
UL Damp Location Listed

Warranty

EVE Full 5 year warranty
Battery, 3 years full, 7 years pro-rata

Catalog Number	
Comments	Type



ACCESSORIES

EV Unit	2 LED Indoor Emergency Light
EVC	Exit Sign/ LED Emergency Light
VRS3	Vandal Resistant Shield
WGLX	Wire Guard (Wall Mount)
WGLXC	Wire Guard (Ceiling Mount)
PMLXB	12 1/2" Pendant Mounting Kit (black)
PMLXW	12 1/2" Pendant Mounting Kit (white)



EVO Outdoor Remote



EVR2 Indoor Remote



EVC Combo Exit/ Light

ORDERING GUIDE

EVE						
Model	Faces	Letter Color	Finish	Operation	Self-Diagnostics	Options
	U Universal Face	R Red G Green	W White B Black	Blank Standard Model E Emergency	Blank No Self-Diagnostics I Spectron® Self-Diagnostics ⁶	2C 2 circuit operation ^{2,5} FAP Fire Alarm Panel ^{1,3,5,6} FM Flasher Module ^{1,6} AF Audible Flasher ^{1,6} DC Remote DC Operation ^{2,4,5} 24K 220-240VAC 50,60Hz with Spectron® SW Special Wordings ^{7,8}

¹ For use with Spectron self-diagnostic models only

² For use with AC models only

³ Operates with 24 volt AC or DC fire alarm panels

⁴ For emergency illumination of sign from remote 6-24 VDC power source

⁵ DC option may not be specified with 2C or FAP options

⁶ AF, FM and FAP options may not be specified together

⁷ AF, FM and FAP options may not be specified together

⁸ SW option limited to selections on pg.2

⁹ Special worded sign ships as a universal single or double face

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

EVEURB

Notes:

Type:**XB**

LAIHOU18-45878

**EVE Series**
LED Exit Sign**SPECIFICATIONS****Electronics**

- Upon failure of the normal utility power, a solid-state transfer switch automatically activates the exit LEDs. Upon resumption of the normal utility power, the battery is disconnected from the load and recharged through a constant current charger. The battery is a maintenance-free Nickel Metal Hydride(NiMH) type. The EVE series accepts 120/ 277VAC at 60 Hz, or an optional 220-240VAC input (-24K option)at 50 or 60 Hz. A low voltage battery disconnect(LVD) feature protects the battery from damage during prolonged power failures. Manual testing is available at any time using the push-to-test button. Rated LED lifecycle-greater than 100,000hrs. or 10 years.

Standard Features Include:

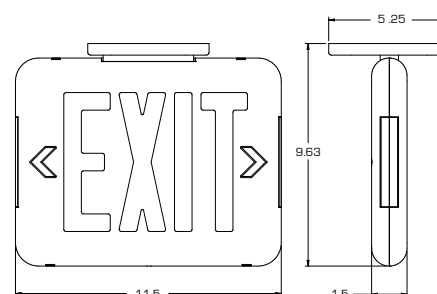
- External push-to-test switch and AC-on indicator
- Battery re-charge within 24 hours
- AC Lock-out circuit
- Low voltage battery disconnect

Optional Spectron Feature:

- Self-diagnostics monitors LED status, LED load transfer circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and an alternating 30 or 60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status
- User initiated 1 or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions(below 80% of nominal AC input voltage)

Operating Temperature Range:

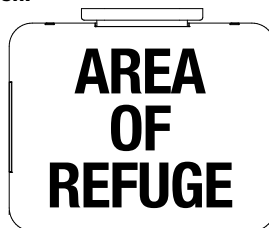
20° to 30°C

Weight: 2.5 lbs**DIMENSIONS****POWER CONSUMPTION**

Model	120VAC, 60Hz			277VAC, 60Hz		
	A	W	PF	A	W	PF
Red AC Only	0.02	1.42	0.59	0.009	1.36	0.54
Green AC Only	0.02	1.36	0.57	0.009	1.30	0.57
Red Emergency	0.027	2.01	0.62	0.0127	1.94	0.55
Green Emergency	0.027	2.01	0.62	0.0127	1.94	0.55

Special Worded Option Selection:

SW13



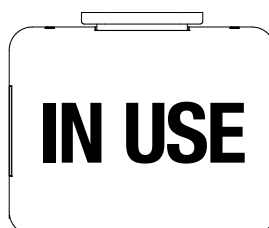
SW10



SW11



SW69



SW3



SW4

* All special worded selections ship as a universal sign for single or double-face application.

Web: www.dual-lite.com • Tech Support: (866)-313-3909


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**HUBBELL**
Lighting

0603570_EVE_Spec 12/15

Submitted by Lighting Associates		Catalog Number: EVEURB-SW3	Type: XC
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		
		Notes:	LAIHOU18-45878



EVE Series

LED Exit Sign

FEATURES

Application

The EVE series is a compact architectural LED exit sign designed for fast installation and reliable service. The EVE Series has a flame-rated, UV stable thermoplastic housing with a lightly textured white or black finish. Available in AC only or emergency operation which includes a nickel metal hydride(NiMH) battery and provides a full 90 minutes of emergency exit illumination in the event of power failure. Includes a constant current charger. The EVE accepts 120/277VAC input at 60Hz and optional 220-240VAC input at 50 or 60 Hz with self-diagnostics option. Available with special worded options.

Construction

The EVE series housing and canopy are made from durable injection molded ABS thermoplastic

Installation

EVE can be wall mounted by use of back-plate with molded-in template, ceiling or end mounted with the use of supplied canopy to standard 3-1/2" or 4" square or octagonal electrical boxes. Pre-stripped AC input leads provided.

Illumination

The EVE series provides bright and uniform exit panel illumination by using energy saving, long-life red or green LEDs with a 10 year lifecycle. The panel face exceeds UL924 requirements for brightness and uniformity.

Compliances

Listed to UL924 Standard
NFPA 101
NFPA 70
UL Damp Location Listed

Warranty

EVE Full 5 year warranty
Battery, 3 years full, 7 years pro-rata

Catalog Number	
Comments	Type



ACCESSORIES

EV Unit	2 LED Indoor Emergency Light
EVC	Exit Sign/ LED Emergency Light
VR3	Vandal Resistant Shield
WGLX	Wire Guard (Wall Mount)
WGLXC	Wire Guard (Ceiling Mount)
PMLXB	12 1/2" Pendant Mounting Kit (black)
PMLXW	12 1/2" Pendant Mounting Kit (white)



EVO Outdoor Remote



EVR2 Indoor Remote



EVC Combo Exit/ Light

ORDERING GUIDE

EVE						
Model	Faces	Letter Color	Finish	Operation	Self-Diagnostics	Options
	U Universal Face	R Red G Green	W White B Black	Blank Standard Model E Emergency	Blank No Self-Diagnostics I Spectron® Self-Diagnostics ⁶	2C 2 circuit operation ^{2,5} FAP Fire Alarm Panel ^{1,3,5,6} FM Flasher Module ^{1,6} AF Audible Flasher ^{1,6} DC Remote DC Operation ^{2,4,5} 24K 220-240VAC 50,60Hz with Spectron® SW Special Wordings ^{7,8}

¹ For use with Spectron self-diagnostic models only

² For use with AC models only

³ Operates with 24 volt AC or DC fire alarm panels

⁴ For emergency illumination of sign from remote 6-24 VDC power source

⁵ DC option may not be specified with 2C or FAP options

⁶ AF, FM and FAP options may not be specified together

⁷ AF, FM and FAP options may not be specified together

⁸ SW option limited to selections on pg.2

⁹ Special worded sign ships as a universal single or double face

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

EVEURB-SW3

Notes:

Type:**XC**

LAIHOU18-45878

**EVE Series**
LED Exit Sign**SPECIFICATIONS****Electronics**

- Upon failure of the normal utility power, a solid-state transfer switch automatically activates the exit LEDs. Upon resumption of the normal utility power, the battery is disconnected from the load and recharged through a constant current charger. The battery is a maintenance-free Nickel Metal Hydride(NiMH) type. The EVE series accepts 120/ 277VAC at 60 Hz, or an optional 220-240VAC input (-24K option)at 50 or 60 Hz. A low voltage battery disconnect(LVD) feature protects the battery from damage during prolonged power failures. Manual testing is available at any time using the push-to-test button. Rated LED lifecycle-greater than 100,000hrs. or 10 years.

Standard Features Include:

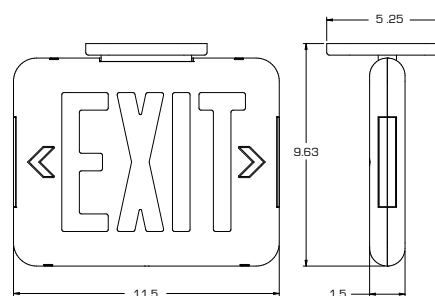
- External push-to-test switch and AC-on indicator
- Battery re-charge within 24 hours
- AC Lock-out circuit
- Low voltage battery disconnect

Optional Spectron Feature:

- Self-diagnostics monitors LED status, LED load transfer circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and an alternating 30 or 60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status
- User initiated 1 or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions(below 80% of nominal AC input voltage)

Operating Temperature Range:

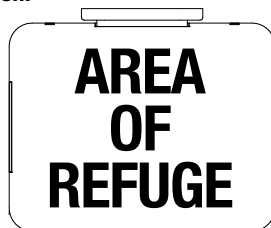
20° to 30°C

Weight: 2.5 lbs**DIMENSIONS****POWER CONSUMPTION**

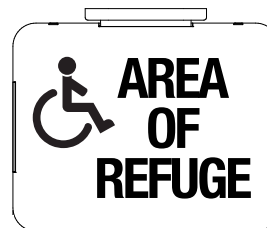
Model	120VAC, 60Hz			277VAC, 60Hz		
	A	W	PF	A	W	PF
Red AC Only	0.02	1.42	0.59	0.009	1.36	0.54
Green AC Only	0.02	1.36	0.57	0.009	1.30	0.57
Red Emergency	0.027	2.01	0.62	0.0127	1.94	0.55
Green Emergency	0.027	2.01	0.62	0.0127	1.94	0.55

Special Worded Option Selection:

SW13



SW10



SW11



SW69



SW3



SW4

* All special worded selections ship as a universal sign for single or double-face application.

Web: www.dual-lite.com • Tech Support: (866)-313-3909


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**HUBBELL**
Lighting

0603570_EVE_Spec 12/15

Submitted by Lighting Associates		Catalog Number: EVEURB-SW4	Type: XC
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		
		Notes:	LAIHOU18-45878



EVE Series

LED Exit Sign

FEATURES

Application

The EVE series is a compact architectural LED exit sign designed for fast installation and reliable service. The EVE Series has a flame-rated, UV stable thermoplastic housing with a lightly textured white or black finish. Available in AC only or emergency operation which includes a nickel metal hydride(NiMH) battery and provides a full 90 minutes of emergency exit illumination in the event of power failure. Includes a constant current charger. The EVE accepts 120/277VAC input at 60Hz and optional 220-240VAC input at 50 or 60 Hz with self-diagnostics option. Available with special worded options.

Construction

The EVE series housing and canopy are made from durable injection molded ABS thermoplastic

Installation

EVE can be wall mounted by use of back-plate with molded-in template, ceiling or end mounted with the use of supplied canopy to standard 3-1/2" or 4" square or octagonal electrical boxes. Pre-stripped AC input leads provided.

Illumination

The EVE series provides bright and uniform exit panel illumination by using energy saving, long-life red or green LEDs with a 10 year lifecycle. The panel face exceeds UL924 requirements for brightness and uniformity.

Compliances

Listed to UL924 Standard
NFPA 101
NFPA 70
UL Damp Location Listed

Warranty

EVE Full 5 year warranty
Battery, 3 years full, 7 years pro-rata

Catalog Number	
Comments	Type



ACCESSORIES

EV Unit	2 LED Indoor Emergency Light
EVC	Exit Sign/ LED Emergency Light
VR3	Vandal Resistant Shield
WGLX	Wire Guard (Wall Mount)
WGLXC	Wire Guard (Ceiling Mount)
PMLXB	12 1/2" Pendant Mounting Kit (black)
PMLXW	12 1/2" Pendant Mounting Kit (white)



EVO Outdoor Remote



EVR2 Indoor Remote



EVC Combo Exit/ Light

ORDERING GUIDE

EVE						
Model	Faces	Letter Color	Finish	Operation	Self-Diagnostics	Options
	U Universal Face	R Red G Green	W White B Black	Blank Standard Model E Emergency	Blank No Self-Diagnostics I Spectron® Self-Diagnostics ⁶	2C 2 circuit operation ^{2,5} FAP Fire Alarm Panel ^{1,3,5,6} FM Flasher Module ^{1,6} AF Audible Flasher ^{1,6} DC Remote DC Operation ^{2,4,5} 24K 220-240VAC 50,60Hz with Spectron® SW Special Wordings ^{7,8}

¹ For use with Spectron self-diagnostic models only

² For use with AC models only

³ Operates with 24 volt AC or DC fire alarm panels

⁴ For emergency illumination of sign from remote 6-24 VDC power source

⁵ DC option may not be specified with 2C or FAP options

⁶ AF, FM and FAP options may not be specified together

⁷ AF, FM and FAP options may not be specified together

⁸ SW option limited to selections on pg.2

⁹ Special worded sign ships as a universal single or double face

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

EVEURB-SW4

Notes:

Type:**XC**

LAIHOU18-45878

**EVE Series**
LED Exit Sign**SPECIFICATIONS****Electronics**

- Upon failure of the normal utility power, a solid-state transfer switch automatically activates the exit LEDs. Upon resumption of the normal utility power, the battery is disconnected from the load and recharged through a constant current charger. The battery is a maintenance-free Nickel Metal Hydride(NiMH) type. The EVE series accepts 120/ 277VAC at 60 Hz, or an optional 220-240VAC input (-24K option)at 50 or 60 Hz. A low voltage battery disconnect(LVD) feature protects the battery from damage during prolonged power failures. Manual testing is available at any time using the push-to-test button. Rated LED lifecycle-greater than 100,000hrs. or 10 years.

Standard Features Include:

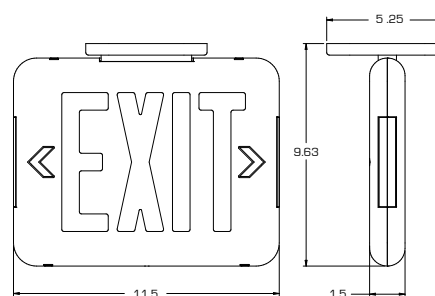
- External push-to-test switch and AC-on indicator
- Battery re-charge within 24 hours
- AC Lock-out circuit
- Low voltage battery disconnect

Optional Spectron Feature:

- Self-diagnostics monitors LED status, LED load transfer circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and an alternating 30 or 60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status
- User initiated 1 or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions(below 80% of nominal AC input voltage)

Operating Temperature Range:

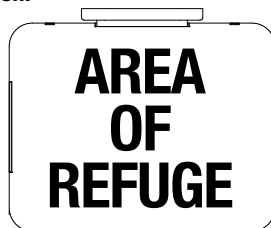
20° to 30°C

Weight: 2.5 lbs**DIMENSIONS****POWER CONSUMPTION**

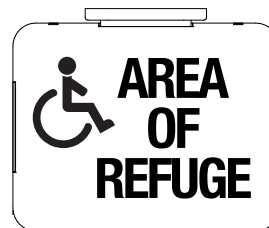
Model	120VAC, 60Hz			277VAC, 60Hz		
	A	W	PF	A	W	PF
Red AC Only	0.02	1.42	0.59	0.009	1.36	0.54
Green AC Only	0.02	1.36	0.57	0.009	1.30	0.57
Red Emergency	0.027	2.01	0.62	0.0127	1.94	0.55
Green Emergency	0.027	2.01	0.62	0.0127	1.94	0.55

Special Worded Option Selection:

SW13



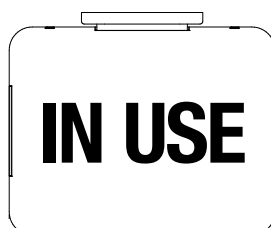
SW10



SW11



SW69



SW3



SW4

* All special worded selections ship as a universal sign for single or double-face application.

Web: www.dual-lite.com • Tech Support: (866)-313-3909

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**HUBBELL**
Lighting

0603570_EVE_Spec 12/15



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

CL1-A-60LU-4K-2-105-FINISH ON
20' ROUND TAPERED STEEL POLE
Notes:

Type:

LAIHOU18-45878

CIMARRON LED

Cat.#

Job

Type



SPAUDLING
LIGHTING

Approvals

SPECIFICATIONS**Construction:**

- Stylish vertically finned die-cast solid top housing for maximum heat dissipation; Stops collection of unsightly debris from gathering on top of the housing

- Rugged lower die-cast aluminum heat sink accelerates thermal management and optimizes PCB and optical performance

- Separate optical and electrical compartment for optimum component operation

- One piece die cut silicone gasket ensures weather proof seal around each individual LED for IP65 rating

- Backlight Control (BC) option available for 85% spill light reduction, doesn't change fixture appearance or EPA, recommended for Type III and Type IV distributions

- Stamped bezel provides mechanical compression to seal the optical assembly

- Complements the Hubbell Southwest series of outdoor fixtures

- Weight - 45.0 pounds, EPA - 1.3 ft²

- Suitable for applications requiring 3G testing prescribed by ANSI C136.31

Optics:

- Choice of 72 high brightness LED configurations with individual acrylic lenses specially designed for IES Type II, III, IV and V distributions

- Auto optics designed for front row 1A and interior rows 2A (see distribution under ordering and page 2)

- CCT: 3000K (80 CRI), 4000K (70 CRI), 5000K (70 CRI), and turtle friendly Amber LED options

Electrical:

- Universal input voltage 120-277 VAC, 50/60 Hz

- Integral step-down transformer for 347V & 480V

- Ambient operating temperature -40° C to 40° C

- Automatic thermal self-protection

- Drivers have greater than 90% power factor and less than 10% THD

- Optional continuous dimming to 10% or dual circuitry available

- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery

- 1050 mA driver available with 90L configuration for increased lumen output

- LED electrical assembly, including PR devices, consumes no power in the 'off' state

- Surge protection - 20KA; Turns fixture off at end of life; Includes LED for end of life indication (see surge suppressor page 4)

Controls:

- Drivers are 0-10V dimming standard. Photocell, occupancy sensor and wireless controls available for complete on/off and dimming control

Lumen maintenance:

- L90 at 60,000 hours (Projected per IESNA TM-21-11)

Installation:

- Two die-cast aluminum arm designs: The decorative arm offers a sleek upswept look while the straight arm follows the housing's contoured lines for continuity of style

- Fixture ships with arm installed for ease of installation and mounts to #2 drill pattern

- Wall bracket, mast arm fitter and pole accessories are also available allowing easy mounting for virtually any application

Finish:

- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

Warranty:

Five year limited warranty (for more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>)

Listings:

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations

- Models meet DesignLights Consortium (DLC) qualifications, consult DLC website for more details: <http://www.designlights.org/QPL>

- IDA approved • IP65

PRODUCT IMAGE(S)

90 LED 3/4 VIEW



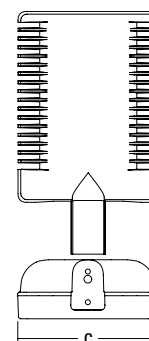
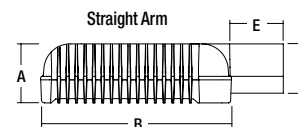
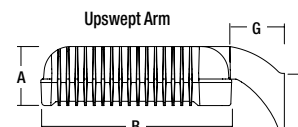
30 LED



60 LED



90 LED

DIMENSIONS

A	B	C	D	E	F	G
6 3/4"	21 3/4"	16"	6 5/8"	6 5/16"	5 5/8"	6 1/8"
171mm	552mm	406mm	168mm	160mm	143mm	155mm

CERTIFICATIONS/LISTINGS

*3000K and warmer CCTs only

ORDERING INFORMATION SEE NEXT PAGE

SPAUDLING
LIGHTING

Spaulding Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000

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HUBBELL
Lighting



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

CL1-A-60LU-4K-2-105-FINISH ON
20" ROUND TAPERED STEEL POLE
Notes:

Type:

LAIHOU18-45878

ORDERING INFORMATION ORDERING EXAMPLE: CL1-A-90LU-5K-3-DB-RPA3

SERIES	NO. OF LEDs	VOLTAGE	CCT	DRIVE CURRENT	OPTIONS
CL1 Cimarron LED	90L 90 High brightness LEDs 60L 60 High brightness LEDs 30L 30 High brightness LEDs	U Universal 120V-277V, 50/60 Hz 1 120V 2 208V 3 240V 4 277V 5 480V, 60 Hz F 347V, 60 Hz E ⁴ 220V, 50 Hz	3K 3000K 4K 4000K 5K 5000K AM ⁴ Amber (590 nm available for "Turtle Friendly" applications (consult factory))	Leave blank for 700mA (standard) 035 350mA Amber CCT only 105 1050 mA (Not for use with 30L)	BC ³ Backlight control CD Continuous dimming WB Wall bracket RPA3 3" Round pole adapter RPA4 4" Round pole adapter RPA5 5" Round pole adapter RPA6 6" Round pole adapter F(X) ² Fusing (replace X with voltage: 1-120V, 2-208V, 3-240V, 4-277V, 5-480V, F-347V) VG Vandal guard 7PR Photocell receptacle (7-pin ANSI C136.41—2013 receptacle for use with standard Twist-Lock® photo controls, shorting caps, and ANSI C136.41 external wireless control devices. Select SCL option to add occupancy sensing capability when using with compatible external wireless devices).
MOUNTING					
A Arm mount construction (6" straight rigid arm included & acceptable for 90° configurations)					
AD Decorative arm mount const. (6" decorative upswept arm incl. & acceptable for 90° configurations)					
MAF Mast arm fitter for mounting to standard 2 3/8" mast arm bracket, includes 6" straight rigid arm					
DISTRIBUTION					
2 Type II 3 Type III 4 Type IV 5M Type V Medium 5S Type V Short 5W Type V Wide 2L Type II Rotated 90° left 3L Type III Rotated 90° left 4L Type IV Rotated 90° left 2R Type II Rotated 90° right 3R Type III Rotated 90° right 4R Type IV Rotated 90° right 1A Auto Front Row Type I 1AR Auto Front Row Type I Rotated 90° right 1AL Auto Front Row Type I Rotated 90° left 2A Auto Front Row Type II 2AR Auto Front Row Type II Rotated 90° right 2AL Auto Front Row Type II Rotated 90° left					

Notes: 1 - Fuse option not available with universal voltage
2 - Select F3 fusing option for 220V
3 - Recommended for Type III and IV distributions only
4 - Available in 350mA drive current only Type IV, 5M
5 - 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, must order minimum of one SCP-REMOTE control to program dimming settings (see accessories)
6 - Not available with AD arm
7 - Not available with WIR or WIRSC
8 - Not available with SCO, SCL, SCP or SCPW

CONTROLS GUIDE

As energy codes become more restrictive and we push for sustainable lighting designs, the integration of lighting controls and luminaires have become more and more important. Hubbell Lighting offers numerous outdoor lighting controls solutions for the most demanding applications. Visit the link below to learn more about energy-saving controls.

www.hubbellighting.com/solutions/controls/

PIR MOTION/OCCUPANCY CONTROL OPTIONS

- SCO**^{6,7} On/Off control (line voltage device not for use with 7PR receptacle option and external wireless control devices)
- SCL**^{6,7} Add-on occupancy sensor for use with ext. wireless control device connected thru 7PR receptacle. Consult control manufacturer for compatibility.
- SCP**^{5,6,7} Programmable dimming control (line voltage device not for use with 7PR receptacle option and external wireless control devices). A minimum of one SCP-REMOTE accessory remote control required for configuration; (Standard lens with greater sensitivity; motion detection radius equal to .75 X luminaire mounting height (approx. distance))
- SCPW**^{5,6,7} Programmable dimming control (line voltage device not for use with 7PR receptacle option and external wireless control devices); A minimum of one SCP-REMOTE accessory remote control required for configuration. (Wide lens with motion detection radius equal to 1.3 X luminaire mounting height (approx. distance))

WIRELESS CONTROL OPTIONS

- WIR**⁸ wiSCAPE Fixture Module, in-fixture relay for wireless lighting control
- WIRSC**⁸ wiSCAPE Fixture Module, in-fixture relay for wireless lighting control and motion/occupancy control

AUTOMOTIVE DEALERSHIP OPTICS

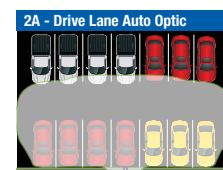
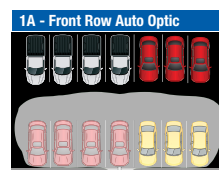
For Automotive Dealership applications Spaulding Lighting has developed two optics designed for enhanced and proper lighting of the auto dealership merchandise and the front row 1A and interior rows 2A (See CL1 distribution information for details)

Optic 1A

- Maximum illumination on front row display
- Maximum pole spacing

Optic 2A

- Excellent front row illumination and drive lane
- Optimal uniformity for drive lane and interior rows



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CL1LED-SPEC December 19, 2017 9:57 AM



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

CL1-A-60LU-4K-2-105-FINISH ON
20' ROUND TAPERED STEEL POLE

Notes:

Type:

LAIHOU18-45878

ENERGY SAVING DATA

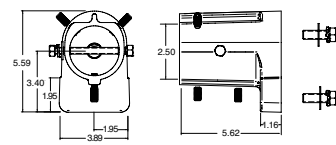
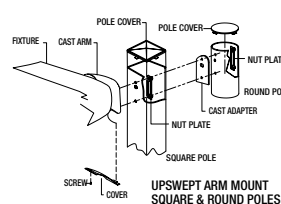
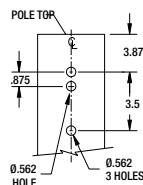
#LEDS	DRIVE CURRENT	SYSTEM WATTS		DIST. TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
		120- 277V	347- 480V		LUMENS	LPW'	B	U	G	LUMENS	LPW'	B	U	G	LUMENS	LPW'	B	U	G
30	700 mA	70W	80W	1A	8244	118	1	0	1	8162	117	1	0	1	6775	97	1	0	1
				2A	8202	117	1	0	1	8121	116	1	0	1	6740	96	1	0	1
				2	7715	110	2	0	3	7639	109	2	0	2	6340	91	2	0	2
				3	7712	110	2	0	2	7635	109	2	0	2	6371	91	1	0	2
				4	7803	111	1	0	2	7726	110	1	0	2	6412	92	1	0	2
				5S	8374	120	3	0	0	8291	118	3	0	0	6882	98	3	0	0
				5M	7940	113	3	0	1	7862	112	3	0	1	6525	93	3	0	1
				5W	7667	110	3	0	2	7591	108	3	0	2	6301	90	3	0	2
				1A	16171	120	1	0	2	16011	119	1	0	1	13289	98	1	0	1
				2A	16088	119	1	0	2	15929	118	1	0	2	13221	98	1	0	2
60	700 mA	135W	150W	2	15134	112	3	0	3	14984	111	3	0	3	12437	92	3	0	3
				3	15127	112	3	0	3	14977	111	3	0	3	12498	93	2	0	3
				4	15306	113	2	0	3	15154	112	2	0	3	12578	93	2	0	3
				5S	16426	122	4	0	0	16263	120	4	0	0	13498	100	4	0	0
				5M	15575	115	4	0	2	15421	114	4	0	2	12799	95	3	0	2
				5W	15040	111	4	0	3	14891	110	4	0	3	12360	92	4	0	3
				1A	21139	96	2	0	2	20929	95	2	0	2	17371	79	2	0	2
				2A	21030	96	2	0	2	20822	95	2	0	2	17282	79	2	0	2
				2	19783	90	4	0	5	19587	89	3	0	5	16257	74	3	0	5
				3	19774	90	3	0	4	19578	89	3	0	4	16250	74	3	0	4
60	1050 mA	220W	235W	4	20007	91	3	0	5	19809	90	3	0	5	16442	75	3	0	5
				5S	21471	98	5	0	0	21259	97	5	0	0	17645	80	5	0	0
				5M	20359	93	5	0	3	20158	92	5	0	3	16731	76	5	0	3
				5W	19660	89	5	0	4	19465	88	5	0	4	16156	73	5	0	4
				1A	23781	116	2	0	2	23546	115	2	0	2	19543	95	2	0	2
				2A	23659	115	2	0	2	23425	114	2	0	2	19443	95	2	0	2
				2	22255	109	3	0	4	22035	107	3	0	4	18289	89	3	0	4
				3	22246	109	3	0	4	22026	107	3	0	4	18379	90	3	0	3
				4	22509	110	3	0	4	22286	109	3	0	4	18497	90	2	0	4
				5S	24156	118	5	0	0	23916	117	5	0	0	19851	97	4	0	0
90	700 mA	205W	225W	5M	22905	112	4	0	2	22678	111	4	0	2	18823	92	4	0	2
				5W	22117	108	5	0	3	21899	107	5	0	3	18176	89	5	0	3
				1A	31708	98	2	0	2	31394	97	2	0	2	26057	80	2	0	2
				2A	31545	97	2	0	2	31233	96	2	0	2	25923	80	2	0	2
				2	29674	91	4	0	5	29380	90	3	0	5	24385	75	3	0	4
				3	29661	91	3	0	4	29367	90	3	0	4	24505	75	3	0	4
				4	30011	92	3	0	5	29714	91	3	0	5	24663	76	3	0	4
				5S	32207	99	5	0	0	31888	98	5	0	0	26467	81	5	0	0
				5M	30539	94	5	0	3	30237	93	5	0	3	25097	77	4	0	2
				5W	29490	91	5	0	4	29198	90	5	0	4	24234	75	5	0	4

Amber					Drive Current	SYSTEM WATTS	
LUMENS	LPW'	B	U	G		120- 277V	#LEDS
					350 mA	135W	60
2488		0	0	1			
2533		2	0	1	350 mA	205W	90
3558		1	0	1			
3596		2	0	1			

ACCESSORIES/REPLACEMENT PARTS - Order Separately

Catalog Number	Description
CR-RPA3-XX'	Round pole adapter for straight arm (3/4" - 3/4")
CR-RPA4-XX'	Round pole adapter for straight arm (3/8" - 4 1/2")
CR-RPA5-XX'	Round pole adapter for straight arm (5")
CR-RPA6-XX'	Round pole adapter for straight arm (6")
CRD-RPA2-XX'	Round pole adapter for upswept arm (2 3/4" - 3 1/8")
CRD-RPA3-XX'	Round pole adapter for upswept arm (3/4" - 3/4")
CRD-RPA4-XX'	Round pole adapter for upswept arm (3/8" - 4 1/2")
CRD-RPA5-XX'	Round pole adapter for upswept arm (5")
CRD-RPA6-XX'	Round pole adapter for upswept arm (6")
WB-AREA-XX'	Wall bracket
TPLB-XX'	Twin parallel luminaire bracket
MAF-CL-XX'	Horizontal mast arm fitter for 2 3/8" OD arm. Mounts to standard 6" arm (ordered with fixture)

- 1 - Replace XX with color choice, eg.: DB for Dark Bronze
2 - When ordering poles, specify Pole Drill Pattern #2
3 - Fixture must include standard 6" arm



MAF - HORIZONTAL MAST ARM FITTER

#2 DRILL PATTERN FOR POLES



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LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

CL1-A-60LU-4K-2-105-FINISH ON
20' ROUND TAPERED STEEL POLE

Notes:

Type:

LAIHOU18-45878

MOUNTING ACCESSORIES

Catalog Number	Description
ARM-CL-K-TA-XX ¹	Adjustable mounting arm for single fixture (2-3/8 tenon) – 5 lbs. 2.3 kgs.
ARM-CL-TK-TA-XX ¹	Adjustable mounting arm for two fixtures at 180° (2-3/8 tenon) – 7 lbs. 3.2 kgs.
ARM-CL-K-S-XX ¹	10" adjustable arm – .5 lbs. .05 kgs. – 5.75 lbs. 2.6 kgs.

¹ Replace XX with color choice, eg.: DB for Dark Bronze
² Fixture must include standard 6" straight arm

ARM-CL-K-TA-XX
ARM-CL-TK-TA-XX



ARM-CL-K-S-XX

**TENON TOP POLE BRACKET ACCESSORIES**

(2 3/8" OD tenon) (RSS version requires 4" round pole adapter)

Catalog Number	Description
SETA2-XX ¹	Square pole tenon adapter (4 at 90 degrees)
RETA2-XX ¹	Round pole tenon adapter (4 at 90 degrees)
TETA-XX ¹	Hexagonal pole tenon adapter (3 at 120 degrees)

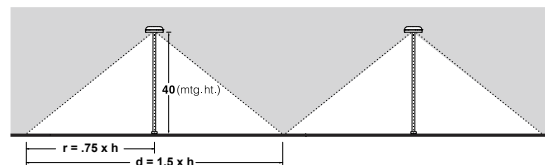
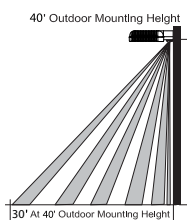
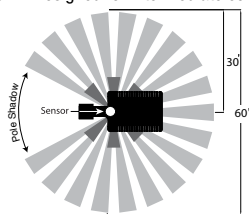
¹ Replace XX with color choice, eg.: DB for Dark Bronze

PHOTOCONTROL EQUIPMENT

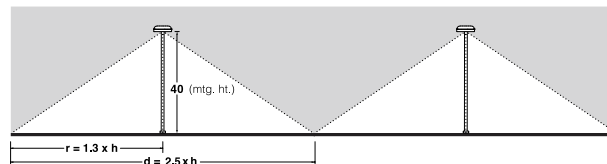
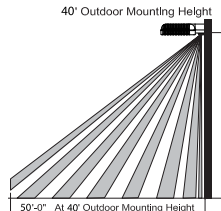
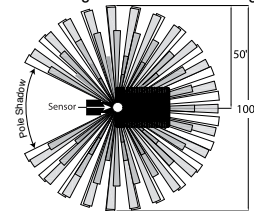
Catalog Number	Description
PTL-1	Photocontrol - twist-lock cell (120V)
PTL-8	Photocontrol - twist-lock cell (120-277V)
PTL-5	Photocontrol - twist-lock cell (480V)
PTL-6	Photocontrol - twist-lock cell (347V)
PSC	Shorting cap - twist-lock

MOTION CONTROLS

- Start up delay from initial motion detection to fixture illumination is approximately 1-2 seconds
- Vehicle detection is possible however less reliable than human detection; Vehicle detection is dependent upon the following: rate of speed, mounting height of luminaire and vehicle temperature

SCP - Designed for intermediate coverage area

Note: Extreme heat or cold temperatures may limit detection.

SCPW - Designed for widest coverage area

Note: Extreme heat or cold temperatures may limit detection.

SURGE PROTECTION

- Field replaceable surge protection device (SPD) provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3
- The SPD is designed with a clamping voltage of 1600V at 20KA using industry standard 8/20μs waveform
- Max surge current = 20,000 Amps (see table)
- LED Indicator – Green LED is unlit at end of life

Pulse Rating (8 x 20 μSec)	
Strikes	Surge
1	20,000 A
2	15,000 A
15	10,000 A
120	3,000 A

	cRUus	CE
I _n	10KA	5KA





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Submitted by Lighting Associates	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Catalog Number: CL1-A-90LU-4K-X-105-FINISH ON 30' STRAIGHT SQUARE STEEL POLE Notes:	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.			

CIMARRON LED	Cat.#		 Approvals
	Job	Type	

SPECIFICATIONS

Construction:

- Stylish vertically finned die-cast solid top housing for maximum heat dissipation; Stops collection of unsightly debris from gathering on top of the housing
- Rugged lower die-cast aluminum heat sink accelerates thermal management and optimizes PCB and optical performance
- Separate optical and electrical compartment for optimum component operation
- One piece die cut silicone gasket ensures weather proof seal around each individual LED for IP65 rating
- Backlight Control (BC) option available for 85% spill light reduction, doesn't change fixture appearance or EPA, recommended for Type III and Type IV distributions
- Stamped bezel provides mechanical compression to seal the optical assembly
- Complements the Hubbell Southwest series of outdoor fixtures
- Weight - 45.0 pounds, EPA - 1.3 ft²
- Suitable for applications requiring 3G testing prescribed by ANSI C136.31

Optics:

- Choice of 72 high brightness LED configurations with individual acrylic lenses specially designed for IES Type II, III, IV and V distributions
- Auto optics designed for front row 1A and interior rows 2A (see distribution under ordering and page 2)
- CCT: 3000K (80 CRI), 4000K (70 CRI), 5000K (70 CRI), and turtle friendly Amber LED options

Electrical:

- Universal input voltage 120-277 VAC, 50/60 Hz
- Integral step-down transformer for 347V & 480V
- Ambient operating temperature -40° C to 40° C
- Automatic thermal self-protection
- Drivers have greater than 90% power factor and less than 10% THD
- Optional continuous dimming to 10% or dual circuitry available

- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- 1050 mA driver available with 90L configuration for increased lumen output
- LED electrical assembly, including PR devices, consumes no power in the 'off' state
- Surge protection - 20KA; Turns fixture off at end of life; Includes LED for end of life indication (see surge suppressor page 4)

Controls:

- Drivers are 0-10V dimming standard. Photocell, occupancy sensor and wireless controls available for complete on/off and dimming control

Lumen maintenance:

- L90 at 60,000 hours (Projected per IESNA TM-21-11)

Installation:

- Two die-cast aluminum arm designs: The decorative arm offers a sleek upswept look while the straight arm follows the housing's contoured lines for continuity of style
- Fixture ships with arm installed for ease of installation and mounts to #2 drill pattern
- Wall bracket, mast arm fitter and pole accessories are also available allowing easy mounting for virtually any application

Finish:

- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

Warranty:

- Five year limited warranty (for more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>)

Listings:

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations
- Models meet DesignLights Consortium (DLC) qualifications, consult DLC website for more details: <http://www.designlights.org/QPL>
- IDA approved • IP65

PRODUCT IMAGE(S)



90 LED 3/4 VIEW



30 LED

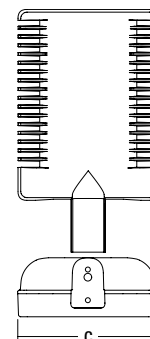
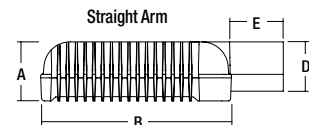
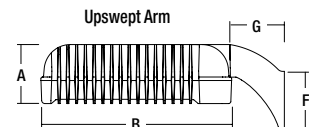


60 LED



90 LED

DIMENSIONS



A	B	C	D	E	F	G
6 3/4" 171mm	21 3/4" 552mm	16" 406mm	6 5/8" 168mm	6 5/16" 160mm	5 5/8" 143mm	6 1/8" 155mm

CERTIFICATIONS/LISTINGS



*3000K and warmer CCTs only

ORDERING INFORMATION SEE NEXT PAGE




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Submitted by Lighting Associates	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Catalog Number: CL1-A-90LU-4K-X-105-FINISH ON 30' STRAIGHT SQUARE STEEL POLE Notes:	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.			

ORDERING INFORMATION ORDERING EXAMPLE: CL1-A-90LU-5K-3-DB-RPA3

SERIES	NO. OF LEDs	VOLTAGE	CCT	DRIVE CURRENT	OPTIONS
CL1 Cimarron LED	90L 90 High brightness LEDs 60L 60 High brightness LEDs 30L 30 High brightness LEDs	U* Universal 120V-277V, 50/60 Hz 1 120V 2 208V 3 240V 4 277V 5 480V, 60 Hz F 347V, 60 Hz E* 220V, 50 Hz	3K 3000K 4K 4000K 5K 5000K AM* Amber (590 nm available for "Turtle Friendly" applications (consult factory))	Leave blank for 700mA (standard) 035 350mA Amber CCT only 105 1050 mA (Not for use with 30L)	BC* Backlight control CD Continuous dimming WB Wall bracket RPA3 3" Round pole adapter RPA4 4" Round pole adapter RPA5 5" Round pole adapter RPA6 6" Round pole adapter F(X)* Fusing (replace X with voltage: 1-120V, 2-208V, 3-240V, 4-277V, 5-480V, F-347V) VG Vandal guard 7PR Photocell receptacle (7-pin ANSI C136.41—2013 receptacle for use with standard Twist-Lock® photo controls, shorting caps, and ANSI C136.41 external wireless control devices. Select SCL option to add occupancy sensing capability when using with compatible external wireless devices.
MOUNTING				COLOR	
A Arm mount construction (6" straight rigid arm included & acceptable for 90° configurations)				DB Dark Bronze BL Black WH White GR Gray PS Platinum Silver RD Red (premium color) FG Forest Green (premium color) CC Custom Color	
AD Decorative arm mount const. (6" decorative upswept arm incl. & acceptable for 90° configurations)					
MAF Mast arm fitter for mounting to standard 2 3/8" mast arm bracket, includes 6" straight rigid arm					
DISTRIBUTION					
		2 Type II 3 Type III 4 Type IV 5M Type V Medium 5S Type V Short 5W Type V Wide 2L Type II Rotated 90° left 3L Type III Rotated 90° left 4L Type IV Rotated 90° left 2R Type II Rotated 90° right 3R Type III Rotated 90° right 4R Type IV Rotated 90° right 1A Auto Front Row Type I 1AR Auto Front Row Type I Rotated 90° right 1AL Auto Front Row Type I Rotated 90° left 2A Auto Front Row Type II 2AR Auto Front Row Type II Rotated 90° right 2AL Auto Front Row Type II Rotated 90° left			

Notes: 1 - Fuse option not available with universal voltage
2 - Select F3 fusing option for 220V
3 - Recommended for Type III and IV distributions only
4 - Available in 350mA drive current only Type IV, 5M
5 - 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, must order minimum of one SCP-REMOTE control to program dimming settings (see accessories)
6 - Not available with AD arm
7 - Not available with WIR or WIRSC
8 - Not available with SCO, SCL, SCP or SCPW

CONTROLS GUIDE

As energy codes become more restrictive and we push for sustainable lighting designs, the integration of lighting controls and luminaires have become more and more important. Hubbell Lighting offers numerous outdoor lighting controls solutions for the most demanding applications. Visit the link below to learn more about energy-saving controls.

www.hubbellighting.com/solutions/controls/

PIR MOTION/OCCUPANCY CONTROL OPTIONS

- SCO^{6,7}** On/Off control (line voltage device not for use with 7PR receptacle option and external wireless control devices)
- SCL^{6,7}** Add-on occupancy sensor for use with ext. wireless control device connected thru 7PR receptacle. Consult control manufacturer for compatibility.
- SCP^{5,6,7}** Programmable dimming control (line voltage device not for use with 7PR receptacle option and external wireless control devices). A minimum of one SCP-REMOTE accessory remote control required for configuration; (Standard lens with greater sensitivity; motion detection radius equal to .75 X luminaire mounting height (approx. distance))
- SCPW^{5,6,7}** Programmable dimming control (line voltage device not for use with 7PR receptacle option and external wireless control devices); A minimum of one SCP-REMOTE accessory remote control required for configuration. (Wide lens with motion detection radius equal to 1.3 X luminaire mounting height (approx. distance))

WIRELESS CONTROL OPTIONS

- WIR⁸** wiSCAPE Fixture Module, in-fixture relay for wireless lighting control
- WIRSC⁸** wiSCAPE Fixture Module, in-fixture relay for wireless lighting control and motion/occupancy control

AUTOMOTIVE DEALERSHIP OPTICS

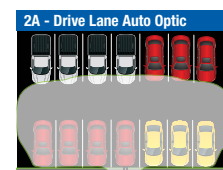
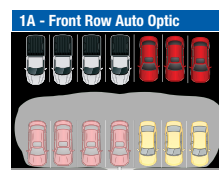
For Automotive Dealership applications Spaulding Lighting has developed two optics designed for enhanced and proper lighting of the auto dealership merchandise and the front row 1A and interior rows 2A (See CL1 distribution information for details)

Optic 1A

- Maximum illumination on front row display
- Maximum pole spacing

Optic 2A

- Excellent front row illumination and drive lane
- Optimal uniformity for drive lane and interior rows



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LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

CL1-A-90LU-4K-X-105-FINISH ON 30'
STRAIGHT SQUARE STEEL POLE

Notes:

Type:

LAIHOU18-45878

ENERGY SAVING DATA

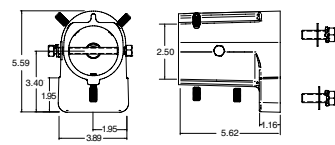
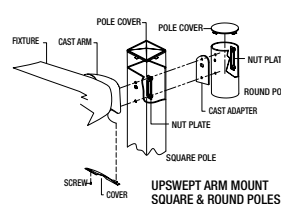
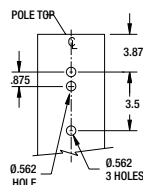
#LEDS	DRIVE CURRENT	SYSTEM WATTS		DIST. TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
		120- 277V	347- 480V		LUMENS	LPW'	B	U	G	LUMENS	LPW'	B	U	G	LUMENS	LPW'	B	U	G
30	700 mA	70W	80W	1A	8244	118	1	0	1	8162	117	1	0	1	6775	97	1	0	1
				2A	8202	117	1	0	1	8121	116	1	0	1	6740	96	1	0	1
				2	7715	110	2	0	3	7639	109	2	0	2	6340	91	2	0	2
				3	7712	110	2	0	2	7635	109	2	0	2	6371	91	1	0	2
				4	7803	111	1	0	2	7726	110	1	0	2	6412	92	1	0	2
				5S	8374	120	3	0	0	8291	118	3	0	0	6882	98	3	0	0
				5M	7940	113	3	0	1	7862	112	3	0	1	6525	93	3	0	1
				5W	7667	110	3	0	2	7591	108	3	0	2	6301	90	3	0	2
				1A	16171	120	1	0	2	16011	119	1	0	1	13289	98	1	0	1
				2A	16088	119	1	0	2	15929	118	1	0	2	13221	98	1	0	2
60	700 mA	135W	150W	2	15134	112	3	0	3	14984	111	3	0	3	12437	92	3	0	3
				3	15127	112	3	0	3	14977	111	3	0	3	12498	93	2	0	3
				4	15306	113	2	0	3	15154	112	2	0	3	12578	93	2	0	3
				5S	16426	122	4	0	0	16263	120	4	0	0	13498	100	4	0	0
				5M	15575	115	4	0	2	15421	114	4	0	2	12799	95	3	0	2
				5W	15040	111	4	0	3	14891	110	4	0	3	12360	92	4	0	3
				1A	21139	96	2	0	2	20929	95	2	0	2	17371	79	2	0	2
				2A	21030	96	2	0	2	20822	95	2	0	2	17282	79	2	0	2
				2	19783	90	4	0	5	19587	89	3	0	5	16257	74	3	0	5
				3	19774	90	3	0	4	19578	89	3	0	4	16250	74	3	0	4
60	1050 mA	220W	235W	4	20007	91	3	0	5	19809	90	3	0	5	16442	75	3	0	5
				5S	21471	98	5	0	0	21259	97	5	0	0	17645	80	5	0	0
				5M	20359	93	5	0	3	20158	92	5	0	3	16731	76	5	0	3
				5W	19660	89	5	0	4	19465	88	5	0	4	16156	73	5	0	4
				1A	23781	116	2	0	2	23546	115	2	0	2	19543	95	2	0	2
				2A	23659	115	2	0	2	23425	114	2	0	2	19443	95	2	0	2
				2	22255	109	3	0	4	22035	107	3	0	4	18289	89	3	0	4
				3	22246	109	3	0	4	22026	107	3	0	4	18379	90	3	0	3
				4	22509	110	3	0	4	22286	109	3	0	4	18497	90	2	0	4
				5S	24156	118	5	0	0	23916	117	5	0	0	19851	97	4	0	0
90	700 mA	205W	225W	5M	22905	112	4	0	2	22678	111	4	0	2	18823	92	4	0	2
				5W	22117	108	5	0	3	21899	107	5	0	3	18176	89	5	0	3
				1A	31708	98	2	0	2	31394	97	2	0	2	26057	80	2	0	2
				2A	31545	97	2	0	2	31233	96	2	0	2	25923	80	2	0	2
				2	29674	91	4	0	5	29380	90	3	0	5	24385	75	3	0	4
				3	29661	91	3	0	4	29367	90	3	0	4	24505	75	3	0	4
				4	30011	92	3	0	5	29714	91	3	0	5	24663	76	3	0	4
				5S	32207	99	5	0	0	31888	98	5	0	0	26467	81	5	0	0
				5M	30539	94	5	0	3	30237	93	5	0	3	25097	77	4	0	2
				5W	29490	91	5	0	4	29198	90	5	0	4	24234	75	5	0	4
90	1050 mA	325W	350W																

Amber					Drive Current	SYSTEM WATTS	
LUMENS	LPW'	B	U	G		120- 277V	#LEDS
					350 mA	135W	60
2488		0	0	1	350 mA	205W	90
2533		2	0	1	350 mA	205W	90
3558		1	0	1	350 mA	205W	90
3596		2	0	1			

ACCESSORIES/REPLACEMENT PARTS - Order Separately

Catalog Number	Description
CR-RPA3-XX'	Round pole adapter for straight arm (3/4" - 3/4")
CR-RPA4-XX'	Round pole adapter for straight arm (3/8" - 4 1/2")
CR-RPA5-XX'	Round pole adapter for straight arm (5")
CR-RPA6-XX'	Round pole adapter for straight arm (6")
CRD-RPA2-XX'	Round pole adapter for upswept arm (2 3/4" - 3 1/8")
CRD-RPA3-XX'	Round pole adapter for upswept arm (3/4" - 3/4")
CRD-RPA4-XX'	Round pole adapter for upswept arm (3/8" - 4 1/2")
CRD-RPA5-XX'	Round pole adapter for upswept arm (5")
CRD-RPA6-XX'	Round pole adapter for upswept arm (6")
WB-AREA-XX'	Wall bracket
TPLB-XX'	Twin parallel luminaire bracket
MAF-CL-XX'	Horizontal mast arm fitter for 2 3/8" OD arm. Mounts to standard 6" arm (ordered with fixture)

- 1 - Replace XX with color choice, eg.: DB for Dark Bronze
2 - When ordering poles, specify Pole Drill Pattern #2
3 - Fixture must include standard 6" arm



MAF - HORIZONTAL MAST ARM FITTER

#2 DRILL PATTERN FOR POLES



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LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

CL1-A-90LU-4K-X-105-FINISH ON 30'
STRAIGHT SQUARE STEEL POLE

Notes:

Type:

LAIHOU18-45878

MOUNTING ACCESSORIES

Catalog Number	Description
ARM-CL-K-TA-XX ¹	Adjustable mounting arm for single fixture (2-3/8 tenon) – 5 lbs. 2.3 kgs.
ARM-CL-TK-TA-XX ¹	Adjustable mounting arm for two fixtures at 180° (2-3/8 tenon) – 7 lbs. 3.2 kgs.
ARM-CL-K-S-XX ¹	10" adjustable arm – .5 lbs. .05 kgs. – 5.75 lbs. 2.6 kgs.

¹ Replace XX with color choice, eg.: DB for Dark Bronze
² Fixture must include standard 6" straight arm

ARM-CL-K-TA-XX
ARM-CL-TK-TA-XX



ARM-CL-K-S-XX

**TENON TOP POLE BRACKET ACCESSORIES**

(2 3/8" OD tenon) (RSS version requires 4" round pole adapter)

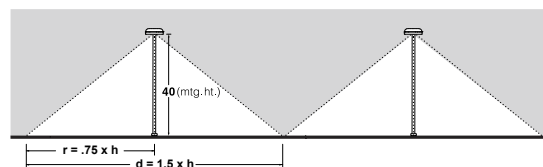
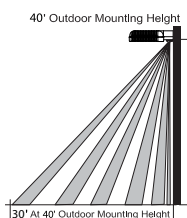
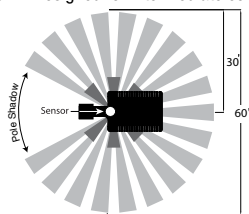
Catalog Number	Description
SETA2-XX ¹	Square pole tenon adapter (4 at 90 degrees)
RETA2-XX ¹	Round pole tenon adapter (4 at 90 degrees)
TETA-XX ¹	Hexagonal pole tenon adapter (3 at 120 degrees)

¹ Replace XX with color choice, eg.: DB for Dark Bronze**PHOTOCONTROL EQUIPMENT**

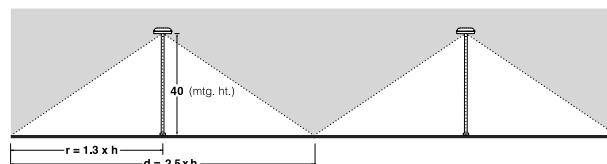
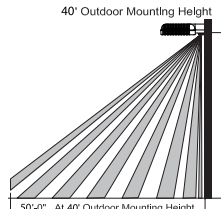
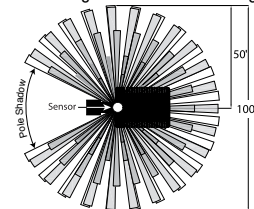
Catalog Number	Description
PTL-1	Photocontrol - twist-lock cell (120V)
PTL-8	Photocontrol - twist-lock cell (120-277V)
PTL-5	Photocontrol - twist-lock cell (480V)
PTL-6	Photocontrol - twist-lock cell (347V)
PSC	Shorting cap - twist-lock

MOTION CONTROLS

- Start up delay from initial motion detection to fixture illumination is approximately 1-2 seconds
- Vehicle detection is possible however less reliable than human detection; Vehicle detection is dependent upon the following: rate of speed, mounting height of luminaire and vehicle temperature

SCP - Designed for intermediate coverage area

Note: Extreme heat or cold temperatures may limit detection.

SCPW - Designed for widest coverage area

Note: Extreme heat or cold temperatures may limit detection.

SURGE PROTECTION

- Field replaceable surge protection device (SPD) provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3
- The SPD is designed with a clamping voltage of 1600V at 20KA using industry standard 8/20μs waveform
- Max surge current = 20,000 Amps (see table)
- LED Indicator – Green LED is unlit at end of life

Pulse Rating (8 x 20 μSec)	
Strikes	Surge
1	20,000 A
2	15,000 A
15	10,000 A
120	3,000 A

	cRUus	CE
I _n	10KA	5KA





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Submitted by Lighting Associates		Catalog Number: LNC3-24L-4K050-4-U-FINISH	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

LITEPAK SERIES LNC3	Cat.#		 HUBBELL Outdoor Lighting
	Job	Type	
			Approvals

SPECIFICATIONS

Intended Use:

The midsize LNC3 is designed for perimeter illumination for safety, security and identity. No uplight and lower glare lens option offer neighbor friendly lighting at typical mounting heights of 8-20'. Units have protective polyester finish for long lasting appearance. Ideal for schools, factories, hospitals, warehouses and retail applications. Energy efficient LEDs provide 70%+ energy savings with little to no maintenance when compared to traditional light sources.

Construction:

Die-cast aluminum housing protects components and provides an architectural appearance. Casting thermally conducts LED heat to optimize performance and long life. Powder paint finish provides durability in outdoor environments. Four 1/2" conduit entries (top, bottom, and sides) provided for surface conduit.

Electrical:

- 120-277, 347 and 480 voltage, 50/60Hz, 0-10V dimming drivers
- Electronic driver
- 10kA surge protection (parallel); Automatically takes fixture off-line when device is consumed

LED(s) CCT:

- Ambient operating temperature -40°C to 40°C
- 3000K, 4000K and 5000K CCT nominal with 70 CRI
- Available in 2 or 24 LED configuration, see page 2 for electrical and photometric data

Lenses:

- Zero uplight distributions using individual acrylic LED optics provide IES type II, III and IV distributions
- CS - Frosted acrylic diffuser option for reduced glare
- CSU - Frosted acrylic diffuser for inverted "up" mounting applications (lens required)

Lumen Maintenance:

L89 at 60,000 hrs (Projected per IESNA TM-21-11), see table on page 2 for all values

Installation:

Quick-mount adapter with gasket seal provides easy installation to wall or to recessed junction box (4" square junction box). Fixture attaches by two Allen-head hidden fasteners for tamper resistance. Designed for direct j-box mount or conduit feed on all four sides in single SKU.

Options/Controls:

- Button photocontrol for dusk to dawn energy savings
- 7-pin photo-receptacle available for twist lock photocell and controls by others
- Occupancy sensor options available for complete on/off and dimming control
- SiteSync pre-commissioned wireless controls (with or without sensor)
- In addition, LITEPAK can be specified with SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbelllighting.com/sitesync for more details.

Listings:

- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Listed to UL1598 and CSAC22.2#250.0-24 for wet locations
- IP65 Assembly • IDA Approved (3000K configurations)

Warranty:

Five year limited warranty (for more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>)

PRODUCT IMAGE(S)



DIMENSIONS

A	B	C	D	E	Weight / BBU
13"	10.5"	9.9"	5.8"	8.3"	18 lbs.
330.2 mm	266.7 mm	251 mm	147.3 mm	210.8 mm	8.2 kg

SHIPPING INFORMATION

Catalog Number	G.W(kg)/CTN	Carton Dimensions			Carton Qty. per Master Pack
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)	
LNC3-24L	18.0 (8.2)	15.8 (40)	11.0 (28)	13 (33)	1

CERTIFICATIONS/LISTINGS



C US

*3000K and warmer CCTs only

ORDERING INFORMATION – ORDERING EXAMPLE: LNC3-24L-3K-105-2-1-DB-7PR-SCP

FAMILY	NUMBER OF LEDS	CCT	DRIVE CURRENT	IES DISTRIBUTION	VOLTAGE	FINISH	CONTROL OPTIONS	OPTIONS
LNC3 Medium Litepak Wallpack	24L 24LEDs	3K 3000K 4K 4000K 5K 5000K	035 350mA 050 500mA 075 750mA 105 1050mA	2 Type II 3 Type III 4 Type IV	U 120v-277v 1 120v 2 208v 3 240v 4 277v 5 480v F 347v	DB Bronze BL Black WH White GR Gray PS Platinum CC Custom Color	PCU Universal Button PC 7PR ⁶ 7pin PCR SCP ^{3,4} Programmable occupancy sensor SWP ^{1,7} SiteSync pre-commissioned SWPM ^{1,4,7,8} SiteSync pre-commissioned w/ occupancy sensor	F ¹ Fusing (must specify voltage per footnote) CS Frosted acrylic diffuser CSU ² Inverted/Up mounting frosted acrylic diffuser (required for up/inverted fixture installations, factory install only see page 3) E ^{1,5} Integral battery backup rated for 0° EH ^{1,5} Integral battery backup with heater rated for -30°C 2DR ⁹ Dual Drivers

¹ Must specify voltage (battery backup 120 or 277V only, SiteSync 120, 277 or 347V only)

² Factory Install Only. Not available with SCP or SWPM sensor/control options

³ Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120-277V only.

⁴ PCU option not applicable, included in sensor (8F = up to 8ft, 20F = up to 20ft)

⁵ 350mA, 500mA & 750mA versions only. Not available with SWP or SWPM control options.

⁶ Accepts standard 3, 5, and 7-Pin ANSI controls (by others). Not available with PCU, SWP or SWPM control options

⁷ Must specify group and zone information at time or order. See www.hubbelllighting.com/products/sitesync for future details

⁸ Specify time delay; dimming level and mounting height

⁹ 1050mA version only, not available with 347/480V

STOCK ORDERING INFORMATION – 2L COB MODELS

CATALOG NUMBER	DESCRIPTION	DISTRIBUTION	WATTAGE	LUMENS	LPW	VOLTAGE	# OF DRIVERS @ DRIVE CURRENT	WEIGHTS LBS. (KGS)
LNC3-2L4K-075	2 LED - 60W Configuration, 4000K, Dark Bronze	Type IV	62.0	5,857	94.8	120-277	1 @ 750mA	16(7.3)
LNC3-2L4K-105	2 LED - 90W Configuration, 4000K, Dark Bronze		87.4	7,721	86.1		1 @ 1050mA	
LNC3-2L5K-105	2 LED - 90W Configuration, 5000K, Dark Bronze		87.4	7,288	82.0		1 @ 1050mA	
LNC3-2L4K-105-7PR	2 LED - 90W Configuration, 4000K, Dark Bronze, 7-Pin		87.4	7,721	86.1		1 @ 1050mA	
LNC3-2L4K-105-SCP	2 LED - 90W Configuration, 4000K, Dark Bronze, SCP		87.4	7,721	86.1		1 @ 1050mA	




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Submitted by Lighting Associates		Catalog Number: LNC3-24L-4K050-4-U-FINISH	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

REPLACEMENT PART/ACCESSORIES

CATALOG NUMBER	DESCRIPTION
LNC3-CS	Frosted acrylic diffuser reduces surface brightness and glare with a roughly 20% lumen reduction
SCP-REMOTE*	Remote control for SCP option. Order at least one per project to program and control fixtures
SWUSB**	SiteSync loaded on USB flash drive (Windows based only)
SWTAB**	SiteSync Windows Tablet
SWBRG*	SiteSync Wireless Bridge Node

*Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V or 277V only

**When ordering with SiteSync, one of the following interface options must be chosen and ordered separately. Each option contains the SiteSync License, GUI and Bridge Node.

* If needed, an additional Bridge Node can be ordered.

Hubbell Control Solutions - Accessories (sold separately)

Catalog Number	Description	HCS System
NXOFM-1R1D-UNV	On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC	NX Distributed Intelligence™
WIR-RME-L	On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110-480VAC	wiSCAPE™ Lighting Control

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

PERFORMANCE DATA

# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
				LUMENS	LPW ¹	B	U	G	LUMENS	LPW ¹	B	U	G	LUMENS	LPW ¹	B	U	G
4	N/A	N/A	E	671	-	-	-	-	657	-	-	-	-	591	-	-	-	-
			2	3,212	115	1	0	1	3,145	113	1	0	1	2,991	107	1	0	1
			3	3,160	113	1	0	1	3,094	111	1	0	1	2,944	106	1	0	1
			4	3,182	114	1	0	1	3,116	112	1	0	1	2,964	106	1	0	1
	350mA	28	2	4,143	101	1	0	2	4,057	99	1	0	2	3,858	94	1	0	2
			3	4,076	99	1	0	1	3,991	97	1	0	1	3,797	93	1	0	1
			4	4,104	100	1	0	1	4,019	98	1	0	1	3,823	93	1	0	1
			2	5,918	99	1	0	2	5,795	97	1	0	2	5,512	92	1	0	2
	500mA	41	3	5,823	97	1	0	2	5,702	95	1	0	2	5,424	90	1	0	2
			4	5,863	98	1	0	2	5,741	96	1	0	2	5,461	91	1	0	2
			2	7,630	92	2	0	2	7,472	90	2	0	2	7,107	86	2	0	2
			3	7,508	90	1	0	2	7,352	89	1	0	2	6,993	84	1	0	2
	750mA	60	4	7,559	91	1	0	2	7,402	89	1	0	2	7,041	85	1	0	2
			2	8,823	101	1	0	2	8,657	99	1	0	2	8,358	94	1	0	2
			3	8,760	99	1	0	1	8,691	97	1	0	1	8,597	93	1	0	1
			4	8,814	100	1	0	1	8,749	98	1	0	1	8,683	93	1	0	1
	1050mA	83	2	11,818	101	1	0	2	11,657	99	1	0	2	11,358	94	1	0	2
			3	11,760	99	1	0	1	11,691	97	1	0	1	11,597	93	1	0	1
			4	11,814	100	1	0	1	11,749	98	1	0	1	11,683	93	1	0	1

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

ELECTRICAL DATA

# OF LEDS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (w)
24	350mA	120	0.23	28
		277	0.10	28
		347	0.08	28
		480	0.06	28
	500mA	120	0.34	41
		277	0.15	41
		347	0.12	41
		480	0.09	41
	750mA	120	0.50	60
		277	0.22	60
		347	0.17	60
		480	0.13	60
	1050mA	120	0.69	83
		277	0.30	83
		347	0.24	83
		480	0.17	83

PROJECTED LUMEN MAINTENANCE

Ambient Temp.	OPERATING HOURS					L70 (hours)
	0	25,000	50,000	TM-21-11 ¹ L96 60,000	100,000	
25°C / 77°F	1.00	0.97	0.94	0.93	0.89	>296,000
40°C / 104°F	1.00	0.95	0.91	0.89	0.83	>191,000

1. Projected per IESNA TM-21-11 * (Nichia 219C, 1050mA, 85°C, 10,000 hrs)

Data references the extrapolated performance projections for the LNC3-24L-105 base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE	LUMEN MULTIPLIER
0° C	1.02
10° C	1.01
20° C	1.00
25° C	1.00
30° C	1.00
40° C	0.99

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).



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LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LNC3-24L-4K050-4-U-FINISH

Notes:**Type:**

LAIHOU18-45878

CSU – INVERTED MOUNTING OPTION
(Requires Factory Installed lens option)

Inverted mounting capabilities for uplighting applications. Specially designed frosted acrylic diffuser option softens output, improves uniformity and protects LED lenses.

7PR-7-PIN RECEPTACLE
(Photocontrol and Wireless Controls by Others)

Standard NEMA 7-Pin receptacle for twist lock photocell or wireless controls (by others).

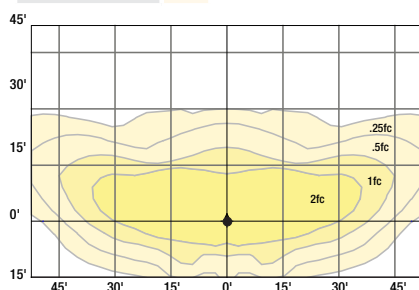
SCP - Programmable Occupancy Sensor

Sensor offers greater control and energy savings with SCP programmable sensor with adjustable delay and dimming levels (Factory default is 10%)

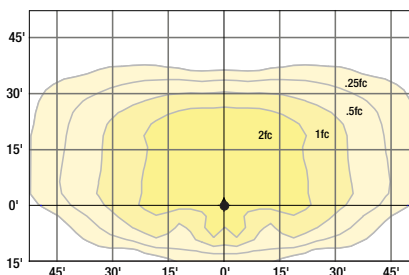
Visit: <http://www.hubbelllighting.com/solutions/controls/> for control application information

PHOTOMETRICS

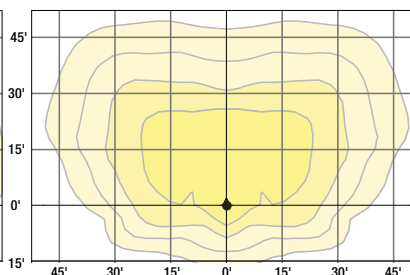
Mounting Height 15ft



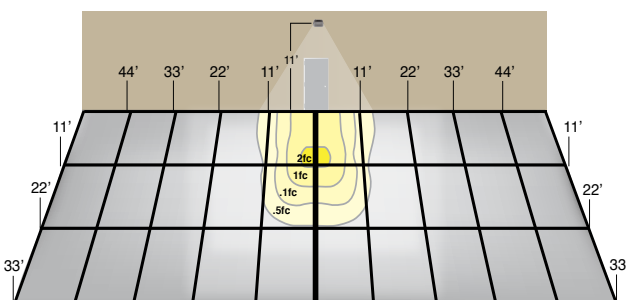
TYPE II
LNC3-24L-5K-105-2



TYPE III
LNC3-24L-5K-105-3



TYPE IV (Forward throw)
LNC3-24L-5K-105-4

PHOTOMETRICS - BATTERY BACK UP

11' Mounting Height

Provides Life Safety Code average illuminance of 1.0 fc. Assumes open space with no obstructions and mounting height of 11'.

Diagrams for illustration purposes only, please consult factory for application layout.

E & EH EMERGENCY BATTERY BACKUP

24 High Power LEDs generate up to 6,000 lumens in Normal Mode, and use 4 LEDs for up to 700 lumens in emergency.

SWP & SWPM - SiteSync™

SiteSync Lighting Control is available from our most popular brands in a broad range of award-winning product families.

Precommissioned SiteSync Ordering Information:

When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project locations Group information, and Operating schedules. For more detailed information please visit www.HubbellLighting.com/products/sitesync or contact Hubbell Lighting tech support at (800) 345-4928.

SiteSync fixtures with occupancy sensor (SWPM) require the mounting height of the fixture selection of the lens.

Examples: LNC3-24L-4K-075-3-U-BL-SWP
LNC3-24L-4K-075-3-U-BL-SWPM-20F

SiteSync only
SiteSync with Motion Control





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Submitted by Lighting Associates	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Catalog Number: LNC-9LU-4K-4-FINISH Notes:	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.			

LNC SERIES	Cat.#		 HUBBELL Outdoor Lighting Approvals
	Job	Type	

SPECIFICATIONS

Intended Use:

The compact LED LNC is designed for entry/perimeter illumination for safety, security and identity. Typical mounting height is up to 12 feet with 40ft fixture spacing (without acrylic diffuser) and 30ft spacing with acrylic diffuser installed. Photocontrol option is available to provide dusk-to-dawn control for additional energy savings.

Construction:

Decorative die-cast aluminum housing and door. Rugged design protects internal components and provides excellent thermal management for long life – 60,000 hours minimum LED life at L96 rating per IESNA TM-21-11. Powder paint finishes provide lasting appearance in outdoor environments.

Optics/Electrical

LED:

Drivers are 120-277V, 50/60Hz Type II, III and Type IV lenses provide wide lateral spread.

- LNC5L – 5 LEDs, Types II, III or IV available, see page 2 for electrical details
- LNC7L – 7 LEDs, Type II, III or IV available, see page 2 for electrical details
- LNC9L – 9 LEDs, Types II, III or IV available, see page 2 for electrical details
- 3000K - 80 CRI, 4000K - 70 CRI, and 5000K - 70 CRI, CCT nominal
- Minimum operating temperature is -40°C/-40°F
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion

Lenses:

Full cut-off distribution; Ambient diffuser included, use for applications near entrances or locations where reduced brightness is desired.

Installation:

Quick mount adapter provides quick installation, designed for recessed box 4" square junction box.

Listings:

Listed and labeled to UL 1598 for wet locations, 25° C ambient environments. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at: <http://www.designlights.org/>

- IES Progress Award Winner - 2012

Warranty:

Five year limited warranty. For more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>

PRODUCT IMAGE(S)



LNC-5L



LNC-7L



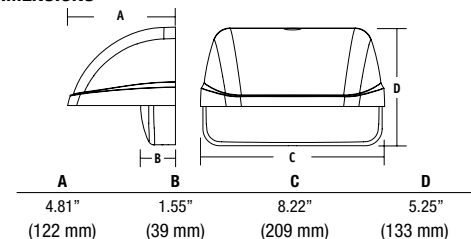
LNC-9L



With diffuser



DIMENSIONS



SHIPPING INFORMATION

Catalog Number	G.W(kg)/ CTN	Carton Dimensions			Carton Qty. per Master Pack
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)	
LNC-5LU	9.6 (4.36)	14.5 (37)	9.6 (24.5)	6.8 (17.5)	2
LNC-7LU	9.6 (4.36)	14.5 (37)	9.6 (24.5)	6.8 (17.5)	2
LNC-9LU	9.6 (4.36)	14.5 (37)	9.6 (24.5)	6.8 (17.5)	2

CERTIFICATIONS/LISTINGS



*3000K and warmer CCTs only

ORDERING INFORMATION

ORDERING EXAMPLE: LNC-9LU-5K-3-1-PCU

LNC						
SERIES	NUMBER OF LEDS	VOLTAGE	CCT	IES DISTRIBUTION	FINISH	OPTIONS
LNC LNC zero uplight	5L 5 LEDs	U 120V-277V	3K 3000K nominal, 70 CRI	2 Type II	1 Bronze	PCU Universal Button Photocell
	7L 7 LEDs	1 120V	4K 4000K nominal, 70 CRI	3 Type III	2 Black	
	9L 9 LEDs	2 208V	5K 5000K nominal	4 Type IV	3 Gray	
		3 240V			4 White	
		4 277V			5 Platinum	
			AM ¹ Amber (590 nm) available for "Turtle Friendly" / observatory applications, 350 mA (consult factory)			

¹ Amber LEDs only available on 7LU and 9LU configurations, 350 mA only



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LAREDO LNC-SPEC

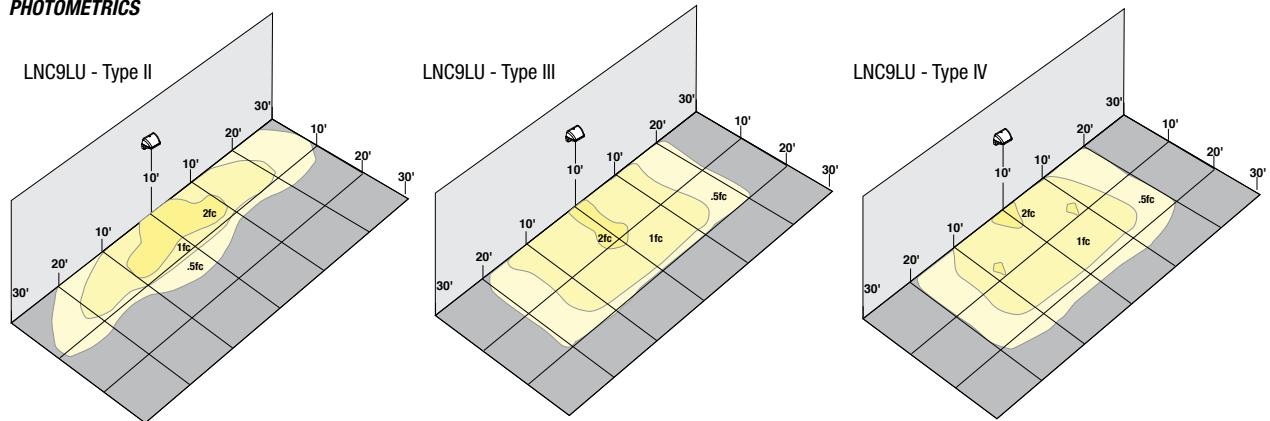
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Submitted by Lighting Associates		Catalog Number: LNC-9LU-4K-4-FINISH	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		
		Notes:	LAIHOU18-45878

REPLACEMENT PART

CATALOG NUMBER	DESCRIPTION
93039574	Frosted comfort shield, improved uniformity with only 5% reduction

PHOTOMETRICS



PERFORMANCE DATA

				5K (5000K nominal, 70 CRI)		4K (4000K nominal, 70 CRI)		3K (3000K nominal, 80 CRI)		AM (<580 nm wave-length)		
# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	LUMENS	LPW ¹	LUMENS	LPW ¹	LUMENS	LPW ¹	LUMENS	SYSTEM WATTS	LPW ¹
5	STD. (700mA) AM (350mA)	13W	2	1,150	88.5	1,052	81	883	68			
			3	1,132	87	1,077	83	833	64			
			4	1,146	88	1,053	81	849	65			
7		17W	2	1,515	89	1,369	80.5	1,272	75			
			3	1,500	88	1,539	90.5	1,392	82	268	6.6	59
			4	1,557	91.5	1,535	90	1,425	84			
9		22W	2	2,069	94	2,033	92	1,588	72			
			3	2,024	92	1,989	90	1,623	74			
			4	2,095	95	2,059	93.5	1,680	76	382	8.3	46

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application. Please consult IES files for BUG ratings.

PROJECTED LUMEN MAINTENANCE

Ambient Temp.	OPERATING HOURS					L70 (hours)
	0	25,000	50,000	TM-21-11' L96 60,000	100,000	
25°C / 77°F	1.00	0.98	0.97	0.96	0.95	>791,000
40°C / 104°F	0.99	0.98	0.96	0.96	0.94	>635,000

1. Projected per IESNA TM-21-11 * (Nichia 219B, 700mA, 85°C Ts, 10,000hrs)
Data references the extrapolated performance projections for the LNC-12LU-5K base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE	LUMEN MULTIPLIER
0° C	1.02
10° C	1.01
20° C	1.00
25° C	1.00
30° C	1.00
40° C	0.99
50° C	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

ELECTRICAL DATA

# OF LEDS	DRIVE CURRENT (mA)	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (w)
5	1	STD. (700mA)	120	0.11	13
			277	0.05	13
7	1	STD. (700mA)	120	0.14	17
			277	0.07	17
9	1	STD. (700mA)	120	0.17	22
			277	0.09	22



HUBBELL
Outdoor Lighting

Hubbell Outdoor Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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LAREDO LNC-SPEC

AUGUST 30, 2017 4:47 PM

LIGHTING
ASSOCIATES, INC.**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

EL807/9L4KUV/BL

Notes:

Type:

LAIHOU18-45878

**KIM LIGHTING**Wall, Step, Path Light **EL807**
120 / 277 Volt Die-Cast Aluminum LED

revision 2/11/15 • kl_el807_spec.pdf

Type:**Job:****Fixture Catalog number:**

_____/_____
 Fixture Mode Finish

Approvals:
Date:
Page: 1 of 2
Specifications

Housing: Die-cast low copper alloy (<0.6% Cu) aluminum with clear anodized finish. Two 1/2" NPT in sides. Housing mounts into concrete, brick, or masonry (non-combustible materials). Internal splice area provided behind lamp plate.

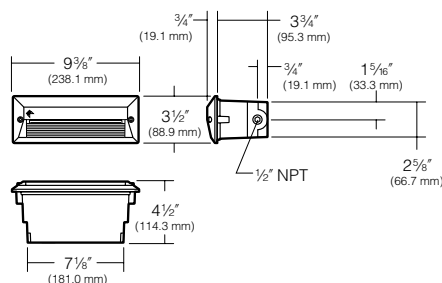
Lens Frame: Die-cast aluminum, with silicone gasket, attaches to housing with two captive 10-32 stainless steel, hex socket cap screws.

Lens: Tempered prismatic glass with silicone gasket, concealed above lens frame opening.

Finish: On lens frame only, each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat finish. Standard colors are Black (**BL**), Dark Bronze (**DB**), and Verde Green (**GR**).

Optical System: A total of 3 or 9 LED emitters are configured together as a module. Available in 3000K, 4200K, and 5100K.

Driver: Universal Voltage from 120 to 277V with a ±10% tolerance. -40° F. starting temperature. All drivers are Underwriters Laboratories recognized.

**ORDERING INFORMATION**

Fixture	Source
<input type="checkbox"/> EL807 / 3L3KUV ¹	5.3W, 3 LED's, 3000K
<input type="checkbox"/> EL807 / 3L4KUV ¹	5.3W, 3 LED's, 4200K
<input type="checkbox"/> EL807 / 3L5KUV ¹	5.3W, 3 LED's, 5100K

Fixture	Source
<input type="checkbox"/> EL807 / 9L3KUV ¹	10.5W, 9 LED's, 3000K
<input type="checkbox"/> EL807 / 9L4KUV ¹	10.5W, 9 LED's, 4200K
<input type="checkbox"/> EL807 / 9L5KUV ¹	10.5W, 9 LED's, 5100K

¹ Universal Voltage from 120 to 277V with a ±10% tolerance.
 For 5.3W, Max Amps. are .13 for 120V, .080 for 208V, .080 for 240V, .060 for 277V. For 10.8W, Max Amps. are .090 for 120V, .050 for 208V, .040 for 240V, .040 for 277V..

Finish


- ☐ **BL** - Black
☐ **DB** - Dark Bronze
☐ **GR** - Verde Green

Hubbell
Lighting, Inc.**Listings and Ratings**

UL cUL 1598 ¹	IP66 Rated	25C Ambient
--------------------------	------------	-------------

¹Suitable for wet locations

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.

Submitted by Lighting Associates		Catalog Number: EL807/9L4KUV/BL	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878



Wall, Step, Path Light **EL807** 120 / 277 Volt Die-Cast Aluminum LED revision 2/11/15 • kl_el807_spec.pdf

Type:

Job:

Page: 2 of 2

Lumen Data

Spectroradiometric			
	3000K	4200K	5100K
Correlated Color Temp. CCT (K)	2800 to 3175K	3800 to 4600K	4600 to 5600K
Color Rendering Index (CRI)	≥75	≥70	≥65

ELECTRICAL - Drive Current @350mA (3 LEDs)		
Volts -AC	Amps - AC	System Watts
120	0.13	5.3
208	0.08	5.3
240	0.08	5.3
277	0.06	5.3


ELECTRICAL - Drive Current @350mA (9 LEDs)		
Volts -AC	Amps - AC	System Watts
120	0.09	10.5
208	0.05	10.5
240	0.04	10.5
277	0.04	10.5

Absolute Lumens (3 LEDs)	
Temperature	EL807/3L*K
3000K	61
4200K	71
5100K	78

Absolute Lumens (9 LEDs)	
Temperature	EL807/9L*K
3000K	167
4200K	188
5100K	211

Lumens Per Watt (3 LEDs)	
Temperature	EL807/3L*K
3000K	11.5
4200K	13.4
5100K	14.7

Lumens Per Watt (9 LEDs)	
Temperature	EL807/9L*K
3000K	15.9
4200K	17.9
5100K	20.1

Submitted by Lighting Associates		Catalog Number: NW-V-1-FINISH	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		



NITEWAY™

LED Night Light

Catalog Number	
Comments	Type

The NiteWay™ patient room night light is the ideal choice for the demands of healthcare environments. It combines an aesthetically pleasing form with low glare performance, rugged durability and water-tight construction. NiteWay is also suitable for commercial, hospitality and residential applications.

FEATURES

- Simple, low-profile form is architecturally-pleasing and can easily be cleaned.
- Available in either a vertical or horizontal orientation and with either white or amber LEDs.
- No visibly exposed fasteners.
- Rated for wet location environments.
- Standard antimicrobial finish available in three standard colors.
- Available with optional photocell control.



NiteWay-Horizontal



NiteWay-Vertical with photocell

SPECIFICATIONS

Construction: Die cast aluminum faceplate. 0.050 aluminum backplate supplied with neoprene gasket. The molded polycarbonate optical lens is sealed to the backplate with a perimeter neoprene gasket.

Finish: The faceplate has a polyester powder coat paint finish with an antimicrobial compound additive to inhibit the growth of microbes.

Light Source: NiteWay™ night light can be specified with either white (3000K) or amber (590nm) LEDs. The emitter has an L70 of 50,000 hours.

Electrical: The integral driver is dual voltage (120/277VAC). System power consumption is < 2 watts.

Installation: The backplate/driver assembly can be mounted to a single-gang electrical junction box or a 4x4 junction box with a plaster reducer ring. The faceplate is secured to the backplate with the provided set screw or tamper-resistant screw.

Certifications:

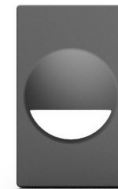
Built and tested to UL 1598 standard and bears the cCSAus label for Wet Locations.

Warranty: 5 year warranty. Please consult factory for details.

Available finishes:



White (WH)



Black (BLK)



Aluminum (AL)


ORDERING GUIDE

EXAMPLE: NW-H-1-WH-PC

MODEL	ORIENTATION	COLOR TEMP	FINISH	OPTIONS
NW NiteWay Night Light	H Horizontal V Vertical	1 White (3000K) 2 Amber (590nm)	WH White BLK Black AL Aluminum CC¹ Custom Color	PC² Photocell Control

¹ Customer to provide RAL number or color chip to match. Additional set-up charges will be applied to the order.

² The photocell is factory set to switch Off at 10 fc (± 2.5 fc) of ambient light and switch On when the light level is below 5 fc (± 2.5 fc). The sensitivity of the photocell is not field adjustable, and performance can vary depending on room finishes, mounting location and surrounding objects.

Submitted by Lighting Associates	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Catalog Number: NW-V-1-FINISH Notes:	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.			



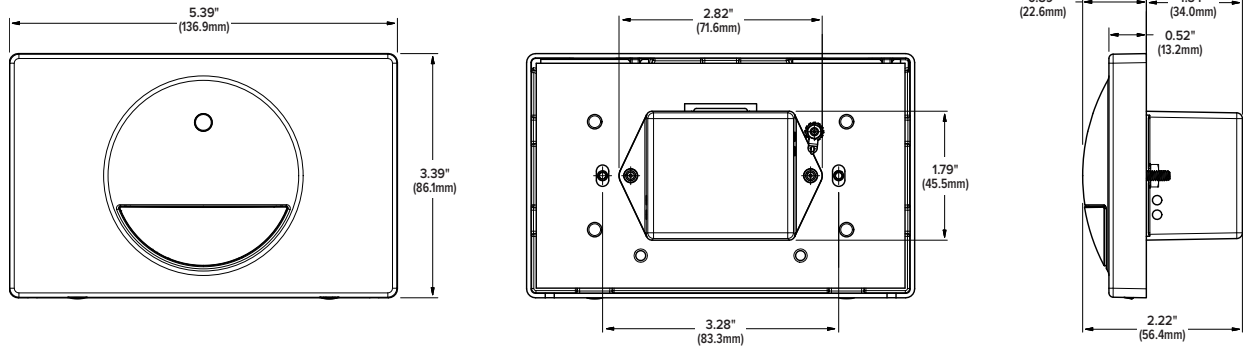
NITEWAY™

LED Night Light

DIMENSIONS

NW-H

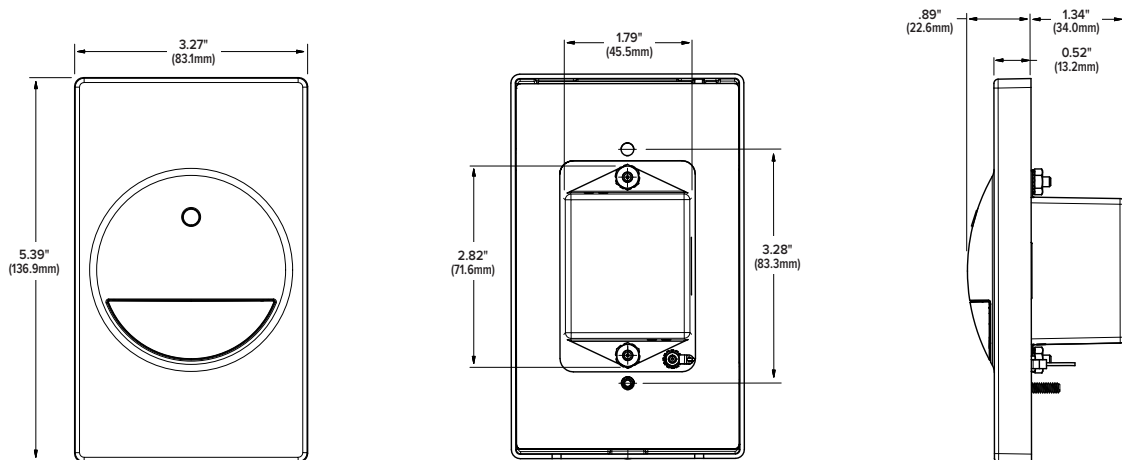
NiteWay Horizontal Night Light



Optional photocell control shown in drawing.

NW-V

NiteWay Vertical Night Light



Optional photocell control shown in drawing.

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**
NW-V-1-FINISH

Notes:

Type:

LAIHOU18-45878

**NITEWAY™**

LED Night Light

PHOTOMETRY

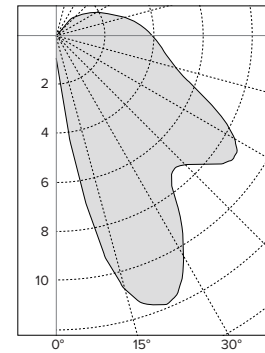
TEST #17.02151 TEST DATE 8/9/17

NW-H-1-WH

Report No.	1.02151
Lamp	2 - Nichia 3000K LEDs
Source CCT	3000K
Fixture Lumens	18.3
Watts	1.9 W
Efficacy	9.6 Lm/W

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixt.
0-30	3.0	16.5
0-40	5.3	29.0
0-60	9.8	53.8
0-90	15.3	83.6
90-120	2.4	13.3
90-130	2.8	15.2
90-150	3.0	16.4
90-180	3.0	16.4
0-180	18.3	100.0

INDOOR CANDELA PLOT

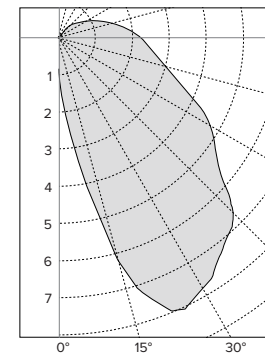
TEST #17.02127 TEST DATE 8/2/17


NW-H-2-WH

Report No.	1.02127
Lamp	2 - Lumileds 590K LEDs
Source CCT	Amber (590 nm)
Fixture Lumens	11.9
Watts	1.8 W
Efficacy	6.6 Lm/W

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixt.
0-30	1.90	15.9
0-40	3.60	30.2
0-60	7.21	60.4
0-90	10.48	87.8
90-120	1.23	10.3
90-130	1.41	11.8
90-150	1.46	12.2
90-180	1.46	12.2
0-180	11.93	100.0

INDOOR CANDELA PLOT

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

Columbia LIGHTING



create**change**

FEATURES

- LED Enclosed and Gasketed
- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Four LED color choices and 80 CRI
- IP66 all sizes when ordered with standard polyacetal (POM) latches
- IP65 all sizes, IP67 4' and 8'
- Available in 2', 4', or 8' lengths
- NEMA 4X housing
- Fiberglass housing with F1 weatherability rating, standard
- Smooth housing for easy cleaning
- Gasket is non-porous to ensure seal
- Impact modified acrylic lens equivalent to 100% DR
- Wide range of lens selections
- Lens firmly secured with tamper resistance ready polyacetal (POM) latches
- Stainless steel latching optional
- ControlScope® compatible
- Drivers include minimum 2.5kV surge protection
- UL Sanitation Certified per NSF Standards
- Removable gear tray electrical access for modular replaceability
- Emergency battery pack installed, optional on most models
- -20°C up to +50°C ambient operation; see table provided for details
- DesignLights Consortium® qualified
- Includes surface mounting brackets
- Occupancy and/or daylight sensing accessories available
- Five year warranty

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Housing is formed from UL 5VA fiberglass. F1 weatherability rating, suitable for indoor or outdoor use with respect to exposure to UV light. Pour-in-place non-porous gasketing assures seal. LED affixed to removable heat sinked gear tray. 14 Latches per 8', 8 per 4', 6 per 2'. Latches are provided tamper resistance ready, tamper resistant screws by others. Latches are standard polyacetal (POM), optional in stainless steel. Access openings are provided for electrical connection.

SHIELDING

Lineal ribbed frosted acrylic lens impact modified equivalent to 100% DR; modification adds flexibility to reduce impact breakage compared to standard acrylic formulations. Optional ribbed polycarbonate lens or deep acrylic. All lenses available in clear or frost.

FINISH

White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel.

ELECTRICAL

Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance. Extra High Lumen packages (XL) rated L70 at 60,000 hours. Driver options include fixed output for on/off function, step dimming⁶ (high/low/off) or continuous 0-10V dimming. QR code label affixed to housing for easy traceability.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Ingress protection IP65 and IP67 standard. UL Sanitation Certified per NSF Standards. Wet location labeling is standard. Emergency-equipped fixtures built to UL 924. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

WARRANTY

Five year warranty (Terms and Conditions Apply).

MOUNTING

Use flexible conduit only.

ORDERING INFORMATION

EXAMPLE LXEM4-35HL-RFA-EDU

LXEM											
MODEL		COLOR TEMP		SHIELDING		DRIVER		VOLTAGE		OPTIONS	
LXEM LED Enclosed and Gasketed		30 3000K		RFA Ribbed Frosted Acrylic		E Fixed Output		U 120V-277V		GLR Fast Blow Fuse	
		35 3500K		RA Ribbed Clear Acrylic		ESD Step Dimming ⁶		347 347V		SSL Stainless Steel Tamper Resistance Ready Latches	
		40 4000K		DFA Deep Frosted Acrylic		ED 0-10V Dimming				TP Tamper Proof Latches	
		50 5000K		DCA Deep Clear Acrylic		ED1 0-10V 1% Dimming ⁶				ELL14 Emergency Battery Pack Installed, 1400 Lumens ^{3,6,7}	
				RFP Ribbed Frosted Polycarbonate ⁵						F3C8W 3 Wire 8' Wet Cord	
				RP Ribbed Clear Polycarbonate ⁵						F3C15W 3 Wire 15' Wet Cord	
SIZE		LUMEN OUTPUT									
2 2' 1,2,3,4		VW Very Low Watt									
4 4'		LW Low Watt									
8 8'		ML Medium Lumen									
		HL High Lumen									
		VL Very High Lumen									
		XL Xtra High Lumen ²									
<div>ACCESSORIES (ORDER SEPARATELY)</div>											
XEDPM Dual Pendant Brackets (pendant by others) ⁸											
XEHC Chain Hanger Kit (Includes 14" Chain)											
XE45MB 45° Mounting Bracket ¹⁰											
XE45MBSS 45° Stainless Steel Mounting Bracket ¹⁰											

ACCESSORIES (ORDER SEPARATELY)

- XEDPM Dual Pendant Brackets (pendant by others)⁸
 XEHC Chain Hanger Kit (Includes 14" Chain)
 XE45MB 45° Mounting Bracket¹⁰
 XE45MBSS 45° Stainless Steel Mounting Bracket¹⁰

SENSOR KITS (Order Separately)

All sensor kits include Occupancy & Daylight.

Daylight activation requires setting of dip-switches on site.

Catalog #	# Relays	Lens Type	Voltage	Wet Label
120V/277V				
OS1360WLK	1	360°	120/277	Yes
OS2360WLK	2	360°	120/277	Yes
OS1AWLK	1	Aisle	120/277	Yes
OS2AWLK	2	Aisle	120/277	Yes

¹VL and XL not available in 2' size.

²Not available with battery pack.

³Not available with XL lumen package.

⁴Not available with VL lumen package.

⁵2' and 4' only. 8' not available.

⁶See table for availability

⁷Not available in 347V

⁸Requires 3/8" OD threaded rod by others.

⁹Registered trademark of Daintree Networks, used by permission.

¹⁰2 required for 8' fixture



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LXEM4-40ML-RFA-EDU

Notes:**Type:**

LAIHOU18-45878

Columbia

LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

Test# 17905 Test Date 10/13/2016

PHOTOMETRIC DATA**LUMINAIRE DATA**

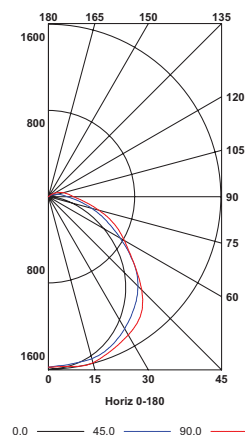
Luminaire	LXEM4-50ML-RFA-EDU LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with frosted ribbed acrylic lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5306
Watts	42.00
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.40
Luminous Opening in Feet	Length: 4.00 Width: 0.54 Height: 0.17

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1268	23.9	23.9
0-40	2105	39.7	39.7
0-60	3766	71.0	71.0
0-90	5025	94.7	94.7
0-180	5306	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens per Watt	126
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.90 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test# 17989 Test Date 10/10/2016

LUMINAIRE DATA

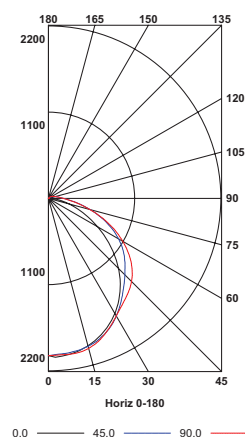
Luminaire	LXEM4-40HL-DFA-EDU LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with deep frosted acrylic lens
Ballast	XI054C150V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	6525
Watts	47.30
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.25 90° = 1.28
Luminous Opening in Feet	Length: 4.00 Width: 0.54 Height: 0.29

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1583	24.3	24.3
0-40	2594	39.8	39.8
0-60	4661	71.4	71.4
0-90	6235	95.6	95.6
0-180	6525	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens per Watt	138
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.73 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test# 18012 Test Date 10/18/2016

LUMINAIRE DATA

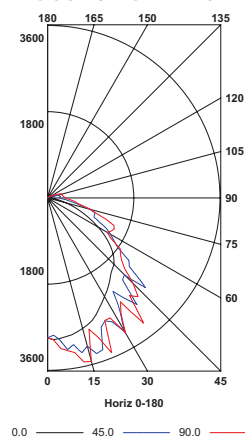
Luminaire	LXEM4-50XL-RA-EDU LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with ribbed clear acrylic lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	10607
Watts	91.40
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.21 90° = 1.38
Luminous Opening in Feet	Length: 4.00 Width: 0.54 Height: 0.17

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	2547	24.0	24.0
0-40	4252	40.1	40.1
0-60	7643	72.1	72.1
0-90	10073	95.0	95.0
0-180	10607	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens per Watt	116
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.05 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

HUBBELL
Lighting

Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

Driver Availability							
LENGTH	OUTPUT	NOMINAL LUMEN RANGE	ESD Available	ED1 Available	347v Available	347 with ESD Available	347 with ED1 Available
2'	VW	2,145 - 2,708	Y	Y	Y	N/A	Y
	LW	2,738 - 3,529	Y	Y	Y	N/A	Y
	ML	3,862 - 4,921	Y	Y	Y	N/A	Y
	HL	4,254 - 5,416	Y	Y	Y	N/A	Y
4'	VW	2,802 - 3,433	Y	Y	Y	N/A	Y
	LW	3,726 - 4,922	N/A	Y	Y	N/A	Y
	ML	4,533 - 5,646	N/A	Y	Y	N/A	Y
	HL	5,449 - 6,763	Y	Y	Y	N/A	Y
	VL	7,086 - 8,415	Y	Y	Y	N/A	N/A
	XL	9,059 - 11,237	N/A	Y	Y	N/A	N/A
8'	VW	6,078 - 6,866	Y	Y	Y	N/A	Y
	LW	8,095 - 9,276	N/A	Y	Y	N/A	Y
	ML	9,844 - 11,293	N/A	Y	Y	N/A	Y
	HL	11,851 - 13,525	Y	Y	Y	N/A	Y
	VL	14,747 - 16,830	Y	Y	Y	N/A	N/A
	XL	19,558 - 22,473	N/A	Y	Y	N/A	N/A

MAX. AMBIENT OPERATING TEMP.							
LENGTH	OUTPUT	NOMINAL LUMEN RANGE	WATTS	LPW	MAX AMBIENT OPERATING TEMPERATURE (C°) (UNIVERSAL VOLTAGE)	ELL14 (WITH UNIVERSAL VOLTAGE)	347v
2'	VW	2,145 - 2,708	21	102 - 130	40	NA	35
	LW	2,738 - 3,529	26	105 - 135	40	NA	35
	ML	3,862 - 4,921	39	100 - 128	40	NA	35
	HL	4,254 - 5,416	44	97 - 123	35	NA	30
4'	VW	2,802 - 3,433	25	114 - 141	50	45	45
	LW	3,726 - 4,922	33	112 - 139	50	45	45
	ML	4,533 - 5,646	42	108 - 134	50	45	45
	HL	5,449 - 6,763	47	115 - 143	45	45	35
	VL	7,086 - 8,415	62	115 - 136	40	40	35
	XL	9,059 - 11,237	92	99 - 123	30	NA	25
8'	VW	6,078 - 6,866	49	124-141	50	45	45
	LW	8,095 - 9,276	67	122 - 139	50	45	45
	ML	9,844 - 11,293	84	117 - 134	50	45	45
	HL	11,851 - 13,525	95	125 - 143	45	45	35
	VL	14,747 - 16,830	123	120 - 136	40	40	35
	XL	19,558 - 22,473	183	107 - 123	30	NA	25

Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

LXEM PREDICTED LIFE					LUMEN MAINTENANCE		
CALCULATED HOURS	LENGTH	OUTPUT	NOMINAL LUMEN RANGE	AMBIENT OPERATING TEMPERATURE (C°)	L70	L80	L90
	2'	VW	2,145 - 2,708	25	393,000	245,000	115,000
				40	207,000	128,000	58,000
		LW	2,738 - 3,529	25	393,000	245,000	115,000
				40	207,000	128,000	58,000
		ML	3,862 - 4,921	25	282,000	174,000	79,000
				40	207,000	128,000	58,000
		HL	4,254 - 5,416	25	232,000	143,000	65,000
				35	175,000	105,000	42,000
	4'	VW	2,802 - 3,433	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		LW	3,726 - 4,922	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		ML	4,533 - 5,646	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		HL	5,449 - 6,763	25	322,000	198,000	90,000
				45	282,000	174,000	79,000
		VL	7,086 - 8,415	25	322,000	198,000	90,000
				40	228,000	140,000	63,000
		XL	9,059 - 11,237	25	266,000	164,000	74,000
				30	240,000	148,000	67,000
	8'	VW	6,078 - 6,866	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		LW	8,095 - 9,276	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		ML	9,844 - 11,293	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		HL	11,851 - 13,525	25	322,000	198,000	90,000
				45	282,000	174,000	79,000
		VL	14,747 - 16,830	25	322,000	198,000	90,000
				40	228,000	140,000	63,000
		XL	19,558 - 22,473	25	266,000	164,000	74,000
				30	240,000	148,000	67,000

Columbia


LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-30VW-RFP-EDU	Very Low Watt	30K	RFP	2,145	21.1	101.6	40°C
LXEM2-30VW-RA-EDU			RA	2,365	20.8	113.7	40°C
LXEM2-30VW-RP-EDU			RP	2,373	20.8	114.1	40°C
LXEM2-30VW-RFA-EDU			RFA	2,448	20.8	117.7	40°C
LXEM2-30VW-DFA-EDU			DFA	2,467	20.8	118.6	40°C
LXEM2-30VW-DCA-EDU			DCA	2,512	20.8	120.8	40°C
LXEM2-35VW-RFP-EDU		35K	RFP	2,217	21.1	105.1	40°C
LXEM2-35VW-RA-EDU			RA	2,446	20.8	117.6	40°C
LXEM2-35VW-RP-EDU			RP	2,454	20.8	118.0	40°C
LXEM2-35VW-RFA-EDU			RFA	2,531	20.8	121.7	40°C
LXEM2-35VW-DFA-EDU			DFA	2,551	20.8	122.6	40°C
LXEM2-35VW-DCA-EDU			DCA	2,598	20.8	124.9	40°C
LXEM2-40VW-RFP-EDU		40K	RFP	2,252	21.1	106.7	40°C
LXEM2-40VW-RA-EDU			RA	2,484	20.8	119.4	40°C
LXEM2-40VW-RP-EDU			RP	2,492	20.8	119.8	40°C
LXEM2-40VW-RFA-EDU			RFA	2,571	20.8	123.6	40°C
LXEM2-40VW-DFA-EDU			DFA	2,590	20.8	124.5	40°C
LXEM2-40VW-DCA-EDU			DCA	2,638	20.8	126.8	40°C
LXEM2-50VW-RFP-EDU		50K	RFP	2,312	21.1	109.6	40°C
LXEM2-50VW-RA-EDU			RA	2,550	20.8	122.6	40°C
LXEM2-50VW-RP-EDU			RP	2,558	20.8	123.0	40°C
LXEM2-50VW-RFA-EDU			RFA	2,639	20.8	126.9	40°C
LXEM2-50VW-DFA-EDU			DFA	2,659	20.8	127.8	40°C
LXEM2-50VW-DCA-EDU			DCA	2,708	20.8	130.2	40°C
LXEM2-30LW-RFP-EDU	Low Watt	30K	RFP	2,738	26.0	105.3	40°C
LXEM2-30LW-RP-EDU			RP	3,049	26.1	116.8	40°C
LXEM2-30LW-RA-EDU			RA	3,144	26.0	120.9	40°C
LXEM2-30LW-RFA-EDU			RFA	3,180	26.2	121.4	40°C
LXEM2-30LW-DFA-EDU			DFA	3,239	26.1	124.1	40°C
LXEM2-30LW-DCA-EDU			DCA	3,273	26.1	125.4	40°C
LXEM2-35LW-RFP-EDU		35K	RFP	2,831	26.0	108.9	40°C
LXEM2-35LW-RP-EDU			RP	3,153	26.1	120.8	40°C
LXEM2-35LW-RA-EDU			RA	3,251	26.0	125.0	40°C
LXEM2-35LW-RFA-EDU			RFA	3,289	26.2	125.5	40°C
LXEM2-35LW-DFA-EDU			DFA	3,349	26.1	128.3	40°C
LXEM2-35LW-DCA-EDU			DCA	3,385	26.1	129.7	40°C
LXEM2-40LW-RFP-EDU		40K	RFP	2,875	26.0	110.6	40°C
LXEM2-40LW-RP-EDU			RP	3,202	26.1	122.7	40°C
LXEM2-40LW-RA-EDU			RA	3,302	26.0	127.0	40°C
LXEM2-40LW-RFA-EDU			RFA	3,339	26.2	127.5	40°C
LXEM2-40LW-DFA-EDU			DFA	3,401	26.1	130.3	40°C
LXEM2-40LW-DCA-EDU			DCA	3,437	26.1	131.7	40°C
LXEM2-50LW-RFP-EDU		50K	RFP	2,951	26.0	113.5	40°C
LXEM2-50LW-RP-EDU			RP	3,287	26.1	125.9	40°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		

Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-50LW-RA-EDU	Low Watt	50K	RA	3,390	26.0	130.4	40°C
LXEM2-50LW-RFA-EDU			RFA	3,428	26.2	130.9	40°C
LXEM2-50LW-DFA-EDU			DFA	3,492	26.1	133.8	40°C
LXEM2-50LW-DCA-EDU			DCA	3,529	26.1	135.2	40°C
LXEM2-30ML-RFP-EDU	Medium Lumen	30K	RFP	3,862	38.5	100.3	40°C
LXEM2-30ML-RP-EDU			RP	4,228	38.5	109.8	40°C
LXEM2-30ML-RFA-EDU			RFA	4,343	38.5	112.8	40°C
LXEM2-30ML-RA-EDU			RA	4,446	38.5	115.5	40°C
LXEM2-30ML-DFA-EDU			DFA	4,526	38.5	117.5	40°C
LXEM2-30ML-DCA-EDU			DCA	4,565	38.5	118.6	40°C
LXEM2-35ML-RFP-EDU		35K	RFP	3,993	38.5	103.7	40°C
LXEM2-35ML-RP-EDU			RP	4,371	38.5	113.5	40°C
LXEM2-35ML-RFA-EDU			RFA	4,490	38.5	116.6	40°C
LXEM2-35ML-RA-EDU			RA	4,597	38.5	119.4	40°C
LXEM2-35ML-DFA-EDU			DFA	4,680	38.5	121.5	40°C
LXEM2-35ML-DCA-EDU			DCA	4,720	38.5	122.6	40°C
LXEM2-40ML-RFP-EDU		40K	RFP	4,055	38.5	105.3	40°C
LXEM2-40ML-RP-EDU			RP	4,439	38.5	115.3	40°C
LXEM2-40ML-RFA-EDU			RFA	4,560	38.5	118.4	40°C
LXEM2-40ML-RA-EDU			RA	4,668	38.5	121.3	40°C
LXEM2-40ML-DFA-EDU			DFA	4,752	38.5	123.4	40°C
LXEM2-40ML-DCA-EDU			DCA	4,793	38.5	124.5	40°C
LXEM2-50ML-RFP-EDU		50K	RFP	4,163	38.5	108.1	40°C
LXEM2-50ML-RP-EDU			RP	4,558	38.5	118.4	40°C
LXEM2-50ML-RFA-EDU			RFA	4,682	38.5	121.6	40°C
LXEM2-50ML-RA-EDU			RA	4,793	38.5	124.5	40°C
LXEM2-50ML-DFA-EDU			DFA	4,879	38.5	126.7	40°C
LXEM2-50ML-DCA-EDU			DCA	4,921	38.5	127.8	40°C
LXEM2-30HL-RFP-EDU	High Lumen	30K	RFP	4,254	44.1	96.5	35°C
LXEM2-30HL-RP-EDU			RP	4,700	44.1	106.6	35°C
LXEM2-30HL-RA-EDU			RA	4,868	44.1	110.4	35°C
LXEM2-30HL-RFA-EDU			RFA	4,874	44.1	110.5	35°C
LXEM2-30HL-DFA-EDU			DFA	5,008	44.1	113.6	35°C
LXEM2-30HL-DCA-EDU			DCA	5,024	44.1	113.9	35°C
LXEM2-35HL-RFP-EDU		35K	RFP	4,399	44.1	99.7	35°C
LXEM2-35HL-RP-EDU			RP	4,860	44.1	110.2	35°C
LXEM2-35HL-RA-EDU			RA	5,033	44.1	114.1	35°C
LXEM2-35HL-RFA-EDU			RFA	5,040	44.1	114.3	35°C
LXEM2-35HL-DFA-EDU			DFA	5,179	44.1	117.4	35°C
LXEM2-35HL-DCA-EDU			DCA	5,195	44.1	117.8	35°C
LXEM2-40HL-RFP-EDU		40K	RFP	4,467	44.1	101.3	35°C
LXEM2-40HL-RP-EDU			RP	4,935	44.1	111.9	35°C
LXEM2-40HL-RA-EDU			RA	5,111	44.1	115.9	35°C
LXEM2-40HL-RFA-EDU			RFA	5,117	44.1	116.0	35°C


Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-40HL-DFA-EDU	High Lumen	40K	DFA	5,259	44.1	119.2	35°C
LXEM2-40HL-DCA-EDU			DCA	5,275	44.1	119.6	35°C
LXEM2-50HL-RFP-EDU		50K	RFP	4,586	44.1	104.0	35°C
LXEM2-50HL-RP-EDU			RP	5,066	44.1	114.9	35°C
LXEM2-50HL-RA-EDU			RA	5,248	44.1	119.0	35°C
LXEM2-50HL-RFA-EDU			RFA	5,254	44.1	119.1	35°C
LXEM2-50HL-DFA-EDU			DFA	5,399	44.1	122.4	35°C
LXEM2-50HL-DCA-EDU			DCA	5,416	44.1	122.8	35°C
LXEM4-30VW-RFP-EDU	Very Low Watt	30K	RFP	2,802	24.5	114.4	50°C
LXEM4-30VW-RP-EDU			RP	2,938	24.4	120.4	50°C
LXEM4-30VW-RA-EDU			RA	3,039	24.4	124.6	50°C
LXEM4-30VW-RFA-EDU			RFA	3,048	24.5	124.4	50°C
LXEM4-30VW-DCA-EDU			DCA	3,180	24.4	130.3	50°C
LXEM4-30VW-DFA-EDU			DFA	3,184	24.4	130.5	50°C
LXEM4-35VW-RFP-EDU		35K	RFP	2,897	24.5	118.2	50°C
LXEM4-35VW-RP-EDU			RP	3,038	24.4	124.5	50°C
LXEM4-35VW-RA-EDU			RA	3,143	24.4	128.8	50°C
LXEM4-35VW-RFA-EDU			RFA	3,151	24.5	128.6	50°C
LXEM4-35VW-DCA-EDU			DCA	3,288	24.4	134.8	50°C
LXEM4-35VW-DFA-EDU			DFA	3,293	24.4	134.9	50°C
LXEM4-40VW-RFP-EDU		40K	RFP	2,942	24.5	120.1	50°C
LXEM4-40VW-RP-EDU			RP	3,085	24.4	126.4	50°C
LXEM4-40VW-RA-EDU			RA	3,191	24.4	130.8	50°C
LXEM4-40VW-RFA-EDU			RFA	3,200	24.5	130.6	50°C
LXEM4-40VW-DCA-EDU			DCA	3,339	24.4	136.8	50°C
LXEM4-40VW-DFA-EDU			DFA	3,344	24.4	137.0	50°C
LXEM4-50VW-RFP-EDU		50K	RFP	3,020	24.5	123.3	50°C
LXEM4-50VW-RP-EDU			RP	3,168	24.4	129.8	50°C
LXEM4-50VW-RA-EDU			RA	3,276	24.4	134.3	50°C
LXEM4-50VW-RFA-EDU			RFA	3,285	24.5	134.1	50°C
LXEM4-50VW-DCA-EDU			DCA	3,428	24.4	140.5	50°C
LXEM4-50VW-DFA-EDU			DFA	3,433	24.4	140.7	50°C
LXEM4-30LW-RFP-EDU	Low Watt	30K	RFP	3,726	33.3	111.9	50°C
LXEM4-30LW-RP-EDU			RP	3,872	33.3	116.3	50°C
LXEM4-30LW-RFA-EDU			RFA	4,048	33.3	121.5	50°C
LXEM4-30LW-RA-EDU			RA	4,054	33.3	121.8	50°C
LXEM4-30LW-DFA-EDU			DFA	4,241	33.3	127.4	50°C
LXEM4-30LW-DCA-EDU			DCA	4,303	33.3	129.2	50°C
LXEM4-35LW-RFP-EDU		35K	RFP	3,853	33.3	115.7	50°C
LXEM4-35LW-RP-EDU			RP	4,004	33.3	120.2	50°C
LXEM4-35LW-RFA-EDU			RFA	4,185	33.3	125.7	50°C
LXEM4-35LW-RA-EDU			RA	4,192	33.3	125.9	50°C
LXEM4-35LW-DFA-EDU			DFA	4,385	33.3	131.7	50°C
LXEM4-35LW-DCA-EDU			DCA	4,449	33.3	133.6	50°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		

Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-40LW-RFP-EDU	Low Watt	40K	RFP	3,912	33.3	117.5	50°C
LXEM4-40LW-RP-EDU			RP	4,066	33.3	122.1	50°C
LXEM4-40LW-RFA-EDU			RFA	4,250	33.3	127.6	50°C
LXEM4-40LW-RA-EDU			RA	4,257	33.3	127.8	50°C
LXEM4-40LW-DFA-EDU			DFA	4,453	33.3	133.7	50°C
LXEM4-40LW-DCA-EDU			DCA	4,518	33.3	135.7	50°C
LXEM4-50LW-RFP-EDU		50K	RFP	4,017	33.3	120.6	50°C
LXEM4-50LW-RP-EDU			RP	4,174	33.3	125.3	50°C
LXEM4-50LW-RFA-EDU			RFA	4,363	33.3	131.0	50°C
LXEM4-50LW-RA-EDU			RA	4,371	33.3	131.3	50°C
LXEM4-50LW-DFA-EDU			DFA	4,572	33.3	137.3	50°C
LXEM4-50LW-DCA-EDU			DCA	4,638	33.3	139.3	50°C
LXEM4-30ML-RFP-EDU	Medium Lumen	30K	RFP	4,533	41.9	108.2	50°C
LXEM4-30ML-RP-EDU			RP	4,714	41.9	112.5	50°C
LXEM4-30ML-RFA-EDU			RFA	4,922	42.0	117.2	50°C
LXEM4-30ML-RA-EDU			RA	4,924	42.0	117.2	50°C
LXEM4-30ML-DFA-EDU			DFA	5,160	42.0	122.9	50°C
LXEM4-30ML-DCA-EDU			DCA	5,238	42.0	124.7	50°C
LXEM4-35ML-RFP-EDU		35K	RFP	4,688	41.9	111.9	50°C
LXEM4-35ML-RP-EDU			RP	4,875	41.9	116.3	50°C
LXEM4-35ML-RFA-EDU			RFA	5,089	42.0	121.2	50°C
LXEM4-35ML-RA-EDU			RA	5,091	42.0	121.2	50°C
LXEM4-35ML-DFA-EDU			DFA	5,336	42.0	127.0	50°C
LXEM4-35ML-DCA-EDU			DCA	5,416	42.0	128.9	50°C
LXEM4-40ML-RFP-EDU		40K	RFP	4,760	41.9	113.6	50°C
LXEM4-40ML-RP-EDU			RP	4,950	41.9	118.1	50°C
LXEM4-40ML-RFA-EDU			RFA	5,168	42.0	123.1	50°C
LXEM4-40ML-RA-EDU			RA	5,170	42.0	123.1	50°C
LXEM4-40ML-DFA-EDU			DFA	5,418	42.0	129.0	50°C
LXEM4-40ML-DCA-EDU			DCA	5,500	42.0	130.9	50°C
LXEM4-50ML-RFP-EDU		50K	RFP	4,887	41.9	116.6	50°C
LXEM4-50ML-RP-EDU			RP	5,082	41.9	121.3	50°C
LXEM4-50ML-RFA-EDU			RFA	5,306	42.0	126.3	50°C
LXEM4-50ML-RA-EDU			RA	5,308	42.0	126.4	50°C
LXEM4-50ML-DFA-EDU			DFA	5,563	42.0	132.4	50°C
LXEM4-50ML-DCA-EDU			DCA	5,646	42.0	134.4	50°C
LXEM4-30HL-RFP-EDU	High Lumen	30K	RFP	5,449	47.4	115.0	45°C
LXEM4-30HL-RP-EDU			RP	5,648	47.2	119.7	45°C
LXEM4-30HL-RFA-EDU			RFA	5,926	47.4	125.0	45°C
LXEM4-30HL-RA-EDU			RA	5,932	47.3	125.4	45°C
LXEM4-30HL-DFA-EDU			DFA	6,214	47.3	131.4	45°C
LXEM4-30HL-DCA-EDU			DCA	6,273	47.4	132.4	45°C
LXEM4-35HL-RFP-EDU		35K	RFP	5,634	47.4	118.9	45°C
LXEM4-35HL-RP-EDU			RP	5,840	47.2	123.7	45°C

Columbia


LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-35HL-RFA-EDU	High Lumen	35K	RFA	6,127	47.4	129.3	45°C
LXEM4-35HL-RA-EDU			RA	6,133	47.3	129.7	45°C
LXEM4-35HL-DFA-EDU			DFA	6,425	47.3	135.8	45°C
LXEM4-35HL-DCA-EDU			DCA	6,487	47.4	136.9	45°C
LXEM4-40HL-RFP-EDU		40K	RFP	5,721	47.4	120.7	45°C
LXEM4-40HL-RP-EDU			RP	5,931	47.2	125.7	45°C
LXEM4-40HL-RFA-EDU			RFA	6,222	47.4	131.3	45°C
LXEM4-40HL-RA-EDU			RA	6,228	47.3	131.7	45°C
LXEM4-40HL-DFA-EDU		50K	DFA	6,525	47.3	137.9	45°C
LXEM4-40HL-DCA-EDU			DCA	6,587	47.4	139.0	45°C
LXEM4-50HL-RFP-EDU			RFP	5,874	47.4	123.9	45°C
LXEM4-50HL-RP-EDU			RP	6,089	47.2	129.0	45°C
LXEM4-50HL-RFA-EDU			RFA	6,388	47.4	134.8	45°C
LXEM4-50HL-RA-EDU			RA	6,394	47.3	135.2	45°C
LXEM4-50HL-DFA-EDU			DFA	6,699	47.3	141.6	45°C
LXEM4-50HL-DCA-EDU			DCA	6,763	47.4	142.7	45°C
LXEM4-30VL-RP-EDU	Very High Lumen	30K	RP	7,086	61.6	115.0	40°C
LXEM4-30VL-RA-EDU			RA	7,373	61.7	119.5	40°C
LXEM4-30VL-RFP-EDU			RFP	7,388	61.6	119.9	40°C
LXEM4-30VL-RFA-EDU			RFA	7,395	61.6	120.0	40°C
LXEM4-30VL-DFA-EDU			DFA	7,756	61.7	125.7	40°C
LXEM4-30VL-DCA-EDU			DCA	7,806	61.7	126.5	40°C
LXEM4-35VL-RP-EDU		35K	RP	7,327	61.6	118.9	40°C
LXEM4-35VL-RA-EDU			RA	7,624	61.7	123.6	40°C
LXEM4-35VL-RFP-EDU			RFP	7,639	61.6	124.0	40°C
LXEM4-35VL-RFA-EDU			RFA	7,646	61.6	124.1	40°C
LXEM4-35VL-DFA-EDU			DFA	8,020	61.7	130.0	40°C
LXEM4-35VL-DCA-EDU			DCA	8,072	61.7	130.8	40°C
LXEM4-40VL-RP-EDU		40K	RP	7,440	61.6	120.8	40°C
LXEM4-40VL-RA-EDU			RA	7,742	61.7	125.5	40°C
LXEM4-40VL-RFP-EDU			RFP	7,757	61.6	125.9	40°C
LXEM4-40VL-RFA-EDU			RFA	7,764	61.6	126.0	40°C
LXEM4-40VL-DFA-EDU			DFA	8,144	61.7	132.0	40°C
LXEM4-40VL-DCA-EDU			DCA	8,197	61.7	132.8	40°C
LXEM4-50VL-RP-EDU		50K	RP	7,639	61.6	124.0	40°C
LXEM4-50VL-RA-EDU			RA	7,948	61.7	128.8	40°C
LXEM4-50VL-RFP-EDU			RFP	7,964	61.6	129.3	40°C
LXEM4-50VL-RFA-EDU			RFA	7,971	61.6	129.4	40°C
LXEM4-50VL-DFA-EDU			DFA	8,361	61.7	135.5	40°C
LXEM4-50VL-DCA-EDU			DCA	8,415	61.7	136.4	40°C
LXEM4-30XL-RFP-EDU	Xtra High Lumen	30K	RFP	9,059	91.3	99.2	30°C
LXEM4-30XL-RP-EDU			RP	9,448	91.2	103.6	30°C
LXEM4-30XL-RFA-EDU			RFA	9,779	91.2	107.2	30°C
LXEM4-30XL-RA-EDU			RA	9,839	91.4	107.7	30°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		


Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-30XL-DFA-EDU	Xtra High Lumen	30K	DFA	10,358	91.4	113.3	30°C
LXEM4-30XL-DCA-EDU			DCA	10,424	91.5	113.9	30°C
LXEM4-35XL-RFP-EDU		35K	RFP	9,367	91.3	102.6	30°C
LXEM4-35XL-RP-EDU			RP	9,769	91.2	107.1	30°C
LXEM4-35XL-RFA-EDU			RFA	10,111	91.2	110.9	30°C
LXEM4-35XL-RA-EDU			RA	10,174	91.4	111.3	30°C
LXEM4-35XL-DFA-EDU			DFA	10,710	91.4	117.2	30°C
LXEM4-35XL-DCA-EDU			DCA	10,778	91.5	117.8	30°C
LXEM4-40XL-RFP-EDU		40K	RFP	9,512	91.3	104.2	30°C
LXEM4-40XL-RP-EDU			RP	9,920	91.2	108.8	30°C
LXEM4-40XL-RFA-EDU			RFA	10,268	91.2	112.6	30°C
LXEM4-40XL-RA-EDU			RA	10,331	91.4	113.0	30°C
LXEM4-40XL-DFA-EDU			DFA	10,876	91.4	119.0	30°C
LXEM4-40XL-DCA-EDU			DCA	10,945	91.5	119.6	30°C
LXEM4-50XL-RFP-EDU		50K	RFP	9,765	91.3	107.0	30°C
LXEM4-50XL-RP-EDU			RP	10,184	91.2	111.7	30°C
LXEM4-50XL-RFA-EDU			RFA	10,542	91.2	115.6	30°C
LXEM4-50XL-RA-EDU			RA	10,607	91.4	116.0	30°C
LXEM4-50XL-DFA-EDU			DFA	11,166	91.4	122.2	30°C
LXEM4-50XL-DCA-EDU			DCA	11,237	91.5	122.8	30°C
LXEM8-30VW-RA-EDU	Very Low Watt	30K	RA	6,078	48.8	124.6	50°C
LXEM8-30VW-RFA-EDU			RFA	6,096	49.0	124.4	50°C
LXEM8-30VW-DCA-EDU			DCA	6,360	48.8	130.3	50°C
LXEM8-30VW-DFA-EDU			DFA	6,369	48.8	130.5	50°C
LXEM8-35VW-RA-EDU		35K	RA	6,285	48.8	128.8	50°C
LXEM8-35VW-RFA-EDU			RFA	6,303	49.0	128.6	50°C
LXEM8-35VW-DCA-EDU			DCA	6,576	48.8	134.8	50°C
LXEM8-35VW-DFA-EDU			DFA	6,585	48.8	134.9	50°C
LXEM8-40VW-RA-EDU		40K	RA	6,382	48.8	130.8	50°C
LXEM8-40VW-RFA-EDU			RFA	6,400	49.0	130.6	50°C
LXEM8-40VW-DCA-EDU			DCA	6,678	48.8	136.8	50°C
LXEM8-40VW-DFA-EDU			DFA	6,687	48.8	137.0	50°C
LXEM8-50VW-RA-EDU		50K	RA	6,553	48.8	134.3	50°C
LXEM8-50VW-RFA-EDU			RFA	6,571	49.0	134.1	50°C
LXEM8-50VW-DCA-EDU			DCA	6,856	48.8	140.5	50°C
LXEM8-50VW-DFA-EDU			DFA	6,866	48.8	140.7	50°C
LXEM8-30LW-RFA-EDU	Low Watt	30K	RFA	8,095	66.6	121.5	50°C
LXEM8-30LW-RA-EDU			RA	8,109	66.6	121.8	50°C
LXEM8-30LW-DFA-EDU			DFA	8,482	66.6	127.4	50°C
LXEM8-30LW-DCA-EDU			DCA	8,605	66.6	129.2	50°C
LXEM8-35LW-RFA-EDU		35K	RFA	8,370	66.6	125.7	50°C
LXEM8-35LW-RA-EDU			RA	8,385	66.6	125.9	50°C
LXEM8-35LW-DFA-EDU			DFA	8,770	66.6	131.7	50°C
LXEM8-35LW-DCA-EDU			DCA	8,898	66.6	133.6	50°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		


Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM8-40LW-RFA-EDU	Low Watt	40K	RFA	8,500	66.6	127.6	50°C
LXEM8-40LW-RA-EDU			RA	8,514	66.6	127.8	50°C
LXEM8-40LW-DFA-EDU			DFA	8,906	66.6	133.7	50°C
LXEM8-40LW-DCA-EDU			DCA	9,035	66.6	135.7	50°C
LXEM8-50LW-RFA-EDU		50K	RFA	8,727	66.6	131.0	50°C
LXEM8-50LW-RA-EDU			RA	8,741	66.6	131.3	50°C
LXEM8-50LW-DFA-EDU			DFA	9,143	66.6	137.3	50°C
LXEM8-50LW-DCA-EDU			DCA	9,276	66.6	139.3	50°C
LXEM8-30ML-RFA-EDU	Medium Lumen	30K	RFA	9,844	84.0	117.2	50°C
LXEM8-30ML-RA-EDU			RA	9,847	84.0	117.2	50°C
LXEM8-30ML-DFA-EDU			DFA	10,320	84.0	122.9	50°C
LXEM8-30ML-DCA-EDU			DCA	10,476	84.0	124.7	50°C
LXEM8-35ML-RFA-EDU		35K	RFA	10,179	84.0	121.2	50°C
LXEM8-35ML-RA-EDU			RA	10,182	84.0	121.2	50°C
LXEM8-35ML-DFA-EDU			DFA	10,671	84.0	127.0	50°C
LXEM8-35ML-DCA-EDU			DCA	10,832	84.0	128.9	50°C
LXEM8-40ML-RFA-EDU		40K	RFA	10,336	84.0	123.1	50°C
LXEM8-40ML-RA-EDU			RA	10,340	84.0	123.1	50°C
LXEM8-40ML-DFA-EDU			DFA	10,836	84.0	129.0	50°C
LXEM8-40ML-DCA-EDU			DCA	10,999	84.0	130.9	50°C
LXEM8-50ML-RFA-EDU		50K	RFA	10,612	84.0	126.3	50°C
LXEM8-50ML-RA-EDU			RA	10,616	84.0	126.4	50°C
LXEM8-50ML-DFA-EDU			DFA	11,125	84.0	132.4	50°C
LXEM8-50ML-DCA-EDU			DCA	11,293	84.0	134.4	50°C
LXEM8-30HL-RFA-EDU	High Lumen	30K	RFA	11,851	94.8	125.0	45°C
LXEM8-30HL-RA-EDU			RA	11,863	94.6	125.4	45°C
LXEM8-30HL-DFA-EDU			DFA	12,428	94.6	131.4	45°C
LXEM8-30HL-DCA-EDU			DCA	12,547	94.8	132.4	45°C
LXEM8-35HL-RFA-EDU		35K	RFA	12,254	94.8	129.3	45°C
LXEM8-35HL-RA-EDU			RA	12,267	94.6	129.7	45°C
LXEM8-35HL-DFA-EDU			DFA	12,851	94.6	135.8	45°C
LXEM8-35HL-DCA-EDU			DCA	12,973	94.8	136.9	45°C
LXEM8-40HL-RFA-EDU		40K	RFA	12,444	94.8	131.3	45°C
LXEM8-40HL-RA-EDU			RA	12,456	94.6	131.7	45°C
LXEM8-40HL-DFA-EDU			DFA	13,049	94.6	137.9	45°C
LXEM8-40HL-DCA-EDU			DCA	13,174	94.8	139.0	45°C
LXEM8-50HL-RFA-EDU		50K	RFA	12,776	94.8	134.8	45°C
LXEM8-50HL-RA-EDU			RA	12,789	94.6	135.2	45°C
LXEM8-50HL-DFA-EDU			DFA	13,397	94.6	141.6	45°C
LXEM8-50HL-DCA-EDU			DCA	13,525	94.8	142.7	45°C
LXEM8-30VL-RFA-EDU	Very High Lumen	30K	RA	14,747	123.4	119.5	40°C
LXEM8-30VL-RA-EDU			RFA	14,789	123.2	120.0	40°C
LXEM8-30VL-DFA-EDU			DFA	15,512	123.4	125.7	40°C
LXEM8-30VL-DCA-EDU			DCA	15,613	123.4	126.5	40°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM8-35VL-RA-EDU	Very High	35K	RA	15,248	123.4	123.6	40°C
LXEM8-35VL-RFA-EDU			RFA	15,292	123.2	124.1	40°C
LXEM8-35VL-DFA-EDU			DFA	16,040	123.4	130.0	40°C
LXEM8-35VL-DCA-EDU			DCA	16,143	123.4	130.8	40°C
LXEM8-40VL-RA-EDU		40K	RA	15,484	123.4	125.5	40°C
LXEM8-40VL-RFA-EDU			RFA	15,529	123.2	126.0	40°C
LXEM8-40VL-DFA-EDU			DFA	16,288	123.4	132.0	40°C
LXEM8-40VL-DCA-EDU			DCA	16,393	123.4	132.8	40°C
LXEM8-50VL-RA-EDU		50K	RA	15,897	123.4	128.8	40°C
LXEM8-50VL-RFA-EDU			RFA	15,943	123.2	129.4	40°C
LXEM8-50VL-DFA-EDU			DFA	16,722	123.4	135.5	40°C
LXEM8-50VL-DCA-EDU			DCA	16,830	123.4	136.4	40°C
LXEM8-30XL-RFA-EDU	Xtra High Lumen	30K	RFA	19,558	182.4	107.2	30°C
LXEM8-30XL-RA-EDU			RA	19,678	182.8	107.7	30°C
LXEM8-30XL-DFA-EDU			DFA	20,716	182.8	113.3	30°C
LXEM8-30XL-DCA-EDU			DCA	20,847	183.0	113.9	30°C
LXEM8-35XL-RFA-EDU		35K	RFA	20,223	182.4	110.9	30°C
LXEM8-35XL-RA-EDU			RA	20,348	182.8	111.3	30°C
LXEM8-35XL-DFA-EDU			DFA	21,420	182.8	117.2	30°C
LXEM8-35XL-DCA-EDU			DCA	21,556	183.0	117.8	30°C
LXEM8-40XL-RFA-EDU		40K	RFA	20,536	182.4	112.6	30°C
LXEM8-40XL-RA-EDU			RA	20,662	182.8	113.0	30°C
LXEM8-40XL-DFA-EDU			DFA	21,752	182.8	119.0	30°C
LXEM8-40XL-DCA-EDU			DCA	21,889	183.0	119.6	30°C
LXEM8-50XL-RFA-EDU		50K	RFA	21,083	182.4	115.6	30°C
LXEM8-50XL-RA-EDU			RA	21,213	182.8	116.0	30°C
LXEM8-50XL-DFA-EDU			DFA	22,332	182.8	122.2	30°C
LXEM8-50XL-DCA-EDU			DCA	22,473	183.0	122.8	30°C

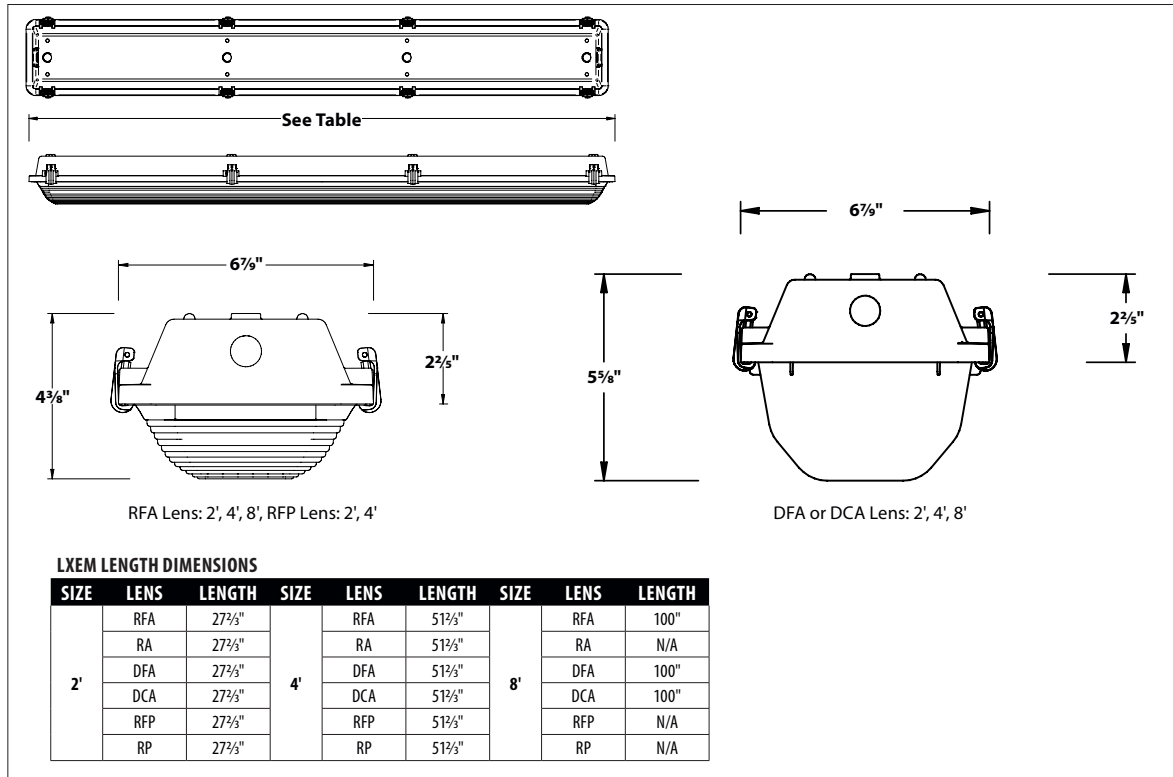
**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LXEM4-40ML-RFA-EDU

Notes:**Type:**


LAIHOU18-45878

Columbia
LIGHTING

LXEM
Enclosed and Gasketed Fiberglass Extreme Environment / LED
DIMENSIONAL DATA

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.



Submitted by Lighting Associates		Catalog Number: VERAILLES #1105 COULDN'T FIND PRODUCT INFORMATION Notes:	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	LAIHOU18-45878	
<div>VERAILLES #1105- COULD NOT FIND PRODUCT INFORMATION</div>			

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

CWM2-40MW-SM-DIC-EDU

Notes:**Type:**

LAIHOU18-45878

Columbia

LIGHTING

LED



INTERACTIVE MENU

- Ordering Guide
- Product Availability Tables
- Photometric Data
- Dimensional Data

HUBBELL CONTROL SOLUTIONS

- SpectraSync™ Overview
- SpectraSync Product Availability Tables
- NX™ SpectraSync Solution Guide
- NX In-Fixture Solution Guide

EXTERNAL LINKS

- NX Distributed Intelligence Brochure
- SpectraSync Brochure

PROJECT INFORMATION

Project Name _____

Catalog No. _____

Type _____

Date _____

COMPATIBLE WITH:

SpectraSync™

NX DISTRIBUTED
INTELLIGENCE

FEATURES

- Simplistic modular design with interchangeable lenses and end caps
- Optional 3form lens designs for added styling and flexibility
- Available in both semi-recessed and flush mount configurations
- High efficacy LEDs provide best in class efficacy up to 140 Lumens Per Watt
- Four LED color choices and 84 CRI
- Long-life LEDs 60,000 hours at L80 with projected life over 86,000 hours for reduced life cycle maintenance costs
- Easy removal of lens allows access to electrical components for modular replaceability
- Luminaire installs in three easy steps without disassembling the fixture
- Slender profile meets ADA requirements for wall mounted product
- CSA listed and suitable for damp locations
- Optional SpectraSync™ offers three modes of tunable white solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments
- DLC® (DesignLights Consortium) Qualified - see www.designlights.org
- 5 Year Warranty (Terms and Conditions apply)



CWM

CONSTRUCTION

The luminaire chassis is designed from anodized extruded aluminum. End caps are injection molded or die cast for a finished appearance and provide smooth edges for ease of handling. Fixture provides easy access to electrical components via removal of lens and chassis.

SHIELDING

High efficiency acrylic lens features linear prisms for high performance without glare or pixelation. Optional 1/8" 3form material can be added as a decorative element or to match existing 3form features in various applications. For custom selections please consult factory.

PERFORMANCE

CWM provides best in class efficacy, reduced input wattage, as well as a wide lumen package offering for a variety of wall mount applications including stairwell, corridor, and vanity. CWM provides excellent energy savings compared to legacy fluorescent products with exceptional lighting quality.

MOUNTING

CWM is available with either a semi recessed mounting or surface mounting option for various applications. Semi recessed mounting option requires the use of a 4-gang junction box for proper mounting and assembly. A Snap-Tite conduit adapter is recommended for conduit installation to surface mount option.


CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80, and TM21 industry standards. DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org. NX is available in U.S., Canada and Mexico. For other locations consult factory.

WARRANTY

Five year-warranty standard. (Terms and Conditions Apply). Additional terms negotiable.

HUBBELL
Lighting

Submitted by Lighting Associates		Catalog Number: CWM2-40MW-SM-DIC-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

Columbia LIGHTING

CWM Contemporary LED Wall Mount

ORDERING INFORMATION

EXAMPLE CWM4-40MLSM-FRFP-EDU

YOUR ORDER CWM - - - U -

CWM		-		-		-	
MODEL	SIZE	CRI	COLOR TEMPERATURE	LUMEN OUTPUT	MOUNTING TYPE	LENS	
CWM Contemporary LED Wall Mount	2 2' 4 4'	Blank >80	30 3000K 35 3500K 40 4000K 50 5000K 2750T 2700K-5000K SpectraSync™ Tunable White ¹ 2765T 2700K-6500K SpectraSync™ Tunable White ¹	XW Extra Low Watt ² VW Very Low Watt MW Medium Low Watt LW Low Watt ⁴ ML Medium Lumen ^{3,4}	SM Surface Mount SR Semi Recessed	FR Frosted Rectilinear Lens SB Slotted Lens with Bamboo Insert SF Slotted Lens with Fabric Insert SC Slotted Lens with Custom 3form Insert ⁵	
						See Product Availability Table on following pages.	
						DIC	

END CAPS		DRIVER		VOLTAGE		OPTIONS		CONTROL OPTIONS	
FP Flat Plastic End Caps		E Fixed Output ¹⁰		U 120V-277V		ELL14 Emergency Battery Pack, 1400 Lumens ^{5,11}		NXE NX Enabled, Dual SmartPorts ^{8,10,11}	
FA Flat Aluminum End Caps		ED 0-10V Dimming				GLR Fast Blow Fuse		HFU High Frequency Ultra-sonic Occupancy Sensor ^{3,8,9}	
WA Aluminum End Caps with Glow Ends		ED1 0-10V 1% Dimming						OW Occupancy Sensor, Wattstopper ^{1,7,8,9}	

OPTIONAL INTEGRAL SENSORS				
Cat# Suffix	Sensor Manufacturer	Sensor Function	Dim-To-Off Daylighting	Powerpack included in luminaire housing
OW	Wattstopper	Occupancy Sensor	No	Yes
HFU	Wattstopper	High Frequency Ultrasonic Occupancy	No	Yes

¹ Available with ED driver only, N/A with ELL14 (2") or SR (2'&4') options

² XW only available with 4'

³ ML not available with SR mounting option

⁴ LW and ML with SR mounting not compatible with through wiring on 4' version

⁵ Consult factory for availability, options, and pricing. Please provide exact 3form material number specified.

⁶ Battery backup only available with SM mounting option

⁷ Not recommended for stairwell applications

⁸ HFU and OW only available with SM mounting option


NX In-Fixture Control Options:

⁹ NX controls can only be used with NX Sensor options.

¹⁰ NX is available with ED and ED1 drivers only.

¹¹ NX with ELL14, consult factory.


For questions about configuration options, contact Hubbell Representative.

Submitted by Lighting Associates		Catalog Number: CWM2-40MW-SM-DIC-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

Columbia LIGHTING

CWM Contemporary LED Wall Mount

Product Availability 80 CRI				
Lumen Package	Lens	Lumens	Input Watts	LPW
CWM2-30VW	FR	1591	14	112.8
CWM2-35VW	FR	1639	14	116.2
CWM2-40VW	FR	1664	14	118.0
CWM2-50VW	FR	1724	14	123.1
CWM2-30VW	SB	1055	14	75.4
CWM2-35VW	SB	1087	14	77.6
CWM2-40VW	SB	1104	14	78.8
CWM2-50VW	SB	1205	14	86.1
CWM2-30VW	SF	1405	14	100.4
CWM2-35VW	SF	1447	14	103.4
CWM2-40VW	SF	1470	14	105.0
CWM2-50VW	SF	1522	14	108.7
CWM2-30MW	FR	1924	17	113.2
CWM2-35MW	FR	1982	17	116.6
CWM2-40MW	FR	2013	17	118.4
CWM2-50MW	FR	2085	17	122.6
CWM2-30MW	SB	1275	17	74.6
CWM2-35MW	SB	1314	17	76.8
CWM2-40MW	SB	1335	17	78.0
CWM2-50MW	SB	1457	17	85.2
CWM2-30MW	SF	1684	17	99.1
CWM2-35MW	SF	1735	17	102.0
CWM2-40MW	SF	1761	17	103.6
CWM2-50MW	SF	1825	17	107.3
CWM2-30LW	FR	2332	21	111.6
CWM2-35LW	FR	2402	21	114.9
CWM2-40LW	FR	2439	21	116.7
CWM2-50LW	FR	2527	21	120.9
CWM2-30LW	SB	1546	21	74.0
CWM2-35LW	SB	1593	21	76.2
CWM2-40LW	SB	1617	21	77.4
CWM2-50LW	SB	1766	21	84.5
CWM2-30LW	SF	2059	21	98.5
CWM2-35LW	SF	2121	21	101.5
CWM2-40LW	SF	2154	21	103.1
CWM2-50LW	SF	2232	21	106.8
CWM2-30ML	FR	3164	30	105.5
CWM2-35ML	FR	3259	30	108.6
CWM2-40ML	FR	3310	30	110.3
CWM2-50ML	FR	3429	30	114.3
CWM2-30ML	SB	2038	30	67.9
CWM2-35ML	SB	2099	30	70.0
CWM2-40ML	SB	2132	30	71.1
CWM2-50ML	SB	2327	30	77.6
CWM2-30ML	SF	2723	30	91.7
CWM2-35ML	SF	2805	30	94.4
CWM2-40ML	SF	2848	30	95.9
CWM2-50ML	SF	2951	30	99.3

Submitted by Lighting Associates		Catalog Number: CWM2-40MW-SM-DIC-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

Columbia LIGHTING

CWM Contemporary LED Wall Mount

Product Availability 80 CRI				
Lumen Package	Lens	Lumens	Input Watts	LPW
CWM4-30XW	FR	2419	18	131.5
CWM4-35XW	FR	2492	18	135.4
CWM4-40XW	FR	2530	18	137.5
CWM4-50XW	FR	2621	18	142.5
CWM4-30XW	SB	1575	18	87.5
CWM4-35XW	SB	1622	18	90.1
CWM4-40XW	SB	1647	18	91.5
CWM4-50XW	SB	1799	18	99.9
CWM4-30XW	SF	2106	18	117.0
CWM4-35XW	SF	2169	18	120.5
CWM4-40XW	SF	2203	18	122.4
CWM4-50XW	SF	2282	18	126.8
CWM4-30VW	FR	3097	24	129.0
CWM4-35VW	FR	3190	24	132.9
CWM4-40VW	FR	3239	24	135.0
CWM4-50VW	FR	3356	24	139.8
CWM4-30VW	SB	2016	24	84.0
CWM4-35VW	SB	2077	24	86.5
CWM4-40VW	SB	2109	24	87.9
CWM4-50VW	SB	2303	24	95.9
CWM4-30VW	SF	2696	24	112.3
CWM4-35VW	SF	2777	24	115.7
CWM4-40VW	SF	2820	24	117.5
CWM4-50VW	SF	2922	24	121.7
CWM4-30MW	FR	3473	27	127.7
CWM4-35MW	FR	3577	27	131.5
CWM4-40MW	FR	3633	27	133.6
CWM4-50MW	FR	3763	27	138.4
CWM4-30MW	SB	2261	27	83.1
CWM4-35MW	SB	2329	27	85.6
CWM4-40MW	SB	2365	27	87.0
CWM4-50MW	SB	2582	27	94.9
CWM4-30MW	SF	3024	27	111.2
CWM4-35MW	SF	3114	27	114.5
CWM4-40MW	SF	3163	27	116.3
CWM4-50MW	SF	3276	27	120.5
CWM4-30LW	FR	4085	32	126.1
CWM4-35LW	FR	4208	32	129.9
CWM4-40LW	FR	4273	32	131.9
CWM4-50LW	FR	4427	32	136.6
CWM4-30LW	SB	2660	32	82.1
CWM4-35LW	SB	2740	32	84.6
CWM4-40LW	SB	2782	32	85.9
CWM4-50LW	SB	3037	32	93.7
CWM4-30LW	SF	3556	32	109.8
CWM4-35LW	SF	3663	32	113.1
CWM4-40LW	SF	3720	32	114.8
CWM4-50LW	SF	3854	32	118.9
CWM4-30ML	FR	4619	38	121.9
CWM4-35ML	FR	4758	38	125.5
CWM4-40ML	FR	4831	38	127.5
CWM4-50ML	FR	5005	38	132.1
CWM4-30ML	SB	3007	38	79.1
CWM4-35ML	SB	3097	38	81.5
CWM4-40ML	SB	3145	38	82.8
CWM4-50ML	SB	3434	38	90.4
CWM4-30ML	SF	4029	38	106.0
CWM4-35ML	SF	4150	38	109.2
CWM4-40ML	SF	4214	38	110.9
CWM4-50ML	SF	4366	38	114.9



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

CWM2-40MW-SM-DIC-EDU

Notes:**Type:**

LAIHOU18-45878

Columbia

LIGHTING

CWM

Contemporary LED Wall Mount

Test #16625 Test Date 9/27/2016

PHOTOMETRIC DATA**LUMINAIRE DATA**

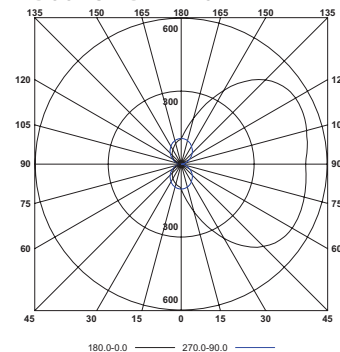
Luminaire	CWM2-35MWxx-FRyy-EDU CWM Contemporary Wall Mount, Surface 2ft Wall Mount with Frosted Lens Data Scaled from Test# 16.02592
Ballast	OT25W/PRG1250C/UNV
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	1983
Watts	17.00
Mounting	Wall Mount
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = N/A 90° = N/A
Luminous Opening in Feet	Length: 0.17 Width: 1.85 Height: 0.42

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	112	5.6	5.6
0-40	214	10.8	10.8
0-60	507	25.6	25.6
0-90	989	49.9	49.9
0-180	1983	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	117
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.05 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #16629 Test Date 8/30/2016

LUMINAIRE DATA

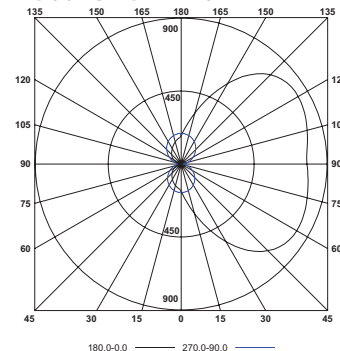
Luminaire	CWM4-35VWxx-FRyy-EDU CWM Contemporary Wall Mount, Surface 4ft Wall Mount with Frosted Lens Data Scaled from Test# 16.02167
Ballast	OT40W/PRG1400C/UNV
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3191
Watts	24.00
Mounting	Wall Mount
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = N/A 90° = N/A
Luminous Opening in Feet	Length: 0.17 Width: 3.85 Height: 0.42

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	180	5.6	5.6
0-40	344	10.8	10.8
0-60	815	25.5	25.5
0-90	1578	49.5	49.5
0-180	3191	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	133
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.80 BASED ON 3000 HRS. AND \$0.08 PER KWH

INDOOR CANDELA PLOT

Test #16631 Test Date 9/1/2016

LUMINAIRE DATA

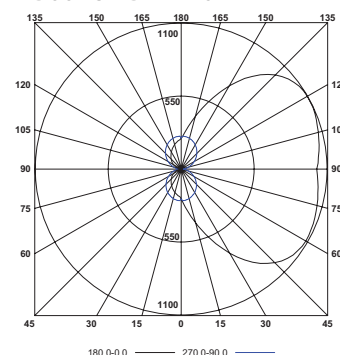
Luminaire	CWM4-35LWxx-FRyy-EDU CWM Contemporary Wall Mount, Surface 4ft Wall Mount with Frosted Lens Data Scaled from Test# 16.02169
Ballast	OT40W/PRG1400C/UNV
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4210
Watts	32.00
Mounting	Wall Mount
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = N/A 90° = N/A
Luminous Opening in Feet	Length: 0.17 Width: 3.85 Height: 0.42

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	241	5.7	5.7
0-40	459	10.9	10.9
0-60	1085	25.8	25.8
0-90	2099	49.8	49.8
0-180	4210	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	132
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.82 BASED ON 3000 HRS. AND \$0.08 PER KWH

INDOOR CANDELA PLOT

HUBBELL
Lighting

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

CWM2-40MW-SM-DIC-EDU

Notes:**Type:**

LAIHOU18-45878

Columbia

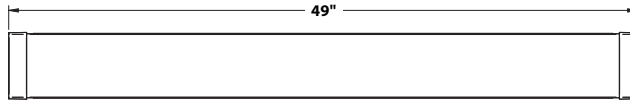
LIGHTING

CWM

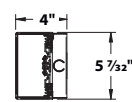
Contemporary LED Wall Mount

DIMENSIONAL DATA — SURFACE MOUNT

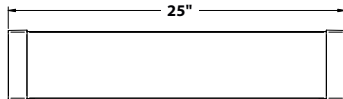
Surface Mount, Front View, 4'



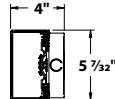
Surface Mount, Cross Section, 4'



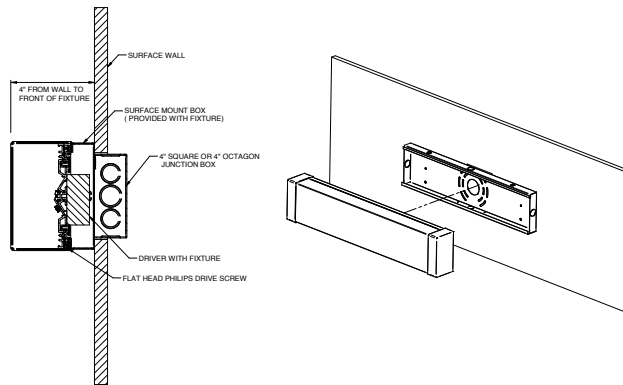
Surface Mount, Front View, 2'



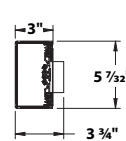
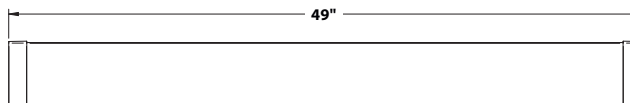
Surface Mount, Cross Section, 2'



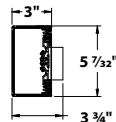
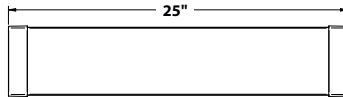
Surface Mount Fixture on Surface

**DIMENSIONAL DATA — SEMI-RECESSED**

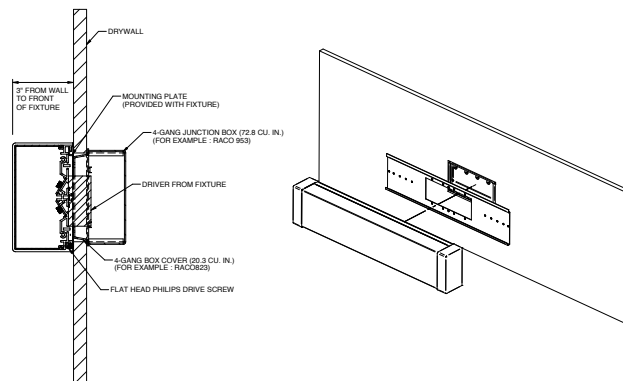
Semi-Recessed, Front View, 4'



Semi-Recessed, Front View, 2'



Semi-Recessed Fixture in Drywall



**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

CWM2-40MW-SM-DIC-EDU

Notes:**Type:**

LAIHOU18-45878

Columbia
LIGHTING

SpectraSync™
CWM
Contemporary LED Wall Mount
SPECTRASYNCTM COLOR TUNING TECHNOLOGY

Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync Color Tuning Technologies.

Dim to Warm

Dim to Warm mimics the familiar warming effect that occurs with traditional incandescent sources as they are dimmed. (Available with 2200K-3000K)

Tunable White

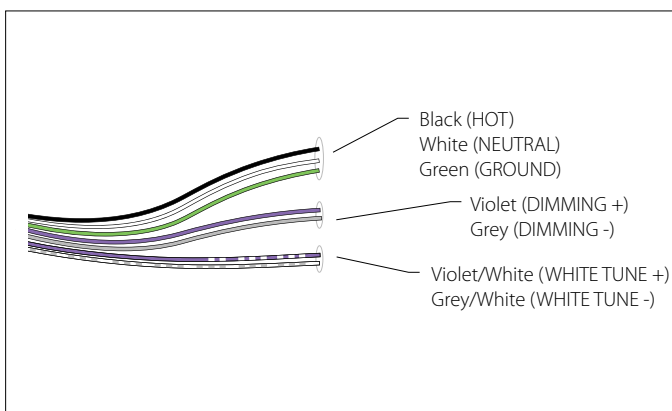
Tunable White offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors, or the aesthetics of the space. (Available with 2700K-5000K or 2700K-6500K)

Scheduled White

Scheduled White creates an environment that mimics the rhythms of natural light throughout the day, enhancing occupant's mood and well-being. (Available with 2700K-5000K or 2700K-6500K)

SPECTRASYNCTM TUNABLE WHITE
2750T OR 2765T- SPECTRASYNCTM LINEAR TUNABLE WHITE, 2700K-5000K OR 2700K-6500K

Requires (2) 0-10V controllers, (1) for intensity and (1) for CCT. Minimum 5% dimming.

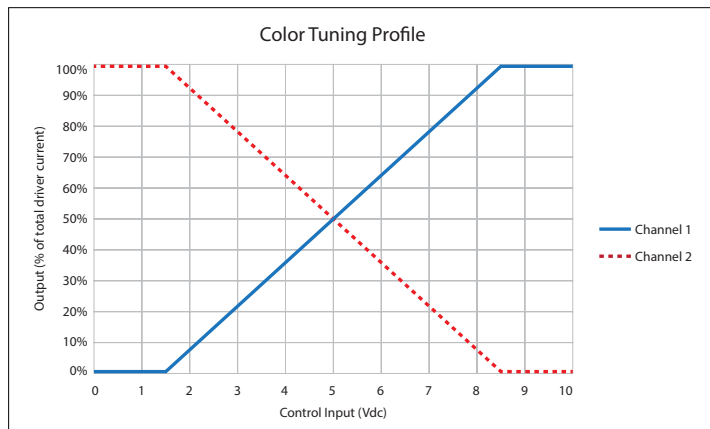


SpectraSync tunable white luminaires are provided with (2) 0-10V circuits. The violet and grey circuit is for wiring to any qualified 0-10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0-10V controller for tunable white CCT control.

CONTROLLER MANUFACTURER DATA**Suggested controllers to be used with SpectraSync:**


SpectraSync tunable white was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NDTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.


HUBBELL
Lighting

Submitted by Lighting Associates		Catalog Number: CWM2-40MW-SM-DIC-EDU	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		

Columbia
LIGHTING

SpectraSync

CWM
Contemporary LED Wall Mount

Size	Lens	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
				Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
2 ft.	FR	VW	14	1523	109	1591	114	1620	116	1640	117	1694	121	1669	119
		MW	17	1841	108	1924	113	1959	115	1984	117	2049	121	2018	119
		LW	21	2232	106	2332	111	2374	113	2404	114	2484	118	2446	116
		ML	30	3028	101	3164	105	3221	107	3262	109	3370	112	3319	111
	SB	VW	14	1010	72	1055	75	1074	77	1088	78	1124	80	1107	79
		MW	17	1220	72	1275	75	1298	76	1315	77	1358	80	1337	79
		LW	21	1480	70	1546	74	1574	75	1594	76	1646	78	1622	77
		ML	30	1950	65	2038	68	2075	69	2101	70	2170	72	2138	71
	SF	VW	14	1345	96	1405	100	1430	102	1449	103	1496	107	1474	105
		MW	17	1612	95	1684	99	1714	101	1736	102	1793	105	1767	104
		LW	21	1970	94	2059	98	2096	100	2123	101	2193	104	2160	103
		ML	30	2606	87	2723	91	2772	92	2807	94	2900	97	2856	95
4 ft.	FR	XW	18	2315	129	2419	134	2463	137	2494	139	2576	143	2538	141
		VW	24	2964	123	3097	129	3153	131	3193	133	3298	137	3249	135
		MW	27	3324	123	3473	129	3536	131	3581	133	3699	137	3643	135
		LW	32	3909	122	4085	128	4159	130	4212	132	4351	136	4285	134
		ML	38	4420	116	4619	122	4702	124	4762	125	4919	129	4845	128
	SB	XW	18	1507	84	1575	88	1603	89	1624	90	1677	93	1652	92
		VW	24	1929	80	2016	84	2052	86	2078	87	2147	89	2115	88
		MW	27	2164	80	2261	84	2302	85	2331	86	2408	89	2372	88
		LW	32	2546	80	2660	83	2708	85	2742	86	2833	89	2790	87
		ML	38	2878	76	3007	79	3061	81	3100	82	3202	84	3154	83
	SF	XW	18	2015	112	2106	117	2144	119	2171	121	2243	125	2209	123
		VW	24	2580	108	2696	112	2745	114	2780	116	2871	120	2828	118
		MW	27	2894	107	3024	112	3078	114	3118	115	3221	119	3172	117
		LW	32	3403	106	3556	111	3620	113	3666	115	3787	118	3730	117
		ML	38	3856	101	4029	106	4102	108	4154	109	4291	113	4226	111

Columbia
LIGHTING

CWM
Contemporary LED Wall Mount

HUBBELL®
Control Solutions

NX DISTRIBUTED™
INTELLIGENCE

NX™ SOLUTION GUIDE FOR SPECTRASYNCTM COLOR TUNING TECHNOLOGY

When paired with SpectraSync™ enabled luminaires, NX Distributed Intelligence lighting control delivers a comprehensive color control solution, simplifying setup and code compliance through self-configuration and an optional Bluetooth® interface with mobile application.

- Complete control solutions using SpectraSync color tuning technology
- Device auto-configuration and plug-n-play connectivity
- Intuitive app interface and user-friendly wall stations

NX™ Distributed Intelligence Accessories for SpectraSync Control	
CATALOG NUMBER	DESCRIPTOR
NXAC-120	NX Area Controller, NEMA 1, HubbNET, BACnet™, 120 Volt
NXHNB	NX Network Bridge Module
NXRC-2RD-UNV	NX Room Controller, 2 Relay, 0-10V Dimming, Universal Voltage
NXSW-CCT-xx	NX Digital CCT Scene Switch, 6 Buttons, 4 Presets, Raise/Lower
NXSW-SS-xx	NX Digital Scene Switch, 6 Buttons, 4 Presets, Raise/Lower
NXSW-ORLO-xx	NX Digital Switch Station, On/Raise/Lower/Off
NXSW-RL-xx	NX Digital Switch Station, 2 Buttons, Raise/Lower
NXSW-OO-xx	NX Digital Switch Station, On/Off
NXSW-TO-xx	NX Digital Switch Station, Timed-On, Pilot

Order as separate catalog number. Visit www.hubbellcontrolsolutions.com

Note: 'xx' = color; Black (BK), Gray (GY), Ivory (IV), Light Almond (LA), Red (RD), White (blank).

NX USER INTERFACES



Wall stations for personalized control of light and color



NX mobile app offers user-friendly configuration tool



Area Controller GUI provides simple and intuitive programming

Android

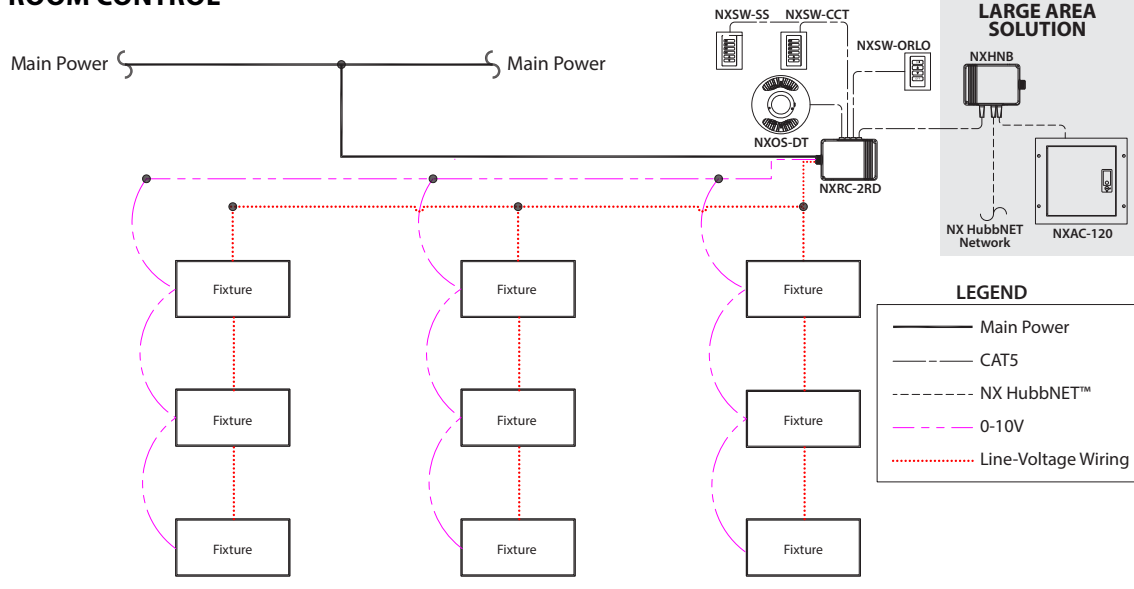



Free Bluetooth® enabled mobile app for ease of configuration

Apple



TYPICAL NX DISTRIBUTED INTELLIGENCE™ LAYOUT FOR STAND-ALONE OR NETWORKED ROOM CONTROL



Submitted by Lighting Associates		Catalog Number: CWM2-40MW-SM-DIC-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

Columbia
LIGHTING

CWM
Contemporary LED Wall Mount

HUBBELL®
Control Solutions

NX DISTRIBUTED™
INTELLIGENCE

NX DISTRIBUTED INTELLIGENCE™ IN-FIXTURE SOLUTION GUIDE

NX Distributed Intelligence enables Hubbell's portfolio of commercial, industrial and architectural luminaires to further reduce energy consumption and total cost of ownership for simple to complex control environments.

NX-enabled luminaires provides you the breadth and flexibility to address all your project requirements today and in the future. For a complete list of luminaires with integrated NX options please visit our website.

NX Distributed Intelligence™ In-Fixture Options			
NX CONTROL OPTIONS	DESCRIPTOR	CONNECTIVITY	APPLICATION SPACE
NXSP14F	NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14'	Standalone	Both
NXSPL	NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, Low Mount	Standalone	Indoor
NXOS	NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, OMNI	Standalone	Indoor
NXS	NX, PIR Occupancy Sensor, Dimming Daylight Harvesting	Standalone	Indoor
NXSPH	NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, High Mount	Standalone	Indoor
NXSP30F	NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30'	Standalone	Outdoor
NXSPL	NX Enabled, PIR Occupancy Sensor, Dimming Daylight Harvesting, Low Mount	Wired	Indoor
NXE	NX Enabled, Dual SmartPorts	Wired	Indoor
NXEOS	NX Enabled, PIR Occupancy Sensor, Dimming Daylight Harvesting, OMNI	Wired	Indoor
NXES	NX Enabled, PIR Occupancy Sensor, Dimming Daylight Harvesting	Wired	Indoor
NXESPH	NX Enabled, PIR Occupancy Sensor, Dimming Daylight Harvesting, High Mount	Wired	Indoor
NXSPW14F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14'	Wireless	Both
NXWE	NX Wireless Enabled	Wireless	Both
NXSPWL	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, Low Mount	Wireless	Indoor
NXOSW	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, OMNI	Wireless	Indoor
NXSPWH	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, High Mount	Wireless	Indoor
NXSW	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting	Wireless	Indoor
NXSPW30F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30'	Wireless	Outdoor

Visit www.hubbellcontrolsolutions.com for additional information on the NX platform. For information on NX options available with specific Hubbell Lighting luminaires please reference specification sheets.

NX Distributed Intelligence™ Accessories	
CATALOG NO.	DESCRIPTOR
NXAC-120	NX Area Controller, NEMA 1, HubbNET, BACnet, 120 Volt
NXHNB	NX Network Bridge Module
NXRC-2RD-UNV	NX Room Controller, 2 Relay, 0 - 10V Dimming, Power Monitoring, Universal Voltage
NXOFM-1RID-UNV	On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC
NXSW-CCT-xx	NX Digital CCT Scene Switch, 6 Buttons, 4 Presets, Raise/Lower
NXSW-SS-xx	NX Digital Scene Switch, 6 Buttons, 4 Presets, Raise/Lower
NXSW-ORLO-xx	NX Digital Switch Station, On/Raise/Lower/Off
NXSW-RL-xx	NX Digital Switch Station, 2 Buttons, Raise/Lower
NXSW-OO-xx	NX Digital Switch Station, On/Off
NXSW-TO-xx	NX Digital Switch Station, Timed-On, Pilot

Note: 'xx' = color; Black (BK), Gray (GY), Ivory (IV), Light Almond (LA), Red (RD), White (blank).

NX USER INTERFACES



Wall stations for personalized control of light and color



NX mobile app offers user-friendly configuration tool



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Android



Free Bluetooth® enabled mobile app for ease of configuration

Apple



LIGHTING
ASSOCIATES, INC.**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**
LCR4-40ML-EDU

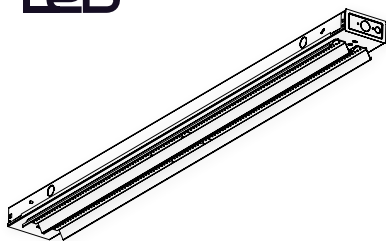
Notes:

Type:

LAIHOU18-45878

Columbia
LIGHTING

LED

**FEATURES**

- Narrow Distribution Industrial
- Long life 50,000 hour LEDs at L80 for reduced maintenance
- Choice of four LED color temperatures
- Choice of four lumen packages per size
- Available in 2', 4' or 8' lengths
- Optional integral emergency battery pack
- Heavy die-formed steel channel
- Fully assembled fixture for quick installation
- LED boards and driver accessible for future maintenance or upgrades
- Modular replaceable LED components
- Surface mount or suspended
- Five year warranty

PROJECT INFORMATION

Project Name _____

Catalog No. _____

Type _____

Date _____

CONSTRUCTION

Housing, wireway, and ends are formed from code-gauge steel. Housing components act as heat sink for LED heat dissipation. Knockouts are provided for electrical access and mounting.

REFLECTOR

Multi-faceted specular aluminum reflector for aisle lighting and areas where narrow lighting beam spread is desired.

FINISH

White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel. For a post-painted housing finish select PAF option.

ELECTRICAL

Long-life LEDs are rated for 50,000 hours at L80 lumen maintenance. Driver options include fixed output for on/off function, step dimming (high/low/off) or continuous 0-10V dimming.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA c/US labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM70, LM80, and TM21 industry standards.

WARRANTY

Five year warranty (Terms and Conditions apply).

ORDERING INFORMATION

EXAMPLE LCR4-35HL-EU

LCR	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
MODEL						
LCR LED Open	2 2'	30 3000K	LW Low Watt	E Fixed Output	U 120V-277V	ELL14 Emergency Battery Pack, 1400 Lumens ^{1,2,3}
	4 4'	35 3500K	ML Medium Lumen	ESD Step Dimming	347 347V (E,ED,ED1 only)	GLR Fast Blow Fuse
	8 8'	40 4000K	HL High Lumen	ED 0-10V Dimming		PAF Paint After Fabrication
		50 5000K	VL Very High Lumen	ED1 0-10V 1% Dimming		NYC NYC Compliant
			See Product Availability Table below.	LUTH Lutron H Series ²		
				LUT5 Lutron S Series ²		

**ACCESSORIES
(ORDER SEPARATELY)**

S18	18" Stem, Canopy
SS18	18" Swivel Stem—45° Swivel
CHSC	Chain Hanger Assembly
LCLWG4	4" Wire Guard, 2 Required for 8' Fixture

PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS (4000K)	NOMINAL WATTS	EFFICACY
2'	ML	2,750	25	110
4'	LW	2,700	25	108
	ML	5,500	48	114
	HL	6,600	56	118
	VL	10,900	97	112
8'	LW	5,500	48	114
	ML	10,900	97	112
	HL	13,300	112	118
	VL	21,800	194	112


¹ For compatibility with Dual-Lite LiteGear[®] inverters in lieu of installed battery pack, contact Hubbell Lighting representative.

² Not available in VL package

³ Not available in 2' size

Lumens vary according to color temperatures and other factors. See specific photometric test(s).

HUBBELL
Lighting

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

Columbia LIGHTING



create**change**

FEATURES

- LED Enclosed and Gasketed
- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Four LED color choices and 80 CRI
- IP66 all sizes when ordered with standard polyacetal (POM) latches
- IP65 all sizes, IP67 4' and 8'
- Available in 2', 4', or 8' lengths
- NEMA 4X housing
- Fiberglass housing with F1 weatherability rating, standard
- Smooth housing for easy cleaning
- Gasket is non-porous to ensure seal
- Impact modified acrylic lens equivalent to 100% DR
- Wide range of lens selections
- Lens firmly secured with tamper resistance ready polyacetal (POM) latches
- Stainless steel latching optional
- ControlScope® compatible
- Drivers include minimum 2.5kV surge protection
- UL Sanitation Certified per NSF Standards
- Removable gear tray electrical access for modular replaceability
- Emergency battery pack installed, optional on most models
- -20°C up to +50°C ambient operation; see table provided for details
- DesignLights Consortium® qualified
- Includes surface mounting brackets
- Occupancy and/or daylight sensing accessories available
- Five year warranty

Enclosed and Gasketed Fiberglass Extreme Environment / LED

LXEM

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Housing is formed from UL 5VA fiberglass. F1 weatherability rating, suitable for indoor or outdoor use with respect to exposure to UV light. Pour-in-place non-porous gasketing assures seal. LED affixed to removable heat sinked gear tray. 14 Latches per 8', 8 per 4', 6 per 2'. Latches are provided tamper resistance ready, tamper resistant screws by others. Latches are standard polyacetal (POM), optional in stainless steel. Access openings are provided for electrical connection.

SHIELDING

Lineal ribbed frosted acrylic lens impact modified equivalent to 100% DR; modification adds flexibility to reduce impact breakage compared to standard acrylic formulations. Optional ribbed polycarbonate lens or deep acrylic. All lenses available in clear or frost.

FINISH

White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel.

ELECTRICAL

Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance. Extra High Lumen packages (XL) rated L70 at 60,000 hours. Driver options include fixed output for on/off function, step dimming⁶ (high/low/off) or continuous 0-10V dimming. QR code label affixed to housing for easy traceability.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Ingress protection IP65 and IP67 standard. UL Sanitation Certified per NSF Standards. Wet location labeling is standard. Emergency-equipped fixtures built to UL 924. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

WARRANTY

Five year warranty (Terms and Conditions Apply).

MOUNTING

Use flexible conduit only.

ORDERING INFORMATION

EXAMPLE LXEM4-35HL-RFA-EDU

LXEM							
MODEL	COLOR TEMP	SHIELDING	DRIVER	VOLTAGE	OPTIONS		
LXEM LED Enclosed and Gasketed	30 3000K 35 3500K 40 4000K 50 5000K	RFA Ribbed Frosted Acrylic RA Ribbed Clear Acrylic DFA Deep Frosted Acrylic DCA Deep Clear Acrylic RFP Ribbed Frosted Polycarbonate ⁵ RP Ribbed Clear Polycarbonate ⁵	E Fixed Output ESD Step Dimming ⁶ ED 0-10V Dimming ED1 0-10V 1% Dimming ⁶	U 120V-277V 347 347V	GLR Fast Blow Fuse SSL Stainless Steel Tamper Resistance Ready Latches TP Tamper Proof Latches ELL14 Emergency Battery Pack Installed, 1400 Lumens ^{1A,7} F3C8W 3 Wire 8' Wet Cord F3C15W 3 Wire 15' Wet Cord F4C8W 4 Wire 8' Wet Cord F4C15W 4 Wire 15' Wet Cord F5C8W 5 Wire 8' Wet Cord F5C15W 5 Wire 15' Wet Cord F6C6W 6 Wire 6' Wet Cord SWH Single Wet Hub 1/2" NPT Hub DWH Dual Wet Hub 1/2" NPT Hub ZRE ControlScope® compatible ¹⁹		
SIZE	LUMEN OUTPUT						
2 2' 1,2,3,4 4 4' 8 8'	VW Very Low Watt LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen XL Xtra High Lumen ²						
ACCESSORIES (ORDER SEPARATELY)							
XEDPM Dual Pendant Brackets (pendant by others) ⁸ XEHC Chain Hanger Kit (Includes 14" Chain) XE45MB 45° Mounting Bracket ¹⁰ XE45MBSS 45° Stainless Steel Mounting Bracket ¹⁰							

ACCESSORIES (ORDER SEPARATELY)

- XEDPM Dual Pendant Brackets (pendant by others)⁸
 XEHC Chain Hanger Kit (Includes 14" Chain)
 XE45MB 45° Mounting Bracket¹⁰
 XE45MBSS 45° Stainless Steel Mounting Bracket¹⁰

SENSOR KITS (Order Separately)

All sensor kits include Occupancy & Daylight.

Daylight activation requires setting of dip-switches on site.

120V/ 277V	Catalog #	# Relays	Lens Type	Voltage	Wet Label
	OS1360WLK	1	360°	120/277	Yes
	OS2360WLK	2	360°	120/277	Yes
	OS1AWLK	1	Aisle	120/277	Yes
	OS2AWLK	2	Aisle	120/277	Yes

¹VL and XL not available in 2' size.

²Not available with battery pack.

³Not available with XL lumen package.

⁴Not available with VL lumen package.

⁵2' and 4' only. 8' not available.

⁶See table for availability

⁷Not available in 347V

⁸Requires 3/8" OD threaded rod by others.

⁹Registered trademark of Daintree Networks, used by permission.

¹⁰2 required for 8' fixture



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LXEM4-40ML-RFA-EDU

Notes:**Type:**

LAIHOU18-45878

Columbia

LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

Test# 17905 Test Date 10/13/2016

PHOTOMETRIC DATA**LUMINAIRE DATA**

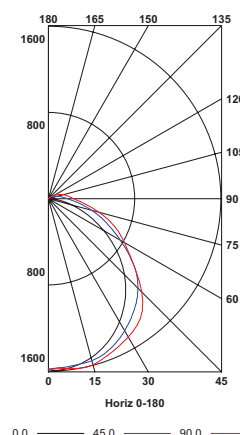
Luminaire	LXEM4-50ML-RFA-EDU LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with frosted ribbed acrylic lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5306
Watts	42.00
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.40
Luminous Opening in Feet	Length: 4.00 Width: 0.54 Height: 0.17

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1268	23.9	23.9
0-40	2105	39.7	39.7
0-60	3766	71.0	71.0
0-90	5025	94.7	94.7
0-180	5306	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens per Watt	126
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.90 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test# 17989 Test Date 10/10/2016

LUMINAIRE DATA

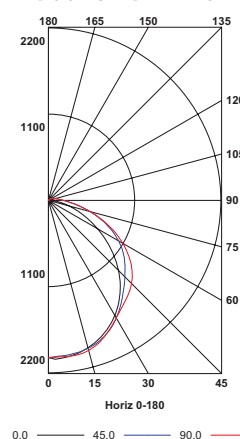
Luminaire	LXEM4-40HL-DFA-EDU LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with deep frosted acrylic lens
Ballast	XI054C150V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	6525
Watts	47.30
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.25 90° = 1.28
Luminous Opening in Feet	Length: 4.00 Width: 0.54 Height: 0.29

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1583	24.3	24.3
0-40	2594	39.8	39.8
0-60	4661	71.4	71.4
0-90	6235	95.6	95.6
0-180	6525	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens per Watt	138
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.73 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test# 18012 Test Date 10/18/2016

LUMINAIRE DATA

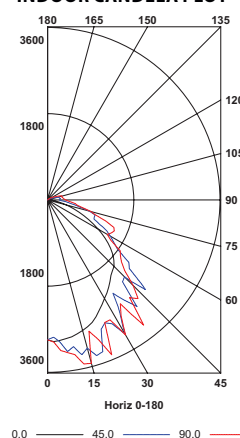
Luminaire	LXEM4-50XL-RA-EDU LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with ribbed clear acrylic lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	10607
Watts	91.40
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.21 90° = 1.38
Luminous Opening in Feet	Length: 4.00 Width: 0.54 Height: 0.17

ZONAL LUMEN SUMMARY


Zone	Lumens	% Lamp	% Fixt.
0-30	2547	24.0	24.0
0-40	4252	40.1	40.1
0-60	7643	72.1	72.1
0-90	10073	95.0	95.0
0-180	10607	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens per Watt	116
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.05 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

HUBBELL
Lighting

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		
		Notes:	

Columbia
LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

Driver Availability							
LENGTH	OUTPUT	NOMINAL LUMEN RANGE	ESD Available	ED1 Available	347v Available	347 with ESD Available	347 with ED1 Available
2'	VW	2,145 - 2,708	Y	Y	Y	N/A	Y
	LW	2,738 - 3,529	Y	Y	Y	N/A	Y
	ML	3,862 - 4,921	Y	Y	Y	N/A	Y
	HL	4,254 - 5,416	Y	Y	Y	N/A	Y
4'	VW	2,802 - 3,433	Y	Y	Y	N/A	Y
	LW	3,726 - 4,922	N/A	Y	Y	N/A	Y
	ML	4,533 - 5,646	N/A	Y	Y	N/A	Y
	HL	5,449 - 6,763	Y	Y	Y	N/A	Y
	VL	7,086 - 8,415	Y	Y	Y	N/A	N/A
	XL	9,059 - 11,237	N/A	Y	Y	N/A	N/A
8'	VW	6,078 - 6,866	Y	Y	Y	N/A	Y
	LW	8,095 - 9,276	N/A	Y	Y	N/A	Y
	ML	9,844 - 11,293	N/A	Y	Y	N/A	Y
	HL	11,851 - 13,525	Y	Y	Y	N/A	Y
	VL	14,747 - 16,830	Y	Y	Y	N/A	N/A
	XL	19,558 - 22,473	N/A	Y	Y	N/A	N/A

MAX. AMBIENT OPERATING TEMP.							
LENGTH	OUTPUT	NOMINAL LUMEN RANGE	WATTS	LPW	MAX AMBIENT OPERATING TEMPERATURE (C°) (UNIVERSAL VOLTAGE)	ELL14 (WITH UNIVERSAL VOLTAGE)	347v
2'	VW	2,145 - 2,708	21	102 - 130	40	NA	35
	LW	2,738 - 3,529	26	105 - 135	40	NA	35
	ML	3,862 - 4,921	39	100 - 128	40	NA	35
	HL	4,254 - 5,416	44	97 - 123	35	NA	30
4'	VW	2,802 - 3,433	25	114 - 141	50	45	45
	LW	3,726 - 4,922	33	112 - 139	50	45	45
	ML	4,533 - 5,646	42	108 - 134	50	45	45
	HL	5,449 - 6,763	47	115 - 143	45	45	35
	VL	7,086 - 8,415	62	115 - 136	40	40	35
	XL	9,059 - 11,237	92	99 - 123	30	NA	25
8'	VW	6,078 - 6,866	49	124-141	50	45	45
	LW	8,095 - 9,276	67	122 - 139	50	45	45
	ML	9,844 - 11,293	84	117 - 134	50	45	45
	HL	11,851 - 13,525	95	125 - 143	45	45	35
	VL	14,747 - 16,830	123	120 - 136	40	40	35
	XL	19,558 - 22,473	183	107 - 123	30	NA	25

Columbia
LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

LXEM PREDICTED LIFE					LUMEN MAINTENANCE		
CALCULATED HOURS	LENGTH	OUTPUT	NOMINAL LUMEN RANGE	AMBIENT OPERATING TEMPERATURE (C°)	L70	L80	L90
	2'	VW	2,145 - 2,708	25	393,000	245,000	115,000
				40	207,000	128,000	58,000
		LW	2,738 - 3,529	25	393,000	245,000	115,000
				40	207,000	128,000	58,000
		ML	3,862 - 4,921	25	282,000	174,000	79,000
				40	207,000	128,000	58,000
		HL	4,254 - 5,416	25	232,000	143,000	65,000
				35	175,000	105,000	42,000
	4'	VW	2,802 - 3,433	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		LW	3,726 - 4,922	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		ML	4,533 - 5,646	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		HL	5,449 - 6,763	25	322,000	198,000	90,000
				45	282,000	174,000	79,000
		VL	7,086 - 8,415	25	322,000	198,000	90,000
				40	228,000	140,000	63,000
		XL	9,059 - 11,237	25	266,000	164,000	74,000
				30	240,000	148,000	67,000
	8'	VW	6,078 - 6,866	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		LW	8,095 - 9,276	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		ML	9,844 - 11,293	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		HL	11,851 - 13,525	25	322,000	198,000	90,000
				45	282,000	174,000	79,000
		VL	14,747 - 16,830	25	322,000	198,000	90,000
				40	228,000	140,000	63,000
		XL	19,558 - 22,473	25	266,000	164,000	74,000
				30	240,000	148,000	67,000

Columbia

LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-30VW-RFP-EDU	Very Low Watt	30K	RFP	2,145	21.1	101.6	40°C
LXEM2-30VW-RA-EDU			RA	2,365	20.8	113.7	40°C
LXEM2-30VW-RP-EDU			RP	2,373	20.8	114.1	40°C
LXEM2-30VW-RFA-EDU			RFA	2,448	20.8	117.7	40°C
LXEM2-30VW-DFA-EDU			DFA	2,467	20.8	118.6	40°C
LXEM2-30VW-DCA-EDU			DCA	2,512	20.8	120.8	40°C
LXEM2-35VW-RFP-EDU		35K	RFP	2,217	21.1	105.1	40°C
LXEM2-35VW-RA-EDU			RA	2,446	20.8	117.6	40°C
LXEM2-35VW-RP-EDU			RP	2,454	20.8	118.0	40°C
LXEM2-35VW-RFA-EDU			RFA	2,531	20.8	121.7	40°C
LXEM2-35VW-DFA-EDU			DFA	2,551	20.8	122.6	40°C
LXEM2-35VW-DCA-EDU			DCA	2,598	20.8	124.9	40°C
LXEM2-40VW-RFP-EDU		40K	RFP	2,252	21.1	106.7	40°C
LXEM2-40VW-RA-EDU			RA	2,484	20.8	119.4	40°C
LXEM2-40VW-RP-EDU			RP	2,492	20.8	119.8	40°C
LXEM2-40VW-RFA-EDU			RFA	2,571	20.8	123.6	40°C
LXEM2-40VW-DFA-EDU			DFA	2,590	20.8	124.5	40°C
LXEM2-40VW-DCA-EDU			DCA	2,638	20.8	126.8	40°C
LXEM2-50VW-RFP-EDU		50K	RFP	2,312	21.1	109.6	40°C
LXEM2-50VW-RA-EDU			RA	2,550	20.8	122.6	40°C
LXEM2-50VW-RP-EDU			RP	2,558	20.8	123.0	40°C
LXEM2-50VW-RFA-EDU			RFA	2,639	20.8	126.9	40°C
LXEM2-50VW-DFA-EDU			DFA	2,659	20.8	127.8	40°C
LXEM2-50VW-DCA-EDU			DCA	2,708	20.8	130.2	40°C
LXEM2-30LW-RFP-EDU	Low Watt	30K	RFP	2,738	26.0	105.3	40°C
LXEM2-30LW-RP-EDU			RP	3,049	26.1	116.8	40°C
LXEM2-30LW-RA-EDU			RA	3,144	26.0	120.9	40°C
LXEM2-30LW-RFA-EDU			RFA	3,180	26.2	121.4	40°C
LXEM2-30LW-DFA-EDU			DFA	3,239	26.1	124.1	40°C
LXEM2-30LW-DCA-EDU			DCA	3,273	26.1	125.4	40°C
LXEM2-35LW-RFP-EDU		35K	RFP	2,831	26.0	108.9	40°C
LXEM2-35LW-RP-EDU			RP	3,153	26.1	120.8	40°C
LXEM2-35LW-RA-EDU			RA	3,251	26.0	125.0	40°C
LXEM2-35LW-RFA-EDU			RFA	3,289	26.2	125.5	40°C
LXEM2-35LW-DFA-EDU			DFA	3,349	26.1	128.3	40°C
LXEM2-35LW-DCA-EDU			DCA	3,385	26.1	129.7	40°C
LXEM2-40LW-RFP-EDU		40K	RFP	2,875	26.0	110.6	40°C
LXEM2-40LW-RP-EDU			RP	3,202	26.1	122.7	40°C
LXEM2-40LW-RA-EDU			RA	3,302	26.0	127.0	40°C
LXEM2-40LW-RFA-EDU			RFA	3,339	26.2	127.5	40°C
LXEM2-40LW-DFA-EDU			DFA	3,401	26.1	130.3	40°C
LXEM2-40LW-DCA-EDU			DCA	3,437	26.1	131.7	40°C
LXEM2-50LW-RFP-EDU		50K	RFP	2,951	26.0	113.5	40°C
LXEM2-50LW-RP-EDU			RP	3,287	26.1	125.9	40°C

Columbia

LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-50LW-RA-EDU	Low Watt	50K	RA	3,390	26.0	130.4	40°C
LXEM2-50LW-RFA-EDU			RFA	3,428	26.2	130.9	40°C
LXEM2-50LW-DFA-EDU			DFA	3,492	26.1	133.8	40°C
LXEM2-50LW-DCA-EDU			DCA	3,529	26.1	135.2	40°C
LXEM2-30ML-RFP-EDU	Medium Lumen	30K	RFP	3,862	38.5	100.3	40°C
LXEM2-30ML-RP-EDU			RP	4,228	38.5	109.8	40°C
LXEM2-30ML-RFA-EDU			RFA	4,343	38.5	112.8	40°C
LXEM2-30ML-RA-EDU			RA	4,446	38.5	115.5	40°C
LXEM2-30ML-DFA-EDU			DFA	4,526	38.5	117.5	40°C
LXEM2-30ML-DCA-EDU			DCA	4,565	38.5	118.6	40°C
LXEM2-35ML-RFP-EDU		35K	RFP	3,993	38.5	103.7	40°C
LXEM2-35ML-RP-EDU			RP	4,371	38.5	113.5	40°C
LXEM2-35ML-RFA-EDU			RFA	4,490	38.5	116.6	40°C
LXEM2-35ML-RA-EDU			RA	4,597	38.5	119.4	40°C
LXEM2-35ML-DFA-EDU			DFA	4,680	38.5	121.5	40°C
LXEM2-35ML-DCA-EDU			DCA	4,720	38.5	122.6	40°C
LXEM2-40ML-RFP-EDU		40K	RFP	4,055	38.5	105.3	40°C
LXEM2-40ML-RP-EDU			RP	4,439	38.5	115.3	40°C
LXEM2-40ML-RFA-EDU			RFA	4,560	38.5	118.4	40°C
LXEM2-40ML-RA-EDU			RA	4,668	38.5	121.3	40°C
LXEM2-40ML-DFA-EDU			DFA	4,752	38.5	123.4	40°C
LXEM2-40ML-DCA-EDU			DCA	4,793	38.5	124.5	40°C
LXEM2-50ML-RFP-EDU		50K	RFP	4,163	38.5	108.1	40°C
LXEM2-50ML-RP-EDU			RP	4,558	38.5	118.4	40°C
LXEM2-50ML-RFA-EDU			RFA	4,682	38.5	121.6	40°C
LXEM2-50ML-RA-EDU			RA	4,793	38.5	124.5	40°C
LXEM2-50ML-DFA-EDU			DFA	4,879	38.5	126.7	40°C
LXEM2-50ML-DCA-EDU			DCA	4,921	38.5	127.8	40°C
LXEM2-30HL-RFP-EDU	High Lumen	30K	RFP	4,254	44.1	96.5	35°C
LXEM2-30HL-RP-EDU			RP	4,700	44.1	106.6	35°C
LXEM2-30HL-RA-EDU			RA	4,868	44.1	110.4	35°C
LXEM2-30HL-RFA-EDU			RFA	4,874	44.1	110.5	35°C
LXEM2-30HL-DFA-EDU			DFA	5,008	44.1	113.6	35°C
LXEM2-30HL-DCA-EDU			DCA	5,024	44.1	113.9	35°C
LXEM2-35HL-RFP-EDU		35K	RFP	4,399	44.1	99.7	35°C
LXEM2-35HL-RP-EDU			RP	4,860	44.1	110.2	35°C
LXEM2-35HL-RA-EDU			RA	5,033	44.1	114.1	35°C
LXEM2-35HL-RFA-EDU			RFA	5,040	44.1	114.3	35°C
LXEM2-35HL-DFA-EDU			DFA	5,179	44.1	117.4	35°C
LXEM2-35HL-DCA-EDU			DCA	5,195	44.1	117.8	35°C
LXEM2-40HL-RFP-EDU		40K	RFP	4,467	44.1	101.3	35°C
LXEM2-40HL-RP-EDU			RP	4,935	44.1	111.9	35°C
LXEM2-40HL-RA-EDU			RA	5,111	44.1	115.9	35°C
LXEM2-40HL-RFA-EDU			RFA	5,117	44.1	116.0	35°C

Columbia


LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-40HL-DFA-EDU	High Lumen	40K	DFA	5,259	44.1	119.2	35°C
LXEM2-40HL-DCA-EDU			DCA	5,275	44.1	119.6	35°C
LXEM2-50HL-RFP-EDU		50K	RFP	4,586	44.1	104.0	35°C
LXEM2-50HL-RP-EDU			RP	5,066	44.1	114.9	35°C
LXEM2-50HL-RA-EDU			RA	5,248	44.1	119.0	35°C
LXEM2-50HL-RFA-EDU			RFA	5,254	44.1	119.1	35°C
LXEM2-50HL-DFA-EDU			DFA	5,399	44.1	122.4	35°C
LXEM2-50HL-DCA-EDU			DCA	5,416	44.1	122.8	35°C
LXEM4-30VW-RFP-EDU	Very Low Watt	30K	RFP	2,802	24.5	114.4	50°C
LXEM4-30VW-RP-EDU			RP	2,938	24.4	120.4	50°C
LXEM4-30VW-RA-EDU			RA	3,039	24.4	124.6	50°C
LXEM4-30VW-RFA-EDU			RFA	3,048	24.5	124.4	50°C
LXEM4-30VW-DCA-EDU			DCA	3,180	24.4	130.3	50°C
LXEM4-30VW-DFA-EDU			DFA	3,184	24.4	130.5	50°C
LXEM4-35VW-RFP-EDU		35K	RFP	2,897	24.5	118.2	50°C
LXEM4-35VW-RP-EDU			RP	3,038	24.4	124.5	50°C
LXEM4-35VW-RA-EDU			RA	3,143	24.4	128.8	50°C
LXEM4-35VW-RFA-EDU			RFA	3,151	24.5	128.6	50°C
LXEM4-35VW-DCA-EDU			DCA	3,288	24.4	134.8	50°C
LXEM4-35VW-DFA-EDU			DFA	3,293	24.4	134.9	50°C
LXEM4-40VW-RFP-EDU		40K	RFP	2,942	24.5	120.1	50°C
LXEM4-40VW-RP-EDU			RP	3,085	24.4	126.4	50°C
LXEM4-40VW-RA-EDU			RA	3,191	24.4	130.8	50°C
LXEM4-40VW-RFA-EDU			RFA	3,200	24.5	130.6	50°C
LXEM4-40VW-DCA-EDU			DCA	3,339	24.4	136.8	50°C
LXEM4-40VW-DFA-EDU			DFA	3,344	24.4	137.0	50°C
LXEM4-50VW-RFP-EDU		50K	RFP	3,020	24.5	123.3	50°C
LXEM4-50VW-RP-EDU			RP	3,168	24.4	129.8	50°C
LXEM4-50VW-RA-EDU			RA	3,276	24.4	134.3	50°C
LXEM4-50VW-RFA-EDU			RFA	3,285	24.5	134.1	50°C
LXEM4-50VW-DCA-EDU			DCA	3,428	24.4	140.5	50°C
LXEM4-50VW-DFA-EDU			DFA	3,433	24.4	140.7	50°C
LXEM4-30LW-RFP-EDU	Low Watt	30K	RFP	3,726	33.3	111.9	50°C
LXEM4-30LW-RP-EDU			RP	3,872	33.3	116.3	50°C
LXEM4-30LW-RFA-EDU			RFA	4,048	33.3	121.5	50°C
LXEM4-30LW-RA-EDU			RA	4,054	33.3	121.8	50°C
LXEM4-30LW-DFA-EDU			DFA	4,241	33.3	127.4	50°C
LXEM4-30LW-DCA-EDU			DCA	4,303	33.3	129.2	50°C
LXEM4-35LW-RFP-EDU		35K	RFP	3,853	33.3	115.7	50°C
LXEM4-35LW-RP-EDU			RP	4,004	33.3	120.2	50°C
LXEM4-35LW-RFA-EDU			RFA	4,185	33.3	125.7	50°C
LXEM4-35LW-RA-EDU			RA	4,192	33.3	125.9	50°C
LXEM4-35LW-DFA-EDU			DFA	4,385	33.3	131.7	50°C
LXEM4-35LW-DCA-EDU			DCA	4,449	33.3	133.6	50°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		


Columbia
LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-40LW-RFP-EDU	Low Watt	40K	RFP	3,912	33.3	117.5	50°C
LXEM4-40LW-RP-EDU			RP	4,066	33.3	122.1	50°C
LXEM4-40LW-RFA-EDU			RFA	4,250	33.3	127.6	50°C
LXEM4-40LW-RA-EDU			RA	4,257	33.3	127.8	50°C
LXEM4-40LW-DFA-EDU			DFA	4,453	33.3	133.7	50°C
LXEM4-40LW-DCA-EDU			DCA	4,518	33.3	135.7	50°C
LXEM4-50LW-RFP-EDU		50K	RFP	4,017	33.3	120.6	50°C
LXEM4-50LW-RP-EDU			RP	4,174	33.3	125.3	50°C
LXEM4-50LW-RFA-EDU			RFA	4,363	33.3	131.0	50°C
LXEM4-50LW-RA-EDU			RA	4,371	33.3	131.3	50°C
LXEM4-50LW-DFA-EDU			DFA	4,572	33.3	137.3	50°C
LXEM4-50LW-DCA-EDU			DCA	4,638	33.3	139.3	50°C
LXEM4-30ML-RFP-EDU	Medium Lumen	30K	RFP	4,533	41.9	108.2	50°C
LXEM4-30ML-RP-EDU			RP	4,714	41.9	112.5	50°C
LXEM4-30ML-RFA-EDU			RFA	4,922	42.0	117.2	50°C
LXEM4-30ML-RA-EDU			RA	4,924	42.0	117.2	50°C
LXEM4-30ML-DFA-EDU			DFA	5,160	42.0	122.9	50°C
LXEM4-30ML-DCA-EDU			DCA	5,238	42.0	124.7	50°C
LXEM4-35ML-RFP-EDU		35K	RFP	4,688	41.9	111.9	50°C
LXEM4-35ML-RP-EDU			RP	4,875	41.9	116.3	50°C
LXEM4-35ML-RFA-EDU			RFA	5,089	42.0	121.2	50°C
LXEM4-35ML-RA-EDU			RA	5,091	42.0	121.2	50°C
LXEM4-35ML-DFA-EDU			DFA	5,336	42.0	127.0	50°C
LXEM4-35ML-DCA-EDU			DCA	5,416	42.0	128.9	50°C
LXEM4-40ML-RFP-EDU		40K	RFP	4,760	41.9	113.6	50°C
LXEM4-40ML-RP-EDU			RP	4,950	41.9	118.1	50°C
LXEM4-40ML-RFA-EDU			RFA	5,168	42.0	123.1	50°C
LXEM4-40ML-RA-EDU			RA	5,170	42.0	123.1	50°C
LXEM4-40ML-DFA-EDU			DFA	5,418	42.0	129.0	50°C
LXEM4-40ML-DCA-EDU			DCA	5,500	42.0	130.9	50°C
LXEM4-50ML-RFP-EDU		50K	RFP	4,887	41.9	116.6	50°C
LXEM4-50ML-RP-EDU			RP	5,082	41.9	121.3	50°C
LXEM4-50ML-RFA-EDU			RFA	5,306	42.0	126.3	50°C
LXEM4-50ML-RA-EDU			RA	5,308	42.0	126.4	50°C
LXEM4-50ML-DFA-EDU			DFA	5,563	42.0	132.4	50°C
LXEM4-50ML-DCA-EDU			DCA	5,646	42.0	134.4	50°C
LXEM4-30HL-RFP-EDU	High Lumen	30K	RFP	5,449	47.4	115.0	45°C
LXEM4-30HL-RP-EDU			RP	5,648	47.2	119.7	45°C
LXEM4-30HL-RFA-EDU			RFA	5,926	47.4	125.0	45°C
LXEM4-30HL-RA-EDU			RA	5,932	47.3	125.4	45°C
LXEM4-30HL-DFA-EDU			DFA	6,214	47.3	131.4	45°C
LXEM4-30HL-DCA-EDU			DCA	6,273	47.4	132.4	45°C
LXEM4-35HL-RFP-EDU		35K	RFP	5,634	47.4	118.9	45°C
LXEM4-35HL-RP-EDU			RP	5,840	47.2	123.7	45°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU Notes:	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		

Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-35HL-RFA-EDU	High Lumen	35K	RFA	6,127	47.4	129.3	45°C
LXEM4-35HL-RA-EDU			RA	6,133	47.3	129.7	45°C
LXEM4-35HL-DFA-EDU			DFA	6,425	47.3	135.8	45°C
LXEM4-35HL-DCA-EDU			DCA	6,487	47.4	136.9	45°C
LXEM4-40HL-RFP-EDU		40K	RFP	5,721	47.4	120.7	45°C
LXEM4-40HL-RP-EDU			RP	5,931	47.2	125.7	45°C
LXEM4-40HL-RFA-EDU			RFA	6,222	47.4	131.3	45°C
LXEM4-40HL-RA-EDU			RA	6,228	47.3	131.7	45°C
LXEM4-40HL-DFA-EDU		50K	DFA	6,525	47.3	137.9	45°C
LXEM4-40HL-DCA-EDU			DCA	6,587	47.4	139.0	45°C
LXEM4-50HL-RFP-EDU			RFP	5,874	47.4	123.9	45°C
LXEM4-50HL-RP-EDU			RP	6,089	47.2	129.0	45°C
LXEM4-50HL-RFA-EDU			RFA	6,388	47.4	134.8	45°C
LXEM4-50HL-RA-EDU			RA	6,394	47.3	135.2	45°C
LXEM4-50HL-DFA-EDU			DFA	6,699	47.3	141.6	45°C
LXEM4-50HL-DCA-EDU			DCA	6,763	47.4	142.7	45°C
LXEM4-30VL-RP-EDU	Very High Lumen	30K	RP	7,086	61.6	115.0	40°C
LXEM4-30VL-RA-EDU			RA	7,373	61.7	119.5	40°C
LXEM4-30VL-RFP-EDU			RFP	7,388	61.6	119.9	40°C
LXEM4-30VL-RFA-EDU			RFA	7,395	61.6	120.0	40°C
LXEM4-30VL-DFA-EDU			DFA	7,756	61.7	125.7	40°C
LXEM4-30VL-DCA-EDU			DCA	7,806	61.7	126.5	40°C
LXEM4-35VL-RP-EDU		35K	RP	7,327	61.6	118.9	40°C
LXEM4-35VL-RA-EDU			RA	7,624	61.7	123.6	40°C
LXEM4-35VL-RFP-EDU			RFP	7,639	61.6	124.0	40°C
LXEM4-35VL-RFA-EDU			RFA	7,646	61.6	124.1	40°C
LXEM4-35VL-DFA-EDU			DFA	8,020	61.7	130.0	40°C
LXEM4-35VL-DCA-EDU			DCA	8,072	61.7	130.8	40°C
LXEM4-40VL-RP-EDU		40K	RP	7,440	61.6	120.8	40°C
LXEM4-40VL-RA-EDU			RA	7,742	61.7	125.5	40°C
LXEM4-40VL-RFP-EDU			RFP	7,757	61.6	125.9	40°C
LXEM4-40VL-RFA-EDU			RFA	7,764	61.6	126.0	40°C
LXEM4-40VL-DFA-EDU			DFA	8,144	61.7	132.0	40°C
LXEM4-40VL-DCA-EDU			DCA	8,197	61.7	132.8	40°C
LXEM4-50VL-RP-EDU		50K	RP	7,639	61.6	124.0	40°C
LXEM4-50VL-RA-EDU			RA	7,948	61.7	128.8	40°C
LXEM4-50VL-RFP-EDU			RFP	7,964	61.6	129.3	40°C
LXEM4-50VL-RFA-EDU			RFA	7,971	61.6	129.4	40°C
LXEM4-50VL-DFA-EDU			DFA	8,361	61.7	135.5	40°C
LXEM4-50VL-DCA-EDU			DCA	8,415	61.7	136.4	40°C
LXEM4-30XL-RFP-EDU	Xtra High Lumen	30K	RFP	9,059	91.3	99.2	30°C
LXEM4-30XL-RP-EDU			RP	9,448	91.2	103.6	30°C
LXEM4-30XL-RFA-EDU			RFA	9,779	91.2	107.2	30°C
LXEM4-30XL-RA-EDU			RA	9,839	91.4	107.7	30°C


Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-30XL-DFA-EDU	Xtra High Lumen	30K	DFA	10,358	91.4	113.3	30°C
LXEM4-30XL-DCA-EDU			DCA	10,424	91.5	113.9	30°C
LXEM4-35XL-RFP-EDU		35K	RFP	9,367	91.3	102.6	30°C
LXEM4-35XL-RP-EDU			RP	9,769	91.2	107.1	30°C
LXEM4-35XL-RFA-EDU			RFA	10,111	91.2	110.9	30°C
LXEM4-35XL-RA-EDU			RA	10,174	91.4	111.3	30°C
LXEM4-35XL-DFA-EDU			DFA	10,710	91.4	117.2	30°C
LXEM4-35XL-DCA-EDU			DCA	10,778	91.5	117.8	30°C
LXEM4-40XL-RFP-EDU		40K	RFP	9,512	91.3	104.2	30°C
LXEM4-40XL-RP-EDU			RP	9,920	91.2	108.8	30°C
LXEM4-40XL-RFA-EDU			RFA	10,268	91.2	112.6	30°C
LXEM4-40XL-RA-EDU			RA	10,331	91.4	113.0	30°C
LXEM4-40XL-DFA-EDU			DFA	10,876	91.4	119.0	30°C
LXEM4-40XL-DCA-EDU			DCA	10,945	91.5	119.6	30°C
LXEM4-50XL-RFP-EDU		50K	RFP	9,765	91.3	107.0	30°C
LXEM4-50XL-RP-EDU			RP	10,184	91.2	111.7	30°C
LXEM4-50XL-RFA-EDU			RFA	10,542	91.2	115.6	30°C
LXEM4-50XL-RA-EDU			RA	10,607	91.4	116.0	30°C
LXEM4-50XL-DFA-EDU			DFA	11,166	91.4	122.2	30°C
LXEM4-50XL-DCA-EDU			DCA	11,237	91.5	122.8	30°C
LXEM8-30VW-RA-EDU	Very Low Watt	30K	RA	6,078	48.8	124.6	50°C
LXEM8-30VW-RFA-EDU			RFA	6,096	49.0	124.4	50°C
LXEM8-30VW-DCA-EDU			DCA	6,360	48.8	130.3	50°C
LXEM8-30VW-DFA-EDU			DFA	6,369	48.8	130.5	50°C
LXEM8-35VW-RA-EDU		35K	RA	6,285	48.8	128.8	50°C
LXEM8-35VW-RFA-EDU			RFA	6,303	49.0	128.6	50°C
LXEM8-35VW-DCA-EDU			DCA	6,576	48.8	134.8	50°C
LXEM8-35VW-DFA-EDU			DFA	6,585	48.8	134.9	50°C
LXEM8-40VW-RA-EDU		40K	RA	6,382	48.8	130.8	50°C
LXEM8-40VW-RFA-EDU			RFA	6,400	49.0	130.6	50°C
LXEM8-40VW-DCA-EDU			DCA	6,678	48.8	136.8	50°C
LXEM8-40VW-DFA-EDU			DFA	6,687	48.8	137.0	50°C
LXEM8-50VW-RA-EDU		50K	RA	6,553	48.8	134.3	50°C
LXEM8-50VW-RFA-EDU			RFA	6,571	49.0	134.1	50°C
LXEM8-50VW-DCA-EDU			DCA	6,856	48.8	140.5	50°C
LXEM8-50VW-DFA-EDU			DFA	6,866	48.8	140.7	50°C
LXEM8-30LW-RFA-EDU	Low Watt	30K	RFA	8,095	66.6	121.5	50°C
LXEM8-30LW-RA-EDU			RA	8,109	66.6	121.8	50°C
LXEM8-30LW-DFA-EDU			DFA	8,482	66.6	127.4	50°C
LXEM8-30LW-DCA-EDU			DCA	8,605	66.6	129.2	50°C
LXEM8-35LW-RFA-EDU		35K	RFA	8,370	66.6	125.7	50°C
LXEM8-35LW-RA-EDU			RA	8,385	66.6	125.9	50°C
LXEM8-35LW-DFA-EDU			DFA	8,770	66.6	131.7	50°C
LXEM8-35LW-DCA-EDU			DCA	8,898	66.6	133.6	50°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU Notes:	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		


Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM8-40LW-RFA-EDU	Low Watt	40K	RFA	8,500	66.6	127.6	50°C
LXEM8-40LW-RA-EDU			RA	8,514	66.6	127.8	50°C
LXEM8-40LW-DFA-EDU			DFA	8,906	66.6	133.7	50°C
LXEM8-40LW-DCA-EDU			DCA	9,035	66.6	135.7	50°C
LXEM8-50LW-RFA-EDU		50K	RFA	8,727	66.6	131.0	50°C
LXEM8-50LW-RA-EDU			RA	8,741	66.6	131.3	50°C
LXEM8-50LW-DFA-EDU			DFA	9,143	66.6	137.3	50°C
LXEM8-50LW-DCA-EDU			DCA	9,276	66.6	139.3	50°C
LXEM8-30ML-RFA-EDU	Medium Lumen	30K	RFA	9,844	84.0	117.2	50°C
LXEM8-30ML-RA-EDU			RA	9,847	84.0	117.2	50°C
LXEM8-30ML-DFA-EDU			DFA	10,320	84.0	122.9	50°C
LXEM8-30ML-DCA-EDU			DCA	10,476	84.0	124.7	50°C
LXEM8-35ML-RFA-EDU		35K	RFA	10,179	84.0	121.2	50°C
LXEM8-35ML-RA-EDU			RA	10,182	84.0	121.2	50°C
LXEM8-35ML-DFA-EDU			DFA	10,671	84.0	127.0	50°C
LXEM8-35ML-DCA-EDU			DCA	10,832	84.0	128.9	50°C
LXEM8-40ML-RFA-EDU		40K	RFA	10,336	84.0	123.1	50°C
LXEM8-40ML-RA-EDU			RA	10,340	84.0	123.1	50°C
LXEM8-40ML-DFA-EDU			DFA	10,836	84.0	129.0	50°C
LXEM8-40ML-DCA-EDU			DCA	10,999	84.0	130.9	50°C
LXEM8-50ML-RFA-EDU		50K	RFA	10,612	84.0	126.3	50°C
LXEM8-50ML-RA-EDU			RA	10,616	84.0	126.4	50°C
LXEM8-50ML-DFA-EDU			DFA	11,125	84.0	132.4	50°C
LXEM8-50ML-DCA-EDU			DCA	11,293	84.0	134.4	50°C
LXEM8-30HL-RFA-EDU	High Lumen	30K	RFA	11,851	94.8	125.0	45°C
LXEM8-30HL-RA-EDU			RA	11,863	94.6	125.4	45°C
LXEM8-30HL-DFA-EDU			DFA	12,428	94.6	131.4	45°C
LXEM8-30HL-DCA-EDU			DCA	12,547	94.8	132.4	45°C
LXEM8-35HL-RFA-EDU		35K	RFA	12,254	94.8	129.3	45°C
LXEM8-35HL-RA-EDU			RA	12,267	94.6	129.7	45°C
LXEM8-35HL-DFA-EDU			DFA	12,851	94.6	135.8	45°C
LXEM8-35HL-DCA-EDU			DCA	12,973	94.8	136.9	45°C
LXEM8-40HL-RFA-EDU		40K	RFA	12,444	94.8	131.3	45°C
LXEM8-40HL-RA-EDU			RA	12,456	94.6	131.7	45°C
LXEM8-40HL-DFA-EDU			DFA	13,049	94.6	137.9	45°C
LXEM8-40HL-DCA-EDU			DCA	13,174	94.8	139.0	45°C
LXEM8-50HL-RFA-EDU		50K	RFA	12,776	94.8	134.8	45°C
LXEM8-50HL-RA-EDU			RA	12,789	94.6	135.2	45°C
LXEM8-50HL-DFA-EDU			DFA	13,397	94.6	141.6	45°C
LXEM8-50HL-DCA-EDU			DCA	13,525	94.8	142.7	45°C
LXEM8-30VL-RFA-EDU	Very High Lumen	30K	RA	14,747	123.4	119.5	40°C
LXEM8-30VL-RA-EDU			RFA	14,789	123.2	120.0	40°C
LXEM8-30VL-DFA-EDU			DFA	15,512	123.4	125.7	40°C
LXEM8-30VL-DCA-EDU			DCA	15,613	123.4	126.5	40°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40ML-RFA-EDU	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		

Columbia
LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM8-35VL-RA-EDU	Very High	35K	RA	15,248	123.4	123.6	40°C
LXEM8-35VL-RFA-EDU			RFA	15,292	123.2	124.1	40°C
LXEM8-35VL-DFA-EDU			DFA	16,040	123.4	130.0	40°C
LXEM8-35VL-DCA-EDU			DCA	16,143	123.4	130.8	40°C
LXEM8-40VL-RA-EDU		40K	RA	15,484	123.4	125.5	40°C
LXEM8-40VL-RFA-EDU			RFA	15,529	123.2	126.0	40°C
LXEM8-40VL-DFA-EDU			DFA	16,288	123.4	132.0	40°C
LXEM8-40VL-DCA-EDU			DCA	16,393	123.4	132.8	40°C
LXEM8-50VL-RA-EDU		50K	RA	15,897	123.4	128.8	40°C
LXEM8-50VL-RFA-EDU			RFA	15,943	123.2	129.4	40°C
LXEM8-50VL-DFA-EDU			DFA	16,722	123.4	135.5	40°C
LXEM8-50VL-DCA-EDU			DCA	16,830	123.4	136.4	40°C
LXEM8-30XL-RFA-EDU	Xtra High Lumen	30K	RFA	19,558	182.4	107.2	30°C
LXEM8-30XL-RA-EDU			RA	19,678	182.8	107.7	30°C
LXEM8-30XL-DFA-EDU			DFA	20,716	182.8	113.3	30°C
LXEM8-30XL-DCA-EDU			DCA	20,847	183.0	113.9	30°C
LXEM8-35XL-RFA-EDU		35K	RFA	20,223	182.4	110.9	30°C
LXEM8-35XL-RA-EDU			RA	20,348	182.8	111.3	30°C
LXEM8-35XL-DFA-EDU			DFA	21,420	182.8	117.2	30°C
LXEM8-35XL-DCA-EDU			DCA	21,556	183.0	117.8	30°C
LXEM8-40XL-RFA-EDU		40K	RFA	20,536	182.4	112.6	30°C
LXEM8-40XL-RA-EDU			RA	20,662	182.8	113.0	30°C
LXEM8-40XL-DFA-EDU			DFA	21,752	182.8	119.0	30°C
LXEM8-40XL-DCA-EDU			DCA	21,889	183.0	119.6	30°C
LXEM8-50XL-RFA-EDU		50K	RFA	21,083	182.4	115.6	30°C
LXEM8-50XL-RA-EDU			RA	21,213	182.8	116.0	30°C
LXEM8-50XL-DFA-EDU			DFA	22,332	182.8	122.2	30°C
LXEM8-50XL-DCA-EDU			DCA	22,473	183.0	122.8	30°C

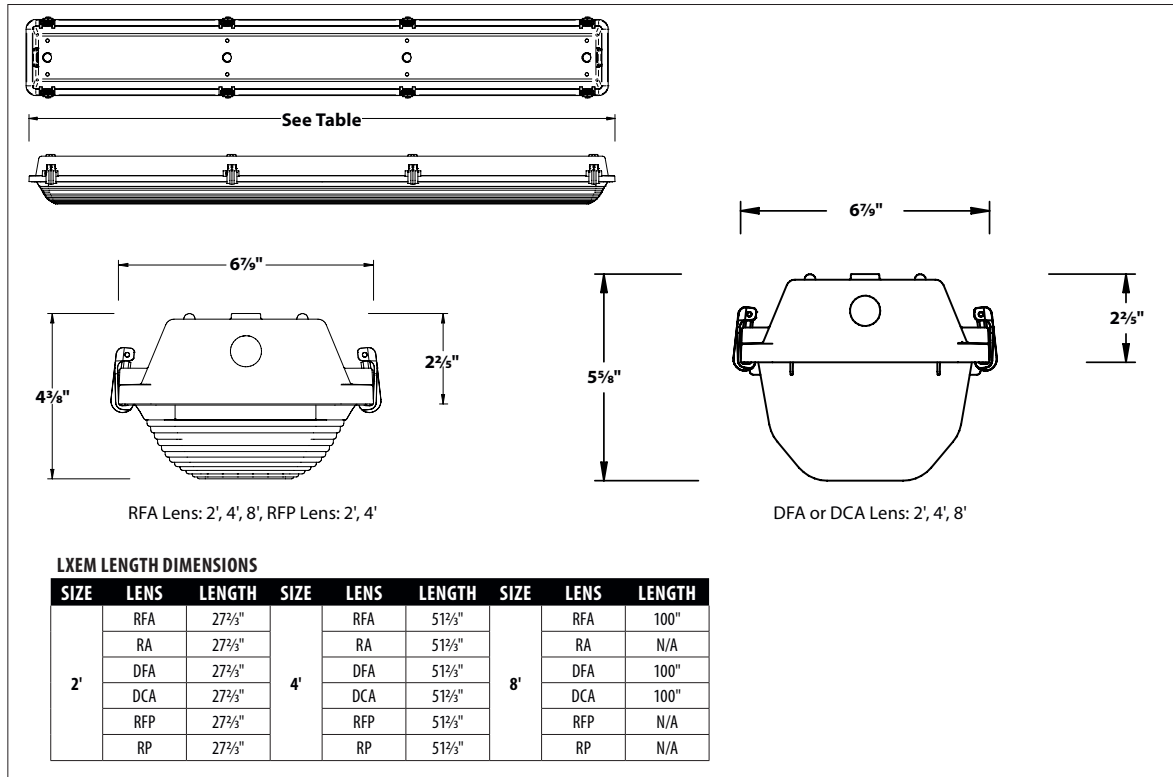
**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

LXEM4-40ML-RFA-EDU

Notes:**Type:**


LAIHOU18-45878

Columbia
LIGHTING

LXEM
Enclosed and Gasketed Fiberglass Extreme Environment / LED
DIMENSIONAL DATA

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.



Submitted by Lighting Associates		Catalog Number: LXEM4-40HL-RFA-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

Columbia LIGHTING



createchange

FEATURES

- LED Enclosed and Gasketed
- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Four LED color choices and 80 CRI
- IP66 all sizes when ordered with standard polyacetal (POM) latches
- IP65 all sizes, IP67 4' and 8'
- Available in 2', 4', or 8' lengths
- NEMA 4X housing
- Fiberglass housing with F1 weatherability rating, standard
- Smooth housing for easy cleaning
- Gasket is non-porous to ensure seal
- Impact modified acrylic lens equivalent to 100% DR
- Wide range of lens selections
- Lens firmly secured with tamper resistance ready polyacetal (POM) latches
- Stainless steel latching optional
- ControlScope® compatible
- Drivers include minimum 2.5kV surge protection
- UL Sanitation Certified per NSF Standards
- Removable gear tray electrical access for modular replaceability
- Emergency battery pack installed, optional on most models
- -20°C up to +50°C ambient operation; see table provided for details
- DesignLights Consortium® qualified
- Includes surface mounting brackets
- Occupancy and/or daylight sensing accessories available
- Five year warranty

PROJECT INFORMATION

Project Name

Type

Catalog No.

Date

CONSTRUCTION

Housing is formed from UL 5VA fiberglass. F1 weatherability rating, suitable for indoor or outdoor use with respect to exposure to UV light. Pour-in-place non-porous gasketing assures seal. LED affixed to removable heat sinked gear tray. 14 Latches per 8', 8 per 4', 6 per 2'. Latches are provided tamper resistance ready, tamper resistant screws by others. Latches are standard polyacetal (POM), optional in stainless steel. Access openings are provided for electrical connection.

SHIELDING

Lineal ribbed frosted acrylic lens impact modified equivalent to 100% DR; modification adds flexibility to reduce impact breakage compared to standard acrylic formulations. Optional ribbed polycarbonate lens or deep acrylic. All lenses available in clear or frost.

FINISH

White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel.

ELECTRICAL

Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance. Extra High Lumen packages (XL) rated L70 at 60,000 hours. Driver options include fixed output for on/off function, step dimming⁶ (high/low/off) or continuous 0-10V dimming. QR code label affixed to housing for easy traceability.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Ingress protection IP65 and IP67 standard. UL Sanitation Certified per NSF Standards. Wet location labeling is standard. Emergency-equipped fixtures built to UL 924. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

WARRANTY

Five year warranty (Terms and Conditions Apply).

MOUNTING

Use flexible conduit only.

ORDERING INFORMATION

EXAMPLE LXEM4-35HL-RFA-EDU

LXEM		-		-		-		-			
MODEL		COLOR TEMP		SHIELDING		DRIVER		VOLTAGE		OPTIONS	
LXEM LED Enclosed and Gasketed		30 3000K	35 3500K	RFA Ribbed Frosted Acrylic	RA Ribbed Clear Acrylic	E Fixed Output	ESD Step Dimming ⁶	U 120V-277V	347 347V	GLR Fast Blow Fuse	SSL Stainless Steel Tamper Resistance Ready Latches
		40 4000K		DFA Deep Frosted Acrylic	DCA Deep Clear Acrylic	ED 0-10V Dimming	ED1 0-10V 1% Dimming ⁶			TP Tamper Proof Latches	ELL14 Emergency Battery Pack Installed, 1400 Lumens ^{3,6,7}
		50 5000K		RFP Ribbed Frosted Polycarbonate ⁵	RP Ribbed Clear Polycarbonate ⁵					F3C8W 3 Wire 8' Wet Cord	F3C15W 3 Wire 15' Wet Cord
										F4C8W 4 Wire 8' Wet Cord	F4C15W 4 Wire 15' Wet Cord
										F5C8W 5 Wire 8' Wet Cord	F5C15W 5 Wire 15' Wet Cord
										F6C6W 6 Wire 6' Wet Cord	SWH Single Wet Hub 1/2" NPT Hub
										DWH Dual Wet Hub 1/2" NPT Hub	ZRE ControlScope® compatible ¹⁹

ACCESSORIES (ORDER SEPARATELY)

- XEDPM Dual Pendant Brackets (pendant by others)⁸
 XEHC Chain Hanger Kit (Includes 14" Chain)
 XE45MB 45° Mounting Bracket¹⁰
 XE45MBSS 45° Stainless Steel Mounting Bracket¹⁰

SENSOR KITS (Order Separately)

All sensor kits include Occupancy & Daylight.

Daylight activation requires setting of dip-switches on site.

Catalog #	# Relays	Lens Type	Voltage	Wet Label
OS1360WLK	1	360°	120/277	Yes
OS2360WLK	2	360°	120/277	Yes
OS1AWLK	1	Aisle	120/277	Yes
OS2AWLK	2	Aisle	120/277	Yes

¹VL and XL not available in 2' size.

²Not available in 347V

³Not available with battery pack.

⁴Requires 3/8" OD threaded rod by others.

⁵Not available with XL lumen package.

⁶Registered trademark of Daintree Networks, used by permission.

⁷Not available with VL lumen package.

⁸2 required for 8' fixture

⁹2' and 4' only. 8' not available.

¹⁰See table for availability



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LXEM4-40HL-RFA-EDU

Notes:**Type:**

LAIHOU18-45878

Columbia

LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

Test# 17905 Test Date 10/13/2016

PHOTOMETRIC DATA**LUMINAIRE DATA**

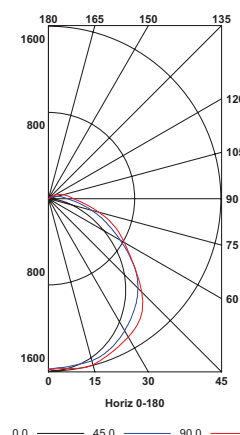
Luminaire	LXEM4-50ML-RFA-EDU LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with frosted ribbed acrylic lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5306
Watts	42.00
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.40
Luminous Opening in Feet	Length: 4.00 Width: 0.54 Height: 0.17

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1268	23.9	23.9
0-40	2105	39.7	39.7
0-60	3766	71.0	71.0
0-90	5025	94.7	94.7
0-180	5306	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens per Watt	126
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.90 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test# 17989 Test Date 10/10/2016

LUMINAIRE DATA

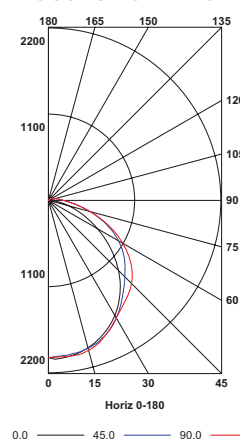
Luminaire	LXEM4-40HL-DFA-EDU LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with deep frosted acrylic lens
Ballast	XI054C150V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	6525
Watts	47.30
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.25 90° = 1.28
Luminous Opening in Feet	Length: 4.00 Width: 0.54 Height: 0.29

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1583	24.3	24.3
0-40	2594	39.8	39.8
0-60	4661	71.4	71.4
0-90	6235	95.6	95.6
0-180	6525	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens per Watt	138
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.73 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test# 18012 Test Date 10/18/2016

LUMINAIRE DATA

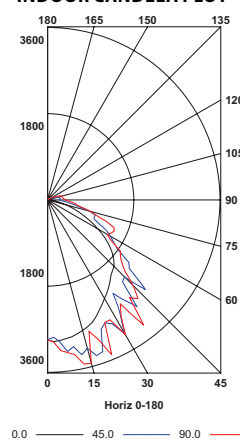
Luminaire	LXEM4-50XL-RA-EDU LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with ribbed clear acrylic lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	10607
Watts	91.40
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.21 90° = 1.38
Luminous Opening in Feet	Length: 4.00 Width: 0.54 Height: 0.17

ZONAL LUMEN SUMMARY


Zone	Lumens	% Lamp	% Fixt.
0-30	2547	24.0	24.0
0-40	4252	40.1	40.1
0-60	7643	72.1	72.1
0-90	10073	95.0	95.0
0-180	10607	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens per Watt	116
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.05 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

HUBBELL
Lighting

Submitted by Lighting Associates		Catalog Number: LXEM4-40HL-RFA-EDU	Type: LAIHO18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		

Columbia

LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

Driver Availability							
LENGTH	OUTPUT	NOMINAL LUMEN RANGE	ESD Available	ED1 Available	347v Available	347 with ESD Available	347 with ED1 Available
2'	VW	2,145 - 2,708	Y	Y	Y	N/A	Y
	LW	2,738 - 3,529	Y	Y	Y	N/A	Y
	ML	3,862 - 4,921	Y	Y	Y	N/A	Y
	HL	4,254 - 5,416	Y	Y	Y	N/A	Y
4'	VW	2,802 - 3,433	Y	Y	Y	N/A	Y
	LW	3,726 - 4,922	N/A	Y	Y	N/A	Y
	ML	4,533 - 5,646	N/A	Y	Y	N/A	Y
	HL	5,449 - 6,763	Y	Y	Y	N/A	Y
	VL	7,086 - 8,415	Y	Y	Y	N/A	N/A
	XL	9,059 - 11,237	N/A	Y	Y	N/A	N/A
8'	VW	6,078 - 6,866	Y	Y	Y	N/A	Y
	LW	8,095 - 9,276	N/A	Y	Y	N/A	Y
	ML	9,844 - 11,293	N/A	Y	Y	N/A	Y
	HL	11,851 - 13,525	Y	Y	Y	N/A	Y
	VL	14,747 - 16,830	Y	Y	Y	N/A	N/A
	XL	19,558 - 22,473	N/A	Y	Y	N/A	N/A

MAX. AMBIENT OPERATING TEMP.							
LENGTH	OUTPUT	NOMINAL LUMEN RANGE	WATTS	LPW	MAX AMBIENT OPERATING TEMPERATURE (C°) (UNIVERSAL VOLTAGE)	ELL14 (WITH UNIVERSAL VOLTAGE)	347v
2'	VW	2,145 - 2,708	21	102 - 130	40	NA	35
	LW	2,738 - 3,529	26	105 - 135	40	NA	35
	ML	3,862 - 4,921	39	100 - 128	40	NA	35
	HL	4,254 - 5,416	44	97 - 123	35	NA	30
4'	VW	2,802 - 3,433	25	114 - 141	50	45	45
	LW	3,726 - 4,922	33	112 - 139	50	45	45
	ML	4,533 - 5,646	42	108 - 134	50	45	45
	HL	5,449 - 6,763	47	115 - 143	45	45	35
	VL	7,086 - 8,415	62	115 - 136	40	40	35
	XL	9,059 - 11,237	92	99 - 123	30	NA	25
8'	VW	6,078 - 6,866	49	124-141	50	45	45
	LW	8,095 - 9,276	67	122 - 139	50	45	45
	ML	9,844 - 11,293	84	117 - 134	50	45	45
	HL	11,851 - 13,525	95	125 - 143	45	45	35
	VL	14,747 - 16,830	123	120 - 136	40	40	35
	XL	19,558 - 22,473	183	107 - 123	30	NA	25

Columbia
LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

LXEM PREDICTED LIFE					LUMEN MAINTENANCE		
CALCULATED HOURS	LENGTH	OUTPUT	NOMINAL LUMEN RANGE	AMBIENT OPERATING TEMPERATURE (C°)	L70	L80	L90
	2'	VW	2,145 - 2,708	25	393,000	245,000	115,000
				40	207,000	128,000	58,000
		LW	2,738 - 3,529	25	393,000	245,000	115,000
				40	207,000	128,000	58,000
		ML	3,862 - 4,921	25	282,000	174,000	79,000
				40	207,000	128,000	58,000
		HL	4,254 - 5,416	25	232,000	143,000	65,000
				35	175,000	105,000	42,000
	4'	VW	2,802 - 3,433	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		LW	3,726 - 4,922	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		ML	4,533 - 5,646	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		HL	5,449 - 6,763	25	322,000	198,000	90,000
				45	282,000	174,000	79,000
		VL	7,086 - 8,415	25	322,000	198,000	90,000
				40	228,000	140,000	63,000
		XL	9,059 - 11,237	25	266,000	164,000	74,000
				30	240,000	148,000	67,000
	8'	VW	6,078 - 6,866	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		LW	8,095 - 9,276	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		ML	9,844 - 11,293	25	322,000	198,000	90,000
				50	257,000	159,000	72,000
		HL	11,851 - 13,525	25	322,000	198,000	90,000
				45	282,000	174,000	79,000
		VL	14,747 - 16,830	25	322,000	198,000	90,000
				40	228,000	140,000	63,000
		XL	19,558 - 22,473	25	266,000	164,000	74,000
				30	240,000	148,000	67,000

Columbia

LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-30VW-RFP-EDU	Very Low Watt	30K	RFP	2,145	21.1	101.6	40°C
LXEM2-30VW-RA-EDU			RA	2,365	20.8	113.7	40°C
LXEM2-30VW-RP-EDU			RP	2,373	20.8	114.1	40°C
LXEM2-30VW-RFA-EDU			RFA	2,448	20.8	117.7	40°C
LXEM2-30VW-DFA-EDU			DFA	2,467	20.8	118.6	40°C
LXEM2-30VW-DCA-EDU			DCA	2,512	20.8	120.8	40°C
LXEM2-35VW-RFP-EDU		35K	RFP	2,217	21.1	105.1	40°C
LXEM2-35VW-RA-EDU			RA	2,446	20.8	117.6	40°C
LXEM2-35VW-RP-EDU			RP	2,454	20.8	118.0	40°C
LXEM2-35VW-RFA-EDU			RFA	2,531	20.8	121.7	40°C
LXEM2-35VW-DFA-EDU			DFA	2,551	20.8	122.6	40°C
LXEM2-35VW-DCA-EDU			DCA	2,598	20.8	124.9	40°C
LXEM2-40VW-RFP-EDU		40K	RFP	2,252	21.1	106.7	40°C
LXEM2-40VW-RA-EDU			RA	2,484	20.8	119.4	40°C
LXEM2-40VW-RP-EDU			RP	2,492	20.8	119.8	40°C
LXEM2-40VW-RFA-EDU			RFA	2,571	20.8	123.6	40°C
LXEM2-40VW-DFA-EDU			DFA	2,590	20.8	124.5	40°C
LXEM2-40VW-DCA-EDU			DCA	2,638	20.8	126.8	40°C
LXEM2-50VW-RFP-EDU		50K	RFP	2,312	21.1	109.6	40°C
LXEM2-50VW-RA-EDU			RA	2,550	20.8	122.6	40°C
LXEM2-50VW-RP-EDU			RP	2,558	20.8	123.0	40°C
LXEM2-50VW-RFA-EDU			RFA	2,639	20.8	126.9	40°C
LXEM2-50VW-DFA-EDU			DFA	2,659	20.8	127.8	40°C
LXEM2-50VW-DCA-EDU			DCA	2,708	20.8	130.2	40°C
LXEM2-30LW-RFP-EDU	Low Watt	30K	RFP	2,738	26.0	105.3	40°C
LXEM2-30LW-RP-EDU			RP	3,049	26.1	116.8	40°C
LXEM2-30LW-RA-EDU			RA	3,144	26.0	120.9	40°C
LXEM2-30LW-RFA-EDU			RFA	3,180	26.2	121.4	40°C
LXEM2-30LW-DFA-EDU			DFA	3,239	26.1	124.1	40°C
LXEM2-30LW-DCA-EDU			DCA	3,273	26.1	125.4	40°C
LXEM2-35LW-RFP-EDU		35K	RFP	2,831	26.0	108.9	40°C
LXEM2-35LW-RP-EDU			RP	3,153	26.1	120.8	40°C
LXEM2-35LW-RA-EDU			RA	3,251	26.0	125.0	40°C
LXEM2-35LW-RFA-EDU			RFA	3,289	26.2	125.5	40°C
LXEM2-35LW-DFA-EDU			DFA	3,349	26.1	128.3	40°C
LXEM2-35LW-DCA-EDU			DCA	3,385	26.1	129.7	40°C
LXEM2-40LW-RFP-EDU		40K	RFP	2,875	26.0	110.6	40°C
LXEM2-40LW-RP-EDU			RP	3,202	26.1	122.7	40°C
LXEM2-40LW-RA-EDU			RA	3,302	26.0	127.0	40°C
LXEM2-40LW-RFA-EDU			RFA	3,339	26.2	127.5	40°C
LXEM2-40LW-DFA-EDU			DFA	3,401	26.1	130.3	40°C
LXEM2-40LW-DCA-EDU			DCA	3,437	26.1	131.7	40°C
LXEM2-50LW-RFP-EDU		50K	RFP	2,951	26.0	113.5	40°C
LXEM2-50LW-RP-EDU			RP	3,287	26.1	125.9	40°C

Columbia

LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-50LW-RA-EDU	Low Watt	50K	RA	3,390	26.0	130.4	40°C
LXEM2-50LW-RFA-EDU			RFA	3,428	26.2	130.9	40°C
LXEM2-50LW-DFA-EDU			DFA	3,492	26.1	133.8	40°C
LXEM2-50LW-DCA-EDU			DCA	3,529	26.1	135.2	40°C
LXEM2-30ML-RFP-EDU	Medium Lumen	30K	RFP	3,862	38.5	100.3	40°C
LXEM2-30ML-RP-EDU			RP	4,228	38.5	109.8	40°C
LXEM2-30ML-RFA-EDU			RFA	4,343	38.5	112.8	40°C
LXEM2-30ML-RA-EDU			RA	4,446	38.5	115.5	40°C
LXEM2-30ML-DFA-EDU			DFA	4,526	38.5	117.5	40°C
LXEM2-30ML-DCA-EDU			DCA	4,565	38.5	118.6	40°C
LXEM2-35ML-RFP-EDU		35K	RFP	3,993	38.5	103.7	40°C
LXEM2-35ML-RP-EDU			RP	4,371	38.5	113.5	40°C
LXEM2-35ML-RFA-EDU			RFA	4,490	38.5	116.6	40°C
LXEM2-35ML-RA-EDU			RA	4,597	38.5	119.4	40°C
LXEM2-35ML-DFA-EDU			DFA	4,680	38.5	121.5	40°C
LXEM2-35ML-DCA-EDU			DCA	4,720	38.5	122.6	40°C
LXEM2-40ML-RFP-EDU		40K	RFP	4,055	38.5	105.3	40°C
LXEM2-40ML-RP-EDU			RP	4,439	38.5	115.3	40°C
LXEM2-40ML-RFA-EDU			RFA	4,560	38.5	118.4	40°C
LXEM2-40ML-RA-EDU			RA	4,668	38.5	121.3	40°C
LXEM2-40ML-DFA-EDU			DFA	4,752	38.5	123.4	40°C
LXEM2-40ML-DCA-EDU			DCA	4,793	38.5	124.5	40°C
LXEM2-50ML-RFP-EDU		50K	RFP	4,163	38.5	108.1	40°C
LXEM2-50ML-RP-EDU			RP	4,558	38.5	118.4	40°C
LXEM2-50ML-RFA-EDU			RFA	4,682	38.5	121.6	40°C
LXEM2-50ML-RA-EDU			RA	4,793	38.5	124.5	40°C
LXEM2-50ML-DFA-EDU			DFA	4,879	38.5	126.7	40°C
LXEM2-50ML-DCA-EDU			DCA	4,921	38.5	127.8	40°C
LXEM2-30HL-RFP-EDU	High Lumen	30K	RFP	4,254	44.1	96.5	35°C
LXEM2-30HL-RP-EDU			RP	4,700	44.1	106.6	35°C
LXEM2-30HL-RA-EDU			RA	4,868	44.1	110.4	35°C
LXEM2-30HL-RFA-EDU			RFA	4,874	44.1	110.5	35°C
LXEM2-30HL-DFA-EDU			DFA	5,008	44.1	113.6	35°C
LXEM2-30HL-DCA-EDU			DCA	5,024	44.1	113.9	35°C
LXEM2-35HL-RFP-EDU		35K	RFP	4,399	44.1	99.7	35°C
LXEM2-35HL-RP-EDU			RP	4,860	44.1	110.2	35°C
LXEM2-35HL-RA-EDU			RA	5,033	44.1	114.1	35°C
LXEM2-35HL-RFA-EDU			RFA	5,040	44.1	114.3	35°C
LXEM2-35HL-DFA-EDU			DFA	5,179	44.1	117.4	35°C
LXEM2-35HL-DCA-EDU			DCA	5,195	44.1	117.8	35°C
LXEM2-40HL-RFP-EDU		40K	RFP	4,467	44.1	101.3	35°C
LXEM2-40HL-RP-EDU			RP	4,935	44.1	111.9	35°C
LXEM2-40HL-RA-EDU			RA	5,111	44.1	115.9	35°C
LXEM2-40HL-RFA-EDU			RFA	5,117	44.1	116.0	35°C

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PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-40HL-DFA-EDU	High Lumen	40K	DFA	5,259	44.1	119.2	35°C
LXEM2-40HL-DCA-EDU			DCA	5,275	44.1	119.6	35°C
LXEM2-50HL-RFP-EDU		50K	RFP	4,586	44.1	104.0	35°C
LXEM2-50HL-RP-EDU			RP	5,066	44.1	114.9	35°C
LXEM2-50HL-RA-EDU			RA	5,248	44.1	119.0	35°C
LXEM2-50HL-RFA-EDU			RFA	5,254	44.1	119.1	35°C
LXEM2-50HL-DFA-EDU			DFA	5,399	44.1	122.4	35°C
LXEM2-50HL-DCA-EDU			DCA	5,416	44.1	122.8	35°C
LXEM4-30VW-RFP-EDU	Very Low Watt	30K	RFP	2,802	24.5	114.4	50°C
LXEM4-30VW-RP-EDU			RP	2,938	24.4	120.4	50°C
LXEM4-30VW-RA-EDU			RA	3,039	24.4	124.6	50°C
LXEM4-30VW-RFA-EDU			RFA	3,048	24.5	124.4	50°C
LXEM4-30VW-DCA-EDU			DCA	3,180	24.4	130.3	50°C
LXEM4-30VW-DFA-EDU			DFA	3,184	24.4	130.5	50°C
LXEM4-35VW-RFP-EDU		35K	RFP	2,897	24.5	118.2	50°C
LXEM4-35VW-RP-EDU			RP	3,038	24.4	124.5	50°C
LXEM4-35VW-RA-EDU			RA	3,143	24.4	128.8	50°C
LXEM4-35VW-RFA-EDU			RFA	3,151	24.5	128.6	50°C
LXEM4-35VW-DCA-EDU			DCA	3,288	24.4	134.8	50°C
LXEM4-35VW-DFA-EDU			DFA	3,293	24.4	134.9	50°C
LXEM4-40VW-RFP-EDU		40K	RFP	2,942	24.5	120.1	50°C
LXEM4-40VW-RP-EDU			RP	3,085	24.4	126.4	50°C
LXEM4-40VW-RA-EDU			RA	3,191	24.4	130.8	50°C
LXEM4-40VW-RFA-EDU			RFA	3,200	24.5	130.6	50°C
LXEM4-40VW-DCA-EDU			DCA	3,339	24.4	136.8	50°C
LXEM4-40VW-DFA-EDU			DFA	3,344	24.4	137.0	50°C
LXEM4-50VW-RFP-EDU		50K	RFP	3,020	24.5	123.3	50°C
LXEM4-50VW-RP-EDU			RP	3,168	24.4	129.8	50°C
LXEM4-50VW-RA-EDU			RA	3,276	24.4	134.3	50°C
LXEM4-50VW-RFA-EDU			RFA	3,285	24.5	134.1	50°C
LXEM4-50VW-DCA-EDU			DCA	3,428	24.4	140.5	50°C
LXEM4-50VW-DFA-EDU			DFA	3,433	24.4	140.7	50°C
LXEM4-30LW-RFP-EDU	Low Watt	30K	RFP	3,726	33.3	111.9	50°C
LXEM4-30LW-RP-EDU			RP	3,872	33.3	116.3	50°C
LXEM4-30LW-RFA-EDU			RFA	4,048	33.3	121.5	50°C
LXEM4-30LW-RA-EDU			RA	4,054	33.3	121.8	50°C
LXEM4-30LW-DFA-EDU			DFA	4,241	33.3	127.4	50°C
LXEM4-30LW-DCA-EDU			DCA	4,303	33.3	129.2	50°C
LXEM4-35LW-RFP-EDU		35K	RFP	3,853	33.3	115.7	50°C
LXEM4-35LW-RP-EDU			RP	4,004	33.3	120.2	50°C
LXEM4-35LW-RFA-EDU			RFA	4,185	33.3	125.7	50°C
LXEM4-35LW-RA-EDU			RA	4,192	33.3	125.9	50°C
LXEM4-35LW-DFA-EDU			DFA	4,385	33.3	131.7	50°C
LXEM4-35LW-DCA-EDU			DCA	4,449	33.3	133.6	50°C

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PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-40LW-RFP-EDU	Low Watt	40K	RFP	3,912	33.3	117.5	50°C
LXEM4-40LW-RP-EDU			RP	4,066	33.3	122.1	50°C
LXEM4-40LW-RFA-EDU			RFA	4,250	33.3	127.6	50°C
LXEM4-40LW-RA-EDU			RA	4,257	33.3	127.8	50°C
LXEM4-40LW-DFA-EDU			DFA	4,453	33.3	133.7	50°C
LXEM4-40LW-DCA-EDU			DCA	4,518	33.3	135.7	50°C
LXEM4-50LW-RFP-EDU		50K	RFP	4,017	33.3	120.6	50°C
LXEM4-50LW-RP-EDU			RP	4,174	33.3	125.3	50°C
LXEM4-50LW-RFA-EDU			RFA	4,363	33.3	131.0	50°C
LXEM4-50LW-RA-EDU			RA	4,371	33.3	131.3	50°C
LXEM4-50LW-DFA-EDU			DFA	4,572	33.3	137.3	50°C
LXEM4-50LW-DCA-EDU			DCA	4,638	33.3	139.3	50°C
LXEM4-30ML-RFP-EDU	Medium Lumen	30K	RFP	4,533	41.9	108.2	50°C
LXEM4-30ML-RP-EDU			RP	4,714	41.9	112.5	50°C
LXEM4-30ML-RFA-EDU			RFA	4,922	42.0	117.2	50°C
LXEM4-30ML-RA-EDU			RA	4,924	42.0	117.2	50°C
LXEM4-30ML-DFA-EDU			DFA	5,160	42.0	122.9	50°C
LXEM4-30ML-DCA-EDU			DCA	5,238	42.0	124.7	50°C
LXEM4-35ML-RFP-EDU		35K	RFP	4,688	41.9	111.9	50°C
LXEM4-35ML-RP-EDU			RP	4,875	41.9	116.3	50°C
LXEM4-35ML-RFA-EDU			RFA	5,089	42.0	121.2	50°C
LXEM4-35ML-RA-EDU			RA	5,091	42.0	121.2	50°C
LXEM4-35ML-DFA-EDU			DFA	5,336	42.0	127.0	50°C
LXEM4-35ML-DCA-EDU			DCA	5,416	42.0	128.9	50°C
LXEM4-40ML-RFP-EDU		40K	RFP	4,760	41.9	113.6	50°C
LXEM4-40ML-RP-EDU			RP	4,950	41.9	118.1	50°C
LXEM4-40ML-RFA-EDU			RFA	5,168	42.0	123.1	50°C
LXEM4-40ML-RA-EDU			RA	5,170	42.0	123.1	50°C
LXEM4-40ML-DFA-EDU			DFA	5,418	42.0	129.0	50°C
LXEM4-40ML-DCA-EDU			DCA	5,500	42.0	130.9	50°C
LXEM4-50ML-RFP-EDU		50K	RFP	4,887	41.9	116.6	50°C
LXEM4-50ML-RP-EDU			RP	5,082	41.9	121.3	50°C
LXEM4-50ML-RFA-EDU			RFA	5,306	42.0	126.3	50°C
LXEM4-50ML-RA-EDU			RA	5,308	42.0	126.4	50°C
LXEM4-50ML-DFA-EDU			DFA	5,563	42.0	132.4	50°C
LXEM4-50ML-DCA-EDU			DCA	5,646	42.0	134.4	50°C
LXEM4-30HL-RFP-EDU	High Lumen	30K	RFP	5,449	47.4	115.0	45°C
LXEM4-30HL-RP-EDU			RP	5,648	47.2	119.7	45°C
LXEM4-30HL-RFA-EDU			RFA	5,926	47.4	125.0	45°C
LXEM4-30HL-RA-EDU			RA	5,932	47.3	125.4	45°C
LXEM4-30HL-DFA-EDU			DFA	6,214	47.3	131.4	45°C
LXEM4-30HL-DCA-EDU			DCA	6,273	47.4	132.4	45°C
LXEM4-35HL-RFP-EDU		35K	RFP	5,634	47.4	118.9	45°C
LXEM4-35HL-RP-EDU			RP	5,840	47.2	123.7	45°C

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PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-35HL-RFA-EDU	High Lumen	35K	RFA	6,127	47.4	129.3	45°C
LXEM4-35HL-RA-EDU			RA	6,133	47.3	129.7	45°C
LXEM4-35HL-DFA-EDU			DFA	6,425	47.3	135.8	45°C
LXEM4-35HL-DCA-EDU			DCA	6,487	47.4	136.9	45°C
LXEM4-40HL-RFP-EDU		40K	RFP	5,721	47.4	120.7	45°C
LXEM4-40HL-RP-EDU			RP	5,931	47.2	125.7	45°C
LXEM4-40HL-RFA-EDU			RFA	6,222	47.4	131.3	45°C
LXEM4-40HL-RA-EDU			RA	6,228	47.3	131.7	45°C
LXEM4-40HL-DFA-EDU		50K	DFA	6,525	47.3	137.9	45°C
LXEM4-40HL-DCA-EDU			DCA	6,587	47.4	139.0	45°C
LXEM4-50HL-RFP-EDU			RFP	5,874	47.4	123.9	45°C
LXEM4-50HL-RP-EDU			RP	6,089	47.2	129.0	45°C
LXEM4-50HL-RFA-EDU			RFA	6,388	47.4	134.8	45°C
LXEM4-50HL-RA-EDU			RA	6,394	47.3	135.2	45°C
LXEM4-50HL-DFA-EDU			DFA	6,699	47.3	141.6	45°C
LXEM4-50HL-DCA-EDU			DCA	6,763	47.4	142.7	45°C
LXEM4-30VL-RP-EDU	Very High Lumen	30K	RP	7,086	61.6	115.0	40°C
LXEM4-30VL-RA-EDU			RA	7,373	61.7	119.5	40°C
LXEM4-30VL-RFP-EDU			RFP	7,388	61.6	119.9	40°C
LXEM4-30VL-RFA-EDU			RFA	7,395	61.6	120.0	40°C
LXEM4-30VL-DFA-EDU			DFA	7,756	61.7	125.7	40°C
LXEM4-30VL-DCA-EDU			DCA	7,806	61.7	126.5	40°C
LXEM4-35VL-RP-EDU		35K	RP	7,327	61.6	118.9	40°C
LXEM4-35VL-RA-EDU			RA	7,624	61.7	123.6	40°C
LXEM4-35VL-RFP-EDU			RFP	7,639	61.6	124.0	40°C
LXEM4-35VL-RFA-EDU			RFA	7,646	61.6	124.1	40°C
LXEM4-35VL-DFA-EDU			DFA	8,020	61.7	130.0	40°C
LXEM4-35VL-DCA-EDU			DCA	8,072	61.7	130.8	40°C
LXEM4-40VL-RP-EDU		40K	RP	7,440	61.6	120.8	40°C
LXEM4-40VL-RA-EDU			RA	7,742	61.7	125.5	40°C
LXEM4-40VL-RFP-EDU			RFP	7,757	61.6	125.9	40°C
LXEM4-40VL-RFA-EDU			RFA	7,764	61.6	126.0	40°C
LXEM4-40VL-DFA-EDU			DFA	8,144	61.7	132.0	40°C
LXEM4-40VL-DCA-EDU			DCA	8,197	61.7	132.8	40°C
LXEM4-50VL-RP-EDU		50K	RP	7,639	61.6	124.0	40°C
LXEM4-50VL-RA-EDU			RA	7,948	61.7	128.8	40°C
LXEM4-50VL-RFP-EDU			RFP	7,964	61.6	129.3	40°C
LXEM4-50VL-RFA-EDU			RFA	7,971	61.6	129.4	40°C
LXEM4-50VL-DFA-EDU			DFA	8,361	61.7	135.5	40°C
LXEM4-50VL-DCA-EDU			DCA	8,415	61.7	136.4	40°C
LXEM4-30XL-RFP-EDU	Xtra High Lumen	30K	RFP	9,059	91.3	99.2	30°C
LXEM4-30XL-RP-EDU			RP	9,448	91.2	103.6	30°C
LXEM4-30XL-RFA-EDU			RFA	9,779	91.2	107.2	30°C
LXEM4-30XL-RA-EDU			RA	9,839	91.4	107.7	30°C


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PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-30XL-DFA-EDU	Xtra High Lumen	30K	DFA	10,358	91.4	113.3	30°C
LXEM4-30XL-DCA-EDU			DCA	10,424	91.5	113.9	30°C
LXEM4-35XL-RFP-EDU		35K	RFP	9,367	91.3	102.6	30°C
LXEM4-35XL-RP-EDU			RP	9,769	91.2	107.1	30°C
LXEM4-35XL-RFA-EDU			RFA	10,111	91.2	110.9	30°C
LXEM4-35XL-RA-EDU			RA	10,174	91.4	111.3	30°C
LXEM4-35XL-DFA-EDU			DFA	10,710	91.4	117.2	30°C
LXEM4-35XL-DCA-EDU			DCA	10,778	91.5	117.8	30°C
LXEM4-40XL-RFP-EDU		40K	RFP	9,512	91.3	104.2	30°C
LXEM4-40XL-RP-EDU			RP	9,920	91.2	108.8	30°C
LXEM4-40XL-RFA-EDU			RFA	10,268	91.2	112.6	30°C
LXEM4-40XL-RA-EDU			RA	10,331	91.4	113.0	30°C
LXEM4-40XL-DFA-EDU			DFA	10,876	91.4	119.0	30°C
LXEM4-40XL-DCA-EDU			DCA	10,945	91.5	119.6	30°C
LXEM4-50XL-RFP-EDU		50K	RFP	9,765	91.3	107.0	30°C
LXEM4-50XL-RP-EDU			RP	10,184	91.2	111.7	30°C
LXEM4-50XL-RFA-EDU			RFA	10,542	91.2	115.6	30°C
LXEM4-50XL-RA-EDU			RA	10,607	91.4	116.0	30°C
LXEM4-50XL-DFA-EDU			DFA	11,166	91.4	122.2	30°C
LXEM4-50XL-DCA-EDU			DCA	11,237	91.5	122.8	30°C
LXEM8-30VW-RA-EDU	Very Low Watt	30K	RA	6,078	48.8	124.6	50°C
LXEM8-30VW-RFA-EDU			RFA	6,096	49.0	124.4	50°C
LXEM8-30VW-DCA-EDU			DCA	6,360	48.8	130.3	50°C
LXEM8-30VW-DFA-EDU			DFA	6,369	48.8	130.5	50°C
LXEM8-35VW-RA-EDU		35K	RA	6,285	48.8	128.8	50°C
LXEM8-35VW-RFA-EDU			RFA	6,303	49.0	128.6	50°C
LXEM8-35VW-DCA-EDU			DCA	6,576	48.8	134.8	50°C
LXEM8-35VW-DFA-EDU			DFA	6,585	48.8	134.9	50°C
LXEM8-40VW-RA-EDU		40K	RA	6,382	48.8	130.8	50°C
LXEM8-40VW-RFA-EDU			RFA	6,400	49.0	130.6	50°C
LXEM8-40VW-DCA-EDU			DCA	6,678	48.8	136.8	50°C
LXEM8-40VW-DFA-EDU			DFA	6,687	48.8	137.0	50°C
LXEM8-50VW-RA-EDU		50K	RA	6,553	48.8	134.3	50°C
LXEM8-50VW-RFA-EDU			RFA	6,571	49.0	134.1	50°C
LXEM8-50VW-DCA-EDU			DCA	6,856	48.8	140.5	50°C
LXEM8-50VW-DFA-EDU			DFA	6,866	48.8	140.7	50°C
LXEM8-30LW-RFA-EDU	Low Watt	30K	RFA	8,095	66.6	121.5	50°C
LXEM8-30LW-RA-EDU			RA	8,109	66.6	121.8	50°C
LXEM8-30LW-DFA-EDU			DFA	8,482	66.6	127.4	50°C
LXEM8-30LW-DCA-EDU			DCA	8,605	66.6	129.2	50°C
LXEM8-35LW-RFA-EDU		35K	RFA	8,370	66.6	125.7	50°C
LXEM8-35LW-RA-EDU			RA	8,385	66.6	125.9	50°C
LXEM8-35LW-DFA-EDU			DFA	8,770	66.6	131.7	50°C
LXEM8-35LW-DCA-EDU			DCA	8,898	66.6	133.6	50°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40HL-RFA-EDU	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		


Columbia LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM8-40LW-RFA-EDU	Low Watt	40K	RFA	8,500	66.6	127.6	50°C
LXEM8-40LW-RA-EDU			RA	8,514	66.6	127.8	50°C
LXEM8-40LW-DFA-EDU			DFA	8,906	66.6	133.7	50°C
LXEM8-40LW-DCA-EDU			DCA	9,035	66.6	135.7	50°C
LXEM8-50LW-RFA-EDU		50K	RFA	8,727	66.6	131.0	50°C
LXEM8-50LW-RA-EDU			RA	8,741	66.6	131.3	50°C
LXEM8-50LW-DFA-EDU			DFA	9,143	66.6	137.3	50°C
LXEM8-50LW-DCA-EDU			DCA	9,276	66.6	139.3	50°C
LXEM8-30ML-RFA-EDU	Medium Lumen	30K	RFA	9,844	84.0	117.2	50°C
LXEM8-30ML-RA-EDU			RA	9,847	84.0	117.2	50°C
LXEM8-30ML-DFA-EDU			DFA	10,320	84.0	122.9	50°C
LXEM8-30ML-DCA-EDU			DCA	10,476	84.0	124.7	50°C
LXEM8-35ML-RFA-EDU		35K	RFA	10,179	84.0	121.2	50°C
LXEM8-35ML-RA-EDU			RA	10,182	84.0	121.2	50°C
LXEM8-35ML-DFA-EDU			DFA	10,671	84.0	127.0	50°C
LXEM8-35ML-DCA-EDU			DCA	10,832	84.0	128.9	50°C
LXEM8-40ML-RFA-EDU		40K	RFA	10,336	84.0	123.1	50°C
LXEM8-40ML-RA-EDU			RA	10,340	84.0	123.1	50°C
LXEM8-40ML-DFA-EDU			DFA	10,836	84.0	129.0	50°C
LXEM8-40ML-DCA-EDU			DCA	10,999	84.0	130.9	50°C
LXEM8-50ML-RFA-EDU		50K	RFA	10,612	84.0	126.3	50°C
LXEM8-50ML-RA-EDU			RA	10,616	84.0	126.4	50°C
LXEM8-50ML-DFA-EDU			DFA	11,125	84.0	132.4	50°C
LXEM8-50ML-DCA-EDU			DCA	11,293	84.0	134.4	50°C
LXEM8-30HL-RFA-EDU	High Lumen	30K	RFA	11,851	94.8	125.0	45°C
LXEM8-30HL-RA-EDU			RA	11,863	94.6	125.4	45°C
LXEM8-30HL-DFA-EDU			DFA	12,428	94.6	131.4	45°C
LXEM8-30HL-DCA-EDU			DCA	12,547	94.8	132.4	45°C
LXEM8-35HL-RFA-EDU		35K	RFA	12,254	94.8	129.3	45°C
LXEM8-35HL-RA-EDU			RA	12,267	94.6	129.7	45°C
LXEM8-35HL-DFA-EDU			DFA	12,851	94.6	135.8	45°C
LXEM8-35HL-DCA-EDU			DCA	12,973	94.8	136.9	45°C
LXEM8-40HL-RFA-EDU		40K	RFA	12,444	94.8	131.3	45°C
LXEM8-40HL-RA-EDU			RA	12,456	94.6	131.7	45°C
LXEM8-40HL-DFA-EDU			DFA	13,049	94.6	137.9	45°C
LXEM8-40HL-DCA-EDU			DCA	13,174	94.8	139.0	45°C
LXEM8-50HL-RFA-EDU		50K	RFA	12,776	94.8	134.8	45°C
LXEM8-50HL-RA-EDU			RA	12,789	94.6	135.2	45°C
LXEM8-50HL-DFA-EDU			DFA	13,397	94.6	141.6	45°C
LXEM8-50HL-DCA-EDU			DCA	13,525	94.8	142.7	45°C
LXEM8-30VL-RFA-EDU	Very High Lumen	30K	RA	14,747	123.4	119.5	40°C
LXEM8-30VL-RFA-EDU			RFA	14,789	123.2	120.0	40°C
LXEM8-30VL-DFA-EDU			DFA	15,512	123.4	125.7	40°C
LXEM8-30VL-DCA-EDU			DCA	15,613	123.4	126.5	40°C

Submitted by Lighting Associates		Catalog Number: LXEM4-40HL-RFA-EDU Notes:	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		

Columbia
LIGHTING

LXEM

Enclosed and Gasketed Fiberglass Extreme Environment / LED

PRODUCT AVAILABILITY

Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM8-35VL-RA-EDU	Very High	35K	RA	15,248	123.4	123.6	40°C
LXEM8-35VL-RFA-EDU			RFA	15,292	123.2	124.1	40°C
LXEM8-35VL-DFA-EDU			DFA	16,040	123.4	130.0	40°C
LXEM8-35VL-DCA-EDU			DCA	16,143	123.4	130.8	40°C
LXEM8-40VL-RA-EDU		40K	RA	15,484	123.4	125.5	40°C
LXEM8-40VL-RFA-EDU			RFA	15,529	123.2	126.0	40°C
LXEM8-40VL-DFA-EDU			DFA	16,288	123.4	132.0	40°C
LXEM8-40VL-DCA-EDU			DCA	16,393	123.4	132.8	40°C
LXEM8-50VL-RA-EDU		50K	RA	15,897	123.4	128.8	40°C
LXEM8-50VL-RFA-EDU			RFA	15,943	123.2	129.4	40°C
LXEM8-50VL-DFA-EDU			DFA	16,722	123.4	135.5	40°C
LXEM8-50VL-DCA-EDU			DCA	16,830	123.4	136.4	40°C
LXEM8-30XL-RFA-EDU	Xtra High Lumen	30K	RFA	19,558	182.4	107.2	30°C
LXEM8-30XL-RA-EDU			RA	19,678	182.8	107.7	30°C
LXEM8-30XL-DFA-EDU			DFA	20,716	182.8	113.3	30°C
LXEM8-30XL-DCA-EDU			DCA	20,847	183.0	113.9	30°C
LXEM8-35XL-RFA-EDU		35K	RFA	20,223	182.4	110.9	30°C
LXEM8-35XL-RA-EDU			RA	20,348	182.8	111.3	30°C
LXEM8-35XL-DFA-EDU			DFA	21,420	182.8	117.2	30°C
LXEM8-35XL-DCA-EDU			DCA	21,556	183.0	117.8	30°C
LXEM8-40XL-RFA-EDU		40K	RFA	20,536	182.4	112.6	30°C
LXEM8-40XL-RA-EDU			RA	20,662	182.8	113.0	30°C
LXEM8-40XL-DFA-EDU			DFA	21,752	182.8	119.0	30°C
LXEM8-40XL-DCA-EDU			DCA	21,889	183.0	119.6	30°C
LXEM8-50XL-RFA-EDU		50K	RFA	21,083	182.4	115.6	30°C
LXEM8-50XL-RA-EDU			RA	21,213	182.8	116.0	30°C
LXEM8-50XL-DFA-EDU			DFA	22,332	182.8	122.2	30°C
LXEM8-50XL-DCA-EDU			DCA	22,473	183.0	122.8	30°C

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**

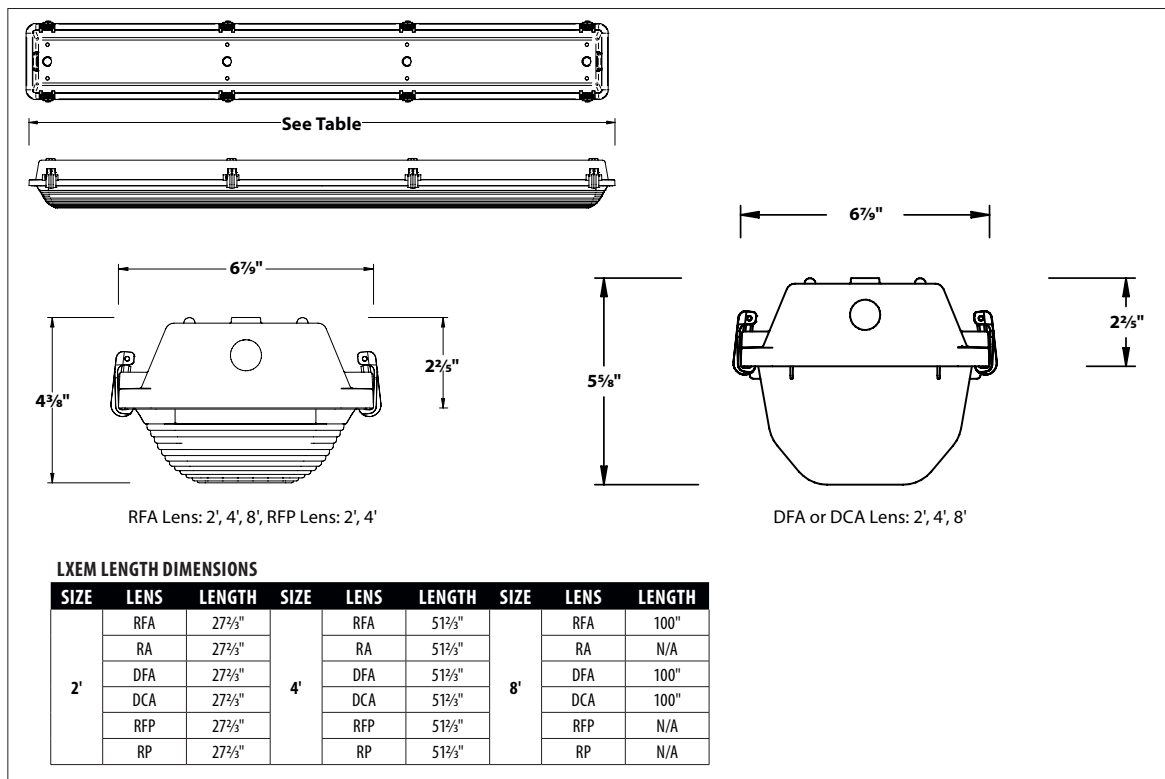
LXEM4-40HL-RFA-EDU

Notes:

Type:

LAIHOU18-45878

Columbia
LIGHTING

LXEM
Enclosed and Gasketed Fiberglass Extreme Environment / LED
DIMENSIONAL DATA

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.





LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LBIL4-40ML-EDU

Notes:

Type:

LAIHOU18-45878

Columbia
LIGHTING

LED

createchange

INTERACTIVE MENU

- Ordering Guide
- Product Availability Tables
- Photometric Data
- Dimensional Data

PROJECT INFORMATION

Project Name

Catalog No.

Type

Date

FEATURES

- Energy saving luminaire with integrated occupancy controls
- Long-life 50,000 hour LEDs at L70 for reduced maintenance
- Choice of four lumen packages
- Occupancy controlled dimming of the LEDs increases energy savings while maintaining base light levels in stairwells at all times
- Tool-less access to ballast for ease of maintenance
- Can be surface mounted, wall mounted, or suspended
- Fail safe operation switches light level to 100% if sensor is damaged
- Optional battery backup available for emergency egress applications
- 5 year warranty (terms and conditions apply)

**LBIL****HOUSING**

White painted steel housing.

ELECTRICAL

Long-life LEDs are rated for 50,000 hours at L70 lumen maintenance. Driver options include fixed output for on/off function or continuous 0-10V dimming.

LENS

Highly efficient acrylic lens with a linear refractive pattern for even illumination and excellent LED obscuration.

OCCUPANCY SENSOR

Hubbell Control Solutions internally mounted Passive Infrared Occupancy sensor standard. LED indicator for easy verification of coverage. Lens has a 1500 square-foot, 360° coverage area at a mounting height of 10 ft, and a 2:1 radius to height ratio coverage pattern. Sensor includes an adjustable time delay, and motion/ photocell sensitivity time delay, and motion/photocell sensitivity.

CERTIFICATION


All luminaires are built to UL1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 standards.

WARRANTY

5 year warranty (terms and conditions apply).



HUBBELL
Lighting

Submitted by Lighting Associates		Catalog Number: LBIL4-40ML-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Notes:	LAIHOU18-45878

Columbia LIGHTING

LBIL LED Bi-Level Luminaire with Controls

ORDERING INFORMATION


EXAMPLE LBIL4-35LW-EDU

YOUR ORDER LBIL - - U -

LBIL	-	-	-	-	U	-
MODEL	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
LBIL LED Bi-Level Luminaire	2 2'	30 3000K	VW Very Low Watt (2' only)	E Fixed Output	U 120V-277V	ELL14 Emergency Battery Pack Installed, 1400 Lumens ¹
	4 4'	35 3500K	MW Medium Low Watt (2' only)	ED 0-10V Dimming		C6TL15 6' Cord and Twist-Lock Plug 15A (Add Voltage: 1=120, 2=277)
	8 8'	40 4000K	LW Low Watt			C6TL20 6' Cord and Twist-Lock Plug 20A (Add Voltage: 1=120, 2=277)
		50 5000K	ML Medium Lumen			C6P151 6' Cord and Straight Blade Plug 15A, 120V
						VH (2) V-Hangers
						NS No Sensor
						US Ultrasonic Sensor (Fixed Output Only), WS
						DH-SL Digital Dimming Low-Bay Sensor, WS ²

¹ Not available with 2'

² Sensor programming module sold separately, SCP-REMOTE

Submitted by Lighting Associates		Catalog Number: LBIL4-40ML-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		
		Notes:	LAIHOU18-45878

Columbia
LIGHTING

LBIL
LED Bi-Level Luminaire with Controls

Product Availability			
Lumen Package	Lumens	Input Watts	Efficacy
LBIL-2-30VW-EU	1654	15	114
LBIL-2-35VW-EU	1684	15	116
LBIL-2-40VW-EU	1706	15	118
LBIL-2-50VW-EU	1762	15	122
LBIL-2-30MW-EU	1973	18	111
LBIL-2-35MW-EU	2009	18	113
LBIL-2-40MW-EU	2034	18	114
LBIL-2-50MW-EU	2101	18	118
LBIL-2-30LW-EU	3026	27	112
LBIL-2-35LW-EU	3081	27	115
LBIL-2-40LW-EU	3120	27	116
LBIL-2-50LW-EU	3223	27	120
LBIL-4-30LW-EU	2959	24	124
LBIL-4-35LW-EU	3012	24	127
LBIL-4-40LW-EU	3051	24	128
LBIL-4-50LW-EU	3151	24	132
LBIL-4-30ML-EU	4997	42	118
LBIL-4-35ML-EU	5087	42	121
LBIL-4-40ML-EU	5152	42	122
LBIL-4-50ML-EU	5322	42	126
LBIL-8-30LW-EU	5918	48	124
LBIL-8-35LW-EU	6024	48	127
LBIL-8-40LW-EU	6102	48	128
LBIL-8-50LW-EU	6302	48	132
LBIL-8-30ML-EU	9994	84	118
LBIL-8-35ML-EU	10174	84	121
LBIL-8-40ML-EU	10304	84	122
LBIL-8-50ML-EU	10644	84	126

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**
LBIL4-40ML-EDU

Notes:

Type:

LAIHOU18-45878

Columbia

LIGHTING

LBIL

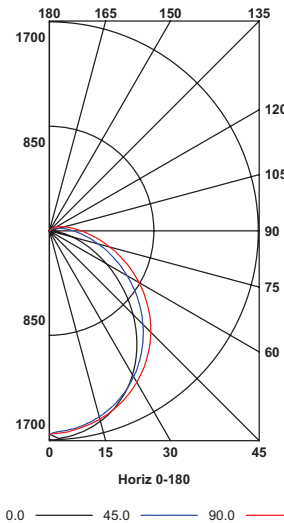
LED Bi-Level Luminaire with Controls

PHOTOMETRIC DATA

Test #19318 Test Date 5/3/2017

LUMINAIRE DATA

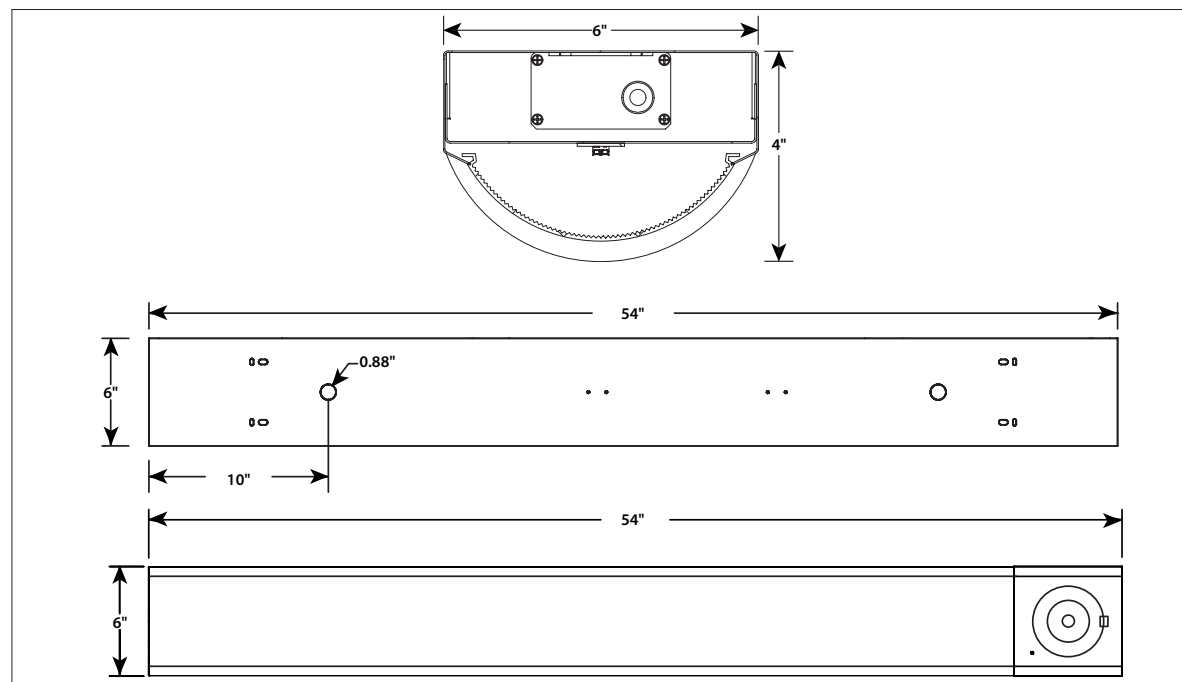
Luminaire	LBIL-4-40ML-EU
	LBIL LED Bi-Level Luminaire, Surface
	4' LED Bi-Level Luminaire with Controls
Ballast	OT50W/PRG1400C/UNV/DIM/L
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5152
Watts	42.20
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.21 90° = 1.28
Luminous Opening in Feet	Length: 4.00 Width: 0.42 Height: 0.00

INDOOR CANDELA PLOT**ENERGY DATA**


Total Luminaire Efficiency	100.0%
Total Lumens per Watt	122
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.95 based on 3000 hrs. and \$0.08 per KWH

ZONAL LUMEN SUMMARY


Zone	Lumens	% Lamp	% Fixt.
0-30	1273	24.7	24.7
0-40	2076	40.3	40.3
0-60	3641	70.7	70.7
0-90	4880	94.7	94.7
0-180	5152	100.0	100.0

DIMENSIONAL DATA

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

Submitted by Lighting Associates		Catalog Number: COULD NOT FIND PRODUCT INFORMATION Notes:	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		LAIHOU18-45878
<div>COULD NOT FIND PRODUCT INFORMATION</div>			

Submitted by Lighting Associates	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Catalog Number: CL1-A-90LU-4K-X-105-FINISH ON 20' STRAIGHT SQUARE STEEL POLE Notes:	Type: LAIHOU18-45878
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CIMARRON LED	Cat.#		
	Job	Type	

SPECIFICATIONS

Construction:

- Stylish vertically finned die-cast solid top housing for maximum heat dissipation; Stops collection of unsightly debris from gathering on top of the housing
- Rugged lower die-cast aluminum heat sink accelerates thermal management and optimizes PCB and optical performance
- Separate optical and electrical compartment for optimum component operation
- One piece die cut silicone gasket ensures weather proof seal around each individual LED for IP65 rating
- Backlight Control (BC) option available for 85% spill light reduction, doesn't change fixture appearance or EPA, recommended for Type III and Type IV distributions
- Stamped bezel provides mechanical compression to seal the optical assembly
- Complements the Hubbell Southwest series of outdoor fixtures
- Weight - 45.0 pounds, EPA - 1.3 ft²
- Suitable for applications requiring 3G testing prescribed by ANSI C136.31

Optics:

- Choice of 72 high brightness LED configurations with individual acrylic lenses specially designed for IES Type II, III, IV and V distributions
- Auto optics designed for front row 1A and interior rows 2A (see distribution under ordering and page 2)
- CCT: 3000K (80 CRI), 4000K (70 CRI), 5000K (70 CRI), and turtle friendly Amber LED options

Electrical:

- Universal input voltage 120-277 VAC, 50/60 Hz
- Integral step-down transformer for 347V & 480V
- Ambient operating temperature -40° C to 40° C
- Automatic thermal self-protection
- Drivers have greater than 90% power factor and less than 10% THD
- Optional continuous dimming to 10% or dual circuitry available

- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- 1050 mA driver available with 90L configuration for increased lumen output
- LED electrical assembly, including PR devices, consumes no power in the 'off' state
- Surge protection – 20KA; Turns fixture off at end of life; Includes LED for end of life indication (see surge suppressor page 4)

Controls:

- Drivers are 0-10V dimming standard. Photocell, occupancy sensor and wireless controls available for complete on/off and dimming control

Lumen maintenance:

- L90 at 60,000 hours (Projected per IESNA TM-21-11)

Installation:

- Two die-cast aluminum arm designs: The decorative arm offers a sleek upswept look while the straight arm follows the housing's contoured lines for continuity of style
- Fixture ships with arm installed for ease of installation and mounts to #2 drill pattern
- Wall bracket, mast arm fitter and pole accessories are also available allowing easy mounting for virtually any application

Finish:

- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

Warranty:

- Five year limited warranty (for more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>)

Listings:

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations
- Models meet DesignLights Consortium (DLC) qualifications, consult DLC website for more details: <http://www.designlights.org/QPL>
- IDA approved • IP65

PRODUCT IMAGE(S)



90 LED 3/4 VIEW



30 LED

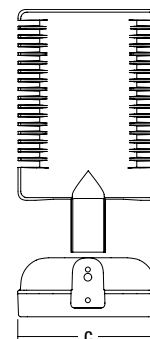
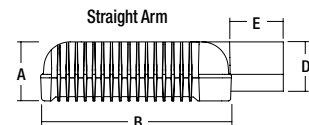
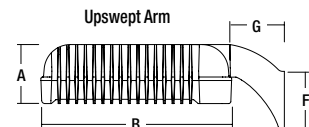


60 LED



90 LED

DIMENSIONS



A	B	C	D	E	F	G
6 3/4"	21 3/4"	16"	6 5/8"	6 5/16"	5 5/8"	6 1/8"
171mm	552mm	406mm	168mm	160mm	143mm	155mm

CERTIFICATIONS/LISTINGS



*3000K and warmer CCTs only

ORDERING INFORMATION SEE NEXT PAGE




Spaulding Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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Submitted by Lighting Associates	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Catalog Number: CL1-A-90LU-4K-X-105-FINISH ON 20' STRAIGHT SQUARE STEEL POLE Notes:	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.			

ORDERING INFORMATION ORDERING EXAMPLE: CL1-A-90LU-5K-3-DB-RPA3

SERIES	NO. OF LEDs	VOLTAGE	CCT	DRIVE CURRENT	OPTIONS
CL1 Cimarron LED	90L 90 High brightness LEDs 60L 60 High brightness LEDs 30L 30 High brightness LEDs	U* Universal 120V-277V, 50/60 Hz 1 120V 2 208V 3 240V 4 277V 5 480V, 60 Hz F 347V, 60 Hz E* 220V, 50 Hz	3K 3000K 4K 4000K 5K 5000K AM* Amber (590 nm available for "Turtle Friendly" applications (consult factory))	Leave blank for 700mA (standard) 035 350mA Amber CCT only 105 1050 mA (Not for use with 30L)	BC* Backlight control CD Continuous dimming WB Wall bracket RPA3 3" Round pole adapter RPA4 4" Round pole adapter RPA5 5" Round pole adapter RPA6 6" Round pole adapter F(X)* Fusing (replace X with voltage: 1-120V, 2-208V, 3-240V, 4-277V, 5-480V, F-347V) VG Vandal guard 7PR Photocell receptacle (7-pin ANSI C136.41—2013 receptacle for use with standard Twist-Lock® photo controls, shorting caps, and ANSI C136.41 external wireless control devices. Select SCL option to add occupancy sensing capability when using with compatible external wireless devices.
MOUNTING					
A Arm mount construction (6" straight rigid arm included & acceptable for 90° configurations) AD Decorative arm mount const. (6" decorative upswept arm incl. & acceptable for 90° configurations) MAF Mast arm fitter for mounting to standard 2 3/8" mast arm bracket, includes 6" straight rigid arm					
DISTRIBUTION					
		2 Type II 3 Type III 4 Type IV 5M Type V Medium 5S Type V Short 5W Type V Wide 2L Type II Rotated 90° left 3L Type III Rotated 90° left 4L Type IV Rotated 90° left 2R Type II Rotated 90° right 3R Type III Rotated 90° right 4R Type IV Rotated 90° right 1A Auto Front Row Type I 1AR Auto Front Row Type I Rotated 90° right 1AL Auto Front Row Type I Rotated 90° left 2A Auto Front Row Type II 2AR Auto Front Row Type II Rotated 90° right 2AL Auto Front Row Type II Rotated 90° left		COLOR DB Dark Bronze BL Black WH White GR Gray PS Platinum Silver RD Red (premium color) FG Forest Green (premium color) CC Custom Color	

Notes: 1 - Fuse option not available with universal voltage
2 - Select F3 fusing option for 220V
3 - Recommended for Type III and IV distributions only
4 - Available in 350mA drive current only Type IV, 5M
5 - 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, must order minimum of one SCP-REMOTE control to program dimming settings (see accessories)
6 - Not available with AD arm
7 - Not available with WIR or WIRSC
8 - Not available with SCO, SCL, SCP or SCPW

CONTROLS GUIDE

As energy codes become more restrictive and we push for sustainable lighting designs, the integration of lighting controls and luminaires have become more and more important. Hubbell Lighting offers numerous outdoor lighting controls solutions for the most demanding applications. Visit the link below to learn more about energy-saving controls.

www.hubbellighting.com/solutions/controls/

PIR MOTION/OCCUPANCY CONTROL OPTIONS

- SCO**^{6,7} On/Off control (line voltage device not for use with 7PR receptacle option and external wireless control devices)
- SCL**^{6,7} Add-on occupancy sensor for use with ext. wireless control device connected thru 7PR receptacle. Consult control manufacturer for compatibility.
- SCP**^{5,6,7} Programmable dimming control (line voltage device not for use with 7PR receptacle option and external wireless control devices). A minimum of one SCP-REMOTE accessory remote control required for configuration; (Standard lens with greater sensitivity; motion detection radius equal to .75 X luminaire mounting height (approx. distance))
- SCPW**^{5,6,7} Programmable dimming control (line voltage device not for use with 7PR receptacle option and external wireless control devices); A minimum of one SCP-REMOTE accessory remote control required for configuration. (Wide lens with motion detection radius equal to 1.3 X luminaire mounting height (approx. distance))

WIRELESS CONTROL OPTIONS

- WIR**⁸ wiSCAPE Fixture Module, in-fixture relay for wireless lighting control
- WIRSC**⁸ wiSCAPE Fixture Module, in-fixture relay for wireless lighting control and motion/occupancy control

AUTOMOTIVE DEALERSHIP OPTICS

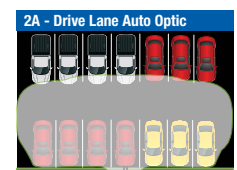
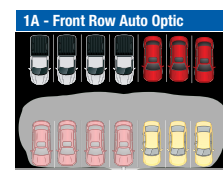
For Automotive Dealership applications Spaulding Lighting has developed two optics designed for enhanced and proper lighting of the auto dealership merchandise and the front row 1A and interior rows 2A (See CL1 distribution information for details)

Optic 1A

- Maximum illumination on front row display
- Maximum pole spacing

Optic 2A

- Excellent front row illumination and drive lane
- Optimal uniformity for drive lane and interior rows



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CL1LED-SPEC December 19, 2017 9:57 AM



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

CL1-A-90LU-4K-X-105-FINISH ON 20'
STRAIGHT SQUARE STEEL POLE

Notes:

Type:

LAIHOU18-45878

ENERGY SAVING DATA

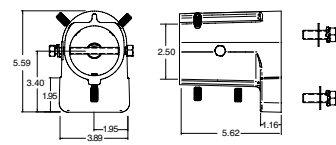
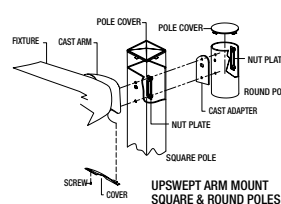
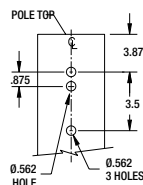
#LEDS	DRIVE CURRENT	SYSTEM WATTS		DIST. TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
		120- 277V	347- 480V		LUMENS	LPW'	B	U	G	LUMENS	LPW'	B	U	G	LUMENS	LPW'	B	U	G
30	700 mA	70W	80W	1A	8244	118	1	0	1	8162	117	1	0	1	6775	97	1	0	1
				2A	8202	117	1	0	1	8121	116	1	0	1	6740	96	1	0	1
				2	7715	110	2	0	3	7639	109	2	0	2	6340	91	2	0	2
				3	7712	110	2	0	2	7635	109	2	0	2	6371	91	1	0	2
				4	7803	111	1	0	2	7726	110	1	0	2	6412	92	1	0	2
				5S	8374	120	3	0	0	8291	118	3	0	0	6882	98	3	0	0
				5M	7940	113	3	0	1	7862	112	3	0	1	6525	93	3	0	1
				5W	7667	110	3	0	2	7591	108	3	0	2	6301	90	3	0	2
				1A	16171	120	1	0	2	16011	119	1	0	1	13289	98	1	0	1
				2A	16088	119	1	0	2	15929	118	1	0	2	13221	98	1	0	2
60	700 mA	135W	150W	2	15134	112	3	0	3	14984	111	3	0	3	12437	92	3	0	3
				3	15127	112	3	0	3	14977	111	3	0	3	12498	93	2	0	3
				4	15306	113	2	0	3	15154	112	2	0	3	12578	93	2	0	3
				5S	16426	122	4	0	0	16263	120	4	0	0	13498	100	4	0	0
				5M	15575	115	4	0	2	15421	114	4	0	2	12799	95	3	0	2
				5W	15040	111	4	0	3	14891	110	4	0	3	12360	92	4	0	3
				1A	21139	96	2	0	2	20929	95	2	0	2	17371	79	2	0	2
				2A	21030	96	2	0	2	20822	95	2	0	2	17282	79	2	0	2
				2	19783	90	4	0	5	19587	89	3	0	5	16257	74	3	0	5
				3	19774	90	3	0	4	19578	89	3	0	4	16250	74	3	0	4
60	1050 mA	220W	235W	4	20007	91	3	0	5	19809	90	3	0	5	16442	75	3	0	5
				5S	21471	98	5	0	0	21259	97	5	0	0	17645	80	5	0	0
				5M	20359	93	5	0	3	20158	92	5	0	3	16731	76	5	0	3
				5W	19660	89	5	0	4	19465	88	5	0	4	16156	73	5	0	4
				1A	23781	116	2	0	2	23546	115	2	0	2	19543	95	2	0	2
				2A	23659	115	2	0	2	23425	114	2	0	2	19443	95	2	0	2
				2	22255	109	3	0	4	22035	107	3	0	4	18289	89	3	0	4
				3	22246	109	3	0	4	22026	107	3	0	4	18379	90	3	0	3
				4	22509	110	3	0	4	22286	109	3	0	4	18497	90	2	0	4
				5S	24156	118	5	0	0	23916	117	5	0	0	19851	97	4	0	0
90	700 mA	205W	225W	5M	22905	112	4	0	2	22678	111	4	0	2	18823	92	4	0	2
				5W	22117	108	5	0	3	21899	107	5	0	3	18176	89	5	0	3
				1A	31708	98	2	0	2	31394	97	2	0	2	26057	80	2	0	2
				2A	31545	97	2	0	2	31233	96	2	0	2	25923	80	2	0	2
				2	29674	91	4	0	5	29380	90	3	0	5	24385	75	3	0	4
				3	29661	91	3	0	4	29367	90	3	0	4	24505	75	3	0	4
				4	30011	92	3	0	5	29714	91	3	0	5	24663	76	3	0	4
				5S	32207	99	5	0	0	31888	98	5	0	0	26467	81	5	0	0
				5M	30539	94	5	0	3	30237	93	5	0	3	25097	77	4	0	2
				5W	29490	91	5	0	4	29198	90	5	0	4	24234	75	5	0	4
90	1050 mA	325W	350W																

Amber					Drive Current	SYSTEM WATTS	
LUMENS	LPW'	B	U	G		120- 277V	#LEDS
					350 mA	135W	60
2488		0	0	1			
2533		2	0	1	350 mA	205W	90
3558		1	0	1			
3596		2	0	1			

ACCESSORIES/REPLACEMENT PARTS - Order Separately

Catalog Number	Description
CR-RPA3-XX'	Round pole adapter for straight arm (3/4" - 3/4")
CR-RPA4-XX'	Round pole adapter for straight arm (3/8" - 4 1/2")
CR-RPA5-XX'	Round pole adapter for straight arm (5")
CR-RPA6-XX'	Round pole adapter for straight arm (6")
CRD-RPA2-XX'	Round pole adapter for upswept arm (2 3/4" - 3 1/8")
CRD-RPA3-XX'	Round pole adapter for upswept arm (3/4" - 3/4")
CRD-RPA4-XX'	Round pole adapter for upswept arm (3/8" - 4 1/2")
CRD-RPA5-XX'	Round pole adapter for upswept arm (5")
CRD-RPA6-XX'	Round pole adapter for upswept arm (6")
WB-AREA-XX'	Wall bracket
TPLB-XX'	Twin parallel luminaire bracket
MAF-CL-XX'	Horizontal mast arm fitter for 2 3/8" OD arm. Mounts to standard 6" arm (ordered with fixture)

- 1 - Replace XX with color choice, eg.: DB for Dark Bronze
2 - When ordering poles, specify Pole Drill Pattern #2
3 - Fixture must include standard 6" arm



MAF - HORIZONTAL MAST ARM FITTER

#2 DRILL PATTERN FOR POLES



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LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

CL1-A-90LU-4K-X-105-FINISH ON 20'
STRAIGHT SQUARE STEEL POLE

Notes:

Type:

LAIHOU18-45878

MOUNTING ACCESSORIES

Catalog Number	Description
ARM-CL-K-TA-XX ¹	Adjustable mounting arm for single fixture (2-3/8 tenon) – 5 lbs. 2.3 kgs.
ARM-CL-TK-TA-XX ¹	Adjustable mounting arm for two fixtures at 180° (2-3/8 tenon) – 7 lbs. 3.2 kgs.
ARM-CL-K-S-XX ¹	10" adjustable arm – .5 lbs. .05 kgs. – 5.75 lbs. 2.6 kgs.

¹ Replace XX with color choice, eg.: DB for Dark Bronze
² Fixture must include standard 6" straight arm

ARM-CL-K-TA-XX
ARM-CL-TK-TA-XX



ARM-CL-K-S-XX

**TENON TOP POLE BRACKET ACCESSORIES**

(2 3/8" OD tenon) (RSS version requires 4" round pole adapter)

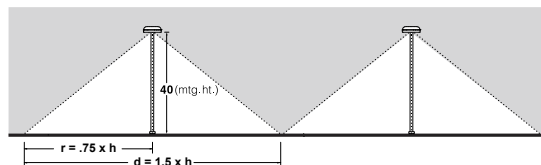
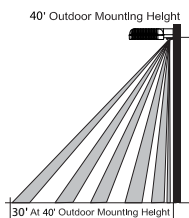
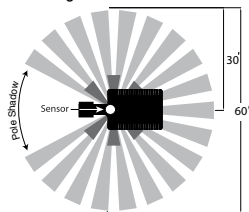
Catalog Number	Description
SETA2-XX ¹	Square pole tenon adapter (4 at 90 degrees)
RETA2-XX ¹	Round pole tenon adapter (4 at 90 degrees)
TETA-XX ¹	Hexagonal pole tenon adapter (3 at 120 degrees)

¹ Replace XX with color choice, eg.: DB for Dark Bronze**PHOTOCONTROL EQUIPMENT**

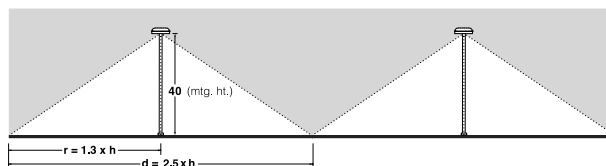
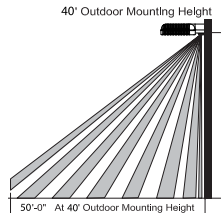
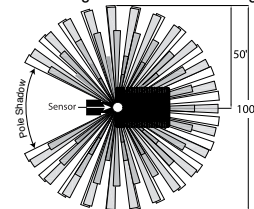
Catalog Number	Description
PTL-1	Photocontrol - twist-lock cell (120V)
PTL-8	Photocontrol - twist-lock cell (120-277V)
PTL-5	Photocontrol - twist-lock cell (480V)
PTL-6	Photocontrol - twist-lock cell (347V)
PSC	Shorting cap - twist-lock

MOTION CONTROLS

- Start up delay from initial motion detection to fixture illumination is approximately 1-2 seconds
- Vehicle detection is possible however less reliable than human detection; Vehicle detection is dependent upon the following: rate of speed, mounting height of luminaire and vehicle temperature

SCP - Designed for intermediate coverage area

Note: Extreme heat or cold temperatures may limit detection.

SCPW - Designed for widest coverage area

Note: Extreme heat or cold temperatures may limit detection.

SURGE PROTECTION

- Field replaceable surge protection device (SPD) provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3
- The SPD is designed with a clamping voltage of 1600V at 20KA using industry standard 8/20μs waveform
- Max surge current = 20,000 Amps (see table)
- LED Indicator – Green LED is unlit at end of life


Pulse Rating (8 x 20 μSec)	
Strikes	Surge
1	20,000 A
2	15,000 A
15	10,000 A
120	3,000 A

	cRUus	CE
I _n	10KA	5KA



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Submitted by Lighting Associates		Catalog Number:	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	NO PRODUCT INFO GIVEN. INSIGHT LIGHTING IS OUR EQUIVALENT TO CK Notes:	LAIHOU18-45878
<div>NO PRODUCT INFO GIVEN. INSIGHT LIGHTING IS EQUIVALENT TO CK</div>			



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LBIL4-40ML-EDU

Notes:

Type:

LAIHOU18-45878

Columbia
LIGHTING

LED

createchange

INTERACTIVE MENU

- Ordering Guide
- Product Availability Tables
- Photometric Data
- Dimensional Data

PROJECT INFORMATION

Project Name

Catalog No.

Type

Date

FEATURES

- Energy saving luminaire with integrated occupancy controls
- Long-life 50,000 hour LEDs at L70 for reduced maintenance
- Choice of four lumen packages
- Occupancy controlled dimming of the LEDs increases energy savings while maintaining base light levels in stairwells at all times
- Tool-less access to ballast for ease of maintenance
- Can be surface mounted, wall mounted, or suspended
- Fail safe operation switches light level to 100% if sensor is damaged
- Optional battery backup available for emergency egress applications
- 5 year warranty (terms and conditions apply)

**LBIL****HOUSING**

White painted steel housing.

ELECTRICAL

Long-life LEDs are rated for 50,000 hours at L70 lumen maintenance. Driver options include fixed output for on/off function or continuous 0-10V dimming.

LENS

Highly efficient acrylic lens with a linear refractive pattern for even illumination and excellent LED obscuration.

OCCUPANCY SENSOR

Hubbell Control Solutions internally mounted Passive Infrared Occupancy sensor standard. LED indicator for easy verification of coverage. Lens has a 1500 square-foot, 360° coverage area at a mounting height of 10 ft, and a 2:1 radius to height ratio coverage pattern. Sensor includes an adjustable time delay, and motion/ photocell sensitivity time delay, and motion/photocell sensitivity.

CERTIFICATION


All luminaires are built to UL1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 standards.

WARRANTY

5 year warranty (terms and conditions apply).



HUBBELL
Lighting

Submitted by Lighting Associates		Catalog Number: LBIL4-40ML-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		
		Notes:	LAIHOU18-45878

Columbia
LIGHTING

LBIL
LED Bi-Level Luminaire with Controls

ORDERING INFORMATION

EXAMPLE LBIL4-35LW-EDU


YOUR ORDER LBIL - - U -

LBIL	-	-	-	-	U	-
MODEL	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
LBIL LED Bi-Level Luminaire	2 2'	30 3000K	VW Very Low Watt (2' only)	E Fixed Output	U 120V-277V	ELL14 Emergency Battery Pack Installed, 1400 Lumens ¹
	4 4'	35 3500K	MW Medium Low Watt (2' only)	ED 0-10V Dimming		C6TL15 6' Cord and Twist-Lock® Plug 15A (Add Voltage: 1=120, 2=277)
	8 8'	40 4000K	LW Low Watt			C6TL20 6' Cord and Twist-Lock® Plug 20A (Add Voltage: 1=120, 2=277)
		50 5000K	ML Medium Lumen			C6P151 6' Cord and Straight Blade Plug 15A, 120V

¹ Not available with 2'

² Sensor programming module sold separately, SCP-REMOTE

VH (2) V-Hangers
NS No Sensor
US Ultrasonic Sensor (Fixed Output Only), WS
DH-SL Digital Dimming Low-Bay Sensor, WS²

Submitted by Lighting Associates		Catalog Number: LBIL4-40ML-EDU	Type:
 LIGHTING ASSOCIATES, INC.	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)		
		Notes:	LAIHOU18-45878

Columbia
LIGHTING

LBIL
LED Bi-Level Luminaire with Controls

Product Availability			
Lumen Package	Lumens	Input Watts	Efficacy
LBIL-2-30VW-EU	1654	15	114
LBIL-2-35VW-EU	1684	15	116
LBIL-2-40VW-EU	1706	15	118
LBIL-2-50VW-EU	1762	15	122
LBIL-2-30MW-EU	1973	18	111
LBIL-2-35MW-EU	2009	18	113
LBIL-2-40MW-EU	2034	18	114
LBIL-2-50MW-EU	2101	18	118
LBIL-2-30LW-EU	3026	27	112
LBIL-2-35LW-EU	3081	27	115
LBIL-2-40LW-EU	3120	27	116
LBIL-2-50LW-EU	3223	27	120
LBIL-4-30LW-EU	2959	24	124
LBIL-4-35LW-EU	3012	24	127
LBIL-4-40LW-EU	3051	24	128
LBIL-4-50LW-EU	3151	24	132
LBIL-4-30ML-EU	4997	42	118
LBIL-4-35ML-EU	5087	42	121
LBIL-4-40ML-EU	5152	42	122
LBIL-4-50ML-EU	5322	42	126
LBIL-8-30LW-EU	5918	48	124
LBIL-8-35LW-EU	6024	48	127
LBIL-8-40LW-EU	6102	48	128
LBIL-8-50LW-EU	6302	48	132
LBIL-8-30ML-EU	9994	84	118
LBIL-8-35ML-EU	10174	84	121
LBIL-8-40ML-EU	10304	84	122
LBIL-8-50ML-EU	10644	84	126

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**
LBIL4-40ML-EDU

Notes:

Type:

LAIHOU18-45878

Columbia

LIGHTING

LBIL

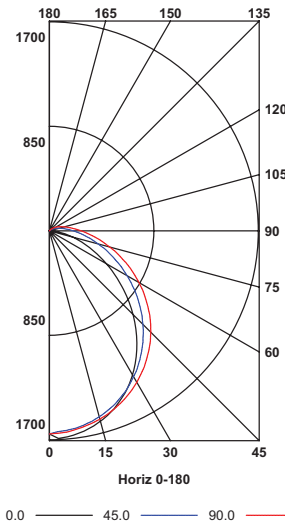
LED Bi-Level Luminaire with Controls

PHOTOMETRIC DATA

Test #19318 Test Date 5/3/2017

LUMINAIRE DATA

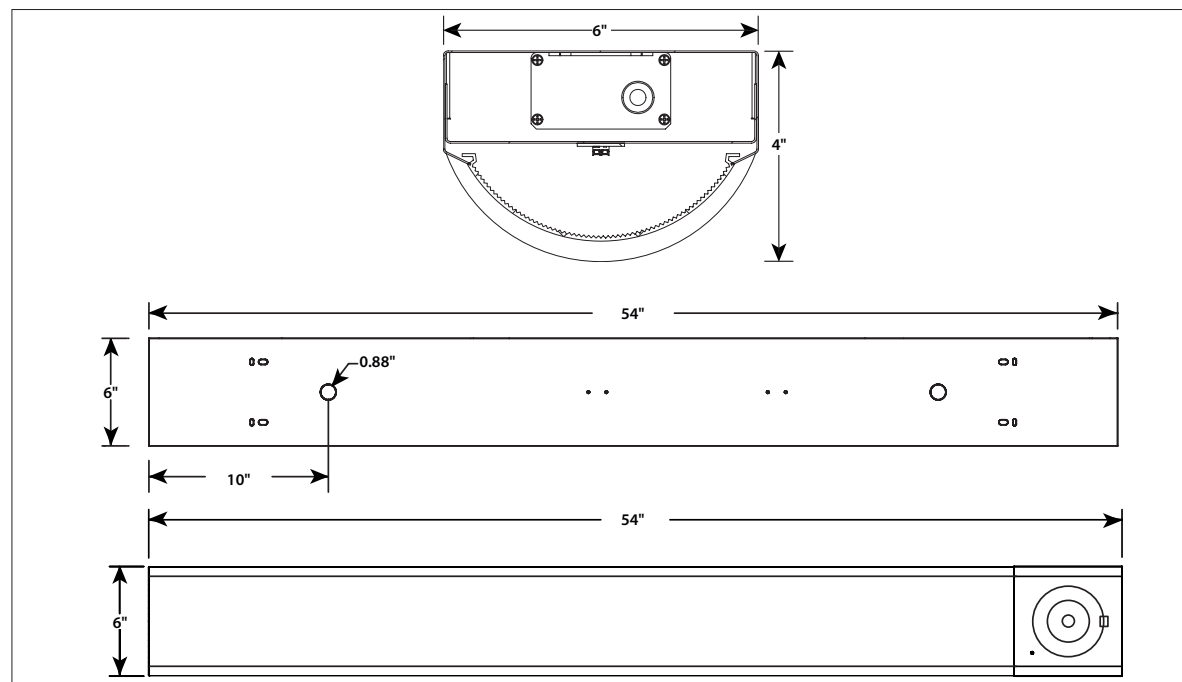
Luminaire	LBIL-4-40ML-EU
	LBIL LED Bi-Level Luminaire, Surface
	4' LED Bi-Level Luminaire with Controls
Ballast	OT50W/PRG1400C/UNV/DIM/L
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5152
Watts	42.20
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.21 90° = 1.28
Luminous Opening in Feet	Length: 4.00 Width: 0.42 Height: 0.00

INDOOR CANDELA PLOT**ENERGY DATA**

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	122
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.95 based on 3000 hrs. and \$0.08 per KWH

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1273	24.7	24.7
0-40	2076	40.3	40.3
0-60	3641	70.7	70.7
0-90	4880	94.7	94.7
0-180	5152	100.0	100.0

DIMENSIONAL DATA**NOTE:** All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

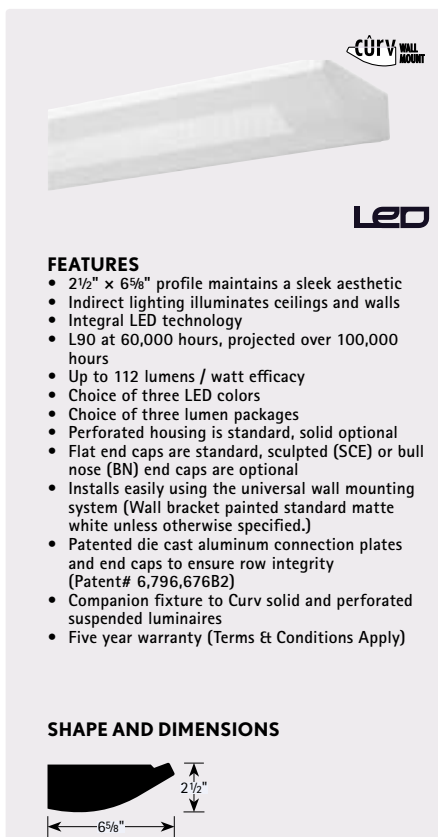
LCV-4-40-ML-S-WM-EDU-MW

Notes:**Type:**

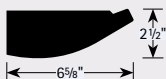
LAIHOU18-45878

**CÛRV LED WALL MOUNT**

LED, Indirect Distribution

**FEATURES**

- 2½" x 6⅝" profile maintains a sleek aesthetic
- Indirect lighting illuminates ceilings and walls
- Integral LED technology
- L90 at 60,000 hours, projected over 100,000 hours
- Up to 112 lumens / watt efficacy
- Choice of three LED colors
- Choice of three lumen packages
- Perforated housing is standard, solid optional
- Flat end caps are standard, sculpted (SCE) or bull nose (BN) end caps are optional
- Installs easily using the universal wall mounting system (Wall bracket painted standard matte white unless otherwise specified.)
- Patented die cast aluminum connection plates and end caps to ensure row integrity (Patent# 6,796,676B2)
- Companion fixture to Cûrv solid and perforated suspended luminaires
- Five year warranty (Terms & Conditions Apply)

SHAPE AND DIMENSIONS**PROJECT INFORMATION**

Project Name	Type
Catalog No.	Date

CONSTRUCTION

—Housing provides indirect distribution. When perforation option is selected glow consists of less than 5% direct light.

—Integral LED technology

—The exact shape of the housing is maintained by the use of an inner die cast plate at each fixture end.

—The housing is constructed of heavy 20-gauge steel and is designed to wrap around the end plates and secures on top with concealed screws to ensure housing tolerances are consistent. These die cast aluminum end caps and aligners provide zero tolerance alignment between fixtures, resulting in consistently straight rows with no snaking.

—Reflectors: standard with a painted white steel reflector with specular inserts on the side,

FINISH

The housing and all painted parts are treated with a multi-stage phosphate bonding process before being finished. Parts are then finished with a white powder coat finish for maximum consistent coverage and longevity.

MOUNTING

Cûrv's contractor-friendly universal mounting system allows for installation into existing studs and spaces the fixture away from the wall ½" to allow for wall variations.

—Brackets on the back of the luminaire easily slip onto the mounting system.

—Leveling screws are the final touch for that perfect installation.

—A 1¾" x 3" cutout is provided in the unit to feed from junction box.

—A cover plate is used to shield the exposed junction box.

LABELS AND ELECTRICAL

—All luminaires are built to UL1598 standards and bear appropriate CSA labels. Adheres to LM79 and LM80 standards. Damp location standard. Long life LED: L90 at 60,000 hours, projected over 100,000 hours.

ORDERING INFORMATION**EXAMPLE: LCV-8-35ML-PERF-WM-EDU-MW**

LCV	LED COLOR	LED LUMEN PACKAGE	MOUNTING METHOD	VOLTAGE	FINISH
MODEL LCV Cûrv LED	30 3000K 35 3500K 40 4000K	LW Low Watt ML Medium Lumen HL High Lumen	WM Wall Mount	U 120V-277V	MW Matte White (Std.) ZT ZET Metallic Silver See Color Selection Guide for other colors.
ROW LENGTH	HOUSING TYPE	BALLAST	OPTIONS		
4 4' Single 8 8' Single — Indicate row length over 8' in 4' increments	PERF Perforated S Solid	E Fixed Driver ED 0-10V Dimming	DC Dust Cover (N/A T5H0) ¹ SCE Sculpted End Cap (5½/16") ³ BN Bull Nose End Cap (5½/16") ³ GLR Fast Blow Fuse GTD Generator or Central Inverter supplied Lighting EMC One Emergency Circuit ^{1,2} NLC Night Light Circuit ^{1,2}		

Note: Rows over 8' will be configured by Alera. Example: 16' will be (2) 8'. Alternate configurations: contact factory.

PRODUCT AVAILABILITY TABLE, 3000K			
LED LUMEN PACKAGE	NOMINAL LUMENS	NOMINAL WATTS	LUMENS/WATT
LW	3150	30	105
ML	4140	40	104
HL	4870	50	97

Lumens vary according to color temperatures, distribution and other factors. See specific photometric test(s).

¹ Not available with all configurations; some limitations apply. Contact factory for details.

² One extra feed drop per EMC or NLC. (For through wiring, contact factory.)

³ Ships separately.



HUBBELL
Lighting, Inc.



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

LCV-4-40-ML-S-WM-EDU-MW

Type:

LAIHOU18-45878

Notes:

**CÛRV LED WALL MOUNT**

LED, Indirect Distribution

PHOTOMETRIC DATA**LUMINAIRE DATA Test 15.01084**

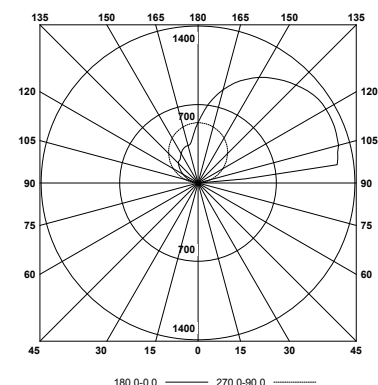
Luminaire	LCVW-30LW-PERF
	LCVW Curv Led
	Wallmount, Curves
	6.5" x 2" x 48" Wall
	Mount with perforated
	housing and opal overlay.
Ballast	D10CC55UNVT-C
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3148
Watts	29.90
Mounting	Wall
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = N/A 90° = N/A
Luminous	Length: 3.58
Opening in Feet	Width: 3.58
	Height: 0.33

ENERGY DATA

Total Luminaire Efficiency	100.0%
Luminaire Efficacy Rating (LER)	105
ANSI/IESNA RP-1-2004 Compliance	Yes-VDT Intensive Use
Comparative Yearly Lighting	\$2.29 based on 3000 hrs.
Energy Cost per 1000 Lumens	and \$0.08 per KWH

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	14	0.4	0.4
0-40	22	0.7	0.7
0-60	41	1.3	1.3
0-90	55	1.8	1.8
90-120	1272	40.4	40.4
90-130	1781	56.6	56.6
90-150	2611	82.9	82.9
90-180	3093	98.2	98.2
0-180	3148	100.0	100.0

INDOOR CANDELA PLOT

Test Date 6/25/15

LUMINAIRE DATA Test 15.01311

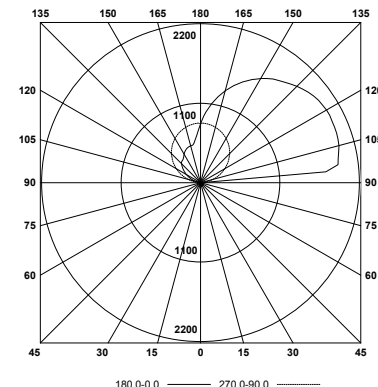
Luminaire	LCVW-30HL-PERF
	LCVW Curv Led
	Wallmount, Curves
	6.5" x 48" LED Curv Wall-
	Mount with Perforated
	Housing and Opal Overlay.
Ballast	D10CC55UNVT-C
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4872
Watts	50.00
Mounting	Wall
Shielding Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = N/A 90° = N/A
Luminous	Length: 0.33
Opening in Feet	Width: 4.00
	Height: 0.00

ENERGY DATA

Total Luminaire Efficiency	100.0%
Luminaire Efficacy Rating (LER)	97
ANSI/IESNA RP-1-2004 Compliance	Yes-VDT Intensive Use
Comparative Yearly Lighting	\$2.47 based on 3000 hrs.
Energy Cost per 1000 Lumens	and \$0.08 per KWH

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	29	0.6	0.6
0-40	46	0.9	0.9
0-60	76	1.6	1.6
0-90	97	2.0	2.0
90-120	1996	41.0	41.0
90-130	2770	56.9	56.9
90-150	4038	82.9	82.9
90-180	4775	98.0	98.0
0-180	4872	100.0	100.0

INDOOR CANDELA PLOT

Test Date 7/24/15



HUBBELL
Lighting, Inc.



LIGHTING
ASSOCIATES, INC.

Job Name:

MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)

Catalog Number:

CAMPICL-PMO-LED-80-875-750-35-
LENGTH-UNV-D1-2-53WAC36-W

Notes:

Type:

LAIHOU18-45878

CAMBER ICL LED

PENDANT DIRECT/INDIRECT

LUMENWERX
WWW.LUMENWERX.COM



Shown with PMO optics

DESCRIPTION

Camber ICL
(Independently
Controllable Light)

is a linear LED pendant luminaire with a thin, articulated profile and Independently Controllable Light output of its indirect and direct components. Using advanced LED engines and optical technique, Camber ICL provides wide spread uplight and well shielded downlight. These components can be controlled independently using a variety of dimming protocols. Please see additional specification sheets for Camber luminaires with uniform control over the light distribution, as well as other mounting arrangements.



PROJECT: _____

TYPE: _____

NOTES: _____

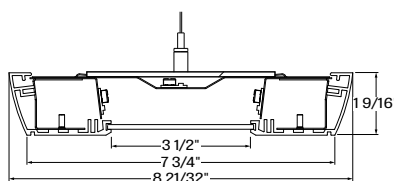
ORDER GUIDE

CAMPICL	PMO	LED				
LUMINAIRE ID	OPTICS	LIGHT SOURCE	CRI	DIRECT LUMEN PACKAGES	INDIRECT LUMEN PACKAGES	COLOR TEMP.
CAMPICL - camber pendant independently controllable light	PMO - precision micro-prism Optic	LED - high performance LED	80 - 80CRI 90 - 90CRI	750 - low output 750lm/ft 875 - medium output 875lm/ft 1000 - high output 1000lm/ft	500 - low output 500lm/ft 750 - medium output 750lm/ft Lower lumen packages are available, consult factory	30 - 3000k 35 - 3500k 40 - 4000k

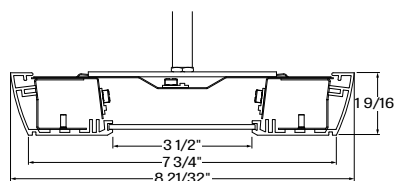
LUMINAIRE LENGTH	VOLTAGE	DRIVER	ELECTRICAL	MOUNTING
#FT - nominal length in feet Sections - 4', 8' and 12' only Continuous Run - for luminaires over 8' in multiples of 4'	120 - 120V 277 - 277V UNV - 120V-277V 347 - 347V	D1 - 1% dimming 0-10V D5 - 5% dimming 0-10V DA - Dali LTE - Lutron 1% - 2 wires 120V L3D3W - Lutron 1% - 3 wires L3DE - Lutron 1% EcoSystem LEH - Lutron 1% EcoSystem LE5 - Lutron 5% EcoSystem	1 - 1 circuit 2 - 2 circuits +#EB - emergency battery (min 4' fixture, except Lutron) +#EM - emergency light circuit +#NL - night light circuit +GTD### - generator transfer device, 120V or 277V	53WAC36 - power 5" + non power 3" white canopy (36" air craft cable) 55WSW18 - power 5" + non power 5" white canopy & stem (18" stem) For all other mountings refer to the Pendant Mounting Guide.
XXFT				

See page 2 for ordering code detailed information

FINISH	CONTROLS	OPTIONS
W - matte white AL - aluminum CF# - custom finish specify RAL#	INDIVIDUAL CONTROLS OMS - Onboard Occupancy ODS - Onboard Daylight OCS - Onboard Occupancy & Daylight GROUPED CONTROLS LSC - Local system NSC - Network system	FU - fuse DC - dust cover TB# - T-bar caddy clip specify grid size TG# - T-bar caddy clip specify grid size ST - Screw Slots caddy clip CU - custom

CROSS SECTION

CAMP - air craft cable



CAMP - stem

OPTICS

PMO - Precision Micro-prism Optic

File Name: CAMBER-PENDANT-ICL-SPEC

Page: 1 / 5

December 6, 2016

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**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**CAMPICL-PMO-LED-80-875-750-35-
LENGTH-UNV-D1-2-53WAC36-W

Notes:

Type:

LAIHOU18-45878

CAMBER ICL LED

PENDANT DIRECT/INDIRECT

WWW.LUMENWERX.COM
OPTICS

PRECISION MICRO-PRISM-OPTIC (PMO) - angled LED array with matte aluminum reflectors and precision Micro-Prism Optic (PMO) shielding of 0.1" thick acrylic. Precisely formed pyramidal prisms with a 0.06" square base provide outstanding control of high-angle brightness. Upper diffuser yields 70/30 indirect/direct distribution. The widespread uplight provides a batwing distribution with peak intensity at 117° and a peak-to-zenith ratio of 2.7:1; shielding from the PMO optic provides 45° optical cut off. Upper reflectors create options for a higher downlight component Camber with is suitable for wide row spacing with a comfortable ceiling brightness gradient.

LIGHT SOURCE - LED

Custom Linear array of mid-flux LED's are mounted directly to the housing for optimal thermal performance. Available in 3000K, 3500K and 4000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. LEDs operated at reduced drive current to optimize efficacy and lumen maintenance.

All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

PERFORMANCE PER 4' AT 4000K
Medium Output (3000 Lumens)

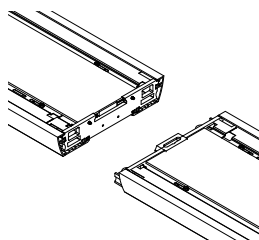
LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	4000K	74	3000	3000	6000	81
medium output	4000K	81	3500	3000	6500	80
high output	4000K	90	4000	3000	7000	78

Low Output (2000 Lumens)

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	4000K	64	3000	2000	5000	78
medium output	4000K	71	3500	2000	5500	77
high output	4000K	79	4000	2000	6000	76

LUMINAIRE LENGTH

Camber is made up of standard 4, 8 and 12 foot sections only that may be joined together to create continuous run lengths. Nominal run length required must be noted in the product code. The minimum individual section available is 4 feet. All individual sections are joined together onsite using the joiner kits provided. LumenWerx offers joiner kits that are extremely simple to work with in the field and result in a fixture that appears virtually seamless with no light leak at any connection.



Joining system for Camber

ELECTRICAL

Factory-set adjustable output current electronic driver with 120-277V AC line input. Dimmable from 100% to 1% with 0-10V control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency >84%, PF >0.9, THD <20%. Other specifiable options include Lutron Hi-Lume A (specify 2, 3 or 4 wires), EcoSystem H (100%-1%, fade-to-black) and EcoSystem 5 (100%-5%) dimmable drivers and DALI protocol drivers.

EMERGENCY

Factory installed long life high temperature recyclable Ni-Cad battery pack with test switch and charge indicator, minimum of 90 minutes operation, up to 1000 lumens per 4ft (25°C) emergency lighting output. Recharge time of 24 hours.

MOUNTING OPTIONS

Fixtures can be pendant-mounted, using aircraft cables, or stem-mounted.

Unless otherwise specified, LumenWerx provides the following hardware:

For cable-mounted fixtures - 53WAC36 (5" white canopy for all power mounting point, 3" white canopy for non power mounting point, and a 36" cable)

For stem mounted fixtures - 55WSW18 (5" white canopy for all power mounting point, and non power mounting point, and a 18" white stem)

Caddy clips, if required specify under **OPTIONS**

For all other required mounting options, see our Pendant Mounting Guide at www.lumenwerx.com


FINISH

Interior - 95%, reflective matte powder coated white paint

Exterior - matte white or silver powder coating. Custom finishes are also available.

CONTROLS

LumenWerx offers several options for integrating occupancy and daylight controls. Whether a sensors control its own fixture or is part of a group of fixtures, lights can be automatically controlled according to different energy saving strategies.

Submitted by Lighting Associates	Job Name: MDACC MASTER SCHEDULE Engineer: SHAH SMITH ENGINEERS (HOUSTON)	Catalog Number: CAMPICL-PMO-LED-80-875-750-35- LENGTH-UNV-D1-2-53WAC36-W Notes:	Type: LAIHOU18-45878
 LIGHTING ASSOCIATES, INC.			

CAMBER ICL LED

PENDANT DIRECT/INDIRECT

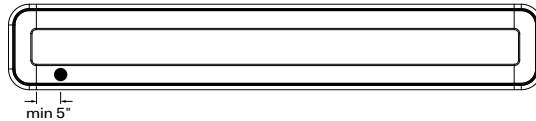


With **individual Controls**, an on-board sensor controls the fixture in which it is installed. Depending on the length, more than one sensor may be necessary and may control the entire fixture, or just a section.

With **Grouped Controls**, on-board or remote sensor are part of a either a local or network sensor infrastructure. It's possible to scale the controls, from a switch to a fixture setup, to a room or a whole building Occupancy and or daylight harvesting.

INDIVIDUAL CONTROLS

Individual controls are integrated into the fixture and are therefore easy to use and allow for a cleaner looking space as no ceiling or wall-mounted sensors are required. Individual controls can be one of three types (**OMS**) Occupancy, (**ODS**) Daylight Harvesting (Photocell), or (**OCS**) combined occupancy and daylight harvesting. These controls will be installed with factory settings, but most offer field adjustability with regular tools or manufacturer supplied configuration tools.



Location of an Onboard control

GROUPED CONTROLS

Local systems permit added flexibility and interconnectivity. Each fixture can now become part of a group of fixtures and be controlled by On-Board or remote sensors as well as wireless switches or controllers. With this architecture, it is now possible to have fewer fixtures with On-Board sensor which control all of the fixtures of the lighting zone. In order to have grouped controls programmed in factory, it is required that a floor layout with requested grouping and functionality be supplied. Field commissioning is also possible but must be requested and discussed before final Purchase Order is placed.

Network Controls, Lumenwerx fixtures are compatible with most popular BMS integration protocols such as DALI, DMX, EnOcean, BACnet, Enlighted and Lutron Ecosystem just to name a few. Field commissioning is usually required and details must be discussed before final Purchase Order is placed.

Please contact our controls department at controls@lumenwerx.com for future assistance.

CONSTRUCTION

Housing - Extruded Aluminum 0.075" nominal, matte white or silver powder coating. Custom finishes are also available.

End cap - Die cast Aluminum (0.95" nominal)

Joiners - male/female system made in Die cast Aluminum (0.95" nominal)

Interior brackets - Die formed cold rolled sheet steel 20 gauge thick

Reflectors - Flat rolled Aluminum sheet 0.040" thick precisely die formed, 95% reflective matte white painted

Hanger - Chromed Griplock securely attached with spring steel hardware in end caps and/or joiners

Air craft Cable Suspension - 7x7 braids Aluminum air craft cable 0.06" thick

Stem - 0.5" diameter threaded steel tube matte white or silver powder coating. Custom finishes are also available

WEIGHT

Camber 4 4ft - 11.67lbs - 5.3kg
Camber 4 8ft - 20.92lbs - 9.5kg
Camber 4 12ft - 30.40lbs - 13.8kg

CERTIFICATIONS

ETL - Rated for Dry/Damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

WARRANTY

LumenWerx provides a five-year limited warranty of electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. LumenWerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.

LIGHTING
ASSOCIATES, INC.**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**CAMPICL-PMO-LED-80-875-750-35-
LENGTH-UNV-D1-2-53WAC36-W

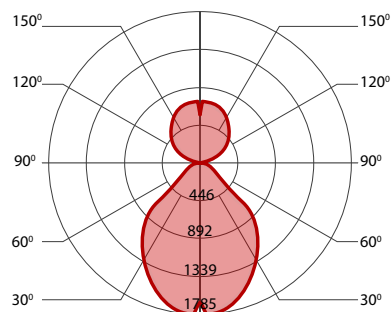
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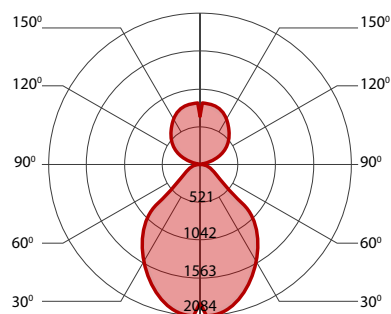
LAIHOU18-45878

CAMBER ICL LED

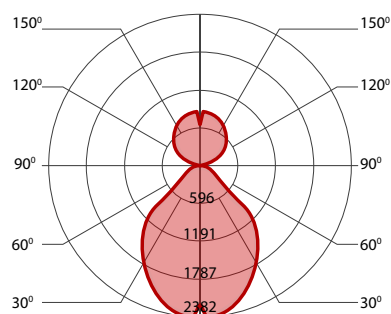
PENDANT DIRECT/INDIRECT

WWW.LUMENWERX.COM
PERFORMANCE AT INDIRECT 500 LUMEN PER FOOT**750 LUMEN AT 80CRI - LOW OUTPUT****PERFORMANCE PER 4'**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	3000K	67.5	3000	2000	5000	74
low output	3500K	66	3000	2000	5000	76
low output	4000K	64	3000	2000	5000	78

875 LUMEN AT 80CRI - MEDIUM OUTPUT**PERFORMANCE PER 4'**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	75	3500	2000	5500	73
medium output	3500K	73	3500	2000	5500	75
medium output	4000K	71	3500	2000	5500	77

1000 LUMEN AT 80CRI - HIGH OUTPUT**PERFORMANCE PER 4'**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
high output	3000K	84.5	4000	2000	6000	71
high output	3500K	82	4000	2000	6000	73
high output	4000K	79	4000	2000	6000	76

**Job Name:**MDACC MASTER SCHEDULE
Engineer: SHAH SMITH ENGINEERS
(HOUSTON)**Catalog Number:**CAMPICL-PMO-LED-80-875-750-35-
LENGTH-UNV-D1-2-53WAC36-W

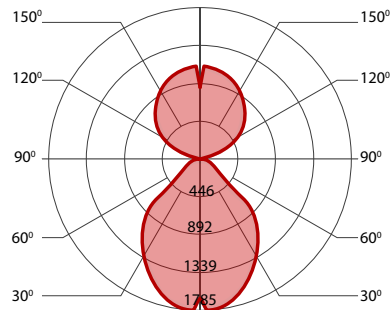
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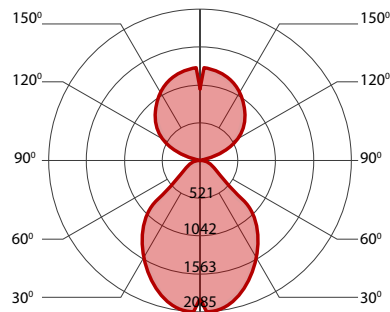
LAIHOU18-45878

CAMBER ICL LED

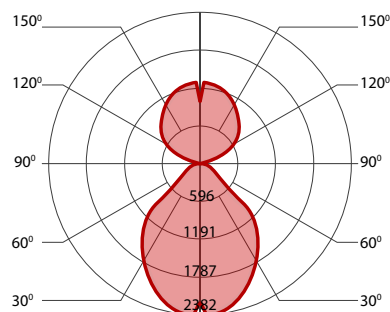
PENDANT DIRECT/INDIRECT

**PERFORMANCE AT INDIRECT 750 LUMEN PER FOOT****750 LUMEN AT 80CRI - LOW OUTPUT****PERFORMANCE PER 4'**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	3000K	79	3000	3000	6000	76
low output	3500K	77	3000	3000	6000	78
low output	4000K	74	3000	3000	6000	81

875 LUMEN AT 80CRI - MEDIUM OUTPUT**PERFORMANCE PER 4'**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	87	3500	3000	6500	75
medium output	3500K	84	3500	3000	6500	77
medium output	4000K	81	3500	3000	6500	80

1000 LUMEN AT 80CRI - HIGH OUTPUT**PERFORMANCE PER 4'**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
high output	3000K	96	4000	3000	7000	73
high output	3500K	92	4000	3000	7000	76
high output	4000K	90	4000	3000	7000	78



Transmittal

Putterman, Scharck & Assoc.
 10855 Tanner Road
 Houston TX 77041
 Phone: (713) 664-7111
From: Jason Peterson

Project MD Anderson Standard Spec
Quote# PSA18-68593
Location Houston Tx
 Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|---|--------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|---------------------------------|
| <input type="checkbox"/> Prior Approval | <input type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input type="checkbox"/> Review and Comment | |

Type	MFG	Part
FA	METALUX	24GRRA-LD5-56-KSH20-UNV-L840-CD1-U
FB	METALUX	24GRRA-LD5-42-KSH20-UNV-L840-CD1-U
FC	METALUX	14GRRA-LD5-43-KSH20-UNV-L840-CD1-U
FD	METALUX	22GRRA-LD5-36-KSH20-UNV-L840-CD1-U
FE	METALUX	22GRRA-LD5-28-KSH20-UNV-L840-CD1-U
FF	METALUX	22RDI-30-UNV-L840-CD1-U
FF1	METALUX	22RDI-20-UNV-L840-CD1-U
FG	METALUX	24RDI-50-UNV-L840-CD1-U
FG1	METALUX	24RDI-40-UNV-L840-CD1-U
FM	FAIL SAFE	UCL-4/3/2-LD4-40-KSH-EDD1-120-OS-RSW
FN	METALUX	24GR-LD5-56-KSH20-UNV-L840-CD1-U
FO	METALUX	24GR-LD5-42-KSH20-UNV-L840-CD1-U
FP	METALUX	14GR-LD5-43-KSH20-UNV-L840-CD1-U
FR/FR2/FS/FS2	PORTFOLIO	LD8A15D010TE - ER8A15840 - 8LM1LIWF
FR1	PORTFOLIO	LD8A10D010TE - ER8A10840 - 8LM1LIWF
FT	PORTFOLIO	LD8A30D010TE - ER8A30840 - 8LW1LIWF
BOLLARD	U S ARCH LIGHTING	BRA8-LED-WP-36LED-NW-FINISH
M3	Vista Pro	1043-NS-40-E-MV-010-HL
XA	SURE-LITES	LPX6BK
XB	SURE-LITES	LPX6BK
XC	EVENLITE, INC.	RCG SERIES CUSTOM GRAPHICS



Transmittal

Putterman, Scharck & Assoc.
 10855 Tanner Road
 Houston TX 77041
 Phone: (713) 664-7111
From: Jason Peterson

Type	MFG	Part
BV2	LUMARK	LDRV-T2-E04-E-FINISH (HSS)
KAD	MCGRAW EDISON	GLEON-AF-04-X-X
TWA	LUMARK	WPSLED-30-GL-UNV
TWA	LUMARK	WPSLED-30-GL-UNV
SP	FC LIGHTING	FCSL105-X-LED-4K-200-X
WG2	FAIL SAFE	MHN-UNV-AMW-TP
DMW	METALUX	4VT2-LD4-4-DR-UNV-L840-WL-SSL-U
AVSP	LIGHTWAY	ORAW-11-LED-U-14W-X-W2-POS
AF	METALUX	4ILED-LD5-5-W-FW/UPL-UNV-L840-CD1-U
DMW	METALUX	4VT2-LD4-4-DR-UNV-L840-WL-SSL-U
DMW	METALUX	4VT2-LD4-6-DR-UNV-L840-WL-SSL-U
FCW	METALUX	4SWLED-LD4-40SL-LW-UNV-L840-CD1-SVPD3-U
BLD	MCGRAW EDISON	GLEON-AF-03-LED-E1-X-FINISH
KVE	MCGRAW EDISON	GLEON-AF-04-LED-E1-X-FINISH
COVE	MODA LIGHT	MODA MINI COVE
FSW	METALUX	4VT2-LD4-6-DR-UNV-L840-WL-SSL-U
WAL	CORELITE	AW-SN-LED-1D-UNV-SUWA

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 24GRRA-LD5-56-KSH20-UNV-L840-
 CD1-U

Notes:

Type:
FA

PSA18-68593

Metalux

DESCRIPTION

GRLED is a recessed lensed troffer series which offers a high quality luminaire designed with the latest solid state lighting and electronic driver technology for optimal performance and energy efficiency. The GRLED is compatible with all of today's popular ceiling systems and is available with a number of shielding options and accessories for application versatility.

The GRLED series features efficiency, quality and performance. The series is an excellent choice for use in a variety of indoor spaces such as offices, schools, residential, hospitals or retail merchandising areas.

SPECIFICATION FEATURES**Construction**

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed for safe handling. Innovative design provides superior lens brightness, uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience. Drivers and internal components are accessible from below the ceiling and LED modules include plug-in low voltage connectors.

Controls

The GRLED is equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels to maximize energy savings. Fixtures may have integrated Eaton control systems such as the SPVD series and the LumaWatt Pro series.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI. TM21 rating up to L89 >60,000 hours. Electronic drivers are cULus recognized and available for 120-277V and 347V applications. Standard dimming is 0-10V to 10% with 1%, step and Fifth Light DALI dimming options available.

Emergency Battery Pack Option

Optional 120V-277V integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. Generator Transfer Device (GTD), emergency transfer switches and other emergency options available - see ordering information for details.

Frame/Optical Shielding

Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens offering the balance of rigidity and light stability. Primary stocking skus come standard with robust .095 lens with other options available for maximum versatility.

Compliance

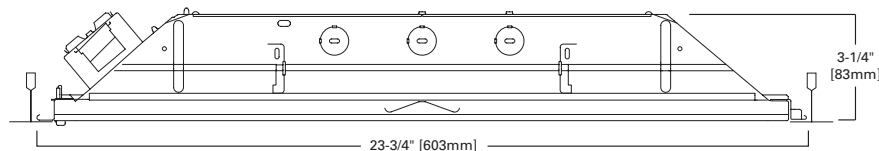
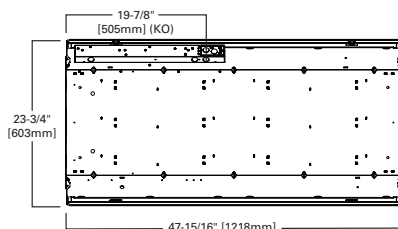
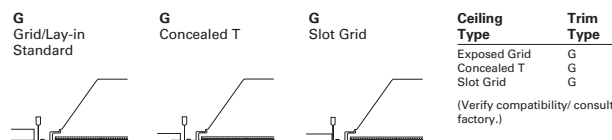
Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments. Fixtures are suitable for direct insulation contact and are damp location listed. RoHS compliant. LED components comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.



24GR LED LED

2' X 4' LED TROFFER

General Recessed LED
Troffer
For Use in Insulated
Ceilings

**MOUNTING DATA****DOOR FRAMES****CEILING COMPATIBILITY**

LINEAR DISCONNECT

Safe and convenient means of
disconnecting power

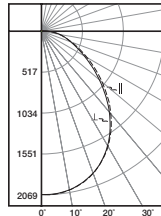

 PS519146EN
 12-4-2017

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 24GRRA-LD5-56-KSH20-UNV-L840-
 CD1-U

Notes:

Type:
FA

PSA18-68593

PHOTOMETRICS
**24GR-LD5-48-F1-
UNV-L835-CD1-U**

Electronic Driver

Linear LED 3500K

Spacing criterion:

 (II) 1.19 x mounting
 height, (L) 1.18 x
 mounting height

Lumens: 4821

Input Watts: 37W

Efficacy: 128.6 lm/W

Test Report: 24GR-

LD5-48-F1-UNV-

L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across I
0	2064	2064	2064
5	2061	2052	2057
10	2028	2019	2026
15	1972	1963	1968
20	1890	1879	1887
25	1779	1773	1774
30	1648	1638	1635
35	1493	1481	1467
40	1316	1299	1286
45	1128	1108	1087
50	946	921	893
55	767	740	717
60	606	574	563
65	468	437	440
70	349	329	344
75	256	243	265
80	172	168	190
85	95	90	105
90	0	0	0

Coefficients of Utilization

		Effective floor cavity reflectance										20%											
		80%				70%				50%				30%				10%				0%	
rc	rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																							
0		119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1		109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85				
2		100	92	86	80	98	90	85	80	87	82	78	84	80	76	81	77	74	72				
3		92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62				
4		85	73	65	58	82	72	64	58	69	63	57	67	61	57	65	60	56	54				
5		78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47				
6		72	60	51	45	71	59	51	45	57	50	44	55	49	44	54	48	44	42				
7		67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37				
8		63	50	42	36	61	49	41	36	47	40	36	47	40	36	46	40	35	33				
9		59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				
10		55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1564	32.4
0-40	2486	51.6
0-60	4001	83.1
0-90	4821	100.0
0-180	4821	100.0

Luminaire Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2444	2401	2355
55	2048	1977	1915
65	1697	1584	1595
75	1517	1439	1571
85	1671	1580	1842

ORDERING INFORMATION

SAMPLE NUMBER: 24GR-LD5-48-F1-UNV-L835-CD1-U


Rating Blank= Standard ATW-SW4= Chicago Rated	LED Type LD5=LED 5.0	Voltage ⁽²⁾ 347-347 Volts UNV=Universal Voltage 120-277 ⁽³⁾	Driver Type CD=0-10V Dimming Driver (10% - 100% Dimming) ⁽⁸⁾ HCD=0-10V Dimming Driver (1% - 100% Dimming) ⁽⁸⁾ SD=Step-Dim Driver ⁽⁷⁾ SLTD=Fifth Light DALI Driver (10% - 100% Dimming) ⁽⁸⁾ SR=Sensor Ready (1% - 100% Dimming) ⁽¹²⁾	Packaging U=Unit Pack PALC=Palleted Fixtures In Carton
Width / Length 24=2' x 4'	LED Lumens Output ⁽¹¹⁾ 30=3000 100=10000 34=3400 120=12000 38=3800 130=13000 42=4200 150=15000 48=4800 180=18000 56=5600 64=6400 72=7200 85=8500 90=9000	Options GL=Single Element Fuse GM=Double Element Fuse Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ⁽⁴⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽⁴⁾ GTD2=Bodine Generator Transfer Device ⁽¹⁰⁾ ETS2=OTA Emergency Transfer Switch ⁽¹⁰⁾ ETS-DR=OTA Emergency Transfer Switch for Dimming Application ⁽¹⁴⁾ CCT L830=3000K L835=3500K L840=4000K L850=5000K Flex Multiple Configurations Available	Number of Drivers 1=1 Driver 2=2 Drivers Options PAF=Painted After Fabrication G1=Gasket, Door Frame and Housing G2=G1 plus Gasket between Lens and Door G3=G1 and G2 plus Gasketing on Mounting Surface of Fixture Trims ^{(9), (6)}	Sensors SVPD1=Integrated occupancy and daylight dimming sensor, 144 sq. ft. SWPD1=WaveLinx Wireless Connected Lighting system LWIPD1=Integrated LumaWatt Pro Wireless sensor system ⁽¹²⁾ LWTPD1=Tile mounted LumaWatt Pro Wireless sensor system
Trim Type G=Grid/Lay-in (Standard) ⁽¹⁾ G=Concealed T G=Slot Grid	Shielding F1=A12 .095 HP (Standard) F125=A12 .125 HP A=A12 .095 A125=A12 .125 A19/156=#19 Pattern Acrylic (.156" Thick) FGW080=Frosted Glazed Lens .080	KSH20		
Series ⁽¹³⁾ R=General Purpose Troffer	Door Frame Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum c/w Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum A/WG=Prismatic Acrylic Lens, Wireguard & Doorframe F1/WG=Frosted Prismatic Acrylic Lens, Wireguard & Doorframe			

NOTES: ⁽¹⁾ An EQ Grid Clip is recommended for all 9/16" ceiling systems. ⁽²⁾ Products also available in non-US voltages and frequencies for international markets. ⁽³⁾ Not available when specifying emergencies, voltage must be specific. ⁽⁴⁾ With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁵⁾ Gasketing only available with aluminum door frame. ⁽⁶⁾ Step dimming (bi-level) 1 driver, 4200 - 7200, 2 driver, 8500 and up lumen model. ⁽⁷⁾ DALI available from 4200 - 9000 lumen models. Two drivers required for 10000 lumen models and up. ⁽⁸⁾ Requires two drivers for 12000 lumens and above. ⁽⁹⁾ Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽¹¹⁾ Nominal lumen output. See table for actual values ⁽¹²⁾ SR driver required for LWIPD1 only. ⁽¹³⁾ DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details. ⁽¹⁴⁾ For dimming applications only one is required.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.	Pallet
24GR-LD5-48	20 lbs.	28

Submitted by Putterman, Scharck & Assoc.		Catalog Number: 24GRRRA-LD5-56-KSH20-UNV-L840-CD1-U	Type: FA
 PUTTERMAN SCHARCK & ASSOCIATES	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	PSA18-68593

24GRLED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	24GR-LD5-30-F1-UNV-L835-CD1-U	3074	23.4	131
MTO	24GR-LD5-34-F1-UNV-L835-CD1-U	3459	26.7	129
Stock	24GR-LD5-38-F1-UNV-L835-CD1-U	3880	30.6	127
MTO	24GR-LD5-42-F1-UNV-L835-CD1-U	4294	34.6	124
Stock	24GR-LD5-48-F1-UNV-L835-CD1-U	4821	37.4	129
MTO	24GR-LD5-56-F1-UNV-L835-CD1-U	5618	45.1	124
Stock	24GR-LD5-64-F1-UNV-L835-CD1-U	6462	48.1	134
MTO	24GR-LD5-72-F1-UNV-L835-CD1-U	7257	56.0	129
MTO	24GR-LD5-85-F1-UNV-L835-CD1-U	8567	70.3	122
MTO	24GR-LD5-90-F1-UNV-L835-CD1-U	9092	69.1	132
MTO	24GR-LD5-100-F1-UNV-L835-CD2-U	10030	71.7	140
MTO	24GR-LD5-120-F1-UNV-L835-CD2-U	12260	90.1	136
MTO	24GR-LD5-130-F1-UNV-L835-CD2-U	13290	90.2	134
MTO	24GR-LD5-150-F1-UNV-L835-CD2-U	15340	120.3	128
MTO	24GR-LD5-180-F1-UNV-L835-CD2-U	18050	144.2	125

*Stocked in 3500K and 4000K others are MTO.

LENS TABLE

Approximate Lumen Multiplier	
F1	1.0
F125	1.0
A125	1.01
A	1.01
A19/156	.975
FGW080	.85

CCT TABLE

Approximate Color Temperature Multiplier	
5000K	1.016
4000K	1.016
3500K	1.0
3000K	.982
2700K	.930

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**24GRRA-LD5-42-KSH20-UNV-L840-
CD1-U

Notes:

Type:**FB**

PSA18-68593

Metalux**DESCRIPTION**

GRLED is a recessed lensed troffer series which offers a high quality luminaire designed with the latest solid state lighting and electronic driver technology for optimal performance and energy efficiency. The GRLED is compatible with all of today's popular ceiling systems and is available with a number of shielding options and accessories for application versatility.

The GRLED series features efficiency, quality and performance. The series is an excellent choice for use in a variety of indoor spaces such as offices, schools, residential, hospitals or retail merchandising areas.

SPECIFICATION FEATURES**Construction**

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed for safe handling. Innovative design provides superior lens brightness, uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience. Drivers and internal components are accessible from below the ceiling and LED modules include plug-in low voltage connectors.

Controls

The GRLED is equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels to maximize energy savings. Fixtures may have integrated Eaton control systems such as the SPVD series and the LumaWatt Pro series.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI. TM21 rating up to L89 >60,000 hours. Electronic drivers are cULus recognized and available for 120-277V and 347V applications. Standard dimming is 0-10V to 10% with 1%, step and Fifth Light DALI dimming options available.

Emergency Battery Pack Option

Optional 120V-277V integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. Generator Transfer Device (GTD), emergency transfer switches and other emergency options available - see ordering information for details.

Frame/Optical Shielding

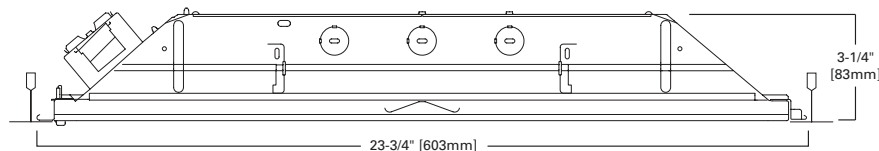
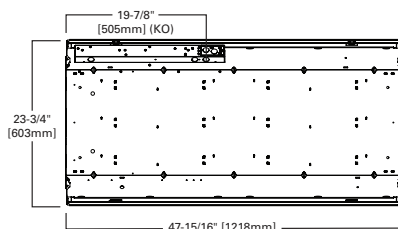
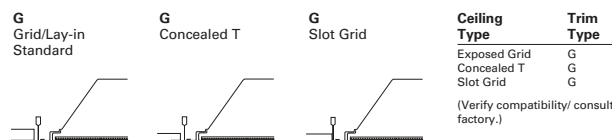
Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens offering the balance of rigidity and light stability. Primary stocking skus come standard with robust .095 lens with other options available for maximum versatility.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments. Fixtures are suitable for direct insulation contact and are damp location listed. RoHS compliant. LED components comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

**24GR LED
LED****2' X 4' LED TROFFER**

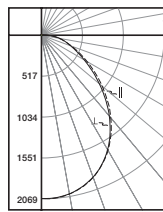
General Recessed LED
Troffer
For Use in Insulated
Ceilings

**MOUNTING DATA****DOOR FRAMES****CEILING COMPATIBILITY****LINEAR DISCONNECT**

Safe and convenient means of
disconnecting power



PS519146EN
12-4-2017

PHOTOMETRICS**24GR-LD5-48-F1-UNV-L835-CD1-U**

Electronic Driver

Linear LED 3500K

Spacing criterion:

(II) 1.19 x mounting

height, (L) 1.18 x

mounting height

Lumens: 4821

Input Watts: 37W

Efficacy: 128.6 lm/W

Test Report: 24GR-

LD5-48-F1-UNV-

L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across I
0	2064	2064	2064
5	2061	2052	2057
10	2028	2019	2026
15	1972	1963	1968
20	1890	1879	1887
25	1779	1773	1774
30	1648	1638	1635
35	1493	1481	1467
40	1316	1299	1286
45	1128	1108	1087
50	946	921	893
55	767	740	717
60	606	574	563
65	468	437	440
70	349	329	344
75	256	243	265
80	172	168	190
85	95	90	105
90	0	0	0

Coefficients of Utilization

		Effective floor cavity reflectance												20%									
rc	rw	80%				70%				50%				30%				10%				0%	
		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0	0			
RCR																							
0		119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1		109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85				
2		100	92	86	80	98	90	85	80	87	82	78	84	80	76	81	77	74	72				
3		92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62				
4		85	73	65	58	82	72	64	58	69	63	57	67	61	57	65	60	56	54				
5		78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47				
6		72	60	51	45	71	59	51	45	57	50	44	55	49	44	54	48	44	42				
7		67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37				
8		63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	33				
9		59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				
10		55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1564	32.4
0-40	2486	51.6
0-60	4001	83.1
0-90	4821	100.0
0-180	4821	100.0

Luminaire Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2444	2401	2355
55	2048	1977	1915
65	1697	1584	1595
75	1517	1439	1571
85	1671	1580	1842

ORDERING INFORMATION

SAMPLE NUMBER: 24GR-LD5-48-F1-UNV-L835-CD1-U


Rating Blank= Standard ATW-SW4= Chicago Rated	LED Type LD5=LED 5.0	Voltage ⁽²⁾ 347-347 Volts UNV=Universal Voltage 120-277 ⁽³⁾	Driver Type CD=0-10V Dimming Driver (10% - 100% Dimming) ⁽³⁾ HCD=0-10V Dimming Driver (1% - 100% Dimming) ⁽³⁾ SD=Step-Dim Driver ⁽⁷⁾ 5LTD=Fifth Light DALI Driver (10% - 100% Dimming) ⁽⁸⁾ SR=Sensor Ready (1% - 100% Dimming) ⁽¹²⁾	Packaging U=Unit Pack PALC=Palletized Fixtures In Carton
Width / Length 24=2' x 4'	LED Lumens Output ⁽¹¹⁾ 30=3000 100=10000 34=3400 120=12000 38=3800 130=13000 42=4200 150=15000 48=4800 180=18000 56=5600 64=6400 72=7200 85=8500 90=9000	Options GL=Single Element Fuse GM=Double Element Fuse Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ⁽⁴⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽⁴⁾ GTD2=Bodine Generator Transfer Device ⁽¹⁰⁾ ETS2=OTA Emergency Transfer Switch ⁽¹⁰⁾ ETS-DR=OTA Emergency Transfer Switch for Dimming Application ⁽¹⁴⁾ CCT L830=3000K L835=3500K L840=4000K L850=5000K Flex Multiple Configurations Available	Number of Drivers 1=1 Driver 2=2 Drivers	Sensors SVPD1=Integrated occupancy and daylight dimming sensor, 144 sq. ft. SWPD1=WaveLinx Wireless Connected Lighting system LWIPD1=Integrated LumaWatt Pro Wireless sensor system ⁽¹²⁾ LWTDP1=Tile mounted LumaWatt Pro Wireless sensor system
Trim Type G=Grid/Lay-in (Standard) ⁽¹⁾ G=Concealed T G=Slot Grid	Shielding F1=A12 .095 HP (Standard) F125=A12 .125 HP A=A12 .095 A125=A12 .125 A19/156=#19 Pattern Acrylic (.156" Thick) FGW080=Frosted Glazed Lens .080	Series ⁽¹³⁾ R=General Purpose Troffer	Door Frame Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum AW=Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum A/WG=Prismatic Acrylic Lens, Wireguard & Doorframe F1/WG=Frosted Prismatic Acrylic Lens, Wireguard & Doorframe	ACCESSORIES EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾ DF-24-W=2' x 4' Drywall Frame Kit ISHH-01=Programming Remote for Integrated Sensor ISHH-02=Personal Control Remote for Integrated Sensor

NOTES: ⁽¹⁾ An EQ Grid Clip is recommended for all 9/16" ceiling systems. ⁽²⁾ Products also available in non-US voltages and frequencies for international markets. ⁽³⁾ Not available when specifying emergencies, voltage must be specific. ⁽⁴⁾ With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaires under emergency operation available. ⁽⁵⁾ Gasketing only available with aluminum door frame. ⁽⁶⁾ Gasketing minimum .125". ⁽⁷⁾ Step dimming (bi-level) 1 driver, 4200 - 7200, 2 driver, 8500 and up lumen model. ⁽⁸⁾ DALI available from 4200 - 9000 lumen models. Two drivers required for 10000 lumen models and up. ⁽⁹⁾ Requires two drivers for 12000 lumens and above. ⁽¹⁰⁾ Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽¹¹⁾ Nominal lumen output. See table for actual values ⁽¹²⁾ SR driver required for LWIPD1 only. ⁽¹³⁾ DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details. ⁽¹⁴⁾ For dimming applications only one is required.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.	Pallet
24GR-LD5-48	20 lbs.	28

Submitted by Putterman, Scharck & Assoc.		Catalog Number: 24GRRRA-LD5-42-KSH20-UNV-L840-CD1-U	Type: FB
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	PSA18-68593

24GRLED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	24GR-LD5-30-F1-UNV-L835-CD1-U	3074	23.4	131
MTO	24GR-LD5-34-F1-UNV-L835-CD1-U	3459	26.7	129
Stock	24GR-LD5-38-F1-UNV-L835-CD1-U	3880	30.6	127
MTO	24GR-LD5-42-F1-UNV-L835-CD1-U	4294	34.6	124
Stock	24GR-LD5-48-F1-UNV-L835-CD1-U	4821	37.4	129
MTO	24GR-LD5-56-F1-UNV-L835-CD1-U	5618	45.1	124
Stock	24GR-LD5-64-F1-UNV-L835-CD1-U	6462	48.1	134
MTO	24GR-LD5-72-F1-UNV-L835-CD1-U	7257	56.0	129
MTO	24GR-LD5-85-F1-UNV-L835-CD1-U	8567	70.3	122
MTO	24GR-LD5-90-F1-UNV-L835-CD1-U	9092	69.1	132
MTO	24GR-LD5-100-F1-UNV-L835-CD2-U	10030	71.7	140
MTO	24GR-LD5-120-F1-UNV-L835-CD2-U	12260	90.1	136
MTO	24GR-LD5-130-F1-UNV-L835-CD2-U	13290	90.2	134
MTO	24GR-LD5-150-F1-UNV-L835-CD2-U	15340	120.3	128
MTO	24GR-LD5-180-F1-UNV-L835-CD2-U	18050	144.2	125

*Stocked in 3500K and 4000K others are MTO.

LENS TABLE

Approximate Lumen Multiplier	
F1	1.0
F125	1.0
A125	1.01
A	1.01
A19/156	.975
FGW080	.85

CCT TABLE

Approximate Color Temperature Multiplier	
5000K	1.016
4000K	1.016
3500K	1.0
3000K	.982
2700K	.930

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 14GRRR-LD5-43-KSH20-UNV-L840-
 CD1-U

Notes:

Type:**FC**

PSA18-68593

Metalux

DESCRIPTION

GRLED is a recessed lensed troffer series which offers a high quality luminaire designed with the latest solid state lighting and electronic driver technology for optimal performance and energy efficiency. The GRLED is compatible with all of today's popular ceiling systems and is available with a number of shielding options and accessories for application versatility.

The GRLED series features efficiency, quality and performance. The series is an excellent choice for use in a variety of indoor spaces such as offices, schools, residential, hospitals or retail merchandising areas.

SPECIFICATION FEATURES**Construction**

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed for safe handling. Innovative design provides superior lens brightness, uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience. Drivers and internal components are accessible from below the ceiling and LED modules include plug-in low voltage connectors.

Controls

The GRLED is equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels to maximize energy savings. Fixtures may have integrated Eaton control systems such as the SPVD series and the LumaWatt Pro series.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal

performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI. TM21 rating of L85 >60,000 hours. Electronic drivers are cULus recognized and available for 120-277V and 347V applications. Standard dimming is 0-10V to 10% with 1%, step and Fifth Light DALI dimming options available.

Emergency Battery Pack Option

Optional 120V-277V integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. Generator Transfer Device (GTD), emergency transfer switches and other emergency options available - see ordering information for details.

Frame/Optical Shielding

Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens offering the balance of rigidity and light stability. Primary stocking skus come standard with robust .095 lens with other options available for maximum versatility.

Compliance

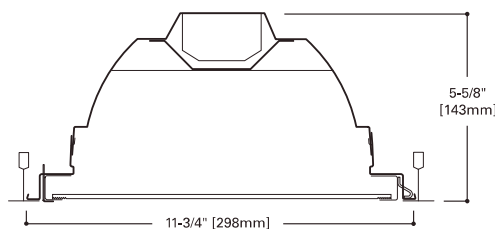
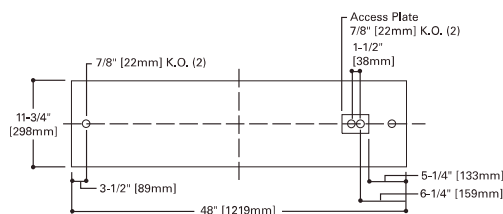
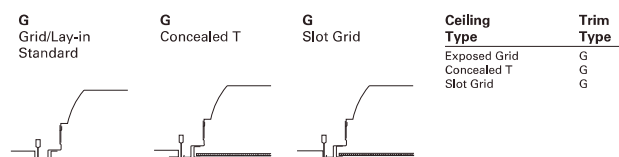
Modules are UL recognized components and indoor luminaires are cULus listed for 25 C ambient environments. Fixtures are suitable for direct insulation contact and are damp location listed. RoHS compliant. LED components comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details.



14GR LED LED

1' X 4' LED TROFFER

General Recessed LED
Troffer
For Use in Insulated
Ceilings

**MOUNTING DATA****DOOR FRAMES****CEILING COMPATIBILITY****LINEAR DISCONNECT**

Safe and convenient means of
disconnecting power

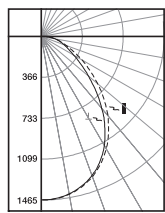

 PS519144EN
 11-30-2017

**PUTTERMAN
SCHARCK
& ASSOCIATES****Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**14GRRA-LD5-43-KSH20-UNV-L840-
CD1-U

Notes:

Type:**FC**

PSA18-68593

14GRLED**PHOTOMETRICS****14GR-LD5-32-F1-
UNV-L835-CD1-U**Electronic Driver
Linear LED 3500KSpacing criterion:
(II) 1.18 x mounting
height, (L) 1.15 x
mounting height

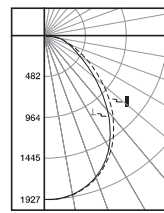
Lumens: 3257

Input Watts: 29.9W

Efficacy: 108.9 lm/W

Test Report: 14GR-
LD5-32-F1-UNV-
L835-CD1-U.IES**Candlepower**

Angle	Along II	45°	Across ⊥
0	1463	1463	1463
5	1460	1451	1457
10	1436	1426	1431
15	1394	1386	1387
20	1336	1324	1324
25	1256	1245	1238
30	1160	1144	1126
35	1047	1023	987
40	925	889	838
45	787	746	686
50	652	606	544
55	525	478	424
60	412	363	330
65	313	274	262
70	233	206	210
75	170	154	167
80	115	108	122
85	62	56	64
90	0	0	0

**14GR-LD5-43-F1-
UNV-L835-CD1-U**Electronic Driver
Linear LED 3500KSpacing criterion:
(II) 1.18 x mounting
height, (L) 1.15 x
mounting height

Lumens: 4284

Input Watts: 41.9W

Efficacy: 102.2 lm/W

Test Report:
14GR-LD5-43-F1-
UNV-L835-CD1-U.
IES**Candlepower**

Angle	Along II	45°	Across ⊥
0	1924	1924	1924
5	1920	1908	1916
10	1889	1876	1882
15	1834	1823	1824
20	1757	1742	1741
25	1652	1637	1628
30	1526	1504	1481
35	1377	1346	1298
40	1216	1169	1102
45	1035	981	902
50	857	797	716
55	691	629	557
60	542	477	434
65	411	360	344
70	307	271	276
75	224	203	220
80	151	142	160
85	81	74	84
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance				20%				30%				50%				70%				80%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	70	50	30	10
RCR	0	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85	85	85	85	85	85	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73	73	73	73	73	73	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63	63	63	63	63	63	63
4	85	74	66	59	83	73	65	59	70	64	58	68	62	58	66	61	57	55	55	55	55	55	55	55
5	79	67	58	52	77	66	58	52	64	57	51	62	55	51	60	54	50	48	48	48	48	48	48	48
6	73	61	52	46	71	60	52	46	58	51	45	56	50	45	55	49	45	43	43	43	43	43	43	43
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	45	40	38	38	38	38	38	38	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	34	34	34	34	34	34	34
9	60	47	39	34	58	46	39	34	45	38	33	44	38	33	43	37	33	31	31	31	31	31	31	31
10	56	43	36	31	55	43	36	31	42	35	30	41	35	30	40	34	30	29	29	29	29	29	29	29

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1103	33.8
0-40	1739	53.4
0-60	2740	84.1
0-90	3257	100.0
0-180	3257	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3750	3554	3268
55	3087	2809	2488
65	2492	2182	2085
75	2217	2009	2178
85	2382	2177	2470

Coefficients of Utilization

rc	Effective floor cavity reflectance				20%				30%				50%				70%				80%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	70	50	30	10
RCR	0	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85	85	85	85	85	85	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73	73	73	73	73	73	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63	63	63	63	63	63	63
4	85	74	66	59	83	73	65	59	70	64	58	68	62	58	66	61	57	55	55	55	55	55	55	55
5	79	67	58	52	77	66	58	52	64	57	51	62	55	51	60	54	50	48	48	48	48	48	48	48
6	73	61	52	46	71	60	52	46	58	51	45	56	50	45	55	49	45	43	43	43	43	43	43	43
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	45	40	38	38	38	38	38	38	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	34	34	34	34	34	34	34
9	60	47	39	34	58	46	39	34	45	38	33	44	38	33	43	37	33	31	31	31	31	31	31	31
10	56	43	36	31	55	43	36	31	42	35	30	41	35	30	40	34	30	29	29	29	29	29	29	29

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1450	33.9
0-40	2288	53.4
0-60	3603	84.1
0-90	4284	100.0
0-180	4284	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	4932	4675	4298
55	4059	3695	3272
65	3277	2870	2743
75	2916	2643	2864
85	3132	2861	3248

ORDERING INFORMATION

SAMPLE NUMBER: 14GR-LD5-24-F1-UNV-L835-CD1-U

Rating Blank- Standard ATW-SW4= Chicago Rated	LED Type LD5=LED 5.0	Voltage ⁽²⁾ 347-347 Volts UNV=Universal Voltage 120-277 ⁽³⁾	Driver Type CD=0-10V Dimming Driver (10% - 100% Dimming) HCD=0-10V Dimming Driver (1% - 100% Dimming) SD=Step-Dim Driver ⁽⁷⁾ SLTD=Fifth Light DALI Driver (10% - 100% Dimming) ⁽⁷⁾ SR=Sensor Ready (1% - 100% Dimming) ⁽⁸⁾⁽⁹⁾	Packaging U=Unit Pack PALC=Palletized Fixtures In Carton
Width / Length 14=1' x 4'	LED Lumen Output ⁽⁶⁾ 20=2000 24=2400 28=2800 32=3200 36=3600 40=4000 43=4300	Options GL=Single Element Fuse GM=Double Element Fuse Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ⁽⁴⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽⁴⁾ GTD2=Bodine Generator Transfer Device ⁽⁶⁾ ETS2-IOTA Emergency Transfer Switch ⁽⁶⁾ ETS-DR=IOTA Emergency Transfer Switch for Dimming Application ⁽¹²⁾	Number of Drivers 1=1 Driver	
Trim Type G=Grid/Lay-in (Standard) ⁽¹⁾ G=Concealed T G=Slot Grid	Shielding F1=A12 .095 HP (Standard) F125=A12 .125 HP A=A12 .095 A125=A12 .125 A19/156=#19 Pattern Acrylic (.156" Thick) FGW080=Frosted Glazed Lens .080	CCT L830=3000K L835=3500K L840=4000K L850=5000K Flex Multiple Configurations Available		
Series ⁽¹¹⁾ R=General Purpose Troffer	Door Frame Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum c/w Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum	KSH20	Options PAF=Painted After Fabrication G1=Gasket, Door Frame and Housing G2=G1 plus Gasket between Lens and Door G3=G1 and G2 plus Gasketing on Mounting Surface of Fixture Trims ⁽⁶⁾	
			ACCESSORIES EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹¹⁾ DF-14-WU=1' x 4' Drywall Frame Kit ISHH-01=Programming Remote for Integrated Sensor ISHH-02=Personal Control Remote for Integrated Sensor	


NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾Not available when specifying emergencies, voltage must be specific. ⁽⁴⁾With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁵⁾Gasketing only available with aluminum door frame. ⁽⁶⁾Gasketing minimum .125. ⁽⁷⁾Step Dim (Bi Level) and DALI only available in 3600 lumen and above. ⁽⁸⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁹⁾Nominal lumen output. See table for actual values. ⁽¹⁰⁾SR driver required for LWPDP1 only. See table for actual values. ⁽¹¹⁾DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details. ⁽¹²⁾For dimming applications only one is required.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.	Pallet
14GR-LD5-32	10 lbs.	24

Eaton
1121 Highway 74 South
Peachtree City, GA 30289
P: 770-496-4800
www.eaton.com/lightingSpecifications and
dimensions subject to
change without notice.PS519144EN
11-30-2017

Submitted by Putterman, Scharck & Assoc.		Catalog Number: 14GRRA-LD5-43-KSH20-UNV-L840-CD1-U Notes:	Type: FC PSA18-68593
 PUTTERMAN SCHARCK & ASSOCIATES	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		

14GRLED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO	Catalog Logic	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	14GR-LD5-20-F1-UNV-L835-CD1-U	2029	17.2	117
MTO	14GR-LD5-24-F1-UNV-L835-CD1-U	2425	21.0	115
MTO	14GR-LD5-28-F1-UNV-L835-CD1-U	2803	24.8	113
MTO	14GR-LD5-32-F1-UNV-L835-CD1-U	3257	29.8	109
MTO	14GR-LD5-36-F1-UNV-L835-CD1-U	3671	35.0	105
MTO	14GR-LD5-40-F1-UNV-L835-CD1-U	4045	38.8	104
MTO	14GR-LD5-43-F1-UNV-L835-CD1-U	4338	42.0	102

LENS TABLE

Approximate Lumen Multiplier	
F1	1.0
F125	1.0
A125	1.01
A	1.01
A19/156	.975
FGW080	.85

CCT TABLE

Approximate Color Temperature Multiplier	
5000K	1.016
4000K	1.016
3500K	1.0
3000K	.982
2700K	.930

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 22GRRA-LD5-36-KSH20-UNV-L840-
 CD1-U

Notes:

Type:**FD**

PSA18-68593

Metalux**DESCRIPTION**

GRLED is a recessed lensed troffer series which offers a high quality luminaire designed with the latest solid state lighting and electronic driver technology for optimal performance and energy efficiency. The GRLED is compatible with all of today's popular ceiling systems and is available with a number of shielding options and accessories for application versatility.

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SPECIFICATION FEATURES**Construction**

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed for safe handling. Innovative design provides superior lens brightness, uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience. Drivers and internal components are accessible from below the ceiling and LED modules include plug-in low voltage connectors.

Controls

The GRLED is equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels to maximize energy savings. Fixtures may have integrated Eaton control systems such as the SPVD series and the LumaWatt Pro series.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI. Projected life at 70% lumen maintenance is nearly 200,000 hours with TM21 rating up to L90 >60,000 hours. Electronic drivers are cULus recognized and available for 120-277V and 347V applications. Standard dimming is 0-10V to 10% with 1%, step and Fifth Light DALI dimming options available.

Emergency Battery Pack Option

Optional 120V-277V integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. Generator Transfer Device (GTD) and other emergency options available - see ordering information for details.

Frame/Optical Shielding

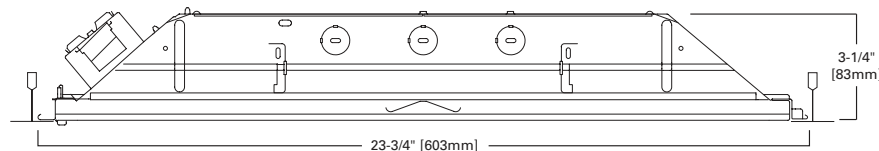
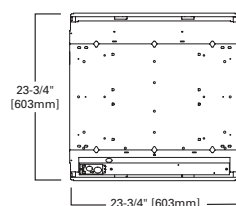
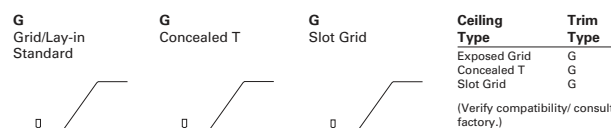
Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens offering the balance of rigidity and light stability. Primary stocking skus come standard with robust - .125 lens with other options available for maximum versatility.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments. Fixtures are suitable for direct insulation contact and are damp location listed. RoHS compliant. LED components comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

**22GR
LED****2' X 2' LED TROFFER**

General Recessed LED
Troffer
For Use in Insulated
Ceilings

**MOUNTING DATA****DOOR FRAMES****CEILING COMPATIBILITY****WATTAGE**

Lumens Package	Watts
2000	16W
2400	20W
2800	24W
3200	28W
3600	32W
4000	39W
4300	40W

LINEAR DISCONNECT

Safe and convenient means of
disconnecting power


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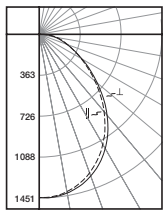
Job Name:MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

22GRRA-LD5-36-KSH20-UNV-L840-CD1-U

Notes:

Type:**FD**

PSA18-68593

22GRLED**PHOTOMETRICS****22GR-LD5-32-F1-UNV-L835-CD1-U**

Electronic Driver

Linear LED 3500K

Spacing criterion:
(H) 1.14 x mounting
height, (L) 1.18 x
mounting height

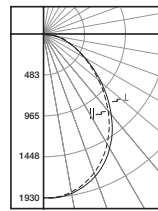
Lumens: 3277

Input Watts: 27.7W

Efficacy: 118.3 lm/W

Test Report:
22GR-LD5-32-F1-
UNV-L835-CD1-U.
IES**Candlepower**

Angle	Along H	45°	Across L
0	1447	1447	1447
5	1438	1436	1445
10	1407	1409	1422
15	1357	1363	1381
20	1288	1299	1320
25	1203	1218	1243
30	1099	1116	1145
35	985	1003	1031
40	862	876	902
45	730	749	767
50	606	615	634
55	490	493	512
60	390	385	398
65	304	295	303
70	235	220	227
75	182	162	166
80	130	112	112
85	72	61	60
90	0	0	0

**22GR-LD5-43-F1-UNV-L835-CD1-U**

Electronic Driver

Linear LED 3500K

Spacing criterion:
(H) 1.14 x mounting
height, (L) 1.18 x
mounting height

Lumens: 4360

Input Watts: 40.1W

Efficacy: 108.7 lm/W

Test Report:
22GR-LD5-43-F1-
UNV-L835-CD1-U.
IES**Candlepower**

Angle	Along H	45°	Across L
0	1965	1965	1965
5	1915	1910	1923
10	1873	1875	1892
15	1806	1813	1835
20	1718	1729	1759
25	1601	1619	1655
30	1463	1485	1522
35	1312	1331	1374
40	1145	1164	1200
45	975	994	1024
50	806	821	850
55	654	659	679
60	517	513	532
65	402	391	407
70	316	293	304
75	242	217	220
80	173	149	151
85	96	80	79
90	0	0	0

Coefficients of Utilization

RCR																	
rc rw	Effective floor cavity reflectance										20%					0%	
	80%				70%				50%			30%			10%		
RCR	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75
3	92	82	74	68	90	81	73	68	78	72	67	75	70	65	72	68	64
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39
8	63	50	42	36	62	50	42	36	48	41	36	47	41	36	46	40	36
9	59	46	38	33	58	46	38	33	45	38	33	43	37	33	42	37	32
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	40	34	30

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1082	33.0
0-40	1709	52.2
0-60	2732	83.4
0-90	3277	100.0
0-180	3277	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3306	3392	3474
55	2736	2753	2859
65	2304	2235	2296
75	2252	2005	2054
85	2646	2241	2205

Coefficients of Utilization

Effective floor cavity reflectance															20%				
rc	80%				70%				50%				30%			10%			0%
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10		
rw	RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85	
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72	
3	92	82	74	68	90	81	73	68	78	72	67	75	70	65	72	68	64	62	
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54	
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	47	
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42	
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	38	
8	63	50	42	36	62	50	42	36	48	41	36	47	41	36	46	40	36	34	
9	59	46	38	33	58	46	38	33	45	38	33	43	37	33	42	37	32	31	
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	40	34	30	28	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1439	33.0
0-40	2273	52.1
0-60	3634	83.4
0-90	4360	100.0
0-180	4360	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	4416	4502	4638
55	3652	3679	3791
65	3046	2963	3084
75	2994	2685	2722
85	3527	2940	2903

ORDERING INFORMATION

SAMPLE NUMBER: 22GR-LD5-27-F1-UNV-L835-CD1-U


Rating Blank=Standard ATW-SW4=Chicago Rated	LED Type LD5=LED 5.0	Voltage ⁽²⁾ 347=347 Volts UNV=Universal Voltage 120-277 ⁽³⁾	Driver Type CD=0-10V Dimming Driver (10% - 100% Dimming) HCD=0-10V Dimming Driver (1% - 100% Dimming) SD=Step-Dim Driver ⁽⁷⁾ 5LTD=Fifth Light DALI Driver (10% - 100% Dimming) ⁽⁷⁾ SR=Sensor Ready (1% - 100% Dimming) ⁽¹⁰⁾	Package U=Unit Pack PALC=Palletized Fixtures In Carton
Width / Length 22=2' x 2'	LED Lumen Output ⁽⁸⁾ 20=2000 24=2400 28=2800 32=3200 36=3600 40=4000 43=4300	Options GL=Single Element Fuse GM=Double Element Fuse Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ⁽⁴⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽⁴⁾ GTD2=Bodine Generator Transfer Device ⁽⁸⁾ ETS2=OTA Emergency Transfer Switch ⁽⁸⁾ CCT L830=3000K L835=3500K L840=4000K L850=5000K Flex Multiple Configurations Available	Number of Drivers 1=1 Driver	Sensors SVPD1=Integrated occupancy and daylight dimming sensor, 144 sq. ft. SWPD1=WaveLinX Wireless Connected Lighting (WCL) system LWIPD1=Integrated LumaWatt Pro Wireless sensor system ⁽¹⁰⁾ LWTPD1=Tile mounted LumaWatt Pro Wireless sensor system
Trim Type G=Grid/Lay-in (Standard) ⁽¹⁾ G=Concealed T G=Slot Grid	Shielding F1=A12 .125 HP (Standard) A=A12 .095 A125=A12 .125 A19/156=#19 Pattern Acrylic (.156" Thick)	Door Frame Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum c/w Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum	Accessories EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹¹⁾ DF-22-W=2' x 2' Drywall Frame Kit ISHH-01=Programming Remote for Integrated Sensor ISHH-02=Personal Control Remote for Integrated Sensor	

NOTES: ⁽¹⁾ An EQ Grid Clip is recommended for all 9/16" ceiling systems. ⁽²⁾ Products also available in non-US voltages and frequencies for international markets.⁽³⁾ Not available when specifying emergencies, voltage must be specific. ⁽⁴⁾ With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁵⁾ Gasketing only available with aluminum door frame. ⁽⁶⁾ Gasketing minimum .125. ⁽⁷⁾ Step-Dim (BI-Level) and Fifth Light (DALI) only available for 4000 lumen and up. ⁽⁸⁾ Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁹⁾ Nominal lumen output. See table for actual values. ⁽¹⁰⁾ SR driver required for LWIPD1 only. ⁽¹¹⁾ DesignLights Consortium™ Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.	Pallet
22GR-LD4-32	10 lbs.	56

Submitted by Putterman, Scharck & Assoc.		Catalog Number: 22GRRRA-LD5-36-KSH20-UNV-L840-CD1-U	Type: FD
		Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering Notes:	PSA18-68593

22GRLED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	22GR-LD5-20-F1-UNV-L835-CD1-U	2045	16.3	125
Stock	22GR-LD5-24-F1-UNV-L835-CD1-U	2467	19.9	123
MTO	22GR-LD5-28-F1-UNV-L835-CD1-U	2883	23.8	121
Stock	22GR-LD5-32-F1-UNV-L835-CD1-U	3277	27.6	118
MTO	22GR-LD5-36-F1-UNV-L835-CD1-U	3655	31.7	115
MTO	22GR-LD5-40-F1-UNV-L835-CD1-U	4098	38.8	105
Stock	22GR-LD5-43-F1-UNV-L835-CD1-U	4360	40.1	108

*Stocked in 3500K and 4000K others are MTO.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 22GRRA-LD5-28-KSH20-UNV-L840-
 CD1-U

Notes:

Type:
FE

PSA18-68593

Metalux

DESCRIPTION

GRLED is a recessed lensed troffer series which offers a high quality luminaire designed with the latest solid state lighting and electronic driver technology for optimal performance and energy efficiency. The GRLED is compatible with all of today's popular ceiling systems and is available with a number of shielding options and accessories for application versatility.

The GRLED series features efficiency, quality and performance. The series is an excellent choice for use in a variety of indoor spaces such as offices, schools, residential, hospitals or retail merchandising areas.

SPECIFICATION FEATURES**Construction**

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed for safe handling. Innovative design provides superior lens brightness, uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience. Drivers and internal components are accessible from below the ceiling and LED modules include plug-in low voltage connectors.

Controls

The GRLED is equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels to maximize energy savings. Fixtures may have integrated Eaton control systems such as the SPVD series and the LumaWatt Pro series.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI. Projected life at 70% lumen maintenance is nearly 200,000 hours with TM21 rating up to L90 >60,000 hours. Electronic drivers are cULus recognized and available for 120-277V and 347V applications. Standard dimming is 0-10V to 10% with 1%, step and Fifth Light DALI dimming options available.

Emergency Battery Pack Option

Optional 120V-277V integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. Generator Transfer Device (GTD) and other emergency options available - see ordering information for details.

Frame/Optical Shielding

Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens offering the balance of rigidity and light stability. Primary stocking skus come standard with robust - .125 lens with other options available for maximum versatility.

Compliance

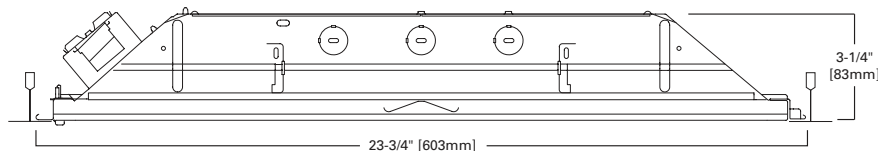
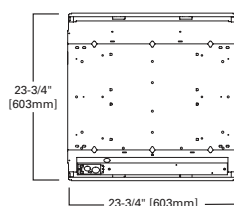
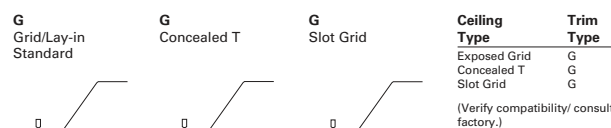
Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments. Fixtures are suitable for direct insulation contact and are damp location listed. RoHS compliant. LED components comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.



22GR LED

2' X 2' LED TROFFER

General Recessed LED
Troffer
For Use in Insulated
Ceilings

**MOUNTING DATA****DOOR FRAMES****CEILING COMPATIBILITY****WATTAGE**

Lumens Package	Watts
2000	16W
2400	20W
2800	24W
3200	28W
3600	32W
4000	39W
4300	40W

LINEAR DISCONNECT

Safe and convenient means of
disconnecting power

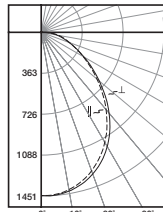

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**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 22GRRA-LD5-28-KSH20-UNV-L840-
 CD1-U

Notes:

Type:**FE**

PSA18-68593

22GRLED**PHOTOMETRICS**
**22GR-LD5-32-F1-
UNV-L835-CD1-U**
 Electronic Driver

Linear LED 3500K

 Spacing criterion:
 (H) 1.14 x mounting
 height, (L) 1.18 x
 mounting height

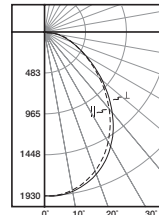
Lumens: 3277

Input Watts: 27.7W

Efficacy: 118.3 lm/W

 Test Report:
 22GR-LD5-32-F1-
 UNV-L835-CD1-U.
 IES
Candlepower

Angle	Along H	45°	Across L
0	1447	1447	1447
5	1438	1436	1445
10	1407	1409	1422
15	1357	1363	1381
20	1288	1299	1320
25	1203	1218	1243
30	1099	1116	1145
35	985	1003	1031
40	862	876	902
45	730	749	767
50	606	615	634
55	490	493	512
60	390	385	398
65	304	295	303
70	235	220	227
75	182	162	166
80	130	112	112
85	72	61	60
90	0	0	0


**22GR-LD5-43-F1-
UNV-L835-CD1-U**
 Electronic Driver

Linear LED 3500K

 Spacing criterion:
 (H) 1.14 x mounting
 height, (L) 1.18 x
 mounting height

Lumens: 4360

Input Watts: 40.1W

Efficacy: 108.7 lm/W

 Test Report:
 22GR-LD5-43-F1-
 UNV-L835-CD1-U.
 IES
Candlepower

Angle	Along H	45°	Across L
0	1965	1965	1965
5	1915	1910	1923
10	1873	1875	1892
15	1806	1813	1835
20	1718	1729	1759
25	1601	1619	1655
30	1463	1485	1522
35	1312	1331	1374
40	1145	1164	1200
45	975	994	1024
50	806	821	850
55	654	659	679
60	517	513	532
65	402	391	407
70	316	293	304
75	242	217	220
80	173	149	151
85	96	80	79
90	0	0	0

Coefficients of Utilization

		Effective floor cavity reflectance												20%											
rc rw RCR		80%				70%				50%				30%				10%				0%			
		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0						
0		119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100						
1		109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85						
2		100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	72						
3		92	82	74	68	90	81	73	68	78	72	67	75	70	65	72	68	64	62						
4		85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54						
5		78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	47						
6		73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42						
7		68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	38						
8		63	50	42	36	62	50	42	36	48	41	36	47	41	36	46	40	36	34						
9		59	46	38	33	58	46	38	33	45	38	33	43	37	33	42	37	32	31						
10		56	43	35	30	54	42	35	30	41	35	30	40	34	30	40	34	30	28						

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1082	33.0
0-40	1709	52.2
0-60	2732	83.4
0-90	3277	100.0
0-180	3277	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3306	3392	3474
55	2736	2753	2859
65	2304	2235	2296
75	2252	2005	2054
85	2646	2241	2205

Coefficients of Utilization

Effective floor cavity reflectance										20%											
rc rw RCR	80%				70%				50%				30%				10%				0%
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72			
3	92	82	74	68	90	81	73	68	78	72	67	75	70	65	72	68	64	62			
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42			
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	38			
8	63	50	42	36	62	50	42	36	48	41	36	47	41	36	46	40	36	34			
9	59	46	38	33	58	46	38	33	45	38	33	43	37	33	42	37	32	31			
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	40	34	30	28			

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1439	33.0
0-40	2273	52.1
0-60	3634	83.4
0-90	4360	100.0
0-180	4360	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	4416	4502	4638
55	3652	3679	3791
65	3046	2963	3084
75	2994	2685	2722
85	3527	2940	2903

ORDERING INFORMATION

SAMPLE NUMBER: 22GR-LD5-27-F1-UNV-L835-CD1-U

Rating Blank=Standard ATW-SW4=Chicago Rated	LED Type LD5=LED 5.0	Voltage ⁽²⁾ 247-247 Volts UNV=Universal Voltage 120-277 ⁽³⁾	Driver Type CD=0-10V Dimming Driver (10% - 100% Dimming) HCD=0-10V Dimming Driver (1% - 100% Dimming) SD=Step-Dim Driver ⁽⁷⁾ 5LTD=Fifth Light DALI Driver (10% - 100% Dimming) ⁽⁷⁾ SR=Sensor Ready (1% - 100% Dimming) ⁽¹⁰⁾	Packaging U=Unit Pack PALC=Palletized Fixtures In Carton
Width / Length 22=2' x 2'	LED Lumen Output ⁽⁸⁾ 20=2000 24=2400 28=2800 32=3200 36=3600 40=4000 43=4300	Options GL=Single Element Fuse GM=Double Element Fuse Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ⁽⁴⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽⁴⁾ GTD2=Bodine Generator Transfer Device ⁽⁸⁾ ETS2=OTA Emergency Transfer Switch ⁽⁸⁾ CCT L830=3000K L835=3500K L840=4000K L850=5000K Flex Multiple Configurations Available	Number of Drivers 1=1 Driver	Sensors SVPD1=Integrated occupancy and daylight dimming sensor, 144 sq. ft. SWPD1=WaveLinX Wireless Connected Lighting (WCL) system LWPD1=Integrated LumaWatt Pro Wireless sensor system ⁽¹⁰⁾ LWTPD1=Tile mounted LumaWatt Pro Wireless sensor system
Trim Type G=Grid/Lay-in (Standard) ⁽¹⁾ G=Concealed T G=Slot Grid	Shielding F1=A12 .125 HP (Standard) A=A12 .095 A125=A12 .125 A19/156=#19 Pattern Acrylic (.156" Thick)	Options PAF=Painted After Fabrication G1=Gasket, Door Frame and Housing G2=G1 plus Gasket between Lens and Door G3=G1 and G2 plus Gasketing on Mounting Surface of Fixture Trims ^{(6), (8)}		
Series ⁽¹¹⁾ R=General Purpose Troffer				
Door Frame Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum c/w Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum				

 NOTES: ⁽¹⁾ An EQ Grid Clip is recommended for all 9/16" ceiling systems. ⁽²⁾ Products also available in non-US voltages and frequencies for international markets.

⁽³⁾ Not available when specifying emergencies, voltage must be specific. ⁽⁴⁾ With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁵⁾ Gasketing only available with aluminum door frame. ⁽⁶⁾ Gasketing minimum .125. ⁽⁷⁾ Step-Dim (BI-Level) and Fifth Light (DALI) only available for 4000 lumen and up. ⁽⁸⁾ Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁹⁾ Nominal lumen output. See table for actual values. ⁽¹⁰⁾ SR driver required for LWPD1 only. ⁽¹¹⁾ DesignLights Consortium™ Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.	Pallet
22GR-LD4-32	10 lbs.	56




Powering Business Worldwide

 Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

 Specifications and
 dimensions subject to
 change without notice.

 PS519145EN
 2017-04-26 07:41:09

Submitted by Putterman, Scharck & Assoc.		Catalog Number: 22GRRRA-LD5-28-KSH20-UNV-L840-CD1-U	Type: FE
		Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering Notes:	PSA18-68593

22GRLED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	22GR-LD5-20-F1-UNV-L835-CD1-U	2045	16.3	125
Stock	22GR-LD5-24-F1-UNV-L835-CD1-U	2467	19.9	123
MTO	22GR-LD5-28-F1-UNV-L835-CD1-U	2883	23.8	121
Stock	22GR-LD5-32-F1-UNV-L835-CD1-U	3277	27.6	118
MTO	22GR-LD5-36-F1-UNV-L835-CD1-U	3655	31.7	115
MTO	22GR-LD5-40-F1-UNV-L835-CD1-U	4098	38.8	105
Stock	22GR-LD5-43-F1-UNV-L835-CD1-U	4360	40.1	108

*Stocked in 3500K and 4000K others are MTO.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

22RDI-30-UNV-L840-CD1-U

Notes:**Type:****FF**

PSA18-68593

Metalux**DESCRIPTION**

The Ovation LED Series is a complete family of recessed direct/indirect luminaires dedicated to the latest solid state lighting and drives technology for optimal performance and energy efficiency. All components are located above the ceiling plane for a clean architectural appearance in the finished space. Carefully balanced design elements combine to provide an efficient and exciting alternative to traditional general lighting. Ovation LED is an excellent choice for commercial office spaces, schools, hospitals, or retail merchandising areas.

SPECIFICATION FEATURES**Construction**

Nominal 6" deep housing is die formed of code gauge, prime cold rolled steel. Heavy gauge end plates are securely attached with screws for strength and rigidity and the elimination of gaps. Four auxiliary fixture end suspension points are provided.

Controls

The Ovation LED is Powered by Fifth Light, with a standard 0-10V continuous dimming driver that works with any 0-10V control/dimmer. Combine with energy saving products like occupancy sensors, daylighting controls and lighting relay panels to maximize energy savings. The Ovation LED can include a factory-installed tile mount sensor system (LWTPD1) for a fully integrated sensor system with Internet of Things (IoT) connectivity and configurable software. Or, specify the Digital Addressable Lighting Interface (DALI) drivers, dimmable down to 10%, for use with Fifth Light controls.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum CRI of 80. Projected life is 60,000 hours at 80% lumen output. cULus listed. Electronic drivers are available for 120-277V and 347V applications.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. The patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Durable cold rolled steel with multistage, iron phosphate pretreatment and white enamel finish to ensure maximum bonding and rust inhibition.

Reflectors

Indirect reflector has high reflectance baked matte white enamel finish for luminous uniformity. Positively retained direct lamp shield is constructed of heavy gauge perforated steel with high reflectance painted after fabrication finish and milky white overlay diffuser for visual comfort. All reflectors are precision formed in a computer-controlled operation.

Compliance

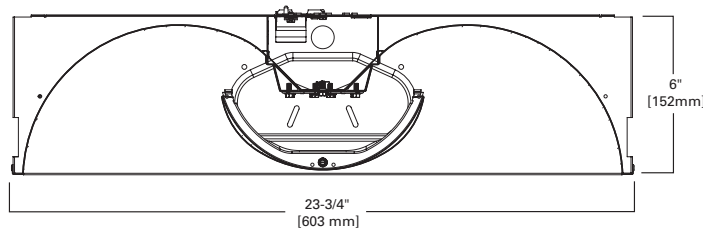
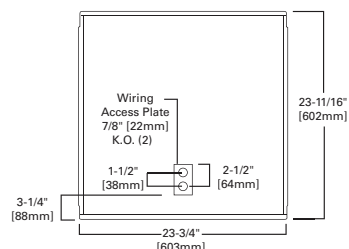
Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Warranty

Five year warranty.

**22RDI
LED****2' X 2' TROFFER LED
MODULE**

Specification Grade Troffer

**MOUNTING DATA****CEILING COMPATIBILITY**

G Grid/Lay-in Standard	T Slot Grid	F Drywall Frame Kit	Ceiling Type**	Trim Type
			Exposed Grid	G
			Concealed T	G or T
			Slot Grid	G or T
			Flange	***

CERTIFICATION DATA

cULus - 1598
 Damp Location Listed
 IC Rated
 LM79/LM80 Compliant
 DesignLights Consortium® Qualified
 NOM Compliant

*See Drywall Frame Kit Accessory in
 Ordering Information Section

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

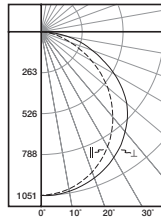
22RDI-30-UNV-L840-CD1-U

Notes:

Type:

FF

PSA18-68593

22RDI LED 2' X 2'**PHOTOMETRICS****22RDI-30-UNV-L840-CD1-U**

Electronic Driver

Linear LED 4000K

 Spacing criterion:
 (II) 1.21 x mounting
 height, (L) 1.32 x
 mounting height

Lumens: 3037.2

Input Watts: 29.9W

Efficacy: 101.6 lm/W

 Test Report:
 22RDI-LD5-30-UNV-
 L840-CD1-U-IES
Candlepower

Angle	Along II	45°	Across L
0	1049	1049	1049
5	1040	1045	1049
10	1023	1031	1038
15	994	1007	1020
20	957	976	997
25	907	936	967
30	850	890	930
35	785	836	889
40	714	776	836
45	636	713	781
50	556	643	716
55	466	570	633
60	373	485	541
65	281	393	439
70	198	301	346
75	128	209	264
80	71	131	168
85	26	52	68
90	0	0	0

Coefficients of Utilization

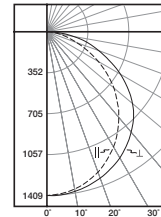
		Effective floor cavity reflectance 20%															
		80%				70%				50%				30%			
rc		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	0%
rw		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	0
RCR		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	0
0		119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	100
1		109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	86
2		99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	71
3		90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	60
4		82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	50
5		76	62	53	47	73	61	53	46	59	52	46	57	51	45	55	43
6		70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	37
7		65	51	42	36	63	50	42	36	49	41	35	47	40	35	46	33
8		60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	29
9		56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	26
10		53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	815	26.8
0-40	1338	44.1
0-60	2386	78.5
0-90	3037	100.0
0-180	3037	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2420	2713	2972
55	2186	2674	2970
65	1789	2502	2795
75	1331	2173	2745
85	803	1606	2100

**22RDI-40-UNV-L835-CD1-U**

Electronic Driver

Linear LED 3500K

 Spacing criterion:
 (II) 1.21 x mounting
 height, (L) 1.32 x
 mounting height

Lumens: 4075.6

Input Watts: 41.8W

Efficacy: 97.5 lm/W

 Test Report:
 22RDI-40-UNV-
 L835-CD1-U-IES
Candlepower

Angle	Along II	45°	Across L
0	1406	1406	1406
5	1395	1401	1406
10	1371	1381	1391
15	1332	1350	1368
20	1282	1308	1337
25	1215	1256	1296
30	1142	1194	1251
35	1053	1120	1191
40	957	1040	1123
45	851	955	1050
50	748	862	957
55	627	765	845
60	505	653	726
65	380	528	591
70	265	406	469
75	174	280	356
80	96	175	224
85	35	71	90
90	0	0	0

Coefficients of Utilization

		Effective floor cavity reflectance 20%															
		80%				70%				50%				30%			
rc		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	0%
rw		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	0
RCR		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	0
0		119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	100
1		109	104	99	96	106	101	98	94	97	94	91	93	91	88	90	86
2		99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	71
3		90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	60
4		82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	50
5		76	62	53	47	73	61	53	46	59	52	46	57	51	45	55	43
6		70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	37
7		65	51	42	36	63	50	42	36	49	41	35	47	40	35	46	33
8		60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	29
9		56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	26
10		53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1093	26.8
0-40	1795	44.0
0-60	3200	78.5
0-90	4076	100.0
0-180	4076	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3239	3634	3996
55	2942	3589	3964
65	2420	3362	3763
75	1809	2911	3701
85	1081	2192	2779

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

22RDI-30-UNV-L840-CD1-U

Type:**FF**

Notes:

PSA18-68593

22RDI LED 2' X 2'**LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 90%	> 60,000

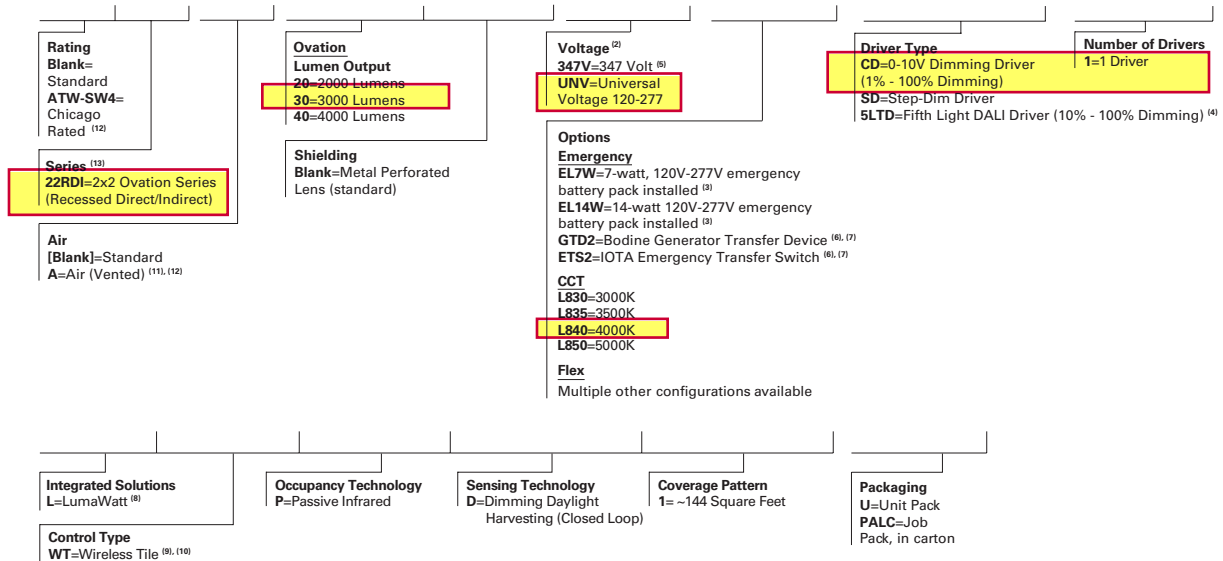
ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Curved)	Delivered Lumens	Watts	Efficacy (LPW)
MTO	22RDI-20-UNV-L830-CD1-U	1945	19.9	97
MTO	22RDI-20-UNV-L835-CD1-U	2026	19.9	101
MTO	22RDI-20-UNV-L840-CD1-U	2026	19.9	101
MTO	22RDI-20-UNV-L850-CD1-U	2107	19.9	105
MTO	22RDI-30-UNV-L830-CD1-U	2911	30.1	96
MTO	22RDI-30-UNV-L835-CD1-U	3032	30.1	100
MTO	22RDI-30-UNV-L840-CD1-U	3032	30.1	100
MTO	22RDI-30-UNV-L850-CD1-U	3153	30.1	104
MTO	22RDI-40-UNV-L830-CD1-U	3913	41.8	93
MTO	22RDI-40-UNV-L835-CD1-U	4076	41.8	97
MTO	22RDI-40-UNV-L840-CD1-U	4076	41.8	97
MTO	22RDI-40-UNV-L850-CD1-U	4239	41.8	101

*Made to order (MTO) requires a typical three week lead time.

ORDERING INFORMATION

SAMPLE NUMBER: 22RDI-30-UNV-L840-CD1-U

**ACCESSORIES**

EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾
 DF-22-W=2' x 2' Drywall Frame Kit
 SK-22-WT=2' x 2' Tall Surface Mount Kit
 DF10P-C=Decorator Dimmer, 0-10V
 SF10P=Decorator Slide Dimmer, 0-10V

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾With integral test switch/indicator. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁴⁾Must be used in conjunction with a DALI control system. For a complete listing of Fifth Light Technology products and other solutions from Cooper Controls, visit www.eaton.com/lightingsystems. ⁽⁵⁾347V versions are not available with emergency options. SD, 5LTD, not available. ⁽⁶⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁷⁾Must specify 120V or 277V for wiring of ETS/GTD components. ⁽⁸⁾Must be used in conjunction with a LumaWatt Pro control system. For complete LumaWatt Pro wireless solutions, visit www.eaton.com/lumawattpro. ⁽⁹⁾LWT compatible with CD drivers only. ⁽¹⁰⁾LWT sensor is external to luminaire, cable factory wired. ⁽¹¹⁾Air version is vented but does not meet air handling requirements; a 3% reduction in delivered lumens is experienced with this option. ⁽¹²⁾Chicago rated and air vented cannot be ordered in combination with each other. ⁽¹³⁾DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
22RDI	19 lbs.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

22RDI-20-UNV-L840-CD1-U

Notes:**Type:****FF1**

PSA18-68593

Metalux**DESCRIPTION**

The Ovation LED Series is a complete family of recessed direct/indirect luminaires dedicated to the latest solid state lighting and drives technology for optimal performance and energy efficiency. All components are located above the ceiling plane for a clean architectural appearance in the finished space. Carefully balanced design elements combine to provide an efficient and exciting alternative to traditional general lighting. Ovation LED is an excellent choice for commercial office spaces, schools, hospitals, or retail merchandising areas.

SPECIFICATION FEATURES**Construction**

Nominal 6" deep housing is die formed of code gauge, prime cold rolled steel. Heavy gauge end plates are securely attached with screws for strength and rigidity and the elimination of gaps. Four auxiliary fixture end suspension points are provided.

Controls

The Ovation LED is Powered by Fifth Light, with a standard 0-10V continuous dimming driver that works with any 0-10V control/dimmer. Combine with energy saving products like occupancy sensors, daylighting controls and lighting relay panels to maximize energy savings. The Ovation LED can include a factory-installed tile mount sensor system (LWTPD1) for a fully integrated sensor system with Internet of Things (IoT) connectivity and configurable software. Or, specify the Digital Addressable Lighting Interface (DALI) drivers, dimmable down to 10%, for use with Fifth Light controls.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum CRI of 80. Projected life is 60,000 hours at 80% lumen output. cULus listed. Electronic drivers are available for 120-277V and 347V applications.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. The patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Durable cold rolled steel with multistage, iron phosphate pretreatment and white enamel finish to ensure maximum bonding and rust inhibition.

Reflectors

Indirect reflector has high reflectance baked matte white enamel finish for luminous uniformity. Positively retained direct lamp shield is constructed of heavy gauge perforated steel with high reflectance painted after fabrication finish and milky white overlay diffuser for visual comfort. All reflectors are precision formed in a computer-controlled operation.

Compliance

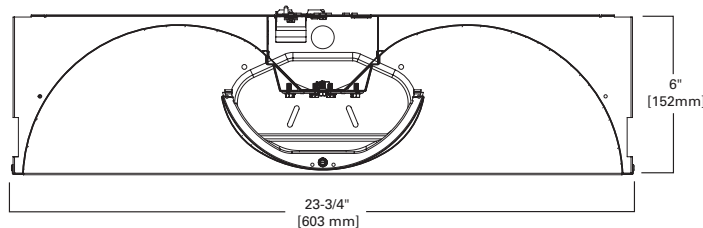
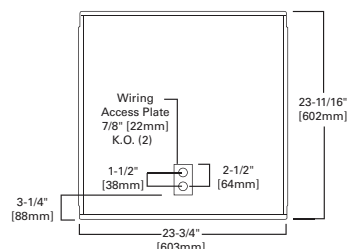
Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Warranty

Five year warranty.

**22RDI
LED****2' X 2' TROFFER LED
MODULE**

Specification Grade Troffer

**MOUNTING DATA****CEILING COMPATIBILITY**

G Grid/Lay-in Standard	T Slot Grid	F Drywall Frame Kit	Ceiling Type**	Trim Type
			Exposed Grid	G
			Concealed T	G or T
			Slot Grid	G or T
			Flange	***

CERTIFICATION DATA

cULus - 1598
 Damp Location Listed
 IC Rated
 LM79/LM80 Compliant
 DesignLights Consortium® Qualified
 NOM Compliant

*See Drywall Frame Kit Accessory in
 Ordering Information Section

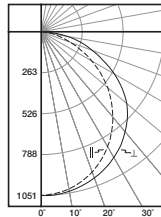
**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

22RDI-20-UNV-L840-CD1-U

Notes:

Type:**FF1**

PSA18-68593

22RDI LED 2' X 2'**PHOTOMETRICS****22RDI-30-UNV-L840-CD1-U**

Electronic Driver

Linear LED 4000K

 Spacing criterion:
 (II) 1.21 x mounting
 height, (⊥) 1.32 x
 mounting height

Lumens: 3037.2

Input Watts: 29.9W

Efficacy: 101.6 lm/W

 Test Report:
 22RDI-LD5-30-UNV-
 L840-CD1-U.IES
Candlepower

Angle	Along II	45°	Across ⊥
0	1049	1049	1049
5	1040	1045	1049
10	1023	1031	1038
15	994	1007	1020
20	957	976	997
25	907	936	967
30	850	890	930
35	785	836	889
40	714	776	836
45	636	713	781
50	556	643	716
55	466	570	633
60	373	485	541
65	281	393	439
70	198	301	346
75	128	209	264
80	71	131	168
85	26	52	68
90	0	0	0

Coefficients of Utilization

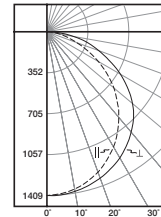
		Effective floor cavity reflectance 20%											
		80%				70%				50%			
rc		70	50	30	10	70	50	30	10	50	30	10	0
rw		70	50	30	10	70	50	30	10	50	30	10	0
RCR		70	50	30	10	70	50	30	10	50	30	10	0
0		119	119	119	119	116	116	116	116	111	111	111	100
1		109	104	99	96	106	102	98	94	97	94	91	83
2		99	90	83	78	96	88	82	77	85	79	75	69
3		90	79	71	64	87	78	70	64	75	68	63	58
4		82	70	61	54	80	69	60	54	66	59	53	50
5		76	62	53	47	73	61	53	46	59	52	46	43
6		70	56	47	41	68	55	47	41	53	46	40	37
7		65	51	42	36	63	50	42	36	49	41	35	33
8		60	46	38	32	59	46	38	32	44	37	32	29
9		56	43	34	29	55	42	34	29	41	34	28	26
10		53	39	31	26	51	39	31	26	38	31	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	815	26.8
0-40	1338	44.1
0-60	2386	78.5
0-90	3037	100.0
0-180	3037	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2420	2713	2972
55	2186	2674	2970
65	1789	2502	2795
75	1331	2173	2745
85	803	1606	2100

**22RDI-40-UNV-L835-CD1-U**

Electronic Driver

Linear LED 3500K

 Spacing criterion:
 (II) 1.21 x mounting
 height, (⊥) 1.32 x
 mounting height

Lumens: 4075.6

Input Watts: 41.8W

Efficacy: 97.5 lm/W

 Test Report:
 22RDI-40-UNV-
 L835-CD1-U.IES
Candlepower

Angle	Along II	45°	Across ⊥
0	1406	1406	1406
5	1395	1401	1406
10	1371	1381	1391
15	1332	1350	1368
20	1282	1308	1337
25	1215	1256	1296
30	1142	1194	1251
35	1053	1120	1191
40	957	1040	1123
45	851	955	1050
50	748	862	957
55	627	765	845
60	505	653	726
65	380	528	591
70	265	406	469
75	174	280	356
80	96	175	224
85	35	71	90
90	0	0	0

Coefficients of Utilization

		Effective floor cavity reflectance 20%											
		80%				70%				50%			
rc		70	50	30	10	70	50	30	10	50	30	10	0
rw		70	50	30	10	70	50	30	10	50	30	10	0
RCR		70	50	30	10	70	50	30	10	50	30	10	0
0		119	119	119	119	116	116	116	116	111	111	111	100
1		109	104	99	96	106	101	98	94	97	94	91	83
2		99	90	83	78	96	88	82	77	85	79	75	69
3		90	79	71	64	87	78	70	64	75	68	63	58
4		82	70	61	54	80	69	60	54	66	59	53	50
5		76	62	53	47	73	61	53	46	59	52	46	43
6		70	56	47	41	68	55	47	40	53	46	40	37
7		65	51	42	36	63	50	42	36	49	41	35	33
8		60	46	38	32	59	46	38	32	44	37	32	29
9		56	43	34	29	55	42	34	29	41	34	28	26
10		53	39	31	26	51	39	31	26	38	31	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1093	26.8
0-40	1795	44.0
0-60	3200	78.5
0-90	4076	100.0
0-180	4076	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3239	3634	3996
55	2942	3589	3964
65	2420	3362	3763
75	1809	2911	3701
85	1081	2192	2779

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

22RDI-20-UNV-L840-CD1-U

Notes:

Type:**FF1**

PSA18-68593

22RDI LED 2' X 2'**LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 90%	> 60,000

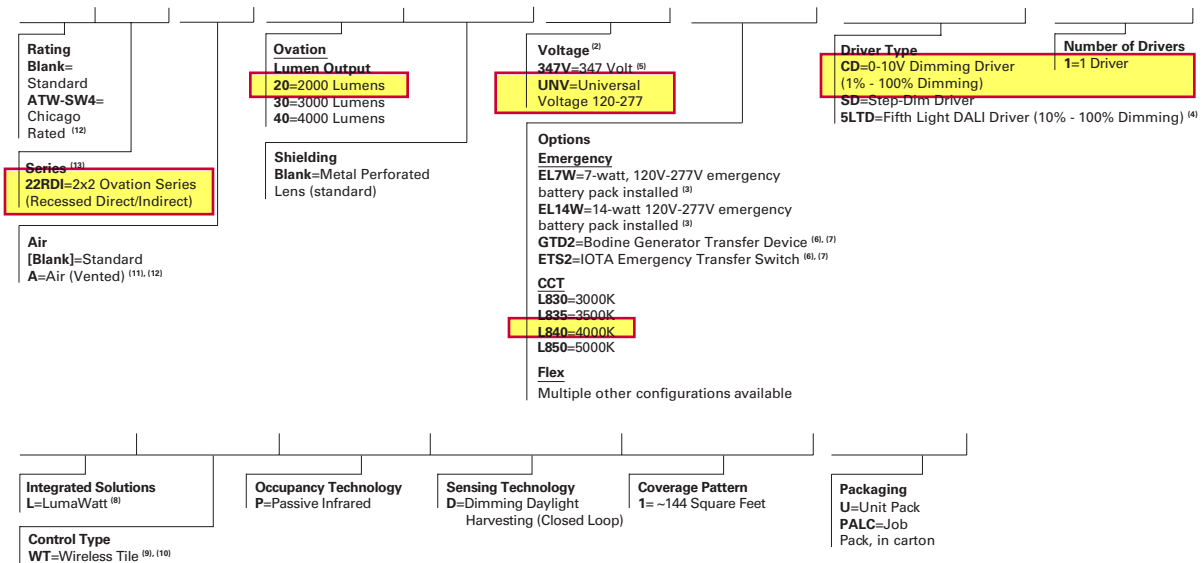
ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Curved)	Delivered Lumens	Watts	Efficacy (LPW)
MTO	22RDI-20-UNV-L830-CD1-U	1945	19.9	97
MTO	22RDI-20-UNV-L835-CD1-U	2026	19.9	101
MTO	22RDI-20-UNV-L840-CD1-U	2026	19.9	101
MTO	22RDI-20-UNV-L850-CD1-U	2107	19.9	105
MTO	22RDI-30-UNV-L830-CD1-U	2911	30.1	96
MTO	22RDI-30-UNV-L835-CD1-U	3032	30.1	100
MTO	22RDI-30-UNV-L840-CD1-U	3032	30.1	100
MTO	22RDI-30-UNV-L850-CD1-U	3153	30.1	104
MTO	22RDI-40-UNV-L830-CD1-U	3913	41.8	93
MTO	22RDI-40-UNV-L835-CD1-U	4076	41.8	97
MTO	22RDI-40-UNV-L840-CD1-U	4076	41.8	97
MTO	22RDI-40-UNV-L850-CD1-U	4239	41.8	101

*Made to order (MTO) requires a typical three week lead time.

ORDERING INFORMATION

SAMPLE NUMBER: 22RDI-30-UNV-L840-CD1-U

**ACCESSORIES**

EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾
 DF-22-W=2' x 2' Drywall Frame Kit
 SK-22-WT=2' x 2' Tall Surface Mount Kit
 DF10P-C=Decorator Dimmer, 0-10V
 SF10P=Decorator Slide Dimmer, 0-10V

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾With integral test switch/indicator. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁴⁾Must be used in conjunction with a DALI control system. For a complete listing of Fifth Light Technology products and other solutions from Cooper Controls, visit www.eaton.com/lightingsystems. ⁽⁵⁾347V versions are not available with emergency options. SD, SLTD, not available. ⁽⁶⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁷⁾Must specify 120V or 277V for wiring of ETS/GTD components. ⁽⁸⁾Must be used in conjunction with a LumaWatt Pro control system. For complete LumaWatt Pro wireless solutions, visit www.eaton.com/lumawattpro. ⁽⁹⁾LWT compatible with CD drivers only. ⁽¹⁰⁾LWT sensor is external to luminaire, cable factory wired. ⁽¹¹⁾Air version is vented but does not meet air handling requirements; a 3% reduction in delivered lumens is experienced with this option. ⁽¹²⁾Chicago rated and air vented cannot be ordered in combination with each other. ⁽¹³⁾DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
22RDI	19 lbs.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

24RDI-50-UNV-L840-CD1-U

Notes:**Type:****FG**

PSA18-68593

Metalux

DESCRIPTION

The Ovation LED Series is a complete family of recessed direct/indirect luminaires dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. All components are located above the ceiling plane for a clean architectural appearance in the finished space. Carefully balanced design elements combine to provide an efficient and exciting alternative to traditional general lighting. Ovation LED is an excellent choice for commercial office spaces, schools, hospitals, or retail merchandising areas.

SPECIFICATION FEATURES**Construction**

Nominal 6" deep housing is die formed of code gauge, prime cold rolled steel. Heavy gauge end plates are securely attached with screws for strength and rigidity and the elimination of gaps. Four auxiliary fixture end suspension points are provided.

Controls

The Ovation LED is Powered by Fifth Light, with a standard 0-10V continuous dimming driver that works with any 0-10V control/dimmer. Combine with energy saving products like occupancy sensors, daylighting controls and lighting relay panels to maximize energy savings. The Ovation LED can include a factory-installed tile mount sensor system (LWTPD1) for a fully integrated sensor system with Internet of Things (IoT) connectivity and configurable software. Or, specify the Digital Addressable Lighting Interface (DALI) drivers, dimmable down to 10%, for use with Fifth Light controls.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a CRI ≥ 80. Projected life is 60,000 hours at 80% lumen output. cULus listed. Electronic drivers are available for 120-277V and 347V applications.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. The patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Durable cold rolled steel with multistage, iron phosphate pretreatment and white enamel finish to ensure maximum bonding and rust inhibition.

Reflectors

Indirect reflector has high reflectance baked matte white enamel finish for luminous uniformity. Positively retained direct lamp shield is constructed of heavy gauge perforated steel with high reflectance painted after fabrication finish and milky white overlay diffuser for visual comfort. All reflectors are precision formed in a computer-controlled operation.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Warranty

Five year warranty.



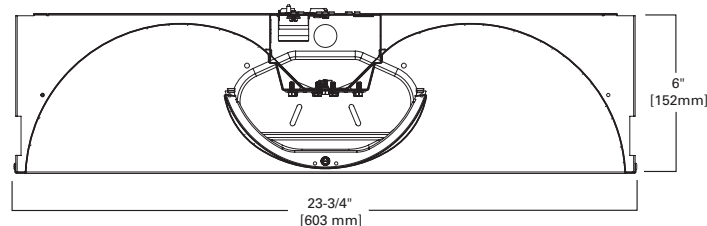
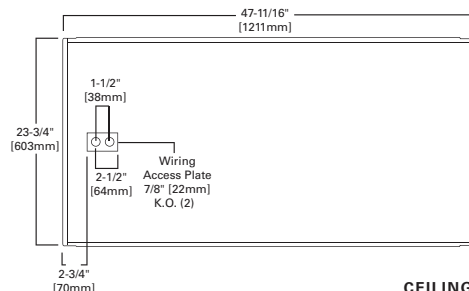
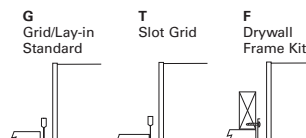
24RDI LED

2' X 4' TROFFER LED MODULE

Specification Grade Troffer

powered by

 fifthlight
 technology

**MOUNTING DATA****CEILING COMPATIBILITY**

Ceiling Type**	Trim Type
Exposed Grid	G
Concealed T	G or T
Slot Grid	G or T
Flange	***

CERTIFICATION DATA

cULus - 1598
 Damp Location Listed
 IC Rated
 LM79/LM80 Compliant
 DesignLights Consortium® Qualified
 NOM Compliant

*See Drywall Frame Kit Accessory in
 Ordering Information Section

LINEAR DISCONNECT

Safe and convenient means of
 disconnecting power


 PS519178EN
 12-21-2017

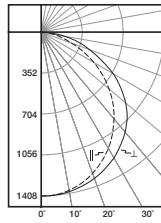
**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

24RDI-50-UNV-L840-CD1-U

Notes:

Type:**FG**

PSA18-68593

24RDI LED 2' X 4'**PHOTOMETRICS****24RDI-40-UNV-L835-CD1-U**

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.22 x mounting
 height, (L) 1.32 x
 mounting height
 Lumens: 4096.9
 Input Watts: 39.6W
 Efficacy: 103.5 lm/W
 Test Report:
 24RDI-LD5-40RP-
 UNV-L835-CD1-U.
 IES

Candlepower

Angle	Along II	45°	Across L
0	1407	1407	1407
5	1402	1398	1405
10	1379	1380	1391
15	1342	1350	1367
20	1290	1310	1336
25	1227	1259	1295
30	1153	1199	1248
35	1066	1129	1186
40	972	1051	1121
45	872	969	1045
50	759	878	947
55	644	780	833
60	524	667	714
65	401	542	569
70	278	404	441
75	183	275	329
80	102	172	206
85	35	67	76
90	0	0	0

Coefficients of Utilization

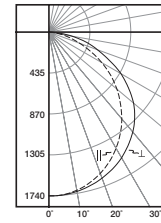
Effective floor cavity reflectance		20%															
rc	rw	80%				70%				50%				30%			
		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	0%
RCR																	0
0		119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	100
1		109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	86
2		99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	72
3		90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	60
4		82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56
5		75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	45
6		70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44
7		65	51	42	36	63	50	42	36	49	41	35	47	40	35	46	40
8		60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36
9		56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33
10		53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1096	26.8
0-40	1802	44.0
0-60	3221	78.6
0-90	4097	100.0
0-180	4097	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	1659	1844	1988
55	1511	1830	1954
65	1277	1726	1812
75	951	1430	1710
85	540	1034	1173

**24RDI-50-UNV-L835-CD1-U**

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.22 x mounting
 height, (L) 1.32 x
 mounting height
 Lumens: 5067.5
 Input Watts: 50.3W
 Efficacy: 100.7 lm/W
 Test Report:
 24RDI-50-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across L
0	1739	1739	1739
5	1734	1727	1736
10	1705	1705	1718
15	1658	1669	1688
20	1596	1618	1650
25	1518	1555	1602
30	1425	1481	1542
35	1319	1394	1467
40	1203	1300	1385
45	1073	1196	1287
50	942	1087	1173
55	802	963	1030
60	649	824	884
65	493	669	706
70	349	506	549
75	228	341	410
80	129	216	254
85	45	86	94
90	0	0	0

Coefficients of Utilization


Effective floor cavity reflectance		20%															
rc	rw	80%				70%				50%				30%			
		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	0%
RCR																	0
0		119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	100
1		109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	86
2		99	90	83	78	96	88	82	77	85	79	75	82	77	73	79	72
3		90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	60
4		82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56
5		75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	45
6		70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44
7		65	51	42	36	63	50	42	36	49	41	35	47	40	35	46	40
8		60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36
9		56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33
10		53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1355	26.7
0-40	2227	43.9
0-60	3983	78.6
0-90	5068	100.0
0-180	5068	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2042	2276	2449
55	1881	2259	2416
65	1570	2130	2248
75	1185	1773	2131
85	695	1328	1451

Submitted by Putterman, Scharck & Assoc.		Catalog Number: 24RDI-50-UNV-L840-CD1-U	Type: FG
 PUTTERMAN SCHARCK & ASSOCIATES	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	
		PSA18-68593	

24RDI LED 2' X 4'

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 89%	> 60,000

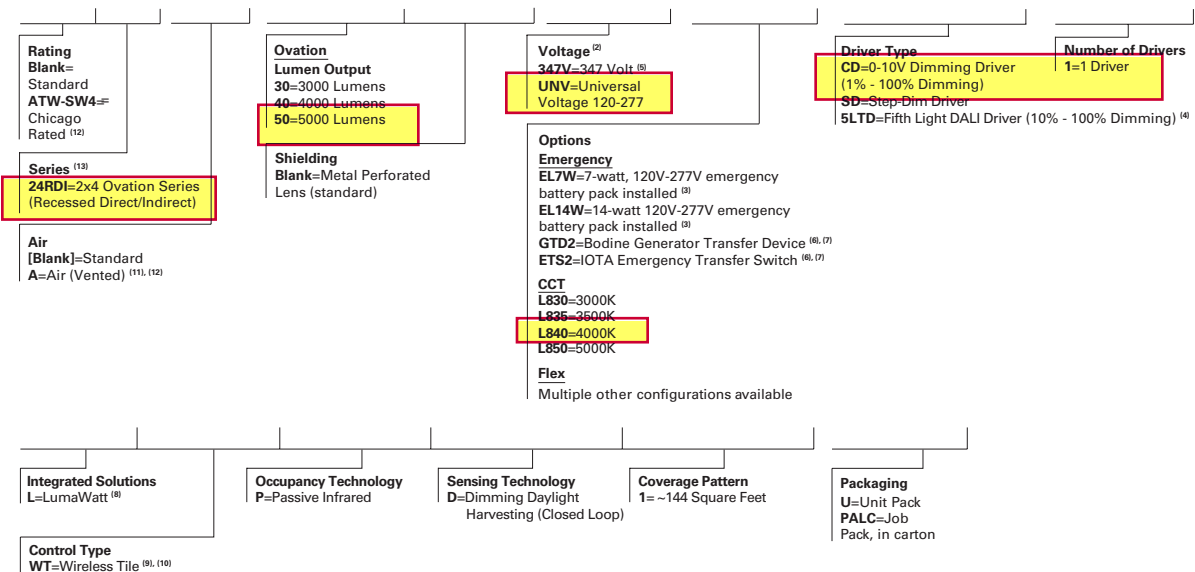
ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Curved)	Delivered Lumens	Watts	Efficacy (LPW)
MTO	24RDI-30-UNV-L830-CD1-U	3010	28.7	104
MTO	24RDI-30-UNV-L835-CD1-U	3071	28.7	107
MTO	24RDI-30-UNV-L840-CD1-U	3132	28.7	109
MTO	24RDI-30-UNV-L850-CD1-U	3225	28.7	112
MTO	24RDI-40-UNV-L830-CD1-U	4015	39.6	101
MTO	24RDI-40-UNV-L835-CD1-U	4097	39.6	103
MTO	24RDI-40-UNV-L840-CD1-U	4179	39.6	105
MTO	24RDI-40-UNV-L850-CD1-U	4302	39.6	108
MTO	24RDI-50-UNV-L830-CD1-U	4966	50.3	98
MTO	24RDI-50-UNV-L835-CD1-U	5067	50.3	100
MTO	24RDI-50-UNV-L840-CD1-U	5168	50.3	102
MTO	24RDI-50-UNV-L850-CD1-U	5320	50.3	105

*Made to order (MTO) requires a typical three week lead time.

ORDERING INFORMATION

SAMPLE NUMBER: 24RDI-30-UNV-L835-CD1-U



ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾
DF-24-W=2' x 4' Drywall Frame Kit
SK-24-WT=2' x 4' Tall Surface Mount Kit
DF10P-C=Decorator Dimmer, 0-10V
SF10P-=Decorator Slide Dimmer, 0-10V

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾With integral test switch/indicator. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁴⁾Must be used in conjunction with a DALI control system. For a complete listing of Fifth Light Technology products and other solutions from Cooper Controls, visit www.eaton.com/lightingsystems. ⁽⁵⁾347V versions are not available with emergency options. SD, 5LTD, not available. ⁽⁶⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁷⁾Must specify 120V or 277V for wiring of ETS/GTD components. ⁽⁸⁾Must be used in conjunction with a LumaWatt Pro control system. For complete LumaWatt Pro wireless solutions, visit www.eaton.com/lumawattpro. ⁽⁹⁾LWT compatible with CD drivers only. ⁽¹⁰⁾LWT sensor is external to luminaire, cable factory wired. ⁽¹¹⁾Air version is vented but does not meet air handling requirements. ⁽¹²⁾Chicago rated and air vented cannot be ordered in combination with each other. ⁽¹³⁾DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
24RDI	30 lbs.



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

PS519178EN
12-21-2017

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

24RDI-40-UNV-L840-CD1-U

Notes:**Type:****FG1**

PSA18-68593

Metalux

DESCRIPTION

The Ovation LED Series is a complete family of recessed direct/indirect luminaires dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. All components are located above the ceiling plane for a clean architectural appearance in the finished space. Carefully balanced design elements combine to provide an efficient and exciting alternative to traditional general lighting. Ovation LED is an excellent choice for commercial office spaces, schools, hospitals, or retail merchandising areas.

SPECIFICATION FEATURES**Construction**

Nominal 6" deep housing is die formed of code gauge, prime cold rolled steel. Heavy gauge end plates are securely attached with screws for strength and rigidity and the elimination of gaps. Four auxiliary fixture end suspension points are provided.

Controls

The Ovation LED is Powered by Fifth Light, with a standard 0-10V continuous dimming driver that works with any 0-10V control/dimmer. Combine with energy saving products like occupancy sensors, daylighting controls and lighting relay panels to maximize energy savings. The Ovation LED can include a factory-installed tile mount sensor system (LWTPD1) for a fully integrated sensor system with Internet of Things (IoT) connectivity and configurable software. Or, specify the Digital Addressable Lighting Interface (DALI) drivers, dimmable down to 10%, for use with Fifth Light controls.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a CRI ≥ 80. Projected life is 60,000 hours at 80% lumen output. cULus listed. Electronic drivers are available for 120-277V and 347V applications.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. The patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Durable cold rolled steel with multistage, iron phosphate pretreatment and white enamel finish to ensure maximum bonding and rust inhibition.

Reflectors

Indirect reflector has high reflectance baked matte white enamel finish for luminous uniformity. Positively retained direct lamp shield is constructed of heavy gauge perforated steel with high reflectance painted after fabrication finish and milky white overlay diffuser for visual comfort. All reflectors are precision formed in a computer-controlled operation.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Warranty

Five year warranty.



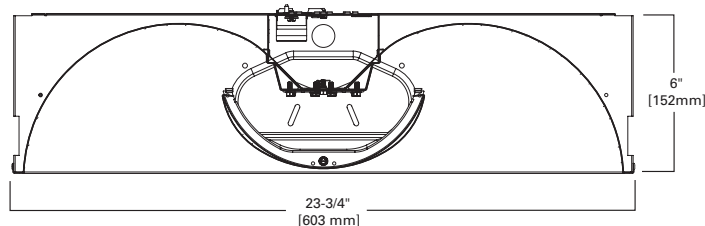
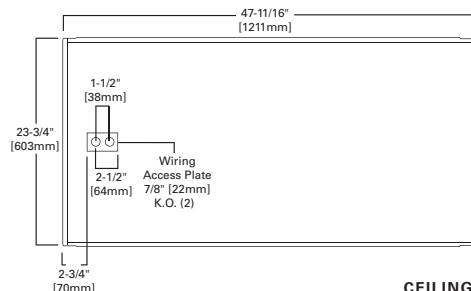
24RDI LED

2' X 4' TROFFER LED MODULE

Specification Grade Troffer

powered by

 fifthlight
 technology

**MOUNTING DATA****CEILING COMPATIBILITY**

G Grid/Lay-in Standard	T Slot Grid	F Drywall Frame Kit	Ceiling Type**	Trim Type
			Exposed Grid	G
			Concealed T	G or T
			Slot Grid	G or T
			Flange	***

CERTIFICATION DATA

cULus - 1598
 Damp Location Listed
 IC Rated
 LM79/LM80 Compliant
 DesignLights Consortium® Qualified
 NOM Compliant

*See Drywall Frame Kit Accessory in
 Ordering Information Section

LINEAR DISCONNECT

Safe and convenient means of
 disconnecting power


 PS519178EN
 12-21-2017

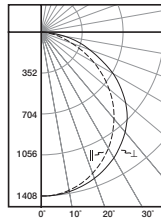

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

24RDI-40-UNV-L840-CD1-U

Notes:

Type:**FG1**

PSA18-68593

24RDI LED 2' X 4'**PHOTOMETRICS****24RDI-40-UNV-L835-CD1-U**

Electronic Driver

Linear LED 3500K

Spacing criterion:

(II) 1.22 x mounting

height, (L) 1.32 x

mounting height

Lumens: 4096.9

Input Watts: 39.6W

Efficacy: 103.5 lm/W

Test Report:

24RDI-LD5-40RP-

UNV-L835-CD1-U.

IES

Candlepower

Angle	Along II	45°	Across L
0	1407	1407	1407
5	1402	1398	1405
10	1379	1380	1391
15	1342	1350	1367
20	1290	1310	1336
25	1227	1259	1295
30	1153	1199	1248
35	1066	1129	1186
40	972	1051	1121
45	872	969	1045
50	759	878	947
55	644	780	833
60	524	667	714
65	401	542	569
70	278	404	441
75	183	275	329
80	102	172	206
85	35	67	76
90	0	0	0

Coefficients of Utilization

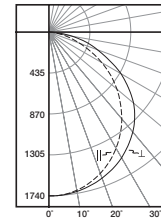
		Effective floor cavity reflectance 20%											
		80%				70%				50%			
rc		70	50	30	10	70	50	30	10	50	30	10	0
rw		70	50	30	10	70	50	30	10	50	30	10	0
RCR		70	50	30	10	70	50	30	10	50	30	10	0
0		119	119	119	119	116	116	116	116	111	111	111	100
1		109	104	99	96	106	102	98	94	97	94	91	84
2		99	90	83	78	96	88	82	77	85	80	75	69
3		90	79	71	64	87	78	70	64	75	68	63	58
4		82	70	61	54	80	69	60	54	66	59	53	50
5		75	62	53	47	73	61	53	46	59	52	46	43
6		70	56	47	41	68	55	47	40	53	46	40	37
7		65	51	42	36	63	50	42	36	49	41	35	33
8		60	46	38	32	58	46	38	32	44	37	32	29
9		56	43	34	29	55	42	34	29	41	34	28	26
10		53	39	31	26	51	39	31	26	37	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1096	26.8
0-40	1802	44.0
0-60	3221	78.6
0-90	4097	100.0
0-180	4097	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	1659	1844	1988
55	1511	1830	1954
65	1277	1726	1812
75	951	1430	1710
85	540	1034	1173

**24RDI-50-UNV-L835-CD1-U**

Electronic Driver

Linear LED 3500K

Spacing criterion:

(II) 1.22 x mounting

height, (L) 1.32 x

mounting height

Lumens: 5067.5

Input Watts: 50.3W

Efficacy: 100.7 lm/W

Test Report:

24RDI-50-UNV-

L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across L
0	1739	1739	1739
5	1734	1727	1736
10	1705	1705	1718
15	1658	1669	1688
20	1596	1618	1650
25	1518	1555	1602
30	1425	1481	1542
35	1319	1394	1467
40	1203	1300	1385
45	1073	1196	1287
50	942	1087	1173
55	802	963	1030
60	649	824	884
65	493	669	706
70	349	506	549
75	228	341	410
80	129	216	254
85	45	86	94
90	0	0	0

Coefficients of Utilization


		Effective floor cavity reflectance 20%											
		80%				70%				50%			
rc		70	50	30	10	70	50	30	10	50	30	10	0
rw		70	50	30	10	70	50	30	10	50	30	10	0
RCR		70	50	30	10	70	50	30	10	50	30	10	0
0		119	119	119	119	116	116	116	116	111	111	111	100
1		109	104	99	96	106	102	98	94	97	94	91	84
2		99	90	83	78	96	88	82	77	85	79	75	69
3		90	79	71	64	87	78	70	64	75	68	63	58
4		82	70	61	54	80	69	60	54	66	59	53	50
5		75	62	53	47	73	61	53	46	59	52	46	43
6		70	56	47	41	68	55	47	40	53	46	40	37
7		65	51	42	36	63	50	42	36	49	41	35	33
8		60	46	38	32	58	46	37	32	44	37	32	29
9		56	43	34	29	55	42	34	29	41	34	28	26
10		53	39	31	26	51	39	31	26	37	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1355	26.7
0-40	2227	43.9
0-60	3983	78.6
0-90	5068	100.0
0-180	5068	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2042	2276	2449
55	1881	2259	2416
65	1570	2130	2248
75	1185	1773	2131
85	695	1328	1451

Submitted by Putterman, Scharck & Assoc.		Catalog Number: 24RDI-40-UNV-L840-CD1-U	Type: FG1
 Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		Notes:	
		PSA18-68593	

24RDI LED 2' X 4'

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 89%	> 60,000

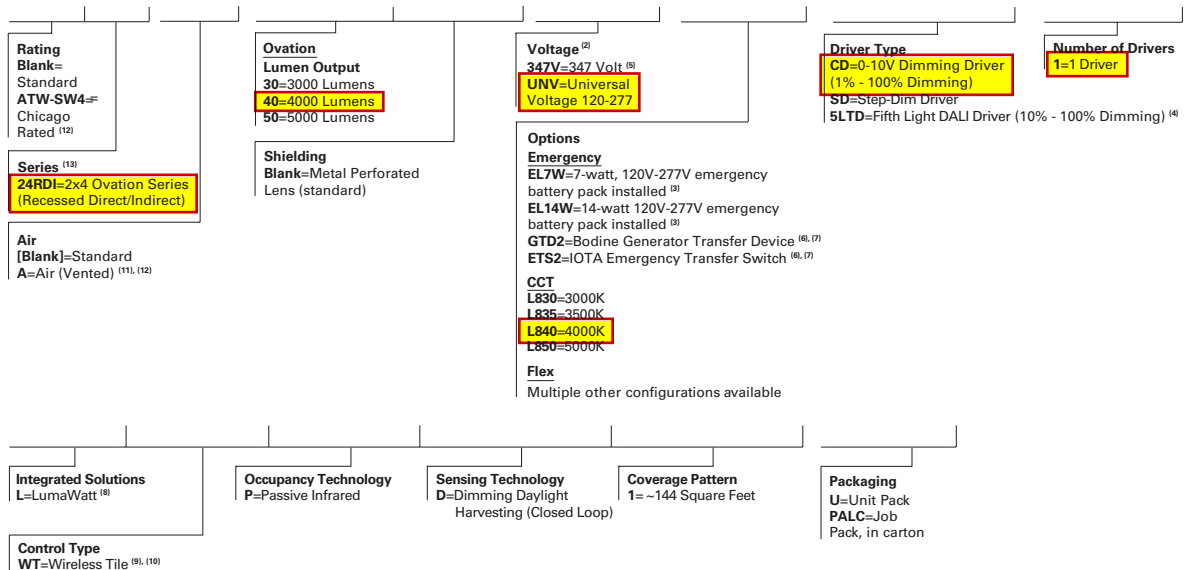
ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Curved)	Delivered Lumens	Watts	Efficacy (LPW)
MTO	24RDI-30-UNV-L830-CD1-U	3010	28.7	104
MTO	24RDI-30-UNV-L835-CD1-U	3071	28.7	107
MTO	24RDI-30-UNV-L840-CD1-U	3132	28.7	109
MTO	24RDI-30-UNV-L850-CD1-U	3225	28.7	112
MTO	24RDI-40-UNV-L830-CD1-U	4015	39.6	101
MTO	24RDI-40-UNV-L835-CD1-U	4097	39.6	103
MTO	24RDI-40-UNV-L840-CD1-U	4179	39.6	105
MTO	24RDI-40-UNV-L850-CD1-U	4302	39.6	108
MTO	24RDI-50-UNV-L830-CD1-U	4966	50.3	98
MTO	24RDI-50-UNV-L835-CD1-U	5067	50.3	100
MTO	24RDI-50-UNV-L840-CD1-U	5168	50.3	102
MTO	24RDI-50-UNV-L850-CD1-U	5320	50.3	105

*Made to order (MTO) requires a typical three week lead time.

ORDERING INFORMATION

SAMPLE NUMBER: 24RDI-30-UNV-L835-CD1-U



ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾
DF-24-W=2' x 4' Drywall Frame Kit
SK-24-WT=2' x 4' Tall Surface Mount Kit
DF10P-C=Decorator Dimmer, 0-10V
SF10P-=Decorator Slide Dimmer, 0-10V

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾With integral test switch/indicator. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁴⁾Must be used in conjunction with a DALI control system. For a complete listing of Fifth Light Technology products and other solutions from Cooper Controls, visit www.eaton.com/lightingsystems. ⁽⁵⁾347V versions are not available with emergency options. SD, 5LTD, not available. ⁽⁶⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁷⁾Must specify 120V or 277V for wiring of ETS/GTD components. ⁽⁸⁾Must be used in conjunction with a LumaWatt Pro control system. For complete LumaWatt Pro wireless solutions, visit www.eaton.com/lumawattpro. ⁽⁹⁾LWT compatible with CD drivers only. ⁽¹⁰⁾LWT sensor is external to luminaire, cable factory wired. ⁽¹¹⁾Air version is vented but does not meet air handling requirements. ⁽¹²⁾Chicago rated and air vented cannot be ordered in combination with each other. ⁽¹³⁾DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
24RDI	30 lbs.



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

PS519178EN
12-21-2017

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 UCL-4/3/2-LD4-40-KSH-EDD1-120-
 OS-RSW

Notes:

Type:**FM**

PSA18-68593

Fail-Safe**DESCRIPTION**

The UCL and UCLV provide effective LED task lighting in most any demanding environment. Heavy gauge cold rolled steel, finished with powder coat white paint, encloses and protects the linear LED module. Stainless steel brushed or painted is available for extreme environments. The LED module is available in color temperatures from 3000K to 5000K. UCL and UCLV are available in acrylic or polycarbonate lenses. Available in 1' to 4' lengths, in 1' increments.

SPECIFICATION FEATURES**Housing/Cover**

UCL - 20 gauge cold-rolled steel housing. K.O. on back and each end. Keyhole slots for mounting.

UCLV - 20 gauge cold-rolled steel housing with keyhole slots for mounting. K.O. on back and ends for power. Seam-welded cover fits over housing (lens between housing cover). Four counter-sunk holes allow counter-sunk screws to attach cover to housing.

Finish

Gloss white polyester powder coat standard. Optional matte white anti-microbial powder coat white paint available. Stainless steel brushed or stainless steel painted powder coat white optional.

Fasteners

UCLV incorporates (4) stainless steel counter-sunk tamper proof TORX® T-20 screws which secure housing to back pan. Philips-head screws available.

Lens

Opal acrylic, Pattern 12 acrylic, KSH25, polycarbonate Pattern 12, 0.125", 0.156" or 0.187" thick.

Electrical / LEDs

LED's are available in 3000K, 3500K, 4000K or 5000K with 85 CRI. 90 CRI available. Nominal 750 lumens per linear foot. Replaceable LED / driver assembly. Life is 50,000 hours at 70% lumen output. Electronic drivers standard for 120-277V applications. 120V or 277V standard for 1' and 2' fixtures. Optional 0-10V dimming driver for 3' and 4' fixtures.

Labels

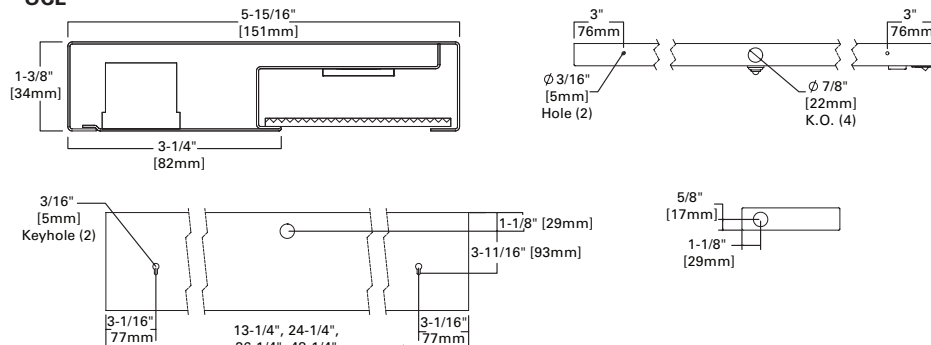
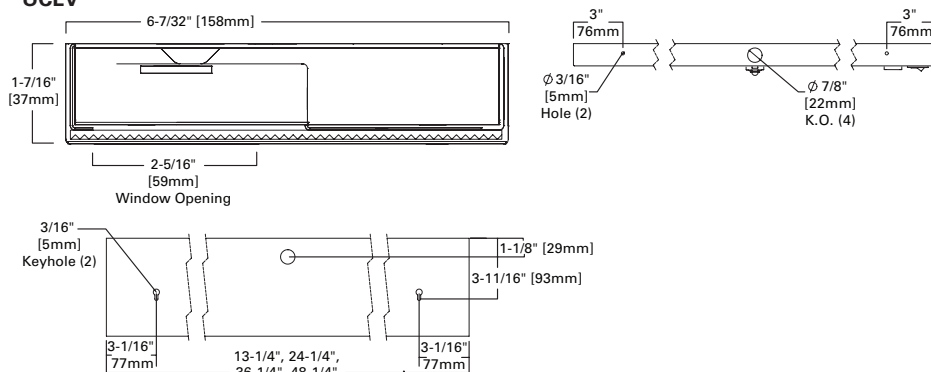
UL/cUL listed for damp locations. UCLV optional IP63 rated.



UCL




UCLV

**UCL
UCLV**
**LD4 LED
Undercabinet**
**Commercial
Medical
Vandal Resistant**
**DIMENSIONS****UCL****UCLV**

Nominal Length	Nominal Input Watts
1' (300mm)	6.9
2' (600mm)	9.1
3' (900mm)	18.3
4' (1200mm)	30.4

Nominal Length	Nominal Delivered Lumens*
1' (300mm)	600
2' (600mm)	800
3' (900mm)	1600
4' (1200mm)	2400

*A12125 Lens

Submitted by Putterman, Scharck & Assoc.		Catalog Number: UCL-4/3/2-LD4-40-KSH-EDD1-120-OS-RSW Notes:	Type: FM PSA18-68593
		Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	

UCL, UCLV

PHOTOMETRICS

See website for IES/photometric files

ORDERING INFORMATION

SAMPLE NUMBERS: UCL-2-LD4-35-A12125-EDC1-UNV-ALH / UCLV-4-LD4-40-82-EDD1-UNV-NTP

Series	Fixture Length	LED Type	Color Temperature	Lens	Driver	Voltage	Options
		LD4				UNV	
UCL=Undercabinet, LED UCLV=Undercabinet LED, Captive Lens	1=1' Length 2=2' Length 3=3' Length 4=4' Length		30=3000K 35=3500K 40=4000K 50=5000K	A12125=Acrylic Pattern 12, 0.125" thick 89AH=Polycarbonate Pattern 12, 0.125" Thick KSH25=Linear Ribbed Acrylic, 0.115" Thick 81=Polycarbonate, Pattern 12, 0.156" thick 82=Polycarbonate, Pattern 12, 0.187" thick 89BW=Acrylic, Opal Smooth, 0.125" thick 89AM=Polycarbonate, Opal Smooth, 0.125" thick	EDC1=Electronic Driver, Single Circuit, Non Dimming EDD1=Electronic Driver, Single Circuit, 0-10V Dimming, 10% ED1D1=Electronic Driver, Single Circuit, 0-10V Dimming, 1%		GLR=Fuse and Holder ALH=Aluminum Housing and Reflector, Powder Coat Painted White SHN=Stainless Steel, Housing and Reflector, Brushed Natural Finish on Exterior SHP=Stainless Steel, Housing and Reflector, Powder Coat Painted White OS=Occupancy Sensor, Passive Infrared Technology (not available on 1' length) ⁶ RSW=Rocker Switch, White 1,2,4 AM=Anti-Microbial Paint, Matte White 6CP=6' Cord with Grounded Plug ² GCO=Grounded Convenience Outlet 1,3,4 NTP=Non Tamper Proof Screws (Philips Head Countersunk) - UCLV only GSK=Gasketing applied to lens, and to cover (UCLV only) ⁷ IP63=IP63 rated (UCLV only) ⁷ 90=90CRI ⁸
LD4=LED Version 4.0					UNV=120-277		

Notes:

- Consult factory for compatibility with other options.
- Must specify voltage.
- 120V only.
- UCLV with RSW or GCO will not be available with the GSK or IP63. Please note that the RSW or GCO option on the UCLV will compromise the full vandal resistant feature.
- Standard "EDC1" driver, low voltage leads not connected to driver. "EDD1" and "ED1D1" driver, low voltage leads connected to driver.
- Occupancy Sensor is positioned on the front cover on the UCL & UCLV, and maybe subject to abuse.
- GSK not available with IP63.
- 90CRI option may require extended lead time.



15 Day Quick Ship							
Product	Length	LED	Color Temp	Lens	Driver / Circuits	Voltage	Option
QS-UCL	2	LD4	35	A12125	EDC1	UNV	RSW
	4		40		EDD1		

Notes:

Maximum order quantity is 50 pieces

15 days from receipt of Purchase Order at Eaton facility to shipment from Eaton facility

Must specify 120 or 277 voltage when using RSW option

Example Catalog #: QS-UCL-4-LD4-35-A12125-EDC1-UNV

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 24GR-LD5-56-KSH20-UNV-L840-
 CD1-U

Notes:

Type:**FN**

PSA18-68593

Metalux

DESCRIPTION

GRLED is a recessed lensed troffer series which offers a high quality luminaire designed with the latest solid state lighting and electronic driver technology for optimal performance and energy efficiency. The GRLED is compatible with all of today's popular ceiling systems and is available with a number of shielding options and accessories for application versatility.

The GRLED series features efficiency, quality and performance. The series is an excellent choice for use in a variety of indoor spaces such as offices, schools, residential, hospitals or retail merchandising areas.

SPECIFICATION FEATURES**Construction**

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed for safe handling. Innovative design provides superior lens brightness, uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience. Drivers and internal components are accessible from below the ceiling and LED modules include plug-in low voltage connectors.

Controls

The GRLED is equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels to maximize energy savings. Fixtures may have integrated Eaton control systems such as the SPVD series and the LumaWatt Pro series.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI. Projected life at 70% lumen maintenance is nearly 200,000 hours with TM21 rating up to L90 >60,000 hours. Electronic drivers are cULus recognized and available for 120-277V and 347V applications. Standard dimming is 0-10V to 10% with 1%, step and Fifth Light DALI dimming options available.

Emergency Battery Pack Option

Optional 120V-277V integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. Generator Transfer Device (GTD) and other emergency options available - see ordering information for details.

Frame/Optical Shielding

Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens offering the balance of rigidity and light stability. Primary stocking skus come standard with robust - .125 lens with other options available for maximum versatility.

Compliance

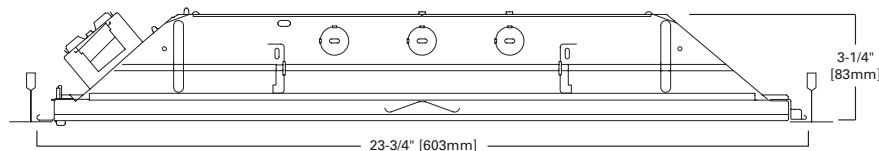
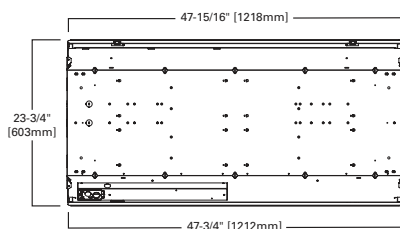
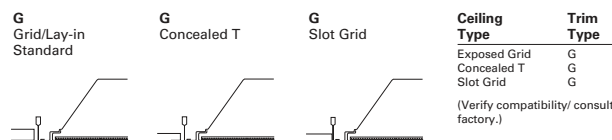
Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments. Fixtures are suitable for direct insulation contact and are damp location listed. RoHS compliant. LED components comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.



24GR LED LED

2' X 4' LED TROFFER

General Recessed LED
Troffer
For Use in Insulated
Ceilings


**MOUNTING DATA****DOOR FRAMES****CEILING COMPATIBILITY****WATTAGE**

Lumens Package	Watts
3000	22W
3400	25W
3800	29W
4200	30W
4800	35W
5600	42W
6400	51W
7200	57W
8500	66W
9000	70W

LINEAR DISCONNECT

Safe and convenient means of
disconnecting power


 PS519146EN
 2017-05-01 16:35:16

Submitted by Putterman, Scharck & Assoc.		Catalog Number: 24GR-LD5-56-KSH20-UNV-L840-CD1-U	Type: FN
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	PSA18-68593

24GRLED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	24GR-LD5-30-F1-UNV-L835-CD1-U	3024	22.4	135
MTO	24GR-LD5-34-F1-UNV-L835-CD1-U	3375	25.3	134
Stock	24GR-LD5-38-F1-UNV-L835-CD1-U	3839	29.1	132
MTO	24GR-LD5-42-F1-UNV-L835-CD1-U	4204	30.1	140
Stock	24GR-LD5-48-F1-UNV-L835-CD1-U	4799	34.9	138
MTO	24GR-LD5-56-F1-UNV-L835-CD1-U	5598	41.9	134
Stock	24GR-LD5-64-F1-UNV-L835-CD1-U	6486	50.7	128
MTO	24GR-LD5-72-F1-UNV-L835-CD1-U	7203	54.2	133
MTO	24GR-LD5-85-F1-UNV-L835-CD1-U	8500	65.6	130
MTO	24GR-LD5-90-F1-UNV-L835-CD1-U	8963	69.5	129

*Stocked in 3500K and 4000K others are MTO.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 24GR-LD5-42-KSH20-UNV-L840-
 CD1-U

Notes:

Type:
FO

PSA18-68593

Metalux

DESCRIPTION

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Controls

The GRLED is equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels to maximize energy savings. Fixtures may have integrated Eaton control systems such as the SPVD series and the LumaWatt Pro series.

Electrical

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Optional 120V-277V integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. Generator Transfer Device (GTD) and other emergency options available - see ordering information for details.

Frame/Optical Shielding

Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens offering the balance of rigidity and light stability. Primary stocking skus come standard with robust - .125 lens with other options available for maximum versatility.

Compliance

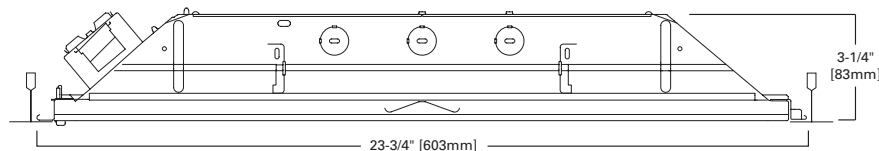
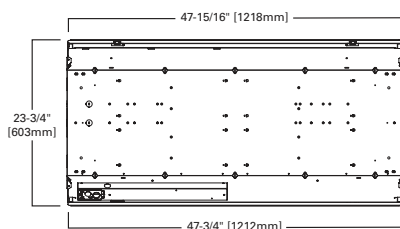
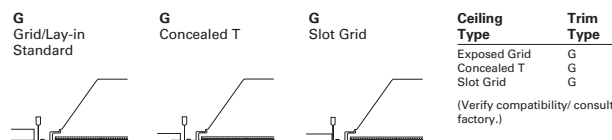
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24GR LED LED

2' X 4' LED TROFFER

General Recessed LED
Troffer
For Use in Insulated
Ceilings

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4800	35W
5600	42W
6400	51W
7200	57W
8500	66W
9000	70W

LINEAR DISCONNECT

Safe and convenient means of
disconnecting power

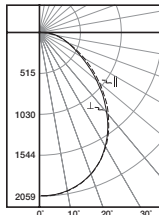

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 2017-05-01 16:35:16

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 24GR-LD5-42-KSH20-UNV-L840-
 CD1-U

Notes:

Type:**FO**

PSA18-68593

24GRLED**PHOTOMETRICS**
**24GR-LD5-48-F1-
UNV-L835-CD1-U**

Electronic Driver

Linear LED 3500K

 Spacing criterion:
 (II) 1.19 x mounting
 height, (L) 1.18 x
 mounting height

Lumens: 4799

Input Watts: 34.9W

Efficacy: 137.5 lm/W

Test Report:

 24GR-LD5-48-F1-
 UNV-L835-CD1-U.
 IES
Candlepower

Angle	Along II	45°	Across ⊥
0	2053	2053	2053
5	2051	2041	2047
10	2018	2009	2014
15	1962	1954	1958
20	1881	1873	1877
25	1772	1765	1771
30	1640	1631	1627
35	1484	1474	1465
40	1312	1293	1277
45	1126	1106	1092
50	942	918	896
55	765	733	715
60	608	575	562
65	463	433	439
70	348	326	341
75	253	242	264
80	173	168	191
85	92	89	107
90	0	0	0

Coefficients of Utilization

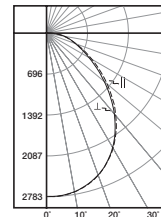
rc rw RCR	Effective floor cavity reflectance								20%								0%							
	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100						
1	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85						
2	100	92	86	80	98	90	85	80	87	82	78	84	80	76	81	77	74	72						
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62						
4	85	73	65	58	82	72	64	58	69	63	57	67	61	57	65	60	56	54						
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47						
6	72	60	51	45	71	59	51	45	57	50	44	55	49	44	54	48	44	42						
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37						
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	33						
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30						
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28						

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1556	32.4
0-40	2475	51.6
0-60	3989	83.1
0-90	4799	100.0
0-180	4799	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2439	2396	2365
55	2043	1957	1909
65	1678	1569	1591
75	1497	1432	1562
85	1617	1564	1880


**24GR-LD5-64-F1-
UNV-L835-CD1-U**

Electronic Driver

Linear LED 3500K

 Spacing criterion:
 (II) 1.19 x mounting
 height, (L) 1.18 x
 mounting height

Lumens: 6486

Input Watts: 50.2W

Efficacy: 129.2 lm/W

Test Report:

 24GR-LD5-64-F1-
 UNV-L835-CD1-U.
 IES
Candlepower

Angle	Along II	45°	Across ⊥
0	2777	2777	2777
5	2773	2760	2768
10	2728	2716	2726
15	2653	2641	2647
20	2543	2528	2538
25	2393	2385	2387
30	2217	2204	2200
35	2008	1992	1974
40	1770	1747	1730
45	1518	1491	1463
50	1272	1239	1202
55	1032	996	965
60	815	772	758
65	630	588	592
70	469	442	463
75	345	327	357
80	232	226	255
85	128	121	141
90	0	0	0

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance								20%								0%							
	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100						
1	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85						
2	100	92	86	80	98	90	85	80	87	82	78	84	80	76	81	77	74	72						
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62						
4	85	73	65	58	82	72	64	58	69	63	57	67	61	57	65	60	56	54						
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47						
6	72	60	51	45	71	59	51	45	57	50	44	55	49	44	54	48	44	42						
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37						
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	33						
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30						
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28						

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	2104	32.4
0-40	3345	51.6
0-60	5390	83.1
0-90	6486	100.0
0-180	6486	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3288	3230	3169
55	2756	2660	2577
65	2283	2131	2145
75	2042	1935	2113
85	2249	2126	2478

ORDERING INFORMATION

SAMPLE NUMBER: 24GR-LD5-48-F1-UNV-L835-CD1-U


Rating Blank= Standard ATW-SW= Chicago Rated	LED Type LD5=LED 5.0	Voltage ⁽²⁾ 347=347 Volts UNV=Universal Voltage 120-277 ⁽³⁾	Driver Type CD=0-10V Dimming Driver (10% - 100% Dimming) ⁽⁸⁾ HCD=0-10V Dimming Driver (1% - 100% Dimming) ⁽⁸⁾ SD=Step-Dim Driver ⁽⁷⁾ 5LTD=5th Light DALI Driver (10% - 100% Dimming) ⁽⁸⁾ SR=Sensor Ready (1% - 100% Dimming) ⁽¹²⁾	Packaging U=Unit Pack PALC=Palletized Fixtures In Carton
Width / Length 24=2' x 4'	LED Lumens Output ⁽¹¹⁾ 30=3000 34=3400 38=3800 42=4200 46=4600 56=5600 64=6400 72=7200 85=8500 90=9000	Options GL=Single Element Fuse GM=Double Element Fuse Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ⁽⁴⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽⁴⁾ GTD2=Bodine Generator Transfer Device ⁽¹⁰⁾ ETS2=IOTA Emergency Transfer Switch ⁽¹⁰⁾ CCT L830=3000K L835=3500K L840=4000K L850=5000K Flex Multiple Configurations Available	Number of Drivers 1=1 Driver 2=2 Drivers	Sensors SVPD1=Integrated occupancy and daylight dimming sensor, 144 sq. ft. SWPD1=WaveLinx Wireless Connected Lighting (WCL) system LWIPD1=Integrated LumaWatt Pro Wireless sensor system ⁽¹²⁾ LWTPD1=Tile mounted LumaWatt Pro Wireless sensor system
Trim Type G=Grid/Lay-in (Standard) ⁽¹⁾ G=Concealed T G=Slot Grid	Shielding F1=A12 .125 HP (Standard) A=A12 .095 A125=A12 .125 A19/156=#19 Pattern Acrylic (.156" Thick)	Door Frame Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum c/w Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum	Options PAF=Painted After Fabrication G1=Gasket, Door Frame and Housing G2=G1 plus Gasket between Lens and Door G3=G1 and G2 plus Gasketing on Mounting Surface of Fixture Trims ^{(6), (8)}	ACCESSORIES EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾ DF-24-W=2' x 4' Drywall Frame Kit ISHH-01=Programming Remote for Integrated Sensor ISHH-02=Personal Control Remote for Integrated Sensor

NOTES: ⁽¹⁾ An EQ Grid Clip is recommended for all 9/16" ceiling systems. ⁽²⁾ Products also available in non-US voltages and frequencies for international markets. ⁽³⁾ Not available when specifying emergencies, voltage must be specific. ⁽⁴⁾ With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁵⁾ Gasketing only available with aluminum door frame. ⁽⁶⁾ Gasketing minimum .125. ⁽⁷⁾ Step dimming (bi-level) 1 driver, 4800 - 8500, 2 driver, 9000 lumen model. ⁽⁸⁾ DALI available from 4800 - 9000 lumen models. ⁽⁹⁾ Requires two drivers for 8500 lumens and above. ⁽¹⁰⁾ Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽¹¹⁾ Nominal lumen output. See table for actual values ⁽¹²⁾ SR driver required for LWIPD1 only. ⁽¹³⁾ DesignLights Consortium ⁽¹⁴⁾ Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.	Pallet
24GR-LD4-48	20 lbs.	28

Submitted by Putterman, Scharck & Assoc.		Catalog Number: 24GR-LD5-42-KSH20-UNV-L840-CD1-U	Type: FO
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	PSA18-68593

24GRLED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	24GR-LD5-30-F1-UNV-L835-CD1-U	3024	22.4	135
MTO	24GR-LD5-34-F1-UNV-L835-CD1-U	3375	25.3	134
Stock	24GR-LD5-38-F1-UNV-L835-CD1-U	3839	29.1	132
MTO	24GR-LD5-42-F1-UNV-L835-CD1-U	4204	30.1	140
Stock	24GR-LD5-48-F1-UNV-L835-CD1-U	4799	34.9	138
MTO	24GR-LD5-56-F1-UNV-L835-CD1-U	5598	41.9	134
Stock	24GR-LD5-64-F1-UNV-L835-CD1-U	6486	50.7	128
MTO	24GR-LD5-72-F1-UNV-L835-CD1-U	7203	54.2	133
MTO	24GR-LD5-85-F1-UNV-L835-CD1-U	8500	65.6	130
MTO	24GR-LD5-90-F1-UNV-L835-CD1-U	8963	69.5	129

*Stocked in 3500K and 4000K others are MTO.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 14GR-LD5-43-KSH20-UNV-L840-
 CD1-U

Notes:

Type:
FP

PSA18-68593

Metalux

DESCRIPTION

GRLED is a recessed lensed troffer series which offers a high quality luminaire designed with the latest solid state lighting and electronic driver technology for optimal performance and energy efficiency. The GRLED is compatible with all of today's popular ceiling systems and is available with a number of shielding options and accessories for application versatility.

The GRLED series features efficiency, quality and performance. The series is an excellent choice for use in a variety of indoor spaces such as offices, schools, residential, hospitals or retail merchandising areas.

SPECIFICATION FEATURES**Construction**

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed for safe handling. Innovative design provides superior lens brightness, uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience. Drivers and internal components are accessible from below the ceiling and LED modules include plug-in low voltage connectors.

Controls

The GRLED is equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels to maximize energy savings. Fixtures may have integrated Eaton control systems such as the SPVD series and the LumaWatt Pro series.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal

performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI. TM21 rating of L85 >60,000 hours. Electronic drivers are cULus recognized and available for 120-277V and 347V applications. Standard dimming is 0-10V to 10% with 1%, step and Fifth Light DALI dimming options available.

Emergency Battery Pack Option

Optional 120V-277V integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. Generator Transfer Device (GTD), emergency transfer switches and other emergency options available - see ordering information for details.

Frame/Optical Shielding

Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens offering the balance of rigidity and light stability. Primary stocking skus come standard with robust .095 lens with other options available for maximum versatility.

Compliance

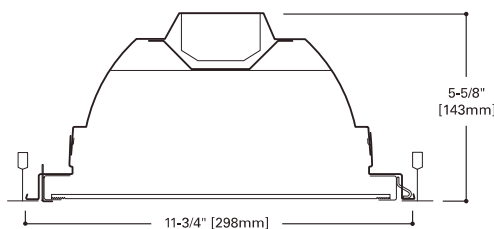
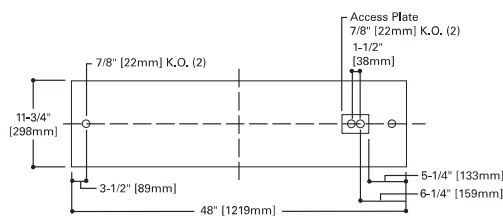
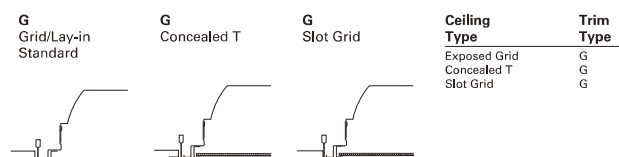
Modules are UL recognized components and indoor luminaires are cULus listed for 25 C ambient environments. Fixtures are suitable for direct insulation contact and are damp location listed. RoHS compliant. LED components comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details.



14GR LED LED

1' X 4' LED TROFFER

General Recessed LED
Troffer
For Use in Insulated
Ceilings

**MOUNTING DATA****DOOR FRAMES****CEILING COMPATIBILITY**

LINEAR DISCONNECT

Safe and convenient means of
disconnecting power

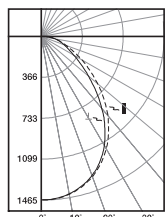

 PS519144EN
 11-30-2017

Job Name:MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**14GR-LD5-43-KSH20-UNV-L840-
CD1-U

Notes:

Type:**FP**

PSA18-68593

14GRLED**PHOTOMETRICS****14GR-LD5-32-F1-
UNV-L835-CD1-U**Electronic Driver
Linear LED 3500KSpacing criterion:
(II) 1.18 x mounting
height, (L) 1.15 x
mounting height

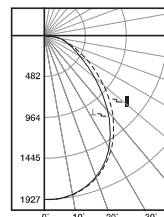
Lumens: 3257

Input Watts: 29.9W

Efficacy: 108.9 lm/W

Test Report: 14GR-
LD5-32-F1-UNV-
L835-CD1-U-IES**Candlepower**

Angle	Along II	45°	Across ⊥
0	1463	1463	1463
5	1460	1451	1457
10	1436	1426	1431
15	1394	1386	1387
20	1336	1324	1324
25	1256	1245	1238
30	1160	1144	1126
35	1047	1023	987
40	925	889	838
45	787	746	686
50	652	606	544
55	525	478	424
60	412	363	330
65	313	274	262
70	233	206	210
75	170	154	167
80	115	108	122
85	62	56	64
90	0	0	0

**14GR-LD5-43-F1-
UNV-L835-CD1-U**Electronic Driver
Linear LED 3500KSpacing criterion:
(II) 1.18 x mounting
height, (L) 1.15 x
mounting height

Lumens: 4284

Input Watts: 41.9W

Efficacy: 102.2 lm/W

Test Report:
14GR-LD5-43-F1-
UNV-L835-CD1-U-
IES**Candlepower**

Angle	Along II	45°	Across ⊥
0	1924	1924	1924
5	1920	1908	1916
10	1889	1876	1882
15	1834	1823	1824
20	1757	1742	1741
25	1652	1637	1628
30	1526	1504	1481
35	1377	1346	1298
40	1216	1169	1102
45	1035	981	902
50	857	797	716
55	691	629	557
60	542	477	434
65	411	360	344
70	307	271	276
75	224	203	220
80	151	142	160
85	81	74	84
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance				20%				50%				30%				10%				0%			
	80%	70%	70%	70%	80%	70%	70%	70%	80%	70%	70%	70%	80%	70%	70%	70%	80%	70%	70%	70%	80%	70%	70%	70%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85	85	85	85	85	85	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73	73	73	73	73	73	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63	63	63	63	63	63	63
4	85	74	66	59	83	73	65	59	70	64	58	68	62	58	66	61	57	55	55	55	55	55	55	55
5	79	67	58	52	77	66	58	52	64	57	51	62	55	51	60	54	50	48	48	48	48	48	48	48
6	73	61	52	46	71	60	52	46	58	51	45	56	50	45	55	49	45	43	43	43	43	43	43	43
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	45	40	38	38	38	38	38	38	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	34	34	34	34	34	34	34
9	60	47	39	34	58	46	39	34	45	38	33	44	38	33	43	37	33	31	31	31	31	31	31	31
10	56	43	36	31	55	43	36	31	42	35	30	41	35	30	40	34	30	29	29	29	29	29	29	29

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1103	33.8
0-40	1739	53.4
0-60	2740	84.1
0-90	3257	100.0
0-180	3257	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3750	3554	3268
55	3087	2809	2488
65	2492	2182	2085
75	2217	2009	2178
85	2382	2177	2470

Coefficients of Utilization

rc	Effective floor cavity reflectance				20%				50%				30%				10%				0%			
	80%	70%	70%	70%	80%	70%	70%	70%	80%	70%	70%	70%	80%	70%	70%	70%	80%	70%	70%	70%	80%	70%	70%	70%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85	85	85	85	85	85	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73	73	73	73	73	73	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63	63	63	63	63	63	63
4	85	74	66	59	83	73	65	59	70	64	58	68	62	58	66	61	57	55	55	55	55	55	55	55
5	79	67	58	52	77	66	58	52	64	57	51	62	55	51	60	54	50	48	48	48	48	48	48	48
6	73	61	52	46	71	60	52	46	58	51	45	56	50	45	55	49	45	43	43	43	43	43	43	43
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	45	40	38	38	38	38	38	38	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	34	34	34	34	34	34	34
9	60	47	39	34	58	46	39	34	45	38	33	44	38	33	43	37	33	31	31	31	31	31	31	31
10	56	43	36	31	55	43	36	31	42	35	30	41	35	30	40	34	30	29	29	29	29	29	29	29

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1450	33.9
0-40	2288	53.4
0-60	3603	84.1
0-90	4284	100.0
0-180	4284	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	4932	4675	4298
55	4059	3695	3272
65	3277	2870	2743
75	2916	2643	2864
85	3132	2861	3248

ORDERING INFORMATION

SAMPLE NUMBER: 14GR-LD5-24-F1-UNV-L835-CD1-U


Rating Blank- Standard ATW-SW4= Chicago Rated	LED Type LD5=LED 5.0	Voltage (2) 347=347 Volts UNV=Universal Voltage 120-277 (3)	Driver Type CD=0-10V Dimming Driver (10% - 100% Dimming) HCD=0-10V Dimming Driver (1% - 100% Dimming) SD=Step-Dim Driver (7) SLTD=Step Light DALI Driver (10% - 100% Dimming) (7) SR=Sensor Ready (1% - 100% Dimming) (8)	Packaging U=Unit Pack PALC=Palettized Fixtures In Carton
Width / Length 14=1' x 4'	LED Lumen Output (6) 20=2000 24=2400 28=2800 32=3200 36=3600 40=4000 43=4300	Options GL=Single Element Fuse GM=Double Element Fuse Emergency EL7W=7-watt, 120V-277V emergency battery pack installed (4) EL14W=14-watt 120V-277V emergency battery pack installed (4) GTD2=Bodine Generator Transfer Device (6) ETS2=IOTA Emergency Transfer Switch (6) ETS-DR=IOTA Emergency Transfer Switch for Dimming Application (12) CCT L830=3000K L835=3500K L840=4000K L850=5000K Flex Multiple Configurations Available	Number of Drivers 1=1 Driver	Sensors SVPD1=Integrated occupancy and daylight dimming sensor, 144 sq. ft. SWPD1=WaveLinx Wireless Connected Lighting system LWPD1=Integrated LumaWatt Pro Wireless sensor system (10) LWTPD1=Tile mounted LumaWatt Pro Wireless sensor system
Trim Type G=Grid/Lay-in (Standard) (1) G=Concealed T G=Slot Grid	Shielding F1=A12 .095 HP (Standard) F125=A12 .125 HP A=A12 .095 A125=A12 .125 A19/156=#19 Pattern Acrylic (.156" Thick) FGW080=Frosted Glazed Lens .080	Accessories EQ-CLIP-U=T-BAR Safety Earthquake Clips (11) DF-14-WU=1' x 4' Drywall Frame Kit ISHH-01=Programming Remote for Integrated Sensor ISHH-02=Personal Control Remote for Integrated Sensor		
Series (14) R=General Purpose Troffer	Door Frame Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum c/w Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum	KSH20		

NOTES: (1) An EQ Clip is recommended for all 9/16" ceiling systems. (2) Products also available in non-US voltages and frequencies for international markets. (3) Not available when specifying emergencies, voltage must be specific. (4) With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. (5) Gasketing only available with aluminum door frame. (6) Gasketing minimum .125. (7) Step Dim (Bi Level) and DALI only available in 3600 lumen and above. (8) Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. (9) Nominal lumen output. See table for actual values. (10) SR driver required for LWPD1 only. See table for actual values. (11) DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details. (12) For dimming applications only one is required.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.	Pallet
14GR-LD5-32	10 lbs.	24

Submitted by Putterman, Scharck & Assoc.		Catalog Number: 14GR-LD5-43-KSH20-UNV-L840-CD1-U Notes:	Type: FP PSA18-68593
 PUTTERMAN SCHARCK & ASSOCIATES	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		

14GRLED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO	Catalog Logic	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	14GR-LD5-20-F1-UNV-L835-CD1-U	2029	17.2	117
MTO	14GR-LD5-24-F1-UNV-L835-CD1-U	2425	21.0	115
MTO	14GR-LD5-28-F1-UNV-L835-CD1-U	2803	24.8	113
MTO	14GR-LD5-32-F1-UNV-L835-CD1-U	3257	29.8	109
MTO	14GR-LD5-36-F1-UNV-L835-CD1-U	3671	35.0	105
MTO	14GR-LD5-40-F1-UNV-L835-CD1-U	4045	38.8	104
MTO	14GR-LD5-43-F1-UNV-L835-CD1-U	4338	42.0	102

LENS TABLE

Approximate Lumen Multiplier	
F1	1.0
F125	1.0
A125	1.01
A	1.01
A19/156	.975
FGW080	.85

CCT TABLE

Approximate Color Temperature Multiplier	
5000K	1.016
4000K	1.016
3500K	1.0
3000K	.982
2700K	.930

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 LD8A15D010TE - ER8A15840 -
 8LM1LIWF

Notes:

Type:**FR/FR2/FS/FS2**

PSA18-68593

Portfolio

DESCRIPTION

8-inch LED recessed narrow, medium, or wide beam downlight specially designed for LED technology. Two-stage reflector system produces smooth distribution with excellent light control and low aperture brightness. Offered with 1000-15,000 lumens with color temperatures of 2700K, 3000K, 3500K, 4000K available in 80 or 90 CRI. Available with dim-to-warm technology – similar to halogen at full power, the 3000K LED warms smoothly as dimmed to 1850K creating a rich warm glow within the space.

SPECIFICATION FEATURES**Lower Shielding Reflector**

Self-flanged, spun .060" thick aluminum lower reflector in combination with a lensed upper optical chamber provides superior lumen output with minimal source brightness. Available in all Portfolio Alzak® finishes.

Trim Retention

Lower reflector is retained with two torsion springs holding the flange tightly to the finished ceiling surface.

Plaster Frame / Collar

Die cast aluminum 1-1/2" deep collar accommodates ceiling materials up to 2".

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

Junction Box

(4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (8) #12 AWG (four in, four out) 90°C

conductors and feed thru branch wiring.

Thermal

Forged aluminum heat sink conducts heat away from the LED module for improved performance and longer life.

LED

LED system contains a plurality of high brightness white LED's combined with a high reflectance upper reflector and convex transitional lens producing even distribution with no pixilation. Rated for 50,000 hours at 70% lumen maintenance. Color variation within 3-step MacAdam ellipses. Flexible disconnect allows for tool-less replacement of LED engine from below ceiling. Available in 80 or 90 CRI. D2W™ – dim-to-warm shifts CCT from 3000K to 1850K as fixture dims mimicking halogen sources.

Driver

Combination 0-10V/trailing edge driver provides flicker free dimming from 100% to 10%.

Optional 1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture. 1000 - 4000 lumen utilize one driver. 5000-10,000 utilize two drivers, 12,000-15,000 lumen utilizes three drivers.

Code Compliance

Thermally protected and cULus listed for protected wet locations. cCSAus certified. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/ RFI emissions per FCC 47CFR Part 18 Class B consumer limits. Non-IC rated - Insulation must be kept 3" from top and sides of housing. RoHS Compliant. Photometric testing completed in accordance with IES LM 79 standards. LED life testing completed in accordance with LM 80 standards. 8000 lumen and above are marked spacing and must follow spacing requirements.

Warranty

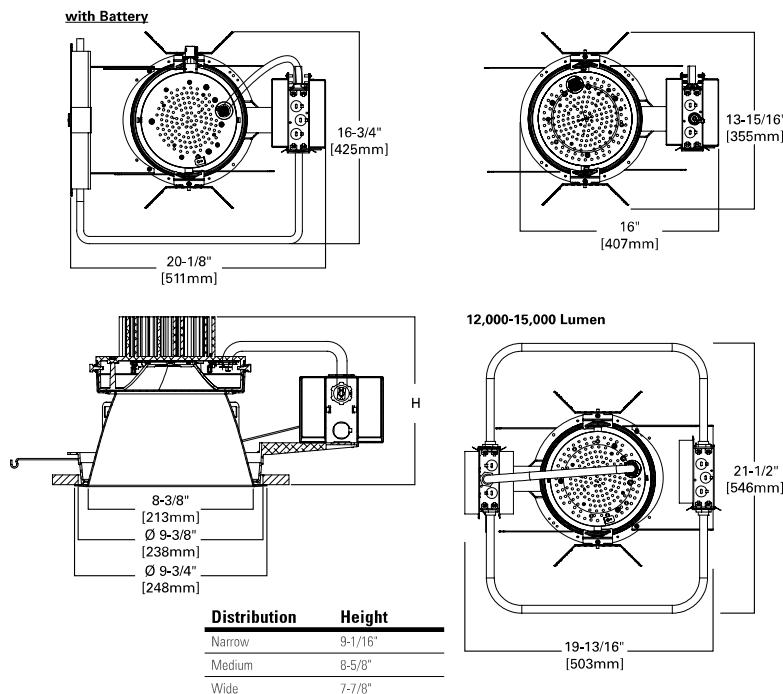
5-year warranty.



LD8A ER8A 8L

1,000-15,000 Lumen LED

8-Inch Narrow, Medium, or Wide
Downlight
New Construction


D2W™
Showerlight

 Refer to ENERGY STAR® Qualified
 Products List.

powered by
fifthlight
 technology

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 2016-10-26 10:21:25

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 LD8A15D010TE - ER8A15840 -
 8LM1LIWF

Notes:

Type:**FR/FR2/FS/FS2**

PSA18-68593

LD8A50 8L

ORDERING INFORMATION
EXAMPLE: LD8A501DE010 ER8A50835 8LW11LI= 8" LED Wide Beam Reflector, 5000 Lumen, 3,500 K Color with Universal 120 - 277V, 0 - 10 Driver

Housing	Lumens ¹	Voltage	Driver	Options ²	Power Module	Lumens	CRI	Color
LD8A=8" Aperture LD8ACP=8" Aperture, Chicago Plenum	10=1000 Lumens 15=1500 Lumens 20=2000 Lumens S30=3000 Lumens S40=4000 Lumens 50=5000 Lumens 60=6000 Lumens 65=6500 Lumens 80=8000 Lumens ⁵ 90=9000 Lumens ⁵ 100=10000 Lumens ⁵ 120=12000 Lumens ⁵ 150=15000 Lumens ⁵	1=120V 2=277V Blank=120-277V 1000 - 4000 Lumen only	1000, 1500, 2000, 3000, 4000, 5000, 6000, 8000, 9000, 10,000 ⁶ 12,000 AND 15,000 LUMEN D010TE=0-10V 10% Dimming or Trailing Edge Dimming ⁴ 1000, 1500, 2000, 3000, 4000, 5000, 6000 AND 8000 LUMEN D5LT=Fifth Light® DALI 0% Dimming DMX=DMX 0% Dimming DE010=0-10V 0% Dimming 1000, 1500, 2000, 3000, 4000, 5000 AND 6000 LUMEN DL3=1% Lutron® Hi-Lume 3-Wire or Ecosystem D010TR=0-10V 10% Dimming or Leading Edge ⁴ 6500 LUMEN D010=0-10V 10% Dimming DE010=0-10V 1% Dimming	EM7=7W Emergency Module with Remote Test Switch ³ EM14=14W Emergency Module with Remote Test Switch ³ IEM7=7W Emergency Module with Integral Test Switch ³ IEM14=14W Emergency Module with Integral Test Switch ³ EMBOD=7W Bodine® Emergency Module with Remote Test Switch IEMBOD=7W Bodine® Emergency Module with Integral Test Switch	ER8A=8" Module ER8ACP=8" Module, Chicago Plenum	10=1000 Lumens 15=1500 Lumens 20=2000 Lumens S30=3000 Lumens S40=4000 Lumens 50=5000 Lumens 60=6000 Lumens 65=6500 Lumens ⁵ 80=8000 Lumens ⁵ 90=9000 Lumens ⁵ 100=10000 Lumens ⁵ 120=12000 Lumens ⁵ 150=15000 Lumens ⁵	8=80 CRI 9=90 CRI	27=2700° K 30=3000° K 35=3500° K 40=4000° K 30D2W= Dim to warm 3000° K to 1850° K (2000 Lumen and below, 90 CRI)

Reflector ⁷	Finish	Options	Accessories
8LN0=8" 25" Narrow Reflector, Polymer Trim Ring 8LN1=8" 25" Narrow Reflector, Self-flanged 8LN0E=8" 25" Narrow Reflector, Polymer Trim Ring for use with IEM Integral Emergency option 8LN1E=8" 25" Narrow Reflector, Self-flanged Trim Ring for use with IEM Integral Emergency option 8LW0=8" 75" Wide Reflector, Polymer Trim Ring 8LW1=8" 75" Wide Reflector, Self-flanged 8LW0E=8" 75" Wide Reflector, Polymer Trim Ring for use with IEM Integral Emergency option 8LW1E=8" 75" Wide Reflector, Self-flanged Trim Ring for use with IEM Integral Emergency option	LI=Specular Clear H=Semi-Specular Clear WMH=Warm Haze G=Specular Gold WH=Wheat WHH=Wheat Haze GP=Graphite GPH=Graphite Haze	B=Specular Black W=Gloss White 8LM0 Only BB=Black Baffle WB=White Baffle	Self-flanged Only WF=White Painted Flange HB26=C-channel Bar Hanger, 26" Long, Pair HB50=C-channel Bar Hanger, 50" Long, Pair RMB22=Wood Joist Bar Hanger, 22" Long, Pair H347=347 to 120V Step Down Transformer, 75VA H347200=347 to 120V Step Down Transformer, 200VA Housings, Specify Slope HSA8=Slope Adapter for 8" Aperture Housings, Specify Slope LGSKT8IP65=IP65 Gasket Kit PURLWTPD1=LumaWatt Pro Wireless Sensor Kit (0-10V only)

- Notes:**
1. Nominal Lumens will vary depending on selected color, driver and reflector finish.
 2. Not available with Chicago Plenum.
 3. Not CSA approved.
 4. Trailing edge and leading edge 120V only.
 5. Product is marked spacing and must be installed with the following minimum spacing:
Center to Center of adjacent luminaires : 36"
Center of Luminaire to Side of Building Member : 18"
Minimum Overhead Clearance: 9"
 6. 0-10V recommended
 7. Distribution with LI finish.

ENERGY DATA

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
1000 Lumen D010TE	
120V Input Power: 15W	277V Input Power: 16W
120V Input Current: 0.13A	277V Input Current: 0.06A
Inrush 120 (Apl): 0.486	Inrush 277 (Apl): 0.848
Duration 120 (ms): 0.4	Duration 277 (ms): 0.182
THDi 120V: <13%	THDi 277V: <20%
1500 Lumen D010TE	
120V Input Power: 23W	277V Input Power: 24W
120V Input Current: 0.19A	277V Input Current: 0.09A
Inrush 120 (Apl): 0.717	Inrush 277 (Apl): 0.531
Duration 120 (ms): 1.58	Duration 277 (ms): 1.24
THDi 120V: <13%	THDi 277V: <20%
2000 Lumen D010TE	
120V Input Power: 31.5W	277V Input Power: 31.5W
120V Input Current: 0.27A	277V Input Current: 0.12A
Inrush 120 (Apl): 0.717	Inrush 277 (Apl): 0.531
Duration 120 (ms): 1.58	Duration 277 (ms): 1.24
THDi 120V: <13%	THDi 277V: <20%
3000 Lumen D010TE	
120V Input Power: 35W	277V Input Power: 34W
120V Input Current: 0.30A	277V Input Current: 0.13A
THDi 120V: <10%	THDi 277V: <20%

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
4000 Lumen D010TE	
120V Input Power: 46W	277V Input Power: 45W
120V Input Current: 0.39A	277V Input Current: 0.17A
THDi 120V: <13%	THDi 277V: <20%
5000 Lumen D010TE	
EM/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Power: 62W	THDi: <17%
120V Input Current: 0.52A	277V Input Current: 0.22A
Inrush 120 (Apl): 0.787	Inrush 277 (Apl): 1.09
Duration 120 (ms): 1.16	Duration 277 (ms): 1.75
6000 Lumen D010TE	
EM/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Power: 77W	THDi: <17%
120V Input Current: 0.64A	277V Input Current: 0.28A
Inrush 120 (Apl): 0.87	Inrush 277 (Apl): 0.96
Duration 120 (ms): 0.39	Duration 277 (ms): 0.31
6500 Lumen D010	
Input Power: 84W	THDi: <17%
120V Input Current: 0.70A	277V Input Current: 0.30A
Inrush 120 (Apl): 2.88	Inrush 277 (Apl): 3.68
Duration 120 (ms): 0.815	Duration 277 (ms): 1.29

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
8000 Lumen D010TE	
120V Input Power: 96W	277V Input Power: 96W
120V Input Current: 0.79A	277V Input Current: 0.36A
Inrush 120 (Apl): 1.09	Inrush 277 (Apl): 1.23
Duration 120 (ms): 0.3	Duration 277 (ms): 0.294
THDi 120V: <13%	THDi 277V: <20%
9000 Lumen D010TE	
120V Input Power: 108W	277V Input Power: 107W
120V Input Current: 0.89A	277V Input Current: 0.39A
Inrush 120 (Apl): 0.48	Inrush 277 (Apl): 1.316
Duration 120 (ms): 0.1	Duration 277 (ms): 0.52
THDi 120V: <13%	THDi 277V: <20%
10,000 Lumen D010TE	
120V Input Power: 126W	277V Input Power: 123W
120V Input Current: 1.05A	277V Input Current: 0.47A
Inrush 120 (Apl): 1.312	Inrush 277 (Apl): 1.856
Duration 120 (ms): 0.05	Duration 277 (ms): 0.1
THDi 120V: <13%	THDi 277V: <20%
12,000 Lumen D010TE	
120V Input Power: 140W	277V Input Power: 141W
120V Input Current: 1.17A	277V Input Current: 0.51A
Inrush 120 (Apl): 1.09	Inrush 277 (Apl): 1.23
Duration 120 (ms): 0.3	Duration 277 (ms): 0.294
THDi 120V: <13%	THDi 277V: <20%

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
15,000 Lumen D010TE	
120V Input Power: 161W	277V Input Power: 159W
120V Input Current: 1.33A	277V Input Current: 0.58A
Inrush 120 (Apl): 0.48	Inrush 277 (Apl): 1.316
Duration 120 (ms): 0.1	Duration 277 (ms): 0.52
THDi 120V: <13%	THDi 277V: <20%

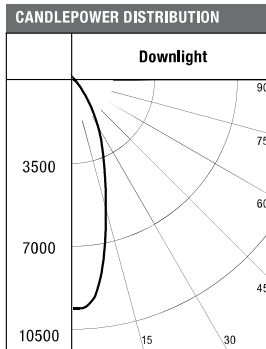
**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 LD8A15D010TE - ER8A15840 -
 8LM1LIWF

Notes:

Type:**FR/FR2/FS/FS2**

PSA18-68593

LD8A50 8L

PHOTOMETRICS

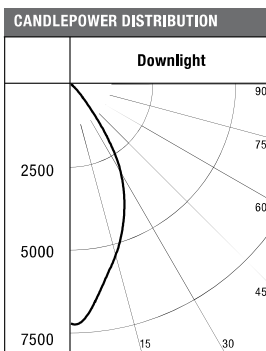
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 Efficacy 74 Lm/W
 CCT 3500K
 SC 0.6

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
12.5'	64	6
15'	45	8
20'	25	10
24'	17	13
28'	13	15

Degrees Vertical	Candela
0	10069
5	9738
15	5643
25	2940
35	1045
45	118
55	10
65	11
75	0
85	13
90	0

Zone	Lumens	%Fixture
0-30	3785	82
0-40	4441	96
0-60	4567	99
0-90	4603	100
90-180	0	0
0-180	4603	100

Average Candela Degrees	Average 0° Luminescence
45	5157
55	524
65	812
75	0
85	4430



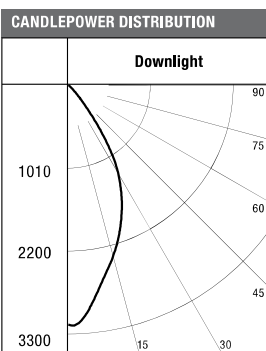
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 Lumens 4962 Lm
 Efficacy 80 Lm/W
 CCT 3500K
 SC 0.8

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
12.5'	42	10
15'	29	12
20'	16	16
24'	11	19
28'	8	22

Degrees Vertical	Candela
0	6445
5	6573
15	5323
25	3488
35	1582
45	316
55	26
65	0
75	1
85	0
90	0

Zone	Lumens	%Fixture
0-30	3598	72
0-40	4641	93
0-60	4952	99
0-90	4962	100
90-180	0	0
0-180	4962	100

Average Candela Degrees	Average 0° Luminescence
45	13773
55	1421
65	0
75	166
85	0



Test Number P110167
 LD8A50D010TE ER8A50835 8LM0LI
 Lumens 5083 Lm
 Efficacy 81.9 Lm/W
 CCT 3500K
 SC 1

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
12.5'	22	15
15'	15	18
20'	8	24
24'	6	29
28'	4	34

Degrees Vertical	Candela
0	3304
5	3395
15	3658
25	3398
35	2268
45	967
55	203
65	18
75	1
85	0
90	0

Zone	Lumens	%Fixture
0-30	2740	54
0-40	4147	81
0-60	5052	99
0-90	5083	100
90-180	0	0
0-180	5083	100

Average Candela Degrees	Average 0° Luminescence
45	42170
55	10921
65	1320
75	166
85	0

EM MULTIPLIER DATA

LUMENS	EM MULTIPLIER
7	14
1000	0.47
1500	0.30
2000	0.30
3000	0.17
4000	0.12
5000	0.11
6000	0.09
6500	0.17
8000	0.15
9000	0.13
10000	0.11
120000	0.09
150000	0.08

MULTIPLIER FROM 5000 LUMENS	
3000	0.75
4000	0.82
5000	1.00
6000	1.20
6500	1.34
8000	1.58
9000	1.75
10000	1.97

LPW	NARROW	MEDIUM	WIDE
1000	70.6	76.1	77.9
1500	69.8	75.2	77.0
2000	60.3	65.0	66.5
3000	83.0	89.5	91.7
4000	64.3	72.7	75.4
5000	74.2	80.0	82.0
6000	71.6	77.2	79.1
6500	73.7	79.5	81.4
8000	75.6	81.5	83.5
9000	75.1	81.0	83.0
10000	71.9	77.5	79.4
12000	74.2	80.0	82.0
15000	88.1	95.0	97.3

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 LD8A10D010TE - ER8A10840 -
 8LM1LIWF

Notes:

Type:**FR1**

PSA18-68593

Portfolio

DESCRIPTION

8-inch LED recessed narrow, medium, or wide beam downlight specially designed for LED technology. Two-stage reflector system produces smooth distribution with excellent light control and low aperture brightness. Offered with 1000-15,000 lumens with color temperatures of 2700K, 3000K, 3500K, 4000K available in 80 or 90 CRI. Available with dim-to-warm technology – similar to halogen at full power, the 3000K LED warms smoothly as dimmed to 1850K creating a rich warm glow within the space.

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Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

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conductors and feed thru branch wiring.

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LED

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Driver

Combination 0-10V/trailing edge driver provides flicker free dimming from 100% to 10%.

Optional 1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture. 1000 - 4000 lumen utilize one driver. 5000-10,000 utilize two drivers, 12,000-15,000 lumen utilizes three drivers.

Code Compliance

Thermally protected and cULus listed for protected wet locations. cCSAus certified. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/ RFI emissions per FCC 47CFR Part 18 Class B consumer limits. Non-IC rated - Insulation must be kept 3" from top and sides of housing. RoHS Compliant. Photometric testing completed in accordance with IES LM 79 standards. LED life testing completed in accordance with LM 80 standards. 8000 lumen and above are marked spacing and must follow spacing requirements.

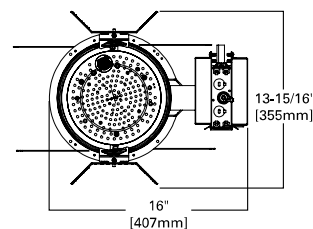
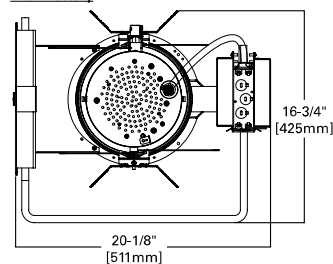
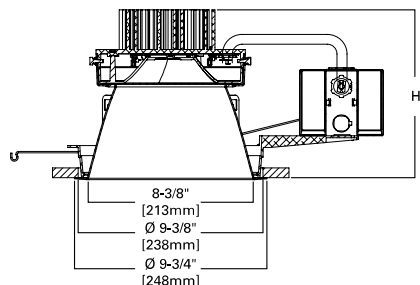
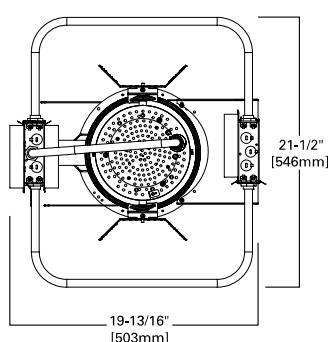
Warranty

5-year warranty.


**LD8A
ER8A
8L**

1,000-15,000 Lumen LED

8-Inch Narrow, Medium, or Wide
Downlight
New Construction

with Battery
D2W™
**12,000-15,000 Lumen**

Distribution	Height
Narrow	9-1/16"
Medium	8-5/8"
Wide	7-7/8"


 Refer to ENERGY STAR® Qualified
 Products List.

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:****LD8A10D010TE - ER8A10840 -
8LM1LIWF**

Notes:

Type:**FR1**

PSA18-68593

LD8A50 8L

ORDERING INFORMATION**EXAMPLE: LD8A501DE010 ER8A50835 8LW11LI= 8" LED Wide Beam Reflector, 5000 Lumen, 3,500 K Color with Universal 120 - 277V, 0 - 10 Driver**

Housing	Lumens ¹	Voltage	Driver	Options ²	Power Module	Lumens	CRI	Color
LD8A=8" Aperture LD8ACP=8" Aperture, Chicago Plenum	10=1000 Lumens 15=1500 Lumens 20=2000 Lumens 30=3000 Lumens 40=4000 Lumens 50=5000 Lumens 60=6000 Lumens 65=6500 Lumens 80=8000 Lumens ⁵ 90=9000 Lumens ⁵ 100=10000 Lumens ⁵ 120=12000 Lumens ⁵ 150=15000 Lumens ⁵	1=120V 2=277V Blank=120-277V 1000 - 4000 Lumen only	1000, 1500, 2000, 3000, 4000, 5000, 6000, 8000, 9000, 10,000⁶ 12,000 AND 15,000 LUMEN D010TE=0-10V 10% Dimming or Trailing Edge Dimming⁴ 1000, 1500, 2000, 3000, 4000, 5000, 6000 AND 8000 LUMEN D5LT=Fifth Light® DALI 0% Dimming DMX=DMX 0% Dimming DE010=0-10V 0% Dimming 1000, 1500, 2000, 3000, 4000, 5000 AND 6000 LUMEN DL3=1% Lutron® Hi-Lume 3-Wire or Ecosystem D010TR=0-10V 10% Dimming or Leading Edge⁴ 6500 LUMEN D010=0-10V 10% Dimming DE010=0-10V 1% Dimming	EM7=7W Emergency Module with Remote Test Switch ³ EM14=14W Emergency Module with Remote Test Switch ³ IE7=7W Emergency Module with Integral Test Switch ³ IE14=14W Emergency Module with Integral Test Switch ³ EMBOD=7W Bodine® Emergency Module with Remote Test Switch ³ IEMBOD=7W Bodine® Emergency Module with Integral Test Switch	ER8A=8" Module ER8ACP=8" Module, Chicago Plenum	10=1000 Lumens 15=1500 Lumens 20=2000 Lumens 30=3000 Lumens 40=4000 Lumens 50=5000 Lumens 60=6000 Lumens 65=6500 Lumens ⁵ 80=8000 Lumens ⁵ 90=9000 Lumens ⁵ 100=10000 Lumens ⁵ 120=12000 Lumens ⁵ 150=15000 Lumens ⁵	8=80 CRI 9=90 CRI	27=2700° K 30=3000° K 35=3500° K 40=4000° K 30D2W= Dim to warm 3000° K to 1850° K (2000 lumen and below, 90 CRI)

Reflector ⁷	Finish	Options	Accessories
8LN0=8" 25" Narrow Reflector, Polymer Trim Ring 8LN1=8" 25" Narrow Reflector, Self-flanged 8LN0E=8" 25" Narrow Reflector, Polymer Trim Ring for use with IEM Integral Emergency option 8LN1E=8" 25" Narrow Reflector, Self-flanged Trim Ring for use with IEM Integral Emergency option 8LM0=8" 50" Medium Reflector, Polymer Trim Ring 8LM1=8" 50" Medium Reflector, Self-flanged	LI=Specular Clear H=Semi-Specular Clear WMH=Warm Haze G=Specular Gold WH=Wheat WHH=Wheat Haze GP=Graphite GPH=Graphite Haze	B=Specular Black W=Gloss White 8LM0 Only BB=Black Baffle WB=White Baffle	Self-flanged Only WF=White Painted Flange HB26=C-channel Bar Hanger, 26" Long, Pair HB50=C-channel Bar Hanger, 50" Long, Pair RMB22=Wood Joist Bar Hanger, 22" Long, Pair H347=347 to 120V Step Down Transformer, 75VA H347200=347 to 120V Step Down Transformer, 200VA Housings, Specify Slope HSA8=Slope Adapter for 8" Aperture Housings, Specify Slope LGSKT8IP65=IP65 Gasket Kit PORLWTPD1=LumaWatt Pro Wireless Sensor Kit (0-10V only)

- Notes:** 1. Nominal Lumens will vary depending on selected color, driver and reflector finish.
2. Not available with Chicago Plenum.
3. Not CSA approved.
4. Trailing edge and leading edge 120V only.
5. Product is marked spacing and must be installed with the following minimum spacing:
Center to Center of adjacent luminaires : 36"
Center of Luminaire to Side of Building Member : 18"
Minimum Overhead Clearance: 9"
6. 0-10V recommended
7. Distribution with LI finish.

ENERGY DATA

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
1000 Lumen D010TE	
120V Input Power: 15W	277V Input Power: 16W
120V Input Current: 0.13A	277V Input Current: 0.06A
Inrush 120 (Apl): 0.486	Inrush 277 (Apl): 0.848
Duration 120 (ms): 0.4	Duration 277 (ms): 0.182
THDi 120V: <13%	THDi 277V: <20%
1500 Lumen D010TE	
120V Input Power: 23W	277V Input Power: 24W
120V Input Current: 0.19A	277V Input Current: 0.09A
Inrush 120 (Apl): 0.717	Inrush 277 (Apl): 0.531
Duration 120 (ms): 1.58	Duration 277 (ms): 1.24
THDi 120V: <13%	THDi 277V: <20%
2000 Lumen D010TE	
120V Input Power: 31.5W	277V Input Power: 31.5W
120V Input Current: 0.27A	277V Input Current: 0.12A
Inrush 120 (Apl): 0.717	Inrush 277 (Apl): 0.531
Duration 120 (ms): 1.58	Duration 277 (ms): 1.24
THDi 120V: <13%	THDi 277V: <20%
3000 Lumen D010TE	
120V Input Power: 35W	277V Input Power: 34W
120V Input Current: 0.30A	277V Input Current: 0.13A
THD 120V: <10%	THD 277V: <20%

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
4000 Lumen D010TE	
120V Input Power: 46W	277V Input Power: 45W
120V Input Current: 0.39A	277V Input Current: 0.17A
THD 120V: <13%	THD 277V: <20%
5000 Lumen D010TE	
EM/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Power: 62W	THD: <17%
120V Input Current: 0.52A	277V Input Current: 0.22A
Inrush 120 (Apl): 0.787	Inrush 277 (Apl): 1.09
Duration 120 (ms): 1.16	Duration 277 (ms): 1.75
6000 Lumen D010TE	
EM/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Power: 77W	THD: <17%
120V Input Current: 0.64A	277V Input Current: 0.28A
Inrush 120 (Apl): 0.87	Inrush 277 (Apl): 0.96
Duration 120 (ms): 0.39	Duration 277 (ms): 0.31
6500 Lumen D010	
Input Power: 84W	THD: <17%
120V Input Current: 0.70A	277V Input Current: 0.30A
Inrush 120 (Apl): 2.88	Inrush 277 (Apl): 3.68
Duration 120 (ms): 0.815	Duration 277 (ms): 1.29

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
8000 Lumen D010TE	
120V Input Power: 96W	277V Input Power: 96W
120V Input Current: 0.79A	277V Input Current: 0.36A
Inrush 120 (Apl): 1.09	Inrush 277 (Apl): 1.23
Duration 120 (ms): 0.3	Duration 277 (ms): 0.294
THDi 120V: <13%	THDi 277V: <20%
9000 Lumen D010TE	
120V Input Power: 108W	277V Input Power: 107W
120V Input Current: 0.89A	277V Input Current: 0.39A
Inrush 120 (Apl): 0.48	Inrush 277 (Apl): 1.316
Duration 120 (ms): 0.1	Duration 277 (ms): 0.52
THDi 120V: <13%	THDi 277V: <20%
10,000 Lumen D010TE	
120V Input Power: 126W	277V Input Power: 123W
120V Input Current: 1.05A	277V Input Current: 0.47A
Inrush 120 (Apl): 1.312	Inrush 277 (Apl): 1.856
Duration 120 (ms): 0.05	Duration 277 (ms): 0.1
THDi 120V: <13%	THDi 277V: <20%
12,000 Lumen D010TE	
120V Input Power: 140W	277V Input Power: 141W
120V Input Current: 1.17A	277V Input Current: 0.51A
Inrush 120 (Apl): 1.09	Inrush 277 (Apl): 1.23
Duration 120 (ms): 0.3	Duration 277 (ms): 0.294
THDi 120V: <13%	THDi 277V: <20%

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
15,000 Lumen D010TE	
120V Input Power: 161W	277V Input Power: 159W
120V Input Current: 1.33A	277V Input Current: 0.58A
Inrush 120 (Apl): 0.48	Inrush 277 (Apl): 1.316
Duration 120 (ms): 0.1	Duration 277 (ms): 0.52
THDi 120V: <13%	THDi 277V: <20%

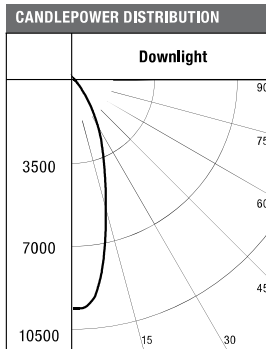
**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 LD8A10D010TE - ER8A10840 -
 8LM1LIWF

Notes:

Type:**FR1**

PSA18-68593

LD8A50 8L

PHOTOMETRICS

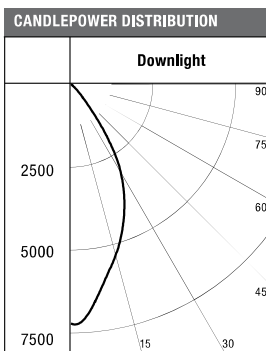
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 Efficacy 74 Lm/W
 CCT 3500K
 SC 0.6

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
12.5'	64	6
15'	45	8
20'	25	10
24'	17	13
28'	13	15

Degrees Vertical	Candela
0	10069
5	9738
15	5643
25	2940
35	1045
45	118
55	10
65	11
75	0
85	13
90	0

Zone	Lumens	%Fixture
0-30	3785	82
0-40	4441	96
0-60	4567	99
0-90	4603	100
90-180	0	0
0-180	4603	100

Average Candela Degrees	Average 0° Luminance
45	5157
55	524
65	812
75	0
85	4430



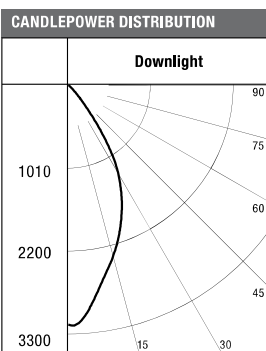
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 Lumens 4962 Lm
 Efficacy 80 Lm/W
 CCT 3500K
 SC 0.8

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
12.5'	42	10
15'	29	12
20'	16	16
24'	11	19
28'	8	22

Degrees Vertical	Candela
0	6445
5	6573
15	5323
25	3488
35	1582
45	316
55	26
65	0
75	1
85	0
90	0

Zone	Lumens	%Fixture
0-30	3598	72
0-40	4641	93
0-60	4952	99
0-90	4962	100
90-180	0	0
0-180	4962	100

Average Candela Degrees	Average 0° Luminance
45	13773
55	1421
65	0
75	166
85	0



Test Number P110167
 LD8A50D010TE ER8A50835 8LM0LI
 Lumens 5083 Lm
 Efficacy 81.9 Lm/W
 CCT 3500K
 SC 1

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
12.5'	22	15
15'	15	18
20'	8	24
24'	6	29
28'	4	34

Degrees Vertical	Candela
0	3304
5	3395
15	3658
25	3398
35	2268
45	967
55	203
65	18
75	1
85	0
90	0

Zone	Lumens	%Fixture
0-30	2740	54
0-40	4147	81
0-60	5052	99
0-90	5083	100
90-180	0	0
0-180	5083	100

Average Candela Degrees	Average 0° Luminance
45	42170
55	10921
65	1320
75	166
85	0

EM MULTIPLIER DATA

LUMENS	EM MULTIPLIER
7	14
1000	0.47
1500	0.30
2000	0.30
3000	0.17
4000	0.12
5000	0.11
6000	0.09
6500	0.17
8000	0.15
9000	0.13
10000	0.11
120000	0.09
150000	0.08

MULTIPLIER FROM 5000 LUMENS	
3000	0.75
4000	0.82
5000	1.00
6000	1.20
6500	1.34
8000	1.58
9000	1.75
10000	1.97

LPW	NARROW	MEDIUM	WIDE
1000	70.6	76.1	77.9
1500	69.8	75.2	77.0
2000	60.3	65.0	66.5
3000	83.0	89.5	91.7
4000	64.3	72.7	75.4
5000	74.2	80.0	82.0
6000	71.6	77.2	79.1
6500	73.7	79.5	81.4
8000	75.6	81.5	83.5
9000	75.1	81.0	83.0
10000	71.9	77.5	79.4
12000	74.2	80.0	82.0
15000	88.1	95.0	97.3

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 LD8A30D010TE - ER8A30840 -
 8LW1LIWF

Notes:

Type:**FT**

PSA18-68593

Portfolio

DESCRIPTION

8-inch LED recessed narrow, medium, or wide beam downlight specially designed for LED technology. Two-stage reflector system produces smooth distribution with excellent light control and low aperture brightness. Offered with 1000-15,000 lumens with color temperatures of 2700K, 3000K, 3500K, 4000K available in 80 or 90 CRI. Available with dim-to-warm technology – similar to halogen at full power, the 3000K LED warms smoothly as dimmed to 1850K creating a rich warm glow within the space.

SPECIFICATION FEATURES**Lower Shielding Reflector**

Self-flanged, spun .060" thick aluminum lower reflector in combination with a lensed upper optical chamber provides superior lumen output with minimal source brightness. Available in all Portfolio Alzak® finishes.

Trim Retention

Lower reflector is retained with two torsion springs holding the flange tightly to the finished ceiling surface.

Plaster Frame / Collar

Die cast aluminum 1-1/2" deep collar accommodates ceiling materials up to 2".

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

Junction Box

(4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (8) #12 AWG (four in, four out) 90°C

conductors and feed thru branch wiring.

Thermal

Forged aluminum heat sink conducts heat away from the LED module for improved performance and longer life.

LED

LED system contains a plurality of high brightness white LED's combined with a high reflectance upper reflector and convex transitional lens producing even distribution with no pixilation. Rated for 50,000 hours at 70% lumen maintenance. Color variation within 3-step MacAdam ellipses. Flexible disconnect allows for tool-less replacement of LED engine from below ceiling. Available in 80 or 90 CRI. D2W™ – dim-to-warm shifts CCT from 3000K to 1850K as fixture dims mimicking halogen sources.

Driver

Combination 0-10V/trailing edge driver provides flicker free dimming from 100% to 10%.

Optional 1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture. 1000 - 4000 lumen utilize one driver. 5000-10,000 utilize two drivers, 12,000-15,000 lumen utilizes three drivers.

Code Compliance

Thermally protected and cULus listed for protected wet locations. cCSAus certified. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/ RFI emissions per FCC 47CFR Part 18 Class B consumer limits. Non-IC rated - Insulation must be kept 3" from top and sides of housing. RoHS Compliant. Photometric testing completed in accordance with IES LM 79 standards. LED life testing completed in accordance with LM 80 standards. 8000 lumen and above are marked spacing and must follow spacing requirements.

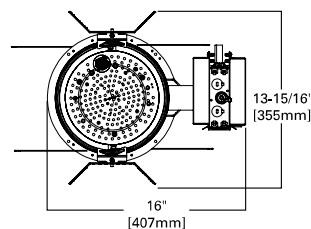
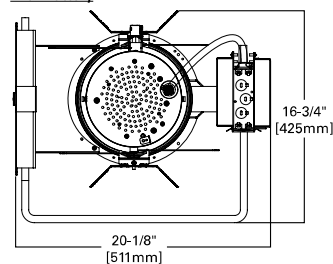
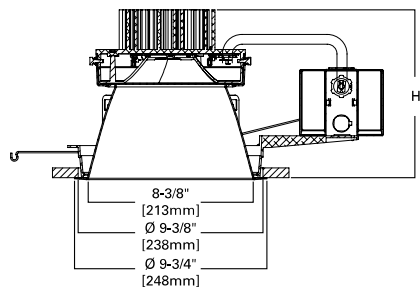
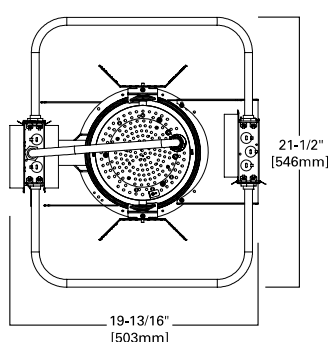
Warranty

5-year warranty.


**LD8A
ER8A
8L**

1,000-15,000 Lumen LED

8-Inch Narrow, Medium, or Wide
Downlight
New Construction

with Battery
D2W™
**12,000-15,000 Lumen**

Distribution	Height
Narrow	9-1/16"
Medium	8-5/8"
Wide	7-7/8"


 Refer to ENERGY STAR® Qualified
 Products List.

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**LD8A30D010TE - ER8A30840 -
8LW1LIWF

Notes:

Type:**FT**

PSA18-68593

LD8A50 8L

ORDERING INFORMATION**EXAMPLE:** LD8A501DE010 ER8A50835 8LW11LI= 8" LED Wide Beam Reflector, 5000 Lumen, 3,500 K Color with Universal 120 - 277V, 0 - 10 Driver

Housing	Lumens ¹	Voltage	Driver	Options ²	Power Module	Lumens	CRI	Color
LD8A=8" Aperture LD8ACP=8" Aperture, Chicago Plenum	10=1000 Lumens 15=1500 Lumens 20=2000 Lumens S30=3000 Lumens S40=4000 Lumens 50=5000 Lumens 60=6000 Lumens 65=6500 Lumens 80=8000 Lumens ⁵ 90=9000 Lumens ⁵ 100=10000 Lumens ⁵ 120=12000 Lumens ⁵ 150=15000 Lumens ⁵	1=120V 2=277V Blank=120-277V 1000 - 4000 Lumen only	1000, 1500, 2000, 3000, 4000, 5000, 6000, 8000, 9000, 10,000 ⁶ 12,000 AND 15,000 LUMEN D010TE=0-10V 10% Dimming or Trailing Edge Dimming⁴ 1000, 1500, 2000, 3000, 4000, 5000, 6000 AND 8000 LUMEN D5LT=Fifth Light® DALI 0% Dimming DMX=DMX 0% Dimming DE010=0-10V 0% Dimming 1000, 1500, 2000, 3000, 4000, 5000 AND 6000 LUMEN DL3=1% Lutron® Hi-Lume 3-Wire or Ecosystem D010TR=0-10V 10% Dimming or Leading Edge ⁴ 6500 LUMEN D010=0-10V 10% Dimming DE010=0-10V 1% Dimming	EM7=7W Emergency Module with Remote Test Switch ³ EM14=14W Emergency Module with Remote Test Switch ³ IEM7=7W Emergency Module with Integral Test Switch ³ IEM14=14W Emergency Module with Integral Test Switch ³ EMBOD=7W Bodine® Emergency Module with Remote Test Switch IEMBOD=7W Bodine® Emergency Module with Integral Test Switch	ER8A=8" Module ER8ACP=8" Module, Chicago Plenum	10=1000 Lumens 15=1500 Lumens 20=2000 Lumens S30=3000 Lumens S40=4000 Lumens 50=5000 Lumens 60=6000 Lumens 65=6500 Lumens ⁵ 80=8000 Lumens ⁵ 90=9000 Lumens ⁵ 100=10000 Lumens ⁵ 120=12000 Lumens ⁵ 150=15000 Lumens ⁵	8=80 CRI 9=90 CRI	27=2700° K 30=3000° K 35=3500° K 40=4000° K 3002W= Dim to warm 3000° K to 1850° K (2000 Lumen and below, 90 CRI)

Reflector ⁷	Finish	Options	Accessories
8LN0=8" 25" Narrow Reflector, Polymer Trim Ring 8LN1=8" 25" Narrow Reflector, Self-flanged 8LN0E=8" 25" Narrow Reflector, Polymer Trim Ring for use with IEM Integral Emergency option 8LN1E=8" 25" Narrow Reflector, Self-flanged Trim Ring for use with IEM Integral Emergency option 8LW0=8" 50" Medium Reflector, Polymer Trim Ring 8LW1=8" 50" Medium Reflector, Self-flanged 8LW0E=8" 50" Medium Reflector, Polymer Trim Ring 8LW1E=8" 50" Medium Reflector, Self-flanged	LI=Specular Clear H=Sem-Specular Clear WMH=Warm Haze G=Specular Gold WH=Wheat WHH=Wheat Haze GP=Graphite GPH=Graphite Haze	B=Specular Black W=Gloss White 8LM0 Only BB=Black Baffle WB=White Baffle	Self-flanged Only WF=White Painted Flange HB26=C-channel Bar Hanger, 26" Long, Pair HB50=C-channel Bar Hanger, 50" Long, Pair RMB22=Wood Joist Bar Hanger, 22" Long, Pair H347=347 to 120V Step Down Transformer, 75VA H347200=347 to 120V Step Down Transformer, 200VA Housings, Specify Slope HSA8=Slope Adapter for 8" Aperture Housings, Specify Slope LGSKT8IP65=IP65 Gasket Kit PURLWTPD1=LumaWatt Pro Wireless Sensor Kit (0-10V only)

- Notes:**
1. Nominal Lumens will vary depending on selected color, driver and reflector finish.
 2. Not available with Chicago Plenum.
 3. Not CSA approved.
 4. Trailing edge and leading edge 120V only.
 5. Product is marked spacing and must be installed with the following minimum spacing:
Center to Center of adjacent luminaires : 36"
Center of Luminaire to Side of Building Member : 18"
Minimum Overhead Clearance: 9"
 6. 0-10V recommended
 7. Distribution with LI finish.

ENERGY DATA

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
1000 Lumen D010TE	
120V Input Power: 15W	277V Input Power: 16W
120V Input Current: 0.13A	277V Input Current: 0.06A
Inrush 120 (Apl): 0.486	Inrush 277 (Apl): 0.848
Duration 120 (ms): 0.4	Duration 277 (ms): 0.182
THDi 120V: <13%	THDi 277V: <20%
1500 Lumen D010TE	
120V Input Power: 23W	277V Input Power: 24W
120V Input Current: 0.19A	277V Input Current: 0.09A
Inrush 120 (Apl): 0.717	Inrush 277 (Apl): 0.531
Duration 120 (ms): 1.58	Duration 277 (ms): 1.24
THDi 120V: <13%	THDi 277V: <20%
2000 Lumen D010TE	
120V Input Power: 31.5W	277V Input Power: 31.5W
120V Input Current: 0.27A	277V Input Current: 0.12A
Inrush 120 (Apl): 0.717	Inrush 277 (Apl): 0.531
Duration 120 (ms): 1.58	Duration 277 (ms): 1.24
THDi 120V: <13%	THDi 277V: <20%
3000 Lumen D010TE	
120V Input Power: 35W	277V Input Power: 34W
120V Input Current: 0.30A	277V Input Current: 0.13A
THDi 120V: <10%	THDi 277V: <20%

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
4000 Lumen D010TE	
120V Input Power: 46W	277V Input Power: 45W
120V Input Current: 0.39A	277V Input Current: 0.17A
THDi 120V: <13%	THDi 277V: <20%
5000 Lumen D010TE	
EM/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Power: 62W	THDi: <17%
120V Input Current: 0.52A	277V Input Current: 0.22A
Inrush 120 (Apl): 0.787	Inrush 277 (Apl): 1.09
Duration 120 (ms): 1.16	Duration 277 (ms): 1.75
6000 Lumen D010TE	
EM/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Power: 77W	THDi: <17%
120V Input Current: 0.64A	277V Input Current: 0.28A
Inrush 120 (Apl): 0.87	Inrush 277 (Apl): 0.96
Duration 120 (ms): 0.39	Duration 277 (ms): 0.31
6500 Lumen D010	
Input Power: 84W	THDi: <17%
120V Input Current: 0.70A	277V Input Current: 0.30A
Inrush 120 (Apl): 2.88	Inrush 277 (Apl): 3.68
Duration 120 (ms): 0.815	Duration 277 (ms): 1.29

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
8000 Lumen D010TE	
120V Input Power: 96W	277V Input Power: 96W
120V Input Current: 0.79A	277V Input Current: 0.36A
Inrush 120 (Apl): 1.09	Inrush 277 (Apl): 1.23
Duration 120 (ms): 0.3	Duration 277 (ms): 0.294
THDi 120V: <13%	THDi 277V: <20%
9000 Lumen D010TE	
120V Input Power: 108W	277V Input Power: 107W
120V Input Current: 0.89A	277V Input Current: 0.39A
Inrush 120 (Apl): 0.48	Inrush 277 (Apl): 1.316
Duration 120 (ms): 0.1	Duration 277 (ms): 0.52
THDi 120V: <13%	THDi 277V: <20%
10,000 Lumen D010TE	
120V Input Power: 126W	277V Input Power: 123W
120V Input Current: 1.05A	277V Input Current: 0.47A
Inrush 120 (Apl): 1.312	Inrush 277 (Apl): 1.856
Duration 120 (ms): 0.05	Duration 277 (ms): 0.1
THDi 120V: <13%	THDi 277V: <20%
12,000 Lumen D010TE	
120V Input Power: 140W	277V Input Power: 141W
120V Input Current: 1.17A	277V Input Current: 0.51A
Inrush 120 (Apl): 1.09	Inrush 277 (Apl): 1.23
Duration 120 (ms): 0.3	Duration 277 (ms): 0.294
THDi 120V: <13%	THDi 277V: <20%

ENERGY DATA	
Sound Rating: Class A standards (Values at non-dimming line voltage)	
Minimum Starting Temperature: -20°C (-4°F)	
Power Factor: >0.90	
Input Frequency: 50-60Hz	
15,000 Lumen D010TE	
120V Input Power: 161W	277V Input Power: 159W
120V Input Current: 1.33A	277V Input Current: 0.58A
Inrush 120 (Apl): 0.48	Inrush 277 (Apl): 1.316
Duration 120 (ms): 0.1	Duration 277 (ms): 0.52
THDi 120V: <13%	THDi 277V: <20%

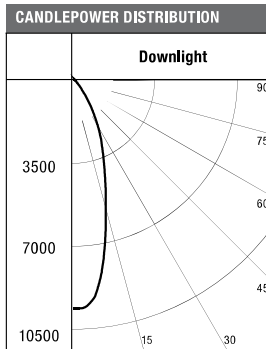
**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 LD8A30D010TE - ER8A30840 -
 8LW1LIWF

Notes:

Type:**FT**

PSA18-68593

LD8A50 8L

PHOTOMETRICS

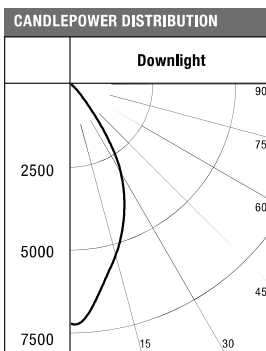
Test Number P112471
 LD8A50D010TE ER8A50835 8LW0LI
 Lumens 4603 Lm
 Efficacy 74 Lm/W
 CCT 3500K
 SC 0.6

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
12.5'	64	6
15'	45	8
20'	25	10
24'	17	13
28'	13	15

Degrees Vertical	Candela
0	10069
5	9738
15	5643
25	2940
35	1045
45	118
55	10
65	11
75	0
85	13
90	0

Zone	Lumens	%Fixture
0-30	3785	82
0-40	4441	96
0-60	4567	99
0-90	4603	100
90-180	0	0
0-180	4603	100

Average Candela Degrees	Average 0° Luminance
45	5157
55	524
65	812
75	0
85	4430



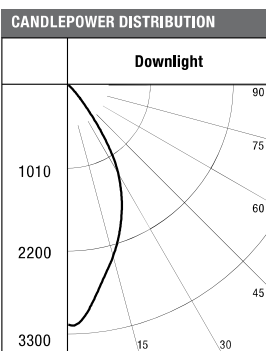
Test Number P112343
 LD8A50D010TE ER8A50835 8LW0LI
 Lumens 4962 Lm
 Efficacy 80 Lm/W
 CCT 3500K
 SC 0.8

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
12.5'	42	10
15'	29	12
20'	16	16
24'	11	19
28'	8	22

Degrees Vertical	Candela
0	6445
5	6573
15	5323
25	3488
35	1582
45	316
55	26
65	0
75	1
85	0
90	0

Zone	Lumens	%Fixture
0-30	3598	72
0-40	4641	93
0-60	4952	99
0-90	4962	100
90-180	0	0
0-180	4962	100

Average Candela Degrees	Average 0° Luminance
45	13773
55	1421
65	0
75	166
85	0



Test Number P110167
 LD8A50D010TE ER8A50835 8LW0LI
 Lumens 5083 Lm
 Efficacy 81.9 Lm/W
 CCT 3500K
 SC 1

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
12.5'	22	15
15'	15	18
20'	8	24
24'	6	29
28'	4	34

Degrees Vertical	Candela
0	3304
5	3395
15	3658
25	3398
35	2268
45	967
55	203
65	18
75	1
85	0
90	0

Zone	Lumens	%Fixture
0-30	2740	54
0-40	4147	81
0-60	5052	99
0-90	5083	100
90-180	0	0
0-180	5083	100

Average Candela Degrees	Average 0° Luminance
45	42170
55	10921
65	1320
75	166
85	0

EM MULTIPLIER DATA

LUMENS	EM MULTIPLIER
7	14
1000	0.47
1500	0.30
2000	0.30
3000	0.17
4000	0.12
5000	0.11
6000	0.09
6500	0.17
8000	0.15
9000	0.13
10000	0.11
120000	0.09
150000	0.08

MULTIPLIER FROM 5000 LUMENS	
3000	0.75
4000	0.82
5000	1.00
6000	1.20
6500	1.34
8000	1.58
9000	1.75
10000	1.97

LPW	NARROW	MEDIUM	WIDE
1000	70.6	76.1	77.9
1500	69.8	75.2	77.0
2000	60.3	65.0	66.5
3000	83.0	89.5	91.7
4000	64.3	72.7	75.4
5000	74.2	80.0	82.0
6000	71.6	77.2	79.1
6500	73.7	79.5	81.4
8000	75.6	81.5	83.5
9000	75.1	81.0	83.0
10000	71.9	77.5	79.4
12000	74.2	80.0	82.0
15000	88.1	95.0	97.3

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:**BRA8-LED-WP-36LED-NW-FINISH**

Notes:

Type:**BOLLARD**

PSA18-68593

SOLID STATE BOLLARDS

BRA SERIES-LED

S P E C I F I C A T I O N S

BOLLARD

Durable corrosion resistant extruded and cast aluminum construction. 1/4" wall thickness.

LED POWER ARRAY™

Three-dimensional array consisting of 6 individual LED tubes for the BDA8 model and 4 individual LED tubes for the BDA6 model, which are fastened to a retaining plate equally spaced to provide 360° of even illumination output. Each LED tube consists of a circuit board populated with a multiple of LED's which is fastened to a radial aluminum heat sink. A white polycarbonate lens and end caps protect each LED tube's internal components and provides diffusion to prevent shadowing and striations.

INTERNAL LOUVER (IL) - A specular louver stack conceals the inner LED Power Array Module and provides uplight and glare control through the external clear polycarbonate lens.

CAST LOUVER (CL) - External cast aluminum louver stack protects the internal LED Power Array Module and provides uplight and glare control. An internal clear polycarbonate lens is integrated with the LED Power Array Module.

OPAL LENS (WP) - Exterior white polycarbonate lens protects the internal LED Power Array Module and provides a uniform white glow.

RADIAL LED MODULE

LED'S are mounted to a circular heatsink in a radial array. The radial LED module is concealed in the cap of the bollard. LED's are not directly visible from angles above 90°.

PARABOLIC REFLECTOR (TR) - A specular Parabolic Reflector reflects a portion of the distribution from the radial LED module and provides a uniform wide angle throw through the outer clear polycarbonate lens.

LED EMITTERS

High Output LED's are driven at 350mA for nominal 1 Watt output each. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

LED DRIVER

UL and CUL recognized Constant Current LED drivers operate on input voltages from 120-277VAC, 50/60hz. Consult Factory for (347-480VAC). Driver is mechanically fastened to a retaining bracket. Driver has a minimum 4KV of internal surge protection, 10KV & 20KV Surge Protector optional. Dimmable and High-Low Driver options available.

FINISH

Polyster powder coat incorporates four step iron phosphate process to pretreat metal surface for maximum adhesion. Top coat is baked at 400°F for maximum hardness and exterior durability.

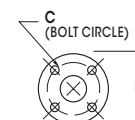
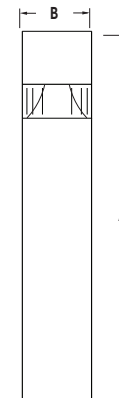
PROJECT NAME: _____

FIXTURE TYPE: _____

**B R A**

BRA8 SHOWN WITH -TR OPTICS

PATENT PENDING



BOLLARD	A	B	C	D
BRA8	42" 1067mm	8" 203mm	6" 152mm	8" 203mm
BRA6	42" 1067mm	6" 152mm	4" 102mm	6" 152mm



2015239

U.S. Architectural Lighting

 660 West Avenue O, Palmdale, CA 93551
 Phone (661) 233-2000 Fax (661) 233-2001
 www.usallg.com

**U.S. ARCHITECTURAL
LIGHTING**

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

1043-NS-40-E-MV-010-HL

Notes:**Type:****M3**

PSA18-68593


**PROFESSIONAL
OUTDOOR LIGHTING**

Type:

Model:

Project:

SPECIFICATION SHEET

MODEL 1043 Architectural Series • Up & Accent

FIXTURE SPECIFICATIONS:

DOOR:

Die-cast, low copper content, A360 aluminum offers maximum corrosion protection. Stainless steel fasteners affixed to a minimalistic styled flat door (standard). Door is designed to shed water from the lens surface. Also available as an accessory is a die-cast medium shield **CS**.

HOUSING:

Die-cast A360 aluminum. Optic and driver compartment separately sealed while being electrically connected. Housing aiming achieved via a Vista patented Infinity Knuckle (see MOUNTING).

FINISH:

Durable powder coat finish available in Glossy Gray, Black, Architectural Bronze, Dark Bronze, Verde, Pewter, Architectural Brick, Granite, Terracotta, Rust, Hunter Green, Mocha, Special Bronze, Weathered Bronze, Weathered Iron, and White. Custom Powder coat finishes available on request.

LED:

Cree® MT-G2 High Density Array (HDA) driven at 500mA, 700mA, 750mA, 1000mA, 1400mA, or 1750mA.

COLOR TEMPERATURE:

LED's are offered in 2700°K, 3000°K, 3500°K, 4000°K, or 5000°K CCT ANSI white 4 step Cree® Easy White™ bins

LIGHT DISTRIBUTION:

Very Narrow Spot **VNS** (16° FWHM), Narrow Spot **NS** (19° FWHM), Medium Flood **MF** (30° FWHM), and Wide Flood **WF** (46° FWHM).

REFLECTOR:

High-purity, vacuum metalized, specular or semi-specular optics designed for maximum performance and uniformity. Very Narrow Spot **VNS** optic incorporates an internal source shield to eliminate unwanted glare outside the beam pattern.

LENS/SEAL:

2.7 mm thick tempered and sealed clear glass sealed with a closed cell molded silicone gasket.

WIRING:

Prewired with 150° C-rated wire.

DRIVER:

Integral CUL listed LED driver. Non-dimmable (**ND**), dimming drivers available in 0-10V (**O10**), TRIAC dimming (120V input only) (**LE**) or ELV dimming (**TE**).

ACCESSORIES:

Barn Doors **BD**, Full Shield **FS**, and Half Shield **HS** available. Accessories are attached into pre-existing slots located on the underside of the fixture door providing for a fastener free appearance.

MOUNTING:

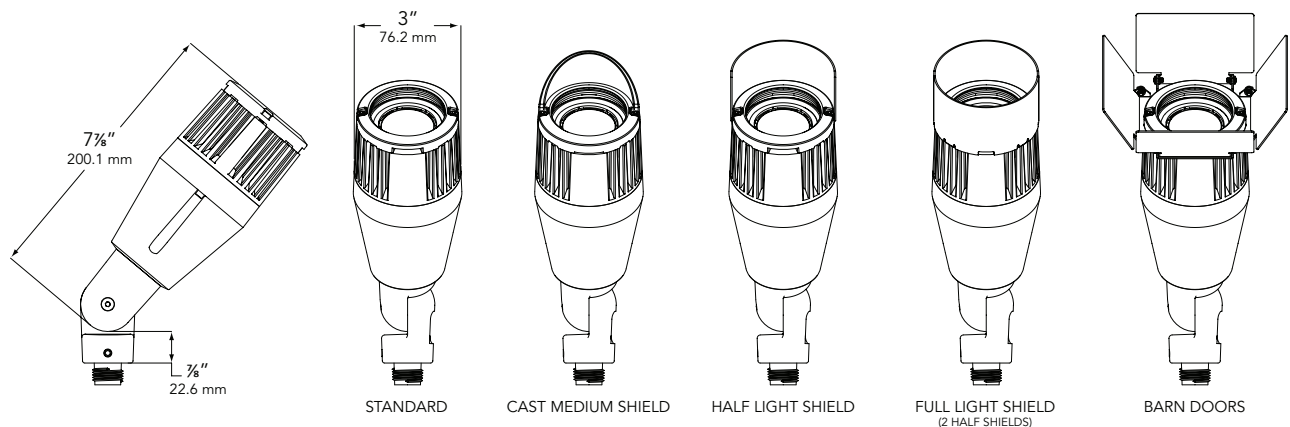
Infinity Knuckle - Die-cast, copper-free aluminum with stainless steel stem. A fully sealed spherical grommet allows infinite adjustment capabilities.

CERTIFICATION:

UL & CUL wet location certified. *IP66*

All Vista luminaires are **MADE IN THE U.S.A.**

DIMENSIONS:



Vista Professional Outdoor Lighting reserves the right to modify the design and/or construction of the fixture shown without further notification.

1625 Surveyor Avenue • Simi Valley, CA 93063 • (805) 527-0987 • (800) 766-VISTA (8478)
FAX: (888) 670-VISTA (8478) • email@vistapro.com • www.vistapro.com



**PROFESSIONAL
OUTDOOR LIGHTING**

SPECIFICATION SHEET

MODEL 1043 Architectural Series • Up & Accent Lights

LAMP SPECIFICATIONS

LED:

- High lumen output LED powered for high efficacy.
- Cree® MT-G2 High Density Array (HDA), driven at 500mA, 700mA, 750mA, 1000mA, 1400mA, or 1750mA.
- 2700°K, 3000°K, 3500°K, 4000°K, or 5000°K CCT ANSI white 4 step Cree® Easy White™ bins.
- 135-1212 Delivered Lumens.

OPTICS/AIMING:

- High-purity, vacuum metalized, specular or semi-specular optics designed for maximum performance and uniformity.
- Very Narrow Spot **VNS** (16° FWHM), Narrow Spot **NS** (19° FWHM), Medium Flood **MF** (30° FWHM), and Wide Flood **WF** (46° FWHM).
- Housing aiming achieved via a Vista patented Infinity Knuckle (see MOUNTING).

ELECTRICAL:

- Multi-Volt **MV** 120V-277V universal input.
- Prewired with 150° C-rated wire.
- Constant current 700mA or 1A output driver (non-dimmable).
- Dimmable constant current drivers available in 500mA, 750mA, 1000mA, 1400mA, 1750mA outputs. Available in linear 0-10V dimming (**010**), TRIAC dimming (**LE**), or ELV dimming (**TE**). (Note: TRIAC dimming available with 120V input only).

FIXTURE ORDERING INFORMATION

TO ORDER FIXTURE: Select appropriate choice from each column as in the following example.

EXAMPLE: 1043-GG-NS-40-C-MV-ND-HS

MODEL	FINISH	DISTRIBUTION	COLOR TEMP	DELIVERED LUMENS	VOLTAGE	DIMMING	ACCESSORIES
1043	GG - Glossy Gray B - Black Z - Architectural Bronze DZ - Dark Bronze LZ - Light Bronze G - Verde P - Pewter BR - Architectural Brick GT - Granite TC - Terracotta R - Rust HG - Hunter Green M - Mocha SB - Special Bronze WB - Weathered Bronze WI - Weathered Iron W - White	VNS - Very Narrow Spot* NS - Narrow Spot** MF - Medium Flood** WF - Wide Flood**	27 - 2700°K 30 - 3000°K 35 - 3500°K 40 - 4000°K 50 - 5000°K	A - 0-200 Lumens B - 200-400 Lumens C - 400-600 Lumens D - 600-750 Lumens E - 750-1050 Lumens F - 1050-1250 Lumens	MV - Multi-Volt (120V-277V)	ND - No Dimming 010 - 0-10V Dimming LE - TRIAC Dimming TE - ELV Dimming	BD - Barn Doors FS - Full Light Shield HS - Half Light Shield CS - Cast Shield 5 - 5' Wire Lead NOTE: * If fixture to be used with Extended Arm Mount (EAM) - must order with extended wire length
				* 1043 VNS ** 1043 NS, MF, WF			
						HONEYCOMB LOUVER	

* 1043-VNS only available in A, B Delivered Lumen Packages.

** 1043-NS, MF, WF only available in B, C, D, E, F Delivered Lumen Packages

LUMEN OUTPUT PACKAGES

Beam Spread	A	B	C	D	E	F
VNS	4.6 Watts 135 Lumens	15.7 Watts 361 Lumens				
NS		4.6 Watts 364 Lumens	9.0 Watts 566 Lumens	13.2 Watts 738 Lumens	15.9 Watts 1035 Lumens	19.5 Watts 1212 Lumens
MF		4.6 Watts 321 Lumens	9.1 Watts 487 Lumens	12.8 Watts 711 Lumens	15.9 Watts 1035 Lumens	20.1 Watts 1188 Lumens
WF		4.6 Watts 332 Lumens	9.4 Watts 542 Lumens	12.6 Watts 687 Lumens	15.6 Watts 967 Lumens	19.2 Watts 1052 Lumens

Vista Professional Outdoor Lighting reserves the right to modify the design and/or construction of the fixture shown without further notification.

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

LPX6BK

Notes:**Type:****XA**

PSA18-68593

DESCRIPTION

LPX Series LED Exit is a polycarbonate unit suitable for general purpose applications. With the new advanced standard features and industry leading innovations, they are now the most universal, energy friendly, easiest to stock and install, and safest Exits in their class.

Sure-Lites

Catalog #	Type
Project	
Comments	Date
Prepared by	

SPECIFICATION FEATURES**Electrical****- General Features**

- Field selected red and green sign capability standard on all units (units shipped red, field convert to green with supplied parts).
- Dual Voltage Input 120/277 VAC, 60Hz

- Voltage Input

- 120/277 VAC, 60 Hz
- 240 VAC, 60 Hz with 48 hour recharge

- AC Only

- Optional 2C (Two circuit, FTBR) available in 120/277 VAC in standard and emergency operation

- Self Powered

- Sure-Lites EZ Key patented external battery disconnect feature – prevents unnecessary battery drainage, saves on installation time
- Solid-state Voltage Limited Charger
- Brownout Circuit
- Low-Voltage Disconnect
- Test Switch/Power Indicator Light
- Standard 24 hour recharge time (max)
- Eagle Eye™ Self-Diagnostic feature available as option

Housing Construction

- All components are injection molded, color stable, high impact UL 94-5VA rated polycarbonate material
- White or black textured finish standard
- Components are of snap-fit construction to facilitate under 5-minute installation
- Reinforcing ribs throughout to provide maximum strength
- Molded-in wireways facilitate internal wire routing and connections
- All components including battery and electronics are located inside the exit housing
- Snap-out or snap-in chevron directional indicators have full 3/4" stroke
- Knockout provided on housing for surface attachment
- Universal exits can be field configured as single face or double face
- Snap-fit canopy with captive mounting screws included with all exits
- Exit can be ceiling, wall, or end mounted
- Universal J-box mounting pattern

Lamp Data

- AC LED: Red and green LED lamps provide uniform diffused illumination
- DC: Red and green LED DC lamps (Brighter in emergency mode)

Code Compliance

- UL 924 Listed
- UL Damp Location (0-40° C)
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- Suitable for Floor Proximity Installation
- UL Listed for 2C (FTBR)
- Patent Numbers 5,735,498 and 5,678,336

Warranty

- Exit: 5-Year
- Battery: 7-year pro-rata

**LPX SERIES**

POLYCARBONATE EXIT
SURFACE MOUNT
LED LAMPS
EXIT LIGHTING

ENERGY DATA

Maximum power consumption under all charge conditions:

AC Only, 120V - Red

Amps: 0.07
Watts: 0.98
Power Factor: 0.12

AC Only, 120V - Green

Amps: 0.07
Watts: 1.02
Power Factor: 0.13

AC Only, 277V - Red

Amps: 0.07
Watts: 1.04
Power Factor: 0.06

AC Only, 277V - Green

Amps: 0.07
Watts: 1.12
Power Factor: 0.06

Self Powered, 120V - Red

Amps: 0.07
Watts: 0.98
Power Factor: 0.12

Self Powered, 120V - Green

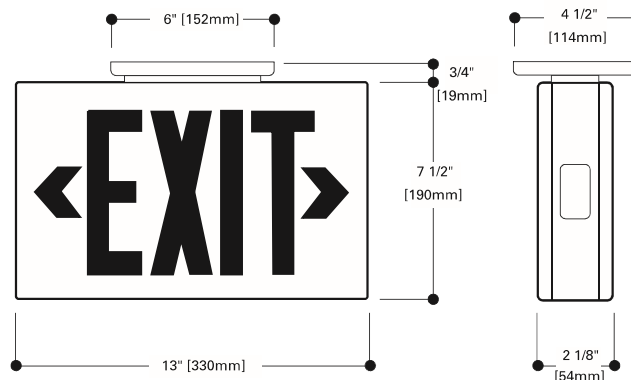
Amps: 0.07
Watts: 1.00
Power Factor: 0.13


Self Powered, 277V - Red

Amps: 0.07
Watts: 1.03
Power Factor: 0.06

Self Powered, 277V - Green

Amps: 0.07
Watts: 1.09
Power Factor: 0.05



Submitted by Putterman, Scharck & Assoc.		Catalog Number: LPX6BK	Type: XA
<div><div></div><div><div>PUTTERMAN SCHARCK & ASSOCIATES</div></div></div> <div><div>Job Name:</div><div>MD Anderson Standard Spec Electrical Engineer: BenCov Engineering</div></div>		Notes:	
PSA18-68593			

LPX SERIES

ORDERING INFORMATION

Sample Number: LPX7, LPX7SD90, LPX6SG8, LPX7SD23050

Family

LPX =Polycarbonate Exit, LED

Series 1

6=AC Only
7=Self Powered

Face Options

Blank=Single and Double

Housing Finish

Blank = White
BK = Black

Options

Blank = No additional options
2C =Two Circuit Option (LPX6 only)
SD=Self Diagnostics Option (LPX7 only)
SD90 =Self Diagnostics with Fire Alarm
Interface Capability (LPX7 Only)

Protection Devices

WG10 =Wall mount wire guard
WGS11=Ceiling or End
VS1 =Polycarbonate Vandal Shield
VS1WP=Polycarbonate Vandal Shield,
Weather Proof

Pendant Kit

LPX18PKWH=18" Pendant Kit, White
LPX18PKHTWH =18" Hang True
Pendant Kit, White
LPX18PKBK =18" Pendant Kit, Black
LPX18PKHTBK =18" Hang True
Pendant Kit, Black

Available Accessories (Order Separately)

-

1 Also available in stock LPX6 and LPX7 units with the initial setup as Green with the capability to convert to Red in the field. To order these units, please use the catalog number LPX6-G or LPX7-G.

TECHNICAL DATA

Lamps

LPX Series Exits use energy efficient, long life LED's to provide uniform diffuse illumination of the exit face. These red and green LEDs require no maintenance and consume less than one watt, on average.

Housing Construction

Rugged, durable, injection molded polycarbonate materials are used throughout the LPX Series Exits. All structural components are designed with reinforcing ribs to add additional rigidity and to maximize structural integrity. These materials are impact and scratch resistant, and they have been UV stabilized to resist discoloration due to age and ultraviolet radiation. All components are designed to be of snap-fit construction - no mechanical fasteners – to facilitate installation in under 5-minutes. Any components required for installation (wirenuts, wire leads, universal metal J-box bracket, etc.) are all included with each exit. The universal design of the LPX Series Exits enables universal exits to be configured as single face or double face in the field. All LPX Series Exits can be wall, ceiling, or end mounted; a rugged, snap-fit, low profile canopy with captive screws is included with every exit for ceiling and end mounting applications.

Lens

Lenses for the LPX Series Exits are made from durable, impact resistant polycarbonate. All exit faces are designed with full 3/4" stroke snap-out or snap-in chevron directional indicators to insure maximum visibility and compliance with the latest codes. Units come with red lenses installed and green lenses included for field selectable red or green signs.

Sure-Lites EZ Key External Battery Disconnect (Self Powered Only)

Patented technology that allows installers to externally control the battery connection. Better than line latching, allows installers to choose when the battery is connected so that it stays fresh longer. Allows battery to be disconnected after installation but before building is occupied, enabling emergency circuit to be shut down for power savings.

Brownout Circuit (Self Powered Only)

The brownout circuit on Sure-Lites' exits monitors the flow of AC current to the exit and activates the emergency lighting system when a predetermined reduction of AC power occurs. This dip in voltage will cause most ballasted fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

Solid-State Transfer (Self Powered Only)

The LPX Series Exit incorporates solid-state switching which eliminates corroded and pitted contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC voltage and automatically energizes the lamps using DC power. Upon restoration of AC power, the DC power will be disconnected and the charger will automatically recharge the battery.

Low Voltage Disconnect (Self Powered Only)

When the battery's terminal voltage falls, the low-voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored, preventing deep battery discharge.

Test Switch/Power Indicator Light (Self Powered Only)

A test switch located on the side of the exit permits the activation of the emergency circuit for a complete operational systems check. The Power Indicator Light provides visual assurance that the AC power is on.

Sealed Nickel Cadmium Battery (Self Powered Only)

Sure-Lites sealed nickel cadmium batteries are maintenance-free with a life expectancy of 15 years. The sealed rechargeable nickel cadmium battery offers high discharge rates and stable performance over a wide range of temperatures, from 0-40° C. The specially designed re-sealable vent automatically controls cell pressure, assuring safety and reliability. This battery is best suited for harsh ambient temperatures because the electrolyte is not active in the electrochemical process.

"2C" (AC Only)


The "2C" Option enables the Exits to operate per the requirements of UL 924 when connected simultaneously to both normal and emergency power circuits (two circuit operation–UL Category FTBR–Emergency Lighting and Power Equipment). The "2C" Option is a factory assembly change which alters the standard Exit such that it complies with and is UL Listed under the FTBR Category. This option should only be used for exits which are intended to be connected simultaneously to normal and emergency power circuits. Both circuits have universal 120/277 VAC standard.

Eagle Eye™ Self Diagnostics Option (Self Powered Only)

The self-diagnostic unit will automatically perform all tests required by UL924, and NFPA 101. The system indicates the status of the exit at all times using the LED indicator near the test switch on the side of the unit. A 90 minute battery power (emergency mode) simulation test will occur randomly once every 12 months. A 30 second battery power simulation test will occur every 30 days.

Warranty

All Sure-Lites' products are backed by a firm five-year warranty against defects in material and workmanship. Maintenance-free, long-life, sealed nickel cadmium batteries carry a seven-year pro-rata warranty.



Powering Business Worldwide

Eaton

1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and
dimensions subject to
change without notice.

Submitted On: Jan 23, 2018

Index Page

DESCRIPTION

LPX Series LED Exit is a polycarbonate unit suitable for general purpose applications. With the new advanced standard features and industry leading innovations, they are now the most universal, energy friendly, easiest to stock and install, and safest Exits in their class.

Sure-Lites

Catalog #	Type
Project	
Comments	Date
Prepared by	

SPECIFICATION FEATURES

Electrical

- **General Features**
- Field selected red and green sign capability standard on all units (units shipped red, field convert to green with supplied parts).
- Dual Voltage Input 120/277 VAC, 60Hz
- **Voltage Input**
- 120/277 VAC, 60 Hz
- 240 VAC, 60 Hz with 48 hour recharge
- **AC Only**
- Optional 2C (Two circuit, FTBR) available in 120/277 VAC in standard and emergency operation
- **Self Powered**
- Sure-Lites EZ Key patented external battery disconnect feature – prevents unnecessary battery drainage, saves on installation time
- Solid-state Voltage Limited Charger
- Brownout Circuit
- Low-Voltage Disconnect
- Test Switch/Power Indicator Light
- Standard 24 hour recharge time (max)
- Eagle Eye™ Self-Diagnostic feature available as option

Housing Construction

- All components are injection molded, color stable, high impact UL 94-5VA rated polycarbonate material
- White or black textured finish standard
- Components are of snap-fit construction to facilitate under 5-minute installation
- Reinforcing ribs throughout to provide maximum strength
- Molded-in wireways facilitate internal wire routing and connections
- All components including battery and electronics are located inside the exit housing
- Snap-out or snap-in chevron directional indicators have full 3/4" stroke
- Knockout provided on housing for surface attachment
- Universal exits can be field configured as single face or double face
- Snap-fit canopy with captive mounting screws included with all exits
- Exit can be ceiling, wall, or end mounted
- Universal J-box mounting pattern

Lamp Data

- AC LED: Red and green LED lamps provide uniform diffused illumination
- DC: Red and green LED DC lamps (Brighter in emergency mode)

Code Compliance

- UL 924 Listed
- UL Damp Location (0-40° C)
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- Suitable for Floor Proximity Installation
- UL Listed for 2C (FTBR)
- Patent Numbers 5,735,498 and 5,678,336

Warranty

- Exit: 5-Year
- Battery: 7-year pro-rata



LPX SERIES

POLYCARBONATE EXIT
SURFACE MOUNT
LED LAMPS
EXIT LIGHTING

ENERGY DATA

Maximum power consumption under all charge conditions:

AC Only, 120V - Red

Amps: 0.07
Watts: 0.98
Power Factor: 0.12

AC Only, 120V - Green

Amps: 0.07
Watts: 1.02
Power Factor: 0.13

AC Only, 277V - Red

Amps: 0.07
Watts: 1.04
Power Factor: 0.06

AC Only, 277V - Green

Amps: 0.07
Watts: 1.12
Power Factor: 0.06

Self Powered, 120V - Red

Amps: 0.07
Watts: 0.98
Power Factor: 0.12

Self Powered, 120V - Green

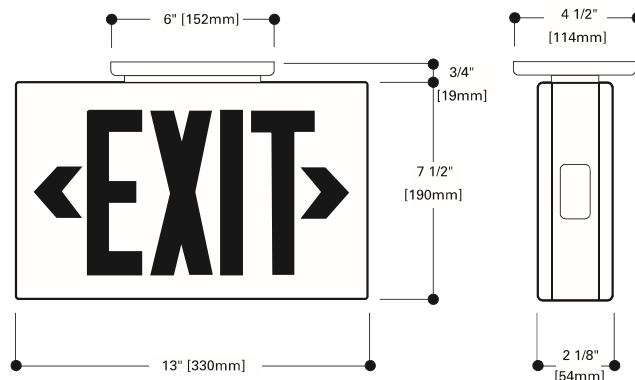
Amps: 0.07
Watts: 1.00
Power Factor: 0.13


Self Powered, 277V - Red

Amps: 0.07
Watts: 1.03
Power Factor: 0.06

Self Powered, 277V - Green

Amps: 0.07
Watts: 1.09
Power Factor: 0.05



Submitted by Putterman, Scharck & Assoc.		Catalog Number: LPX6BK	Type: XB
<div><div></div><div><div>PUTTERMAN SCHARCK & ASSOCIATES</div></div></div> <div><div>Job Name:</div><div>MD Anderson Standard Spec Electrical Engineer: BenCov Engineering</div></div>		Notes:	
PSA18-68593			

LPX SERIES

ORDERING INFORMATION

Sample Number: LPX7, LPX7SD90, LPX6SG8, LPX7SD23050

Family

LPX =Polycarbonate Exit, LED

Series 1

6=AC Only
7=Self Powered

Face Options

Blank=Single and Double

Housing Finish

Blank = White
BK = Black

Options

Blank = No additional options
2C =Two Circuit Option (LPX6 only)
SD=Self Diagnostics Option (LPX7 only)
SD90 =Self Diagnostics with Fire Alarm
Interface Capability (LPX7 Only)

Protection Devices

WG10 =Wall mount wire guard
WGS11=Ceiling or End
VS1 =Polycarbonate Vandal Shield
VS1WP=Polycarbonate Vandal Shield,
Weather Proof

Pendant Kit

LPX18PKWH=18" Pendant Kit, White
LPX18PKHTWH=18" Hang True
Pendant Kit, White
LPX18PKBK=18" Pendant Kit, Black
LPX18PKHTBK=18" Hang True
Pendant Kit, Black

Available Accessories (Order Separately)

-

1 Also available in stock LPX6 and LPX7 units with the initial setup as Green with the capability to convert to Red in the field. To order these units, please use the catalog number LPX6-G or LPX7-G.

TECHNICAL DATA

Lamps

LPX Series Exits use energy efficient, long life LED's to provide uniform diffuse illumination of the exit face. These red and green LEDs require no maintenance and consume less than one watt, on average.

Housing Construction

Rugged, durable, injection molded polycarbonate materials are used throughout the LPX Series Exits. All structural components are designed with reinforcing ribs to add additional rigidity and to maximize structural integrity. These materials are impact and scratch resistant, and they have been UV stabilized to resist discoloration due to age and ultraviolet radiation. All components are designed to be of snap-fit construction - no mechanical fasteners – to facilitate installation in under 5-minutes. Any components required for installation (wirenuts, wire leads, universal metal J-box bracket, etc.) are all included with each exit. The universal design of the LPX Series Exits enables universal exits to be configured as single face or double face in the field. All LPX Series Exits can be wall, ceiling, or end mounted; a rugged, snap-fit, low profile canopy with captive screws is included with every exit for ceiling and end mounting applications.

Lens

Lenses for the LPX Series Exits are made from durable, impact resistant polycarbonate. All exit faces are designed with full 3/4" stroke snap-out or snap-in chevron directional indicators to insure maximum visibility and compliance with the latest codes. Units come with red lenses installed and green lenses included for field selectable red or green signs.

Sure Lites EZ Key External Battery Disconnect (Self Powered Only)

Patented technology that allows installers to externally control the battery connection. Better than line latching, allows installers to choose when the battery is connected so that it stays fresh longer. Allows battery to be disconnected after installation but before building is occupied, enabling emergency circuit to be shut down for power savings.

Brownout Circuit (Self Powered Only)

The brownout circuit on Sure-Lites' exits monitors the flow of AC current to the exit and activates the emergency lighting system when a predetermined reduction of AC power occurs. This dip in voltage will cause most ballasted fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

Solid-State Transfer (Self Powered Only)

The LPX Series Exit incorporates solid-state switching which eliminates corroded and pitted contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC voltage and automatically energizes the lamps using DC power. Upon restoration of AC power, the DC power will be disconnected and the charger will automatically recharge the battery.

Low Voltage Disconnect (Self Powered Only)

When the battery's terminal voltage falls, the low-voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored, preventing deep battery discharge.

Test Switch/Power Indicator Light (Self Powered Only)

A test switch located on the side of the exit permits the activation of the emergency circuit for a complete operational systems check. The Power Indicator Light provides visual assurance that the AC power is on.

Sealed Nickel Cadmium Battery (Self Powered Only)

Sure-Lites sealed nickel cadmium batteries are maintenance-free with a life expectancy of 15 years. The sealed rechargeable nickel cadmium battery offers high discharge rates and stable performance over a wide range of temperatures, from 0-40° C. The specially designed re-sealable vent automatically controls cell pressure, assuring safety and reliability. This battery is best suited for harsh ambient temperatures because the electrolyte is not active in the electrochemical process.

2C" (AC Only)


The "2C" Option enables the Exits to operate per the requirements of UL 924 when connected simultaneously to both normal and emergency power circuits (two circuit operation-UL Category FTBR-Emergency Lighting and Power Equipment). The "2C" Option is a factory assembly change which alters the standard Exit such that it complies with and is UL Listed under the FTBR Category. This option should only be used for exits which are intended to be connected simultaneously to normal and emergency power circuits. Both circuits have universal 120/277 VAC standard.

Eagle Eye™ Self Diagnostics Option (Self Powered Only)

The self-diagnostic unit will automatically perform all tests required by UL924, and NFPA 101. The system indicates the status of the exit at all times using the LED indicator near the test switch on the side of the unit. A 90 minute battery power (emergency mode) simulation test will occur randomly once every 12 months. A 30 second battery power simulation test will occur every 30 days.

Warranty

All Sure-Lites' products are backed by a firm five-year warranty against defects in material and workmanship. Maintenance-free, long-life, sealed nickel cadmium batteries carry a seven-year pro-rata warranty.



Powering Business Worldwide

Eaton

1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and
dimensions subject to
change without notice.

Submitted On: Jan 23, 2018

Index Page

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

RCG SERIES CUSTOM GRAPHICS

Notes:**Type:****XC**

PSA18-68593

Razor

Custom Graphics

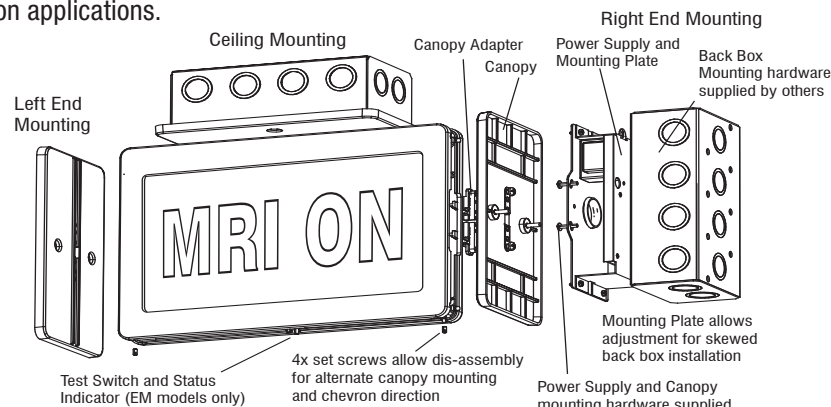
RCG Series

The RAZOR Custom is the ultimate in low profile, unobtrusive custom graphics signs. Utilizing the Razor Exit sign components with an open face insert a wide variety of custom graphics can be applied. Only 5/8" thin, the Razor die cast aluminum sign utilizes the latest low energy, long life LED light sources.

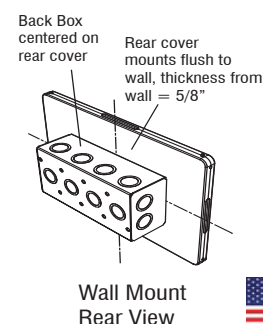
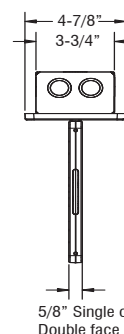
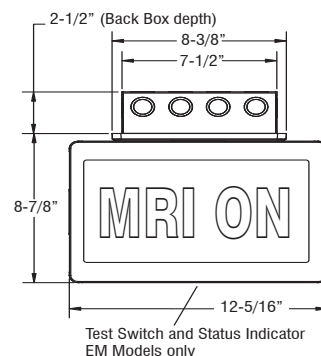
The Razor custom is designed wherein the legend is virtually invisible when the fixture is off, Illuminating only when AC is present. This method is ideal for warning signs where it is apparent the sign is "On" or "Off". The legend colors can be Red, Green or Blue, while the background can be white, black, or custom to order. Razor custom graphic is ideal for normally off or normally on applications.



Maximum illuminated area is 10.7 x 6 "



Single or Double face sign

ARRA Compliant
for Levels 1&2

LIFE SAFETY LIGHTING SOLUTIONS

2575 Metropolitan Drive, Treveose, PA 19053 • USA

TEL: (800) 872 0879 • FAX: (215) 244 4208 • www.evenlite.com

Project name:

Approved By:

Catalog No:

Type No:

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:****RCG SERIES CUSTOM GRAPHICS**

Notes:

Type:**XC**

PSA18-68593

Razor Custom Graphics RCG Series

FEATURES

- Razor thin Die Cast Aluminum LED open face sign with recessed power supply
- Featuring high contrast and visibility in the energized mode and near invisibility when not energized
- Maintenance free LED light source with 25+ years life expectancy
- High intensity LED array provides exceptional energy efficiency with just 1.5 watt power consumption for both single and double face AC models. Battery backup models consume just 2.5 watts, .7 power factor
- Edge lit illumination provides vivid and uniform legend illumination
- Self-Diagnostic Battery monitoring on all 'EM' models
- 4 Hour battery backup runtime with Premium long life high temperature fused Nickel Cadmium battery pack
- 120 or 277 VAC field selectable input
- Electronic control circuit applies full wave, low ripple current to each LED thereby optimizing life and light output
- A diagnostic self-compensating constant current charger circuit monitors the condition of the battery pack and indicates via a flashing LED when battery needs replacing
- Circuitry includes - Zero current LVCO, Brownout sensing & Line-Latch
- Thick wall construction from heavy duty die cast aluminum alloy the assembly mounts to a standard 4 gang electrical back box provided
- Fine grain brushed aluminum face trim is standard. Other finishes are available
- Solid 3/16" tapered acrylic light guide
- Concealed tamper resistant face access hardware
- Low profile canopy for end or top mount applications
- Polycarbonate security cover and wire guards available for wall mount installations
- Optional polycarbonate face shield with tamper proof screws is ideal for vandal resistant applications
- Pendant suspension mounting & specialty mounts available
- 5 Year Limited Warranty

ORDERING GUIDE

RCG							
Model	Operation	Letter Color	Background Color	No. of Faces	Face & Body Color	Mounting	Options
RCG	AC AC Only 120/277 VAC EM Battery Backup Emergency	R Red G Green B Blue W White	WH White BK Black CU Custom Color	1 Single 2 Double	AA All Brushed BB All Black WW All White CC Custom Color	W Wall Mount, No Canopy T Canopy top mount LE Canopy left end mount RE Canopy right end mount PA 12" Swivel Pendant Mount PB 24" Swivel Pendant Mount PC 36" Swivel Pendant Mount PD 48" Swivel Pendant Mount	F Flash in Emergency Mode (EM models) or continuous Flash in AC models FZ F option including Buzzer FA Flash in AC and Emergency mode on 12-24V (AC or DC) Normally Off Fire Alarm Signal (EM models) FB FA option including Buzzer DK Two Circuit Input - Specify Input Voltage (AC models only) LL High/Low Level Master/Remote (AC and EM models - Remote is Single Face Wall Mount only) DL Damp Location SD Self-Test/Self-Diagnostic (EM Models) IR Self-Diagnostic with Infrared Remote Testing TLRT Infrared Remote Testing Transmitter (Order Separately) RS Razor Vandal Shield (see data sheet RS) M990010 Wire Guard (Wall Mount Only)

Example: RCG-EM-R-WH-1-WW-W-SD "Specify Graphics"

**EVENLITE**
LIFE SAFETY LIGHTING SOLUTIONS2575 Metropolitan Drive • Trevose, PA 19053 • USA
Tel: (800) 872-0879 • Fax: (215) 244-4208
www.evenlite.com

RCG 03/17

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

LDRV-T2-E04-E-FINISH (HSS)

Notes:

Type:**BV2**

PSA18-68593

Lumark**DESCRIPTION**

The Ridgeview™ LED area luminaire is the compact, efficient, economical approach to LED area lighting. A pure blend of traditional form and LED efficiency; the Ridgeview luminaire provides functional, low-profile design with excellent operating performance. Patented modular LightBAR™ technology delivers uniform and energy-efficient illumination to parking lots and perimeter security lighting applications.

Catalog #	Type
Project	
Comments	Date
Prepared by	

SPECIFICATION FEATURES**Construction**

Rugged one-piece, die-cast aluminum housing secures the thermally conductive LED panel and electrical chamber. Low profile, 3G vibration rated compact design minimizes wind load requirements. Extruded aluminum frame secured with stainless steel hardware confines the LightBAR panel to the thermally conductive housing. The unique glide bracket LightBAR panel allows for easy access to the electrical chamber.

Optics

Choice of twelve patented, high-efficiency AccuLED Optic™ technology. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optic technology, creates consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

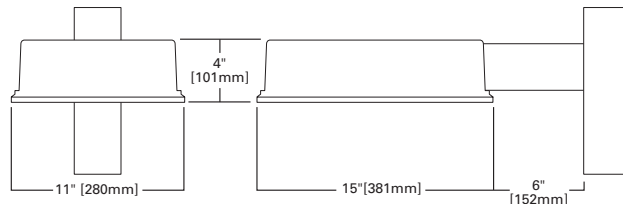
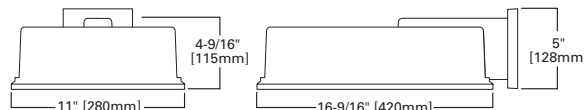
Cast aluminum 6" arm includes bolt guides allowing for easy position of the fixture during installation to pole. Standard single carton packaging of housing, square pole arm and round pole adapter provide contractor-friendly installation. Wall mount models feature a cast aluminum arm that is directly mounted to a 4" supplied wall plate secured with set screws.

Finish

Components finished in a five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard color is bronze. Optional colors include black, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty

Five-year warranty.


**RV
RIDGEVIEW**
**1 - 4 LightBARs
Solid State LED**
AREA LUMINAIRE
DIMENSIONS**POLE MOUNT****WALL MOUNT****CERTIFICATIONS**
 UL/cUL Listed
 LM79 / LM80 Compliant
 3G Vibration Rated
 IP65 Fixture Rating
 IP66 LightBARs
 ISO 9001
ENERGY DATA**Electronic LED Driver**
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 & 60Hz, 347V/60Hz,
 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating
 50°C (Optional) Ambient Temperature
 Rating
EPA

Effective Projected Area: (Sq. Ft.)

Without Arm: 0.48

With Arm: 0.67

SHIPPING DATA

Approximate Net Weight:

12.5 lbs. (5.8 kgs.)

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

LDRV-T2-E04-E-FINISH (HSS)

Notes:

Type:**BV2**

PSA18-68593

RV RIDGEVIEW

POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBARS)

Number of LightBARs		E01	E02	E03	E04
Drive Current		350mA Drive Current			
Power (Watts)		25W	52W	75W	97W
Current @ 120V (A)		0.22	0.44	0.63	0.82
Current @ 277V (A)		0.10	0.20	0.28	0.36
Power (Watts)		31W	58W	82W	99W
Current @ 347V (A)		0.11	0.19	0.28	0.29
Current @ 480V (A)		0.09	0.15	0.20	0.21
T2	Lumens	2,999	5,997	8,996	11,994
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3
T3	Lumens	2,986	5,972	8,957	11,943
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3
T4	Lumens	2,939	5,877	8,816	11,754
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G3
5MQ	Lumens	3,108	6,215	9,323	12,431
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2
5WQ	Lumens	3,066	6,131	9,197	12,262
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2
5XQ	Lumens	3,092	6,184	9,276	12,368
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3
SL2	Lumens	2,928	5,856	8,784	11,712
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2
SL3	Lumens	2,969	5,937	8,906	11,875
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2
SL4	Lumens	2,882	5,764	8,646	11,528
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2
RW	Lumens	3,004	6,007	9,011	12,015
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
SLL/SLR	Lumens	2,693	5,387	8,080	10,774
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3

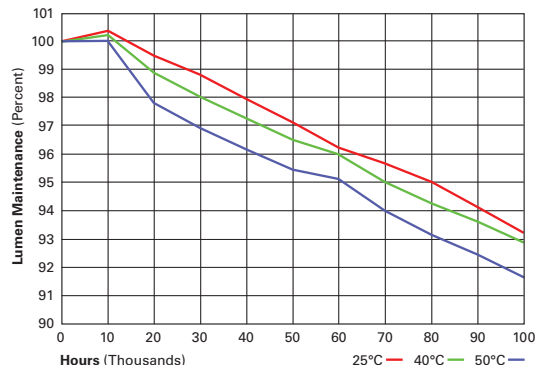
POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBARS)

Number of LightBARs		F01	F02	F03	F04
Drive Current		1A Drive Current			
Power (Watts)		26W	55W	78W	102W
Current @ 120V (A)		0.22	0.46	0.66	0.86
Current @ 277V (A)		0.10	0.21	0.29	0.37
Power (Watts)		32W	60W	85W	105W
Current @ 347V (A)		0.11	0.19	0.28	0.30
Current @ 480V (A)		0.09	0.15	0.21	0.22
T2	Lumens	2,475	4,951	7,426	9,902
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3
T3	Lumens	2,465	4,930	7,395	9,859
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3
T4	Lumens	2,426	4,852	7,278	9,704
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2
5MQ	Lumens	2,565	5,131	7,696	10,262
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2
5WQ	Lumens	2,531	5,061	7,592	10,123
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2
5XQ	Lumens	2,553	5,105	7,658	10,210
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3
SL2	Lumens	2,417	4,834	7,251	9,668
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2
SL3	Lumens	2,451	4,901	7,352	9,803
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2
SL4	Lumens	2,379	4,758	7,138	9,517
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2
RW	Lumens	2,480	4,959	7,439	9,918
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3
SLL/SLR	Lumens	2,224	4,447	6,671	8,894
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B1-U0-G3

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

**LUMEN MULTIPLIER**

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

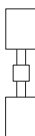
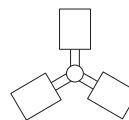
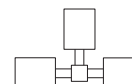
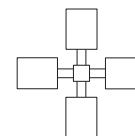
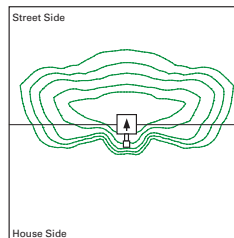
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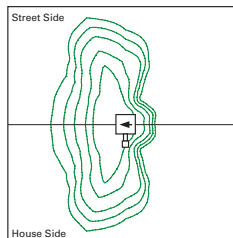
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PSA18-68593

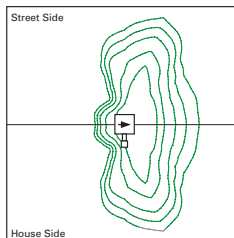
RV RIDGEVIEW

MOUNTING CONFIGURATIONS AND EPAS**Wall Mount****Arm Mount Single**
EPA: 0.67**Arm Mount 2 @ 180°**
EPA: 1.34**Arm Mount 2 @ 90°**
EPA: 1.34**Arm Mount 3 @ 120°**
EPA: 1.72**Arm Mount 3 @ 90°**
EPA: 1.72**Arm Mount 4 @ 90°**
EPA: 1.94**OPTIC ORIENTATION**

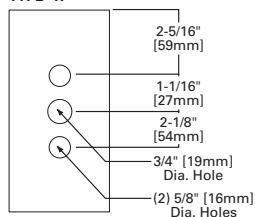
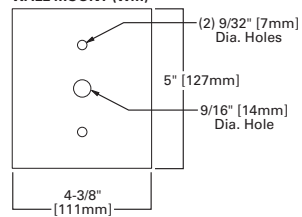
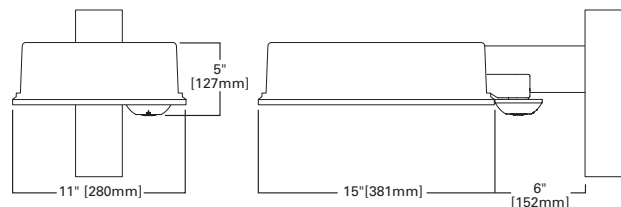
Standard



Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

DRILLING PATTERNS**TYPE "R"****WALL MOUNT (WM)****OPTIONAL WIRELESS CONTROL****LumaWatt Sensor**

Submitted by Putterman, Scharck & Assoc.

PUTTERMAN
SCHARCK
& ASSOCIATES

Job Name:

MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering

Catalog Number:

LDRV-T2-E04-E-FINISH (HSS)

Notes:

Type:

BV2

PSA18-68593

RV RIDGEVIEW

ORDERING INFORMATION

Sample Number: LDRV-T2-E02-E-DP

Lamp Type	Series ¹	Distribution ²	Number of LightBARs ^{3,4}	Voltage
LD=Solid State Light Emitting Diodes	RV=Ridgeview	T2=Type II T3=Type III T4=Type IV SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide RW=Rectangular Wide SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs	E=Universal (120-277V) 347=347V ⁵ 480=480V ^{5,6}

Options (Add as Suffix)	Color	Accessories (Order Separately) ¹⁷
HA=50°C High Ambient Temperature Rating ⁷ WM=Wall Mount Arm and Mounting Plate ⁸ R90=Optics Rotated Right 90° L90=Optics Rotated Left 90° PC=Button Type Photocontrol ⁹ PER=NEMA Twistlock Photocontrol Receptacle 2L=Two Circuits ¹⁰ 7030=70 CRI / 3000K CCT ¹¹ 7050=70 CRI / 5000K CCT ¹¹ 7060=70 CRI / 5700K CCT ¹¹ 8030=80 CRI / 3000K CCT ¹¹ LCF=LightBAR Cover Plate Matches Housing Finish BBLEDCLD=UL924 Cold Battery Backup (Specify Voltage) ¹² MS-LXX=Motion Sensor for ON/OFF Operation ¹³ MS/X-LXX=Motion Sensor for Bi-Level Switching ¹⁴ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁵ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁵ HSS=Factory Installed House Side Shield ¹⁸ <div>HSS IF NEEDED</div>	AP=Grey BZ=Bronze (Standard) BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	MA1175-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1176-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1177-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1178-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1179-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1180-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1181-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1182-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1183-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1184-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1185-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1186-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1187-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1300-XX=Wall Mount Plate (Type R Drill Pattern) RV/WG=Field Installed Wire Guard MA1305-XX=R to M Square Pole Adapter MA1306-XX=R to M Round Pole Adapter MA1253=10kV Circuit Module Replacement OA/RA1013=Photocontrol Shorting Cap OA/RA1014=NEMA Twistlock Photocontrol - 120V OA/RA1016=NEMA Twistlock Photocontrol - Multi-Tap OA/RA1027=NEMA Twistlock Photocontrol - 480V OA/RA1201=NEMA Twistlock Photocontrol - 347V LB/HSS-21=Field Installed House Side Shield for "E" LightBARs ^{16, 18} LB/HSS-07=Field Installed House Side Shield for "F" LightBARs ^{16, 18}

NOTES:

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.

2. 6" Arm and round pole adapter included with fixture.

3. 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.

4. Lumen values based upon 4000K CCT, 350mA drive current, 25°C ambient operating temperature.

5. Not available with two circuit option.

6. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase Four Wire Delta and Three Phase Two Wire Corner Grounded Delta systems).

7. HA not available with BLBLEDCLD options.

8. Wall mount arm and mounting plate included with fixture.

9. Specify voltage. Available in 120, 208, 240 or 277V. Not available with HA option.

10. Low-level output varies by bar count, consult factory. Not available with 347V or 480V.

11. Consult factory for lead time and lumen multiplier. Extended lead times apply.

12. Specify 120V or 277V. Available with E01 or F01 configurations only. 25°C ambient operating temperature.

13. Sensor housed in external box mounted to the luminaire. Replace XX with mounting height in feet for proper lens selection (e.g., MS-L20). Not available with HA option. Consult factory for more information.

14. Motion sensor for bi-level switching. Sensor housed in external box mounted to the luminaire. Available in E02-E04 and F02-F04 configurations. Replace X with number of bars operating in low output mode and replace XX with fixture mounting height for proper lens selection (e.g., MS/3-L20). Not available with HA option. Consult factory of more information.

15. LumaWatt Pro wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt Pro application information.

16. Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.

17. Replace XX with color designation.

18. One required for each LightBAR. Not available with L90 or R90 options.

EATON

Powering Business Worldwide

Eaton

1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

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Submitted On: Jan 23, 2018

Index Page

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

GLEON-AF-04-X-X

Notes:

Type:**KAD**

PSA18-68593

McGraw-Edison

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

SPECIFICATION FEATURES**Construction**

Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics

Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical

LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting

STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the

arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. **QUICK MOUNT ARM:** Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish

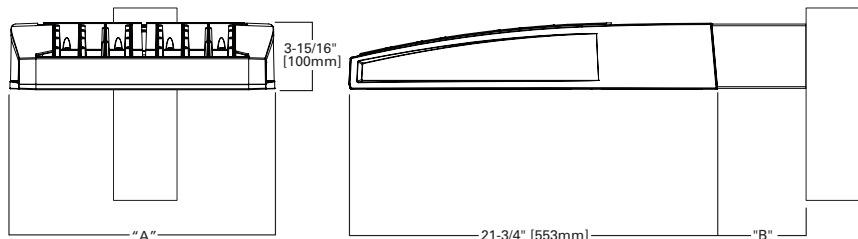
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty

Five-year warranty.

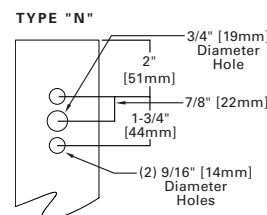


GLEON GALLEON LED

1-10 Light Squares
Solid State LED
AREA/SITE LUMINAIRE
DIMENSIONS**DIMENSION DATA**

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length ¹	Weight with Arm (lbs.)	EPA with Arm ² (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

**DRILLING PATTERN****CERTIFICATION DATA**

UL/cUL Wet Location Listed
 ISO 9001
 LM79 / LM80 Compliant
 3G Vibration Rated
 IP66 Rated
 DesignLights Consortium™ Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120V-277V 50/60Hz
 347V & 480V 60Hz
 -40°C Min. Temperature
 40°C Max. Temperature
 50°C Max. Temperature (HA Option)



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*www.designlights.org

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

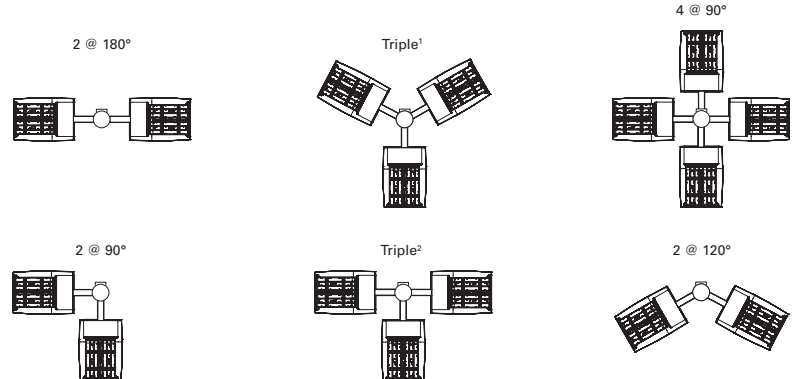
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Notes:**Type:****KAD**

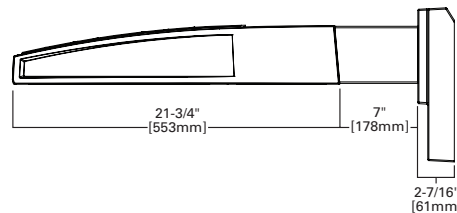
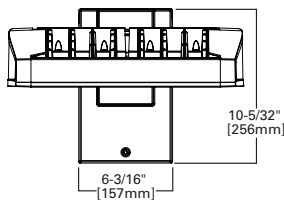
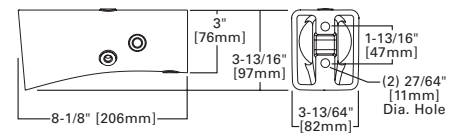
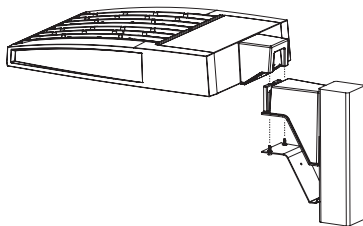
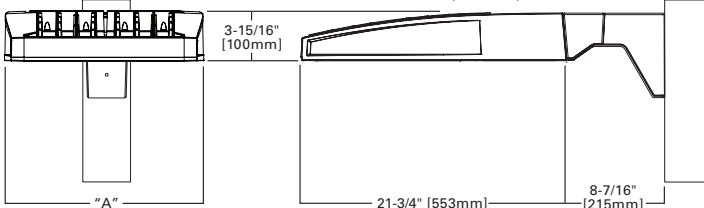
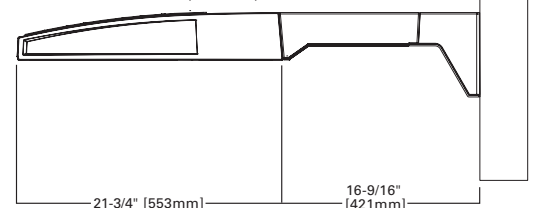
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GLEON GALLEON LED**ARM MOUNTING REQUIREMENTS**

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)



NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. 2 Round poles are 3 @ 90°.

STANDARD WALL MOUNT**MAST ARM MOUNT****QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)****QM Quick Mount Arm (Standard)****QMEA Quick Mount Arm (Extended)****QUICK MOUNT ARM DATA**

Number of Light Squares ^{1,2}	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 ³	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.

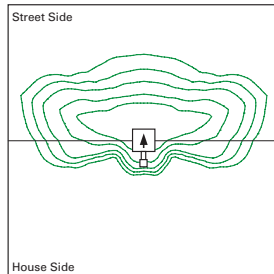
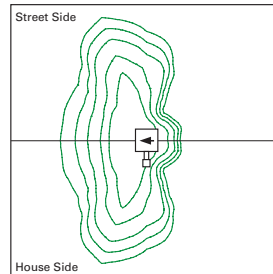
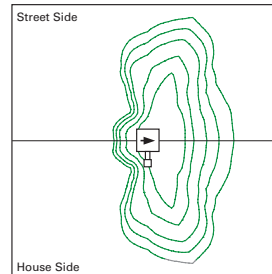
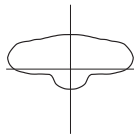
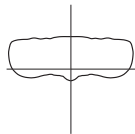
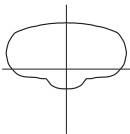
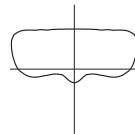
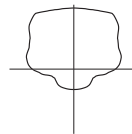
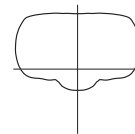
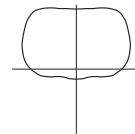
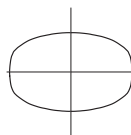
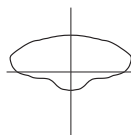
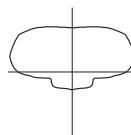
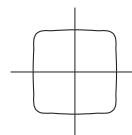
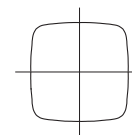
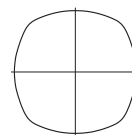
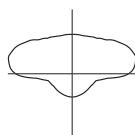
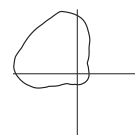
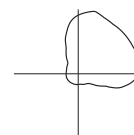
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 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering

Catalog Number:
GLEON-AF-04-X-X

Notes:

Type:**KAD**

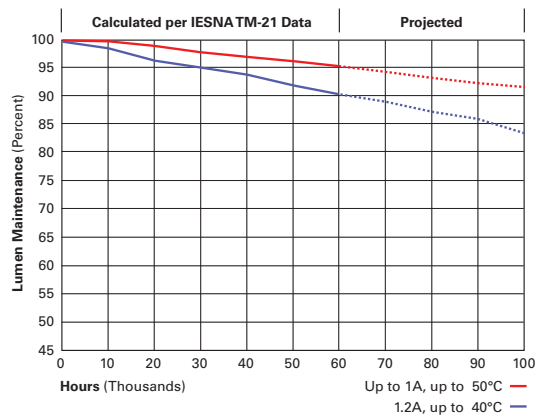
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GLEON GALLEON LED**OPTIC ORIENTATION****Standard****Optics Rotated Left @ 90° [L90]****Optics Rotated Right @ 90° [R90]****OPTICAL DISTRIBUTIONS****Asymmetric Area Distributions****T2**
(Type II)**SL2**
(Type II with Spill Control)**T3**
(Type III)**SL3**
(Type III with Spill Control)**T4FT**
(Type IV Forward Throw)**T4W**
(Type IV Wide)**SL4**
(Type IV with Spill Control)**Asymmetric Roadway Distributions****RW**
(Rectangular Wide Type I)**T2R**
(Type II Roadway)**T3R**
(Type III Roadway)**Symmetric Distributions****5NQ**
(Type V Square Narrow)**5MQ**
(Type V Square Medium)**5WQ**
(Type V Square Wide)**Specialized Distributions****AFL**
(Automotive Frontline)**SLL**
(90° Spill Light Eliminator Left)**SLR**
(90° Spill Light Eliminator Right)**LUMEN MAINTENANCE**

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97



Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-04-X-X	Type: KAD
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	PSA18-68593

GLEON GALLEON LED

NOMINAL POWER LUMENS (1.2A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K/5000K Lumens	6,709	13,111	19,562	25,848	32,026	38,325	45,324	51,355	57,286	63,424
	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	7,122	13,919	20,769	27,442	34,000	40,687	48,117	54,519	60,816	67,333
	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,838	13,363	19,939	26,346	32,642	39,062	46,196	52,343	58,388	64,646
	3000K Lumens	6,053	11,829	17,650	23,321	28,895	34,578	40,893	46,334	51,685	57,225
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,990	13,660	20,382	26,931	33,368	39,930	47,223	53,506	59,686	66,081
	3000K Lumens	6,188	12,092	18,042	23,839	29,537	35,346	41,802	47,364	52,834	58,495
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,878	13,440	20,055	26,499	32,832	39,289	46,464	52,646	58,726	65,020
	3000K Lumens	6,088	11,897	17,753	23,457	29,063	34,779	41,130	46,602	51,984	57,556
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,789	13,267	19,795	26,156	32,408	38,781	45,864	51,967	57,968	64,180
	3000K Lumens	6,010	11,744	17,523	23,153	28,688	34,329	40,599	46,001	51,313	56,812
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,697	13,088	19,529	25,804	31,970	38,259	45,245	51,267	57,186	63,315
	3000K Lumens	5,928	11,585	17,287	22,842	28,300	33,867	40,051	45,382	50,621	56,046
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,837	13,361	19,936	26,342	32,639	39,057	46,189	52,336	58,380	64,636
	3000K Lumens	6,052	11,827	17,647	23,318	28,892	34,573	40,887	46,328	51,678	57,216
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,496	12,695	18,943	25,029	31,011	37,110	43,886	49,727	55,470	61,414
	3000K Lumens	5,750	11,238	16,768	22,156	27,451	32,850	38,848	44,018	49,102	54,364
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	7,052	13,781	20,564	27,171	33,664	40,285	47,641	53,981	60,215	66,669
	3000K Lumens	6,242	12,199	18,203	24,052	29,799	35,660	42,172	47,784	53,302	59,015
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	7,182	14,034	20,942	27,671	34,284	41,027	48,518	54,975	61,323	67,896
	3000K Lumens	6,358	12,423	18,538	24,494	30,348	36,317	42,948	48,664	54,283	60,102
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	7,201	14,073	20,998	27,744	34,375	41,136	48,648	55,121	61,487	68,077
	3000K Lumens	6,374	12,457	18,587	24,559	30,429	36,414	43,063	48,793	54,428	60,262
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	6,009	11,741	17,519	23,148	28,681	34,321	40,589	45,990	51,301	56,798
	3000K Lumens	5,319	10,393	15,508	20,491	25,388	30,381	35,929	40,710	45,412	50,278
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
RW	4000K/5000K Lumens	6,989	13,657	20,378	26,925	33,360	39,921	47,211	53,494	59,672	66,066
	3000K Lumens	6,187	12,089	18,039	23,834	29,530	35,338	41,791	47,353	52,822	58,482
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	7,014	13,706	20,452	27,023	33,481	40,066	47,383	53,688	59,888	66,306
	3000K Lumens	6,209	12,133	18,104	23,921	29,637	35,466	41,943	47,525	53,013	58,694
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4


* Nominal data for 70 CRI.



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Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-04-X-X	Type: KAD PSA18-68593
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	

GLEON GALLEON LED

NOMINAL POWER LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.6	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	1.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K/5000K Lumens	6,116	11,951	17,833	23,563	29,195	34,937	41,317	46,814	52,221	57,817
	3000K Lumens	5,414	10,579	15,786	20,858	25,843	30,926	36,574	41,440	46,226	51,180
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	6,493	12,688	18,932	25,015	30,994	37,090	43,863	49,699	55,439	61,380
	3000K Lumens	5,748	11,231	16,759	22,143	27,436	32,832	38,828	43,994	49,075	54,334
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,234	12,181	18,176	24,017	29,756	35,609	42,111	47,715	53,225	58,930
	3000K Lumens	5,518	10,783	16,089	21,260	26,340	31,521	37,277	42,237	47,115	52,165
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,372	12,453	18,580	24,550	30,418	36,400	43,048	48,776	54,409	60,239
	3000K Lumens	5,640	11,023	16,447	21,732	26,926	32,221	38,106	43,177	48,163	53,324
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,270	12,252	18,282	24,156	29,929	35,815	42,356	47,992	53,534	59,271
	3000K Lumens	5,550	10,845	16,183	21,383	26,493	31,703	37,494	42,483	47,388	52,467
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,189	12,094	18,045	23,844	29,543	35,352	41,809	47,372	52,843	58,506
	3000K Lumens	5,479	10,706	15,973	21,107	26,151	31,294	37,009	41,934	46,777	51,790
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,105	11,931	17,803	23,522	29,144	34,877	41,245	46,734	52,130	57,717
	3000K Lumens	5,404	10,561	15,759	20,822	25,798	30,873	36,510	41,369	46,145	51,091
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,233	12,180	18,174	24,013	29,753	35,604	42,106	47,708	53,218	58,921
	3000K Lumens	5,517	10,782	16,088	21,256	26,337	31,517	37,272	42,231	47,109	52,157
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	5,922	11,572	17,268	22,816	28,269	33,829	40,006	45,330	50,566	55,984
	3000K Lumens	5,242	10,244	15,286	20,197	25,024	29,945	35,413	40,126	44,761	49,557
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	6,429	12,563	18,746	24,768	30,688	36,723	43,429	49,208	54,891	60,775
	3000K Lumens	5,691	11,121	16,594	21,925	27,165	32,507	38,443	43,559	48,590	53,798
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	6,547	12,794	19,090	25,224	31,253	37,400	44,228	50,114	55,902	61,893
	3000K Lumens	5,795	11,325	16,898	22,328	27,665	33,106	39,151	44,361	49,484	54,788
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	6,564	12,828	19,141	25,291	31,336	37,499	44,347	50,248	56,051	62,058
	3000K Lumens	5,810	11,355	16,944	22,388	27,739	33,194	39,256	44,480	49,616	54,934
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	5,478	10,703	15,970	21,102	26,145	31,286	37,001	41,924	46,765	51,777
	3000K Lumens	4,849	9,474	14,137	18,679	23,144	27,694	32,753	37,111	41,396	45,833
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	6,371	12,449	18,576	24,544	30,411	36,392	43,037	48,764	54,396	60,225
	3000K Lumens	5,640	11,020	16,443	21,726	26,920	32,214	38,096	43,166	48,151	53,311
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	6,394	12,494	18,644	24,634	30,521	36,524	43,194	48,942	54,593	60,444
	3000K Lumens	5,660	11,060	16,504	21,806	27,017	32,331	38,235	43,323	48,326	53,505
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4


* Nominal data for 70 CRI.



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Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-04-X-X Notes:	Type: KAD PSA18-68593
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		

GLEON GALLEON LED

NOMINAL POWER LUMENS (800MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K/5000K Lumens	4,941	9,656	14,408	19,038	23,588	28,227	33,382	37,823	42,191	46,713
	3000K Lumens	4,374	8,547	12,754	16,852	20,880	24,987	29,550	33,481	37,347	41,350
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	5,246	10,251	15,296	20,211	25,041	29,966	35,439	40,154	44,791	49,592
	3000K Lumens	4,644	9,074	13,540	17,891	22,166	26,526	31,371	35,544	39,649	43,899
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3	4000K/5000K Lumens	5,037	9,842	14,685	19,404	24,041	28,770	34,024	38,551	43,003	47,612
	3000K Lumens	4,459	8,712	12,999	17,176	21,281	25,467	30,118	34,125	38,066	42,146
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	5,148	10,061	15,011	19,835	24,576	29,409	34,780	39,408	43,959	48,669
	3000K Lumens	4,557	8,906	13,288	17,558	21,755	26,033	30,787	34,884	38,913	43,082
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	5,066	9,899	14,770	19,516	24,181	28,936	34,221	38,774	43,252	47,888
	3000K Lumens	4,484	8,763	13,074	17,276	21,405	25,614	30,292	34,323	38,287	42,390
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	5,000	9,771	14,579	19,264	23,869	28,562	33,779	38,274	42,694	47,269
	3000K Lumens	4,426	8,649	12,905	17,052	21,129	25,283	29,901	33,880	37,793	41,843
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	4,933	9,639	14,383	19,005	23,547	28,178	33,324	37,758	42,118	46,632
	3000K Lumens	4,367	8,532	12,732	16,823	20,844	24,943	29,498	33,423	37,283	41,279
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	5,036	9,841	14,683	19,401	24,039	28,766	34,019	38,546	42,997	47,605
	3000K Lumens	4,458	8,711	12,997	17,174	21,279	25,464	30,114	34,121	38,061	42,140
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	4,784	9,350	13,951	18,434	22,840	27,332	32,323	36,624	40,854	45,232
	3000K Lumens	4,235	8,277	12,349	16,318	20,218	24,194	28,612	32,420	36,164	40,039
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	5,194	10,150	15,145	20,011	24,794	29,670	35,088	39,757	44,349	49,102
	3000K Lumens	4,598	8,985	13,406	17,714	21,948	26,264	31,060	35,193	39,258	43,465
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5MQ	4000K/5000K Lumens	5,290	10,337	15,424	20,380	25,250	30,217	35,734	40,489	45,165	50,006
	3000K Lumens	4,683	9,150	13,653	18,040	22,351	26,748	31,632	35,841	39,980	44,265
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	5,304	10,365	15,465	20,434	25,318	30,297	35,830	40,597	45,286	50,139
	3000K Lumens	4,695	9,175	13,690	18,088	22,411	26,819	31,717	35,936	40,087	44,383
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	4,426	8,648	12,903	17,049	21,124	25,278	29,894	33,872	37,784	41,832
	3000K Lumens	3,918	7,655	11,422	15,092	18,699	22,376	26,462	29,983	33,446	37,030
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	5,147	10,058	15,009	19,830	24,570	29,402	34,771	39,399	43,949	48,658
	3000K Lumens	4,556	8,903	13,286	17,554	21,749	26,027	30,779	34,876	38,904	43,072
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
AFL	4000K/5000K Lumens	5,166	10,095	15,063	19,903	24,659	29,509	34,898	39,542	44,108	48,835
	3000K Lumens	4,573	8,936	13,334	17,618	21,828	26,121	30,892	35,003	39,044	43,229
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3


* Nominal data for 70 CRI.



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Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-04-X-X	Type: KAD
 Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		Notes:	PSA18-68593

GLEON GALLEON LED

NOMINAL POWER LUMENS (600MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K/5000K Lumens	4,029	7,874	11,749	15,525	19,235	23,019	27,222	30,844	34,406	38,093
	3000K Lumens	3,566	6,970	10,400	13,743	17,027	20,376	24,097	27,303	30,456	33,720
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T2R	4000K/5000K Lumens	4,278	8,360	12,474	16,482	20,421	24,437	28,900	32,745	36,527	40,441
	3000K Lumens	3,787	7,400	11,042	14,590	18,077	21,632	25,582	28,986	32,334	35,798
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3	4000K/5000K Lumens	4,107	8,026	11,976	15,824	19,605	23,461	27,746	31,438	35,068	38,827
	3000K Lumens	3,636	7,105	10,601	14,007	17,354	20,768	24,561	27,829	31,042	34,370
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T3R	4000K/5000K Lumens	4,198	8,205	12,242	16,175	20,041	23,982	28,363	32,137	35,848	39,689
	3000K Lumens	3,716	7,263	10,837	14,318	17,740	21,229	25,107	28,448	31,733	35,133
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	4,131	8,072	12,045	15,915	19,719	23,597	27,907	31,620	35,272	39,052
	3000K Lumens	3,657	7,145	10,662	14,088	17,455	20,888	24,703	27,990	31,223	34,569
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	4,077	7,968	11,889	15,710	19,465	23,292	27,546	31,212	34,816	38,547
	3000K Lumens	3,609	7,053	10,524	13,906	17,230	20,618	24,384	27,629	30,819	34,122
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL2	4000K/5000K Lumens	4,022	7,861	11,729	15,498	19,202	22,979	27,175	30,791	34,347	38,028
	3000K Lumens	3,560	6,959	10,383	13,719	16,998	20,341	24,055	27,256	30,404	33,662
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL3	4000K/5000K Lumens	4,106	8,025	11,974	15,821	19,603	23,458	27,742	31,433	35,064	38,821
	3000K Lumens	3,635	7,104	10,599	14,005	17,353	20,765	24,557	27,824	31,039	34,364
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	3,902	7,624	11,377	15,033	18,626	22,289	26,359	29,867	33,316	36,886
	3000K Lumens	3,454	6,749	10,071	13,307	16,488	19,730	23,333	26,438	29,491	32,651
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	4,236	8,277	12,351	16,319	20,219	24,196	28,614	32,422	36,166	40,042
	3000K Lumens	3,750	7,327	10,933	14,446	17,898	21,418	25,329	28,700	32,014	35,445
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
5MQ	4000K/5000K Lumens	4,314	8,429	12,578	16,619	20,591	24,641	29,141	33,019	36,832	40,779
	3000K Lumens	3,819	7,461	11,134	14,711	18,227	21,812	25,796	29,228	32,604	36,098
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	4,325	8,452	12,611	16,664	20,646	24,707	29,219	33,106	36,930	40,888
	3000K Lumens	3,828	7,482	11,163	14,751	18,276	21,871	25,865	29,305	32,690	36,194
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
SLL/SLR	4000K/5000K Lumens	3,609	7,052	10,522	13,903	17,226	20,613	24,378	27,622	30,812	34,114
	3000K Lumens	3,195	6,242	9,314	12,307	15,248	18,247	21,579	24,451	27,275	30,198
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	4,197	8,202	12,239	16,171	20,036	23,977	28,356	32,129	35,839	39,680
	3000K Lumens	3,715	7,260	10,834	14,315	17,736	21,224	25,101	28,441	31,725	35,125
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
AFL	4000K/5000K Lumens	4,213	8,232	12,284	16,230	20,109	24,064	28,459	32,246	35,969	39,824
	3000K Lumens	3,729	7,287	10,874	14,367	17,800	21,301	25,192	28,544	31,840	35,252
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 70 CRI.



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**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

GLEON-AF-04-X-X

Notes:**Type:****KAD**

PSA18-68593

GLEON GALLEON LED**CONTROL OPTIONS****0-10V (DIM)**

This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (P, R and PER7)

Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

After Hours Dim (AHD)

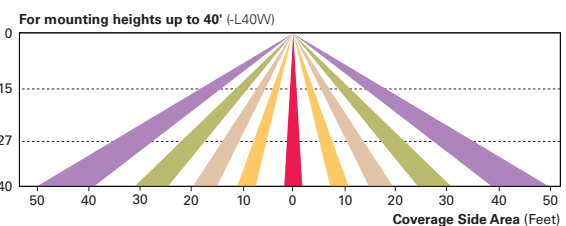
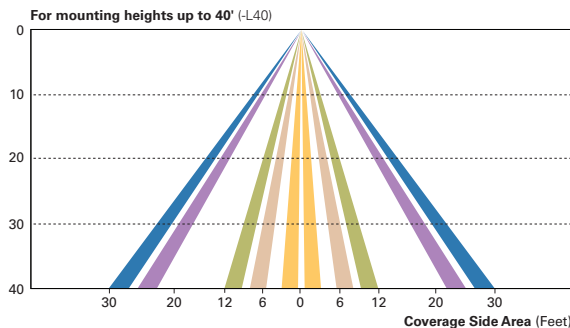
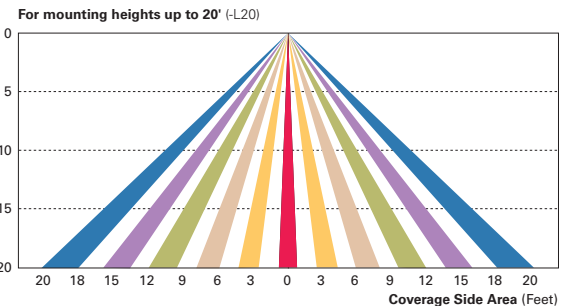
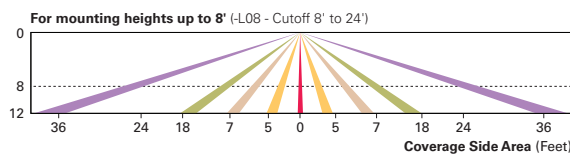
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

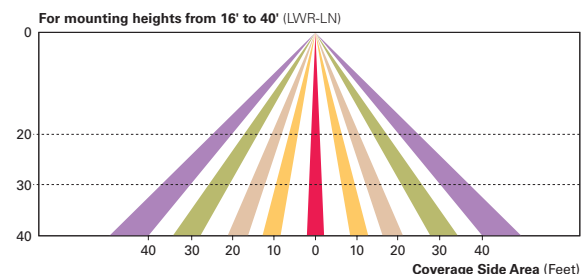
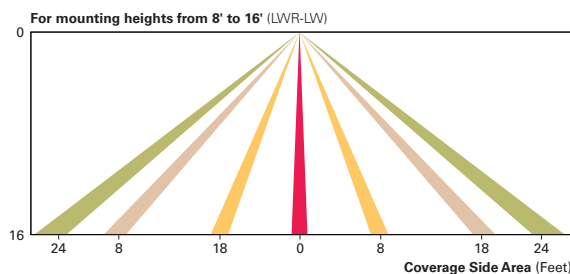
These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.

**LumaWatt Wireless Control and Monitoring System (LWR-LW and LWR-LN)**

The LumaWatt system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt product guides.



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Submitted by Putterman, Scharck & Assoc.

PUTTERMAN
SCHARCK
& ASSOCIATES

Job Name:

MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering

Catalog Number:

GLEON-AF-04-X-X

Notes:

Type:

KAD

PSA18-68593

GLEON GALLEON LED

ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

Product Family ^{1,2}	Light Engine	Number of Light Squares ³	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	AF=1A Drive Current	01=1 02=2 03=3 04=4 05=5 06=6 07=7 ⁴ 08=8 ⁴ 09=9 ⁵ 10=10 ⁵	LED=Solid State Light Emitting Diodes	E1=120-277V 347=347V ⁶ 480=480V ^{6,7}	T2=Type II T2R=Type II Roadway T3=Type III T3R=Type III Roadway T4FT=Type IV Forward Throw T4W=Type IV Wide 5NQ=Type V Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	AP=Gray BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	[Blank]=Arm for Round or Square Pole EA=Extended Arm ⁸ MA=Mast Arm Adapter ⁹ WM=Wall Mount QM=Quick Mount Arm (Standard Length) ¹⁰ QMEA=Quick Mount Arm (Extended Length) ¹¹

Options (Add as Suffix)

Accessories (Order Separately)

7030=70 CRI 3000K ¹²
8030=80 CRI 3000K ¹³
7050=70 CRI 5000K ¹²
7060=70 CRI 6000K ¹²
600=Drive Current Factory Set to Nominal 600mA ¹⁴
800=Drive Current Factory Set to Nominal 800mA ¹⁴
1200=Drive Current Factory Set to Nominal 1200mA ^{14,15}
F=Single Fuse (120, 277 or 347V. Must Specify Voltage)
FF=Double Fuse (208, 240 or 480V. Must Specify Voltage)
2L=Two Circuits ^{16,17}
DIM=External 0-10V Dimming Leads
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Volatage)
PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle
R=NEMA Twistlock Photocontrol Receptacle
AHD145=After Hours Dim, 5 Hours ¹⁸
AHD245=After Hours Dim, 6 Hours ¹⁸
AHD255=After Hours Dim, 7 Hours ¹⁸
AHD355=After Hours Dim, 8 Hours ¹⁸
HA=50°C High Ambient ¹⁹
MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{20,21}
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{20,22}
MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{20,23}
MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{20,24}
MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height ^{20,21,25}
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height ^{20,22,25}
MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height ^{20,23,25}
MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) ^{20,24,25}
MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height ^{20,21}
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height ^{20,22}
MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height ^{20,23}
MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) ^{20,24}
LWR-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ²⁶
LWR-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ²⁶
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
MIT=Factory Installed Mesh Top
TH=Tool-less Door Hardware
LCF=Light Square Trim Plate Painted to Match Housing ²⁷
HSS=Factory Installed House Side Shield ²⁸
CE=CE Marking ²⁹

OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=120V Photocontrol
MA1252=10kV Surge Module Replacement
MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon
MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon
FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²⁰
GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares
GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares
GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares
GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares
GLEON-QM=Quick Mount Arm Kit
GLEON-QMEA=Quick Mount Extended Arm Kit
LS/HSS=Field Installed House Side Shield ^{28,30}

NOTES:

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Standard 4000K CCT and minimum 70 CRI.
4. Not compatible with extended quick mount arm (QMEA).
5. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
6. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
7. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
8. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
9. Factory installed.
10. Maximum 8 light squares.
11. Maximum 6 light squares.
12. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
13. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
14. 1 Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. These files are published on the Galleon luminaire product page on the website.
15. Not available with HA option.
16. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
17. Not available with LumaWatt wireless sensors.
18. Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
19. 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents.
20. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
21. Approximately 22' detection diameter at 8' mounting height.
22. Approximately 40' detection diameter at 20' mounting height.
23. Approximately 60' detection diameter at 40' mounting height.
24. Approximately 100' detection diameter at 40' mounting height.
25. Replace X with number of Light Squares operating in low output mode.
26. LumaWatt wireless sensors are factory installed only requiring network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
27. Not available with house side shield (HSS).
28. Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.
29. CE is not available with the LWR, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only.
30. One required for each Light Square.

EATON

Powering Business Worldwide

1121 Highway 74 South
Peachtree City, GA 30269
P: 770-496-4900
www.eaton.com/lighting

Specifications and
dimensions subject to
change without notice.

TD500020EN
2016-09-28 15:31:55

Submitted On: Jan 23, 2018

Index Page

DESCRIPTION

The Lumark WPSLED wall luminaire provides traditional architectural style with high performance energy efficient illumination. Rugged die-cast aluminum construction, stainless steel hardware along with a sealed and gasketed optical compartment make the Wal-Pak virtually impenetrable to contaminants. IP66 Rated. UL/cUL wet location listed. Replaces up to 100W metal halide equivalent. The WPSLED wall luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways and loading docks.

SPECIFICATION FEATURES

Housing
Rugged die-cast aluminum housing and hinged, removable die-cast aluminum door. One-piece silicone gasket seals the optical chamber. UL 1598 wet location listed and IP66 ingress protection rated. Three 1/2" threaded conduit entry points allow for thru-branch wiring.

Optical
Highly reflective anodized aluminum reflectors provide high efficiency illumination. Optical assemblies include impact resistant borosilicate refractive glass. Solid state LED luminaires are thermally optimized with one lumen

packages. Available in cool 5000K or netrual warm 4000K LED color temperature (CCT).

Electrical
LED driver and related electrical components are hard mounted to the die-cast housing for optimal heat sinking and operating efficiency. Wiring is extended through a silicone gasket at the back of the housing. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from LED source. Integral LED electronic driver incorporates internal fusing designed to

Catalog #	Type
Project	
Comments	Date
Prepared by	

withstand a 4kV surge test and is Class 2 rated for 120-277V, 50/60Hz with an operating temperature of -40° to 25°C. Wal-Pak LED systems maintain greater than 94% of the initial light output after 50,000 hours of operation.

Finish
Finished in five-stage super UV stabilized polyester powder coat paint for superior protection against fade and wear. Standard color is bronze.

Options
Optional wire guard and visor are available.

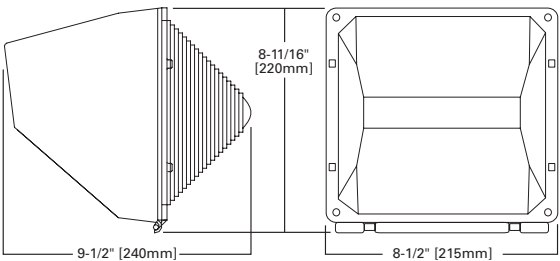


WPSLED

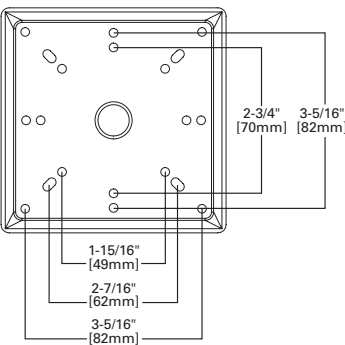
27W
LED

WALL MOUNT LUMINAIRE

DIMENSIONS




MOUNTING DETAIL



TECHNICAL DATA
UL/cUL Wet Location Listed
IP66 Rated
25°C Maximum Ambient Temperature

SHIPPING DATA
Approximate Net Weight:
5.25 lbs. (2.38 kgs.)

Submitted by Putterman, Scharck & Assoc.		Catalog Number: WPSLED-30-GL-UNV	Type: TWA
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	
		PSA18-68593	

WPSLED

POWER AND LUMENS

4000K	WPSLED-30
Delivered Lumens	3382
CCT (Kelvin)	4000
CRI (Color Rendering Index)	70
Power Consumption (Watts)	27
5000K	WPSLED-30
Delivered Lumens	3435
CCT (Kelvin)	5000
CRI (Color Rendering Index)	70
Power Consumption (Watts)	27

CURRENT DRAW

Voltage (V)	Model Series
	WPSLED-30
Current (A)	
120V	0.23
208V	0.13
240V	0.12
277V	0.10

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (50,000 Hours)	Theoretical L70 (Hours)
4000K / 5000K		
25°C	> 94.88%	> 346,000

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.03
15°C	1.02
25°C	1.00

ORDERING INFORMATION

Sample Number: WPSLED-30-GL-UNV

Product Family ¹	Lamp Wattage	Door/Glass	Voltage	Options (Add as Suffix) ²	Accessories (Order Separately)
WPSLED	30=27W	GL=Borosilicate Glass Door	UNV=120-277V 347-347V	Blank=70 CRI / 4000K 7050=70 CRI / 5000K PC=120-277V Button Photocontrol 10kV=10kV Surge Protection	WGS/WLPAK=Wire Guard WPSLED VSS/WLPAK=Visor for WPSLED

NOTES:

1. Available in bronze only.
2. Extended lead times apply.

DESCRIPTION

The Lumark WPSLED wall luminaire provides traditional architectural style with high performance energy efficient illumination. Rugged die-cast aluminum construction, stainless steel hardware along with a sealed and gasketed optical compartment make the Wal-Pak virtually impenetrable to contaminants. IP66 Rated. UL/cUL wet location listed. Replaces up to 100W metal halide equivalent. The WPSLED wall luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways and loading docks.

SPECIFICATION FEATURES

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packages. Available in cool 5000K or netrual warm 4000K LED color temperature (CCT).

Electrical
LED driver and related electrical components are hard mounted to the die-cast housing for optimal heat sinking and operating efficiency. Wiring is extended through a silicone gasket at the back of the housing. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from LED source. Integral LED electronic driver incorporates internal fusing designed to

Catalog #	Type
Project	
Comments	Date
Prepared by	

withstand a 4kV surge test and is Class 2 rated for 120-277V, 50/60Hz with an operating temperature of -40° to 25°C. Wal-Pak LED systems maintain greater than 94% of the initial light output after 50,000 hours of operation.

Finish
Finished in five-stage super UV stabilized polyester powder coat paint for superior protection against fade and wear. Standard color is bronze.

Options
Optional wire guard and visor are available.

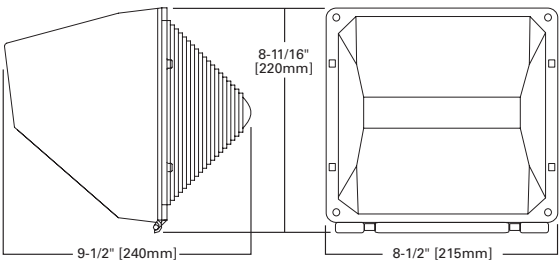


WPSLED

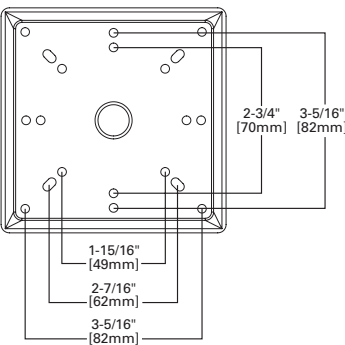
27W
LED

WALL MOUNT LUMINAIRE

DIMENSIONS



MOUNTING DETAIL



TECHNICAL DATA
UL/cUL Wet Location Listed
IP66 Rated
25°C Maximum Ambient Temperature

SHIPPING DATA
Approximate Net Weight:
5.25 lbs. (2.38 kgs.)

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

WPSLED-30-GL-UNV

Notes:

Type:**TWA**

PSA18-68593

WPSLED**POWER AND LUMENS**

4000K	WPSLED-30
Delivered Lumens	3382
CCT (Kelvin)	4000
CRI (Color Rendering Index)	70
Power Consumption (Watts)	27
5000K	WPSLED-30
Delivered Lumens	3435
CCT (Kelvin)	5000
CRI (Color Rendering Index)	70
Power Consumption (Watts)	27

CURRENT DRAW

Voltage (V)	Model Series
	WPSLED-30
Current (A)	
120V	0.23
208V	0.13
240V	0.12
277V	0.10

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (50,000 Hours)	Theoretical L70 (Hours)
4000K / 5000K		
25°C	> 94.88%	> 346,000

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.03
15°C	1.02
25°C	1.00


ORDERING INFORMATION

Sample Number: WPSLED-30-GL-UNV

Product Family ¹	Lamp Wattage	Door/Glass	Voltage	Options (Add as Suffix) ²	Accessories (Order Separately)
WPSLED	30=27W	GL=Borosilicate Glass Door	UNV=120-277V 347=347V	Blank=70 CRI / 4000K 7050=70 CRI / 5000K PC=120-277V Button Photocontrol 10kV=10kV Surge Protection	WGS/WLPAK=Wire Guard WPSLED VSS/WLPAK=Visor for WPSLED

NOTES:

1. Available in bronze only.
 2. Extended lead times apply.

Submitted by Putterman, Scharck & Assoc.		Catalog Number: FCSL105-X-LED-4K-200-X	Type: SP
 Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		Notes:	
		PSA18-68593	



Date:	Approved:
Type:	
Fixture:	
Project:	

FCSL101 and 102

Exterior Die-Cast Brick Light with Die-Cast Faceplate for masonry applications.
(1 of 2)



FCSL101

ORDERING

EXAMPLE: FCSL101-120V-4K-360-BK-SLH

SPECIFY							
SERIES	VOLTAGE	SOURCE/TEMPERATURE		LED LUMENS	FINISH		ACCESSORIES
FCSL101	120V	LED	3K	700 Lumens (14W)	BK	Black	LD LED Dimming (0-10V)
FCSL102	277V		35K		BZ	Bronze	HB Hanger Bracket
			4K		CC	Custom Color	EMR Emergency Backup, Remote
		PL	13Q		SL	Silver	PCL Polycarbonate Lens
					WH	White	

SPECIFICATION

MOUNTING

- Concrete pour standard. Use **HB** accessory for drywall applications.
- Installation:** <http://tinyurl.com/heunzqb>

CONSTRUCTION

- Marine grade, corrosion resistant, heavy walled, high pressure die-cast aluminum construction.
- Clear or opal, tempered glass lens. Optional polycarbonate lens (PCL) accessory. Precision formed semi-specular aluminum reflector.
- Neoprene continuous closed cell urethane 'O' ring gasket. Captive and recessed stainless steel, tamper resistant hex socket screws.

LED

- Lumens stated are the minimum delivered out of the luminaire. LED lifetime is greater than or equal to 70,000 hours with the lumen depreciation greater than L70. All of our luminaires are LM-80 tested and are ≥ CRI80, with a 4-step MacAdam Ellipse color consistency. Integral power supply standard. Input voltage 120V or 277V standard. Consult factory for non-white static color LED options; Amber, Blue, Green or Red. 5 year warranty included.

FINISH

- Six stage chemical pre-treatment process that includes iron phosphate, to prepare the substrate for a UV stable, super durable standard polyester powder coat.

ELECTRICAL

- Socket** PL: Four pin plug-in type compact fluorescent lamp holder (*lamp by others*).
- Ballast** UL listed ballast standard. PL - Voltage dedicated 120V or 277V.

LISTING


- UL & cUL/ETL, U.S. and CA listed for interior and exterior wet locations. IP65 rating.


* Terms & Conditions for our Go Green Speed, quick ship program are located on our website: fclighting.com

FC Lighting, Inc. reserves the right to change lab test details or specifications without notice. Product use certifies agreement to FC Lighting's terms and conditions.

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RF Rev. 0417

Submitted by Putterman, Scharck & Assoc.		Catalog Number: FCSL105-X-LED-4K-200-X	Type: SP
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	PSA18-68593



Date:

Type:


Fixture:

Project:


Approved:

FCSL103, 105 and 106

Exterior Die-Cast Brick Light with Die-Cast Vertical or Horizontal Louvered Faceplate for masonry applications.
(2 of 2)




FCSL103



FCSL105

ORDERING

100 pcs or Less / ships in 2 weeks*

EXAMPLE: FCSL105-120V-4K-180-BK-SLH

SERIES	VOLTAGE	SOURCE/TEMPERATURE	LED LUMENS	FINISH	ACCESSORIES
FCSL103	120V	LED 3K	200 Lumens (10W)	BK Black	LD LED Dimming (0-10V)
FCSL105	277V	35K		BZ Bronze	SLH Spread Lens, Horizontal
FCSL106		4K		CC Custom Color	EMR Emergency Backup, Remote
		PL 13Q		SL Silver	PCL Polycarbonate Lens
				WH White	HB Hanger Bracket

SPECIFICATION

MOUNTING

- Concrete pour standard. Use **HB** accessory for drywall applications.
- Installation: <http://tinyurl.com/heunzqb>

CONSTRUCTION

- Marine grade, corrosion resistant, heavy walled, high pressure die-cast aluminum construction.
- Clear or opal, tempered glass lens. Optional polycarbonate lens (PCL) accessory. Precision formed semi-specular aluminum reflector.
- Neoprene continuous closed cell urethane 'O' ring gasket. Captive and recessed stainless steel, tamper resistant hex socket screws.

LED

- Lumens stated are the minimum delivered out of the luminaire. LED lifetime is greater than or equal to 70,000 hours with the lumen depreciation greater than L70. All of our luminaires are LM-80 tested and are ≥ CRI80, with a 4-step MacAdam Ellipse color consistency. Integral power supply standard. Input voltage 120V or 277V standard. Consult factory for non-white static color LED options; Amber, Blue, Green or Red. 5 year warranty included.

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- Six stage chemical pre-treatment process that includes iron phosphate, to prepare the substrate for a UV stable, super durable standard polyester powder coat.

ELECTRICAL

- Socket PL: Four pin plug-in type compact fluorescent lamp holder (lamp by others).
- Ballast UL listed ballast standard. PL - Voltage dedicated 120V or 277V.

LISTING

- ETL, U.S. and CA listed for interior and exterior wet locations. IP65 rating.

FC Lighting, Inc. reserves the right to change lab test details or specifications without notice. Product use certifies agreement to FC Lighting's terms and conditions.

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RF Rev. 0417

Submitted On: Jan 23, 2018

Index Page

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering

Catalog Number:
 MHN-UNV-AMW-TP

Notes:

Type:**WG2**

PSA18-68593

DESCRIPTION

Circadian LED nightlights and chart lights bring soft, low level illumination to any environment. Fitting into a standard junction box (single-gang, handy box, 2" minimum inside width) for easy installation, the MSN, MHN and MLN operate on 120-277V, delivering up to 30 lumens of illumination. The MCL Chart Light has an illuminated push-button switch (120V only). Depress the switch to energize the unit. Also, an accessory Thru Wall Junction Box is available, that accommodates wall thickness from 3 1/2" to 6", and uses two Circadian night lights.

SPECIFICATION FEATURES**Mounting / Installation**

Fits into standard junction box for easy installation (single-gang, handy box, 2" minimum inside width).

Faceplate

Unique faceplate design distributes light evenly. Die-cast aluminum louvered or scoop faceplates. White painted faceplate standard; black and brushed nickel paint options available. Anti-microbial matte white paint also available.

Lens

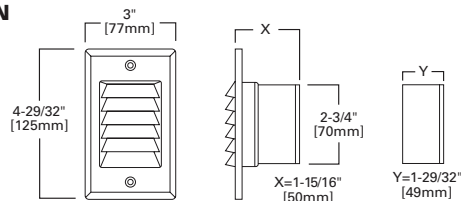
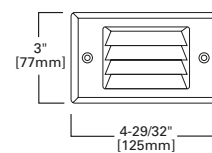
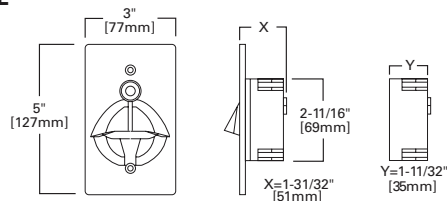
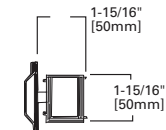
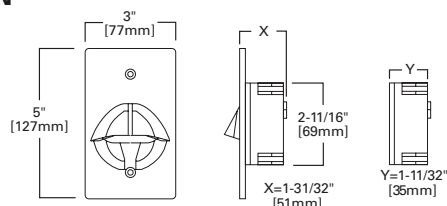
MSN/MLN/MHN: 4 lenses accompany each unit and are quickly and easily field-installable. Lenses are 0.040" thick polycarbonate, and are clear, amber, red, and blue colors. Install the lens choice based on the desired color of illumination. MCL: Clear acrylic lens, 0.040" thick. Thru Wall Junction Box Night lights (2) fit into the galvanized steel junction box. Order on a separate line item.

Wattage

<5 input watts.

Labels

- MLN, MHN: Wet location listed.
- MSN: Wet location listed above 4' mounting height.
- MCL: Dry location listed.

MLN**MHN****MCL****MSN**

For retrofit applications, check width, height and depth of existing junction box. Requires 2" minimum inside width.

SPECIFICATIONS

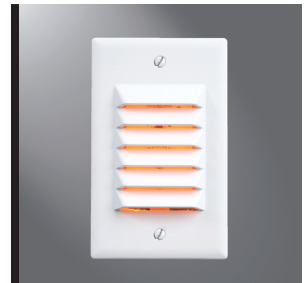
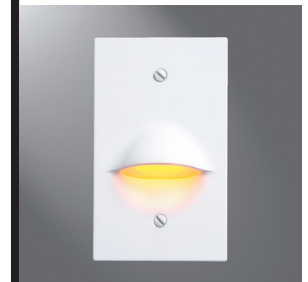
	MLN / MHN	MCL / MSN
Illumination	Minimum 30 Lumens	Minimum 30 Lumens
Input Wattage	< 5 Watts	< 5 Watts
Face Plate	Die-cast aluminum	Die-cast aluminum
Code Compliance	UL 1598	UL 1598
Input Voltage	120-277V	MSN - 120-277V MCL - 120V Only
Mounting / Installation	Single-gang junction box (2" minimum inside width)	Single-gang junction box (2" minimum inside width)
Labels	ETL listed	ETL listed - MSN, UL listed - MCL

Cooper Lighting
 by **EATON**

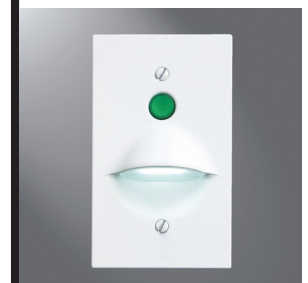
Specifications and dimensions subject to change without notice.
 Consult your representative for additional options and finishes.

FAIL-SAFE®

Catalog #	Type
Project	
Comments	Date
Prepared by	


 MLN / MHN (120 - 277V)
 (MHN not shown - see line drawing)


MSN (120 - 277V)



MCL (120V only)

CIRCADIAN UNV
LED
 Healthcare: Patient

 MSN
 MCL
 MHN
 MLN
 TWJB

 ADF101743
 2015-04-28 08:34:28

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**
MHN-UNV-AMW-TP

Notes:

Type:**WG2**

PSA18-68593

CIRCADIAN UNV - MLN, MHN, MCL, MSN

ORDERING INFORMATION**UNIVERSAL VOLTAGE: MHN / MLN / MSN**

SAMPLE NUMBER: MSN-UNV-W

UNV

Product Family	Voltage	Faceplate Finish	Options
MHN= Medical Horizontal Louver ^{1,2}	UNV=120-277V	W=White Paint B=Black Paint BN=Brushed Nickel Paint AMW=Anti-microbial White, Matte Finish	TP=Tamper-resistant Screws
MLN= Medical Louver Nightlight ^{1,2}			
MSN= Medical Scoop Nightlight ^{1,2}			

NOTES:

- ¹ Wet location standard on MLN, MHN and MSN.
² Product ships standard with white (4000K) LEDs and a clear polycarbonate lens. Colored lenses ship with each fixture, to field-convert the white color to amber, red or blue - by replacing the clear lens with the lens of choice.

Custom Colors available
(specify or supply sample
- consult factory)

MCL ORDERING INFORMATION**120V MCL**

SAMPLE NUMBER: MCL-W-120-W

Product Family	LED Color	Voltage	Faceplate Finish	Options
MCL= Medical Chart Nightlight	W=White A=Amber	120=120V	W=White Paint B=Black Paint BN=Brushed Nickel Paint AMW=Anti-microbial White, Matte Finish	PHC=Photocell (in place of standard on/off switch) ¹ TP=Tamper-resistant Screws

NOTES:

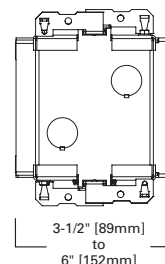
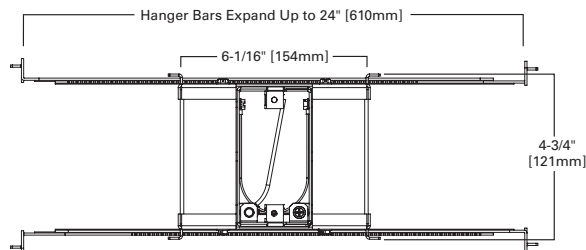
- ¹ The MCL version of Circadian is supplied with a photo optic cell which turns the light source (LED) off when the ambient light rises above the MCL set point or threshold. In a very limited number of applications, where the sustained ambient light is at or near the MCL set point, the user may experience "flickering" of the light. To avoid "flickering", do not install the MCL in areas such as in dark shadows or dark corners. Should flickering occur, relocate the MCL to an area of higher ambient light.

Custom Colors available
(specify or supply sample
- consult factory)

THRU WALL JUNCTION BOX (ORDER ON SEPERATE LINE ITEM)

Order as "TWJB"

Use (1) TWJB with (2) Circadian night lights
 TWJB can be rotated 90° and be used with the MHN



Cooper Lighting
by **EATON**

Specifications and dimensions subject to change without notice.

Fail-Safe • Customer First Center • 1121 Highway 74 South • Peachtree City, GA 30269 • TEL 770.486.4800 • FAX 770.486.4801

ADF101743
2015-04-28 08:34:28

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 4VT2-LD4-4-DR-UNV-L840-WL-SSL-
 U

Notes:

Type:
DMW

PSA18-68593

Metalux

DESCRIPTION

The Vaportite LED Series is an energy efficient industrial Vaportite fixture that features rugged and durable construction. The Vaportite LED incorporates a full metal fixture liner inside a reinforced fiberglass housing with a high impact diffuser. This Vaportite series is suitable for interior and exterior applications and can be surface or chain mounted.

The Vaportite LED Series has been designed for maximum operation in commercial institutional and industrial environments and can operate in a wide range of temperatures (-20°C to 25°C) and is ideal for cold storage environments.

SPECIFICATION FEATURES**Construction**

Fiberglass housing is reinforced polyester and self-extinguishing (ASTM-D635-74) plastic of a permanent pearl gray color. A watertite hub for 1/2" conduit entry is provided at each end of housing (standard) for continuous feed. Polyurethane gasketing is formed in the housing providing a continuous seamless seal for the diffuser. Four sturdy cam latches clamp diffuser tightly for a positive seal between housing, gasketing and diffuser. Electrical components and fixtures are UL/ cUL listed for Wet Locations.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500, 4000 and 5000K with a CRI \geq 85. Projected life is 60,000 hours at 91% lumen output. cULus listed. Electronic drivers are available for 120-277V applications. A 0-10V dimming control is available (standard). IP65 rated and NSF certified (4' only).

Lens

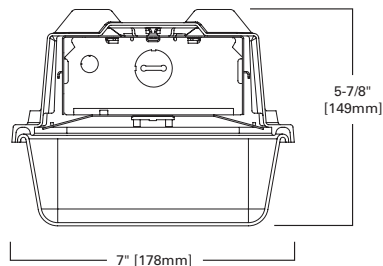
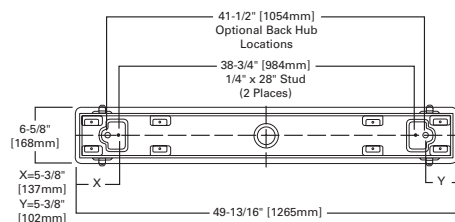
DR=Internal Prismatic Lens/15% DR High Impact Additive.
 DR100=Internal Prismatic Lens/100% DR High Impact Additive.

Warranty

Vaportite LED features a five year limited warranty.

Compliance

UL/cUL listed for Wet location. RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details.

**MOUNTING DATA****INSTALLATION DATA****MOUNTING BRACKETS**

Furnished
 Two per 2' and 4' Unit
 Four per 8' Unit

**OPTIONAL CHAN HANGING SET
(VT2-CHAIN/SET-U)**

Includes 6 ft. of chain, 4 large S-Hooks and 4 small S-Hooks
 Order One (1) Kit for each 2' or 4' Fixture



VAPORTITE LED

4' INDUSTRIAL LED LAMP

Vaportite Industrial
 Refrigerated Case

**ENERGY DATA**

Input Watts:

4VT2-LD4-4 (4,000 lumens)=38W
 4VT2-LD4-6 (6,000 lumens)=57.3W
 4VT2-LD4-8 (8,000 lumens)=81.1W

LINEAR DISCONNECT

Safe and convenient means of
 disconnecting power



Powering Business Worldwide

ADF142831

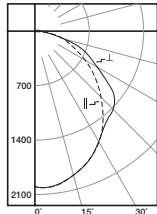
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**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
4VT2-LD4-4-DR-UNV-L840-WL-SSL-U

Notes:

Type:
DMW

PSA18-68593

4' VAPORTITE LED**PHOTOMETRICS**
4VT2-LD4-6-DR-UNV-L835-CD1-U

Electronic Driver

Linear LED 3500K

Spacing criterion:

(II) 1.2 x mounting

height, (L) 1.2 x

mounting height

Lumens: 5882

Input Watts: 56W

Efficacy: 104.7 lm/W

Test Report:

4VT2-LD4-6-DR-

UNV-L835-CD1-U.

IES

Candlepower

Angle	Along II	45°	Across ⊥
0	2000	2000	2000
5	2007	1979	1980
10	1981	1951	1956
15	1930	1900	1903
20	1857	1836	1844
25	1764	1748	1765
30	1645	1646	1660
35	1511	1522	1534
40	1375	1393	1468
45	1221	1271	1438
50	1062	1207	1343
55	903	1175	1148
60	749	1048	933
65	600	1151	771
70	461	591	600
75	332	398	426
80	206	249	255
85	94	137	127
90	34	75	63

Coefficients of Utilization

rc	Effective floor cavity reflectance								20%							
	80%				70%				50%				30%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
RCR	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101
1	108	103	98	94	105	101	96	93	96	93	90	92	89	87	88	86
2	98	89	82	76	95	87	81	75	84	78	73	80	75	71	77	73
3	89	78	70	63	86	76	69	62	73	67	61	70	65	60	68	63
4	81	69	60	53	79	68	59	53	65	58	52	62	56	51	60	55
5	75	62	52	46	73	60	52	45	58	51	45	56	49	44	54	48
6	69	55	46	40	67	54	46	40	52	45	39	51	44	39	49	43
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	38
8	59	46	37	31	58	45	37	31	44	36	31	42	35	31	41	35
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29

Zonal Lumen Summary

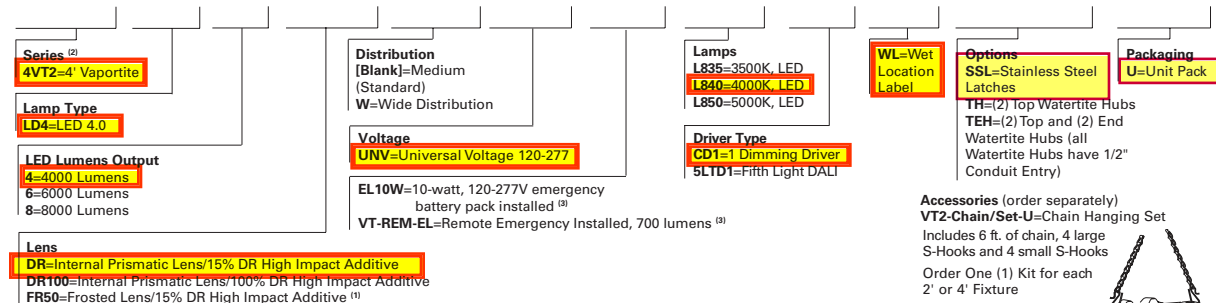
Zone	Lumens	% Fixture
0-30	1536	26.1
0-40	2490	42.3
0-60	4463	75.9
0-90	5804	98.7
0-180	5882	100.0

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 91%	> 247,000

ORDERING INFORMATION

SAMPLE NUMBER: 4VT2-LD4-4-DR-UNV-L840-CD1-WL-U



NOTES: (1) Not available in wide distribution. (2) DesignLights Consortium™ Qualified and classified for DLC Standard (some models are not DLC qualified), refer to www.designlights.org for details. (3) EL must specify 120 or 277V only.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
4VT2-LD4	18 lbs.

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

ORAW-11-LED-U-14W-X-W2-POS

Notes:

Type:**AVSP**

PSA18-68593

ORAW-LED**Construction:**

- Perforated aluminum shield; steel chassis
- Diffuser is white textured polycarbonate behind perforated shield

Light Source:

- LED
- Dimming (0 - 10v) to 10% **Included**

Notes:

- Keyhole slots or center lockup for standard J-box
- Custom cage styles available
- Open top and bottom
- ADA compliant
- UL and CUL listed DAMP location
- LED Components
 - OSRAM Gen II Distributed Array
 - CRI > 80
 - 14w - 1600 Lumens
 - Dimming (10% or 1%)
 - 25w OSRAM Power Supply
 - 5-Year Warranty on LED Components



Type:	
Job Name:	

**ORAW-11-LED**

Height - 11"

Width - 10"

Depth - 4"

**ORDERING INFORMATION****Example: ORAW-11-LED-U-14W-4-P2-POS-DIM**

Model	Cage	Voltage	Wattage	Kelvin	Finish	Diffuser	Options
ORAW-11-LED		U 120 - 277	14w LED / 1600lm (114 lm per watt)	2 3000K 3 3500K 4 4000K	P2 Brushed Alum B1 Satin Black Z1 Satin Bronze Z3 Text Bronze Optional (See Price List) W1 Yolk W2 Gloss White W3 Text White B2 Text Black T4 Shimmer Gray M13 Anod Silver T6 Pewter W13 Pearl Beige P9 Brushed Nickel M16 Antique Brass	POS Perforated Aluminum Shield with White Textured Polycarbonate	DIM LED dimming driver (0 - 10v) Dimming to 10% (Included) DIM1 LED dimming driver (0 - 10v) Dimming to 1% (See Price List)



28435 Industry Drive., Valencia, California 91355
 West Coast Sales: 800-325-4448 / 661-257-0286 • fax 800-323-2346 / 661-257-0201
 East Coast Sales: 866-350-0991 • fax 866-490-5754
 www.lightwayind.com • sales@lightwayind.com



**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 4ILED-LD5-5-W-FW/UPL-UNV-L840-
 CD1-U

Notes:

Type:
AF

PSA18-68593

Metalux

DESCRIPTION

The Industrial LED Linear Bay is the energy efficient solution for both low bay and high bay applications. The Linear Bay has been optimized to provide maximum performance utilizing the latest in LED technology. Several lumen packages and distributions make it suitable for a wide range of applications including "big box" retail, shopping malls, school gymnasiums, light industrial, warehouse and manufacturing.

SPECIFICATION FEATURES**Construction**

Specification grade full body housing, end plates and socket tracks are die formed cold rolled steel in 4' or 8' lengths. The housing features an integral driver channel that adds strength and provides numerous KO's for easy installation.

Electrical

Long-life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500k, 4000k and 5000k with a CRI ≥ 80. cULus listed. Electronic drivers are available for 120-277V, 347V and 480V applications. 0-10V dimming driver is standard. Optional modular power receptacle meets UL2459 and NEC 410.73 and is UL/cUL rated for make and break under load from outside the luminaire to speed maintenance.

Finish

Electrostatically applied baked white enamel finish is preceded by a multistage cleaning cycle, iron phosphate coating with rust inhibitor.

Optics

Optical modules are enclosed inside housing to protect against damage. Available in narrow or wide distributions. Narrow beam optical modules utilize 95% specular aluminum finish. An optional attractive thin blade white baffle adds longitudinal shielding. A clear or frosted white acrylic lens is also available. Optional heavy duty wireguard can be used with or without the lens or baffle. Latched retention of shielding optics (safety leader restraints) allows for easy access.

Mounting

Suitable for surface, suspension mounting with optional wire hook and chain set, stem or cable mounting. Top connector box mounting is also available. Narrow 11" housing allows mounting within 12" horizontally from the nearest edge of the sprinkler deflector.

Compliance

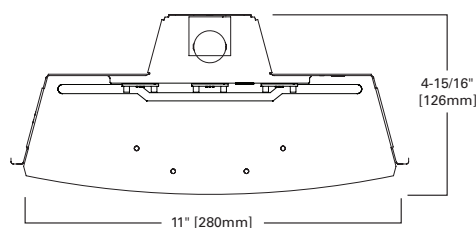
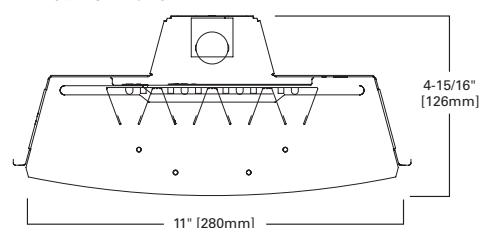
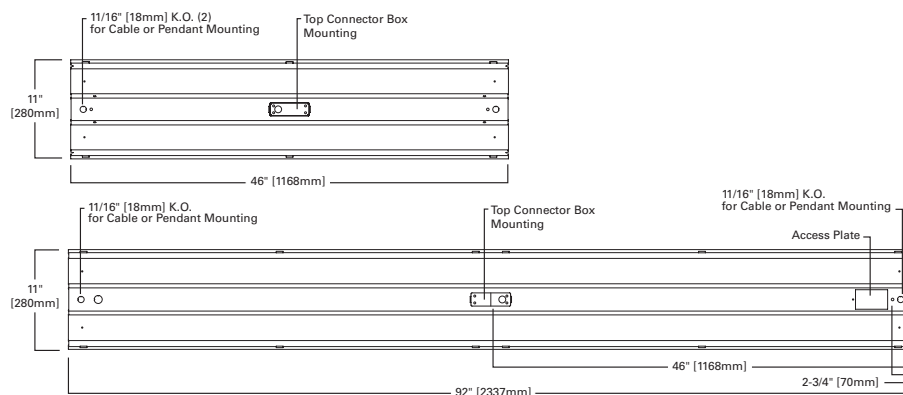
Luminaires are cULus listed for damp locations -20°C - 45°C ambient environments. RoHS compliant, and LED modules comply with IESNA LM-79/ LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Options

Integral Occupancy Sensor available and provides from 600 sq. ft. (MS) up to 1250 sq. ft. (MSO) of coverage at a maximum mounting height of 40'.



INDUSTRIAL LED LINEAR BAY

 LED Linear Bay Lighting
 System
**WIDE DISTRIBUTION****NARROW DISTRIBUTION****MOUNTING DATA****CERTIFICATION DATA**

Damp Location Listed
 LM79/LM80 Compliant
 ROHS Compliant
 DesignLights Consortium™ Qualified

ENERGY DATA

Catalog No.	Input Watts
4ILED-LD4-5	35
4ILED-LD4-7	57
4ILED-LD4-9	74
4ILED-LD4-11	101
4ILED-LD4-14	115
4ILED-LD4-16	145

LINEAR DISCONNECT

Safe and convenient means of
 disconnecting power

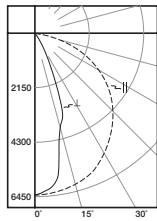

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 2016-08-05 08:22:44

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
**4ILED-LD5-5-W-FW/UPL-UNV-L840-
CD1-U**

Notes:

Type:
AF

PSA18-68593

INDUSTRIAL BAY LED**PHOTOMETRICS**
**4ILED-LD4-7-N-
UNV-L835**

Electronic Driver

Linear LED 3500K

Spacing criterion:

(II) 1.3 x mounting

height, (L) 0.6 x

mounting height

Lumens: 6392

Input Watts: 57.0W

Efficacy: 112.1 lm/W

Test Report:

4ILED-LD4-7-N-UNV-

L835.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	6355	6355	6355
5	6328	6165	6133
10	6247	5951	5334
15	6119	4995	3720
20	5948	3680	3091
25	5718	3255	1170
30	5459	2079	482
35	5130	846	102
40	4764	353	69
45	4350	79	30
50	3857	45	15
55	3377	26	14
60	2824	21	13
65	2251	19	12
70	1661	17	11
75	1056	16	10
80	525	14	7
85	95	10	6
90	0	0	0

Coefficients of Utilization

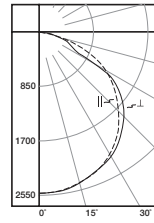
Effective floor cavity reflectance 20%									
80% 70% 50% 30% 10% 0%									
rc	80%	70%	50%	30%	10%	0%			
rw	70	50	30	10	70	50	30	10	0
RCR									
0	119	119	119	119	116	116	116	111	111
1	112	108	105	102	109	106	103	101	102
2	105	99	94	89	102	97	92	88	93
3	98	90	84	79	96	89	83	78	86
4	92	83	76	71	90	81	75	70	79
5	86	76	69	64	85	75	69	64	73
6	81	71	64	59	80	70	63	58	67
7	77	66	59	54	75	65	58	54	64
8	73	62	55	50	71	61	54	50	60
9	69	58	51	46	67	57	51	46	56
10	65	54	48	43	64	54	48	43	53

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	3500	54.8
0-40	4603	72.0
0-60	5906	92.4
0-90	6392	100.0
0-180	6392	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	4350	79	30
55	3377	26	14
65	2251	19	12
75	1056	16	10
85	95	10	6


**4ILED-LD4-7-W-
UNV-L840**

Electronic Driver

Linear LED 4000K

Spacing criterion:

(II) 1.3 x mounting

height, (L) 1.3 x

mounting height

Lumens: 7246

Input Watts: 56.6W

Efficacy: 120 lm/W

Test Report:

4ILED-LD4-7-W-

UNV-L840.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	2511	2511	2511
5	2501	2499	2510
10	2477	2474	2482
15	2431	2428	2439
20	2366	2371	2383
25	2285	2295	2308
30	2187	2205	2224
35	2058	2103	2120
40	1910	1987	1983
45	1748	1832	1836
50	1577	1660	1667
55	1373	1467	1484
60	1166	1256	1264
65	942	1029	1036
70	707	825	834
75	468	530	536
80	243	285	290
85	68	80	82
90	0	0	0

Coefficients of Utilization

Effective floor cavity reflectance 20%									
80% 70% 50% 30% 10% 0%									
rc	80%	70%	50%	30%	10%	0%			
rw	70	50	30	10	70	50	30	10	0
RCR									
0	119	119	119	119	116	116	116	111	111
1	109	105	101	97	107	103	99	96	98
2	100	92	85	80	97	90	84	79	86
3	91	81	73	66	89	79	72	66	76
4	83	71	63	56	81	70	62	56	68
5	77	64	55	48	74	63	54	48	61
6	71	57	48	42	69	56	48	42	55
7	65	52	43	37	64	51	43	37	50
8	61	47	39	33	59	47	38	33	45
9	57	43	35	30	55	43	35	30	42
10	53	40	32	27	52	39	32	27	38

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1986	27.4
0-40	3299	45.5
0-60	5987	82.6
0-90	7246	100.0
0-180	7246	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	1748	1832	1836
55	1373	1467	1484
65	942	1029	1036
75	468	530	536
85	68	80	82

LUMEN MAINTENANCE

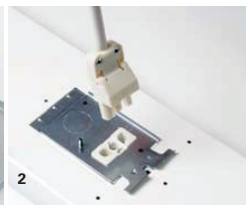
Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
35°C	> 86%	171,000

Modular Power Supply Option

Eaton's Modular Power Supply option is available for use with all Metalux products. The modular power supply allows external fixture access for safe and easy servicing. There is no need to remove lamps or reflectors to disconnect fixture power with Modular Power Supply. Access to the individual fixture's power supply allows servicing without turning off all the fixtures, disrupting occupants. The Modular Power Supply is a time-saver in installation – **simply plug & power.**



1. Modular Power Supply Receptacle supplied mounted into fixture Access Plate
2. Modular Power Cord & Plugs in 120, 277, 347, & 480V configurations for easy plug & power into existing supply



No internal fixture access required for installation or disconnecting power



Modular Motion Sensor Option supplied with Mounting Box and Modular Power Supply Receptacle

Code Compliance

- UL/cUL Certified for Make/Break under load (UL2549)
- Meets NEC requirements for ballast disconnect (NEC 410.73G)
- Allows for addition of Occupancy Sensor without hard connections
- Receptacles complete with insulating/dust cap

INDUSTRIAL BAY LED

ORDERING INFORMATION

SAMPLE NUMBER: 4ILED-LD4-9-W-FL-UNV-L840-CD1-U

Length 4=4' Length 8=8' Length	Voltage UNV=Universal 120-277 Voltage UNC=Universal 347/480 Voltage 120V=120 Volt 277V=277 Volt 347V=347 Volt (4) 480V=480 Volt (4)	Driver Type CD=0-10V Dimming (standard) SD=Step-dim Driver (2) 5LTD=5th Light DALI	Options Wiring PI_NG=Plug In System (1, 2, or 3 Circuit Capability), No Ground (ground provided by fixture body) (6) PI_WG=Plug In System (1, 2, or 3 Circuit Capability), With Ground (separate ground wire in harness) (6) CPI_NG=Crossover Plug In System (2 or 3 Circuit Capability), No Ground (ground provided by fixture body) (6) CPI_WG=Crossover Plug In System (2 or 3 Circuit Capability), With Ground (separate ground wire in harness) (6) MWS=Modular Wiring System Motion Sensors MS=360° or 180° Motion Sensor, 120 through 347, or 480V MP=Modular Power Receptacle (Used for all Cord or Cord and Plug options)	Packaging U=Unit Pack PAL=Palletized Out of Carton PALC=Palletized In Carton
Series (10) ILED=LED High Bay	CCT L835=3500K L840=4000K L850=5000K	Number of Drivers 1=1 Driver (10,000 lumen) 2=2 Drivers (16,000, 14,000, 18,000 and 22,000 lumen) 4=4 Drivers (28,000 and 32,000 lumen)	Accessories (order separately) ILED-SPM=Single Monopoint Hanger w/Hub FH-1=Fixture Hook FL-1=Fixture Loop SHK=Fixture Hook AYC-CHAIN/SET/U=(2) Hooks, 36" Chain Sets w/S-Hooks TOGGLE=Single Toggle, #2 Cable (Specify 10' or 30') LOOP=Loop Hanger, #2 Cable (Specify 10' or 30') MC6=6' Modular Power Cord MPC6=6' Modular Power Cord & Plug (Specify Voltage) MMS=360° or 180° Aisle Motion Sensor with Modular Power Receptacle (120-277V) MDS6=6' Modular Power Cord with MWS 27DS18/2G06MP Connector	
Mounting Arrangement Blank=Stand Alone R=Continuous Row Mount	Options Emergency EL7W=Emergency Installed, 7 Watts (3), (4) EL14W=Emergency Installed, 14 Watts (3), (4) GTD2=Bodine Generator Transfer Device (6) ETS2=IOTA Emergency Transfer Switch (6)		Door Frames (for Field Installation) (6) ILED-4-FRM/FL-PK=4 ft. Frosted Acrylic Lens & Frame ILED-4-FRM/CL-PK=4 ft. Clear Acrylic Lens & Frame ILED-4-WG-PK=4 ft. Wireguard ILED-4-TBW-PK=4 ft. Thin White Baffle ILED-4-ASY-PK=4 ft. Asymmetric Directional Louver	
Lamp Type LD4=LED 4.0				
LED Lumen Output 4 ft. 5=5,000 Lumens 7=7,000 Lumens 9=9,000 Lumens 11=11,000 Lumens 14=14,000 Lumens 16=16,000 Lumens (1, 7) 8 ft. 10=10,000 Lumens 14=14,000 Lumens 18=18,000 Lumens 22=22,000 Lumens 28=28,000 Lumens 32=32,000 Lumens (1, 7)				
Distribution N=Narrow (2) W=Wide				
Shielding Options Blank=Open TBW=Thin White Baffle (6) FL=Frosted Acrylic Lens & Frame (2), (3) FL/UPL=Frosted Lens w/Uplight (2), (3) CL=Clear Acrylic Lens & Door Frame (2), (3) ASY=Asymmetric Directional Louver (2), (3) WG=Heavy Duty Wireguard				

NOTES: (1) Max. ambient 40C for 16K and 32K lumen packages. (2) Narrow distribution not available with FL, FL/UPL, CL and ASY shielding options. (3) Max. ambient 35C for EL options. (4) EL not available in 347 or 480V configurations. (5) Wireguard available in conjunction with shielding option (catalog example TWB/WG). (6) PI option does not include low voltage wiring for 0-10V dimming. (7) Step-dim not available in 16,000 and 32,000 lumen configurations. (8) Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. (9) 8 ft. fixtures require two door frames per fixture. (10) DesignLights Consortium™ Qualified and classified for DLC Standard (all lumen packages), refer to www.designlights.org for details.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

PI OPTION ORDERING INFORMATION

Catalog Number	Number of Circuits	Circuit Wired To Ballast
PI 1 BLK	1	Black
PI 2 BLU	2	Blue
PI 2 BLK	2	Black
PI 3 RED	3	Red
PI 3 BLU	3	Blue
PI 3 BLK	3	Black

Catalog Numbering System

The PI System is available in sections up to 8' in length for continuous row wiring by simply plugging the sections together. Each PI section is factory wired to the ballast leads. Color coding of wires is as follows:

PI-1 = One Circuit - 2 Wires: one black, one white
PI-2 = Two Circuits - 3 Wires: one black, one blue, one white
PI-3 = Three Circuits - 4 wires: one black, one blue, one red, one white

When ordering the PI2/PI3 System it is necessary to specify the number of fixtures required for each circuit. Each circuit in fixture must be ordered as a separate line item, with a different hot wire color specified. All wiring to external feeds, using cord or cord & plug, are responsibility of installing licensed contractor. Cord and cord & plug sets must be ordered separately if PI option is chosen.

PI1 - Single Circuit Plug-In

SAMPLE NUMBER: PI1BLK-WG

PI1 = Single Circuit	NG = No Ground (ground provided by fixture body)
BLK =Black Hot	WG = With Ground (separate ground wire in harness)

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

PI2 - Two Circuit Plug-In

SAMPLE NUMBER: PI2BLK-WG

PI2 = Two Circuit	Leave Blank =Single Neutral
BLK =Black Hot	2NEU =Two Neutrals
BLU =Blue Hot	NG = No Ground (ground provided by fixture body)
Leave Blank =Single Neutral	WG = With Ground (separate ground wire in harness)
/WHT =White Neutral	
/GRY =Gray Neutral	

PI3 - Three Circuit Plug-In

SAMPLE NUMBER: PI3BLK-WG

PI3 = Three Circuit	Leave Blank =Single Neutral
BLK =Black Hot	2NEU =Two Neutrals
BLU =Blue Hot	NG = No Ground (ground provided by fixture body)
RED =Red Hot	WG = With Ground (separate ground wire in harness)
Leave Blank =Single Neutral	
/WHT =White Neutral	
/GRY =Gray Neutral	

SHIPPING DATA

Catalog No.	Wt.
4ILEDL	15 lbs.
8ILED	30 lbs.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 4VT2-LD4-4-DR-UNV-L840-WL-SSL-
 U

Notes:

Type:**DMW**

PSA18-68593

Metalux**DESCRIPTION**

The Vaportite LED Series is an energy efficient industrial Vaportite fixture that features rugged and durable construction. The Vaportite LED incorporates a full metal fixture liner inside a reinforced fiberglass housing with a high impact diffuser. This Vaportite series is suitable for interior and exterior applications and can be surface or chain mounted.

The Vaportite LED Series has been designed for maximum operation in commercial institutional and industrial environments and can operate in a wide range of temperatures (-20°C to 25°C) and is ideal for cold storage environments.

SPECIFICATION FEATURES**Construction**

Fiberglass housing is reinforced polyester and self-extinguishing (ASTM-D635-74) plastic of a permanent pearl gray color. A watertite hub for 1/2" conduit entry is provided at each end of housing (standard) for continuous feed. Polyurethane gasketing is formed in the housing providing a continuous seamless seal for the diffuser. Four sturdy cam latches clamp diffuser tightly for a positive seal between housing, gasketing and diffuser. Electrical components and fixtures are UL/ cUL listed for Wet Locations.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500, 4000 and 5000K with a CRI \geq 85. Projected life is 60,000 hours at 91% lumen output. cULus listed. Electronic drivers are available for 120-277V applications. A 0-10V dimming control is available (standard). IP65 rated and NSF certified (4' only).

Lens

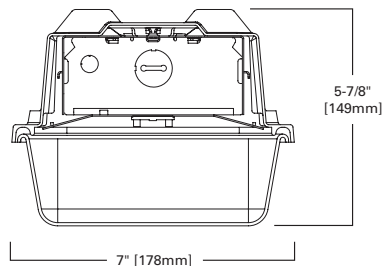
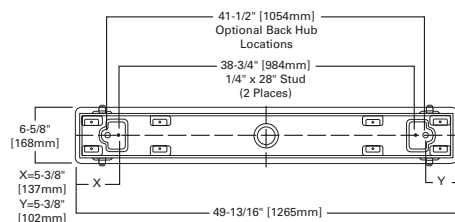
DR=Internal Prismatic Lens/15% DR High Impact Additive.
 DR100=Internal Prismatic Lens/100% DR High Impact Additive.

Warranty

Vaportite LED features a five year limited warranty.

Compliance

UL/cUL listed for Wet location. RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details.

**MOUNTING DATA****INSTALLATION DATA****MOUNTING BRACKETS**

Furnished
 Two per 2' and 4' Unit
 Four per 8' Unit

**OPTIONAL CHAN HANGING SET
(VT2-CHAIN/SET-U)**

Includes 6 ft. of chain, 4 large S-Hooks and 4 small S-Hooks
 Order One (1) Kit for each 2' or 4' Fixture

LINEAR DISCONNECT

Safe and convenient means of
 disconnecting power

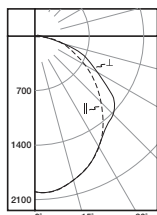
Job Name:MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

4VT2-LD4-4-DR-UNV-L840-WL-SSL-U

Notes:

Type:**DMW**

PSA18-68593

4' VAPORTITE LED**PHOTOMETRICS****4VT2-LD4-6-DR-UNV-L835-CD1-U**

Electronic Driver
Linear LED 3500K
Spacing criterion:
(II) 1.2 x mounting
height, (L) 1.2 x
mounting height
Lumens: 5882
Input Watts: 56W
Efficacy: 104.7 lm/W
Test Report:
4VT2-LD4-6-DR-
UNV-L835-CD1-U.
IES

Candlepower

Angle	Along II	45°	Across ⊥
0	2000	2000	2000
5	2007	1979	1980
10	1981	1951	1956
15	1930	1900	1903
20	1857	1836	1844
25	1764	1748	1765
30	1645	1646	1660
35	1511	1522	1534
40	1375	1393	1468
45	1221	1271	1438
50	1062	1207	1343
55	903	1175	1148
60	749	1048	933
65	600	1151	771
70	461	591	600
75	332	398	426
80	206	249	255
85	94	137	127
90	34	75	63

Coefficients of Utilization

rc	Effective floor cavity reflectance								20%							
	80%				70%				50%				30%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
RCR	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101
1	108	103	98	94	105	101	96	93	96	93	90	92	89	87	88	86
2	98	89	82	76	95	87	81	75	84	78	73	80	75	71	77	73
3	89	78	70	63	86	76	69	62	73	67	61	70	65	60	68	63
4	81	69	60	53	79	68	59	53	65	58	52	62	56	51	60	55
5	75	62	52	46	73	60	52	45	58	51	45	56	49	44	54	48
6	69	55	46	40	67	54	46	40	52	45	39	51	44	39	49	43
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	38
8	59	46	37	31	58	45	37	31	44	36	31	42	35	31	41	35
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29

Zonal Lumen Summary

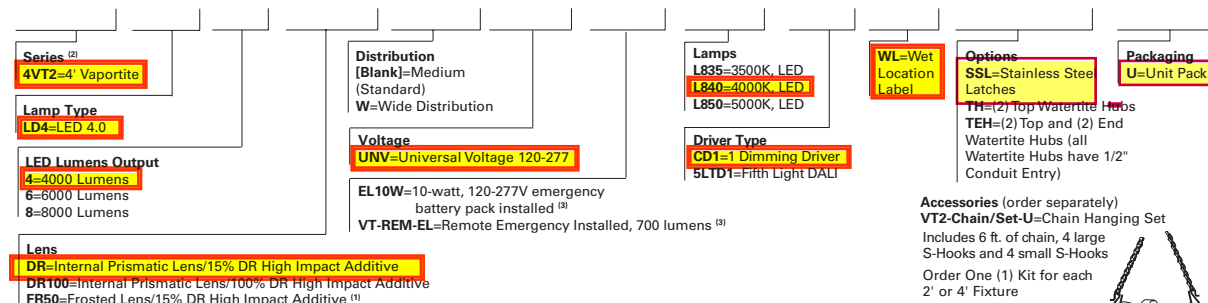
Zone	Lumens	% Fixture
0-30	1536	26.1
0-40	2490	42.3
0-60	4463	75.9
0-90	5804	98.7
0-180	5882	100.0

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 91%	> 247,000

ORDERING INFORMATION

SAMPLE NUMBER: 4VT2-LD4-4-DR-UNV-L840-CD1-WL-U



NOTES: (1) Not available in wide distribution. (2) DesignLights Consortium™ Qualified and classified for DLC Standard (some models are not DLC qualified), refer to www.designlights.org for details. (3) EL must specify 120 or 277V only.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
4VT2-LD4	18 lbs.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 4VT2-LD4-6-DR-UNV-L840-WL-SSL-
 U

Notes:

Type:**DMW**

PSA18-68593

Metalux**DESCRIPTION**

The Vaportite LED Series is an energy efficient industrial Vaportite fixture that features rugged and durable construction. The Vaportite LED incorporates a full metal fixture liner inside a reinforced fiberglass housing with a high impact diffuser. This Vaportite series is suitable for interior and exterior applications and can be surface or chain mounted.

The Vaportite LED Series has been designed for maximum operation in commercial institutional and industrial environments and can operate in a wide range of temperatures (-20°C to 25°C) and is ideal for cold storage environments.

SPECIFICATION FEATURES**Construction**

Fiberglass housing is reinforced polyester and self-extinguishing (ASTM-D635-74) plastic of a permanent pearl gray color. A watertite hub for 1/2" conduit entry is provided at each end of housing (standard) for continuous feed. Polyurethane gasketing is formed in the housing providing a continuous seamless seal for the diffuser. Four sturdy cam latches clamp diffuser tightly for a positive seal between housing, gasketing and diffuser. Electrical components and fixtures are UL/ cUL listed for Wet Locations.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500, 4000 and 5000K with a CRI ≥ 85. Projected life is 60,000 hours at 91% lumen output. cULus listed. Electronic drivers are available for 120-277V applications. A 0-10V dimming control is available (standard). IP65 rated and NSF certified (4' only).

Lens

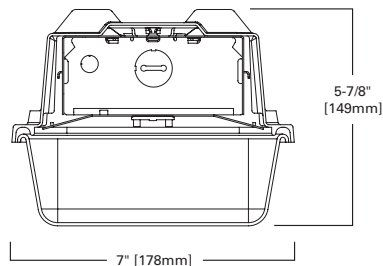
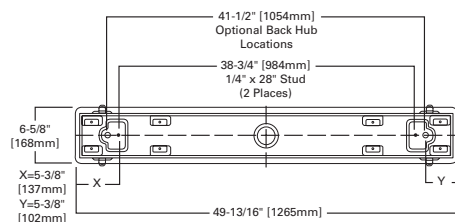
DR=Internal Prismatic Lens/15% DR High Impact Additive.
 DR100=Internal Prismatic Lens/100% DR High Impact Additive.

Warranty

Vaportite LED features a five year limited warranty.

Compliance

UL/cUL listed for Wet location. RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details.

**MOUNTING DATA****INSTALLATION DATA****MOUNTING BRACKETS**

Furnished
 Two per 2' and 4' Unit
 Four per 8' Unit

**OPTIONAL CHAN HANGING SET
(VT2-CHAIN/SET-U)**

Includes 6 ft. of chain, 4 large S-Hooks and 4 small S-Hooks
 Order One (1) Kit for each 2' or 4' Fixture

**VAPORTITE
LED****4' INDUSTRIAL
LED LAMP**

Vaportite Industrial
 Refrigerated Case

**ENERGY DATA**

Input Watts:

4VT2-LD4-4 (4,000 lumens)=38W
 4VT2-LD4-6 (6,000 lumens)=57.3W
 4VT2-LD4-8 (8,000 lumens)=81.1W

LINEAR DISCONNECT

Safe and convenient means of
 disconnecting power



Powering Business Worldwide

ADF142831

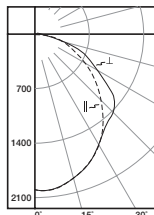
2017-05-04 08:42:04

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
4VT2-LD4-6-DR-UNV-L840-WL-SSL-U

Notes:

Type:
DMW

PSA18-68593

4' VAPORTITE LED**PHOTOMETRICS**
4VT2-LD4-6-DR-UNV-L835-CD1-U

Electronic Driver

Linear LED 3500K

Spacing criterion:

(II) 1.2 x mounting

height, (L) 1.2 x

mounting height

Lumens: 5882

Input Watts: 56W

Efficacy: 104.7 lm/W

Test Report:

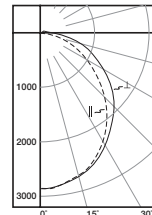
4VT2-LD4-6-DR-

UNV-L835-CD1-U.

IES

Candlepower

Angle	Along II	45°	Across ⊥
0	2000	2000	2000
5	2007	1979	1980
10	1981	1951	1956
15	1930	1900	1903
20	1857	1836	1844
25	1764	1748	1765
30	1645	1646	1660
35	1511	1522	1534
40	1375	1393	1468
45	1221	1271	1438
50	1062	1207	1343
55	903	1175	1148
60	749	1048	933
65	600	1151	771
70	461	591	600
75	332	398	426
80	206	249	255
85	94	137	127
90	34	75	63


4VT2-LD4-8-FR50-UNV-L835-CD1-WL-U

Electronic Driver

Linear LED 3500K

Spacing criterion:

(II) 1.2 x mounting

height, (L) 1.3 x

mounting height

Lumens: 8553

Input Watts: 81W

Efficacy: 105.5 lm/W

Test Report:

4VT2-LD4-8-FR50-

UNV-L835-CD1-WL-

U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	2854	2854	2854
5	2857	2829	2842
10	2811	2790	2804
15	2733	2723	2742
20	2626	2629	2658
25	2484	2508	2545
30	2316	2365	2408
35	2120	2195	2253
40	1904	2011	2086
45	1678	1819	1914
50	1451	1622	1736
55	1222	1422	1558
60	1009	1229	1368
65	810	1034	1171
70	622	843	959
75	446	659	748
80	287	487	555
85	148	341	392
90	45	228	271

Coefficients of Utilization

rc	Effective floor cavity reflectance								20%							
	80%				70%				50%				30%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
RCR	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101
1	108	103	98	94	105	101	96	93	96	93	90	92	89	87	88	86
2	98	89	82	76	95	87	81	75	84	78	73	80	75	71	77	73
3	89	78	70	63	86	76	69	62	73	67	61	70	65	60	68	63
4	81	69	60	53	79	68	59	53	65	58	52	62	56	51	60	55
5	75	62	52	46	73	60	52	45	58	51	45	56	49	44	54	48
6	69	55	46	40	67	54	46	40	52	45	39	51	44	39	49	43
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	38
8	59	46	37	31	58	45	37	31	44	36	31	42	35	31	41	35
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1536	26.1
0-40	2490	42.3
0-60	4463	75.9
0-90	5804	98.7
0-180	5882	100.0

Coefficients of Utilization

rc	Effective floor cavity reflectance								20%							
	80%				70%				50%				30%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
RCR	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99
1	107	102	97	93	104	99	95	91	94	91	87	90	87	84	85	83
2	97	88	81	75	94	86	79	74	82	76	72	78	73	69	74	67
3	88	77	69	62	85	75	68	61	72	65	60	69	63	58	66	61
4	81	68	59	53	78	67	58	52	64	57	51	61	55	50	59	53
5	74	61	52	45	72	60	51	45	57	50	44	55	48	43	53	47
6	69	55	46	39	66	54	45	39	52	44	38	50	43	38	48	42
7	64	50	41	35	62	49	41	35	47	40	34	45	39	34	44	38
8	59	46	37	31	57	45	37	31	43	36	30	42	35	30	40	34
9	55	42	34	28	54	41	33	28	40	32	27	38	32	27	37	31
10	52	39	31	25	50	38	30	25	37	30	25	36	29	25	34	29

Zonal Lumen Summary

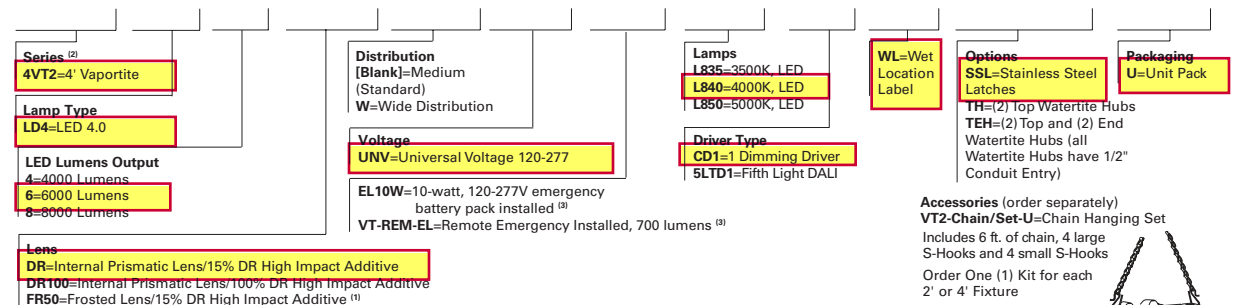
Zone	Lumens	% Fixture
0-30	2200	25.7
0-40	3573	41.8
0-60	6232	96.4
0-90	8248	100.0
0-180	8553	100.0

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 91%	> 247,000

ORDERING INFORMATION

SAMPLE NUMBER: 4VT2-LD4-4-DR-UNV-L840-CD1-WL-U



NOTES: (1) Not available in wide distribution. (2) DesignLights Consortium™ Qualified and classified for DLC Standard (some models are not DLC qualified), refer to www.designlights.org for details. (3) EL must specify 120 or 277V only.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
4VT2-LD4	18 lbs.

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**4SWLED-LD4-40SL-LW-UNV-L840-
CD1-SVPD3-U

Notes:

Type:**FCW**

PSA18-68593

Metalux**DESCRIPTION**

SWLED is a versatile LED surface or wall mount luminaire which can be used in a broad range of commercial and industrial applications. This series provides customers with a high quality luminaire utilizing the latest LED, solid state lighting and electronic driver technology for optimal performance and maximized energy efficiency. Offered with three different lens distributions and three different lens options which provides uniform light distribution that is an ideal choice for general purpose lighting where customers want to move away from traditional fluorescent solutions.

SPECIFICATION FEATURES**Construction**

Housing consists of die formed cold rolled steel with decorative white opaque injection molded end plates. Reflector/channel wireway cover secured by fasteners for easy wireway access. Channel back has numerous KO's for easy installation.

Controls

The SWLED is Powered by Fifth Light, with a standard 0-10V continuous dimming driver that works with any 0-10V control/dimmer. Combine with energy saving products like occupancy sensors, daylighting controls and lighting relay panels to maximize energy savings. In addition, the SWLED can include a factory-installed integrated sensor system for occupancy and daylight dimming control and manual control from an optional handheld remote. Or, specify the Digital Addressable Lighting Interface (DALI) drivers (consult factory for 1% dimming), for use with Fifth Light controls. See ordering information for details on all three options.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K, 4000K or 5000K with a typical CRI 85. Projected life is 60,000 hours at 70% lumen output. Electronic drivers are available for 120-277V applications. A 0-10V dimming driver is standard.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Highly reflective post painted finish (PAF) standard offering customers the optimal finish and handling. Additionally, each housing is treated in a multistage iron phosphate pretreatment, insuring maximum bonding and rust inhibitor.

Shielding

Specially designed LED lens blends and linear optics allows us to offer three different lens versions

- LC (clear), LN (Semi-Frost with narrow distribution) and LW (full frost with wide distribution). This lenses provide different lighting distribution allowing customers to choice between smooth even illumination. Lens is securely held in place by removable injection molded white end caps that can be easily removed for installation and maintenance.

Installation

Fixture may be surface (wall or ceiling) and suspended mounted. See accessories below for ordering information.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for up to 40°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details.

**SWLED
LED**

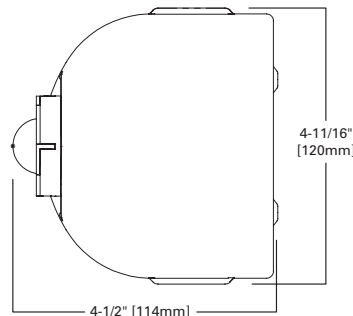
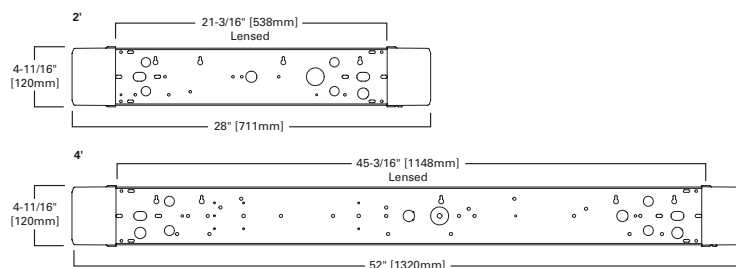
Surface and Wall LED



powered by
fifthlight
technology



**2016
PRODUCT
OF THE YEAR
FINALISTS**

**MOUNTING DATA**

EATON
Powering Business Worldwide

CERTIFICATION DATA

cULus - 1598
Damp Location Listed
LM79/LM80 Compliant
ROHS Compliant
DesignLights Consortium™ Qualified
NOM Compliant

LINEAR DISCONNECT

Safe and convenient means of
disconnecting power



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2016-09-27 07:58:10

SWLED

WATTAGE

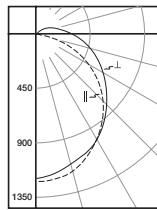
Lens Type	Lumen Type	Length	Catalog Logic	Nominal Lumens	Wattage	lm/W
Full Frost (LW)	Standard	2 ft.	2SWLED-LD4-8SL-LW-UNV-L8XX-CD1-SVPD2-U	800	10.1	105
Full Frost (LW)	Standard	2 ft.	2SWLED-LD4-16SL-LW-UNV-L8XX-CD1-SVPD2-U	1600	18.9	99.5
Full Frost (LW)	Standard	2 ft.	2SWLED-LD4-20SL-LW-UNV-L8XX-CD1-SVPD2-U	2000	23.5	92
Full Frost (LW)	High	2 ft.	2SWLED-LD4-24HL-LW-UNV-L8XX-CD1-SVPD2-U	2400	24.9	94.5
Full Frost (LW)	High	2 ft.	2SWLED-LD4-28HL-LW-UNV-L8XX-CD1-SVPD2-U	2800	29.1	89.5
Full Frost (LW)	Standard	4 ft.	4SWLED-LD4-16SL-LW-UNV-L8XX-CD1-SVPD2-U	1500	12.8	116.7
Full Frost (LW)	Standard	4 ft.	4SWLED-LD4-20SL-LW-UNV-L8XX-CD1-SVPD2-U	2000	17.6	113.6
Full Frost (LW)	Standard	4 ft.	4SWLED-LD4-28SL-LW-UNV-L8XX-CD1-SVPD2-U	2800	25.6	109.6
Full Frost (LW)	Standard	4 ft.	4SWLED-LD4-32SL-LW-UNV-L8XX-CD1-SVPD2-U	3200	30	101.7
Full Frost (LW)	Standard	4 ft.	4SWLED-LD4-36SL-LW-UNV-L8XX-CD1-SVPD2-U	3600	35.2	102.1
Full Frost (LW)	Standard	4 ft.	4SWLED-LD4-40SL-LW-UNV-L8XX-CD1-SVPD2-U	4000	40.4	99.1
Full Frost (LW)	High	4 ft.	4SWLED-LD4-44HL-LW-UNV-L8XX-CD1-SVPD2-U	4400	39.2	112.2
Full Frost (LW)	High	4 ft.	4SWLED-LD4-48HL-LW-UNV-L8XX-CD1-SVPD2-U	4800	43.3	110.9
Full Frost (LW)	High	4 ft.	4SWLED-LD4-52HL-LW-UNV-L8XX-CD2-SVPD2-U	5200	46.8	111.0
Full Frost (LW)	High	4 ft.	4SWLED-LD4-56HL-LW-UNV-L8XX-CD2-SVPD2-U	5600	51.1	109.6
Full Frost (LW)	High	4 ft.	4SWLED-LD4-60HL-LW-UNV-L8XX-CD2-SVPD2-U	6000	55.5	108.1
Full Frost (LW)	High	4 ft.	4SWLED-LD4-64HL-LW-UNV-L8XX-CD2-SVPD2-U	6400	60	106.7
Full Frost (LW)	High	4 ft.	4SWLED-LD4-72HL-LW-UNV-L8XX-CD2-SVPD2-U	7200	69	104.3

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**4SWLED-LD4-40SL-LW-UNV-L840-
CD1-SVPD3-U

Notes:

Type:**FCW**

PSA18-68593

PHOTOMETRICS**SWLED****4SWLED-LD4-40SL-
LW-UNV-L835-CD1**Electronic Driver
Linear LED 3500KSpacing criterion:
(||) 1.2 x mounting
height, (⊥) 1.2 x
mounting height

Lumens: 4087

Input Watts: 42.5W

Efficacy: 96.2 lm/W

Test Report:
4SWLED-LD4-40SL-
LW-UNV-L835-CD1.
IES**Candlepower**

Angle	Along	45°	Across ⊥
0	1194	1194	1194
5	1203	1188	1173
10	1184	1159	1142
15	1153	1123	1110
20	1110	1080	1074
25	1058	1032	1031
30	996	978	983
35	926	918	933
40	849	855	878
45	766	786	816
50	678	713	754
55	588	639	690
60	495	564	626
65	400	491	563
70	302	419	503
75	207	352	445
80	125	291	390
85	55	236	337
90	4	188	285

Coefficients of Utilization

rc	Effective floor cavity reflectance					
	80%		70%		50%	
rw	70	50	30	10	70	50
RCR	70	50	30	10	50	30
0	117	117	117	117	113	113
1	105	99	94	90	101	96
2	95	85	78	71	91	83
3	86	74	66	59	82	72
4	78	66	56	49	75	64
5	72	58	49	42	69	57
6	66	53	43	37	64	51
7	61	48	39	32	59	46
8	57	43	35	29	55	42
9	53	40	31	26	51	39
10	50	37	29	23	48	36

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	905	22.1
0-40	1480	36.2
0-60	2656	65.0
0-90	3738	91.5
0-180	4087	100.0

ORDERING INFORMATION

SAMPLE NUMBER: 4SWLED-LD4-40SL-LW-UNV-L840-CD1-SVPD2-U

Length 2=2 ft. Length 4=4 ft. Length Series ⁽¹³⁾ SWLED=LED Surface and Wall	LED Type LD4=LED 4.0 LED Lumens Output ⁽²⁾ 8SL=800 ⁽⁸⁾ 16SL=1600 ⁽³⁾ 20SL=2000 24HL=2400 ⁽³⁾ 28HL=2800 ⁽³⁾ 28SL=2800 ⁽⁴⁾ 32SL=3200 36SL=3600 40SL=4000 44HL=4400 48HL=4800 52HL=5200 ⁽¹²⁾ 56HL=5600 ⁽¹²⁾ 60HL=6000 ⁽¹²⁾ 64HL=6400 ⁽¹²⁾ 67HL=6700 ^{(12), (16)} 72HL=7200 ^{(12), (16)} 78HL=7800 ^{(12), (16)} 80HL=8000 ^{(12), (17)} Optic LC=Clear Lens LN=Semi-Frost Lens - Narrow LW=Full Frost Lens - Wide	Voltage 347V=347 Volt ⁽¹¹⁾ 480V=480 Volt ⁽¹¹⁾ UNV=Universal Voltage 120-277 ⁽¹⁾ UNC=Universal Voltage 347/480 ^{(4), (11)} Emergency ^{(4), (9)} EL7W=7-watt, 120V-277V emergency battery pack installed ⁽⁸⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽⁸⁾ GTD2=Bodine Generator Transfer Device ⁽¹⁸⁾ ETS2=IOTA Emergency Transfer Switch ⁽¹⁸⁾ CCT L835=3500K L840=4000K L850=5000K	Driver Type CD=0-10V Dimming Driver HCD=0-10V Dimming Driver (1% - 100% Dimming) ⁽¹¹⁾ SD=Step-dim Driver ^{(19), (20)} SLTD=First Light (DALI) Driver Number of Drivers 1=1 Driver 2=2 Drivers	Options Occupancy Sensor SVPD1=Integrated occupancy and daylight dimming sensor, 500 sq. ft. coverage ^{(8), (9), (16), (15)} SVPD2=Integrated occupancy and daylight dimming sensor, 900 sq. ft. coverage ^{(8), (14), (15)} SVPD3=Integrated occupancy and daylight dimming sensor, 1200 sq. ft. coverage ^{(7), (15)}	Packaging U=Unit Pack
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ACCESSORIES

(Order Separately)
 SCF=Fixed Stem Set (Specify Length)
 SCS=Swivel Stem Set (Specify Length)
 SCA=Adjustable 48" Stem Set
 A1B/Spacer-U=Spacer 1-1/2" to 2-1/2" from ceiling
 (Use 2 Per Fixture)
 ISHH-01=Programming Remote for Integrated Sensor
 ISHH-02=Personal Control Remote for Integrated Sensor

NOTES: ⁽¹⁾ Not available when specifying emergencies, voltage must be specific. ⁽²⁾ Nominal lumen output. ⁽³⁾ 2 ft. model. ⁽⁴⁾ Only available in 4 ft. models. ⁽⁵⁾ With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁶⁾ For mounting heights up to 8 ft. ⁽⁷⁾ For mounting heights up to 30 ft. ⁽⁸⁾ For mounting heights up to 12 ft. ⁽⁹⁾ Integral EL battery pack is rated for 35°C. ⁽¹⁰⁾ Product configuration meet ADA. ⁽¹¹⁾ Consult factory. ⁽¹²⁾ Currently not DLC listed, consult factory. ⁽¹³⁾ DesignLights Consortium™ Qualified and classified for DLC Standard (some models are not DLC qualified), refer to www.design-lights.org for details. ⁽¹⁴⁾ For wall mount applications. ⁽¹⁵⁾ For use with CD driver only. ⁽¹⁶⁾ Lumen value with LN (30% Frost lens). ⁽¹⁷⁾ Lumen value with LC (Clear lens). ⁽¹⁸⁾ Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽¹⁹⁾ 4 ft. model only. ⁽²⁰⁾ 4000 and above.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
2SWLED-LD4	6 lbs.
4SWLED-LD4	12 lbs.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and
 dimensions subject to
 change without notice.

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**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 4SWLED-LD4-40SL-LW-UNV-L840-
 CD1-SVPD3-U

Notes:

Type:**FCW**

PSA18-68593

SWLED**INTEGRATED SENSOR**

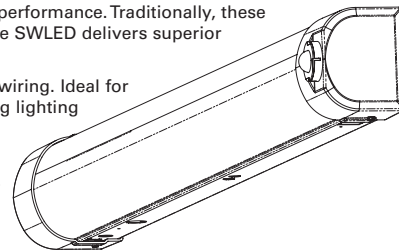
The SWLED with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The SWLED delivers superior lighting with integrated occupancy and daylighting controls.

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the SWLED delivers automatic ON to an energy saving light level, ensuring lighting is turned OFF when the space is unoccupied.

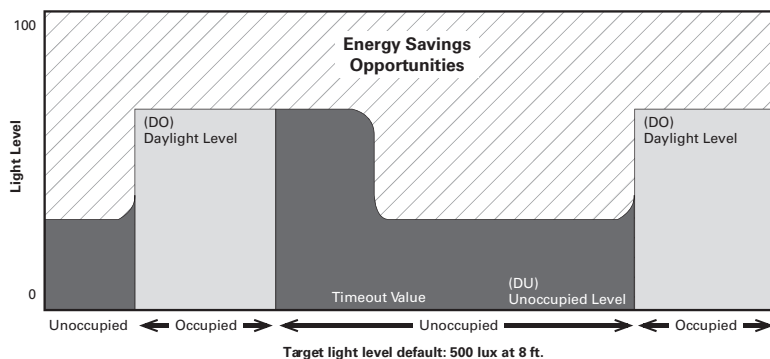
The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

The SWLED with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

**How it works:**

- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically half of the occupied daylight level.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.

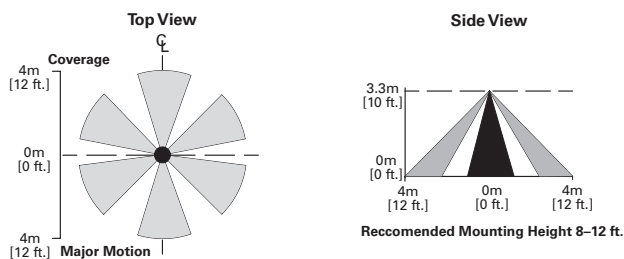
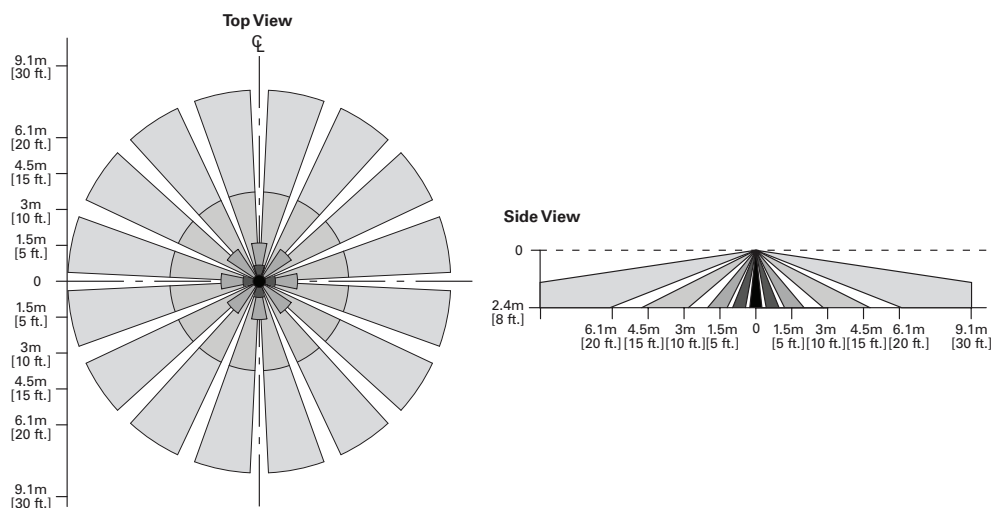
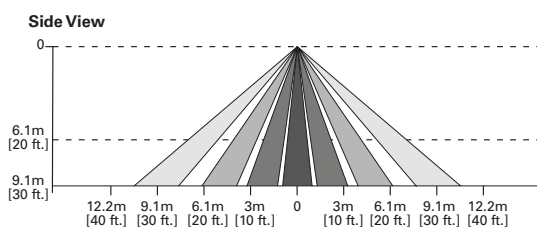
**Coverage Patterns next page**

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
 4SWLED-LD4-40SL-LW-UNV-L840-
 CD1-SVPD3-U

Notes:

Type:**FCW**

PSA18-68593

SWLED**SENSOR DETAILS - SWLED****SVPD1 Coverage Pattern****SVPD2 Coverage Pattern****SVPD3 Coverage Pattern****Optional Remote Controls****ISHH-01 Programming Remote****ISHH-02 Personal Control Remote**

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

GLEON-AF-03-LED-E1-X-FINISH

Notes:

Type:**BLD**

PSA18-68593

McGraw-Edison

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

SPECIFICATION FEATURES**Construction**

Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics

Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical

LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting

STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the

arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. **QUICK MOUNT ARM:** Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish

Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty

Five-year warranty.

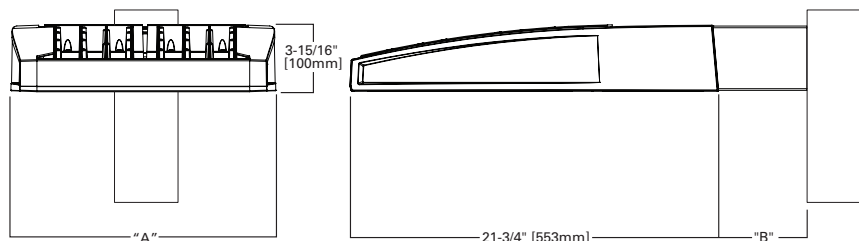


GLEON GALLEON LED

1-10 Light Squares

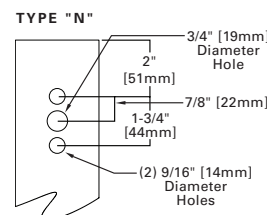
Solid State LED

AREA/SITE LUMINAIRE

DIMENSIONS**DIMENSION DATA**

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length ¹	Weight with Arm (lbs.)	EPA with Arm ² (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

**DRILLING PATTERN****CERTIFICATION DATA**

UL/cUL Wet Location Listed
 ISO 9001
 LM79 / LM80 Compliant
 3G Vibration Rated
 IP66 Rated
 DesignLights Consortium™ Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120V-277V 50/60Hz
 347V & 480V 60Hz
 -40°C Min. Temperature
 40°C Max. Temperature
 50°C Max. Temperature (HA Option)



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*www.designlights.org

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

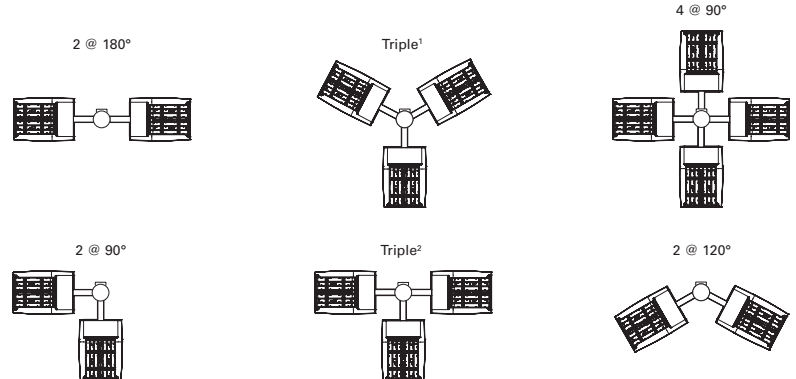
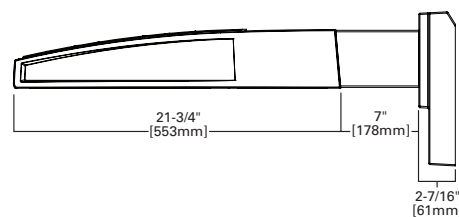
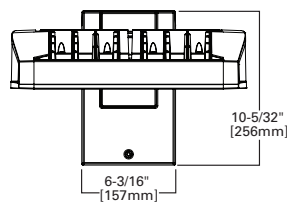
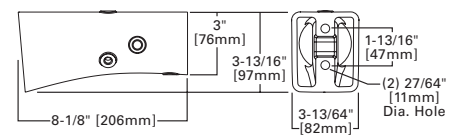
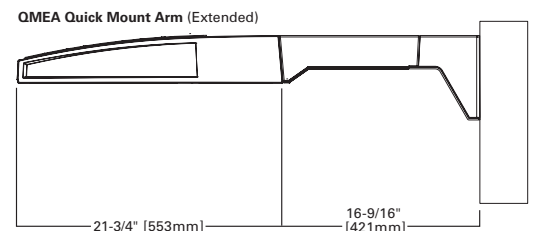
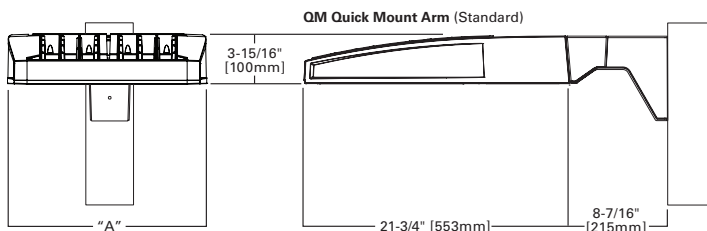
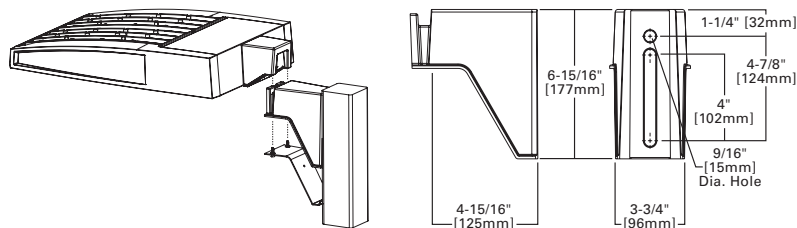
GLEON-AF-03-LED-E1-X-FINISH

Notes:**Type:****BLD**

PSA18-68593

GLEON GALLEON LED**ARM MOUNTING REQUIREMENTS**

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. 2 Round poles are 3 @ 90°.
STANDARD WALL MOUNT**MAST ARM MOUNT****QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)****QUICK MOUNT ARM DATA**

Number of Light Squares ^{1,2}	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 ³	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.

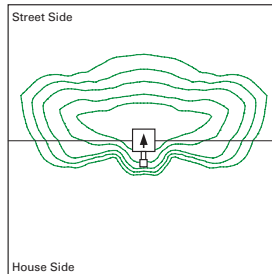
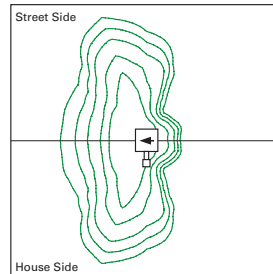
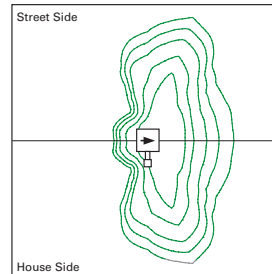
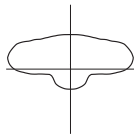
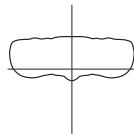
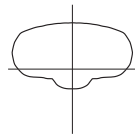
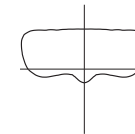
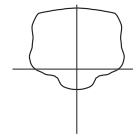
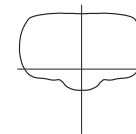
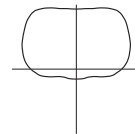
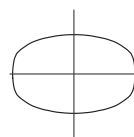
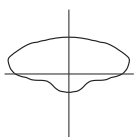
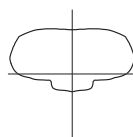
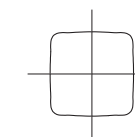
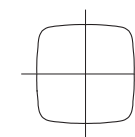
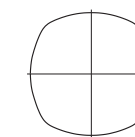
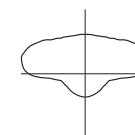
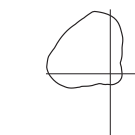
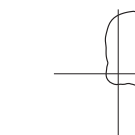
**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

GLEON-AF-03-LED-E1-X-FINISH

Type:**BLD**

Notes:

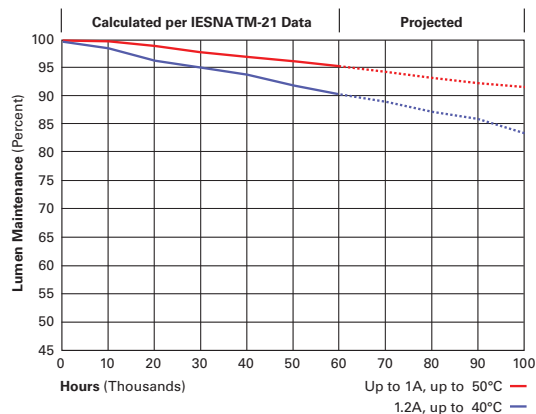
PSA18-68593


GLEON GALLEON LED**OPTIC ORIENTATION****Standard****Optics Rotated Left @ 90° [L90]****Optics Rotated Right @ 90° [R90]****OPTICAL DISTRIBUTIONS****Asymmetric Area Distributions****T2**
(Type II)**SL2**
(Type II with Spill Control)**T3**
(Type III)**SL3**
(Type III with Spill Control)**T4FT**
(Type IV Forward Throw)**T4W**
(Type IV Wide)**SL4**
(Type IV with Spill Control)**Asymmetric Roadway Distributions****RW**
(Rectangular Wide Type I)**T2R**
(Type II Roadway)**T3R**
(Type III Roadway)**Symmetric Distributions****5NQ**
(Type V Square Narrow)**5MQ**
(Type V Square Medium)**5WQ**
(Type V Square Wide)**Specialized Distributions****AFL**
(Automotive Frontline)**SLL**
(90° Spill Light Eliminator Left)**SLR**
(90° Spill Light Eliminator Right)**LUMEN MAINTENANCE**

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97



Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-03-LED-E1-X-FINISH	Type: BLD
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	PSA18-68593

GLEON GALLEON LED

NOMINAL POWER LUMENS (1.2A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K/5000K Lumens	6,709	13,111	19,562	25,848	32,026	38,325	45,324	51,355	57,286	63,424
	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	7,122	13,919	20,769	27,442	34,000	40,687	48,117	54,519	60,816	67,333
	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,838	13,363	19,939	26,346	32,642	39,062	46,196	52,343	58,388	64,646
	3000K Lumens	6,053	11,829	17,650	23,321	28,895	34,578	40,893	46,334	51,685	57,225
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,990	13,660	20,382	26,931	33,368	39,930	47,223	53,506	59,686	66,081
	3000K Lumens	6,188	12,092	18,042	23,839	29,537	35,346	41,802	47,364	52,834	58,495
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,878	13,440	20,055	26,499	32,832	39,289	46,464	52,646	58,726	65,020
	3000K Lumens	6,088	11,897	17,753	23,457	29,063	34,779	41,130	46,602	51,984	57,556
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,789	13,267	19,795	26,156	32,408	38,781	45,864	51,967	57,968	64,180
	3000K Lumens	6,010	11,744	17,523	23,153	28,688	34,329	40,599	46,001	51,313	56,812
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,697	13,088	19,529	25,804	31,970	38,259	45,245	51,267	57,186	63,315
	3000K Lumens	5,928	11,585	17,287	22,842	28,300	33,867	40,051	45,382	50,621	56,046
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,837	13,361	19,936	26,342	32,639	39,057	46,189	52,336	58,380	64,636
	3000K Lumens	6,052	11,827	17,647	23,318	28,892	34,573	40,887	46,328	51,678	57,216
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,496	12,695	18,943	25,029	31,011	37,110	43,886	49,727	55,470	61,414
	3000K Lumens	5,750	11,238	16,768	22,156	27,451	32,850	38,848	44,018	49,102	54,364
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	7,052	13,781	20,564	27,171	33,664	40,285	47,641	53,981	60,215	66,669
	3000K Lumens	6,242	12,199	18,203	24,052	29,799	35,660	42,172	47,784	53,302	59,015
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	7,182	14,034	20,942	27,671	34,284	41,027	48,518	54,975	61,323	67,896
	3000K Lumens	6,358	12,423	18,538	24,494	30,348	36,317	42,948	48,664	54,283	60,102
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	7,201	14,073	20,998	27,744	34,375	41,136	48,648	55,121	61,487	68,077
	3000K Lumens	6,374	12,457	18,587	24,559	30,429	36,414	43,063	48,793	54,428	60,262
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	6,009	11,741	17,519	23,148	28,681	34,321	40,589	45,990	51,301	56,798
	3000K Lumens	5,319	10,393	15,508	20,491	25,388	30,381	35,929	40,710	45,412	50,278
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
RW	4000K/5000K Lumens	6,989	13,657	20,378	26,925	33,360	39,921	47,211	53,494	59,672	66,066
	3000K Lumens	6,187	12,089	18,039	23,834	29,530	35,338	41,791	47,353	52,822	58,482
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	7,014	13,706	20,452	27,023	33,481	40,066	47,383	53,688	59,888	66,306
	3000K Lumens	6,209	12,133	18,104	23,921	29,637	35,466	41,943	47,525	53,013	58,694
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4


* Nominal data for 70 CRI.



Eaton
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Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-03-LED-E1-X-FINISH	Type: BLD PSA18-68593
 PUTTERMAN SCHARCK & ASSOCIATES	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	

GLEON GALLEON LED

NOMINAL POWER LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.6	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	1.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K/5000K Lumens	6,116	11,951	17,833	23,563	29,195	34,937	41,317	46,814	52,221	57,817
	3000K Lumens	5,414	10,579	15,786	20,858	25,843	30,926	36,574	41,440	46,226	51,180
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	6,493	12,688	18,932	25,015	30,994	37,090	43,863	49,699	55,439	61,380
	3000K Lumens	5,748	11,231	16,759	22,143	27,436	32,832	38,828	43,994	49,075	54,334
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,234	12,181	18,176	24,017	29,756	35,609	42,111	47,715	53,225	58,930
	3000K Lumens	5,518	10,783	16,089	21,260	26,340	31,521	37,277	42,237	47,115	52,165
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,372	12,453	18,580	24,550	30,418	36,400	43,048	48,776	54,409	60,239
	3000K Lumens	5,640	11,023	16,447	21,732	26,926	32,221	38,106	43,177	48,163	53,324
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,270	12,252	18,282	24,156	29,929	35,815	42,356	47,992	53,534	59,271
	3000K Lumens	5,550	10,845	16,183	21,383	26,493	31,703	37,494	42,483	47,388	52,467
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,189	12,094	18,045	23,844	29,543	35,352	41,809	47,372	52,843	58,506
	3000K Lumens	5,479	10,706	15,973	21,107	26,151	31,294	37,009	41,934	46,777	51,790
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,105	11,931	17,803	23,522	29,144	34,877	41,245	46,734	52,130	57,717
	3000K Lumens	5,404	10,561	15,759	20,822	25,798	30,873	36,510	41,369	46,145	51,091
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,233	12,180	18,174	24,013	29,753	35,604	42,106	47,708	53,218	58,921
	3000K Lumens	5,517	10,782	16,088	21,256	26,337	31,517	37,272	42,231	47,109	52,157
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	5,922	11,572	17,268	22,816	28,269	33,829	40,006	45,330	50,566	55,984
	3000K Lumens	5,242	10,244	15,286	20,197	25,024	29,945	35,413	40,126	44,761	49,557
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	6,429	12,563	18,746	24,768	30,688	36,723	43,429	49,208	54,891	60,775
	3000K Lumens	5,691	11,121	16,594	21,925	27,165	32,507	38,443	43,559	48,590	53,798
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	6,547	12,794	19,090	25,224	31,253	37,400	44,228	50,114	55,902	61,893
	3000K Lumens	5,795	11,325	16,898	22,328	27,665	33,106	39,151	44,361	49,484	54,788
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	6,564	12,828	19,141	25,291	31,336	37,499	44,347	50,248	56,051	62,058
	3000K Lumens	5,810	11,355	16,944	22,388	27,739	33,194	39,256	44,480	49,616	54,934
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	5,478	10,703	15,970	21,102	26,145	31,286	37,001	41,924	46,765	51,777
	3000K Lumens	4,849	9,474	14,137	18,679	23,144	27,694	32,753	37,111	41,396	45,833
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	6,371	12,449	18,576	24,544	30,411	36,392	43,037	48,764	54,396	60,225
	3000K Lumens	5,640	11,020	16,443	21,726	26,920	32,214	38,096	43,166	48,151	53,311
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	6,394	12,494	18,644	24,634	30,521	36,524	43,194	48,942	54,593	60,444
	3000K Lumens	5,660	11,060	16,504	21,806	27,017	32,331	38,235	43,323	48,326	53,505
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4

* Nominal data for 70 CRI.

Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-03-LED-E1-X-FINISH Notes:	Type: BLD PSA18-68593
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		

GLEON GALLEON LED

NOMINAL POWER LUMENS (800MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K/5000K Lumens	4,941	9,656	14,408	19,038	23,588	28,227	33,382	37,823	42,191	46,713
	3000K Lumens	4,374	8,547	12,754	16,852	20,880	24,987	29,550	33,481	37,347	41,350
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	5,246	10,251	15,296	20,211	25,041	29,966	35,439	40,154	44,791	49,592
	3000K Lumens	4,644	9,074	13,540	17,891	22,166	26,526	31,371	35,544	39,649	43,899
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3	4000K/5000K Lumens	5,037	9,842	14,685	19,404	24,041	28,770	34,024	38,551	43,003	47,612
	3000K Lumens	4,459	8,712	12,999	17,176	21,281	25,467	30,118	34,125	38,066	42,146
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	5,148	10,061	15,011	19,835	24,576	29,409	34,780	39,408	43,959	48,669
	3000K Lumens	4,557	8,906	13,288	17,558	21,755	26,033	30,787	34,884	38,913	43,082
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	5,066	9,899	14,770	19,516	24,181	28,936	34,221	38,774	43,252	47,888
	3000K Lumens	4,484	8,763	13,074	17,276	21,405	25,614	30,292	34,323	38,287	42,390
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	5,000	9,771	14,579	19,264	23,869	28,562	33,779	38,274	42,694	47,269
	3000K Lumens	4,426	8,649	12,905	17,052	21,129	25,283	29,901	33,880	37,793	41,843
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	4,933	9,639	14,383	19,005	23,547	28,178	33,324	37,758	42,118	46,632
	3000K Lumens	4,367	8,532	12,732	16,823	20,844	24,943	29,498	33,423	37,283	41,279
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	5,036	9,841	14,683	19,401	24,039	28,766	34,019	38,546	42,997	47,605
	3000K Lumens	4,458	8,711	12,997	17,174	21,279	25,464	30,114	34,121	38,061	42,140
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	4,784	9,350	13,951	18,434	22,840	27,332	32,323	36,624	40,854	45,232
	3000K Lumens	4,235	8,277	12,349	16,318	20,218	24,194	28,612	32,420	36,164	40,039
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	5,194	10,150	15,145	20,011	24,794	29,670	35,088	39,757	44,349	49,102
	3000K Lumens	4,598	8,985	13,406	17,714	21,948	26,264	31,060	35,193	39,258	43,465
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5MQ	4000K/5000K Lumens	5,290	10,337	15,424	20,380	25,250	30,217	35,734	40,489	45,165	50,006
	3000K Lumens	4,683	9,150	13,653	18,040	22,351	26,748	31,632	35,841	39,980	44,265
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	5,304	10,365	15,465	20,434	25,318	30,297	35,830	40,597	45,286	50,139
	3000K Lumens	4,695	9,175	13,690	18,088	22,411	26,819	31,717	35,936	40,087	44,383
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	4,426	8,648	12,903	17,049	21,124	25,278	29,894	33,872	37,784	41,832
	3000K Lumens	3,918	7,655	11,422	15,092	18,699	22,376	26,462	29,983	33,446	37,030
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	5,147	10,058	15,009	19,830	24,570	29,402	34,771	39,399	43,949	48,658
	3000K Lumens	4,556	8,903	13,286	17,554	21,749	26,027	30,779	34,876	38,904	43,072
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
AFL	4000K/5000K Lumens	5,166	10,095	15,063	19,903	24,659	29,509	34,898	39,542	44,108	48,835
	3000K Lumens	4,573	8,936	13,334	17,618	21,828	26,121	30,892	35,003	39,044	43,229
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3


* Nominal data for 70 CRI.



Eaton
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Specifications and
dimensions subject to
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2016-09-28 15:31:55

Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-03-LED-E1-X-FINISH Notes:	Type: BLD PSA18-68593
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		

GLEON GALLEON LED

NOMINAL POWER LUMENS (600MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K/5000K Lumens	4,029	7,874	11,749	15,525	19,235	23,019	27,222	30,844	34,406	38,093
	3000K Lumens	3,566	6,970	10,400	13,743	17,027	20,376	24,097	27,303	30,456	33,720
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T2R	4000K/5000K Lumens	4,278	8,360	12,474	16,482	20,421	24,437	28,900	32,745	36,527	40,441
	3000K Lumens	3,787	7,400	11,042	14,590	18,077	21,632	25,582	28,986	32,334	35,798
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3	4000K/5000K Lumens	4,107	8,026	11,976	15,824	19,605	23,461	27,746	31,438	35,068	38,827
	3000K Lumens	3,636	7,105	10,601	14,007	17,354	20,768	24,561	27,829	31,042	34,370
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T3R	4000K/5000K Lumens	4,198	8,205	12,242	16,175	20,041	23,982	28,363	32,137	35,848	39,689
	3000K Lumens	3,716	7,263	10,837	14,318	17,740	21,229	25,107	28,448	31,733	35,133
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	4,131	8,072	12,045	15,915	19,719	23,597	27,907	31,620	35,272	39,052
	3000K Lumens	3,657	7,145	10,662	14,088	17,455	20,888	24,703	27,990	31,223	34,569
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	4,077	7,968	11,889	15,710	19,465	23,292	27,546	31,212	34,816	38,547
	3000K Lumens	3,609	7,053	10,524	13,906	17,230	20,618	24,384	27,629	30,819	34,122
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL2	4000K/5000K Lumens	4,022	7,861	11,729	15,498	19,202	22,979	27,175	30,791	34,347	38,028
	3000K Lumens	3,560	6,959	10,383	13,719	16,998	20,341	24,055	27,256	30,404	33,662
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL3	4000K/5000K Lumens	4,106	8,025	11,974	15,821	19,603	23,458	27,742	31,433	35,064	38,821
	3000K Lumens	3,635	7,104	10,599	14,005	17,353	20,765	24,557	27,824	31,039	34,364
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	3,902	7,624	11,377	15,033	18,626	22,289	26,359	29,867	33,316	36,886
	3000K Lumens	3,454	6,749	10,071	13,307	16,488	19,730	23,333	26,438	29,491	32,651
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	4,236	8,277	12,351	16,319	20,219	24,196	28,614	32,422	36,166	40,042
	3000K Lumens	3,750	7,327	10,933	14,446	17,898	21,418	25,329	28,700	32,014	35,445
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
5MQ	4000K/5000K Lumens	4,314	8,429	12,578	16,619	20,591	24,641	29,141	33,019	36,832	40,779
	3000K Lumens	3,819	7,461	11,134	14,711	18,227	21,812	25,796	29,228	32,604	36,098
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	4,325	8,452	12,611	16,664	20,646	24,707	29,219	33,106	36,930	40,888
	3000K Lumens	3,828	7,482	11,163	14,751	18,276	21,871	25,865	29,305	32,690	36,194
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
SLL/SLR	4000K/5000K Lumens	3,609	7,052	10,522	13,903	17,226	20,613	24,378	27,622	30,812	34,114
	3000K Lumens	3,195	6,242	9,314	12,307	15,248	18,247	21,579	24,451	27,275	30,198
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	4,197	8,202	12,239	16,171	20,036	23,977	28,356	32,129	35,839	39,680
	3000K Lumens	3,715	7,260	10,834	14,315	17,736	21,224	25,101	28,441	31,725	35,125
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
AFL	4000K/5000K Lumens	4,213	8,232	12,284	16,230	20,109	24,064	28,459	32,246	35,969	39,824
	3000K Lumens	3,729	7,287	10,874	14,367	17,800	21,301	25,192	28,544	31,840	35,252
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 70 CRI.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

GLEON-AF-03-LED-E1-X-FINISH

Notes:**Type:****BLD**

PSA18-68593

GLEON GALLEON LED**CONTROL OPTIONS****0-10V (DIM)**

This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (P, R and PER7)

Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

After Hours Dim (AHD)

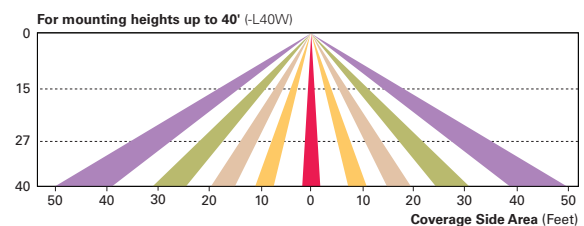
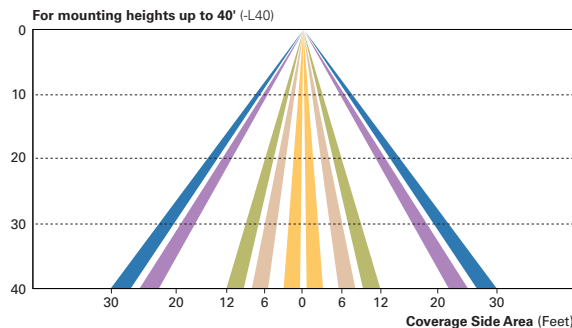
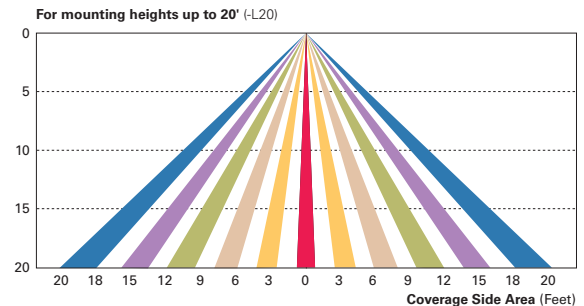
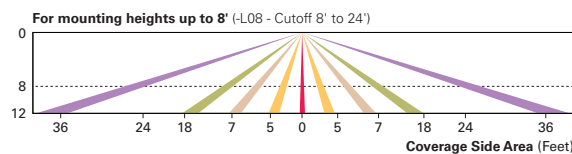
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

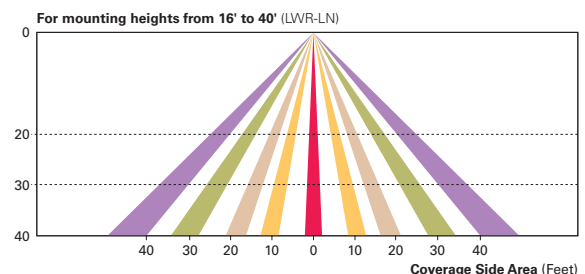
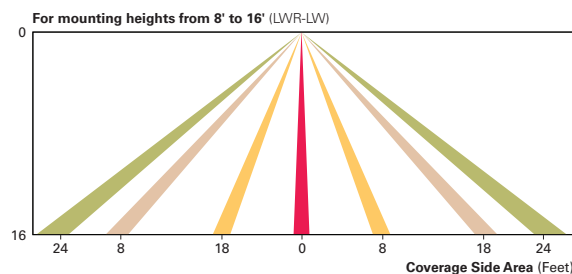
These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.

**LumaWatt Wireless Control and Monitoring System (LWR-LW and LWR-LN)**

The LumaWatt system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt product guides.



Submitted by Putterman, Scharck & Assoc.

PUTTERMAN
SCHARCK
& ASSOCIATES

Job Name:

MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering

Catalog Number:

GLEON-AF-03-LED-E1-X-FINISH

Notes:

Type:

BLD

PSA18-68593

GLEON GALLEON LED

ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

Product Family ^{1,2}	Light Engine	Number of Light Squares ³	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	AF=1A Drive Current	01=1 02=2 03=3 04=4 05=5 06=6 07=7 ⁴ 08=8 ⁴ 09=9 ⁵ 10=10 ⁵	LED=Solid State Light Emitting Diodes	E1=120-277V 347=347V ⁶ 480=480V ^{6,7}	T2=Type II T2R=Type II Roadway T3=Type III T3R=Type III Roadway T4FT=Type IV Forward Throw T4W=Type IV Wide 5NQ=Type V Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	[Blank]=Arm for Round or Square Pole EA=Extended Arm ⁸ MA=Mast Arm Adapter ⁹ WM=Wall Mount QM=Quick Mount Arm (Standard Length) ¹⁰ QMEA=Quick Mount Arm (Extended Length) ¹¹
Options (Add as Suffix)					Accessories (Order Separately)		
<p>7030=70 CRI 3000K ¹² 8030=80 CRI 3000K ¹³ 7050=70 CRI 5000K ¹² 7060=70 CRI 6000K ¹² 600=Drive Current Factory Set to Nominal 600mA ¹⁴ 800=Drive Current Factory Set to Nominal 800mA ¹⁴ 1200=Drive Current Factory Set to Nominal 1200mA ^{14,15} F=Single Fuse (120, 277 or 347V. Must Specify Voltage) FF=Double Fuse (208, 240 or 480V. Must Specify Voltage) 2L=Two Circuits ^{16,17} DIM=External 0-10V Dimming Leads P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Volatage) PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle R=NEMA Twistlock Photocontrol Receptacle AHD145=After Hours Dim, 5 Hours ¹⁸ AHD245=After Hours Dim, 6 Hours ¹⁸ AHD255=After Hours Dim, 7 Hours ¹⁸ AHD355=After Hours Dim, 8 Hours ¹⁸ HA=50°C High Ambient ¹⁹ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{20,21} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{20,22} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{20,23} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{20,24} MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height ^{20,21,25} MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height ^{20,22,25} MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height ^{20,23,25} MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) ^{20,24,25} MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height ^{20,21} MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height ^{20,22} MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height ^{20,23} MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) ^{20,24} LWR-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ²⁶ LWR-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ²⁶ L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right MIT=Factory Installed Mesh Top TH=Tool-less Door Hardware LCF=Light Square Trim Plate Painted to Match Housing ²⁷ HSS=Factory Installed House Side Shield ²⁸ CE=CE Marking ²⁹</p>					<p>OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V OA/RA1013=Photocontrol Shorting Cap OA/RA1014=120V Photocontrol MA1252=10kV Surge Module Replacement MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²⁰ GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares GLEON-QM=Quick Mount Arm Kit GLEON-QMEA=Quick Mount Extended Arm Kit LS/HSS=Field Installed House Side Shield ^{28,30}</p>		

NOTES:

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.

2. DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.

3. Standard 4000K CCT and minimum 70 CRI.

4. Not compatible with extended quick mount arm (QMEA).

5. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).

6. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.

7. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).

8. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.

9. Factory installed.

10. Maximum 8 light squares.

11. Maximum 6 light squares.

12. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.

13. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.

14. 1 Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. These files are published on the Galleon luminaire product page on the website.

15. Not available with HA option.

16. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.

17. Not available with LumaWatt wireless sensors.

18. Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.

19. 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents.

20. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.

21. Approximately 22' detection diameter at 8' mounting height.

22. Approximately 40' detection diameter at 20' mounting height.

23. Approximately 60' detection diameter at 40' mounting height.

24. Approximately 100' detection diameter at 40' mounting height.

25. Replace X with number of Light Squares operating in low output mode.

26. LumaWatt wireless sensors are factory installed only requiring network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.

27. Not available with house side shield (HSS).

28. Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.

29. CE is not available with the LWR, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only.

30. One required for each Light Square.

EATON

Powering Business Worldwide

1121 Highway 74 South
Peachtree City, GA 30269
P: 770-496-4900
www.eaton.com/lighting

Specifications and
dimensions subject to
change without notice.

TD500020EN
2016-09-28 15:31:55

Submitted On: Jan 23, 2018

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**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

GLEON-AF-04-LED-E1-X-FINISH

Notes:

Type:**KVE**

PSA18-68593

McGraw-Edison**DESCRIPTION**

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

SPECIFICATION FEATURES**Construction**

Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics

Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical

LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting

STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the

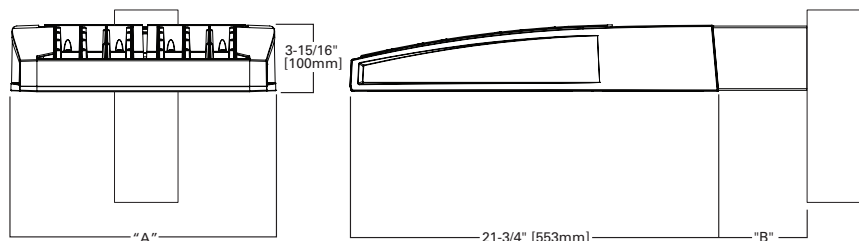
arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. **QUICK MOUNT ARM:** Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish

Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

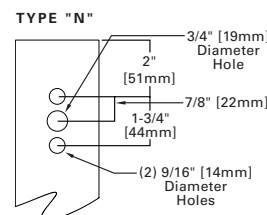
Warranty

Five-year warranty.

**GLEON
GALLEON LED****1-10 Light Squares****Solid State LED****AREA/SITE LUMINAIRE****DIMENSIONS****DIMENSION DATA**

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length ¹	Weight with Arm (lbs.)	EPA with Arm ² (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

**DRILLING PATTERN****CERTIFICATION DATA**

UL/cUL Wet Location Listed
ISO 9001
LM79 / LM80 Compliant
3G Vibration Rated
IP66 Rated
DesignLights Consortium™ Qualified*

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)



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*www.designlights.org

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

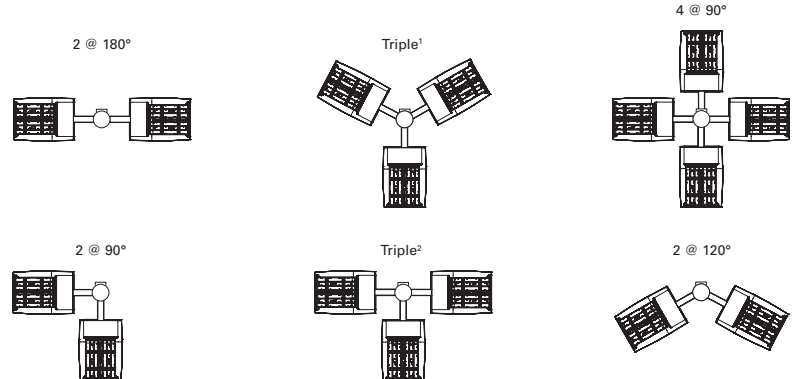
GLEON-AF-04-LED-E1-X-FINISH

Notes:**Type:****KVE**

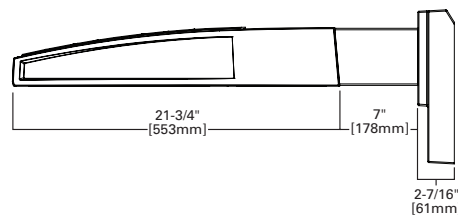
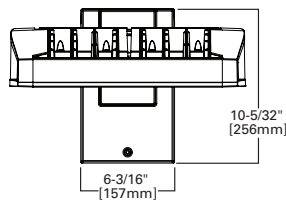
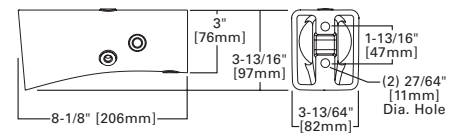
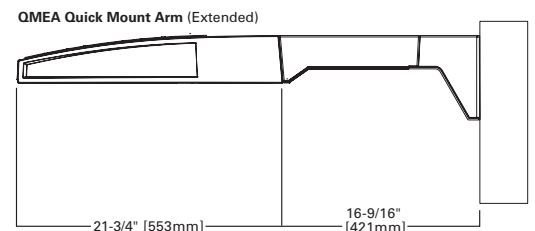
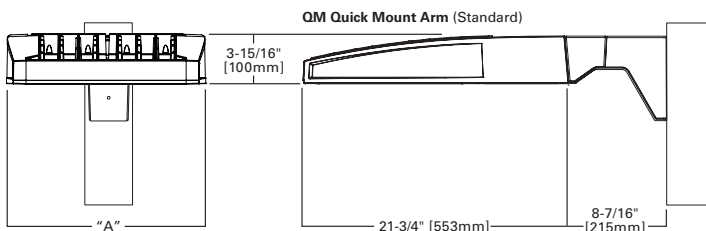
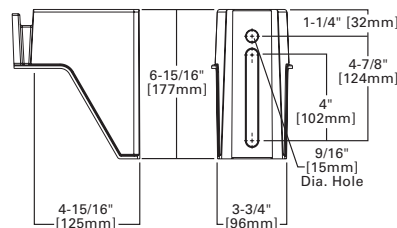
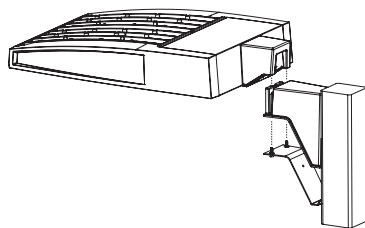
PSA18-68593

GLEON GALLEON LED**ARM MOUNTING REQUIREMENTS**

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)



NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. 2 Round poles are 3 @ 90°.

STANDARD WALL MOUNT**MAST ARM MOUNT****QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)****QUICK MOUNT ARM DATA**

Number of Light Squares ^{1,2}	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 ³	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.

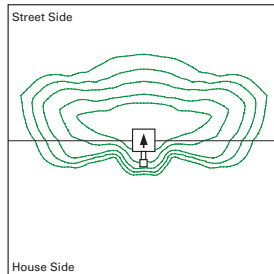
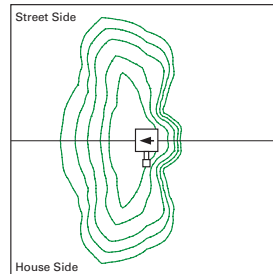
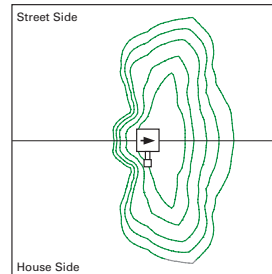
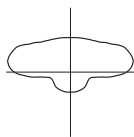
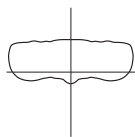
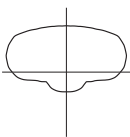
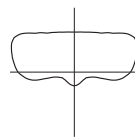
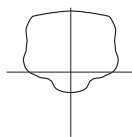
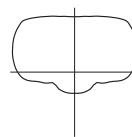
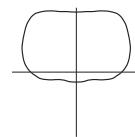
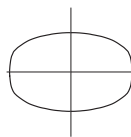
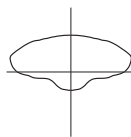
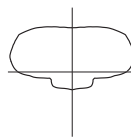
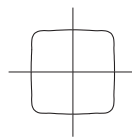
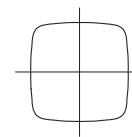
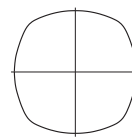
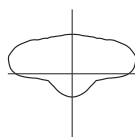
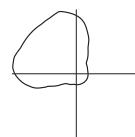
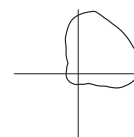
**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

GLEON-AF-04-LED-E1-X-FINISH

Notes:

Type:**KVE**

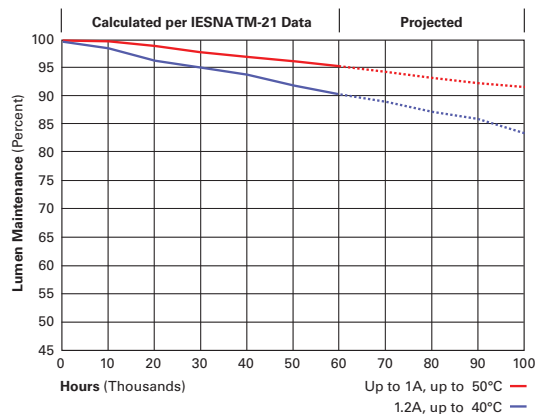
PSA18-68593


GLEON GALLEON LED**OPTIC ORIENTATION****Standard****Optics Rotated Left @ 90° [L90]****Optics Rotated Right @ 90° [R90]****OPTICAL DISTRIBUTIONS****Asymmetric Area Distributions****T2**
(Type II)**SL2**
(Type II with Spill Control)**T3**
(Type III)**SL3**
(Type III with Spill Control)**T4FT**
(Type IV Forward Throw)**T4W**
(Type IV Wide)**SL4**
(Type IV with Spill Control)**Asymmetric Roadway Distributions****RW**
(Rectangular Wide Type I)**T2R**
(Type II Roadway)**T3R**
(Type III Roadway)**Symmetric Distributions****5NQ**
(Type V Square Narrow)**5MQ**
(Type V Square Medium)**5WQ**
(Type V Square Wide)**Specialized Distributions****AFL**
(Automotive Frontline)**SLL**
(90° Spill Light Eliminator Left)**SLR**
(90° Spill Light Eliminator Right)**LUMEN MAINTENANCE**

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97



Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-04-LED-E1-X-FINISH	Type: KVE
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering	Notes:	
			PSA18-68593

GLEON GALLEON LED

NOMINAL POWER LUMENS (1.2A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K/5000K Lumens	6,709	13,111	19,562	25,848	32,026	38,325	45,324	51,355	57,286	63,424
	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	7,122	13,919	20,769	27,442	34,000	40,687	48,117	54,519	60,816	67,333
	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,838	13,363	19,939	26,346	32,642	39,062	46,196	52,343	58,388	64,646
	3000K Lumens	6,053	11,829	17,650	23,321	28,895	34,578	40,893	46,334	51,685	57,225
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,990	13,660	20,382	26,931	33,368	39,930	47,223	53,506	59,686	66,081
	3000K Lumens	6,188	12,092	18,042	23,839	29,537	35,346	41,802	47,364	52,834	58,495
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,878	13,440	20,055	26,499	32,832	39,289	46,464	52,646	58,726	65,020
	3000K Lumens	6,088	11,897	17,753	23,457	29,063	34,779	41,130	46,602	51,984	57,556
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,789	13,267	19,795	26,156	32,408	38,781	45,864	51,967	57,968	64,180
	3000K Lumens	6,010	11,744	17,523	23,153	28,688	34,329	40,599	46,001	51,313	56,812
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,697	13,088	19,529	25,804	31,970	38,259	45,245	51,267	57,186	63,315
	3000K Lumens	5,928	11,585	17,287	22,842	28,300	33,867	40,051	45,382	50,621	56,046
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,837	13,361	19,936	26,342	32,639	39,057	46,189	52,336	58,380	64,636
	3000K Lumens	6,052	11,827	17,647	23,318	28,892	34,573	40,887	46,328	51,678	57,216
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,496	12,695	18,943	25,029	31,011	37,110	43,886	49,727	55,470	61,414
	3000K Lumens	5,750	11,238	16,768	22,156	27,451	32,850	38,848	44,018	49,102	54,364
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	7,052	13,781	20,564	27,171	33,664	40,285	47,641	53,981	60,215	66,669
	3000K Lumens	6,242	12,199	18,203	24,052	29,799	35,660	42,172	47,784	53,302	59,015
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	7,182	14,034	20,942	27,671	34,284	41,027	48,518	54,975	61,323	67,896
	3000K Lumens	6,358	12,423	18,538	24,494	30,348	36,317	42,948	48,664	54,283	60,102
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	7,201	14,073	20,998	27,744	34,375	41,136	48,648	55,121	61,487	68,077
	3000K Lumens	6,374	12,457	18,587	24,559	30,429	36,414	43,063	48,793	54,428	60,262
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	6,009	11,741	17,519	23,148	28,681	34,321	40,589	45,990	51,301	56,798
	3000K Lumens	5,319	10,393	15,508	20,491	25,388	30,381	35,929	40,710	45,412	50,278
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
RW	4000K/5000K Lumens	6,989	13,657	20,378	26,925	33,360	39,921	47,211	53,494	59,672	66,066
	3000K Lumens	6,187	12,089	18,039	23,834	29,530	35,338	41,791	47,353	52,822	58,482
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	7,014	13,706	20,452	27,023	33,481	40,066	47,383	53,688	59,888	66,306
	3000K Lumens	6,209	12,133	18,104	23,921	29,637	35,466	41,943	47,525	53,013	58,694
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4


* Nominal data for 70 CRI.



Eaton
1121 Highway 74 South
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TD500020EN
2016-09-28 15:31:55

Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-04-LED-E1-X-FINISH Notes:	Type: KVE PSA18-68593
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		

GLEON GALLEON LED

NOMINAL POWER LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.6	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	1.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K/5000K Lumens	6,116	11,951	17,833	23,563	29,195	34,937	41,317	46,814	52,221	57,817
	3000K Lumens	5,414	10,579	15,786	20,858	25,843	30,926	36,574	41,440	46,226	51,180
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	6,493	12,688	18,932	25,015	30,994	37,090	43,863	49,699	55,439	61,380
	3000K Lumens	5,748	11,231	16,759	22,143	27,436	32,832	38,828	43,994	49,075	54,334
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,234	12,181	18,176	24,017	29,756	35,609	42,111	47,715	53,225	58,930
	3000K Lumens	5,518	10,783	16,089	21,260	26,340	31,521	37,277	42,237	47,115	52,165
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,372	12,453	18,580	24,550	30,418	36,400	43,048	48,776	54,409	60,239
	3000K Lumens	5,640	11,023	16,447	21,732	26,926	32,221	38,106	43,177	48,163	53,324
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,270	12,252	18,282	24,156	29,929	35,815	42,356	47,992	53,534	59,271
	3000K Lumens	5,550	10,845	16,183	21,383	26,493	31,703	37,494	42,483	47,388	52,467
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,189	12,094	18,045	23,844	29,543	35,352	41,809	47,372	52,843	58,506
	3000K Lumens	5,479	10,706	15,973	21,107	26,151	31,294	37,009	41,934	46,777	51,790
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,105	11,931	17,803	23,522	29,144	34,877	41,245	46,734	52,130	57,717
	3000K Lumens	5,404	10,561	15,759	20,822	25,798	30,873	36,510	41,369	46,145	51,091
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,233	12,180	18,174	24,013	29,753	35,604	42,106	47,708	53,218	58,921
	3000K Lumens	5,517	10,782	16,088	21,256	26,337	31,517	37,272	42,231	47,109	52,157
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	5,922	11,572	17,268	22,816	28,269	33,829	40,006	45,330	50,566	55,984
	3000K Lumens	5,242	10,244	15,286	20,197	25,024	29,945	35,413	40,126	44,761	49,557
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	6,429	12,563	18,746	24,768	30,688	36,723	43,429	49,208	54,891	60,775
	3000K Lumens	5,691	11,121	16,594	21,925	27,165	32,507	38,443	43,559	48,590	53,798
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	6,547	12,794	19,090	25,224	31,253	37,400	44,228	50,114	55,902	61,893
	3000K Lumens	5,795	11,325	16,898	22,328	27,665	33,106	39,151	44,361	49,484	54,788
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	6,564	12,828	19,141	25,291	31,336	37,499	44,347	50,248	56,051	62,058
	3000K Lumens	5,810	11,355	16,944	22,388	27,739	33,194	39,256	44,480	49,616	54,934
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	5,478	10,703	15,970	21,102	26,145	31,286	37,001	41,924	46,765	51,777
	3000K Lumens	4,849	9,474	14,137	18,679	23,144	27,694	32,753	37,111	41,396	45,833
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	6,371	12,449	18,576	24,544	30,411	36,392	43,037	48,764	54,396	60,225
	3000K Lumens	5,640	11,020	16,443	21,726	26,920	32,214	38,096	43,166	48,151	53,311
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	6,394	12,494	18,644	24,634	30,521	36,524	43,194	48,942	54,593	60,444
	3000K Lumens	5,660	11,060	16,504	21,806	27,017	32,331	38,235	43,323	48,326	53,505
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4


* Nominal data for 70 CRI.



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 PUTTERMAN SCHARCK & ASSOCIATES	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		

GLEON GALLEON LED

NOMINAL POWER LUMENS (800MA)


Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K/5000K Lumens	4,941	9,656	14,408	19,038	23,588	28,227	33,382	37,823	42,191	46,713
	3000K Lumens	4,374	8,547	12,754	16,852	20,880	24,987	29,550	33,481	37,347	41,350
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	5,246	10,251	15,296	20,211	25,041	29,966	35,439	40,154	44,791	49,592
	3000K Lumens	4,644	9,074	13,540	17,891	22,166	26,526	31,371	35,544	39,649	43,899
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3	4000K/5000K Lumens	5,037	9,842	14,685	19,404	24,041	28,770	34,024	38,551	43,003	47,612
	3000K Lumens	4,459	8,712	12,999	17,176	21,281	25,467	30,118	34,125	38,066	42,146
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	5,148	10,061	15,011	19,835	24,576	29,409	34,780	39,408	43,959	48,669
	3000K Lumens	4,557	8,906	13,288	17,558	21,755	26,033	30,787	34,884	38,913	43,082
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	5,066	9,899	14,770	19,516	24,181	28,936	34,221	38,774	43,252	47,888
	3000K Lumens	4,484	8,763	13,074	17,276	21,405	25,614	30,292	34,323	38,287	42,390
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	5,000	9,771	14,579	19,264	23,869	28,562	33,779	38,274	42,694	47,269
	3000K Lumens	4,426	8,649	12,905	17,052	21,129	25,283	29,901	33,880	37,793	41,843
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	4,933	9,639	14,383	19,005	23,547	28,178	33,324	37,758	42,118	46,632
	3000K Lumens	4,367	8,532	12,732	16,823	20,844	24,943	29,498	33,423	37,283	41,279
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	5,036	9,841	14,683	19,401	24,039	28,766	34,019	38,546	42,997	47,605
	3000K Lumens	4,458	8,711	12,997	17,174	21,279	25,464	30,114	34,121	38,061	42,140
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	4,784	9,350	13,951	18,434	22,840	27,332	32,323	36,624	40,854	45,232
	3000K Lumens	4,235	8,277	12,349	16,318	20,218	24,194	28,612	32,420	36,164	40,039
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	5,194	10,150	15,145	20,011	24,794	29,670	35,088	39,757	44,349	49,102
	3000K Lumens	4,598	8,985	13,406	17,714	21,948	26,264	31,060	35,193	39,258	43,465
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5MQ	4000K/5000K Lumens	5,290	10,337	15,424	20,380	25,250	30,217	35,734	40,489	45,165	50,006
	3000K Lumens	4,683	9,150	13,653	18,040	22,351	26,748	31,632	35,841	39,980	44,265
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	5,304	10,365	15,465	20,434	25,318	30,297	35,830	40,597	45,286	50,139
	3000K Lumens	4,695	9,175	13,690	18,088	22,411	26,819	31,717	35,936	40,087	44,383
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	4,426	8,648	12,903	17,049	21,124	25,278	29,894	33,872	37,784	41,832
	3000K Lumens	3,918	7,655	11,422	15,092	18,699	22,376	26,462	29,983	33,446	37,030
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	5,147	10,058	15,009	19,830	24,570	29,402	34,771	39,399	43,949	48,658
	3000K Lumens	4,556	8,903	13,286	17,554	21,749	26,027	30,779	34,876	38,904	43,072
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
AFL	4000K/5000K Lumens	5,166	10,095	15,063	19,903	24,659	29,509	34,898	39,542	44,108	48,835
	3000K Lumens	4,573	8,936	13,334	17,618	21,828	26,121	30,892	35,003	39,044	43,229
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 70 CRI.



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Submitted by Putterman, Scharck & Assoc.		Catalog Number: GLEON-AF-04-LED-E1-X-FINISH Notes:	Type: KVE PSA18-68593
	Job Name: MD Anderson Standard Spec Electrical Engineer: BenCov Engineering		

GLEON GALLEON LED

NOMINAL POWER LUMENS (600MA)

Number of Light Squares	1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)	34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)	0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)	0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)	0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)	0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)	0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)	0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics										
T2	4000K/5000K Lumens	4,029	7,874	11,749	15,525	19,235	23,019	27,222	30,844	38,093
	3000K Lumens	3,566	6,970	10,400	13,743	17,027	20,376	24,097	27,303	33,720
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T2R	4000K/5000K Lumens	4,278	8,360	12,474	16,482	20,421	24,437	28,900	32,745	40,441
	3000K Lumens	3,787	7,400	11,042	14,590	18,077	21,632	25,582	28,986	35,798
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4
T3	4000K/5000K Lumens	4,107	8,026	11,976	15,824	19,605	23,461	27,746	31,438	38,827
	3000K Lumens	3,636	7,105	10,601	14,007	17,354	20,768	24,561	27,829	34,370
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3R	4000K/5000K Lumens	4,198	8,205	12,242	16,175	20,041	23,982	28,363	32,137	39,689
	3000K Lumens	3,716	7,263	10,837	14,318	17,740	21,229	25,107	28,448	35,133
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T4FT	4000K/5000K Lumens	4,131	8,072	12,045	15,915	19,719	23,597	27,907	31,620	39,052
	3000K Lumens	3,657	7,145	10,662	14,088	17,455	20,888	24,703	27,990	34,569
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	4,077	7,968	11,889	15,710	19,465	23,292	27,546	31,212	38,547
	3000K Lumens	3,609	7,053	10,524	13,906	17,230	20,618	24,384	27,629	34,122
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL2	4000K/5000K Lumens	4,022	7,861	11,729	15,498	19,202	22,979	27,175	30,791	38,028
	3000K Lumens	3,560	6,959	10,383	13,719	16,998	20,341	24,055	27,256	33,662
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL3	4000K/5000K Lumens	4,106	8,025	11,974	15,821	19,603	23,458	27,742	31,433	38,821
	3000K Lumens	3,635	7,104	10,599	14,005	17,353	20,765	24,557	27,824	34,364
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL4	4000K/5000K Lumens	3,902	7,624	11,377	15,033	18,626	22,289	26,359	29,867	36,886
	3000K Lumens	3,454	6,749	10,071	13,307	16,488	19,730	23,333	26,438	32,651
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	4,236	8,277	12,351	16,319	20,219	24,196	28,614	32,422	40,042
	3000K Lumens	3,750	7,327	10,933	14,446	17,898	21,418	25,329	28,700	35,445
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3
5MQ	4000K/5000K Lumens	4,314	8,429	12,578	16,619	20,591	24,641	29,141	33,019	40,779
	3000K Lumens	3,819	7,461	11,134	14,711	18,227	21,812	25,796	29,228	36,098
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	4,325	8,452	12,611	16,664	20,646	24,707	29,219	33,106	40,888
	3000K Lumens	3,828	7,482	11,163	14,751	18,276	21,871	25,865	29,305	36,194
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
SLL/SLR	4000K/5000K Lumens	3,609	7,052	10,522	13,903	17,226	20,613	24,378	27,622	34,114
	3000K Lumens	3,195	6,242	9,314	12,307	15,248	18,247	21,579	24,451	30,198
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
RW	4000K/5000K Lumens	4,197	8,202	12,239	16,171	20,036	23,977	28,356	32,129	39,680
	3000K Lumens	3,715	7,260	10,834	14,315	17,736	21,224	25,101	28,441	35,125
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3
AFL	4000K/5000K Lumens	4,213	8,232	12,284	16,230	20,109	24,064	28,459	32,246	39,824
	3000K Lumens	3,729	7,287	10,874	14,367	17,800	21,301	25,192	28,544	35,252
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 70 CRI.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

GLEON-AF-04-LED-E1-X-FINISH

Notes:**Type:****KVE**

PSA18-68593

GLEON GALLEON LED**CONTROL OPTIONS****0-10V (DIM)**

This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (P, R and PER7)

Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

After Hours Dim (AHD)

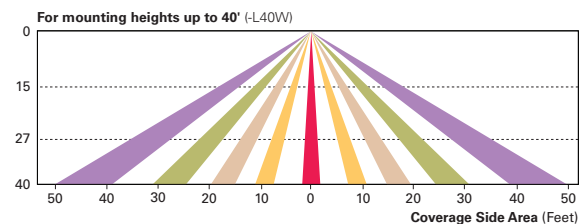
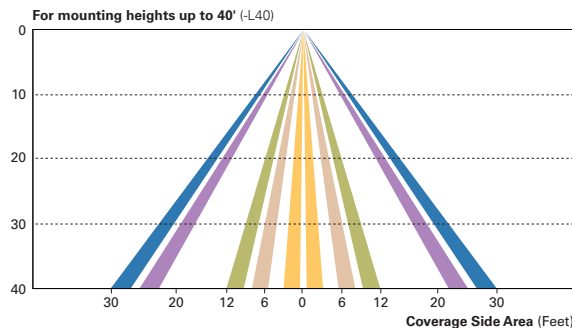
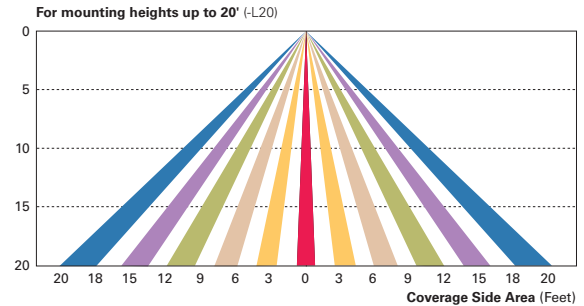
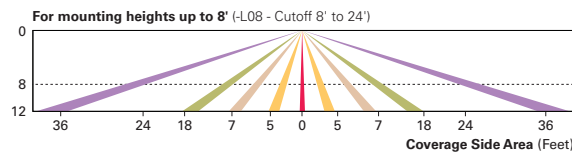
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

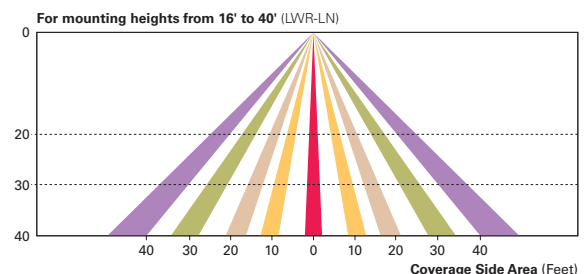
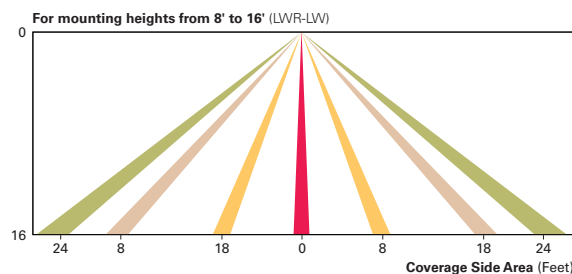
These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.

**LumaWatt Wireless Control and Monitoring System (LWR-LW and LWR-LN)**

The LumaWatt system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt product guides.



Submitted by Putterman, Scharck & Assoc.

PUTTERMAN
SCHARCK
& ASSOCIATES

Job Name:

MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering

Catalog Number:

GLEON-AF-04-LED-E1-X-FINISH

Notes:

Type:

KVE

PSA18-68593

GLEON GALLEON LED

ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

Product Family ^{1,2}	Light Engine	Number of Light Squares ³	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	AF=1A Drive Current	01=1 02=2 03=3 04=4 05=5 06=6 07=7 ⁴ 08=8 ⁴ 09=9 ⁵ 10=10 ⁵	LED=Solid State Light Emitting Diodes	E1=120-277V 347=347V ⁶ 480=480V ^{6,7}	T2=Type II T2R=Type II Roadway T3=Type III T3R=Type III Roadway T4FT=Type IV Forward Throw T4W=Type IV Wide 5NQ=Type V Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	[Blank]=Arm for Round or Square Pole EA=Extended Arm ⁸ MA=Mast Arm Adapter ⁹ WM=Wall Mount QM=Quick Mount Arm (Standard Length) ¹⁰ QMEA=Quick Mount Arm (Extended Length) ¹¹

Options (Add as Suffix)

Accessories (Order Separately)

7030=70 CRI 3000K ¹²
8030=80 CRI 3000K ¹³
7050=70 CRI 5000K ¹²
7060=70 CRI 6000K ¹²
600=Drive Current Factory Set to Nominal 600mA ¹⁴
800=Drive Current Factory Set to Nominal 800mA ¹⁴
1200=Drive Current Factory Set to Nominal 1200mA ^{14,15}
F=Single Fuse (120, 277 or 347V. Must Specify Voltage)
FF=Double Fuse (208, 240 or 480V. Must Specify Voltage)
2L=Two Circuits ^{16,17}
DIM=External 0-10V Dimming Leads
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Volatage)
PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle
R=NEMA Twistlock Photocontrol Receptacle
AHD145=After Hours Dim, 5 Hours ¹⁸
AHD245=After Hours Dim, 6 Hours ¹⁸
AHD255=After Hours Dim, 7 Hours ¹⁸
AHD355=After Hours Dim, 8 Hours ¹⁸
HA=50°C High Ambient ¹⁹
MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{20,21}
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{20,22}
MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{20,23}
MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{20,24}
MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height ^{20,21,25}
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height ^{20,22,25}
MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height ^{20,23,25}
MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) ^{20,24,25}
MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height ^{20,21}
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height ^{20,22}
MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height ^{20,23}
MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) ^{20,24}
LWR-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ²⁶
LWR-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ²⁶
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
MIT=Factory Installed Mesh Top
TH=Tool-less Door Hardware
LCF=Light Square Trim Plate Painted to Match Housing ²⁷
HSS=Factory Installed House Side Shield ²⁸
CE=CE Marking ²⁹

OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=120V Photocontrol
MA1252=10kV Surge Module Replacement
MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon
MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon
FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²⁰
GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares
GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares
GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares
GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares
GLEON-QM=Quick Mount Arm Kit
GLEON-QMEA=Quick Mount Extended Arm Kit
LS/HSS=Field Installed House Side Shield ^{28,30}

NOTES:

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.

2. DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.

3. Standard 4000K CCT and minimum 70 CRI.

4. Not compatible with extended quick mount arm (QMEA).

5. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).

6. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.

7. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).

8. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.

9. Factory installed.

10. Maximum 8 light squares.

11. Maximum 6 light squares.

12. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.

13. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.

14. 1 Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. These files are published on the Galleon luminaire product page on the website.

15. Not available with HA option.

16. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.

17. Not available with LumaWatt wireless sensors.

18. Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.

19. 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents.

20. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.

21. Approximately 22' detection diameter at 8' mounting height.

22. Approximately 40' detection diameter at 20' mounting height.

23. Approximately 60' detection diameter at 40' mounting height.

24. Approximately 100' detection diameter at 40' mounting height.

25. Replace X with number of Light Squares operating in low output mode.

26. LumaWatt wireless sensors are factory installed only requiring network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.

27. Not available with house side shield (HSS).

28. Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.

29. CE is not available with the LWR, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only.

30. One required for each Light Square.

EATON

1121 Highway 74 South
Peachtree City, GA 30269
P: 770-496-4900
www.eaton.com/lighting

Specifications and
dimensions subject to
change without notice.

TD500020EN
2016-09-28 15:31:55

Submitted On: Jan 23, 2018

Index Page

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**
MODA MINI COVE

Notes:

Type:**COVE**

PSA18-68593

modaLIGHT® SPECIFICATION

Miniature Line Voltage Cove Fixture.

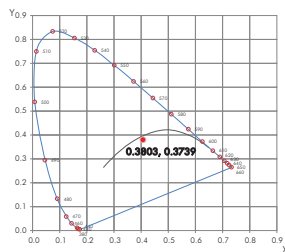
MODA MINI COVE INTERIOR features smooth flicker free ELV dimming down to 0%. Specialized Light Chamber delivers a light bending 200 degree beam perfect for cove illumination. Integral self locking bracket which slides into any position and turns 170 degrees. Lightweight aluminum construction for durability and excellent thermal characteristics. Available in 6", 1ft, 4ft, and 8ft Lengths for rapid installation saving expensive labour installation costs.

OUTPUT

Delivered Lumens	1955.00
CCT & SDMC	4000k - 2 Step MacAdam Ellipse
Chromaticity Coordinates	x: 0.3803 y: 0.3739 u: 0.2261 v: 0.5003
Color Bin Tolerance	Single Bin
Efficacy (lm/w)	102.89 (120v) / 97.75 (277v)
CRI	96
Lumen Maintenance	70,000 Hours L70 @ 25°C 90,000 Hours L50 @ 25°C 50,000 Hours L70 @ 50°C 70,000 Hours L50 @ 50°C
Testing Data	Light Data LM-79-08 & LM-80-08

ELECTRICAL

Input Voltage	100-277v AC 50Hz/60Hz
Power Consumption	120v - 19w (0.15A) 277v - 20w (0.07A)
Power Factor	≥ 0.98
Dimming	Electronic Low Voltage Reverse Phase Trailing Edge
Emergency	N/A

**CIE 1931 CHROMATICITY
DIAGRAM****R VALUES**

R1	R2	R3	R4	R5
98	99	98	93	95
R6	R7	R8	R9	R10
96	94	94	93	99
R11	R12	R13	R14	R15
97	71	99	98	96

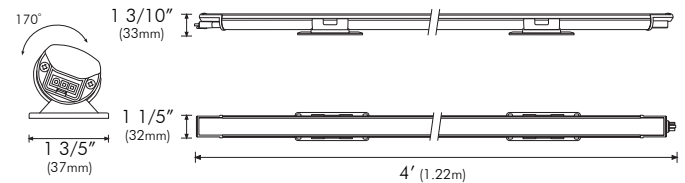
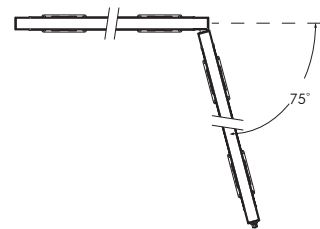
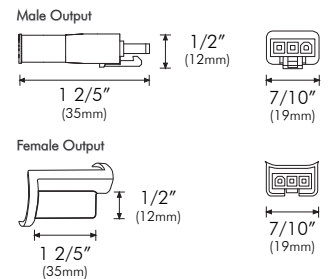
Project Name:

Notes:

MODA MINI COVE® INTERIOR SO 4000K HCRI 4FT

**PHYSICAL**

Applications	Cove, Accent & Indirect General Illumination
Dimensions	Length 4' (1.22m) Width 1 3/5" (37mm) Height 1 2/5" (35mm)
Weight	19.50oz (553g)
Construction	Pure Aluminum Body, Polycarbonate Mounting Bracket and Lens
Thermal Management	MODA Aluminum Heat Sink
Optics	N/A
Fixture Connections	Integral Male & Female Connectors
Operating Temperature	-4°F ~ 104°F (-20°C ~ 40°C)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Humidity	0-95% Non Condensing

DIMENSIONS**ANGLE ADJUSTMENT****CONNECTOR DIMENSIONS****MODA TECHNOLOGY**

modaBIN™
modaCOMMUNICATE™
modaCUE™
modaDRIVER™
modaHIGH CRI

modaKWIK CONNECT™
modaLOCK™
modaPHOSPHOR™
modaSOFT™

STANDARDS & CERTIFICATIONS

Due to continuous improvements and innovations, specifications may change without notice. Please refer to our website for current technical data. These figures are provided as a guideline only and may vary with differing power supplies and installations. All rights reserved. E&OE.

VDC20162012
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F: 702 407 7773 | www.modalight.com | © Copyright 2016

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering

Catalog Number:
MODA MINI COVE

Notes:

Type:
COVE

PSA18-68593

modaLIGHT®

SPECIFICATION

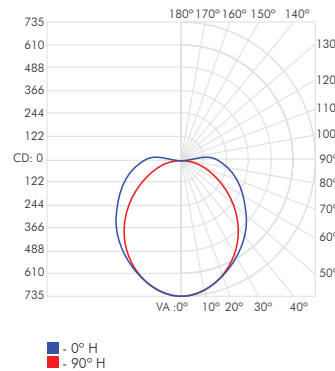
MODA MINI COVE® INTERIOR SO 4000K HCRI 4FT

ILLUMINANCE AT A DISTANCE

	Center Beam FC	Beam Width
2.0 ft	181.00 fc	8.9 ft 5.6 ft
4.0 ft	45.30 fc	18.1 ft 11.3 ft
6.0 ft	22.70 fc	27.0 ft 16.9 ft
8.0 ft	11.30 fc	36.1 ft 22.5 ft
10.0 ft	5.70 fc	45.1 ft 28.2 ft
12.0 ft	2.90 fc	54.1 ft 33.8 ft

Vert. Spread: 200°

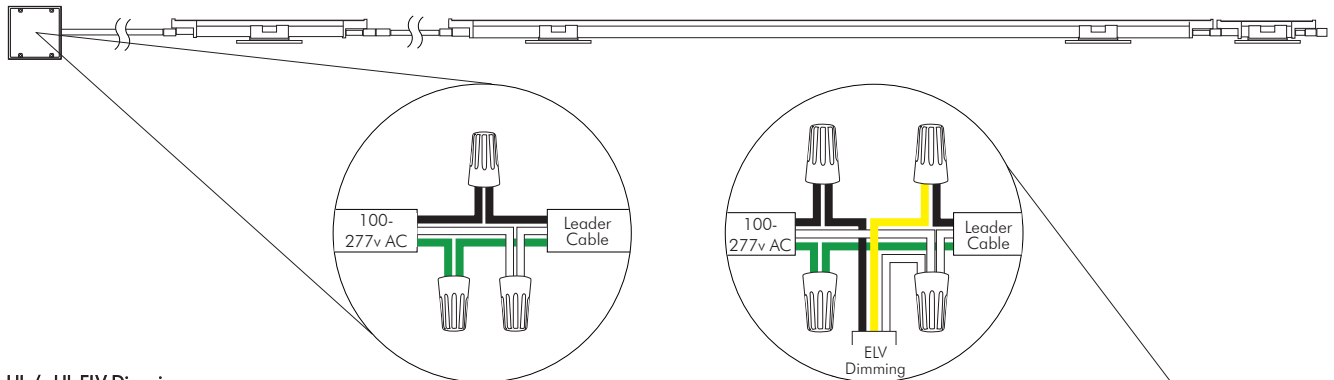
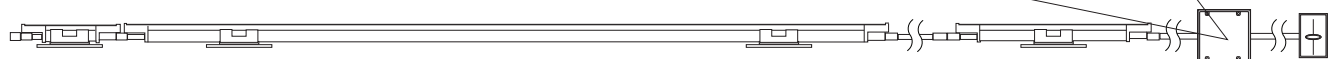
Horiz. Spread: 120°

POLAR CANDELA DISTRIBUTION**ZONAL LUMEN SUMMARY**

Zone	Lumens	% Lamp	% Fixt
0-30	561.09	N.A.	28.70%
0-40	916.90	N.A.	46.90%
0-60	1605.06	N.A.	82.10%
60-90	348.00	N.A.	17.80%
0-90	1953.05	N.A.	99.90%
90-180	1.96	N.A.	0.10%
0-180	1955.00	N.A.	100%

LUMENS PER ZONE

Zone	Lumens	% Total
0-10	68.43	3.50%
10-20	195.50	10.00%
20-30	297.16	15.20%
30-40	355.81	18.20%
40-50	365.59	18.70%
50-60	322.58	16.50%
60-70	226.78	11.60%
70-80	103.62	5.30%
80-90	17.60	0.90%
90-100	14.86	0.76%

WIRING**UL / cUL Non-dimming****UL / cUL ELV Dimming****WIRING LEGEND**

	UL/cUL	CE/PSE*
Ground	Green	Yellow/Green
Live 100-277v	Black	Brown
Neutral	White	Blue
Data	Yellow	

*not illustrated

COMPATIBLE DIMMERS
 Lutron MAELV-600 (600W)
 Lutron Skylark SELV-300P (300W)
 Leviton MNE04 (400W)
 Lutron DIVA DVELV-300P (300W)
 Lutron DIVA DVELV-300P (300W)
 ADJUSTED
MAX RUN LENGTHS

4ft using 120v AC	30pcs
4ft using 277v AC	60pcs

Due to continuous improvements and innovations, specifications may change without notice. Please refer to our website for current technical data. These figures are provided as a guideline only and may vary with differing power supplies and installations. All rights reserved. E&OE.

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 F: 702 407 7773 | www.modalight.com | © Copyright 2016

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering

Catalog Number:
MODA MINI COVE

Notes:

Type:**COVE**

PSA18-68593

modaLIGHT®

SPECIFICATION

MODA MINI COVE® INTERIOR
SO 4000K HCRI 4FT
ACCESSORIES
MODA-MINI-COVE-GRAZE-INT-10FT-LEADER-CABLE-W

Power to First Fixture of Run

 Leader Cable
 L: 10' (3.05m)

 Male Connector
 L: 1 2/5" (35mm)
 W: 7/10" (19mm)
 H: 1/2" (12mm)

MODA-MINI-COVE-GRAZE-INT-25FT-LEADER-CABLE-W

Power to First Fixture of Run

 Leader Cable
 L: 25' (7.62m)

 Male Connector
 L: 1 2/5" (35mm)
 W: 7/10" (19mm)
 H: 1/2" (12mm)

MODA-MINI-COVE-GRAZE-INT-1FT-JUMPER-CABLE-W

Connection Between Fixtures

 Jumper Cable
 L: 1' (304.80mm)

 Male Connector
 L: 1 2/5" (35mm)
 W: 7/10" (19mm)
 H: 1/2" (12mm)

 Female Connector
 L: 1 2/5" (35mm)
 W: 7/10" (19mm)
 H: 1/2" (12mm)

MODA-MINI-COVE-GRAZE-INT-4FT-JUMPER-CABLE-W

Connection Between Fixtures

 Jumper Cable
 L: 4' (1.2m)

 Male Connector
 L: 1 2/5" (35mm)
 W: 7/10" (19mm)
 H: 1/2" (12mm)

 Female Connector
 L: 1 2/5" (35mm)
 W: 7/10" (19mm)
 H: 1/2" (12mm)

MODA-MINI-COVE-GRAZE-INT-TERMINATOR-W

Must be Fixed to Last Fixture for Safety

 L: 1 1/2" (39mm)
 W: 4/5" (22mm)
 H: 3/5" (17mm)

MODA-MINI-COVE-GRAZE-20FT-MOUNTING-TRACK-G

 Allows User to Install Fixtures in a
 Continuous Linear Position.

5 Pieces (20ft)

 Each Piece
 4' (1.2m)
**MODA-BRIDGE¹**
 Allows User to Convert a 0-10v Dimming Signal into
 an ELV Dimming Signal that Dims Down to 0%

 L: 7 3/4" (196.85mm)
 W: 4 2/10" (107mm)
 H: 1 8/10" (47mm)
STANDARDS & CERTIFICATIONS

Certification	Tested to UL & CSA by Intertek For Use in USA & CANADA. Exceeds ANSI C78.377-2015, CE & RoHS Compliant.
Class	1
Environment	Dry/Damp Location - IP52
Warranty	5 Year Limited Warranty

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**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**

MODA MINI COVE

Notes:

Type:**COVE**

PSA18-68593

modaLIGHT[®]
SPECIFICATIONSKU GUIDE: MODA-MINI-COVE-INTERIOR-**B**-C-D-**E**-**F**-G-H-I

MODA - MINI - COVE - INTERIOR - _____ - S1 - S - _____ - _____ - HCRI - _____

COMPLETE SAMPLE SKU: MODA-MINI-COVE-INTERIOR-SO-S1-S-ELV-4000K-HCRI-4FT

A - FIXTURE

MINI COVE — Fixture with no optic option

E - DIMMINGELV — Electronic Low Voltage
0-10v* — DC voltage ranging from 0 to 10 volts
*Available only in 1ft and 4ft.**INTERIOR - LOCATION**

INTERIOR — Fixture for dry location use

F - LED COLOR22K — 2200K
27K — 2700K
3K — 3000K
35K — 3500K
4K — 4000K**B - LIGHT OUTPUT**SO — Standard Output
HO — High Output**G - COLOR RENDERING INDEX (CRI)**

HCRI — High CRI

C - SERIES NUMBER

S1 — Series 1

H - LENGTH6" — 6 inches
1FT — 1 foot
4FT — 4 feet
8FT — 8 feet**D - PRODUCT FINISH**

S — Silver

I - OPTIC

Available only for Moda Mini Graze.

**Job Name:**MD Anderson Standard Spec
Electrical Engineer: BenCov Engineering**Catalog Number:**4VT2-LD4-6-DR-UNV-L840-WL-SSL-
U

Notes:

Type:**FSW**

PSA18-68593

Metalux

DESCRIPTION

The Vaportite LED Series is an energy efficient industrial Vaportite fixture that features rugged and durable construction. The Vaportite LED incorporates a full metal fixture liner inside a reinforced fiberglass housing with a high impact diffuser. This Vaportite series is suitable for interior and exterior applications and can be surface or chain mounted.

The Vaportite LED Series has been designed for maximum operation in commercial institutional and industrial environments and can operate in a wide range of temperatures (-20°C to 25°C) and is ideal for cold storage environments.

SPECIFICATION FEATURES**Construction**

Fiberglass housing is reinforced polyester and self-extinguishing (ASTM-D635-74) plastic of a permanent pearl gray color. A watertite hub for 1/2" conduit entry is provided at each end of housing (standard) for continuous feed. Polyurethane gasketing is formed in the housing providing a continuous seamless seal for the diffuser. Four sturdy cam latches clamp diffuser tightly for a positive seal between housing, gasketing and diffuser. Electrical components and fixtures are UL/ cUL listed for Wet Locations.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500, 4000 and 5000K with a CRI \geq 85. Projected life is 60,000 hours at 91% lumen output. cULus listed. Electronic drivers are available for 120-277V applications. A 0-10V dimming control is available (standard). IP65 rated and NSF certified (4' only).

Lens

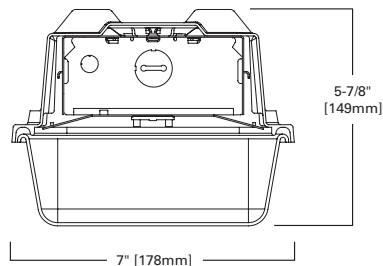
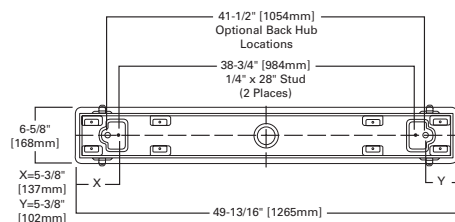
DR=Internal Prismatic Lens/15% DR High Impact Additive.
DR100=Internal Prismatic Lens/100% DR High Impact Additive.

Warranty

Vaportite LED features a five year limited warranty.

Compliance

UL/cUL listed for Wet location. RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details.

**MOUNTING DATA****INSTALLATION DATA**

MOUNTING BRACKETS
Furnished
Two per 2' and 4' Unit
Four per 8' Unit



OPTIONAL CHAN HANGING SET
(VT2-CHAIN/SET-U)
Includes 6 ft. of chain, 4 large S-Hooks and 4 small S-Hooks
Order One (1) Kit for each 2' or 4' Fixture



VAPORTITE LED

4' INDUSTRIAL LED LAMP

Vaportite Industrial
Refrigerated Case

**ENERGY DATA**

Input Watts:
4VT2-LD4-4 (4,000 lumens)=38W
4VT2-LD4-6 (6,000 lumens)=57.3W
4VT2-LD4-8 (8,000 lumens)=81.1W

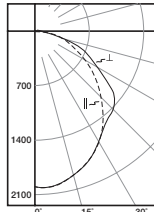
LINEAR DISCONNECT

Safe and convenient means of
disconnecting power



**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:
4VT2-LD4-6-DR-UNV-L840-WL-SSL-U
 Notes:
Type:
FSW

PSA18-68593

4' VAPORTITE LED**PHOTOMETRICS**
4VT2-LD4-6-DR-UNV-L835-CD1-U

Electronic Driver

Linear LED 3500K

Spacing criterion:

(II) 1.2 x mounting

height, (L) 1.2 x

mounting height

Lumens: 5882

Input Watts: 56W

Efficacy: 104.7 lm/W

Test Report:

4VT2-LD4-6-DR-

UNV-L835-CD1-U.

IES

Candlepower

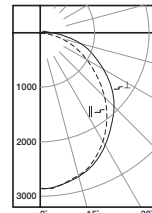
Angle	Along II	45°	Across ⊥
0	2000	2000	2000
5	2007	1979	1980
10	1981	1951	1956
15	1930	1900	1903
20	1857	1836	1844
25	1764	1748	1765
30	1645	1646	1660
35	1511	1522	1534
40	1375	1393	1468
45	1221	1271	1438
50	1062	1207	1343
55	903	1175	1148
60	749	1048	933
65	600	1151	771
70	461	591	600
75	332	398	426
80	206	249	255
85	94	137	127
90	34	75	63

Coefficients of Utilization

rc	Effective floor cavity reflectance								20%							
	80%				70%				50%				30%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
RCR	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101
1	108	103	98	94	105	101	96	93	96	93	90	92	89	87	88	86
2	98	89	82	76	95	87	81	75	84	78	73	80	75	71	77	73
3	89	78	70	63	86	76	69	62	73	67	61	70	65	60	68	63
4	81	69	60	53	79	68	59	53	65	58	52	62	56	51	60	55
5	75	62	52	46	73	60	52	45	58	51	45	56	49	44	54	48
6	69	55	46	40	67	54	46	40	52	45	39	51	44	39	49	43
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	38
8	59	46	37	31	58	45	37	31	44	36	31	42	35	31	41	35
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1536	26.1
0-40	2490	42.3
0-60	4463	75.9
0-90	5804	98.7
0-180	5882	100.0


4VT2-LD4-8-FR50-UNV-L835-CD1-WL-U

Electronic Driver

Linear LED 3500K

Spacing criterion:

(II) 1.2 x mounting

height, (L) 1.3 x

mounting height

Lumens: 8553

Input Watts: 81W

Efficacy: 105.5 lm/W

Test Report:

4VT2-LD4-8-FR50-

UNV-L835-CD1-WL-

U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	2854	2854	2854
5	2857	2829	2842
10	2811	2790	2804
15	2733	2723	2742
20	2626	2629	2658
25	2484	2508	2545
30	2316	2365	2408
35	2120	2195	2253
40	1904	2011	2086
45	1678	1819	1914
50	1451	1622	1736
55	1222	1422	1558
60	1009	1229	1368
65	810	1034	1171
70	622	843	959
75	446	659	748
80	287	487	555
85	148	341	392
90	45	228	271

Coefficients of Utilization

rc	Effective floor cavity reflectance								20%							
	80%				70%				50%				30%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
RCR	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99
1	107	102	97	93	104	99	95	91	94	91	87	90	87	84	85	83
2	97	88	81	75	94	86	79	74	82	76	72	78	73	69	74	67
3	88	77	69	62	85	75	68	61	72	65	60	69	63	58	66	61
4	81	68	59	53	78	67	58	52	64	57	51	61	55	50	59	53
5	74	61	52	45	72	60	51	45	57	50	44	55	48	43	53	47
6	69	55	46	39	66	54	45	39	52	44	38	50	43	38	48	42
7	64	50	41	35	62	49	41	35	47	40	34	45	39	34	44	38
8	59	46	37	31	57	45	37	31	43	36	30	42	35	30	40	34
9	55	42	34	28	54	41	33	28	40	32	27	38	32	27	37	31
10	52	39	31	25	50	38	30	25	37	30	25	36	29	25	34	29

Zonal Lumen Summary

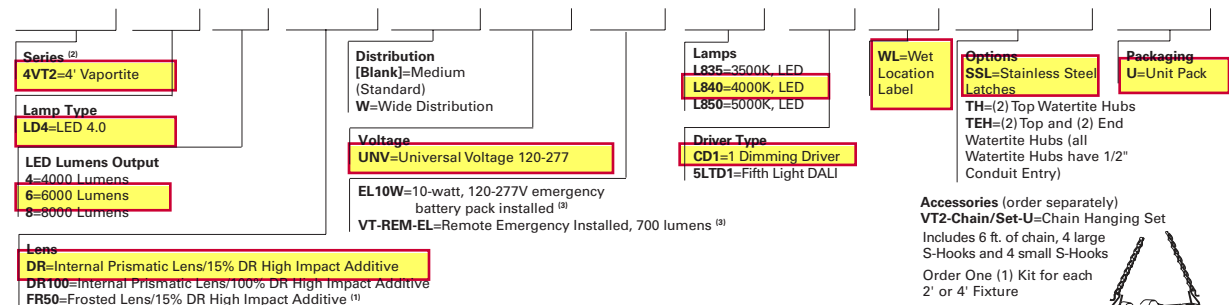
Zone	Lumens	% Fixture
0-30	2200	25.7
0-40	3573	41.8
0-60	6232	96.4
0-90	8248	100.0
0-180	8553	100.0

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 91%	> 247,000

ORDERING INFORMATION

SAMPLE NUMBER: 4VT2-LD4-4-DR-UNV-L840-CD1-WL-U



NOTES: (1) Not available in wide distribution. (2) DesignLights Consortium™ Qualified and classified for DLC Standard (some models are not DLC qualified), refer to www.designlights.org for details. (3) EL must specify 120 or 277V only.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
4VT2-LD4	18 lbs.

**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

AW-SN-LED-1D-UNV-SUWA

Notes:

Type:**WAL**

PSA18-68593

CORELITE™**DESCRIPTION**

Corelite's Class A Indirect Wall Mount is an indirect fluorescent luminaire with an engineered optical system, which provides an asymmetric forward throw distribution. The Class A Indirect Wall may be mounted over standard 2"x4" J-Boxes for individual or continuous configurations using 4', 8' and 12' modular sections. The Class A Indirect Wall is suited for open office perimeters, private offices, conference rooms, corridors and public spaces.

Catalog #	Type
Project	
Comments	Date
Prepared by	

SPECIFICATION FEATURES**A ... Construction**

Housing is one piece die-formed cold rolled steel, forming a 6" x 2 7/8" architectural profile. Standard 4'-0", 8'-0" and 12'-0" fixture lengths combine for continuous runs.

B ... End Plates

Standard laser cut 14-gauge cold rolled steel, mechanically attached with no exposed fasteners. Optional die-cast aluminum end caps also available.

C ... Reflectors

Die-formed reflectors are highly specular anodized aluminum.

D ... Electrical

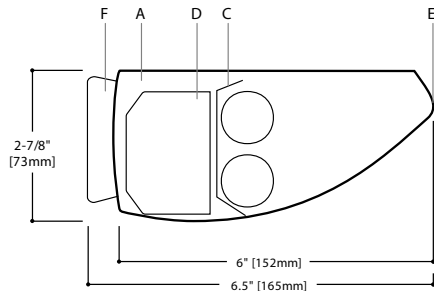
Fixtures are prewired with quick wire connectors and use UL listed Class P, 265ma T8 instant start universal voltage electronic ballasts. Power factor of 95% with less than 10% THD. Fixtures and electrical components certified to UL and CUL standards.

E ... Finish

Fixture housings are standard white using electrostatically applied polyester powder coat paint.

F ... Mounting

Fixture mounts directly to existing structure over a 2" x 4" standard electrical box mounted horizontally into the wall. Refer to installation section for details.

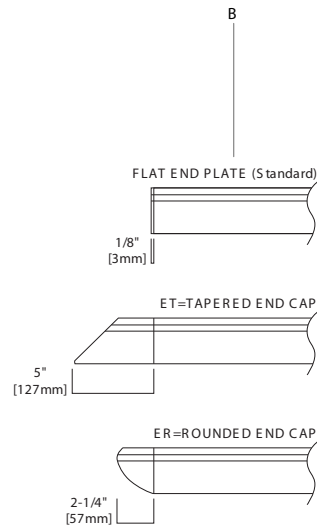
**MODULES AND DIMENSIONS***

48" [1219mm]

96" [2438mm]

144" [3658mm]

*Dimensions do not include end plates.

**Class A
Indirect Wall**

2T8

**Wall Mount
Full Indirect**
Light Distribution
 Indirect - 100.0%
 Direct - 0.0%
ORDERING INFORMATION

Sample Number: AW-SN-2T8-1C-277-SU-WA-32-ET

Series AW: Class A Indirect Wall Mount	Optics Up S: Specular Optics Down N: None	Number of Lamps 2: 2 Lamps	Lamp Type T8: T8 Normal Output Number of Circuits 1: 1 Circuit 2: 2 Circuits	Wiring B: Battery Pack C: Standard Circuit D: Dimming E: Emergency T: Nightlight Y: Daylight	Voltage 120: 120V 277: 277V 347: 347V UNV: Universal (120V-277V)	Suspension SU-WA: Surface/Wall Mount Run Length Individually Mounted Luminaires may be 4', 8', or 12' in length Continuously Mounted Standard row configurations over 12' consist of 8' and 12' sections	Options ER: Rounded End Cap ET: Tapered End Cap
LED							

Notes: 1 Not all options available. Please consult your Cooper Lighting Representative for availability.

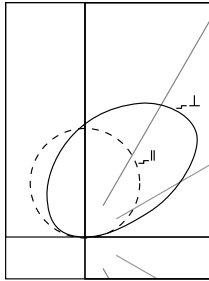
**Job Name:**
 MD Anderson Standard Spec
 Electrical Engineer: BenCov Engineering
Catalog Number:

AW-SN-LED-1D-UNV-SUWA

Notes:

Type:**WAL**

PSA18-68593

PHOTOMETRICS**Corelite**
 AW-SN-2T8
 (2) F32T8/TL841
 3000 Lumens

Efficiency 52.7%

 Test Report
 #LSI14065
Coefficients of Utilization

Effective floor cavity reflectance										20%																			
rc	80%					70%					50%					30%					10%					0%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0								
RCR																													
0	50	50	50	50	43	43	43	43	29	29	29	17	17	17	05	05	05	00	00	00	00								
1	46	43	42	40	39	37	36	34	25	25	24	15	14	14	05	05	04	00	00	00	00								
2	41	38	35	32	35	32	30	28	22	21	19	13	12	11	04	04	04	00	00	00	00								
3	38	33	30	27	32	28	26	23	20	18	16	11	11	10	04	03	03	00	00	00	00								
4	34	29	25	23	29	25	22	20	17	15	14	10	09	08	03	03	03	00	00	00	00								
5	31	25	22	19	27	22	19	17	15	13	12	09	08	07	03	03	02	00	00	00	00								
6	29	23	19	16	25	20	17	14	14	12	10	08	07	06	03	02	02	00	00	00	00								
7	27	21	17	14	23	18	15	12	12	10	09	07	06	05	02	02	02	00	00	00	00								
8	24	19	15	12	21	16	13	11	11	09	08	07	05	04	02	02	01	00	00	00	00								
9	23	17	13	11	19	14	11	09	10	08	07	06	05	04	02	02	01	00	00	00	00								
10	21	15	12	09	18	13	10	08	09	07	06	05	04	03	02	01	01	00	00	00	00								

Candela

Angle	Along II	45°	Across L
180	882	882	882
175	863	931	952
170	854	967	1014
165	840	1004	1072
160	817	1032	1126
155	790	1057	1178
150	757	1071	1220
145	719	1081	1239
140	674	1078	1245
135	623	1055	1231
130	568	1018	1143
125	508	957	1013
120	442	841	859
115	371	695	646
110	293	509	472
105	205	316	319
100	114	170	176
95	38	34	9
90	0	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
180-150	720	12.00	22.79
180-140	1221	20.36	38.66
180-120	2347	39.12	74.30
180-90	3159	52.66	100.00
140-90	1937	32.30	61.34
120-90	811	13.53	25.70
0-90	0	0.00	0.00
0-180	3159	52.66	100.00

COMMON CIRCUIT CONFIGURATIONS FOR TWO LAMP SUSPENDED FIXTURE

2C=Two circuit luminaire

2E=Two circuit luminaire with emergency circuit

1B=Single circuit luminaire with battery pack

/1/=Circuit 1

/2/=Circuit 2

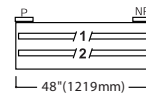
/E/=Emergency Circuit

/B/=Battery Circuit

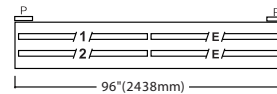
P=Power Mount

NP=Non-Power Mount

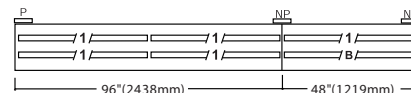
2C



2E



1B

**STANDARD ROW CONFIGURATIONS**

FIXTURE LENGTH	4'	8'	12'	16'	20'	24'	28'	32'	36'	40'	44'	48'	52'	56'	60'	64'	68'	72'	76'	80'	84'	88'	92'	96'	100'	104'	108'
4'	1																										
8'		1		2	1		2	1		2	1		2	1		2	1		2	1		2	1		2	1	
12'			1		1	2	1	2	3	2	3	4	3	4	5	4	5	6	5	6	7	6	7	8	7	8	9



KBR8 LED

LED Specification Bollard

Catalog
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

8" Round
(20.3 cm)

Height: 40"
(101.6 cm)

Weight (max): 27 lbs
(12.25 kg)



Introduction

The KBR8 Bollard is a stylish, fully integrated LED solution for walkways. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 70% in energy savings over comparable 100W metal halide luminaires, the KBR8 Bollard is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: KBR8 LED 16C 700 40K SYM MVOLT DDBXD

KBR8 LED											
Series	LEDs	Drive current		Color temperature		Distribution		Voltage	Control options	Other options	Finish <i>(required)</i>
KBR8 LED	Asymmetric 12C 12 LEDs ¹	350	350 mA	30K	3000 K	ASY	Asymmetric ¹	MVOLT ⁵	Shipped installed PE Photoelectric cell, button type DMG 0-10V dimming driver (no controls) ELCW Emergency battery backup ⁶	Shipped installed SF Single fuse (120, 277, 347V) ^{4,7} DF Double fuse (208, 240V) ^{4,7} H24 24" overall height H30 30" overall height H36 36" overall height FG Ground-fault festoon outlet L/AB Without anchor bolts (3 bolt base) L/AB4 4 bolt retrofit base without anchor bolts ⁸	DWHXD White
		450	450 mA ^{3,4}	40K	4000 K	SYM	Symmetric ²	120 ⁵			DNAXD Natural aluminum
		530	530 mA	50K	5000 K			208 ⁵			DDBXD Dark bronze
	Symmetric 16C 16 LEDs ²	700	700 mA	AMBPC	Amber phosphor converted			240 ⁵			DBLXD Black
				AMBLW	Amber limited wavelength ^{3,4}			277 ⁵			DDBTXD Textured dark bronze
								347 ⁴			DBLBXD Textured black
								DNATXD Textured natural aluminum			
										DWHGXD Textured white	

Accessories

Ordered and shipped separately.

MRAB U Anchor bolts for KBR8 LED⁸

NOTES

- Only available in the 12C, ASY version.
- Only available in the 16C, SYM version.
- Only available with 450 AMBLW version.
- Not available with ELCW.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options), or photocontrol (PE option).
- Not available with 347V. Not available with fusing. Not available with 450 AMBLW.
- Single fuse (SF) requires 120, 277, or 347 voltage option. Double fuse (DF) requires 208 or 240 voltage option.
- MRAB U not available with L/AB4 option.



Performance Data

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Actual wattage may differ by +/- 8% when operating between 120-480V +/- 10%.

Light Engines	Drive Current	System Watts	3000 K					4000 K					5000 K					Limited Wavelength Amber				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
Asymmetric 3 Engines (12 LEDs)	350	16	641	40	1	1	1	809	51	1	1	1	870	54	1	1	1					
	530	22	947	43	1	1	1	1,191	54	1	1	1	1,282	58	1	1	1					
	700	31	1,214	40	1	1	1	1,527	51	1	1	1	1,646	55	1	1	1					
	Amber 450	16																324	20	0	1	0
Symmetric 4 Engines (16 LEDs)	350	20	888	44	1	0	0	1,116	56	1	0	0	1,203	60	1	0	0					
	530	28	1,254	45	1	0	0	1,598	57	1	0	1	1,719	61	1	0	1					
	700	39	1,608	41	1	0	1	2,022	52	1	0	1	2,180	56	2	0	1					
	Amber 450	20																374	19	0	0	0

Note: Available with phosphor-converted amber LED's (nomenclature AMBPC). These LED's produce light with 97+% >530 nm. Output can be calculated by applying a 0.7 factor to 4000 K lumen values and photometric files.

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.00	0.98	0.97	0.95

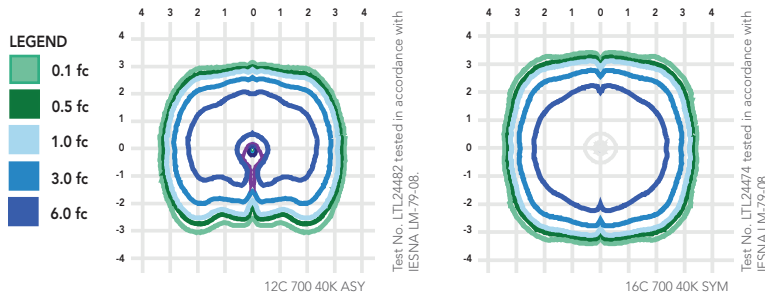
Electrical Load

Light Engines	Drive Current (mA)	System Watts	Current (A)				
			120	208	240	277	347
12C	350	16W	0.158	0.118	0.114	0.109	0.105
	530	22W	0.217	0.146	0.136	0.128	0.118
	700	31W	0.296	0.185	0.168	0.153	0.139
	Amber 450	16W	0.161	0.120	0.115	0.110	0.106
16C	350	20W	0.197	0.137	0.128	0.121	0.114
	530	28W	0.282	0.178	0.162	0.148	0.135
	700	39W	0.385	0.231	0.207	0.185	0.163
	Amber 450	20W	0.199	0.139	0.130	0.123	0.116

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [KBR8 Bollard homepage](#).

Isofootcandle plots for the KB LED Bollards. Distances are in units of mounting height (3').



FEATURES & SPECIFICATIONS

INTENDED USE

The rugged construction and clean lines of the KBA bollard is ideal for illuminating building entryways, walking paths, and pedestrian plazas, as well as any other location requiring a low mounting height light source with fully cutoff illumination.

CONSTRUCTION

One-piece 8-inch round extruded aluminum shaft with thick side walls for extreme durability, a high-impact clear acrylic lens and welded top cap. Die-cast aluminum mounting ring allows for easy leveling even in sloped locations and a full 360-degree rotation for precise alignment during installation. Three ½" x 11" anchor bolts with double nuts and washers and 3 ¾" bolt circle template ensure stability. Overall height is 42" standard.

FINISH

Exterior parts are protected by a zinc-infused super durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering for maximum retention of gloss and luster. A tightly controlled multi-stage process ensures a minimum 3-mil thickness for a finish that can withstand the elements without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS

Two fully cutoff optical distributions are available: symmetrical and asymmetrical. IP66 sealed LED light engine provides smoothly graduated illumination without any uplight. Light engines are available in standard 4000 K (>70 CRI) or optional 3000 K (>80 CRI) or 5000 K (67 CRI). Limited-wavelength amber LEDs are also available.

ELECTRICAL

Light engines consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (L95/100,000 hours at 700mA at 25°C). Class 2 electronic drivers are designed for an expected life of 100,000 hours with < 1% failure rate. Electrical components are mounted on a removable power tray.

LISTINGS

CSA certified to U.S. and Canadian standards. Light engines are IP66 rated. Rated for -40°C minimum ambient. Cold-weather emergency battery backup rated for -20°C minimum ambient.

WARRANTY

Five-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Specifications subject to change without notice.



FEATURES & SPECIFICATIONS

INTENDED USE — A general purpose and energy-efficient surface-mounted or suspended LED fixture, suitable for wet, damp and/or cold locations. For vapor-tight demanding environments where moisture or dust is a concern and where relatively low fixture mounting heights and wide fixture spacing are common. Typical applications include industrial facilities, parking garages, retail malls, multi-purpose rooms, garden centers, and food processing. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable use.](#)

CONSTRUCTION — One-piece SVA fiberglass housing with integral perimeter channel utilizing continuous poured-in-place NEMA 4X gasket. Approved as a wireway and for through wiring. Captive polymeric latches are standard. Stainless steel latches (#316) available as an option for food processing or more demanding applications.

Power connection is easily accomplished through pre-drilled holes. Fixture easily mounts to ceilings and other solid structures, or can be suspended with chain, cable or rod using stainless steel mounting brackets (included).

OPTICS — Injection molded, acrylic lens (.080" thick) provides high impact-resistance comparable to 100% DR. For L48 Medium Distribution, a UV stabilized polycarbonate diffuser (.080" thick) in clear or frosted for additional impact strength where vandal protection is desired.

Expected service life of 60,000 hours at 80% lumen maintenance (L80); predicted life of more than 100,000 hours.

ELECTRICAL — Utilizes high-efficiency LEDs mounted to core circuit boards. High-efficiency drivers operate 120 thru 277V, 347V and 480V offered with 0-10 volt dimming, allowing granular control when coupled with wireless networking controls. Integral 6kV/3kA surge protection, tested in accordance to IEEE/ANSI standards.

INSTALLATION — Fixture can be ceiling or suspended mounted. Pre-punched stainless steel mounting brackets are included (two per luminaire) for easy field-attachment of bolts, screws and other mounting hardware. A covered ceiling is not required to maintain wet location listing or IP rating.

LISTINGS — CSA certified to UL and C-UL standards. Listed for wet locations in ambient temps ranging from -35°C (-31°F) to 25°C (77°F) when fixture is surface mounted or up to 45°C (113°F) when fixture is suspended at least 6" from ceiling. IP65, IP66 and IP67 rated. NSF splash-zone 2 certified and meets FDA/USDA guidelines. Nema 4X rated lens and housing. 1500 PSI hose-down. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Stock configurations are offered for shorter lead times:

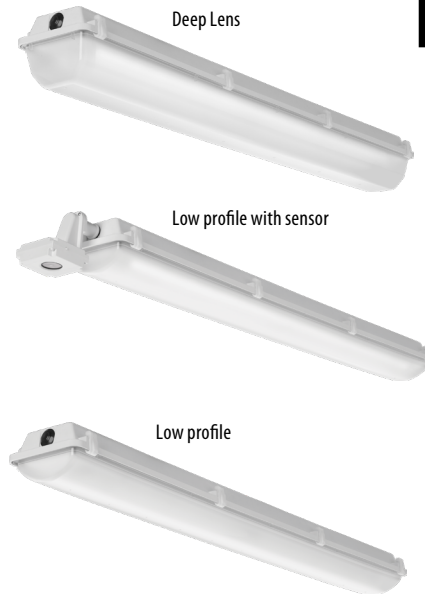
Standard Part Number	Stock Part Number
FEM L48 4000LM LPAFL MD MVOLT GZ10 40K 80CRI	FEM L48 4L MVOLT
FEM L48 4000LM LPAFL MD MVOLT GZ10 50K 80CRI	FEM L48 4L MVOLT 5K

Catalog Number
Notes
Type

Low-Profile Enclosed and Gasketed Industrial

FEM LED

CEILING/ SUSPENDED MOUNT



Deep Lens

Low profile with sensor

Low profile



A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or XPoint™ Wireless control networks marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

FEM LED Low-Profile Enclosed and Gasketed



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: FEM L48 4000LM IMAFL WD MVOLT GZ10 40K 80CRI

Series	Length	Nominal Lumens	Diffuser	Distribution	Voltage	Driver	Color temperature	CRI	
FEM	L48 48" ¹	3000LM 3,000 lumens	IMAFL Acrylic, lineal ribbed frosted lens	MD Medium WD Wide ⁴	MVOLT MVOLT 120 120V 277 277V 347 347V ⁵ 480 480V ⁵	GZ10 0 - 10V dimming	30K 3000K	80CRI 80 CRI	
		4000LM 4,000 lumens					35K 3500K	90CRI 90 CRI	
		6000LM 6,000 lumens	IMACD Acrylic, clear deep lens					40K 4000K	
		8000LM 8,000 lumens	IMAFD Acrylic, deep frosted lens					50K 5000K	
		10000LM 10,000 lumens	LPAFL Acrylic, low profile frosted lens ³						
	L96 96" ²		LPACL Acrylic, low profile clear lens ³						
		9000LM 9,000 lumens	LPPCL Polycarbonate, low profile clear lens ³						
		12000LM 12,000 lumens	LPPFL Polycarbonate, low profile frosted lens ³						
		15000LM 15,000 lumens							
		18000LM 18,000 lumens							
	20000LM 20,000 lumens								

Options

SF	Single fuse (available with 120, 277, 347) ⁶	CS88	6' Brad Harrison 16/3 cord and straight blade plug set ⁶	MSI10NWL	Low mount 360° integral motion sensor, wet location, On/Off operation ⁶
DF	Double Fusing (available with 347, 480V) ⁶	CS88L12	12' Brad Harrison 16/3 cord and straight blade plug set ⁶	MSI102L3VWL	Low mount 360° integral motion sensor, wet location, High/Low operation (bi-level) ⁶
BSL520	Bodine® emergency LED battery pack for -20°C and up ^{6,7}	CS88R	Brad Harrison receptacle	MSI10NWL DSCNWL	Low mount 360° integral motion sensor, wet location, On/Off operation for motion sensing, override Off due to daylight ⁶
BGTD	Generator transfer device ^{6,8}	CS89	6' white cord, 16/3, no plug, wet location		
SPD	Surge protection device, additional 10kV/5kA ⁶	CS89L12	12' white cord, 16/3, no plug, wet location	MSI10XAWL DSCXAWL	Xpoint wireless integral motion sensor, On/Off operation for motion sensing, override Off due to daylight ⁶
WLF	Wet location fitting (two outboard, top)	TRS	Tamper Resistant Torx® T10 screws		
WLFEND	Wet location fitting (one end)	DPMB	Dual pendant mounting bracket	XAD	XPoint™ wireless controller, 0-10V dimming ⁶
WLFEND2	Wet location fitting (both ends)	DL	Damp location		
		STSL	Stainless steel latches		

Accessories: Order as separate catalog number.

MHCH 36	Jack chain 36" (pair)
MHHK120	10' single leg air craft cable (ships as pair)
MHHK120SS	10' single leg air craft cable, stainless steel (ships as pair)
RK1 T10DRV	Torx® T10 screwdriver for TRS option
FEMDPMB	Dual pendant mounting bracket (ships as a pair)

Notes

- 1 Available with 3000LM, 4000LM, 6000LM, 8000LM, and 10000LM lumen packages. Not available with WD when using low profile diffuser.
- 2 Available with 9000LM, 12000LM, 15000LM, 18000LM, and 20000LM. Not available with low profile diffuser options.
- 3 Not available with L96. Not available with L48 when ordering WD option.
- 4 Not available with L48 when ordering low-profile lens options.
- 5 Utilizes step-down transformer. Not available with BGTD.
- 6 Must specify voltage.
- 7 Not available with 347 or 480V. For use in ambient temperature -20°C and up.
- 8 Available with 120V or 277V only. For use in ambient environments up to 25°C. Not available with L48 when ordering 10000LM lumen package. Not available with L96 when ordering 18000LM or 20000LM lumen packages.

FEM LED Low-Profile Enclosed and Gasketed

OPERATIONAL DATA

		Lumen packages	Wattage				Diffusers		
			120v	277v	347v	480v	Acrylic Lineal Frosted (IMAFI)	Frosted (IMAFD, LPAFL, LPPFL)	Clear (IMACD, LPAFL, LPPCL)
L48 Medium Distribution <small>*test results reflect less than 1% difference between acrylic (clear/deep/low profile) and polycarbonate (low profile) lens</small>	Delivered Lumens at 30K 80CRI	3000LM	23	23	24	25	2972	3032	3071
		4000LM	31	30	31	32	4019	4100	4153
		6000LM	45	44	46	47	5925	6044	6122
		8000LM	69	67	70	71	7593	7746	7845
		10000LM	80	78	81	82	9781	9979	10107
	Delivered Lumens at 35K 80CRI	3000LM	23	23	24	25	3039	3100	3140
		4000LM	31	30	31	32	4109	4192	4246
		6000LM	45	44	46	47	6057	6179	6258
		8000LM	69	67	70	71	7762	7918	8020
		10000LM	80	78	81	82	9999	10201	10332
	Delivered Lumens at 40K 80CRI	3000LM	23	23	24	25	3086	3148	3189
		4000LM	31	30	31	32	4173	4257	4312
		6000LM	45	44	46	47	6151	6275	6356
		8000LM	69	67	70	71	7883	8042	8145
		10000LM	80	78	81	82	10155	10360	10493
	Delivered Lumens at 50K 80CRI	3000LM	23	23	24	25	3200	3264	3306
		4000LM	31	30	31	32	4326	4414	4470
		6000LM	45	44	46	47	6378	6506	6590
		8000LM	69	67	70	71	8173	8338	8445
		10000LM	80	78	81	82	10529	10741	10879

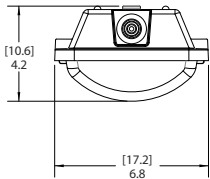
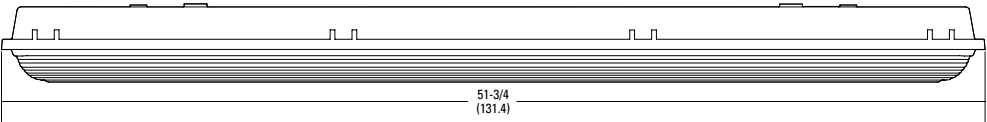
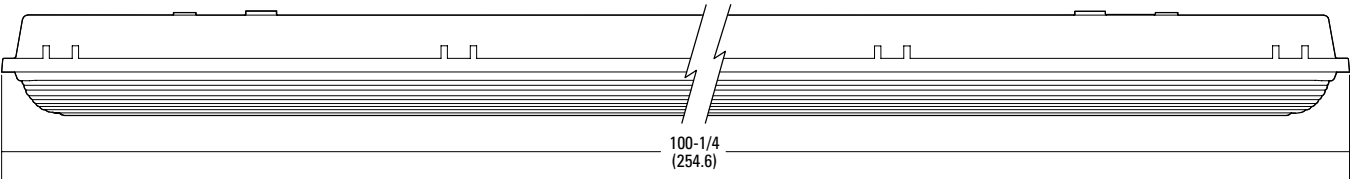
		Lumen packages	Wattage				Diffusers		
			120v	277v	347v	480v	Acrylic Lineal Frosted (IMAFI)	Acrylic Frosted (IMAFD)	Acrylic Clear (IMACD)
L96 Medium Distribution	Delivered Lumens at 30K 80CRI	9000LM	65	64	66	67	8718	8959	9072
		12000LM	88	86	89	90	11370	11685	11831
		15000LM	120	118	122	124	14263	14657	14841
		18000LM	145	141	146	148	16863	17330	17547
		20000LM	160	156	162	164	19313	19847	20096
	Delivered Lumens at 35K 80CRI	9000LM	65	64	66	67	8913	9159	9274
		12000LM	88	86	89	90	11624	11945	12095
		15000LM	120	118	122	124	14581	14984	15172
		18000LM	145	141	146	148	17239	17716	17938
		20000LM	160	156	162	164	19743	20289	20544
	Delivered Lumens at 40K 80CRI	9000LM	65	64	66	67	9051	9302	9419
		12000LM	88	86	89	90	11805	12131	12284
		15000LM	120	118	122	124	14808	15218	15409
		18000LM	145	141	146	148	17507	17992	18218
		20000LM	160	156	162	164	20051	20605	20864
	Delivered Lumens at 50K 80CRI	9000LM	65	64	66	67	9385	9644	9765
		12000LM	88	86	89	90	12239	12578	12736
		15000LM	120	118	122	124	15353	15778	15976
		18000LM	145	141	146	148	18152	18654	18888
		20000LM	160	156	162	164	20789	21364	21632

FEM LED Low-Profile Enclosed and Gasketed

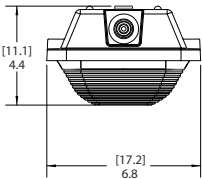
DIMENSIONS

Specifications subject to change without notice.
All dimensions are inches (centimeters) unless otherwise indicated.

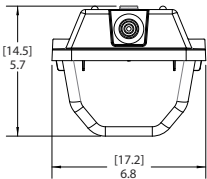
Weight (may vary with options or accessories)
FEM L48: 11.9 lbs (5.397kg)
FEM L96: 24.3 lbs (11.022kg)



Diffuser Type:
LPAFL
LPACL
LPPFL
LPPCL



Diffuser Type:
IMAFI



Diffuser Type:
IMAFD
IMACD

PHOTOMETRICS

See www.lithonia.com for photometry reports.

FEATURES & SPECIFICATIONS

INTENDED USE — The T Series LED combines digital lighting and control technologies with a high-performance optical system to deliver general ambient lighting for many applications such as schools, offices and hospitals.

High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing formed from cold-rolled steel. Housing is painted after fabrication for superior finish.

Smooth hemmed sides and smooth inward-formed end flanges, for easy handling.

Standard extruded aluminum door frame has superior structural integrity with premium appearance and mitered corners. Door frame is painted after fabrication, standard. Powder-painted rotary cam latches provide easy, secure door closure. Integral T-bar clips are standard. Acrylic shielding material is 100% UV stabilized.

OPTICS — Standard pattern #19 lens, 0.156" thick with highly transmissive overlay, is standard for superior brightness control. Overlay is 0.040" thick. Other lenses are available.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior level and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI. Optional nLight® embedded controls continuously monitor system performance, allow for constant lumen management/compensation function, facilitate simple "plug-and-play" network and controls upgrading via Cat-5 cable.

Driver disconnect is provided where required to comply with U.S. and Canadian codes.

INSTALLATION — Drivers and internal components are accessible from floor. LED boards include plug-in connectors for easy replacement or servicing. Suitable for direct insulation contact. Suitable for damp location.

LISTINGS — CSA certified to U.S. and Canadian standards. IC rated. DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

T SERIES LED

2TL

2' x 4' LED



eldoLED®

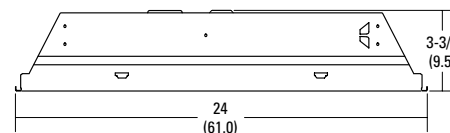


Specifications

Length: 48 (122.0)

Width: 24 (61.0)

Depth: 3-3/4 (9.5)



All dimensions are inches (centimeters) unless otherwise noted.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2TL 2X4 Recessed LED Lighting



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: 2TL4 40L RW A19 EZ1 LP835 N80

2TL4				
Series	Lumens ¹	Door	Lens	Voltage
2TL4 Recessed LED 2x4	30L 3000 lumens 40L 4000 lumens 48L 4800 lumens 60L 6000 lumens 72L 7200 lumens	FW Flush aluminum, white RW Recessed aluminum, white	A12 #12 pattern acrylic A19 #19 pattern acrylic, 0.156" thick MWS Matte white .040" thick MPL Micro prism SWL Satin white	(blank) MVOLT (120-277V) 347 347V ²

Driver	Color temperature	Control	Options
EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K	(blank) No controls	EL7L 700 nominal lumen battery pack (non-CEC compliant)
EZB eldoLED dims to dark (0-10 volt dimming)	LP835 3500 K	N80 nLight with 80% (L80) lumen management	EL14L 1400 nominal lumen battery pack (non-CEC compliant)
EDB eldoLED DALI ³	LP840 4000 K	N80EMG nLight with 80% (L80) lumen management for use with generator supply EM power	E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant
EXB eldoLED DMX/RDM ³	LP850 5000 K	N100 nLight without lumen management	CP Chicago plenum
EXA1 Dims to 1%, XPoint wireless enabled ^{3,4}		N100EMG nLight without lumen management for use with generator supply EM power	
EXAB Dims to dark, XPoint wireless enabled ^{3,4}			
SLD Step-level dimming ³			

Accessories: Order as separate catalog number.	
DGA24	Drywall grid adapter for 2x4 recessed fixture.

Notes

- 1 Approximate lumen output.
- 2 Not available with EL7L or EL14L battery packs or SLD driver.
- 3 Not available with N80, N80EMG, N100, or N100EMG.
- 4 Gateway not included. Requires on-site commissioning.

Visit www.lightingcontrols.com/XPointWireless for more information.

Performance Data

Lumen	Package	Lumens	Input Watts	LPW
30L	LP830	3,010.9	25	120.4
30L	LP835	3,075.5	25	123.0
30L	LP840	3,097.0	25	123.9
30L	LP850	3,204.7	25	128.2
40L	LP830	3,835.1	32	119.8
40L	LP835	3,918.2	32	122.4
40L	LP840	3,945.8	32	123.3
40L	LP850	4,084.2	32	127.6
48L	LP830	4,730.1	40	118.3
48L	LP835	4,831.6	40	120.8
48L	LP840	4,865.4	40	121.6
48L	LP850	5,034.6	40	125.9
60L	LP830	5,431.3	47	115.6
60L	LP835	5,548.2	47	118.0
60L	LP840	5,588.2	47	118.9
60L	LP850	5,785.0	47	123.1
72L	LP830	7,513.4	67	112.1
72L	LP835	7,673.3	67	114.5
72L	LP840	7,728.7	67	115.4
72L	LP850	7,999.3	67	119.4

Performance based on standard #12 pattern acrylic lens.

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

$$\text{Delivered Lumens} = 1.25 \times P \times \text{LPW}$$

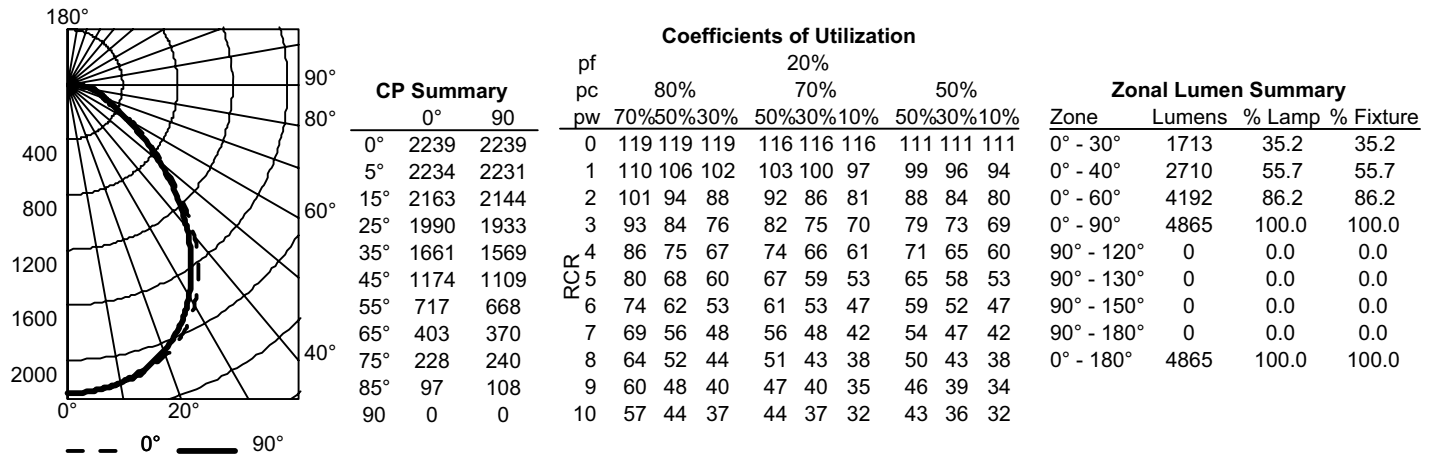
P = Output power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

2TL 2X4 Recessed LED Lighting

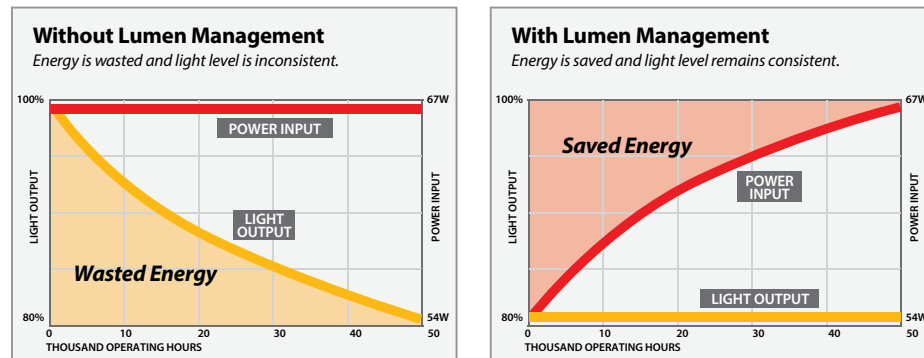
PHOTOMETRICS

2TL4 48L FW A12 EZ1 LP840, 4865.4 delivered lumens, test no. LTL26934P10, tested in accordance to IESNA LM-79.



Constant Lumen Management

Enabled by the embedded nLight control, the T Series LED actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.



FEATURES & SPECIFICATIONS

INTENDED USE — The T Series LED combines digital lighting and control technologies with a high-performance optical system to deliver general ambient lighting for many applications such as schools, offices and hospitals.

High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing formed from cold-rolled steel. Housing is painted after fabrication for superior finish.

Smooth hemmed sides and smooth inward-formed end flanges, for easy handling.

Standard extruded aluminum door frame has superior structural integrity with premium appearance and mitered corners. Door frame is painted after fabrication, standard. Powder-painted rotary cam latches provide easy, secure door closure. Integral T-bar clips are standard. Acrylic shielding material is 100% UV stabilized.

OPTICS — Standard pattern #19 lens, 0.156" thick with highly transmissive overlay, is standard for superior brightness control. Overlay is 0.040" thick. Other lenses are available.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior level and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI. Optional nLight® embedded controls continuously monitor system performance, allow for constant lumen management/compensation function, facilitate simple "plug-and-play" network and controls upgrading via Cat-5 cable.

Driver disconnect is provided where required to comply with U.S. and Canadian codes.

INSTALLATION — Drivers and internal components are accessible from floor. LED boards include plug-in connectors for easy replacement or servicing. Suitable for direct insulation contact. Suitable for damp location.

LISTINGS — CSA certified to U.S. and Canadian standards. IC rated. DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

T SERIES LED

2TL

2' x 4' LED



eldoLED®

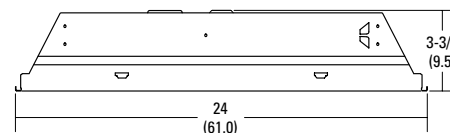


Specifications

Length: 48 (122.0)

Width: 24 (61.0)

Depth: 3-3/4 (9.5)



All dimensions are inches (centimeters) unless otherwise noted.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2TL 2X4 Recessed LED Lighting



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: 2TL4 40L RW A19 EZ1 LP835 N80

2TL4				
Series	Lumens ¹	Door	Lens	Voltage
2TL4 Recessed LED 2x4	30L 3000 lumens 40L 4000 lumens 48L 4800 lumens 60L 6000 lumens 72L 7200 lumens	FW Flush aluminum, white RW Regressed aluminum, white	A12 #12 pattern acrylic A19 #19 pattern acrylic, 0.156" thick MWS Matte white .040" thick MPL Micro prism SWL Satin white	(blank) MVOLT (120-277V) 347 347V ²

Driver	Color temperature	Control	Options
EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K	(blank) No controls	EL7L 700 nominal lumen battery pack (non-CEC compliant)
EZB eldoLED dims to dark (0-10 volt dimming)	LP835 3500 K	N80 nLight with 80% (L80) lumen management	EL14L 1400 nominal lumen battery pack (non-CEC compliant)
EDB eldoLED DALI ³	LP840 4000 K	N80EMG nLight with 80% (L80) lumen management for use with generator supply EM power	E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant
EXB eldoLED DMX/RDM ³	LP850 5000 K	N100 nLight without lumen management	CP Chicago plenum
EXA1 Dims to 1%, XPoint wireless enabled ^{3,4}		N100EMG nLight without lumen management for use with generator supply EM power	
EXAB Dims to dark, XPoint wireless enabled ^{3,4}			
SLD Step-level dimming ³			

Accessories: Order as separate catalog number.	
DGA24	Drywall grid adapter for 2x4 recessed fixture.

Notes

- 1 Approximate lumen output.
- 2 Not available with EL7L or EL14L battery packs or SLD driver.
- 3 Not available with N80, N80EMG, N100, or N100EMG.
- 4 Gateway not included. Requires on-site commissioning.

Visit www.lightingcontrols.com/XPointWireless for more information.

Performance Data

Lumen	Package	Lumens	Input Watts	LPW
30L	LP830	3,010.9	25	120.4
30L	LP835	3,075.5	25	123.0
30L	LP840	3,097.0	25	123.9
30L	LP850	3,204.7	25	128.2
40L	LP830	3,835.1	32	119.8
40L	LP835	3,918.2	32	122.4
40L	LP840	3,945.8	32	123.3
40L	LP850	4,084.2	32	127.6
48L	LP830	4,730.1	40	118.3
48L	LP835	4,831.6	40	120.8
48L	LP840	4,865.4	40	121.6
48L	LP850	5,034.6	40	125.9
60L	LP830	5,431.3	47	115.6
60L	LP835	5,548.2	47	118.0
60L	LP840	5,588.2	47	118.9
60L	LP850	5,785.0	47	123.1
72L	LP830	7,513.4	67	112.1
72L	LP835	7,673.3	67	114.5
72L	LP840	7,728.7	67	115.4
72L	LP850	7,999.3	67	119.4

Performance based on standard #12 pattern acrylic lens.

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

$$\text{Delivered Lumens} = 1.25 \times P \times \text{LPW}$$

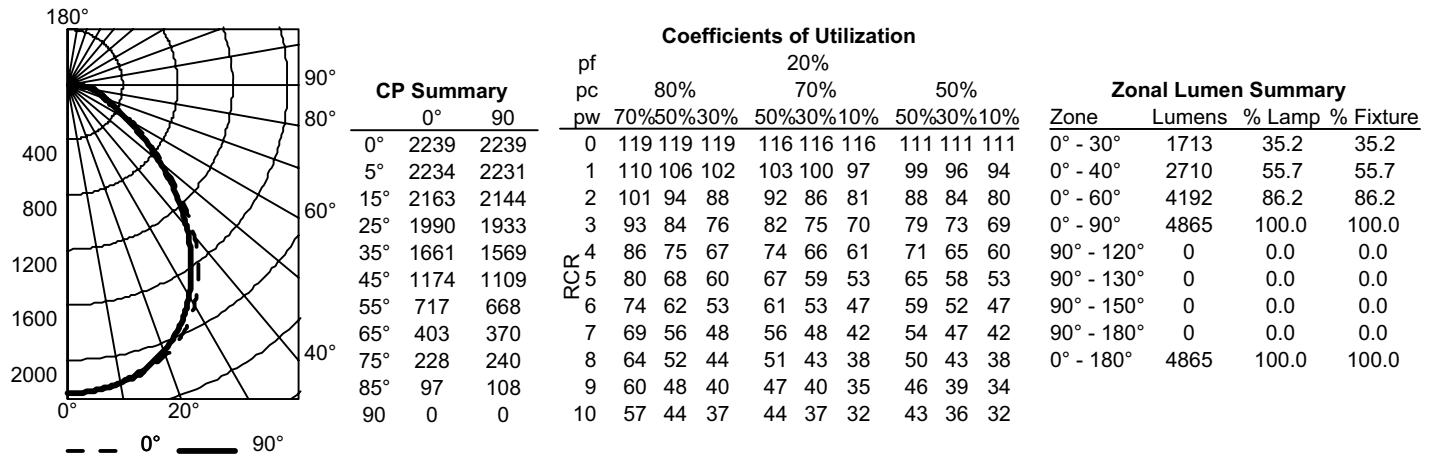
P = Output power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

2TL 2X4 Recessed LED Lighting

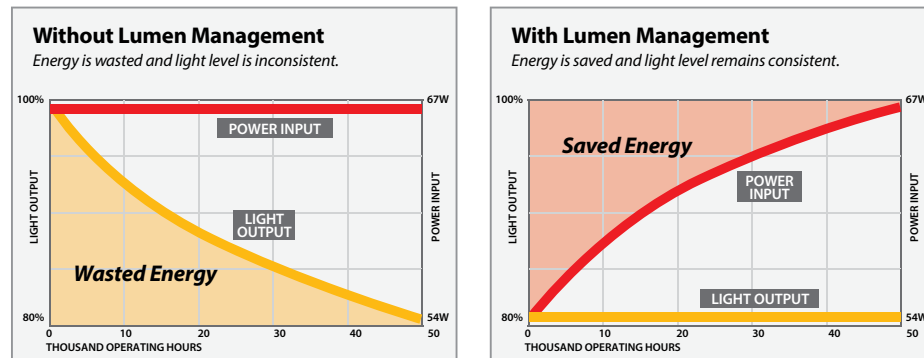
PHOTOMETRICS

2TL4 48L FW A12 EZ1 LP840, 4865.4 delivered lumens, test no. LTL26934P10, tested in accordance to IESNA LM-79.



Constant Lumen Management

Enabled by the embedded nLight control, the T Series LED actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.



FEATURES & SPECIFICATIONS

INTENDED USE —The T Series LED combines digital lighting and control technologies with a high-performance optical system to deliver general ambient lighting for many applications such as schools, offices and hospitals.

High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing formed from cold-rolled steel. Housing is painted after fabrication for superior finish.

Smooth hemmed sides and smooth inward-formed end flanges, for easy handling.

Standard extruded aluminum door frame has superior structural integrity with premium appearance and mitered corners. Door frame is painted after fabrication, standard. Powder-painted rotary cam latches provide easy, secure door closure. Integral T-bar clips are standard. Acrylic shielding material is 100% UV stabilized.

OPTICS — Standard pattern #19 lens, 0.156" thick with highly transmissive overlay, is standard for superior brightness control. Overlay is 0.040" thick. Other lenses are available.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior level and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI. Optional nLight® embedded controls continuously monitor system performance, allow for constant lumen management/compensation function, facilitate simple "plug-and-play" network and controls upgrading via Cat-5 cable.

Driver disconnect is provided where required to comply with U.S. and Canadian codes.

INSTALLATION — Drivers and internal components are accessible from floor. LED boards include plug-in connectors for easy replacement or servicing. Suitable for direct insulation contact. Suitable for damp location.

LISTINGS — CSA certified to U.S. and Canadian standards. IC rated.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

T SERIES LED

TL

1' x 4' LED



eldoLED®



Specifications

Length: 48 (121.9)

Width: 12 (30.5)

Depth: 4-1/2 (11.4)

All dimensions are inches (centimeters) unless otherwise noted.



CSA+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

TL Recessed LED Lighting 1'x4'



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: TL4 40L FW A12 EZ1 LP835 N80

TL4					
Series	Lumens ¹	Door	Lens	Voltage	
TL4 Recessed LED 1x4	20L 2000 lumens	FW Flush aluminum, white	A12 #12 pattern acrylic	(blank)	MVOLT (120-277V)
	30L 3000 lumens	RW Regressed aluminum, white	A19 #19 pattern acrylic, 0.156" thick	347	347V ²
	40L 4000 lumens		MWS Matte white .040" thick		
	48L 4800 lumens		MPL Micro prism		
	60L 6000 lumens		SWL Satin white		

Driver	Color temperature	Control ⁵	Options
EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K	(blank) No controls	EL7L 700 nominal lumen battery pack (non-CEC compliant) ⁶
EZB eldoLED dims to dark (0-10 volt dimming)	LP835 3500 K	N80 nLight with 80% (L80) lumen management	EL14L 1400 nominal lumen battery pack (non-CEC compliant) ⁶
EDB eldoLED DALI ³	LP840 4000 K	N80EMG nLight with 80% (L80) lumen management for use with generator supply EM power	E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant ⁶
EXB eldoLED DMX/RDM ³	LP850 5000 K	N100 nLight without lumen management	CP Chicago plenum
EXA1 Dims to 1%, XPoint wireless enabled ^{3,4}		N100EMG nLight without lumen management for use with generator supply EM power	
EXAB Dims to dark, XPoint wireless enabled ^{3,4}			
SLD Step-level dimming ³			

Accessories: Order as separate catalog number.	
DGA14	Drywall grid adapter for 1x4 recessed fixture.

Notes

- 1 Approximate lumen output.
- 2 Not available with EL7L or EL14L battery packs or SLD driver.
- 3 Not available with N80, N80EMG, N100, or N100EMG.
- 4 Gateway not included. Requires on-site commissioning. Visit www.lightingcontrols.com/XPointWireless for more information.
- 5 Cannot row mount when ordered with nLight options
- 6 Not available for 48L or 60L options.

Performance Data				
Lumen	Package	Lumens	Input Watts	LPW
20L	LP830	2,212.5	21	105.4
20L	LP835	2,259.9	21	107.6
20L	LP840	2,275.7	21	108.4
20L	LP850	2,354.8	21	112.1
30L	LP830	3,143.5	30	104.8
30L	LP835	3,211.3	30	107.0
30L	LP840	3,233.9	30	107.8
30L	LP850	3,346.9	30	111.6
40L	LP830	3,991.0	39	102.3
40L	LP835	4,076.9	39	104.5
40L	LP840	4,106.3	39	105.3
40L	LP850	4,248.6	39	108.9
48L	LP830	4,793.3	47	102.0
48L	LP835	4,897.2	47	104.2
48L	LP840	4,931.1	47	104.9
48L	LP850	5,105.2	47	108.6
60L	LP830	5,426.1	55	98.7
60L	LP835	5,541.3	55	100.8
60L	LP840	5,582.0	55	101.5
60L	LP850	5,776.3	55	105.0

Performance based on standard #12 pattern acrylic lens.

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

$$\text{Delivered Lumens} = 1.25 \times P \times \text{LPW}$$

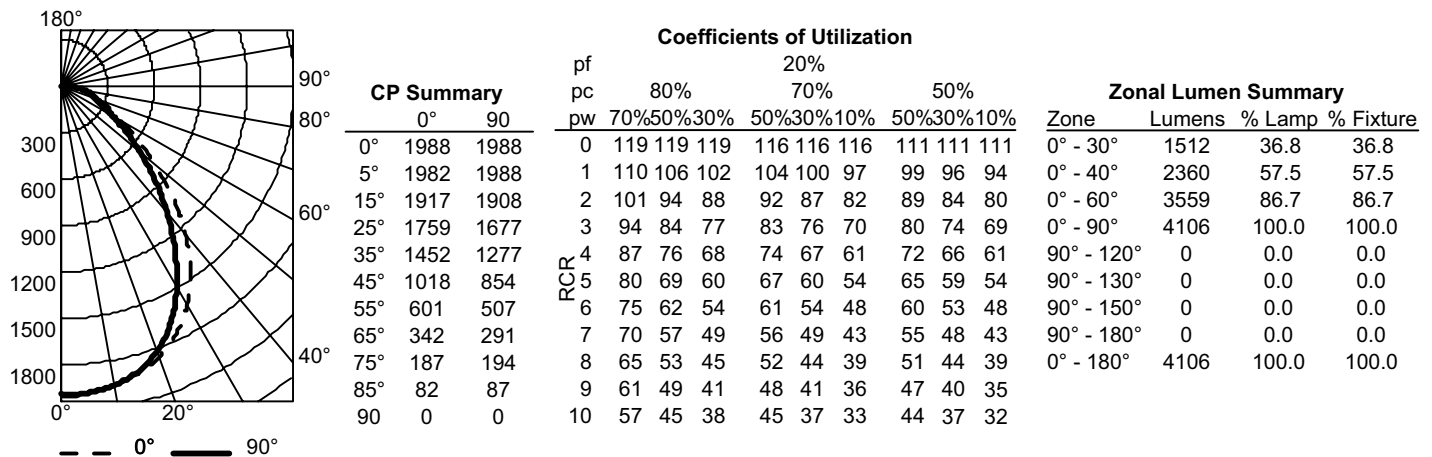
P = Output power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

TL Recessed LED Lighting 1'x4'

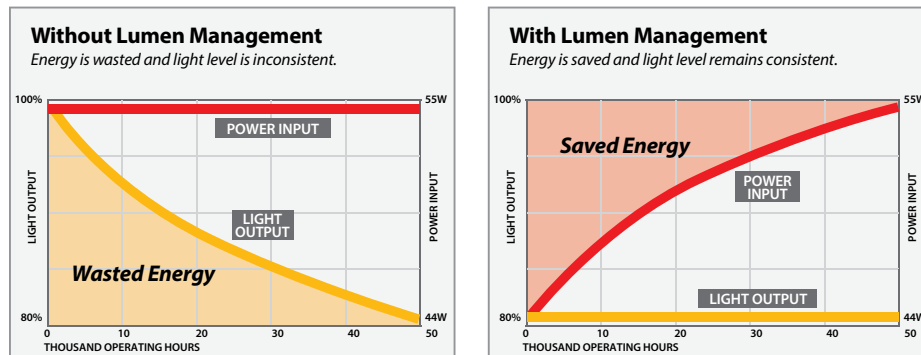
PHOTOMETRICS

TL4 40L FW A12 EZ1 LP840, 4106.3 delivered lumens, test no. LTL26929P10, tested in accordance to IESNA LM-79.



Constant Lumen Management

Enabled by the embedded nLight control, the T Series LED actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.



FEATURES & SPECIFICATIONS

INTENDED USE — The T Series LED combines digital lighting and control technologies with a high-performance optical system to deliver general ambient lighting for many applications such as schools, offices and hospitals.

High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing formed from cold-rolled steel. Housing is painted after fabrication for superior finish.

Smooth hemmed sides and smooth inward-formed end flanges, for easy handling.

Standard extruded aluminum door frame has superior structural integrity with premium appearance and mitered corners. Door frame is painted after fabrication, standard. Powder-painted rotary cam latches provide easy, secure door closure. Integral T-bar clips are standard. Acrylic shielding material is 100% UV stabilized.

OPTICS — Standard pattern #19 lens, 0.156" thick with highly transmissive overlay, is standard for superior brightness control. Overlay is 0.040" thick. Other lenses are available.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior level and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI. Optional nLight® embedded controls continuously monitor system performance, allow for constant lumen management/compensation function, facilitate simple "plug-and-play" network and controls upgrading via Cat-5 cable.

Driver disconnect is provided where required to comply with U.S. and Canadian codes.

INSTALLATION — Drivers and internal components are accessible from floor. LED boards include plug-in connectors for easy replacement or servicing. Suitable for direct insulation contact. Suitable for damp location.

LISTINGS — CSA certified to U.S. and Canadian standards. IC rated.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

T SERIES LED

2TL

2' x 2' LED



eldoLED®

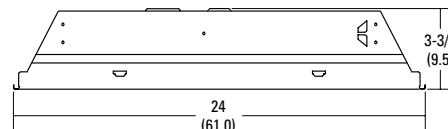


Specifications

Length: 24 (61.0)

Width: 24 (61.0)

Depth: 3-3/4 (9.5)



All dimensions are inches (centimeters) unless otherwise noted.

Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2TL Recessed LED Lighting 2'x2'



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: 2TL2 33L RW A19 EZ1 LP835 N80

2TL2									
Series		Lumens ¹		Door		Lens		Voltage	
2TL2	Recessed LED 2x2	20L	2000 lumens	FW	Flush aluminum, white	A12	#12 pattern acrylic	(blank)	MVOLT (120-277V)
		33L	3300 lumens	RW	Regressed aluminum, white	A19	#19 pattern acrylic, 0.156" thick	347	347V ²
		40L	4000 lumens			MWS	Matte white .040" thick		
						MPL	Micro prism		
						SWL	Satin white		

Driver		Color temperature		Control		Options	
EZ1	eldoLED dims to 1% (0-10 volt dimming)	LP830	3000 K	(blank)	No controls	EL7L	700 nominal lumen battery pack (non-CEC compliant)
EZB	eldoLED dims to dark (0-10 volt dimming)	LP835	3500 K	N80	nLight with 80% (L80) lumen management	EL14L	1400 nominal lumen battery pack (non-CEC compliant)
EDB	eldoLED DALI ³	LP840	4000 K	N80EMG	nLight with 80% (L80) lumen management for use with generator supply EM power	E10WLCP	EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant
EXB	eldoLED DMX/RDM ³	LP850	5000 K	N100	nLight without lumen management	CP	Chicago plenum
EXA1	Dims to 1%, XPoint wireless enabled ^{3,4}			N100EMG	nLight without lumen management for use with generator supply EM power		
EXAB	Dims to dark, XPoint wireless enabled ^{3,4}						
SLD	Step-level dimming ³						

Accessories: Order as separate catalog number.

DGA22 Drywall grid adapter for 2x2 recessed fixture.

Notes

- 1 Approximate lumen output.
- 2 Not available with EL7L or EL14L battery packs or SLD driver.
- 3 Not available with N80, N80EMG, N100, or N100EMG.
- 4 Gateway not included. Requires on-site commissioning. Visit www.lightingcontrols.com/XPointWireless for more information.

Performance Data

Lumen	Package	Lumens	Input Watts	LPW
20L	LP830	2,034.7	18	113.0
20L	LP835	2,078.3	18	115.5
20L	LP840	2,092.9	18	116.3
20L	LP850	2,165.6	18	120.3
33L	LP830	3,246.3	29	111.9
33L	LP835	3,317.0	29	114.4
33L	LP840	3,339.8	29	115.2
33L	LP850	3,458.3	29	119.3
40L	LP830	3,811.6	35	108.9
40L	LP835	3,892.7	35	111.2
40L	LP840	3,921.8	35	112.1
40L	LP850	4,058.9	35	116.0

Performance based on standard #12 pattern acrylic lens.

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

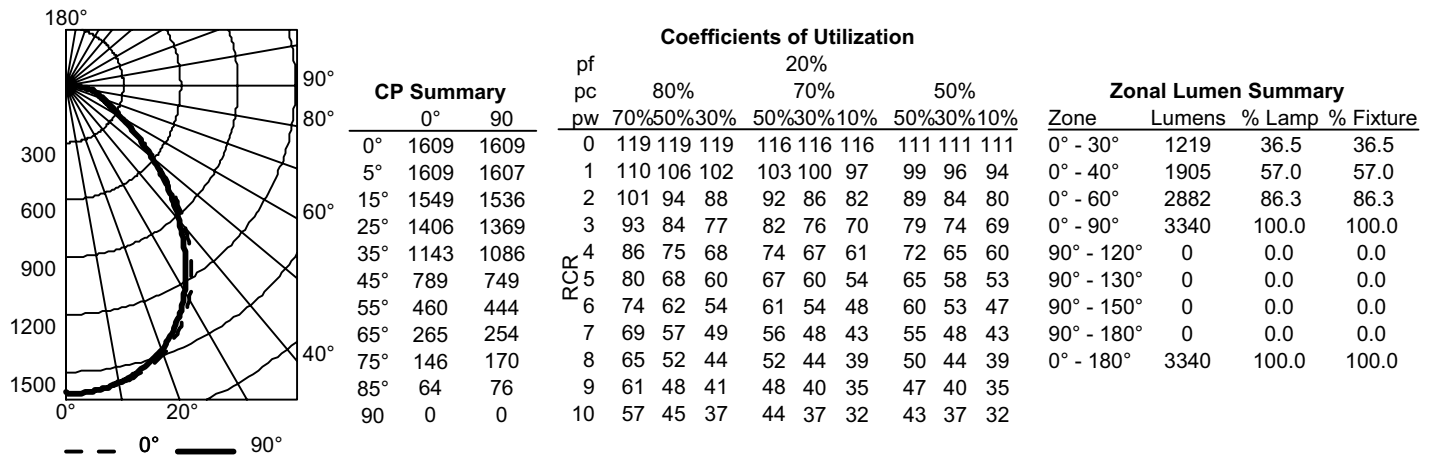
P = Output power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

2TL Recessed LED Lighting 2'x2'

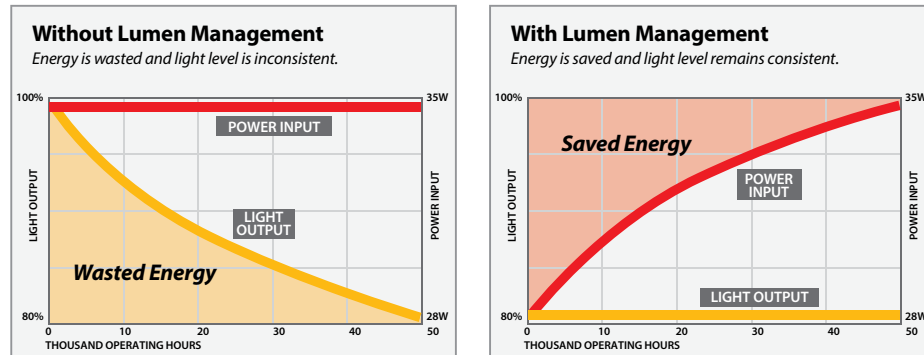
PHOTOMETRICS

2TL2 33L FW A12 EZ1 LP840, 3339.8 delivered lumens, test no. LTL26923P6, tested in accordance to IESNA LM-79.



Constant Lumen Management

Enabled by the embedded nLight control, the T Series LED actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.



FEATURES & SPECIFICATIONS

INTENDED USE — The T Series LED combines digital lighting and control technologies with a high-performance optical system to deliver general ambient lighting for many applications such as schools, offices and hospitals.

High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing formed from cold-rolled steel. Housing is painted after fabrication for superior finish.

Smooth hemmed sides and smooth inward-formed end flanges, for easy handling.

Standard extruded aluminum door frame has superior structural integrity with premium appearance and mitered corners. Door frame is painted after fabrication, standard. Powder-painted rotary cam latches provide easy, secure door closure. Integral T-bar clips are standard. Acrylic shielding material is 100% UV stabilized.

OPTICS — Standard pattern #19 lens, 0.156" thick with highly transmissive overlay, is standard for superior brightness control. Overlay is 0.040" thick. Other lenses are available.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior level and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI. Optional nLight® embedded controls continuously monitor system performance, allow for constant lumen management/compensation function, facilitate simple "plug-and-play" network and controls upgrading via Cat-5 cable.

Driver disconnect is provided where required to comply with U.S. and Canadian codes.

INSTALLATION — Drivers and internal components are accessible from floor. LED boards include plug-in connectors for easy replacement or servicing. Suitable for direct insulation contact. Suitable for damp location.

LISTINGS — CSA certified to U.S. and Canadian standards. IC rated.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

T SERIES LED

2TL

2' x 2' LED



eldoLED®

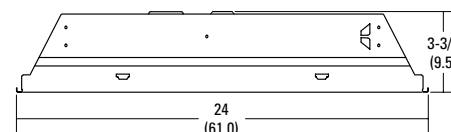


Specifications

Length: 24 (61.0)

Width: 24 (61.0)

Depth: 3-3/4 (9.5)



All dimensions are inches (centimeters) unless otherwise noted.

Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2TL Recessed LED Lighting 2'x2'



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: 2TL2 33L RW A19 EZ1 LP835 N80

2TL2							
Series		Lumens ¹		Door		Lens	
2TL2	Recessed LED 2x2	20L	2000 lumens	FW	Flush aluminum, white	A12	#12 pattern acrylic
		33L	3300 lumens	RW	Regressed aluminum, white	A19	#19 pattern acrylic, 0.156" thick
		40L	4000 lumens			MWS	Matte white .040" thick
						MPL	Micro prism
						SWL	Satin white
						Voltage	
						(blank) MVOLT (120-277V)	
						347 347V ²	

Driver		Color temperature		Control		Options	
EZ1	eldoLED dims to 1% (0-10 volt dimming)	LP830	3000 K	(blank)	No controls	EL7L	700 nominal lumen battery pack (non-CEC compliant)
EZB	eldoLED dims to dark (0-10 volt dimming)	LP835	3500 K	N80	nLight with 80% (L80) lumen management	EL14L	1400 nominal lumen battery pack (non-CEC compliant)
EDB	eldoLED DALI ³	LP840	4000 K	N80EMG	nLight with 80% (L80) lumen management for use with generator supply EM power	E10WLCP	EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant
EXB	eldoLED DMX/RDM ³	LP850	5000 K	N100	nLight without lumen management	CP	Chicago plenum
EXA1	Dims to 1%, XPoint wireless enabled ^{3,4}			N100EMG	nLight without lumen management for use with generator supply EM power		
EXAB	Dims to dark, XPoint wireless enabled ^{3,4}						
SLD	Step-level dimming ³						

Accessories: Order as separate catalog number.

DGA22 Drywall grid adapter for 2x2 recessed fixture.

Notes

- 1 Approximate lumen output.
- 2 Not available with EL7L or EL14L battery packs or SLD driver.
- 3 Not available with N80, N80EMG, N100, or N100EMG.
- 4 Gateway not included. Requires on-site commissioning. Visit www.lightingcontrols.com/XPointWireless for more information.

Performance Data

Lumen	Package	Lumens	Input Watts	LPW
20L	LP830	2,034.7	18	113.0
20L	LP835	2,078.3	18	115.5
20L	LP840	2,092.9	18	116.3
20L	LP850	2,165.6	18	120.3
33L	LP830	3,246.3	29	111.9
33L	LP835	3,317.0	29	114.4
33L	LP840	3,339.8	29	115.2
33L	LP850	3,458.3	29	119.3
40L	LP830	3,811.6	35	108.9
40L	LP835	3,892.7	35	111.2
40L	LP840	3,921.8	35	112.1
40L	LP850	4,058.9	35	116.0

Performance based on standard #12 pattern acrylic lens.

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

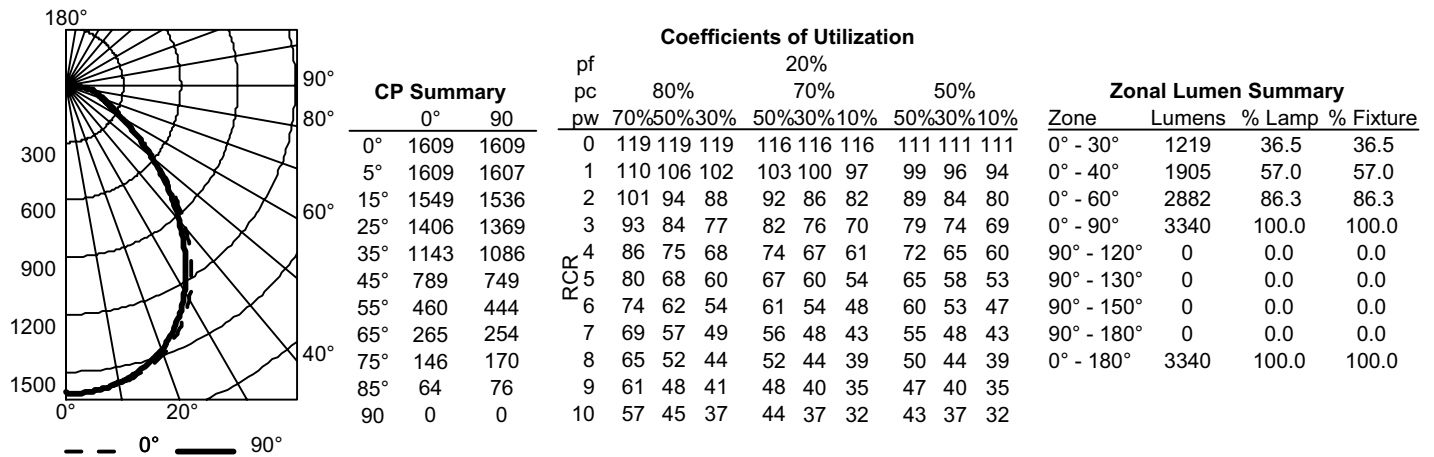
P = Output power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

2TL Recessed LED Lighting 2'x2'

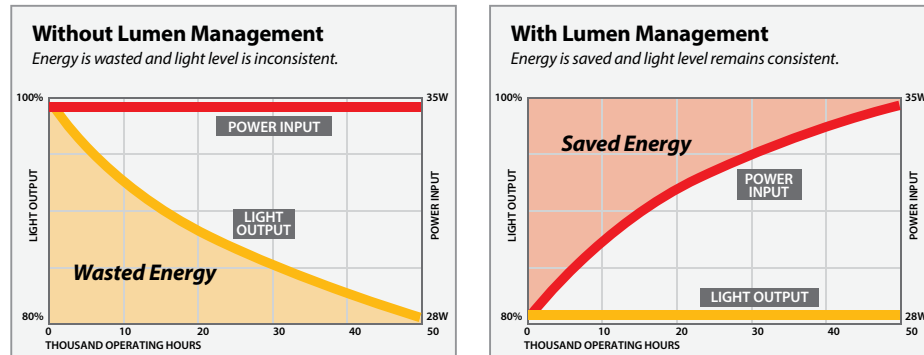
PHOTOMETRICS

2TL2 33L FW A12 EZ1 LP840, 3339.8 delivered lumens, test no. LTL26923P6, tested in accordance to IESNA LM-79.



Constant Lumen Management

Enabled by the embedded nLight control, the T Series LED actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.



FEATURES & SPECIFICATIONS

INTENDED USE — The Avante 2x2 is a general lighting luminaire for large spaces including open offices, circulation areas, classrooms, libraries, cafeterias, airport ticketing and wait areas, and numerous other commercial applications. Static or air function available. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing is gloss white enamel on cold-rolled steel. All edges hemmed or rounded. All shavings pivot on light traps and swing down for easy access.

Molded light traps prevent light leaks between shielding and end-plates.

All air and screw slot units supplied with screw-on tee bar clips. Driver access is from below.

OPTICS — Matte white polyester powder paint finished reflectors provide uniform light distribution.

All diffusers control direct light distribution and glare by shielding LEDs from direct view.

Metal diffuser staggered round holes (MDR) 52% open perforated metal with .075" diameter holes backed with white acrylic diffuser.

Straight blade louver (SBL) sides of perforated metal with staggered round holes and solid blade louvered center. Sides and louver backed with white acrylic diffuser.

Acrylic diffuser prismatic lens (ADP) extruded acrylic lens backed with white acrylic diffuser.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range and choice of control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Optional integrated nLight® controls make each luminaire addressable - allowing it to digitally communicate with other nLight-enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Simply connect all the nLight-enabled control devices and the AVL luminaires using standard Cat-5 cabling. Unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission.

Lumen Management: Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

Driver disconnect provided where required to comply with US and Canadian codes.

INSTALLATION — Trims available for standard 1" and 9/16" tee bar or screw slot grids.

Fixtures can be row mounted end-to-end. Suitable for damp locations.

Drywall ceiling adapters available.

LISTINGS — CSA certified to meet US and Canadian standards. IC rated.

Avante is covered by one or more of the following patents: 5,988,829; 399,586; 411,641; 413,402; 2,212,513; 87,513.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

Catalog Number
Notes
Type

Avante
Direct/Indirect Lighting

2AVL

2' X 2'
LED



eldoLED®

Specifications

Length:	24 (61.0)
Width:	24 (61.0)
Diffuser width:	8 (20.3)
Depth:	5-1/2 (14.0) 5-7/8 (14.9) for air fixture
Weight:	20 lbs

All dimensions are inches (centimeters) unless otherwise indicated.

A+ Capable Luminaire


This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2AVL 2x2 Direct/Indirect Lighting



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative

Example: 2AVL2 20L MDR EZ1 LP835

2AVL2					
Series	Trim type	Air function	Lumens ¹	Diffuser	Voltage
2AVL2 AV LED	(blank) Grid trim ST Screw slot	(blank) Static (no air function) A Air return/Supply	20L 2000 lumens 30L 3000 lumens 40L 4000 lumens	MDR Metal diffuser, round holes SBL Straight louver, round holes ADP Acrylic diffuser, linear prismatic lens	(blank) MVOLT (120 - 277V)

Driver	Color temperature	Controls	Options
EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K LP835 3500 K LP840 4000 K LP850 5000 K	(blank) No controls N80 nLight® with 80% lumen management N80EMG nLight® with 80% lumen management. For use with generator supply EM power N100 nLight® without lumen management N100EMG nLight® without lumen management. For use with generator supply EM power	JP20 Palletized job pack, qty. 20 EL7L 700 lumen battery pack (non-CEC compliant) ¹ EL14L 1400 lumen battery pack (non-CEC compliant) ¹ E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant CP Chicago plenum

Accessories: Order as separate catalog number.

DGA22 Drywall ceiling adapter, unit installation. Use G trim plus DGA accessory for fixture trim flange and fixture support in plaster or plasterboard ceilings.

Notes

1 Approximate lumen output.

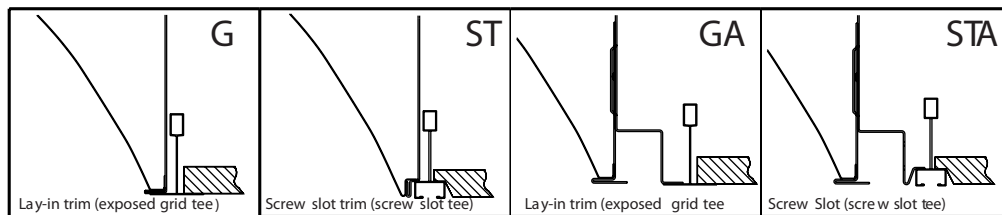
Performance Data			
Lumen Package	Lumens	Input Watts	LPW
20L MDR LP830	2044	24	85
20L MDR LP835	2034	24	85
20L MDR LP840	2025	24	84
20L MDR LP850	2106	24	88
30L MDR LP830	2759	36	77
30L MDR LP835	2704	36	75
30L MDR LP840	2734	36	76
30L MDR LP850	2843	36	79
40L MDR LP830	3884	57	68
40L MDR LP835	3806	57	67
40L MDR LP840	3848	57	67
40L MDR LP850	4001	57	70

How to Calculate Delivered Lumens in Emergency Mode
Use the formula below to determine the delivered lumens in emergency mode
Delivered Lumens = 1.25 x P x LPW
P = Output power of emergency driver. P = 10W for E10WLCP option.
LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.
LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

2AVL 2x2 Direct/Indirect Lighting

MOUNTING DATA

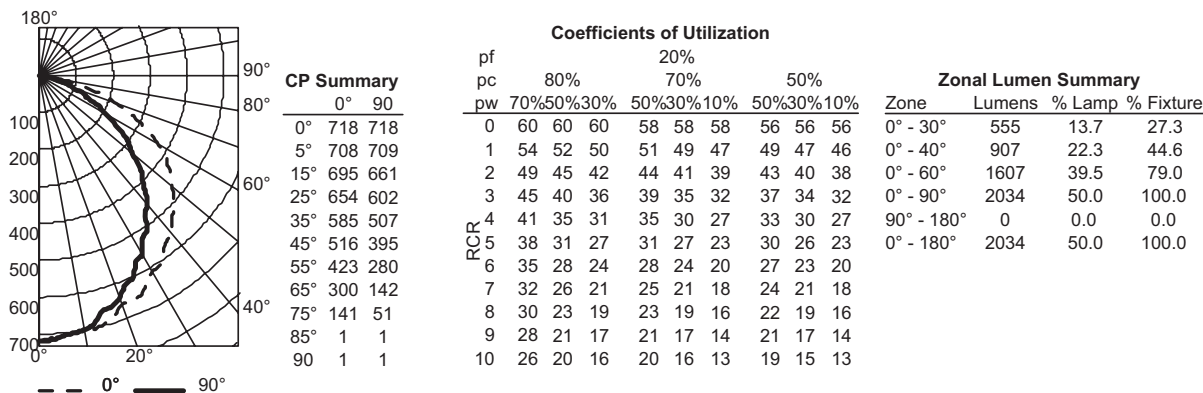
Ceiling Type	Appropriate Trim Type
Exposed grid tee (1" and 9/16")	G
Concealed grid tee	G
Screw slot	ST
Plaster or plasterboard	G*



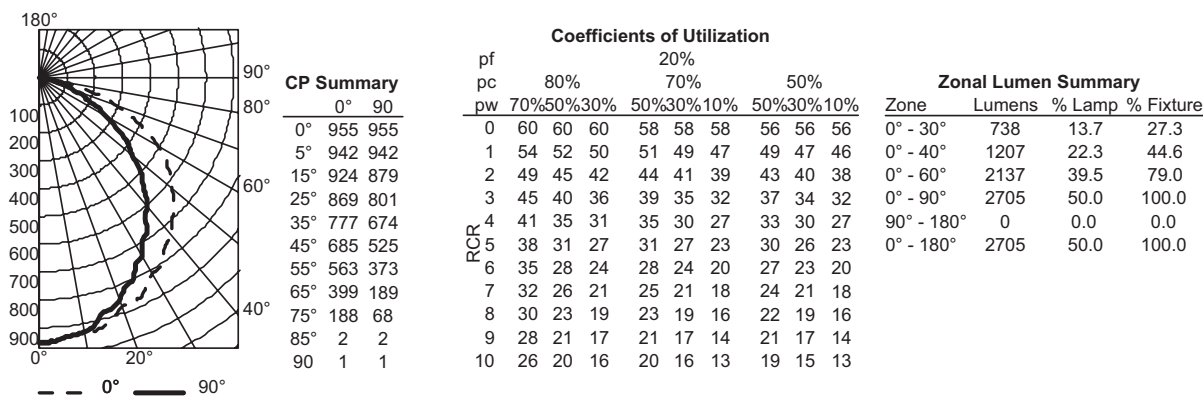
*DGA accessory available to provide ceiling trim flange and fixture support for plaster or plasterboard ceiling. Recommended rough-in dimensions for DGA installation is 24-3/4" x 48-3/4" (Tolerance is +1/8", -0").

PHOTOMETRICS

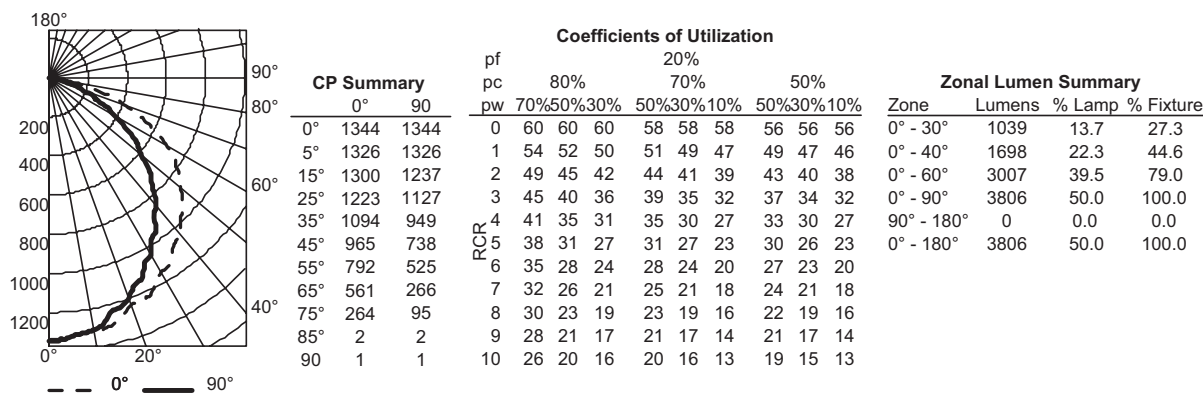
2AVL2 20L MDR LP835, 2034 delivered lumens, test no. 69075P0, tested in accordance to IESNA-LM79.



2AVL2 30L MDR LP835, 2704 delivered lumens, test no. 69075P5, tested in accordance to IESNA-LM79.



2AVL2 40L MDR LP835, 3806 delivered lumens, test no. 69075P9, tested in accordance to IESNA-LM79.



FEATURES & SPECIFICATIONS

INTENDED USE — The Avante 2x2 is a general lighting luminaire for large spaces including open offices, circulation areas, classrooms, libraries, cafeterias, airport ticketing and wait areas, and numerous other commercial applications. Static or air function available. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing is gloss white enamel on cold-rolled steel. All edges hemmed or rounded. All shavings pivot on light traps and swing down for easy access.

Molded light traps prevent light leaks between shielding and end-plates.

All air and screw slot units supplied with screw-on tee bar clips. Driver access is from below.

OPTICS — Matte white polyester powder paint finished reflectors provide uniform light distribution.

All diffusers control direct light distribution and glare by shielding LEDs from direct view.

Metal diffuser staggered round holes (MDR) 52% open perforated metal with .075" diameter holes backed with white acrylic diffuser.

Straight blade louver (SBL) sides of perforated metal with staggered round holes and solid blade louvered center. Sides and louver backed with white acrylic diffuser.

Acrylic diffuser prismatic lens (ADP) extruded acrylic lens backed with white acrylic diffuser.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range and choice of control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Optional integrated nLight® controls make each luminaire addressable - allowing it to digitally communicate with other nLight-enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Simply connect all the nLight-enabled control devices and the AVL luminaires using standard Cat-5 cabling. Unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission.

Lumen Management: Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

Driver disconnect provided where required to comply with US and Canadian codes.

INSTALLATION — Trims available for standard 1" and 9/16" tee bar or screw slot grids.

Fixtures can be row mounted end-to-end. Suitable for damp locations.

Drywall ceiling adapters available.

LISTINGS — CSA certified to meet US and Canadian standards. IC rated.

Avante is covered by one or more of the following patents: 5,988,829; 399,586; 411,641; 413,402; 2,212,513; 87,513.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

Catalog Number
Notes
Type

Avante
Direct/Indirect Lighting

2AVL

2' X 2'
LED



eldoLED®

Specifications

Length:	24 (61.0)
Width:	24 (61.0)
Diffuser width:	8 (20.3)
Depth:	5-1/2 (14.0) 5-7/8 (14.9) for air fixture
Weight:	20 lbs

All dimensions are inches (centimeters) unless otherwise indicated.

A+ Capable Luminaire


This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2AVL 2x2 Direct/Indirect Lighting



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative

Example: 2AVL2 20L MDR EZ1 LP835

2AVL2					
Series	Trim type	Air function	Lumens ¹	Diffuser	Voltage
2AVL2 AV LED	(blank) Grid trim ST Screw slot	(blank) Static (no air function) A Air return/Supply	20L 2000 lumens 30L 3000 lumens 40L 4000 lumens	MDR Metal diffuser, round holes SBL Straight louver, round holes ADP Acrylic diffuser, linear prismatic lens	(blank) MVOLT (120 - 277V)

Driver	Color temperature	Controls	Options
EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K LP835 3500 K LP840 4000 K LP850 5000 K	(blank) No controls N80 nLight® with 80% lumen management N80EMG nLight® with 80% lumen management. For use with generator supply EM power N100 nLight® without lumen management N100EMG nLight® without lumen management. For use with generator supply EM power	JP20 Palletized job pack, qty. 20 EL7L 700 lumen battery pack (non-CEC compliant) ¹ EL14L 1400 lumen battery pack (non-CEC compliant) ¹ E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant CP Chicago plenum

Accessories: Order as separate catalog number.

DGA22 Drywall ceiling adapter, unit installation. Use G trim plus DGA accessory for fixture trim flange and fixture support in plaster or plasterboard ceilings.

Notes

1 Approximate lumen output.

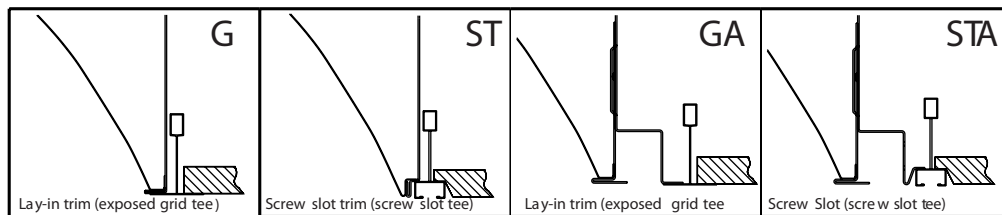
Performance Data			
Lumen Package	Lumens	Input Watts	LPW
20L MDR LP830	2044	24	85
20L MDR LP835	2034	24	85
20L MDR LP840	2025	24	84
20L MDR LP850	2106	24	88
30L MDR LP830	2759	36	77
30L MDR LP835	2704	36	75
30L MDR LP840	2734	36	76
30L MDR LP850	2843	36	79
40L MDR LP830	3884	57	68
40L MDR LP835	3806	57	67
40L MDR LP840	3848	57	67
40L MDR LP850	4001	57	70

How to Calculate Delivered Lumens in Emergency Mode
Use the formula below to determine the delivered lumens in emergency mode
Delivered Lumens = 1.25 x P x LPW
P = Output power of emergency driver. P = 10W for E10WLCP option.
LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.
LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

2AVL 2x2 Direct/Indirect Lighting

MOUNTING DATA

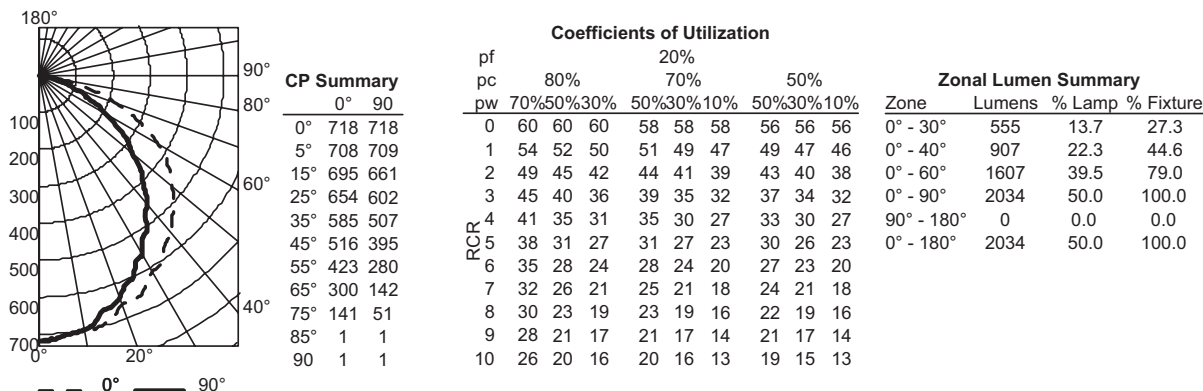
Ceiling Type	Appropriate Trim Type
Exposed grid tee (1" and 9/16")	G
Concealed grid tee	G
Screw slot	ST
Plaster or plasterboard	G*



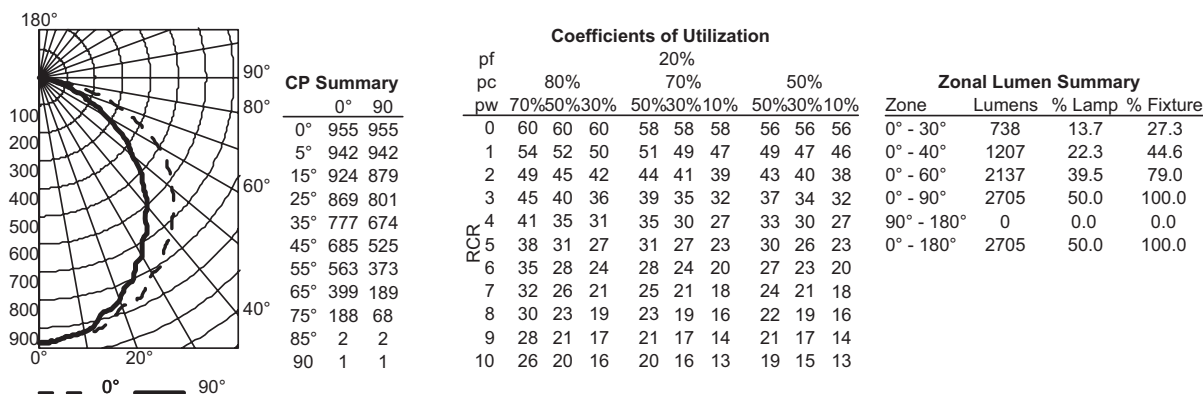
*DGA accessory available to provide ceiling trim flange and fixture support for plaster or plasterboard ceiling. Recommended rough-in dimensions for DGA installation is 24-3/4" x 48-3/4" (Tolerance is +1/8", -0").

PHOTOMETRICS

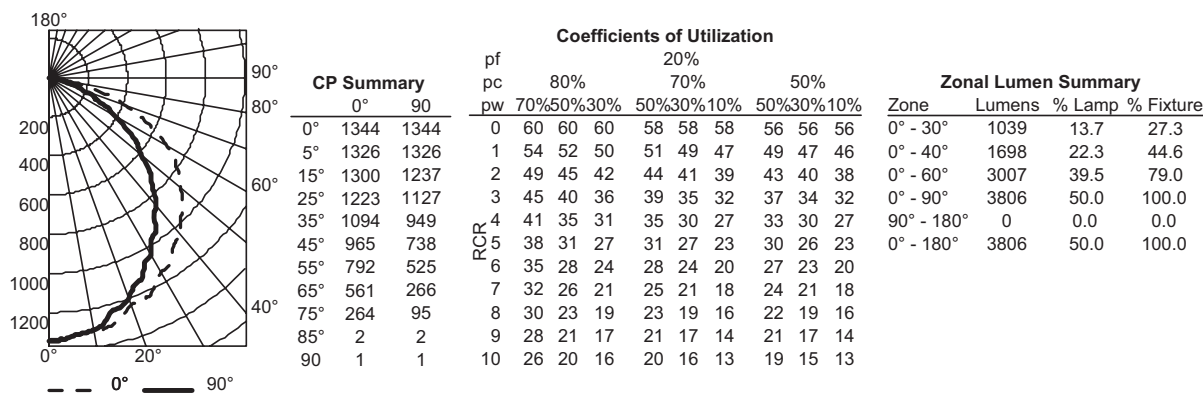
2AVL2 20L MDR LP835, 2034 delivered lumens, test no. 69075P0, tested in accordance to IESNA-LM79.



2AVL2 30L MDR LP835, 2704 delivered lumens, test no. 69075P5, tested in accordance to IESNA-LM79.



2AVL2 40L MDR LP835, 3806 delivered lumens, test no. 69075P9, tested in accordance to IESNA-LM79.



FEATURES & SPECIFICATIONS

INTENDED USE — The Avante 2x4 is a general lighting luminaire for large spaces including open offices, circulation areas, classrooms, libraries, cafeterias, airport ticketing and wait areas, and numerous other commercial applications. Static or air function available. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing is gloss white enamel on cold-rolled steel. All edges hemmed or rounded. All shieldings pivot on light traps and swing down for easy access.

Molded light traps prevent light leaks between shielding and end-plates.

All air and screw slot units supplied with screw-on tee bar clips. Driver access is from below.

OPTICS — Matte white polyester powder paint finished reflectors provide uniform light distribution.

All diffusers control direct light distribution and glare by shielding LEDs from direct view.

Metal diffuser staggered round holes (MDR) 52% open perforated metal with .075" diameter holes backed with white acrylic diffuser.

Straight blade louver (SBL) sides of perforated metal with staggered round holes and solid blade louvered center. Sides and louver backed with white acrylic diffuser.

Acrylic diffuser prismatic lens (ADP) extruded acrylic lens backed with white acrylic diffuser.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range and choice of control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Optional integrated nLight® controls make each luminaire addressable - allowing it to digitally communicate with other nLight-enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Simply connect all the nLight-enabled control devices and the AVL luminaires using standard Cat-5 cabling. Unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission. Lumen Management: Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

Driver disconnect provided where required to comply with US and Canadian codes.

INSTALLATION — Trims available for standard 1" and 9/16" tee bar or screw slot grids.

Fixtures can be row mounted end-to-end. Suitable for damp locations.

Drywall ceiling adapters available.

LISTINGS — CSA certified to meet US and Canadian standards. IC rated.

Avante is covered by one or more of the following patents: 5,988,829; 399,586; 411,641; 413,402; 2,212,513; 87,513.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

Avante®
Direct/Indirect Lighting

2AVL



eldoLED®

Specifications

Length:	48 (121.9)
Width:	24 (61.0)
Diffuser width:	8 (20.3)
Depth:	5-1/2 (14.0) 5-7/8 (14.9) for air fixture
Weight:	35 lbs

All dimensions are inches (centimeters) unless otherwise indicated.

CSA+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2AVL 2x4 Direct/Indirect Lighting



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative

Example: 2AVL4 40L MDR EZ1 LP835

2AVL4					
Series	Trim type	Air function	Lumens ¹	Diffuser	Voltage
2AVL4 AV LED	(blank) Grid trim ST Screw slot	(blank) Static (no air function) A Air return/Supply	30L 3000 lumens 40L 4000 lumens 50L 5000 lumens	MDR Metal diffuser, round holes SBL Straight louver, round holes ADP Acrylic diffuser, linear prismatic lens	(blank) MVOLT (120 - 277V)

Driver	Color temperature	Controls	Options
EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K LP835 3500 K LP840 4000 K LP850 5000 K	(blank) No controls N80 nLight® with 80% lumen management N80EMG nLight® with 80% lumen management. For use with generator supply EM power N100 nLight® without lumen management N100EMG nLight® without lumen management. For use with generator supply EM power	JP10 Palletized job pack, qty. 10 EL7L 700 lumen battery pack (non-CEC compliant) ¹ EL14L 1400 lumen battery pack (non-CEC compliant) ¹ E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant CP Chicago plenum

Accessories: Order as separate catalog number.

DGA24 Drywall ceiling adapter, unit installation. Use G trim plus DGA accessory for fixture trim flange and fixture support in plaster or plasterboard ceilings.

Notes

1 Approximate lumen output.

Performance Data

Lumen Package	Lumens	Input Watts	LPW
30L MDR LP830	3295	38	87
30L MDR LP835	3456	38	91
30L MDR LP840	3380	38	89
30L MDR LP850	3522	38	93
40L MDR LP830	4056	48	84
40L MDR LP835	4254	48	89
40L MDR LP840	4161	48	87
40L MDR LP850	4336	48	90
50L MDR LP830	4857	61	80
50L MDR LP835	5095	61	84
50L MDR LP840	4983	61	82
50L MDR LP850	5193	61	85

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Output power of emergency driver. P = 10W for E10WLCP option.

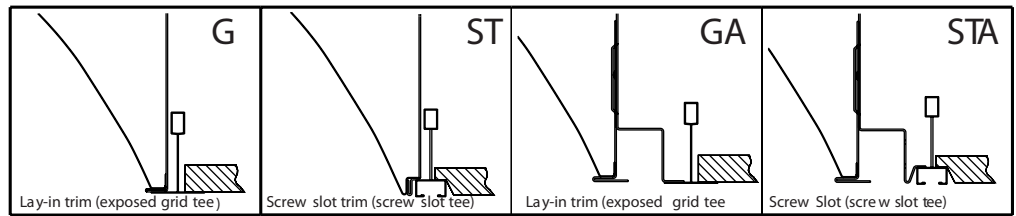
LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.

LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

2AVL 2x4 Direct/Indirect Lighting

MOUNTING DATA

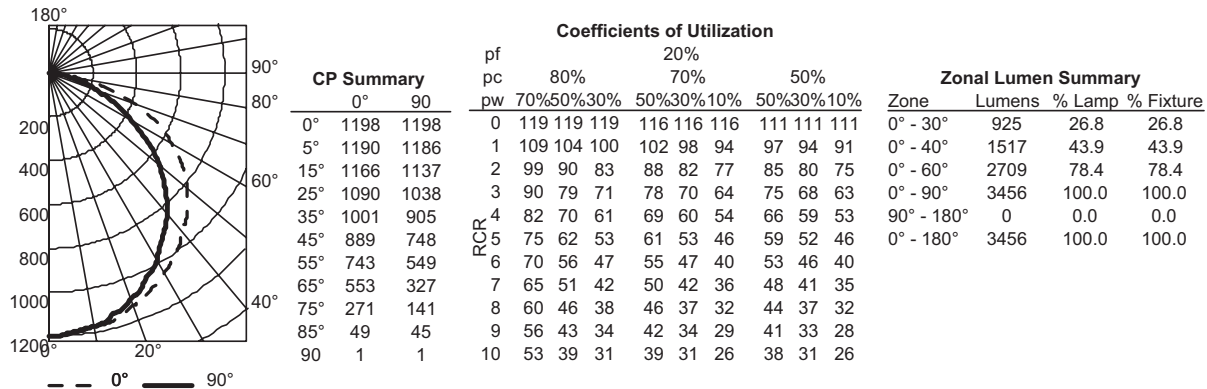
Ceiling Type	Appropriate Trim Type
Exposed grid tee (1" and 9/16")	G
Concealed grid tee	G
Screw slot	ST
Plaster or plasterboard	G*



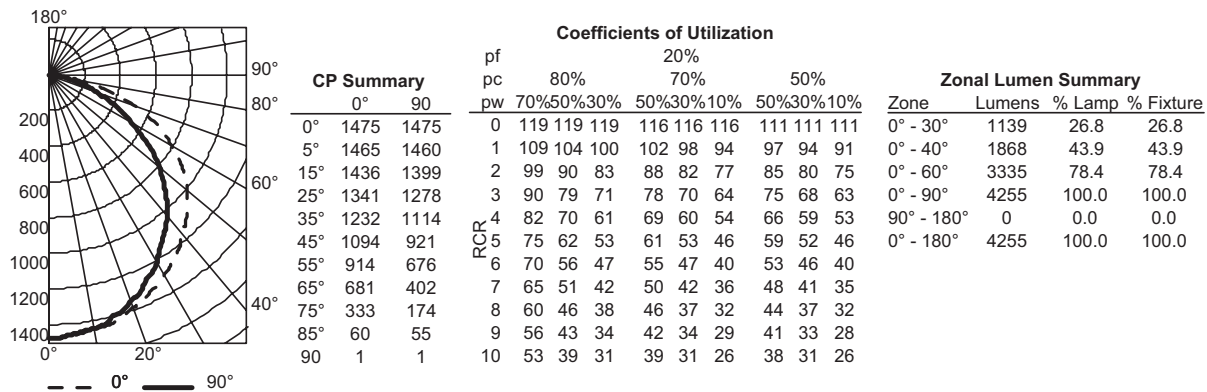
*DGA accessory available to provide ceiling trim flange and fixture support for plaster or plasterboard ceiling. Recommended rough-in dimensions for DGA installation is 24-3/4" x 48-3/4" (Tolerance is +1/8", -0").

PHOTOMETRICS

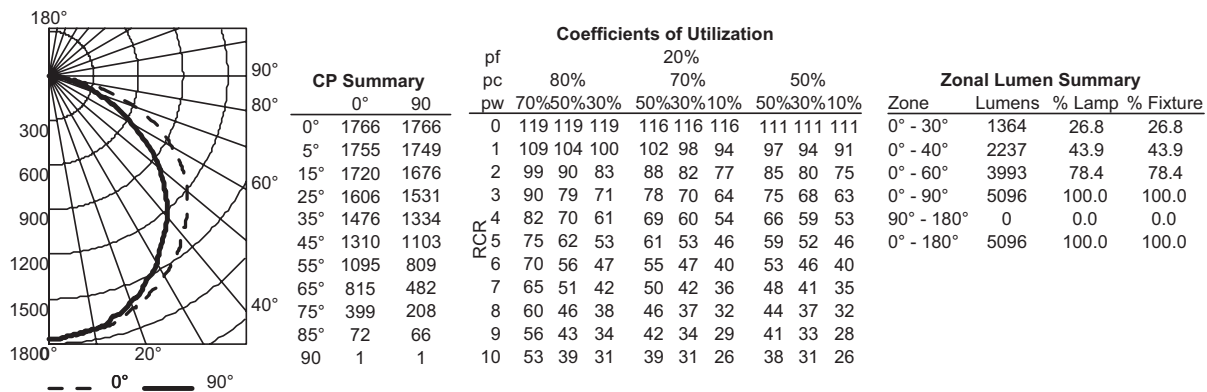
2AVL4 30L MDR LP835, 3456 delivered lumens, test no. 69071P0, tested in accordance to IESNA-LM79.



2AVL4 40L MDR LP835, 4255 delivered lumens, test no. 69071P5, tested in accordance to IESNA-LM79.



2AVL4 50L MDR LP835, 5095 delivered lumens, test no. 69071P9, tested in accordance to IESNA-LM79.



2AVL-2X4



FEATURES & SPECIFICATIONS

INTENDED USE — The Avante 2x4 is a general lighting luminaire for large spaces including open offices, circulation areas, classrooms, libraries, cafeterias, airport ticketing and wait areas, and numerous other commercial applications. Static or air function available. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing is gloss white enamel on cold-rolled steel. All edges hemmed or rounded. All shieldings pivot on light traps and swing down for easy access.

Molded light traps prevent light leaks between shielding and end-plates.

All air and screw slot units supplied with screw-on tee bar clips. Driver access is from below.

OPTICS — Matte white polyester powder paint finished reflectors provide uniform light distribution. All diffusers control direct light distribution and glare by shielding LEDs from direct view.

Metal diffuser staggered round holes (MDR) 52% open perforated metal with .075" diameter holes backed with white acrylic diffuser.

Straight blade louver (SBL) sides of perforated metal with staggered round holes and solid blade louvered center. Sides and louver backed with white acrylic diffuser.

Acrylic diffuser prismatic lens (ADP) extruded acrylic lens backed with white acrylic diffuser.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range and choice of control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Optional integrated nLight® controls make each luminaire addressable - allowing it to digitally communicate with other nLight-enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Simply connect all the nLight-enabled control devices and the AVL luminaires using standard Cat-5 cabling. Unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission. Lumen Management: Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

Driver disconnect provided where required to comply with US and Canadian codes.

INSTALLATION — Trims available for standard 1" and 9/16" tee bar or screw slot grids.

Fixtures can be row mounted end-to-end. Suitable for damp locations.

Drywall ceiling adapters available.

LISTINGS — CSA certified to meet US and Canadian standards. IC rated.

Avante is covered by one or more of the following patents: 5,988,829; 399,586; 411,641; 413,402; 2,212,513; 87,513.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

Avante®
Direct/Indirect Lighting

2AVL



eldoLED®

Specifications

Length:	48 (121.9)
Width:	24 (61.0)
Diffuser width:	8 (20.3)
Depth:	5-1/2 (14.0) 5-7/8 (14.9) for air fixture
Weight:	35 lbs

All dimensions are inches (centimeters) unless otherwise indicated.

CSA+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2AVL 2x4 Direct/Indirect Lighting



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative

Example: 2AVL4 40L MDR EZ1 LP835

2AVL4					
Series	Trim type	Air function	Lumens ¹	Diffuser	Voltage
2AVL4 AV LED	(blank) Grid trim ST Screw slot	(blank) Static (no air function) A Air return/Supply	30L 3000 lumens 40L 4000 lumens 50L 5000 lumens	MDR Metal diffuser, round holes SBL Straight louver, round holes ADP Acrylic diffuser, linear prismatic lens	(blank) MVOLT (120 - 277V)

Driver	Color temperature	Controls	Options
EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K LP835 3500 K LP840 4000 K LP850 5000 K	(blank) No controls N80 nLight® with 80% lumen management N80EMG nLight® with 80% lumen management. For use with generator supply EM power N100 nLight® without lumen management N100EMG nLight® without lumen management. For use with generator supply EM power	JP10 Palletized job pack, qty. 10 EL7L 700 lumen battery pack (non-CEC compliant) ¹ EL14L 1400 lumen battery pack (non-CEC compliant) ¹ E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant CP Chicago plenum

Accessories: Order as separate catalog number.

DGA24 Drywall ceiling adapter, unit installation. Use G trim plus DGA accessory for fixture trim flange and fixture support in plaster or plasterboard ceilings.

Notes

1 Approximate lumen output.

Performance Data

Lumen Package	Lumens	Input Watts	LPW
30L MDR LP830	3295	38	87
30L MDR LP835	3456	38	91
30L MDR LP840	3380	38	89
30L MDR LP850	3522	38	93
40L MDR LP830	4056	48	84
40L MDR LP835	4254	48	89
40L MDR LP840	4161	48	87
40L MDR LP850	4336	48	90
50L MDR LP830	4857	61	80
50L MDR LP835	5095	61	84
50L MDR LP840	4983	61	82
50L MDR LP850	5193	61	85

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Output power of emergency driver. P = 10W for E10WLCP option.

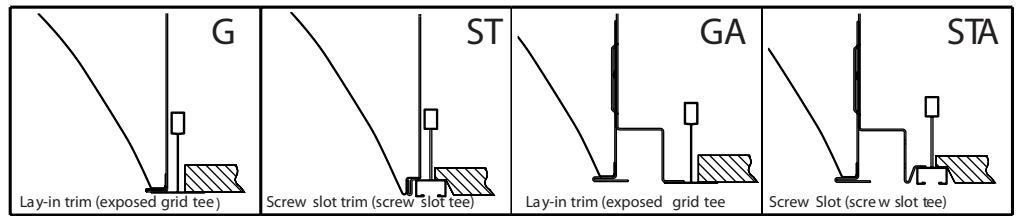
LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.

LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

2AVL 2x4 Direct/Indirect Lighting

MOUNTING DATA

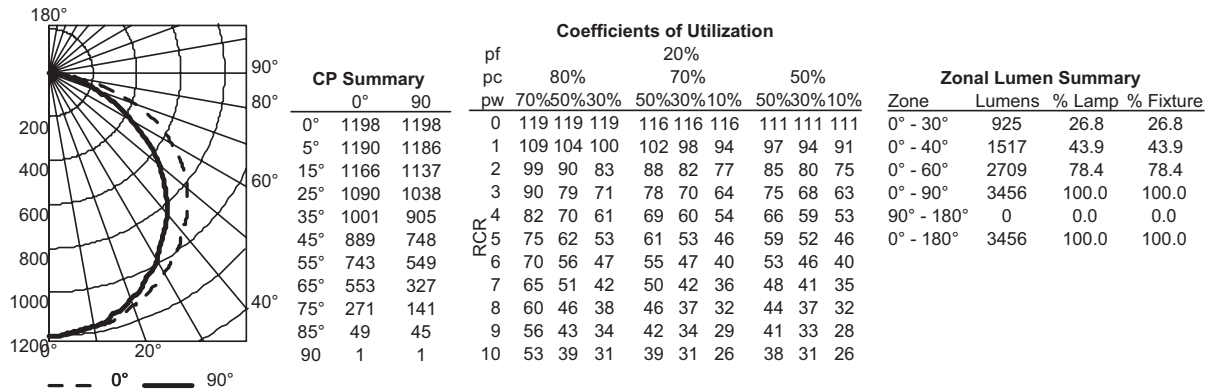
Ceiling Type	Appropriate Trim Type
Exposed grid tee (1" and 9/16")	G
Concealed grid tee	G
Screw slot	ST
Plaster or plasterboard	G*



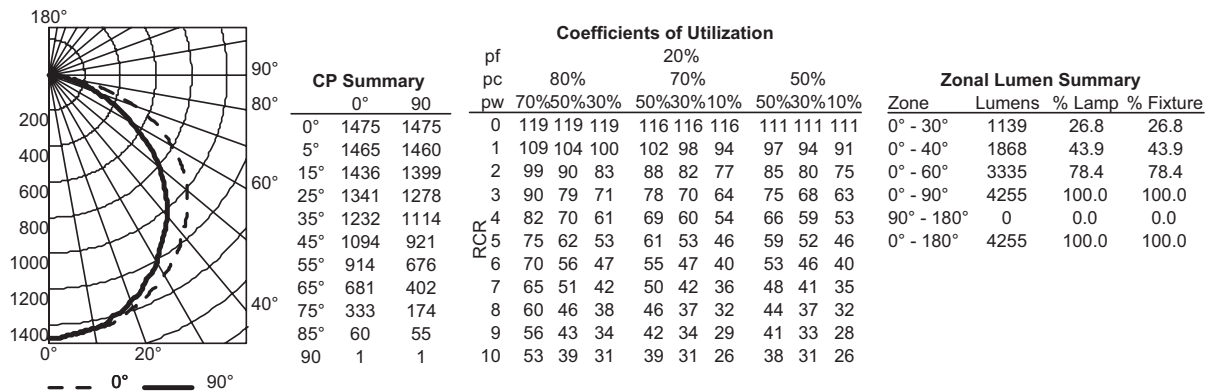
*DGA accessory available to provide ceiling trim flange and fixture support for plaster or plasterboard ceiling. Recommended rough-in dimensions for DGA installation is 24-3/4" x 48-3/4" (Tolerance is +1/8", -0").

PHOTOMETRICS

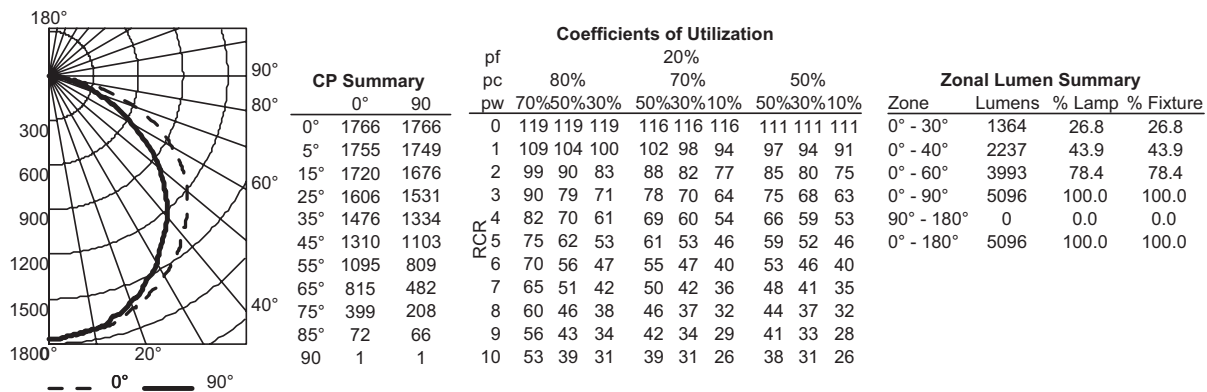
2AVL4 30L MDR LP835, 3456 delivered lumens, test no. 69071P0, tested in accordance to IESNA-LM79.



2AVL4 40L MDR LP835, 4255 delivered lumens, test no. 69071P5, tested in accordance to IESNA-LM79.



2AVL4 50L MDR LP835, 5095 delivered lumens, test no. 69071P9, tested in accordance to IESNA-LM79.



2AVL-2X4





Spectra-SF LED

Under-Cabinet Task Lighting

Project:

Type:

Qty:

SPECIFICATIONS

Interior

SPECTRA-SF LED

SPECIFICATIONS

Localized task lighting is essential in many areas of a healthcare facility. This is especially important where work areas lay beneath cabinets or counters, as commonly found in pharmacies, laboratories, and nurse stations. Properly lighting these dim task areas reduces workers' eye strain and fatigue. The custom lens design of the Spectra-SF LED under-cabinet fixture effectively diffuses the point sources of light to eliminate dark bands and multiple shadowing sometimes associated with LEDs. The result is uniform distribution of light across the work surface without bothersome striations and distortions. A solid front housing creates clean cut-off and eliminates forward glare.

Construction

20 GA steel housing
Nominal 1', 1.5', 2', 3' and 4' lengths available
2 Keyhole slots for mounting

Finish

Polyester powder coat painted after fabrication
Antimicrobial or Custom Color are optional

Shielding

High impact acrylic lens

Source

LED - 3000K, 3500K, 4000K
L80 at 65,000 hours
CRI >80

Electrical

0-10v dimmable driver dims to 10%
120v, 277, or Multi-Volt

Switching

On-Off rocker switch (optional)
Occupancy Sensor (optional)

Linking Connectors (optional)

Linking power connectors simplify installation
Only the first fixture in a run needs to be hardwired
Up to 25 fixtures in a run (9 fixtures with CO option)
Rated to 277V
Locking tabs keep connectors secured in place
See ordering tree for all available options



Listings

CSA Certified to meet US and Canadian standards

Warranty

5-year limited warranty. Complete warranty terms located at: www.AcuityBrands.com/CustomerResources/Terms_and_Conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

CATALOG NUMBER

Example: HUC523 120 LED35 S1 LX6

Series	Voltage	LED White Color	Switching	Options	Linking Options	Finish
HUC512 ¹ Spectra-SF LED 12"	120 120 Volt	LED30 3000K LED	S1 On-Off Rocker Switch	CO ² Single Gang Convenience Outlet	LX Linking Power Connector for end-to-end	GW Gloss White (standard)
HUC519 Spectra-SF LED 19"	277 277 Volt	LED35 3500K LED	OS Occupancy Sensor	BW Batwing Diffuser	LX6 6" Linking Extension with Connectors	AM Anti-Microbial White
HUC523 Spectra-SF LED 23"	120-277 Volt	LED40 4000K LED			LX12 12" Linking Extension with Connectors	CC ³ Custom Color
HUC535 Spectra-SF LED 35"					LX24 24" Linking Extension with Connectors	
HUC546 Spectra-SF LED 46"						

Notes

- For HUC512: Neither OS nor S1 options are available when specified with linking options due to fixture space constraints.
- CO option limited to 50 watts per outlet.
- Custom color requires factory pricing.

Spectra-SF LED

Under-Cabinet Task Lighting

Project:

Type:

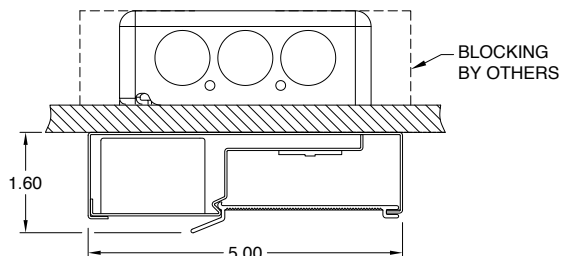
Qty:

SPECIFICATIONS

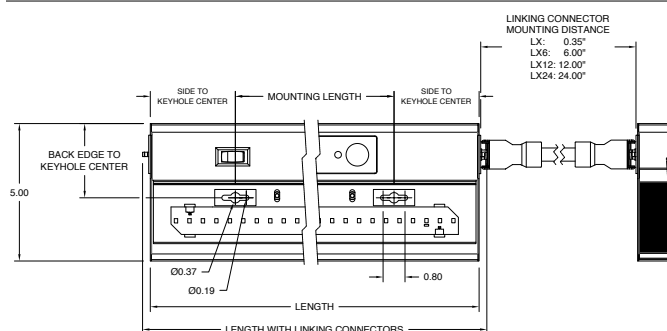
Interior

SPECTRA-SF LED

TECHNICAL DRAWINGS



MOUNTING INFORMATION



FIXTURE	NOMINAL LENGTH (FT)	ACTUAL LENGTH (IN)	LENGTH WITH LINKING CONNECTORS (IN)	MOUNTING LENGTH (IN)	SIDE EDGE TO KEYHOLE CENTER (IN)	BACK EDGE TO KEYHOLE CENTER (IN)	FIXTURE WEIGHT
HUC512	1	12.07	12.63	9	1.54	2.61	2.1 LBS
HUC519	1.5	19	19.56	12.92	3.04	2.62	3.2 LBS
HUC523	2	23.15	23.71	17	3.08	2.63	3.7 LBS
HUC535	3	34.9	35.46	28	3.45	2.63	5.7 LBS
HUC546	4	46.19	46.75	40	3.09	2.7	7.3 LBS

Notes:

- It is the responsibility of the party installing the fixture to select appropriate fasteners that are suitable for the wall material and construction.
- It is the responsibility of the person installing the light fixture to ensure that the materials, hardware and building structural members that are selected will support the light fixture(s) and that they meet all applicable building and safety codes.
- Complete electrical connections according to the wiring diagram on ballast tray, following all applicable building codes and regulations. Replace low voltage wiring enclosure, if applicable.

Spectra-SF LED

Under-Cabinet Task Lighting

Project:

Type:

Qty:

SPECIFICATIONS

Interior

SPECTRA-SF LED

PERFORMANCE DATA

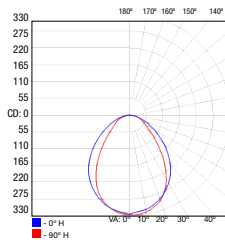
Lumen Output

Lumen values are from photometric tests from an accredited laboratory. Data is considered to be representative of the configurations shown, within generally accepted industry tolerances. Contact factory for performance data on any configurations not shown here.

Configuration	Lumen Output	Max Candela	Input Watts
HUC512 120 LED35	660	330	7.1
HUC523 120 LED35	1220	590	12.3
HUC535 120 LED35	1930	930	19.4
HUC546 120 LED35	2600	1240	26.3

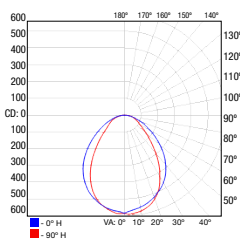
PHOTOMETRICS

Test Report: LTL27631
IES LM 79-08
HUC512 120 LED35
Lumens: 664
Wattage: 7.06 W Efficacy: 94 L/W
Max. Candela: 328.0 @ H: 135°, V: 2.5°



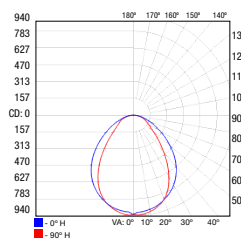
Illuminance at a Distance	
Height	Center Beam Footcandle
2	81.3
4	20.3
6	9.0
8	5.1
10	3.3

Test Report: LTL27632
IES LM 79-08
HUC523 120 LED35
Lumens: 1221.7
Wattage: 12.25 W Efficacy: 99 L/W
Max. Candela: 591.0 @ H: 90°, V: 1.09°



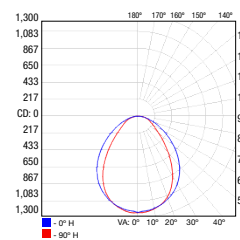
Illuminance at a Distance	
Height	Center Beam Footcandle
2	146.3
4	36.6
6	16.3
8	9.1
10	5.9

Test Report: LTL27633
IES LM 79-08
HUC535 120 LED35
Lumens: 1932.5
Wattage: 19.4 W Efficacy: 99 L/W
Max. Candela: 933 @ H: 157.5°, V: 2.5°



Illuminance at a Distance	
Height	Center Beam Footcandle
2	231.5
4	57.9
6	25.7
8	14.5
10	9.3

Test Report: LTL27634
IES LM 79-08
HUC546 120 LED35
Lumens: 2605.8
Wattage: 26.3 W Efficacy: 99 L/W
Max. Candela: 1245.0 @ H: 337.5°, V: 2.5°



Illuminance at a Distance	
Height	Center Beam Footcandle
2	308.3
4	77.1
6	34.3
8	19.3
10	12.3

Photometric data based on test results from an independent NIST traceable testing lab. IES data is available at www.healthcare-lighting.com. Always refer to our website for the latest IES file updates.

FEATURES & SPECIFICATIONS

INTENDED USE — The T Series LED combines digital lighting and control technologies with a high-performance optical system to deliver general ambient lighting for many applications such as schools, offices and hospitals.

High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing formed from cold-rolled steel. Housing is painted after fabrication for superior finish.

Smooth hemmed sides and smooth inward-formed end flanges, for easy handling.

Standard extruded aluminum door frame has superior structural integrity with premium appearance and mitered corners. Door frame is painted after fabrication, standard. Powder-painted rotary cam latches provide easy, secure door closure. Integral T-bar clips are standard. Acrylic shielding material is 100% UV stabilized.

OPTICS — Standard pattern #19 lens, 0.156" thick with highly transmissive overlay, is standard for superior brightness control. Overlay is 0.040" thick. Other lenses are available.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior level and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI. Optional nLight® embedded controls continuously monitor system performance, allow for constant lumen management/compensation function, facilitate simple "plug-and-play" network and controls upgrading via Cat-5 cable.

Driver disconnect is provided where required to comply with U.S. and Canadian codes.

INSTALLATION — Drivers and internal components are accessible from floor. LED boards include plug-in connectors for easy replacement or servicing. Suitable for direct insulation contact. Suitable for damp location.

LISTINGS — CSA certified to U.S. and Canadian standards. IC rated. DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

T SERIES LED

2TL

2' x 4' LED



eldoLED®

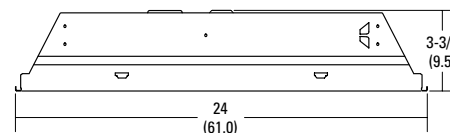


Specifications

Length: 48 (122.0)

Width: 24 (61.0)

Depth: 3-3/4 (9.5)



All dimensions are inches (centimeters) unless otherwise noted.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2TL 2X4 Recessed LED Lighting



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: 2TL4 40L RW A19 EZ1 LP835 N80

2TL4				
Series	Lumens ¹	Door	Lens	Voltage
2TL4 Recessed LED 2x4	30L 3000 lumens 40L 4000 lumens 48L 4800 lumens 60L 6000 lumens 72L 7200 lumens	FW Flush aluminum, white RW Regressed aluminum, white	A12 #12 pattern acrylic A19 #19 pattern acrylic, 0.156" thick MWS Matte white .040" thick MPL Micro prism SWL Satin white	(blank) MVOLT (120-277V) 347 347V ²

Driver	Color temperature	Control	Options
EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K	(blank) No controls	EL7L 700 nominal lumen battery pack (non-CEC compliant)
EZB eldoLED dims to dark (0-10 volt dimming)	LP835 3500 K	N80 nLight with 80% (L80) lumen management	EL14L 1400 nominal lumen battery pack (non-CEC compliant)
EDB eldoLED DALI ³	LP840 4000 K	N80EMG nLight with 80% (L80) lumen management for use with generator supply EM power	E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant
EXB eldoLED DMX/RDM ³	LP850 5000 K	N100 nLight without lumen management	CP Chicago plenum
EXA1 Dims to 1%, XPoint wireless enabled ^{3,4}		N100EMG nLight without lumen management for use with generator supply EM power	
EXAB Dims to dark, XPoint wireless enabled ^{3,4}			
SLD Step-level dimming ³			

Accessories: Order as separate catalog number.	
DGA24	Drywall grid adapter for 2x4 recessed fixture.

Notes

- 1 Approximate lumen output.
- 2 Not available with EL7L or EL14L battery packs or SLD driver.
- 3 Not available with N80, N80EMG, N100, or N100EMG.
- 4 Gateway not included. Requires on-site commissioning.

Visit www.lightingcontrols.com/XPointWireless for more information.

Performance Data				
Lumen	Package	Lumens	Input Watts	LPW
30L	LP830	3,010.9	25	120.4
30L	LP835	3,075.5	25	123.0
30L	LP840	3,097.0	25	123.9
30L	LP850	3,204.7	25	128.2
40L	LP830	3,835.1	32	119.8
40L	LP835	3,918.2	32	122.4
40L	LP840	3,945.8	32	123.3
40L	LP850	4,084.2	32	127.6
48L	LP830	4,730.1	40	118.3
48L	LP835	4,831.6	40	120.8
48L	LP840	4,865.4	40	121.6
48L	LP850	5,034.6	40	125.9
60L	LP830	5,431.3	47	115.6
60L	LP835	5,548.2	47	118.0
60L	LP840	5,588.2	47	118.9
60L	LP850	5,785.0	47	123.1
72L	LP830	7,513.4	67	112.1
72L	LP835	7,673.3	67	114.5
72L	LP840	7,728.7	67	115.4
72L	LP850	7,999.3	67	119.4

Performance based on standard #12 pattern acrylic lens.

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

$$\text{Delivered Lumens} = 1.25 \times P \times \text{LPW}$$

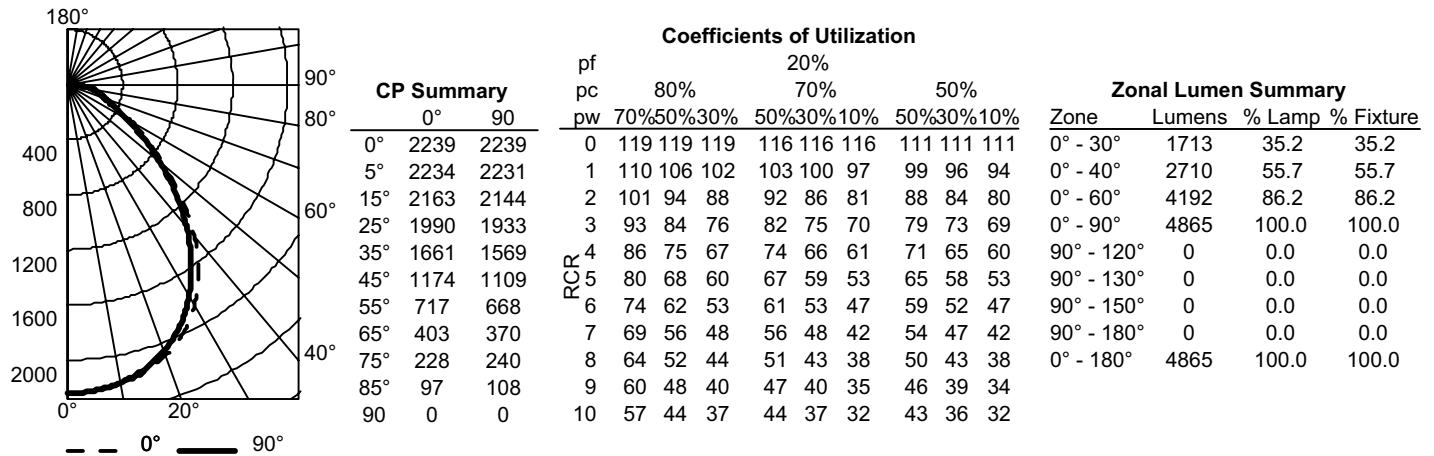
P = Output power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

2TL 2X4 Recessed LED Lighting

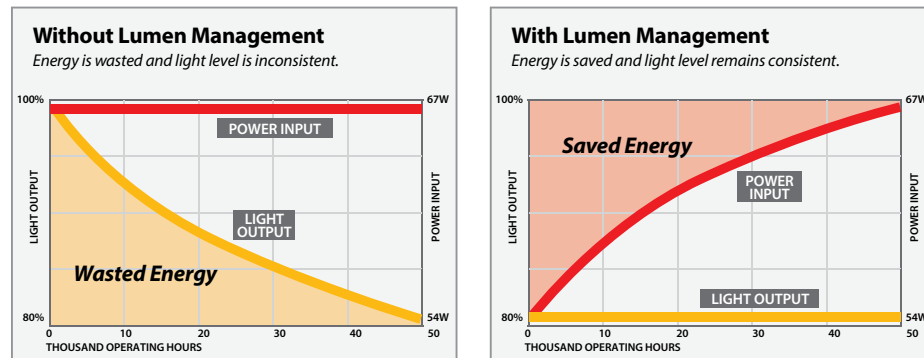
PHOTOMETRICS

2TL4 48L FW A12 EZ1 LP840, 4865.4 delivered lumens, test no. LTL26934P10, tested in accordance to IESNA LM-79.



Constant Lumen Management

Enabled by the embedded nLight control, the T Series LED actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.



FEATURES & SPECIFICATIONS

INTENDED USE — The T Series LED combines digital lighting and control technologies with a high-performance optical system to deliver general ambient lighting for many applications such as schools, offices and hospitals.

High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing formed from cold-rolled steel. Housing is painted after fabrication for superior finish.

Smooth hemmed sides and smooth inward-formed end flanges, for easy handling.

Standard extruded aluminum door frame has superior structural integrity with premium appearance and mitered corners. Door frame is painted after fabrication, standard. Powder-painted rotary cam latches provide easy, secure door closure. Integral T-bar clips are standard. Acrylic shielding material is 100% UV stabilized.

OPTICS — Standard pattern #19 lens, 0.156" thick with highly transmissive overlay, is standard for superior brightness control. Overlay is 0.040" thick. Other lenses are available.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior level and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI. Optional nLight® embedded controls continuously monitor system performance, allow for constant lumen management/compensation function, facilitate simple "plug-and-play" network and controls upgrading via Cat-5 cable.

Driver disconnect is provided where required to comply with U.S. and Canadian codes.

INSTALLATION — Drivers and internal components are accessible from floor. LED boards include plug-in connectors for easy replacement or servicing. Suitable for direct insulation contact. Suitable for damp location.

LISTINGS — CSA certified to U.S. and Canadian standards. IC rated. DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

T SERIES LED

2TL

2' x 4' LED



eldoLED®

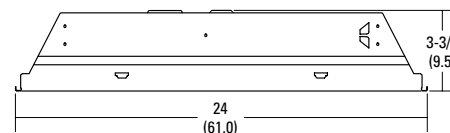


Specifications

Length: 48 (122.0)

Width: 24 (61.0)

Depth: 3-3/4 (9.5)



All dimensions are inches (centimeters) unless otherwise noted.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2TL 2X4 Recessed LED Lighting



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: 2TL4 40L RW A19 EZ1 LP835 N80

2TL4				
Series	Lumens ¹	Door	Lens	Voltage
2TL4 Recessed LED 2x4	30L 3000 lumens	FW Flush aluminum, white	A12 #12 pattern acrylic	(blank) MVOLT (120-277V)
	40L 4000 lumens	RW Regressed aluminum, white	A19 #19 pattern acrylic, 0.156" thick	347 347V ²
	48L 4800 lumens		MWS Matte white .040" thick	
	60L 6000 lumens		MPL Micro prism	
	72L 7200 lumens		SWL Satin white	

Driver	Color temperature	Control	Options
EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K	(blank) No controls	EL7L 700 nominal lumen battery pack (non-CEC compliant)
EZB eldoLED dims to dark (0-10 volt dimming)	LP835 3500 K	N80 nLight with 80% (L80) lumen management	EL14L 1400 nominal lumen battery pack (non-CEC compliant)
EDB eldoLED DALI ³	LP840 4000 K	N80EMG nLight with 80% (L80) lumen management for use with generator supply EM power	E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant
EXB eldoLED DMX/RDM ³	LP850 5000 K	N100 nLight without lumen management	CP Chicago plenum
EXA1 Dims to 1%, XPoint wireless enabled ^{3,4}		N100EMG nLight without lumen management for use with generator supply EM power	
EXAB Dims to dark, XPoint wireless enabled ^{3,4}			
SLD Step-level dimming ³			

Accessories: Order as separate catalog number.	
DGA24	Drywall grid adapter for 2x4 recessed fixture.

Notes

- 1 Approximate lumen output.
- 2 Not available with EL7L or EL14L battery packs or SLD driver.
- 3 Not available with N80, N80EMG, N100, or N100EMG.
- 4 Gateway not included. Requires on-site commissioning.

Visit www.lightingcontrols.com/XPointWireless for more information.

Performance Data				
Lumen	Package	Lumens	Input Watts	LPW
30L	LP830	3,010.9	25	120.4
30L	LP835	3,075.5	25	123.0
30L	LP840	3,097.0	25	123.9
30L	LP850	3,204.7	25	128.2
40L	LP830	3,835.1	32	119.8
40L	LP835	3,918.2	32	122.4
40L	LP840	3,945.8	32	123.3
40L	LP850	4,084.2	32	127.6
48L	LP830	4,730.1	40	118.3
48L	LP835	4,831.6	40	120.8
48L	LP840	4,865.4	40	121.6
48L	LP850	5,034.6	40	125.9
60L	LP830	5,431.3	47	115.6
60L	LP835	5,548.2	47	118.0
60L	LP840	5,588.2	47	118.9
60L	LP850	5,785.0	47	123.1
72L	LP830	7,513.4	67	112.1
72L	LP835	7,673.3	67	114.5
72L	LP840	7,728.7	67	115.4
72L	LP850	7,999.3	67	119.4

Performance based on standard #12 pattern acrylic lens.

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

$$\text{Delivered Lumens} = 1.25 \times P \times \text{LPW}$$

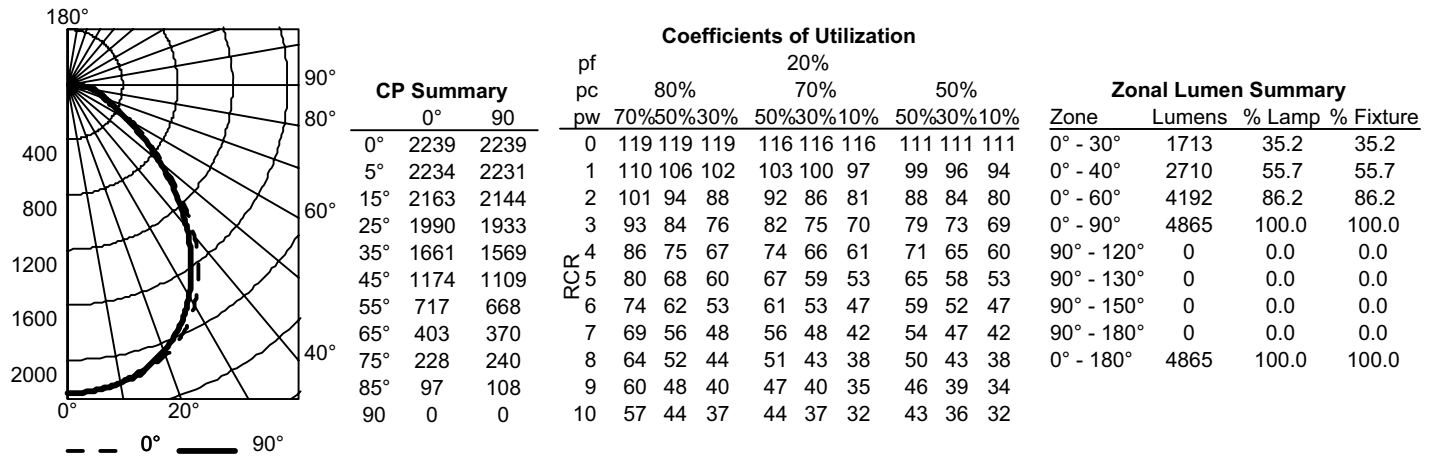
P = Output power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

2TL 2X4 Recessed LED Lighting

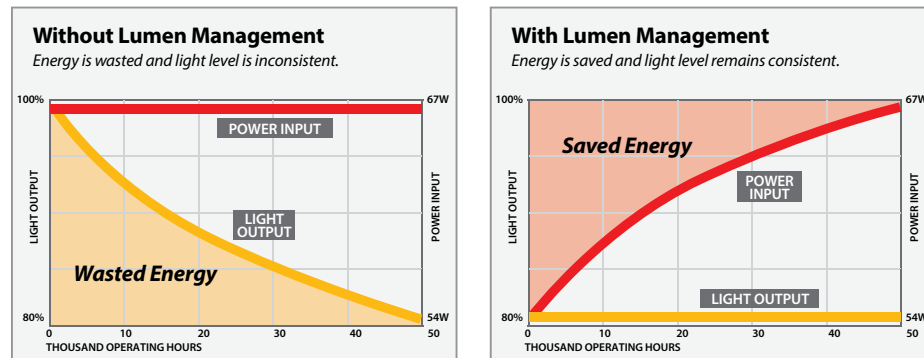
PHOTOMETRICS

2TL4 48L FW A12 EZ1 LP840, 4865.4 delivered lumens, test no. LTL26934P10, tested in accordance to IESNA LM-79.



Constant Lumen Management

Enabled by the embedded nLight control, the T Series LED actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.



FEATURES & SPECIFICATIONS

INTENDED USE —The T Series LED combines digital lighting and control technologies with a high-performance optical system to deliver general ambient lighting for many applications such as schools, offices and hospitals.

High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Housing formed from cold-rolled steel. Housing is painted after fabrication for superior finish.

Smooth hemmed sides and smooth inward-formed end flanges, for easy handling.

Standard extruded aluminum door frame has superior structural integrity with premium appearance and mitered corners. Door frame is painted after fabrication, standard. Powder-painted rotary cam latches provide easy, secure door closure. Integral T-bar clips are standard. Acrylic shielding material is 100% UV stabilized.

OPTICS — Standard pattern #19 lens, 0.156" thick with highly transmissive overlay, is standard for superior brightness control. Overlay is 0.040" thick. Other lenses are available.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior level and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI. Optional nLight® embedded controls continuously monitor system performance, allow for constant lumen management/compensation function, facilitate simple "plug-and-play" network and controls upgrading via Cat-5 cable.

Driver disconnect is provided where required to comply with U.S. and Canadian codes.

INSTALLATION — Drivers and internal components are accessible from floor. LED boards include plug-in connectors for easy replacement or servicing. Suitable for direct insulation contact. Suitable for damp location.

LISTINGS — CSA certified to U.S. and Canadian standards. IC rated.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

T SERIES LED

TL

1' x 4' LED



eldoLED®



Specifications

Length: 48 (121.9)

Width: 12 (30.5)

Depth: 4-1/2 (11.4)

All dimensions are inches (centimeters) unless otherwise noted.



CSA+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

TL Recessed LED Lighting 1'x4'



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: TL4 40L FW A12 EZ1 LP835 N80

TL4					
Series	Lumens ¹	Door	Lens	Voltage	
TL4 Recessed LED 1x4	20L 2000 lumens	FW Flush aluminum, white	A12 #12 pattern acrylic	(blank)	MVOLT (120-277V)
	30L 3000 lumens	RW Regressed aluminum, white	A19 #19 pattern acrylic, 0.156" thick	347	347V ²
	40L 4000 lumens		MWS Matte white .040" thick		
	48L 4800 lumens		MPL Micro prism		
	60L 6000 lumens		SWL Satin white		

Driver	Color temperature	Control ⁵	Options
EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K	(blank) No controls	EL7L 700 nominal lumen battery pack (non-CEC compliant) ⁶
EZB eldoLED dims to dark (0-10 volt dimming)	LP835 3500 K	N80 nLight with 80% (L80) lumen management	EL14L 1400 nominal lumen battery pack (non-CEC compliant) ⁶
EDB eldoLED DALI ³	LP840 4000 K	N80EMG nLight with 80% (L80) lumen management for use with generator supply EM power	E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant ⁶
EXB eldoLED DMX/RDM ³	LP850 5000 K	N100 nLight without lumen management	CP Chicago plenum
EXA1 Dims to 1%, XPoint wireless enabled ^{3,4}		N100EMG nLight without lumen management for use with generator supply EM power	
EXAB Dims to dark, XPoint wireless enabled ^{3,4}			
SLD Step-level dimming ³			

Accessories: Order as separate catalog number.	
DGA14	Drywall grid adapter for 1x4 recessed fixture.

Notes

- 1 Approximate lumen output.
- 2 Not available with EL7L or EL14L battery packs or SLD driver.
- 3 Not available with N80, N80EMG, N100, or N100EMG.
- 4 Gateway not included. Requires on-site commissioning. Visit www.lightingcontrols.com/XPointWireless for more information.
- 5 Cannot row mount when ordered with nLight options
- 6 Not available for 48L or 60L options.

Performance Data				
Lumen	Package	Lumens	Input Watts	LPW
20L	LP830	2,212.5	21	105.4
20L	LP835	2,259.9	21	107.6
20L	LP840	2,275.7	21	108.4
20L	LP850	2,354.8	21	112.1
30L	LP830	3,143.5	30	104.8
30L	LP835	3,211.3	30	107.0
30L	LP840	3,233.9	30	107.8
30L	LP850	3,346.9	30	111.6
40L	LP830	3,991.0	39	102.3
40L	LP835	4,076.9	39	104.5
40L	LP840	4,106.3	39	105.3
40L	LP850	4,248.6	39	108.9
48L	LP830	4,793.3	47	102.0
48L	LP835	4,897.2	47	104.2
48L	LP840	4,931.1	47	104.9
48L	LP850	5,105.2	47	108.6
60L	LP830	5,426.1	55	98.7
60L	LP835	5,541.3	55	100.8
60L	LP840	5,582.0	55	101.5
60L	LP850	5,776.3	55	105.0

Performance based on standard #12 pattern acrylic lens.

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

$$\text{Delivered Lumens} = 1.25 \times P \times \text{LPW}$$

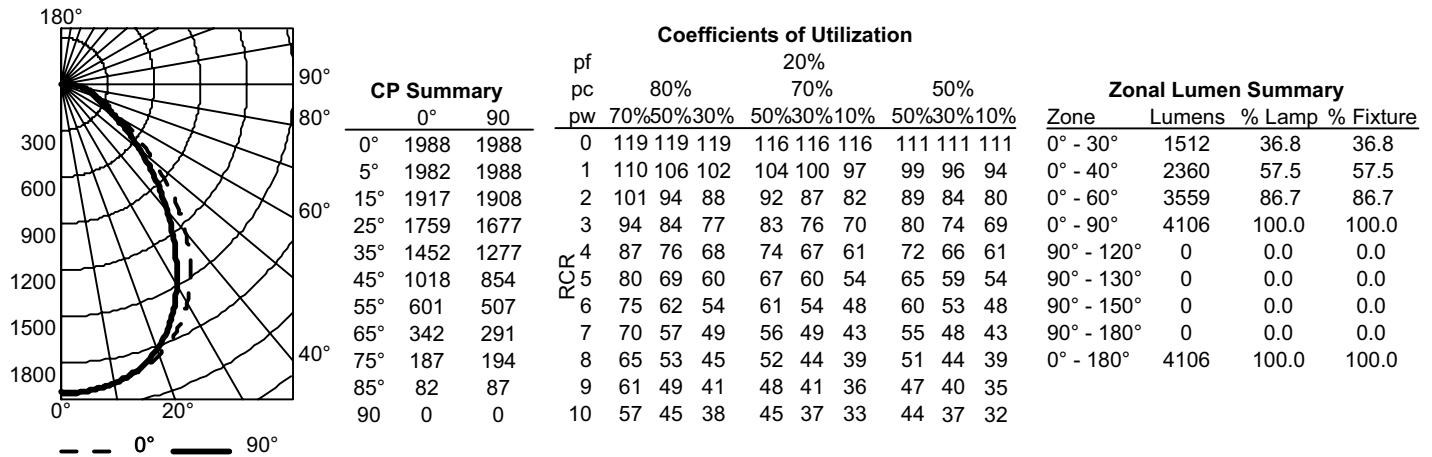
P = Output power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

TL Recessed LED Lighting 1'x4'

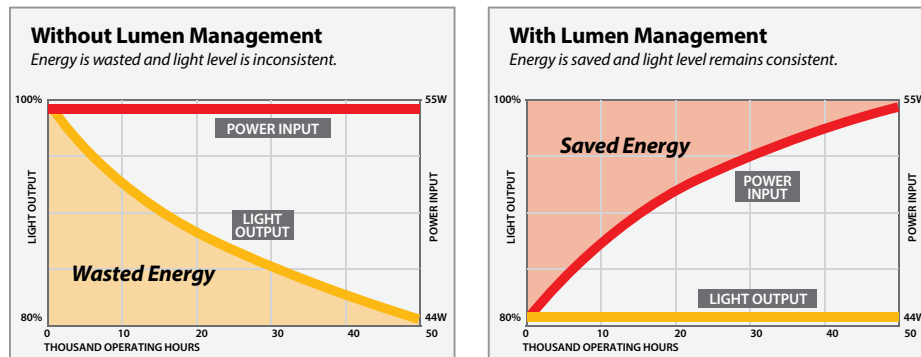
PHOTOMETRICS

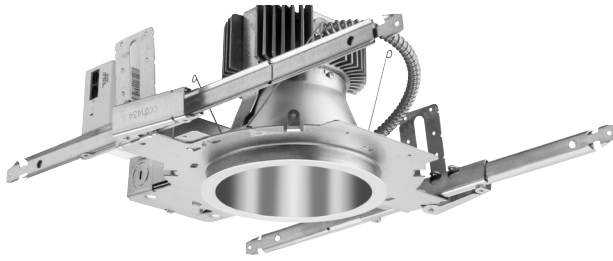
TL4 40L FW A12 EZ1 LP840, 4106.3 delivered lumens, test no. LTL26929P10, tested in accordance to IESNA LM-79.



Constant Lumen Management

Enabled by the embedded nLight control, the T Series LED actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.





Gotham Architectural Downlighting
LED Downlights

**6" Evo®
Downlight**

Solid-State Lighting



FEATURES

OPTICAL SYSTEM

- Self-flanged or flangeless semi-specular, matte-diffuse or specular finishing trim
- Patented Bounding Ray™ optical design (U.S. Patent No. 5,800,050)
- 45° cutoff to source and source image
- Top-down flash characteristic
- Polycarbonate lens integral to light engine

MECHANICAL SYSTEM

- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture
- Injection molded mud ring included with flangeless trims. Ships separately. Installs independently of the mounting frame to reduce cracks in plaster due to vibration.

ELECTRICAL SYSTEM

- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- Tested according to LM-79 and LM-80 standards
- Overload and short circuit protected
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional

LISTINGS

- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling. ENERGY STAR® certified product.

WARRANTY

- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

ORDERING INFORMATION



A+ Capable options indicated by this color background.

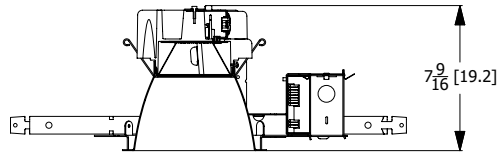
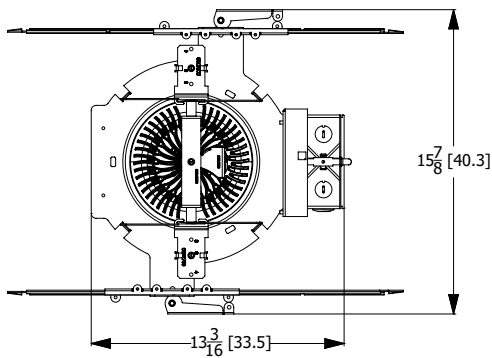
EXAMPLE: EVO 35/10 6AR MWD LSS MVOLT EZ1

Series	Color temperature	Nominal lumen values	Aperture/Trim color	Trim Style	Distribution	Finish	Voltage
EVO	27/ 2700 K	10 1000 lumens	6AR Clear	(blank) Self-flanged	VND Very narrow (0.5 s/mh)	LSS Semi-specular	MVOLT
	30/ 3000 K	15 1500 lumens	6PR Pewter	FL Flangeless	ND Narrow (0.7 s/mh)	LD Matte-diffuse	120
	35/ 3500 K	20 2000 lumens	6WTR Wheat		MD Medium (0.9 s/mh)	LS Specular	277
	40/ 4000 K	25 2500 lumens	6GR Gold		MWD Medium wide (1.0 s/mh)		347²
	50/ 5000 K	30 3000 lumens	6WR¹ White		WD Wide (1.2 s/mh)		
		35 3500 lumens	6BR¹ Black				
		40 4000 lumens	6WRAMF¹ White anti-microbial				
		45 4500 lumens					

Driver³	Options
EZ10 eldoLED 0-10V ECOdrive. Linear dimming to 10% min.	SF Single fuse. Specify 120V or 277V.
EZ1 eldoLED 0-10V ECOdrive. Linear dimming to 1% min.	TRW⁶ White painted flange
EZB eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%.	TRBL⁷ Black painted flange
EDAB eldoLED SOLOdrive DALI. Logarithmic dimming to <1%.	EL⁸ Emergency battery pack with integral test switch, CEC compliant
EDXB eldoLED POWERdrive DMX with RDM (remote device management). Square Law dimming to <1%. Includes termination resistor. Refer to DMXR Manual .	ELR⁹ Emergency battery pack with remote test switch, CEC compliant
EXA1 XPoint Wireless, eldoLED 0-10V ECOdrive. Linear dimming to 1%. Refer to XPoint tech sheet.	NPS80EZ⁵ nLight® dimming pack controls 0-10V eldoLED drivers.
EXAB XPoint Wireless, eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. Refer to XPoint tech sheet.	NPS80EZER⁵,³ nLight® dimming pack controls 0-10V eldoLED drivers. ER controls fixtures on emergency circuit.
ECOS2⁴,⁵ Lutron® Hi-Lume® 2-wire forward-phase driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 3000.	BGTD Bodine generator transfer device. Specify 120V or 277V.
ECOS3⁴ Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 4500.	CR190 High CRI (90+) Chicago plenum. Specify 120V or 277V.
	CP¹⁰ RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.

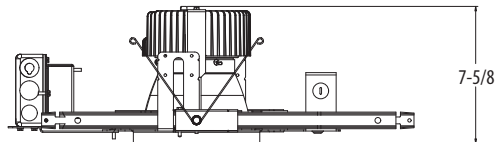
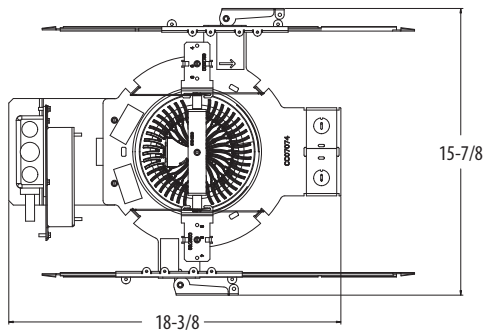
DIMENSIONAL DATA

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 6-1/4" (15.9)
Ceiling Opening: 7-1/8" (18.1) self-flanged
7-1/4" (18.4) flangeless
Overlap trim: 7-1/2" (19.1)

DIMENSIONS FOR CHICAGO PLENUM



ELECTRICAL

WATTAGE CONSUMPTION MATRIX			
LUMENS	LM ACTUAL	WATTAGE	LUMENS per WATT
1000	1,059	11.8	90.1
1500	1,572	18.5	85.0
2000	2,058	23.2	88.9
2500	2,612	29.5	88.5
3000	3,077	36.6	84.1
3500	3,591	42.1	85.3
4000	4,046	48.1	84.2
4500	4,555	46.9	97.1

EMERGENCY LUMEN OUTPUT		
LUMENS	WATTAGE	INITIAL OUTPUT
1000	9.6	1000
1500	9.6	1000
2000	9.6	1000
2500	9.6	1000
3000	9.6	1000
3500	9.6	1000
4000	9.6	1000
4500	9.6	1000

ACCESSORIES

ACCESSORIES order as separate catalog numbers (shipped separately)

SCA6	Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA6 10D. Refer to TECH-190 .
CTA4-8 YK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 5"). Adds ~4" to fixture height.
GVRT	Vandal-resistant trim accessory. Refer to TECH-200 .
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC .

NOTES

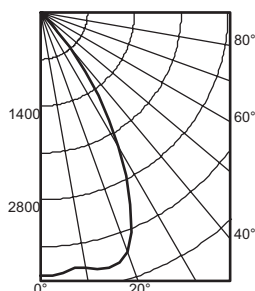
ORDERING NOTES

- Not available with finishes.
- Not available with EL or ELR options.
- Refer to [TECH-240](#) for compatible dimmers.
- Not available with nLight[®] and XPoint options.
- Specify voltage. ECOS2 not available in 277V.
- Not available with white reflector. Not applicable with FL option.
- Not available with black reflector. Not applicable with FL option.
- For dimensional changes, refer to [TECH-140](#). Not available with 347V.
- For use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
- ELR not available. CP & ECOS2 - 3000 lumen max. CP & ECOS3 - 4000 lumen max. CP, ECOS2/ECOS3 & EL - 2000 lumen max.

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor
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EVO 35/40 6AR LS

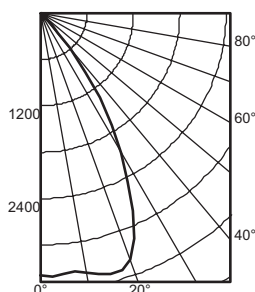
INPUT WATTS: 48.1, DELIVERED LUMENS: 4046, LM/W=84.1 , 1.03 S/MH, TEST NO. LTL27768



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	70%	50%
0	3935	0° - 30°	2904.3	71.8	0	119	119	119	116	116
5	3901	0° - 40°	3830.0	94.7	1	111	108	106	109	106
15	3944	0° - 60°	4043.4	99.9	2	103	99	96	101	98
25	3172	0° - 90°	4046.3	100.0	3	96	91	87	95	90
35	1508	90° - 180°	0.0	0.0	4	90	84	80	89	84
45	221	0° - 180°	4046.3	*100.0	5	84	78	74	83	78
55	6				6	79	73	69	78	73
65	2				7	74	68	64	73	68
75	1				8	70	64	60	69	63
85	0				9	66	60	56	65	60
90	0				10	62	56	52	62	56

EVO 35/35 6AR LS

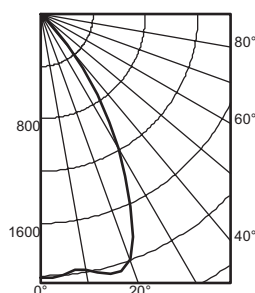
INPUT WATTS: 42.1, DELIVERED LUMENS: 3591, LM/W=85.3, 1.05 S/MH, TEST NO. LTL27767



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	70%	50%
0	3400	0° - 30°	2579.3	71.8	0	119	119	119	116	116
5	3390	0° - 40°	3399.8	94.7	1	111	108	106	109	106
15	3497	0° - 60°	3586.3	99.9	2	103	99	96	101	98
25	2830	0° - 90°	3590.5	100.0	3	96	91	87	95	90
35	1335	90° - 180°	0.0	0.0	4	90	84	80	89	84
45	193	0° - 180°	3590.5	*100.0	5	84	78	74	83	78
55	5				6	79	73	69	78	73
65	2				7	74	68	64	73	68
75	1				8	70	64	60	69	63
85	1				9	66	60	56	65	60
90	1				10	62	56	52	62	56

EVO 35/20 6AR LS

INPUT WATTS: 23.2, DELIVERED LUMENS: 2058, LM/W=88.7, 1.02 S/MH, TEST NO. LTL27777



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	70%	50%
0	2018	0° - 30°	1498.5	72.8	0	119	119	119	116	116
5	1997	0° - 40°	1958.0	95.1	1	111	108	106	109	107
15	2053	0° - 60°	2056.6	99.9	2	103	99	96	102	98
25	1618	0° - 90°	2058.3	100.0	3	96	92	88	95	91
35	749	90° - 180°	0.0	0.0	4	90	85	81	89	84
45	105	0° - 180°	2058.3	*100.0	5	84	79	74	83	78
55	3				6	79	73	69	78	73
65	1				7	74	68	64	73	68
75	0				8	70	64	60	69	63
85	0				9	66	60	56	65	60
90	0				10	62	57	53	62	56

LUMEN OUTPUT MULTIPLIER - CRI	
CRI	FACTOR
80 CRI	1
90 CRI	0.79

LUMEN OUTPUT MULTIPLIER - CCT	
CRI	FACTOR
5000 K	1.101
4000 K	1.035
3500 K	1
3000 K	0.973
2700 K	0.938

LUMEN OUTPUT MULTIPLIER - TRIM FINISH						
FINISH	CLEAR (AR)	PEWTER (PR)	WHEAT (WTR)	GOLD (GR)	WHITE (WR/WRAMF)	BLACK (BR)
Specular (LS)	1.00	0.88	0.83	0.95	N/A	N/A
Semi-specular (LSS)	0.95	0.84	0.79	0.90	N/A	N/A
Matte-diffuse (LD)	0.85	0.73	0.69	0.80	N/A	N/A
Paint	N/A	N/A	N/A	N/A	0.87	0.73

PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 85 typical.

Choose Wall Controls.

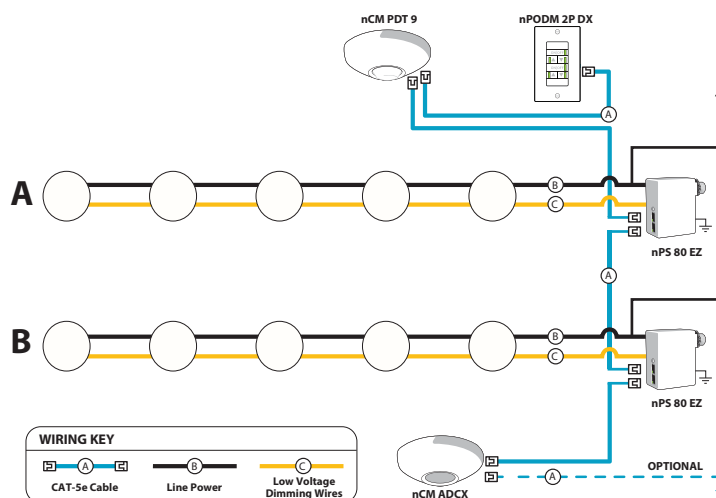
nLIGHT offers multiple styles of wall controls – each with varying features and user experience.



Push-Button WallPod
Traditional tactile buttons
and LED user feedback



Graphic WallPod
Full color touch screen
provides a sophisticated
look and feel



EXAMPLE

Group Fixture Control*

*Application diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty 2 required)

nPODM 2P DX Dual On/Off/Dim Push-Button WallPod

nCM ADCX Daylight Sensor with Automatic Dimming Control

nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.

nLight® Control Accessories:

Order as separate catalog number. Visit www.sensorswitch.com/nLight for complete listing of nLight controls.

WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX [color]	Wide view (PIR / dual tech)	nWV 16 / nWV PDT 16
Photocell controls	Model number	Wall Switch w/ Raise/Lower (PIR / dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	Cat-5 cables (plenum rated)	Model number
		10', CAT5 10FT	CAT5 10FT J1
		15', CAT5 15FT	CAT5 15FT J1

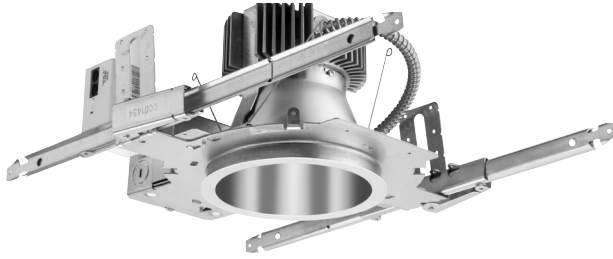
A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details



Gotham Architectural Downlighting
LED Downlights

**6" Evo®
Downlight**

Solid-State Lighting



FEATURES

OPTICAL SYSTEM

- Self-flanged or flangeless semi-specular, matte-diffuse or specular finishing trim
- Patented Bounding Ray™ optical design (U.S. Patent No. 5,800,050)
- 45° cutoff to source and source image
- Top-down flash characteristic
- Polycarbonate lens integral to light engine

MECHANICAL SYSTEM

- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture
- Injection molded mud ring included with flangeless trims. Ships separately. Installs independently of the mounting frame to reduce cracks in plaster due to vibration.

ELECTRICAL SYSTEM

- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- Tested according to LM-79 and LM-80 standards
- Overload and short circuit protected
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional

LISTINGS

- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling. ENERGY STAR® certified product.

WARRANTY

- 5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

ORDERING INFORMATION



A+ Capable options indicated
by this color background.

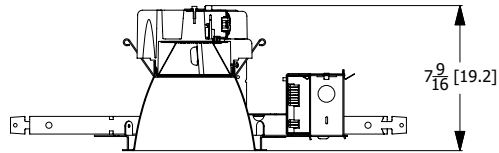
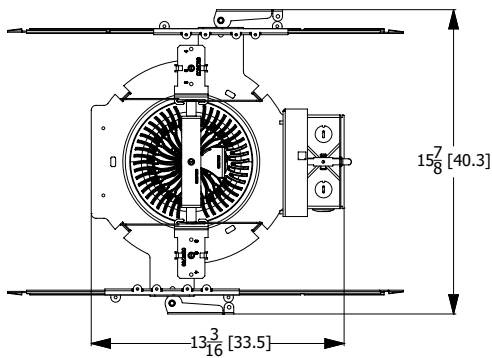
EXAMPLE: EVO 35/10 6AR MWD LSS MVOLT EZ1

Series	Color temperature	Nominal lumen values	Aperture/Trim color	Trim Style	Distribution	Finish	Voltage
EVO	27/ 2700 K	10 1000 lumens	6AR Clear	(blank) Self-flanged	VND Very narrow (0.5 s/mh)	LSS Semi-specular	MVOLT
	30/ 3000 K	15 1500 lumens	6PR Pewter	FL Flangeless	ND Narrow (0.7 s/mh)	LD Matte-diffuse	120
	35/ 3500 K	20 2000 lumens	6WTR Wheat		MD Medium (0.9 s/mh)	LS Specular	277
	40/ 4000 K	25 2500 lumens	6GR Gold		MWD Medium wide (1.0 s/mh)		347²
	50/ 5000 K	30 3000 lumens	6WR¹ White		WD Wide (1.2 s/mh)		
		35 3500 lumens	6BR¹ Black				
		40 4000 lumens	6WRAMF¹ White anti-microbial				
		45 4500 lumens					

Driver³	Options
EZ10 eldoLED 0-10V ECOdrive. Linear dimming to 10% min.	SF Single fuse. Specify 120V or 277V.
EZ1 eldoLED 0-10V ECOdrive. Linear dimming to 1% min.	TRW⁶ White painted flange
EZB eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%.	TRBL⁷ Black painted flange
EDAB eldoLED SOLOdrive DALI. Logarithmic dimming to <1%.	EL⁸ Emergency battery pack with integral test switch, CEC compliant
EDXB eldoLED POWERdrive DMX with RDM (remote device management). Square Law dimming to <1%. Includes termination resistor. Refer to DMXR Manual .	ELR⁹ Emergency battery pack with remote test switch, CEC compliant
EXA1 XPoint Wireless, eldoLED 0-10V ECOdrive. Linear dimming to 1%. Refer to XPoint tech sheet.	NPS80EZ⁵ nLight® dimming pack controls 0-10V eldoLED drivers.
EXAB XPoint Wireless, eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. Refer to XPoint tech sheet.	NPS80EZER⁵,³ nLight® dimming pack controls 0-10V eldoLED drivers. ER controls fixtures on emergency circuit.
ECOS2⁴,⁵ Lutron® Hi-Lume® 2-wire forward-phase driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 3000.	BGTD Bodine generator transfer device. Specify 120V or 277V.
ECOS3⁴ Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 4500.	CR190 High CRI (90+) Chicago plenum. Specify 120V or 277V.
	CP¹⁰ RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.

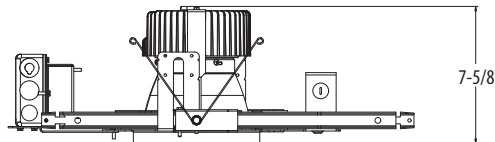
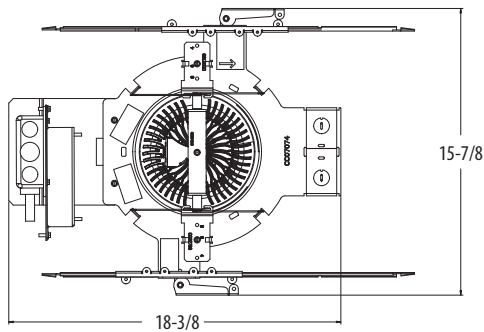
DIMENSIONAL DATA

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 6-1/4" (15.9)
Ceiling Opening: 7-1/8" (18.1) self-flanged
7-1/4" (18.4) flangeless
Overlap trim: 7-1/2" (19.1)

DIMENSIONS FOR CHICAGO PLENUM



ELECTRICAL

WATTAGE CONSUMPTION MATRIX			
LUMENS	LM ACTUAL	WATTAGE	LUMENS per WATT
1000	1,059	11.8	90.1
1500	1,572	18.5	85.0
2000	2,058	23.2	88.9
2500	2,612	29.5	88.5
3000	3,077	36.6	84.1
3500	3,591	42.1	85.3
4000	4,046	48.1	84.2
4500	4,555	46.9	97.1

EMERGENCY LUMEN OUTPUT		
LUMENS	WATTAGE	INITIAL OUTPUT
1000	9.6	1000
1500	9.6	1000
2000	9.6	1000
2500	9.6	1000
3000	9.6	1000
3500	9.6	1000
4000	9.6	1000
4500	9.6	1000

ACCESSORIES

ACCESSORIES order as separate catalog numbers (shipped separately)

SCA6	Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA6 10D. Refer to TECH-190 .
CTA4-8 YK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 5"). Adds ~4" to fixture height.
GVRT	Vandal-resistant trim accessory. Refer to TECH-200 .
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC .

NOTES

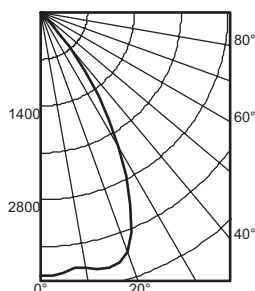
ORDERING NOTES

- Not available with finishes.
- Not available with EL or ELR options.
- Refer to [TECH-240](#) for compatible dimmers.
- Not available with nLight[®] and XPoint options.
- Specify voltage. ECOS2 not available in 277V.
- Not available with white reflector. Not applicable with FL option.
- Not available with black reflector. Not applicable with FL option.
- For dimensional changes, refer to [TECH-140](#). Not available with 347V.
- For use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
- ELR not available. CP & ECOS2 - 3000 lumen max. CP & ECOS3 - 4000 lumen max. CP, ECOS2/ECOS3 & EL - 2000 lumen max.

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor
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EVO 35/40 6AR LS

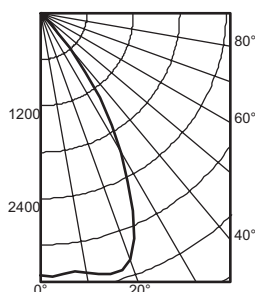
INPUT WATTS: 48.1, DELIVERED LUMENS: 4046, LM/W=84.1 , 1.03 S/MH, TEST NO. LTL27768



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	20%	50%
0	3935	0° - 30°	2904.3	71.8	0	119	119	119	116	116
5	3901	0° - 40°	3830.0	94.7	1	111	108	106	109	106
15	3944	0° - 60°	4043.4	99.9	2	103	99	96	101	98
25	3172	0° - 90°	4046.3	100.0	3	96	91	87	95	90
35	1508	90° - 180°	0.0	0.0	4	90	84	80	89	84
45	221	0° - 180°	4046.3	*100.0	5	84	78	74	83	78
55	6				6	79	73	69	78	73
65	2				7	74	68	64	73	68
75	1				8	70	64	60	69	63
85	0				9	66	60	56	65	60
90	0				10	62	56	52	62	56

EVO 35/35 6AR LS

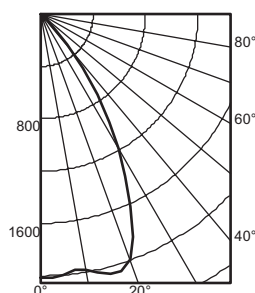
INPUT WATTS: 42.1, DELIVERED LUMENS: 3591, LM/W=85.3, 1.05 S/MH, TEST NO. LTL27767



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	20%	50%
0	3400	0° - 30°	2579.3	71.8	0	119	119	119	116	116
5	3390	0° - 40°	3399.8	94.7	1	111	108	106	109	106
15	3497	0° - 60°	3586.3	99.9	2	103	99	96	101	98
25	2830	0° - 90°	3590.5	100.0	3	96	91	87	95	90
35	1335	90° - 180°	0.0	0.0	4	90	84	80	89	84
45	193	0° - 180°	3590.5	*100.0	5	84	78	74	83	78
55	5				6	79	73	69	78	73
65	2				7	74	68	64	73	68
75	1				8	70	64	60	69	63
85	1				9	66	60	56	65	60
90	1				10	62	56	52	62	56

EVO 35/20 6AR LS

INPUT WATTS: 23.2, DELIVERED LUMENS: 2058, LM/W=88.7, 1.02 S/MH, TEST NO. LTL27777



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	20%	50%
0	2018	0° - 30°	1498.5	72.8	0	119	119	119	116	116
5	1997	0° - 40°	1958.0	95.1	1	111	108	106	109	107
15	2053	0° - 60°	2056.6	99.9	2	103	99	96	102	98
25	1618	0° - 90°	2058.3	100.0	3	96	92	88	95	91
35	749	90° - 180°	0.0	0.0	4	90	85	81	89	84
45	105	0° - 180°	2058.3	*100.0	5	84	79	74	83	78
55	3				6	79	73	69	78	73
65	1				7	74	68	64	73	68
75	0				8	70	64	60	69	63
85	0				9	66	60	56	65	60
90	0				10	62	57	53	62	56

LUMEN OUTPUT MULTIPLIER - CRI	
CRI	FACTOR
80 CRI	1
90 CRI	0.79

LUMEN OUTPUT MULTIPLIER - CCT	
CRI	FACTOR
5000 K	1.101
4000 K	1.035
3500 K	1
3000 K	0.973
2700 K	0.938

LUMEN OUTPUT MULTIPLIER - TRIM FINISH						
FINISH	CLEAR (AR)	PEWTER (PR)	WHEAT (WTR)	GOLD (GR)	WHITE (WR/WRAMF)	BLACK (BR)
Specular (LS)	1.00	0.88	0.83	0.95	N/A	N/A
Semi-specular (LSS)	0.95	0.84	0.79	0.90	N/A	N/A
Matte-diffuse (LD)	0.85	0.73	0.69	0.80	N/A	N/A
Paint	N/A	N/A	N/A	N/A	0.87	0.73

PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 85 typical.

Choose Wall Controls.

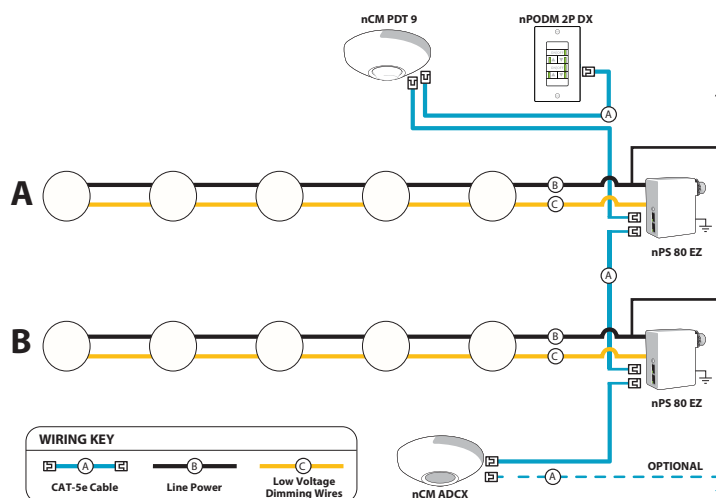
nLIGHT offers multiple styles of wall controls – each with varying features and user experience.



Push-Button WallPod
Traditional tactile buttons
and LED user feedback



Graphic WallPod
Full color touch screen
provides a sophisticated
look and feel



EXAMPLE

Group Fixture Control*

*Application diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty 2 required)

nPODM 2P DX Dual On/Off/Dim Push-Button WallPod

nCM ADCX Daylight Sensor with Automatic Dimming Control

nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.

nLight® Control Accessories:

Order as separate catalog number. Visit www.sensorswitch.com/nLight for complete listing of nLight controls.

WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX [color]	Wide view (PIR / dual tech)	nWV 16 / nWV PDT 16
Photocell controls	Model number	Wall Switch w/ Raise/Lower (PIR / dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	Cat-5 cables (plenum rated)	Model number
		10', CAT5 10FT	CAT5 10FT J1
		15', CAT5 15FT	CAT5 15FT J1

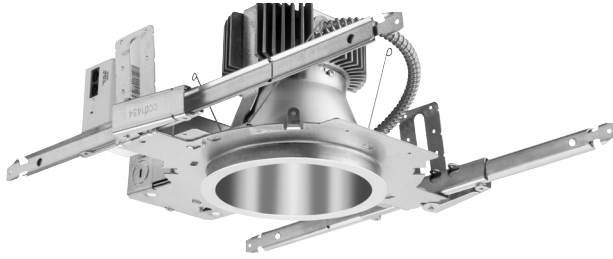
A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details



Gotham Architectural Downlighting
LED Downlights

**6" Evo®
Downlight**

Solid-State Lighting



FEATURES

OPTICAL SYSTEM

- Self-flanged or flangeless semi-specular, matte-diffuse or specular finishing trim
- Patented Bounding Ray™ optical design (U.S. Patent No. 5,800,050)
- 45° cutoff to source and source image
- Top-down flash characteristic
- Polycarbonate lens integral to light engine

MECHANICAL SYSTEM

- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture
- Injection molded mud ring included with flangeless trims. Ships separately. Installs independently of the mounting frame to reduce cracks in plaster due to vibration.

ELECTRICAL SYSTEM

- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- Tested according to LM-79 and LM-80 standards
- Overload and short circuit protected
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional

LISTINGS

- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling. ENERGY STAR® certified product.

WARRANTY

- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

ORDERING INFORMATION



A+ Capable options indicated by this color background.

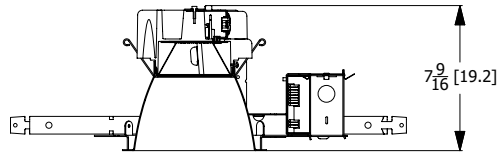
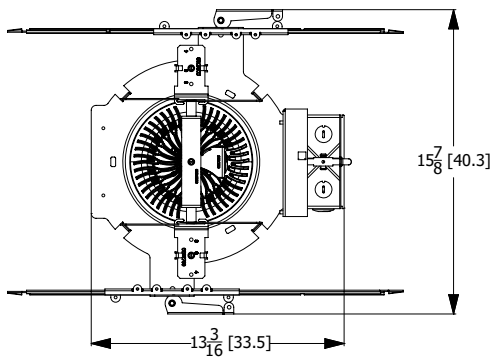
EXAMPLE: EVO 35/10 6AR MWD LSS MVOLT EZ1

Series	Color temperature	Nominal lumen values	Aperture/Trim color	Trim Style	Distribution	Finish	Voltage
EVO	27/ 2700 K	10 1000 lumens	6AR Clear	(blank) Self-flanged	VND Very narrow (0.5 s/mh)	LSS Semi-specular	MVOLT
	30/ 3000 K	15 1500 lumens	6PR Pewter	FL Flangeless	ND Narrow (0.7 s/mh)	LD Matte-diffuse	120
	35/ 3500 K	20 2000 lumens	6WTR Wheat		MD Medium (0.9 s/mh)	LS Specular	277
	40/ 4000 K	25 2500 lumens	6GR Gold		MWD Medium wide (1.0 s/mh)		347 ²
	50/ 5000 K	30 3000 lumens	6WR ¹ White		WD Wide (1.2 s/mh)		
		35 3500 lumens	6BR ¹ Black				
		40 4000 lumens	6WRAMF ¹ White anti-microbial				
		45 4500 lumens					

Driver ³	Options				
EZ10	eldoLED 0-10V ECOdrive. Linear dimming to 10% min.	SF	Single fuse. Specify 120V or 277V.	BGTD	Bodine generator transfer device. Specify 120V or 277V.
EZ1	eldoLED 0-10V ECOdrive. Linear dimming to 1% min.	TRW⁶	White painted flange	CRI90	High CRI (90+)
EZB	eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%.	TRBL⁷	Black painted flange	CP¹⁰	Chicago plenum. Specify 120V or 277V.
EDAB	eldoLED SOLOdrive DALI. Logarithmic dimming to <1%.	EL⁸	Emergency battery pack with integral test switch, CEC compliant	RRL	RELOC [®] -ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.
EDXB	eldoLED POWERdrive DMX with RDM (remote device management). Square Law dimming to <1%. Includes termination resistor. Refer to DMXR Manual .	ELR⁸	Emergency battery pack with remote test switch, CEC compliant		
EXA1	XPoint Wireless, eldoLED 0-10V ECOdrive. Linear dimming to 1%. Refer to XPoint tech sheet.	NPS80EZ⁵	nLight [®] dimming pack controls 0-10V eldoLED drivers.		
EXAB	XPoint Wireless, eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. Refer to XPoint tech sheet.	NPS80EZER^{5,9}	nLight [®] dimming pack controls 0-10V eldoLED drivers. ER controls fixtures on emergency circuit.		
ECOS2^{4,5}	Lutron [®] Hi-Lume [®] 2-wire forward-phase driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 3000.				
ECOS3⁴	Lutron [®] Hi-Lume [®] 3-wire or EcoSystem [®] dimming driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 4500.				

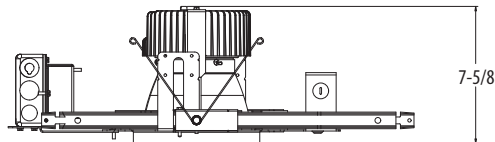
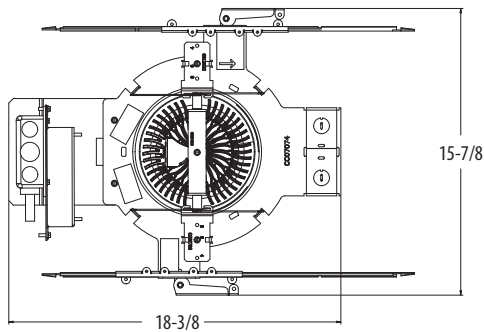
DIMENSIONAL DATA

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 6-1/4" (15.9)
Ceiling Opening: 7-1/8" (18.1) self-flanged
7-1/4" (18.4) flangeless
Overlap trim: 7-1/2" (19.1)

DIMENSIONS FOR CHICAGO PLENUM



ELECTRICAL

WATTAGE CONSUMPTION MATRIX			
LUMENS	LM ACTUAL	WATTAGE	LUMENS per WATT
1000	1,059	11.8	90.1
1500	1,572	18.5	85.0
2000	2,058	23.2	88.9
2500	2,612	29.5	88.5
3000	3,077	36.6	84.1
3500	3,591	42.1	85.3
4000	4,046	48.1	84.2
4500	4,555	46.9	97.1

EMERGENCY LUMEN OUTPUT		
LUMENS	WATTAGE	INITIAL OUTPUT
1000	9.6	1000
1500	9.6	1000
2000	9.6	1000
2500	9.6	1000
3000	9.6	1000
3500	9.6	1000
4000	9.6	1000
4500	9.6	1000

ACCESSORIES

ACCESSORIES order as separate catalog numbers (shipped separately)

SCA6	Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA6 10D. Refer to TECH-190 .
CTA4-8 YK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 5"). Adds ~4" to fixture height.
GVRT	Vandal-resistant trim accessory. Refer to TECH-200 .
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC .

NOTES

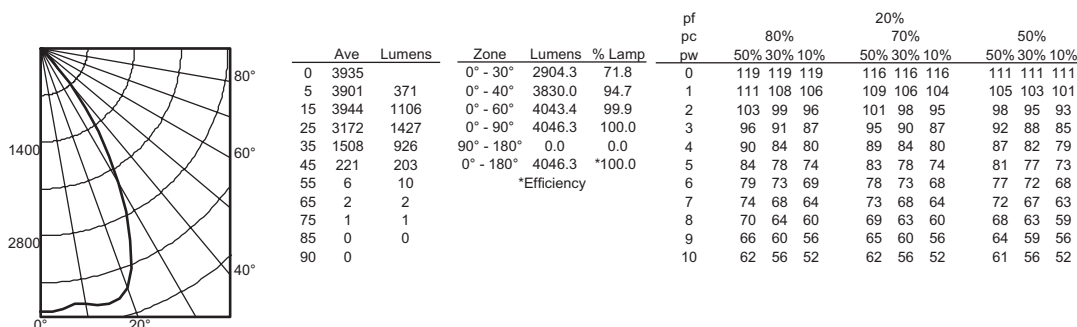
ORDERING NOTES

- Not available with finishes.
- Not available with EL or ELR options.
- Refer to [TECH-240](#) for compatible dimmers.
- Not available with nLight[®] and XPoint options.
- Specify voltage. ECOS2 not available in 277V.
- Not available with white reflector. Not applicable with FL option.
- Not available with black reflector. Not applicable with FL option.
- For dimensional changes, refer to [TECH-140](#). Not available with 347V.
- For use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
- ELR not available. CP & ECOS2 - 3000 lumen max. CP & ECOS3 - 4000 lumen max. CP, ECOS2/ECOS3 & EL - 2000 lumen max.

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor
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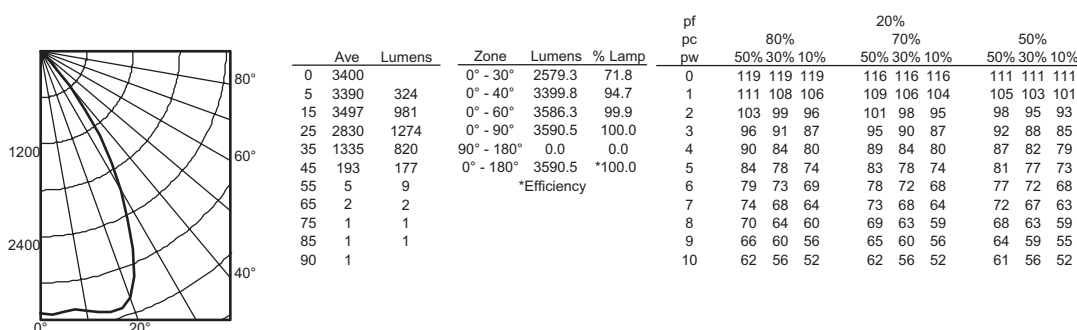
EVO 35/40 6AR LS

INPUT WATTS: 48.1, DELIVERED LUMENS: 4046, LM/W=84.1 , 1.03 S/MH, TEST NO. LTL27768



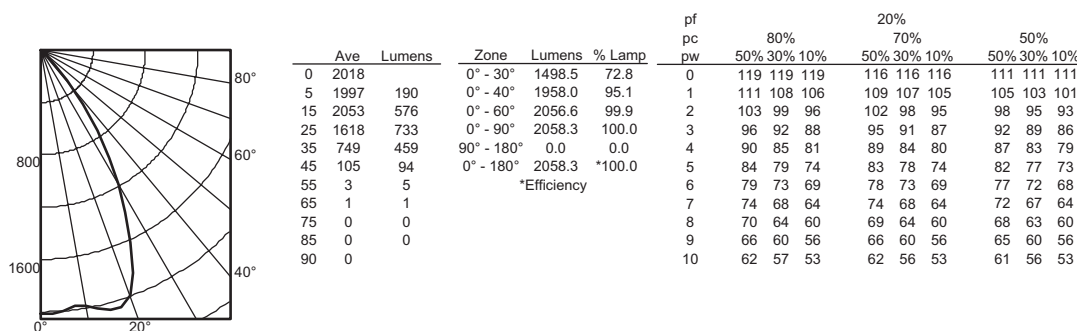
EVO 35/35 6AR LS

INPUT WATTS: 42.1, DELIVERED LUMENS: 3591, LM/W=85.3, 1.05 S/MH, TEST NO. LTL27767



EVO 35/20 6AR LS

INPUT WATTS: 23.2, DELIVERED LUMENS: 2058, LM/W=88.7, 1.02 S/MH, TEST NO. LTL27777



LUMEN OUTPUT MULTIPLIER - CRI	
CRI	FACTOR
80 CRI	1
90 CRI	0.79

LUMEN OUTPUT MULTIPLIER - CCT	
CRI	FACTOR
5000 K	1.101
4000 K	1.035
3500 K	1
3000 K	0.973
2700 K	0.938

LUMEN OUTPUT MULTIPLIER - TRIM FINISH						
FINISH	CLEAR (AR)	PEWTER (PR)	WHEAT (WTR)	GOLD (GR)	WHITE (WR/WRAMF)	BLACK (BR)
Specular (LS)	1.00	0.88	0.83	0.95	N/A	N/A
Semi-specular (LSS)	0.95	0.84	0.79	0.90	N/A	N/A
Matte-diffuse (LD)	0.85	0.73	0.69	0.80	N/A	N/A
Paint	N/A	N/A	N/A	N/A	0.87	0.73

PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 85 typical.

Choose Wall Controls.

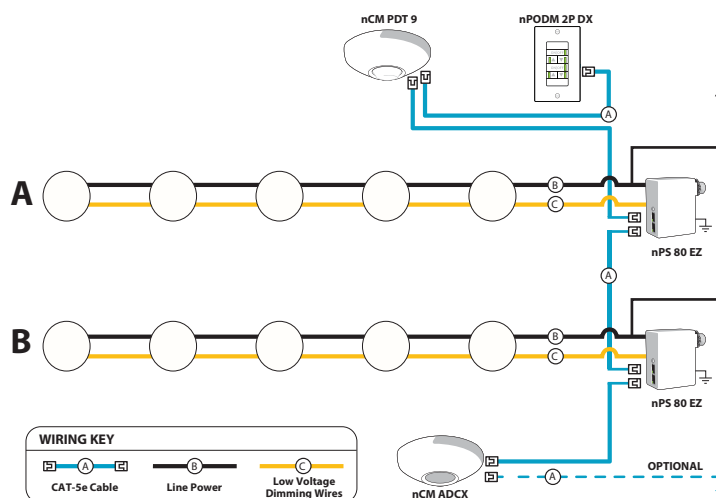
nLIGHT offers multiple styles of wall controls – each with varying features and user experience.



Push-Button WallPod
Traditional tactile buttons
and LED user feedback



Graphic WallPod
Full color touch screen
provides a sophisticated
look and feel



EXAMPLE

Group Fixture Control*

*Application diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty 2 required)

nPODM 2P DX Dual On/Off/Dim Push-Button WallPod

nCM ADCX Daylight Sensor with Automatic Dimming Control

nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.

nLight® Control Accessories:

Order as separate catalog number. Visit www.sensorswitch.com/nLight for complete listing of nLight controls.

WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX [color]	Wide view (PIR / dual tech)	nWV 16 / nWV PDT 16
Photocell controls	Model number	Wall Switch w/ Raise/Lower (PIR / dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	Cat-5 cables (plenum rated)	Model number
		10', CAT5 10FT	CAT5 10FT J1
		15', CAT5 15FT	CAT5 15FT J1

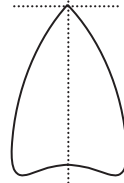
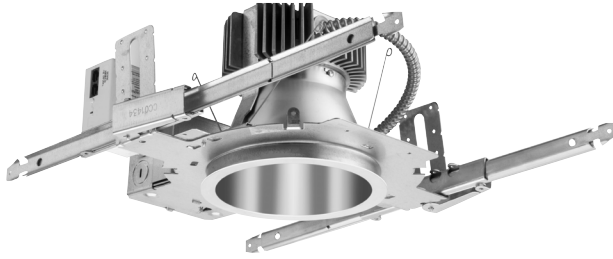
A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details



Gotham Architectural Downlighting
LED Downlights

**6" Evo®
Downlight**

Solid-State Lighting



FEATURES

OPTICAL SYSTEM

- Self-flanged or flangeless semi-specular, matte-diffuse or specular finishing trim
- Patented Bounding Ray™ optical design (U.S. Patent No. 5,800,050)
- 45° cutoff to source and source image
- Top-down flash characteristic
- Polycarbonate lens integral to light engine

MECHANICAL SYSTEM

- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture
- Injection molded mud ring included with flangeless trims. Ships separately. Installs independently of the mounting frame to reduce cracks in plaster due to vibration.

ELECTRICAL SYSTEM

- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- Tested according to LM-79 and LM-80 standards
- Overload and short circuit protected
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional

LISTINGS

- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling. ENERGY STAR® certified product.

WARRANTY

- 5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

ORDERING INFORMATION



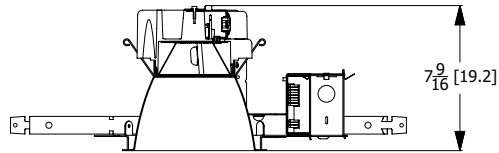
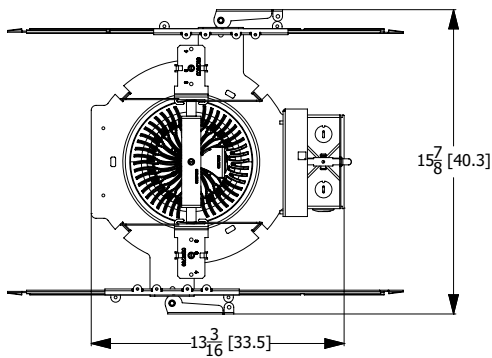
A+ Capable options indicated by this color background.

EXAMPLE: EVO 35/10 6AR MWD LSS MVOLT EZ1

Series	Color temperature	Nominal lumen values	Aperture/Trim color	Trim Style	Distribution	Finish	Voltage
EVO	27/ 2700 K	10 1000 lumens	6AR Clear	(blank) Self-flanged	VND Very narrow (0.5 s/mh)	LSS Semi-specular	MVOLT
	30/ 3000 K	15 1500 lumens	6PR Pewter	FL Flangeless	ND Narrow (0.7 s/mh)	LD Matte-diffuse	120
	35/ 3500 K	20 2000 lumens	6WTR Wheat		MD Medium (0.9 s/mh)	LS Specular	277
	40/ 4000 K	25 2500 lumens	6GR Gold		MWD Medium wide (1.0 s/mh)		347 ²
	50/ 5000 K	30 3000 lumens	6WR ¹ White		WD Wide (1.2 s/mh)		
		35 3500 lumens	6BR ¹ Black				
		40 4000 lumens	6WRAMF ¹ White anti-microbial				
		45 4500 lumens					

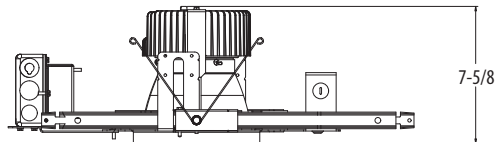
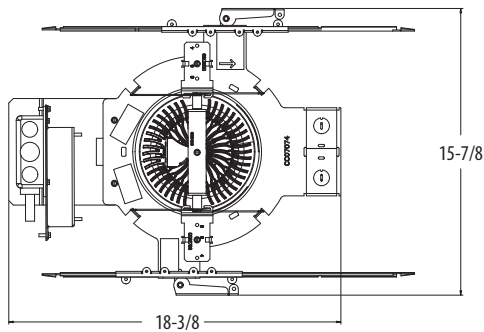
Driver ³	Options
EZ10 eldoLED 0-10V ECOdrive. Linear dimming to 10% min. EZ1 eldoLED 0-10V ECOdrive. Linear dimming to 1% min. EZB eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. EDAB eldoLED SOLOdrive DALI. Logarithmic dimming to <1%. EDXB eldoLED POWERdrive DMX with RDM (remote device management). Square Law dimming to <1%. Includes termination resistor. Refer to DMXR Manual . EXA1 XPoint Wireless, eldoLED 0-10V ECOdrive. Linear dimming to 1%. Refer to XPoint tech sheet. EXAB XPoint Wireless, eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. Refer to XPoint tech sheet. ECOS2^{4,5} Lutron® Hi-Lume® 2-wire forward-phase driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 3000. ECOS3⁴ Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 4500.	SF Single fuse. Specify 120V or 277V. TRW⁶ White painted flange TRBL⁷ Black painted flange EL⁸ Emergency battery pack with integral test switch, CEC compliant ELR⁸ Emergency battery pack with remote test switch, CEC compliant NPS80EZ⁵ nLight® dimming pack controls 0-10V eldoLED drivers. NPS80EZER^{5,9} nLight® dimming pack controls 0-10V eldoLED drivers. ER controls fixtures on emergency circuit. BGTD Bodine generator transfer device. Specify 120V or 277V. CR190 High CRI (90+) Chicago plenum. Specify 120V or 277V. CP¹⁰ RRL RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 6-1/4" (15.9)
Ceiling Opening: 7-1/8" (18.1) self-flanged
7-1/4" (18.4) flangeless
Overlap trim: 7-1/2" (19.1)

DIMENSIONS FOR CHICAGO PLENUM



WATTAGE CONSUMPTION MATRIX			
LUMENS	LM ACTUAL	WATTAGE	LUMENS per WATT
1000	1,059	11.8	90.1
1500	1,572	18.5	85.0
2000	2,058	23.2	88.9
2500	2,612	29.5	88.5
3000	3,077	36.6	84.1
3500	3,591	42.1	85.3
4000	4,046	48.1	84.2
4500	4,555	46.9	97.1

EMERGENCY LUMEN OUTPUT		
LUMENS	WATTAGE	INITIAL OUTPUT
1000	9.6	1000
1500	9.6	1000
2000	9.6	1000
2500	9.6	1000
3000	9.6	1000
3500	9.6	1000
4000	9.6	1000
4500	9.6	1000

ACCESSORIES order as separate catalog numbers (shipped separately)

SCA6	Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA6 10D. Refer to TECH-190 .
CTA4-8 YK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 5"). Adds ~4" to fixture height.
GVRT	Vandal-resistant trim accessory. Refer to TECH-200 .
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC .

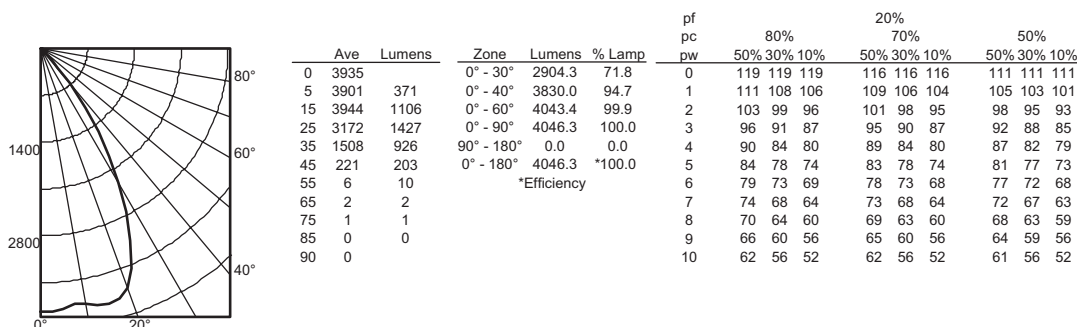
ORDERING NOTES

- Not available with finishes.
- Not available with EL or ELR options.
- Refer to [TECH-240](#) for compatible dimmers.
- Not available with nLight[®] and XPoint options.
- Specify voltage. ECOS2 not available in 277V.
- Not available with white reflector. Not applicable with FL option.
- Not available with black reflector. Not applicable with FL option.
- For dimensional changes, refer to [TECH-140](#). Not available with 347V.
- For use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
- ELR not available. CP & ECOS2 - 3000 lumen max. CP & ECOS3 - 4000 lumen max. CP, ECOS2/ECOS3 & EL - 2000 lumen max.

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor
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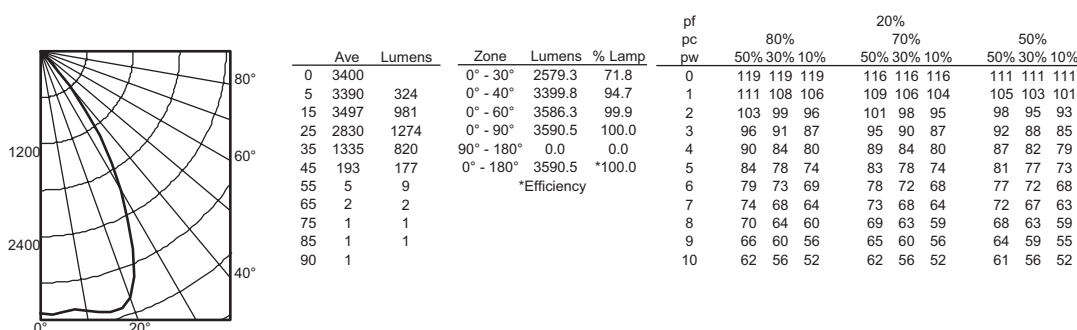
EVO 35/40 6AR LS

INPUT WATTS: 48.1, DELIVERED LUMENS: 4046, LM/W=84.1 , 1.03 S/MH, TEST NO. LTL27768



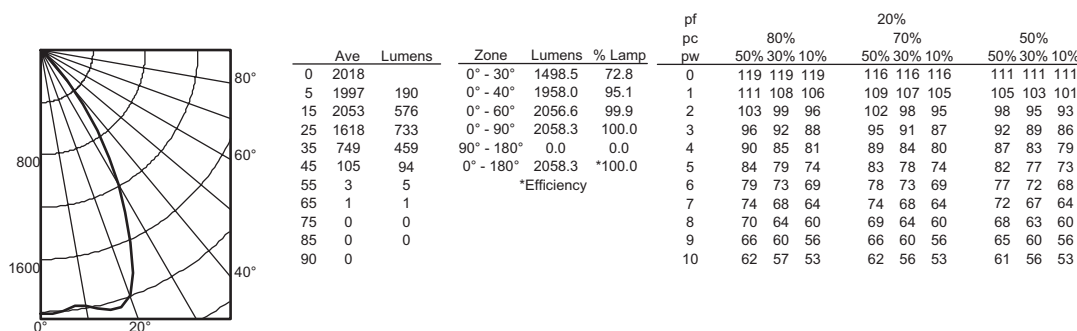
EVO 35/35 6AR LS

INPUT WATTS: 42.1, DELIVERED LUMENS: 3591, LM/W=85.3, 1.05 S/MH, TEST NO. LTL27767



EVO 35/20 6AR LS

INPUT WATTS: 23.2, DELIVERED LUMENS: 2058, LM/W=88.7, 1.02 S/MH, TEST NO. LTL27777



LUMEN OUTPUT MULTIPLIER - CRI	
CRI	FACTOR
80 CRI	1
90 CRI	0.79

LUMEN OUTPUT MULTIPLIER - CCT	
CRI	FACTOR
5000 K	1.101
4000 K	1.035
3500 K	1
3000 K	0.973
2700 K	0.938

LUMEN OUTPUT MULTIPLIER - TRIM FINISH						
FINISH	CLEAR (AR)	PEWTER (PR)	WHEAT (WTR)	GOLD (GR)	WHITE (WR/WRAMF)	BLACK (BR)
Specular (LS)	1.00	0.88	0.83	0.95	N/A	N/A
Semi-specular (LSS)	0.95	0.84	0.79	0.90	N/A	N/A
Matte-diffuse (LD)	0.85	0.73	0.69	0.80	N/A	N/A
Paint	N/A	N/A	N/A	N/A	0.87	0.73

PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 85 typical.

Choose Wall Controls.

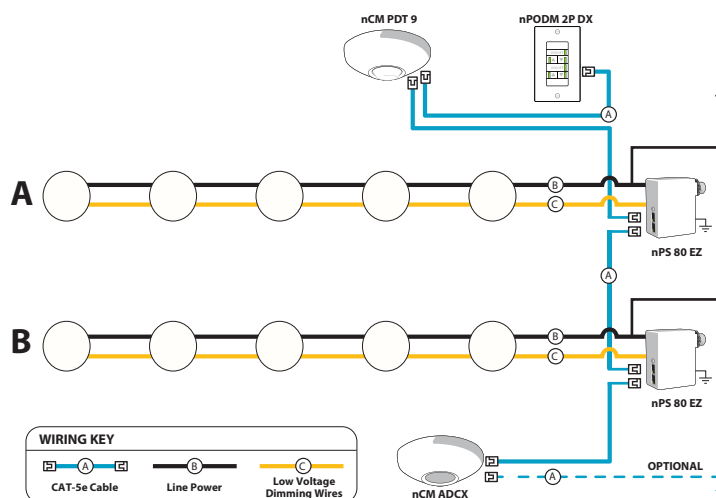
nLIGHT offers multiple styles of wall controls – each with varying features and user experience.



Push-Button WallPod
Traditional tactile buttons
and LED user feedback



Graphic WallPod
Full color touch screen
provides a sophisticated
look and feel



EXAMPLE

Group Fixture Control*

*Application diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty 2 required)

nPODM 2P DX Dual On/Off/Dim Push-Button WallPod

nCM ADCX Daylight Sensor with Automatic Dimming Control

nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.

nLight® Control Accessories:

Order as separate catalog number. Visit www.sensorswitch.com/nLight for complete listing of nLight controls.

WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX [color]	Wide view (PIR / dual tech)	nWV 16 / nWV PDT 16
Photocell controls	Model number	Wall Switch w/ Raise/Lower (PIR / dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	Cat-5 cables (plenum rated)	Model number
		10', CAT5 10FT	CAT5 10FT J1
		15', CAT5 15FT	CAT5 15FT J1

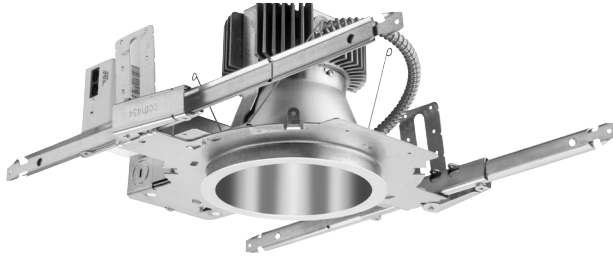
A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details



Gotham Architectural Downlighting
LED Downlights

**6" Evo®
Downlight**

Solid-State Lighting



FEATURES

OPTICAL SYSTEM

- Self-flanged or flangeless semi-specular, matte-diffuse or specular finishing trim
- Patented Bounding Ray™ optical design (U.S. Patent No. 5,800,050)
- 45° cutoff to source and source image
- Top-down flash characteristic
- Polycarbonate lens integral to light engine

MECHANICAL SYSTEM

- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture
- Injection molded mud ring included with flangeless trims. Ships separately. Installs independently of the mounting frame to reduce cracks in plaster due to vibration.

ELECTRICAL SYSTEM

- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- Tested according to LM-79 and LM-80 standards
- Overload and short circuit protected
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional

LISTINGS

- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling. ENERGY STAR® certified product.

WARRANTY

- 5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

ORDERING INFORMATION



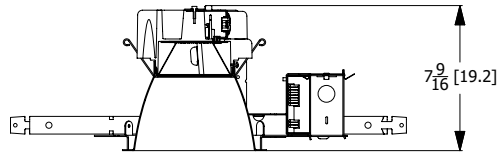
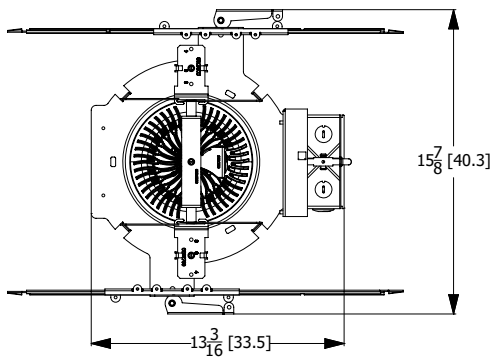
A+ Capable options indicated
by this color background.

EXAMPLE: EVO 35/10 6AR MWD LSS MVOLT EZ1

Series	Color temperature	Nominal lumen values	Aperture/Trim color	Trim Style	Distribution	Finish	Voltage
EVO	27/ 2700 K	10 1000 lumens	6AR Clear	(blank) Self-flanged	VND Very narrow (0.5 s/mh)	LSS Semi-specular	MVOLT
	30/ 3000 K	15 1500 lumens	6PR Pewter	FL Flangeless	ND Narrow (0.7 s/mh)	LD Matte-diffuse	120
	35/ 3500 K	20 2000 lumens	6WTR Wheat		MD Medium (0.9 s/mh)	LS Specular	277
	40/ 4000 K	25 2500 lumens	6GR Gold		MWD Medium wide (1.0 s/mh)		347²
	50/ 5000 K	30 3000 lumens	6WR¹ White		WD Wide (1.2 s/mh)		
		35 3500 lumens	6BR¹ Black				
		40 4000 lumens	6WRAMF¹ White anti-microbial				
		45 4500 lumens					

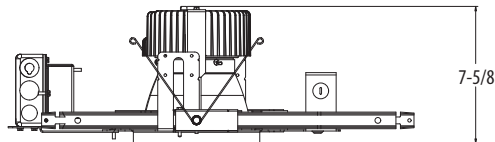
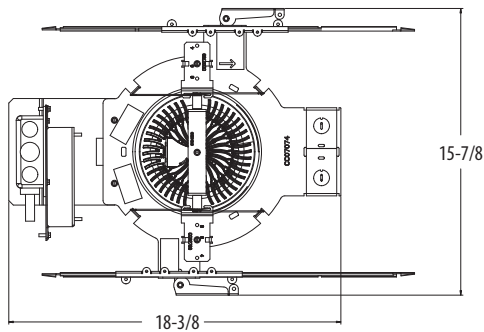
Driver³	Options
EZ10 eldoLED 0-10V ECOdrive. Linear dimming to 10% min.	SF Single fuse. Specify 120V or 277V.
EZ1 eldoLED 0-10V ECOdrive. Linear dimming to 1% min.	TRW⁶ White painted flange
EZB eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%.	TRBL⁷ Black painted flange
EDAB eldoLED SOLOdrive DALI. Logarithmic dimming to <1%.	EL⁸ Emergency battery pack with integral test switch, CEC compliant
EDXB eldoLED POWERdrive DMX with RDM (remote device management). Square Law dimming to <1%. Includes termination resistor. Refer to DMXR Manual .	ELR⁹ Emergency battery pack with remote test switch, CEC compliant
EXA1 XPoint Wireless, eldoLED 0-10V ECOdrive. Linear dimming to 1%. Refer to XPoint tech sheet.	NPS80EZ⁵ nLight® dimming pack controls 0-10V eldoLED drivers.
EXAB XPoint Wireless, eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. Refer to XPoint tech sheet.	NPS80EZER⁵,³ nLight® dimming pack controls 0-10V eldoLED drivers. ER controls fixtures on emergency circuit.
ECOS2⁴,⁵ Lutron® Hi-Lume® 2-wire forward-phase driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 3000.	BGTD Bodine generator transfer device. Specify 120V or 277V.
ECOS3⁴ Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 4500.	CR190 High CRI (90+) Chicago plenum. Specify 120V or 277V.
	CP¹⁰ RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 6-1/4" (15.9)
Ceiling Opening: 7-1/8" (18.1) self-flanged
7-1/4" (18.4) flangeless
Overlap trim: 7-1/2" (19.1)

DIMENSIONS FOR CHICAGO PLENUM



WATTAGE CONSUMPTION MATRIX			
LUMENS	LM ACTUAL	WATTAGE	LUMENS per WATT
1000	1,059	11.8	90.1
1500	1,572	18.5	85.0
2000	2,058	23.2	88.9
2500	2,612	29.5	88.5
3000	3,077	36.6	84.1
3500	3,591	42.1	85.3
4000	4,046	48.1	84.2
4500	4,555	46.9	97.1

EMERGENCY LUMEN OUTPUT		
LUMENS	WATTAGE	INITIAL OUTPUT
1000	9.6	1000
1500	9.6	1000
2000	9.6	1000
2500	9.6	1000
3000	9.6	1000
3500	9.6	1000
4000	9.6	1000
4500	9.6	1000

ACCESSORIES order as separate catalog numbers (shipped separately)

SCA6	Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA6 10D. Refer to TECH-190 .
CTA4-8 YK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 5"). Adds ~4" to fixture height.
GVRT	Vandal-resistant trim accessory. Refer to TECH-200 .
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC .

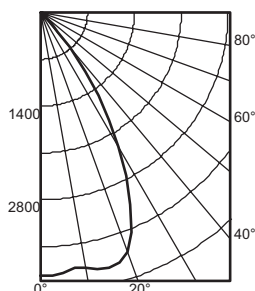
ORDERING NOTES

- Not available with finishes.
- Not available with EL or ELR options.
- Refer to [TECH-240](#) for compatible dimmers.
- Not available with nLight[®] and XPoint options.
- Specify voltage. ECOS2 not available in 277V.
- Not available with white reflector. Not applicable with FL option.
- Not available with black reflector. Not applicable with FL option.
- For dimensional changes, refer to [TECH-140](#). Not available with 347V.
- For use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
- ELR not available. CP & ECOS2 - 3000 lumen max. CP & ECOS3 - 4000 lumen max. CP, ECOS2/ECOS3 & EL - 2000 lumen max.

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor
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EVO 35/40 6AR LS

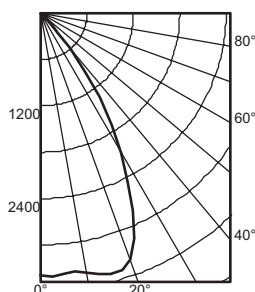
INPUT WATTS: 48.1, DELIVERED LUMENS: 4046, LM/W=84.1 , 1.03 S/MH, TEST NO. LTL27768



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	70%	50%
0	3935	0° - 30°	2904.3	71.8	0	119	119	119	116	111
5	3901	0° - 40°	3830.0	94.7	1	111	108	106	109	103
15	3944	0° - 60°	4043.4	99.9	2	103	99	96	101	95
25	3172	0° - 90°	4046.3	100.0	3	96	91	87	95	88
35	1508	90° - 180°	0.0	0.0	4	90	84	80	89	82
45	221	0° - 180°	4046.3	*100.0	5	84	78	74	83	77
55	6				6	79	73	69	78	72
65	2				7	74	68	64	73	67
75	1				8	70	64	60	69	63
85	0				9	66	60	56	65	59
90	0				10	62	56	52	62	56

EVO 35/35 6AR LS

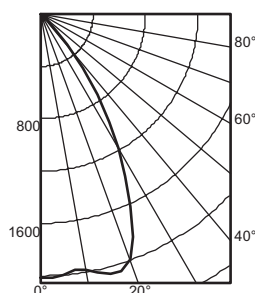
INPUT WATTS: 42.1, DELIVERED LUMENS: 3591, LM/W=85.3, 1.05 S/MH, TEST NO. LTL27767



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	70%	50%
0	3400	0° - 30°	2579.3	71.8	0	119	119	119	116	111
5	3390	0° - 40°	3399.8	94.7	1	111	108	106	109	103
15	3497	0° - 60°	3586.3	99.9	2	103	99	96	101	95
25	2830	0° - 90°	3590.5	100.0	3	96	91	87	95	88
35	1335	90° - 180°	0.0	0.0	4	90	84	80	89	82
45	193	0° - 180°	3590.5	*100.0	5	84	78	74	83	77
55	5				6	79	73	69	78	72
65	2				7	74	68	64	73	67
75	1				8	70	64	60	69	63
85	1				9	66	60	56	65	59
90	1				10	62	56	52	62	56

EVO 35/20 6AR LS

INPUT WATTS: 23.2, DELIVERED LUMENS: 2058, LM/W=88.7, 1.02 S/MH, TEST NO. LTL27777



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	70%	50%
0	2018	0° - 30°	1498.5	72.8	0	119	119	119	116	111
5	1997	0° - 40°	1958.0	95.1	1	111	108	106	109	103
15	2053	0° - 60°	2056.6	99.9	2	103	99	96	102	95
25	1618	0° - 90°	2058.3	100.0	3	96	92	88	95	89
35	749	90° - 180°	0.0	0.0	4	90	85	81	89	83
45	105	0° - 180°	2058.3	*100.0	5	84	79	74	83	77
55	3				6	79	73	69	78	72
65	1				7	74	68	64	73	67
75	0				8	70	64	60	69	63
85	0				9	66	60	56	65	59
90	0				10	62	57	53	62	56

LUMEN OUTPUT MULTIPLIER - CRI	
CRI	FACTOR
80 CRI	1
90 CRI	0.79

LUMEN OUTPUT MULTIPLIER - CCT	
CRI	FACTOR
5000 K	1.101
4000 K	1.035
3500 K	1
3000 K	0.973
2700 K	0.938

LUMEN OUTPUT MULTIPLIER - TRIM FINISH						
FINISH	CLEAR (AR)	PEWTER (PR)	WHEAT (WTR)	GOLD (GR)	WHITE (WR/WRAMF)	BLACK (BR)
Specular (LS)	1.00	0.88	0.83	0.95	N/A	N/A
Semi-specular (LSS)	0.95	0.84	0.79	0.90	N/A	N/A
Matte-diffuse (LD)	0.85	0.73	0.69	0.80	N/A	N/A
Paint	N/A	N/A	N/A	N/A	0.87	0.73

PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 85 typical.

Choose Wall Controls.

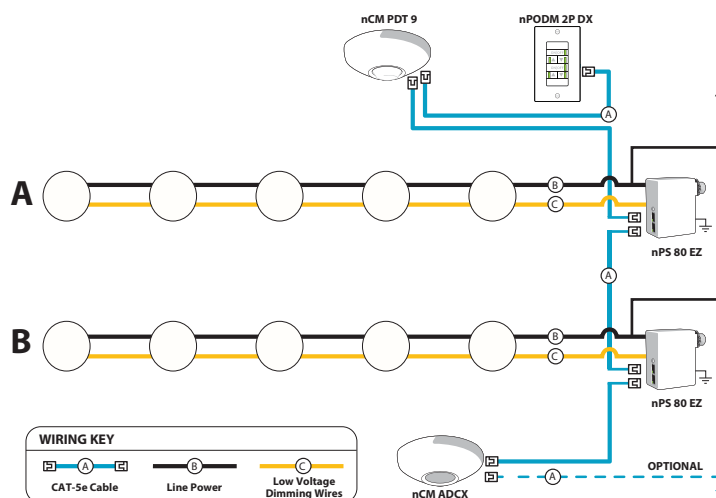
nLIGHT offers multiple styles of wall controls – each with varying features and user experience.



Push-Button WallPod
Traditional tactile buttons
and LED user feedback



Graphic WallPod
Full color touch screen
provides a sophisticated
look and feel



EXAMPLE

Group Fixture Control*

*Application diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty 2 required)

nPODM 2P DX Dual On/Off/Dim Push-Button WallPod

nCM ADCX Daylight Sensor with Automatic Dimming Control

nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.

nLight® Control Accessories:

Order as separate catalog number. Visit www.sensorswitch.com/nLight for complete listing of nLight controls.

WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX [color]	Wide view (PIR / dual tech)	nWV 16 / nWV PDT 16
Photocell controls	Model number	Wall Switch w/ Raise/Lower (PIR / dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	Cat-5 cables (plenum rated)	Model number
		10', CAT5 10FT	CAT5 10FT J1
		15', CAT5 15FT	CAT5 15FT J1

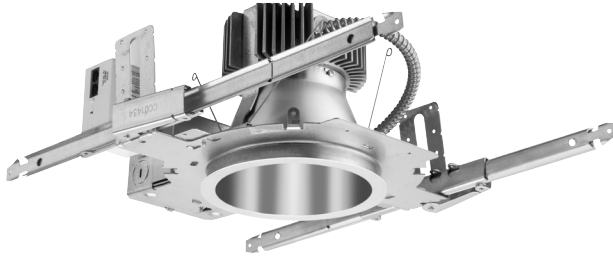
A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details



Gotham Architectural Downlighting
LED Downlights

**6" Evo®
Downlight**

Solid-State Lighting



FEATURES

OPTICAL SYSTEM

- Self-flanged or flangeless semi-specular, matte-diffuse or specular finishing trim
- Patented Bounding Ray™ optical design (U.S. Patent No. 5,800,050)
- 45° cutoff to source and source image
- Top-down flash characteristic
- Polycarbonate lens integral to light engine

MECHANICAL SYSTEM

- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture
- Injection molded mud ring included with flangeless trims. Ships separately. Installs independently of the mounting frame to reduce cracks in plaster due to vibration.

ELECTRICAL SYSTEM

- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- Tested according to LM-79 and LM-80 standards
- Overload and short circuit protected
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional

LISTINGS

- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling. ENERGY STAR® certified product.

WARRANTY

- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

ORDERING INFORMATION



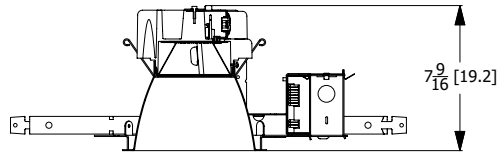
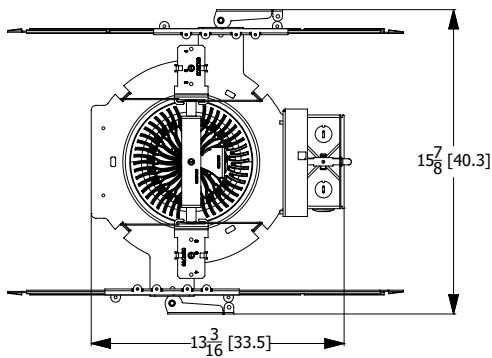
A+ Capable options indicated by this color background.

EXAMPLE: EVO 35/10 6AR MWD LSS MVOLT EZ1

Series	Color temperature	Nominal lumen values	Aperture/Trim color	Trim Style	Distribution	Finish	Voltage
EVO	27/ 2700 K	10 1000 lumens	6AR Clear	(blank) Self-flanged	VND Very narrow (0.5 s/mh)	LSS Semi-specular	MVOLT
	30/ 3000 K	15 1500 lumens	6PR Pewter	FL Flangeless	ND Narrow (0.7 s/mh)	LD Matte-diffuse	120
	35/ 3500 K	20 2000 lumens	6WTR Wheat		MD Medium (0.9 s/mh)	LS Specular	277
	40/ 4000 K	25 2500 lumens	6GR Gold		MWD Medium wide (1.0 s/mh)		347 ²
	50/ 5000 K	30 3000 lumens	6WR ¹ White		WD Wide (1.2 s/mh)		
		35 3500 lumens	6BR ¹ Black				
		40 4000 lumens	6WRAMF ¹ White anti-microbial				
		45 4500 lumens					

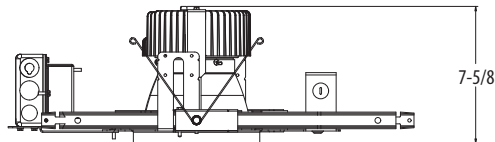
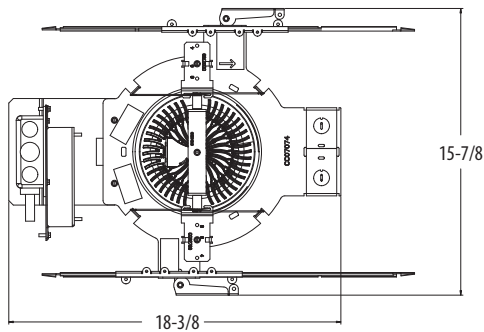
Driver ³	Options
EZ10 eldoLED 0-10V ECOdrive. Linear dimming to 10% min. EZ1 eldoLED 0-10V ECOdrive. Linear dimming to 1% min. EZB eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. EDAB eldoLED SOLOdrive DALI. Logarithmic dimming to <1%. EDXB eldoLED POWERdrive DMX with RDM (remote device management). Square Law dimming to <1%. Includes termination resistor. Refer to DMXR Manual . EXA1 XPoint Wireless, eldoLED 0-10V ECOdrive. Linear dimming to 1%. Refer to XPoint tech sheet. EXAB XPoint Wireless, eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. Refer to XPoint tech sheet. ECOS2^{4,5} Lutron® Hi-Lume® 2-wire forward-phase driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 3000. ECOS3⁴ Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 4500.	SF Single fuse. Specify 120V or 277V. TRW⁶ White painted flange TRBL⁷ Black painted flange EL⁸ Emergency battery pack with integral test switch, CEC compliant ELR⁸ Emergency battery pack with remote test switch, CEC compliant NPS80EZ⁵ nLight® dimming pack controls 0-10V eldoLED drivers. NPS80EZER^{5,9} nLight® dimming pack controls 0-10V eldoLED drivers. ER controls fixtures on emergency circuit. BGTD Bodine generator transfer device. Specify 120V or 277V. CR190 High CRI (90+) Chicago plenum. Specify 120V or 277V. CP¹⁰ RRL RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 6-1/4" (15.9)
Ceiling Opening: 7-1/8" (18.1) self-flanged
7-1/4" (18.4) flangeless
Overlap trim: 7-1/2" (19.1)

DIMENSIONS FOR CHICAGO PLENUM



WATTAGE CONSUMPTION MATRIX			
LUMENS	LM ACTUAL	WATTAGE	LUMENS per WATT
1000	1,059	11.8	90.1
1500	1,572	18.5	85.0
2000	2,058	23.2	88.9
2500	2,612	29.5	88.5
3000	3,077	36.6	84.1
3500	3,591	42.1	85.3
4000	4,046	48.1	84.2
4500	4,555	46.9	97.1

EMERGENCY LUMEN OUTPUT		
LUMENS	WATTAGE	INITIAL OUTPUT
1000	9.6	1000
1500	9.6	1000
2000	9.6	1000
2500	9.6	1000
3000	9.6	1000
3500	9.6	1000
4000	9.6	1000
4500	9.6	1000

ACCESSORIES order as separate catalog numbers (shipped separately)

SCA6	Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA6 10D. Refer to TECH-190 .
CTA4-8 YK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 5"). Adds ~4" to fixture height.
GVRT	Vandal-resistant trim accessory. Refer to TECH-200 .
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC .

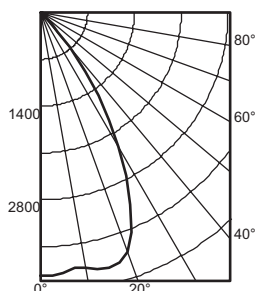
ORDERING NOTES

- Not available with finishes.
- Not available with EL or ELR options.
- Refer to [TECH-240](#) for compatible dimmers.
- Not available with nLight[®] and XPoint options.
- Specify voltage. ECOS2 not available in 277V.
- Not available with white reflector. Not applicable with FL option.
- Not available with black reflector. Not applicable with FL option.
- For dimensional changes, refer to [TECH-140](#). Not available with 347V.
- For use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
- ELR not available. CP & ECOS2 - 3000 lumen max. CP & ECOS3 - 4000 lumen max. CP, ECOS2/ECOS3 & EL - 2000 lumen max.

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor
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EVO 35/40 6AR LS

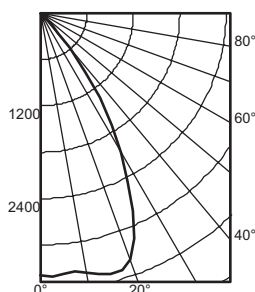
INPUT WATTS: 48.1, DELIVERED LUMENS: 4046, LM/W=84.1 , 1.03 S/MH, TEST NO. LTL27768



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	70%	50%
0	3935	0° - 30°	2904.3	71.8	0			119 119 119	116 116 116	111 111 111
5	3901	0° - 40°	3830.0	94.7	1			111 108 106	109 106 104	105 103 101
15	3944	0° - 60°	4043.4	99.9	2			103 99 96	101 98 95	98 95 93
25	3172	0° - 90°	4046.3	100.0	3			96 91 87	95 90 87	92 88 85
35	1508	90° - 180°	0.0	0.0	4			90 84 80	89 84 80	87 82 79
45	221	0° - 180°	4046.3	*100.0	5			84 78 74	83 78 74	81 77 73
55	6				6			79 73 69	78 73 68	77 72 68
65	2				7			74 68 64	73 68 64	72 67 63
75	1				8			70 64 60	69 63 60	68 63 59
85	0				9			66 60 56	65 60 56	64 59 56
90	0				10			62 56 52	62 56 52	61 56 52

EVO 35/35 6AR LS

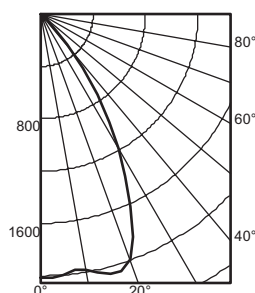
INPUT WATTS: 42.1, DELIVERED LUMENS: 3591, LM/W=85.3, 1.05 S/MH, TEST NO. LTL27767



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	70%	50%
0	3400	0° - 30°	2579.3	71.8	0			119 119 119	116 116 116	111 111 111
5	3390	0° - 40°	3399.8	94.7	1			111 108 106	109 106 104	105 103 101
15	3497	0° - 60°	3586.3	99.9	2			103 99 96	101 98 95	98 95 93
25	2830	0° - 90°	3590.5	100.0	3			96 91 87	95 90 87	92 88 85
35	1335	90° - 180°	0.0	0.0	4			90 84 80	89 84 80	87 82 79
45	193	0° - 180°	3590.5	*100.0	5			84 78 74	83 78 74	81 77 73
55	5				6			79 73 69	78 72 68	77 72 68
65	2				7			74 68 64	73 68 64	72 67 63
75	1				8			70 64 60	69 63 59	68 63 59
85	1				9			66 60 56	65 60 56	64 59 55
90	1				10			62 56 52	62 56 52	61 56 52

EVO 35/20 6AR LS

INPUT WATTS: 23.2, DELIVERED LUMENS: 2058, LM/W=88.7, 1.02 S/MH, TEST NO. LTL27777



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	70%	50%
0	2018	0° - 30°	1498.5	72.8	0			119 119 119	116 116 116	111 111 111
5	1997	0° - 40°	1958.0	95.1	1			111 108 106	109 107 105	105 103 101
15	2053	0° - 60°	2056.6	99.9	2			103 99 96	102 98 95	98 95 93
25	1618	0° - 90°	2058.3	100.0	3			96 92 88	95 91 87	92 89 86
35	749	90° - 180°	0.0	0.0	4			90 85 81	89 84 80	87 83 79
45	105	0° - 180°	2058.3	*100.0	5			84 79 74	83 78 74	82 77 73
55	3				6			79 73 69	78 73 69	77 72 68
65	1				7			74 68 64	73 68 64	72 67 64
75	0				8			70 64 60	69 64 60	68 63 60
85	0				9			66 60 56	66 60 56	65 60 56
90	0				10			62 57 53	62 56 53	61 56 53

LUMEN OUTPUT MULTIPLIER - CRI	
CRI	FACTOR
80 CRI	1
90 CRI	0.79

LUMEN OUTPUT MULTIPLIER - CCT	
CRI	FACTOR
5000 K	1.101
4000 K	1.035
3500 K	1
3000 K	0.973
2700 K	0.938

LUMEN OUTPUT MULTIPLIER - TRIM FINISH						
FINISH	CLEAR (AR)	PEWTER (PR)	WHEAT (WTR)	GOLD (GR)	WHITE (WR/WRAMF)	BLACK (BR)
Specular (LS)	1.00	0.88	0.83	0.95	N/A	N/A
Semi-specular (LSS)	0.95	0.84	0.79	0.90	N/A	N/A
Matte-diffuse (LD)	0.85	0.73	0.69	0.80	N/A	N/A
Paint	N/A	N/A	N/A	N/A	0.87	0.73

PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 85 typical.

Choose Wall Controls.

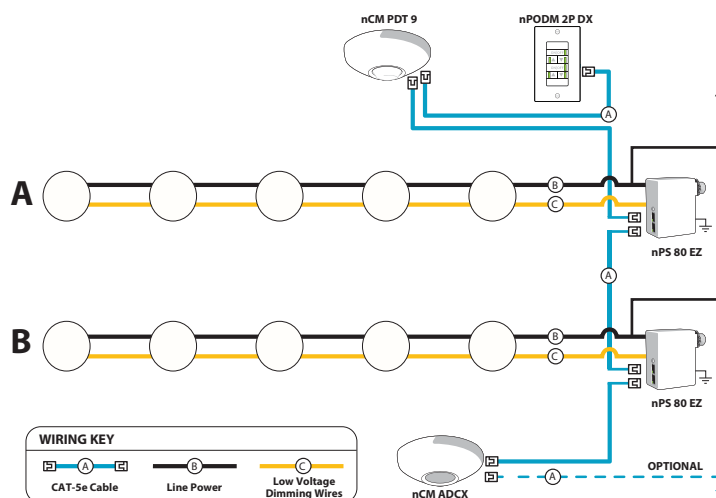
nLIGHT offers multiple styles of wall controls – each with varying features and user experience.



Push-Button WallPod
Traditional tactile buttons
and LED user feedback



Graphic WallPod
Full color touch screen
provides a sophisticated
look and feel



EXAMPLE

Group Fixture Control*

*Application diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty 2 required)

nPODM 2P DX Dual On/Off/Dim Push-Button WallPod

nCM ADCX Daylight Sensor with Automatic Dimming Control

nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.

nLight® Control Accessories:

Order as separate catalog number. Visit www.sensorswitch.com/nLight for complete listing of nLight controls.

WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX [color]	Wide view (PIR / dual tech)	nWV 16 / nWV PDT 16
Photocell controls	Model number	Wall Switch w/ Raise/Lower (PIR / dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	Cat-5 cables (plenum rated)	Model number
		10', CAT5 10FT	CAT5 10FT J1
		15', CAT5 15FT	CAT5 15FT J1

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a **shaded background***
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

FEATURES & SPECIFICATIONS

INTENDED USE — Square Straight Steel is a general purpose light pole for up to 39-foot mounting heights. This pole provides a robust yet cost effective option for mounting area lights and floodlights.

CONSTRUCTION — **Pole Shaft:** The pole shaft is of uniform dimension and wall thickness and is made of a weldable-grade, hot-rolled, commercial-quality steel tubing with a minimum yield of 55 KSI (11-gauge, .1196"), or 50 KSI (7-gauge, .1793"). Shaft is one-piece with a full-length longitudinal high-frequency electric resistance weld. Uniformly square in cross-section with flat sides, small corner radii and excellent torsional qualities. Available shaft widths are 4", 5" and 6".

Pole Top: A top cap is provided for all poles that will receive drilling patterns for side-mount luminaire arm assemblies or when ordered with PT option.

Handhole: A reinforced handhole with grounding provision is provided at 18" from the base. Positioning the handhole lower may not be possible and requires engineering review; consult Tech Support-Outdoor for further information. Every handhole includes a cover and cover attachment hardware. The handhole has a nominal dimension of 2.5" x 5".

Base Cover: A durable ABS plastic two-piece full base cover, finished to match the pole, is provided with each pole assembly. Additional base cover options are available upon request.

Anchor Base/ Bolts: Anchor base is fabricated from steel that meets ASTM A36 standards and can be altered to match existing foundations; consult factory for modifications. Anchor bolts are manufactured to ASTM F1554 Standards grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Top threaded portion (nominal 12") is hot-dipped galvanized per ASTM A-153.

HARDWARE — All structural fasteners are high-strength galvanized carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.

FINISH — Standard powder-coat finishes include Dark Bronze, White, Black, Medium Bronze and Natural Aluminum colors. Classic finishes include Sandstone, Charcoal Gray, Tennis Green, Bright Red and Steel Blue colors. Architectural Colors and Special Finishes are available by quote and include, but are not limited to Hot-dipped Galvanized, Paint over Hot-dipped Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes. Factory-applied primer paint finish is available for customer field-paint applications.

WARRANTY — 1-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

Catalog Number
Notes
Type



Anchor Base Poles

SSS

SQUARE STRAIGHT STEEL

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: SSS 20 5C DM19 DDB

SSS						
Series	Nominal fixture mounting height	Nominal shaft base size/wall thickness ¹	Mounting ²		Options	Finish ¹⁰
SSS	(See technical information table for complete ordering information.)	(See technical information table for complete ordering information.)	Tenon mounting	AERIS™ Suspend drill mounting ^{3,4}	Shipped installed	Standard colors
	10'-39' (for 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.)	4C 4" 11g (.1196") 4G 4" 7g (.1793") 5C 5" 11g (.1196") 5G 5" 7g (.1793") 6G 6" 7g (.1793")	PT Open top (includes top cap) T20 2-3/8" O.D. (2" NPS) T25 2-7/8" O.D. (2-1/2" NPS) T30 3-1/2" O.D. (3" NPS) T35 4" O.D. (3-1/2" NPS)	DM19AST_ 1 at 90° DM28AST_ 2 at 180° DM29AST_ 2 at 90° DM39AST_ 3 at 90° DM49AST_ 4 at 90°	L/AB Less anchor bolts (Include when anchor bolts are not needed) VD Vibration damper TP Tamper resistant handhole cover fasteners HAXy Horizontal arm bracket (1 fixture) ^{5,6} FDLxy Festoon outlet less electrical ⁵ CPL12/xy 1/2" coupling ⁵ CPL34/xy 3/4" coupling ⁵ CPL1/xy 1" coupling ⁵ NPL12/xy 1/2" threaded nipple ⁵ NPL34/xy 3/4" threaded nipple ⁵ NPL1/xy 1" threaded nipple ⁵ EHHxy Extra handhole ^{5,7} MAEX Match existing ⁸ USPOM United States point of manufacture ⁹ IC Interior coating ¹⁰ UL UL listed with label (Includes NEC compliant cover) NEC NEC 410.30 compliant gasketed handhole (Not UL Labeled)	DDB Dark bronze DWH White DBL Black DMB Medium bronze DNA Natural aluminum
			KAC/KAD/KSE/KSF/KVR/KVF Drill mounting ³ DM19 1 at 90° DM28 2 at 180° DM28 PL 2 at 180° with one side plugged DM29 2 at 90° DM39 3 at 90° DM49 4 at 90°	OMERO™ Suspend drill mounting ^{3,4} DM19MRT_ 1 at 90° DM28MRT_ 2 at 180° DM29MRT_ 2 at 90° DM39MRT_ 3 at 90° DM49MRT_ 4 at 90°		Classic colors DSS Sandstone DGC Charcoal gray DTG Tennis green DBR Bright red DSB Steel blue
			CSX/DSX/AERIS™/OMERO™/HLA/KAX Drill mounting ³ DM19AS 1 at 90° DM28AS 2 at 180° DM29AS 2 at 90° DM39AS 3 at 90° DM49AS 4 at 90°			Architectural Colors and Special Finishes ¹¹ Galvanized, Paint over Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes available.
					Shipped separately (replacement kit available) (blank) FBC Full base cover (plastic) (blank) TC Top cap (blank) HHC Handhole cover	

See footnotes next page.

SSS Square Straight Steel Poles

NOTES:

- 1. Wall thickness will be signified with a "C" (11 Gauge) or a "G" (7-gauge) in nomenclature. "C" - 0.1196" | "G" - 0.1793".
- 2. PT open top poles include top cap. When ordering tenon mounting and drill mounting for the same pole, follow this example: DM28/T20. The combination includes a required extra handhole.
- 3. Refer to the fixture spec sheet for the correct drilling template pattern and orientation compatibility.
- 4. Insert "1" or "2" to designate fixture size; e.g. DM19AST2.
- 5. Specify location and orientation when ordering option.
For "x": Specify the height above the base of pole in feet or feet and inches; separate feet and inches with a "-".
Example: 5ft = 5 and 20ft 3in = 20-3
For "y": Specify orientation from handhole (A,B,C,D)
Refer to the Handhole Orientation diagram below.
Example: 1/2" coupling at 5' 8", orientation C = CPL12/5-8C
- 6. Horizontal arm is 18" x 2-3/8" O.D. tenon standard, with radius curve providing 12" rise and 2-3/8" O.D..
- 7. Combination of tenon-top and drill mount includes extra handhole.

- 8. Must add original order number of existing pole(s).
- 9. Use when mill certifications are required.
- 10. Provides enhanced corrosion resistance.
- 11. Additional colors available; see www.lithonia.com/archcolors or Architectural Colors brochure (Form No. 794.3). Available by formal quote only, consult factory for details.

TECHNICAL INFORMATION — EPA (ft²) WITH 3-SECOND GUST PER AASHTO 2013																	
Series	Mounting Height (ft)*	Shaft Base Size	90 MPH	Max. weight	100 MPH	Max. weight	110 MPH	Max. weight	120 MPH	Max. weight	130 MPH	Max. weight	140 MPH	Max. weight	150 MPH	Max. weight	Approximate ship weight (lbs.)
SSS	10	4C	20	500	16	400	13	325	10.5	263	8.5	213	7	175	6	150	75
SSS	12	4C	16	400	13	325	10	250	8	200	6.5	163	5	125	4	100	90
SSS	14	4C	13.5	338	10	250	7.5	188	6	150	4.5	113	3.5	88	2.5	63	100
SSS	16	4C	10.5	263	7.5	188	5.5	138	4	100	3	75	1.5	38	1	25	115
SSS	18	4C	8	200	5.5	138	4	100	2.5	63	1.5	38	0.5	13	-	-	125
SSS	18	4G	13	325	9.5	238	7	175	5	125	3.5	88	2.5	63	1.5	38	185
SSS	18	5C	13	325	9.5	238	6.5	163	4.5	113	3	75	1.5	38	3.5	13	170
SSS	20	4C	6	150	4	100	2.5	63	1	25	-	-	-	-	-	-	140
SSS	20	4G	10.5	263	7.5	188	5.5	138	3.5	88	2	50	1	25			205
SSS	20	5C	10	250	7	175	4.5	113	2.5	63	1	25	-	-	-	-	185
SSS	20	5G	20	500	15	375	11.5	288	8.5	213	6	150	4.5	113	3	75	265
SSS	25	4C	2	50	0.5	13	-	-	-	-	-	-	-	-	-	-	170
SSS	25	4G	5.5	138	3	75	1.5	38	-	-	-	-	-	-	-	-	245
SSS	25	5C	4.5	113	2	50	-	-	-	-	-	-	-	-	-	-	225
SSS	25	5G	12	300	8.5	213	5.5	138	3	75	1.5	38	-	-	-	-	360
SSS	25	6G	19	475	13.5	338	9	225	5.5	138	3	75	1	25			445
SSS	30	4G	1.5	38	-	-	-	-	-	-	-	-	-	-	-	-	291
SSS	30	5C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265
SSS	30	5G	6.5	163	3.5	88	1	25	-	-	-	-	-	-	-	-	380
SSS	30	6G	11	275	6	150	2.5	63	-	-	-	-	-	-	-	-	520
SSS	35	5G	2	50	-	-	-	-	-	-	-	-	-	-	-	-	440
SSS	35	6G	4	100	-	-	-	-	-	-	-	-	-	-	-	-	540
SSS	39	6G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	605

AASHTO 2013 criteria is the most conservative existing EPA calculation. For poles not showing EPA values under AASHTO 2013, EPA values may exist under commercial criteria (see table below).

*For 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.

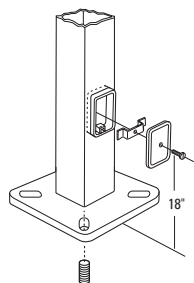
SSS Square Straight Steel Poles

TECHNICAL INFORMATION

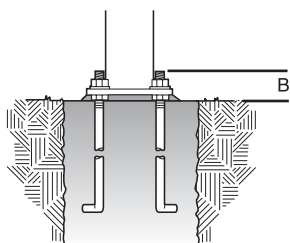
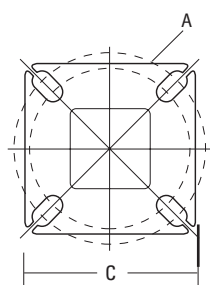
Catalog Number	Nominal Shaft Length (ft.)*	Pole Shaft Size (Base in. x Top in. x ft.)	Wall thick (in)	Gauge	EPA (ft ²) with 1.3 gust						Bolt circle (in)	Bolt size (in. x in. x in.)	Approximate ship weight (lbs.)
					80 MPH	Max. weight	90 MPH	Max. weight	100 MPH	Max. weight			
SSS 10 4C	10	4.0 x 10.0	0.1196	11	30.6	765	23.8	595	18.9	473	8-9	3/4 x 18 x 3	75
SSS 12 4C	12	4.0 x 12.0	0.1196	11	24.4	610	18.8	470	14.8	370	8-9	3/4 x 18 x 3	90
SSS 14 4C	14	4.0 x 14.0	0.1196	11	19.9	498	15.1	378	11.7	293	8-9	3/4 x 18 x 3	100
SSS 16 4C	16	4.0 x 16.0	0.1196	11	15.9	398	11.8	295	8.9	223	8-9	3/4 x 18 x 3	115
SSS 18 4C	18	4.0 x 18.0	0.1196	11	12.6	315	9.2	230	6.7	168	8-9	3/4 x 18 x 3	125
SSS 20 4C	20	4.0 x 20.0	0.1196	11	9.6	240	6.7	167	4.5	150	8-9	3/4 x 18 x 3	140
SSS 20 4G	20	4.0 x 20.0	0.1793	7	14	350	11	275	8	200	8-9	3/4 x 30 x 3	198
SSS 20 5C	20	5.0 x 20.0	0.1196	11	17.7	443	12.7	343	9.4	235	10-12	1 x 36 x 4	185
SSS 20 5G	20	5.0 x 20.0	0.1793	7	28.1	703	21.4	535	16.2	405	10-12	1 x 36 x 4	265
SSS 25 4C	25	4.0 x 25.0	0.1196	11	4.8	150	2.6	100	1	50	8-9	3/4 x 18 x 3	170
SSS 25 4G	25	4.0 x 25.0	0.1793	7	10.8	270	7.7	188	5.4	135	8-9	3/4 x 30 x 3	245
SSS 25 5C	25	5.0 x 25.0	0.1196	11	9.8	245	6.3	157	3.7	150	10-12	1 x 36 x 4	225
SSS 25 5G	25	5.0 x 25.0	0.1793	7	18.5	463	13.3	333	9.5	238	10-12	1 x 36 x 4	360
SSS 30 4G	30	4.0 x 30.0	0.1793	7	6.7	168	4.4	110	2.6	65	8-9	3/4 x 30 x 3	295
SSS 30 5C	30	5.0 x 30.0	0.1196	11	4.7	150	2	50	--	--	10-12	1 x 36 x 4	265
SSS 30 5G	30	5.0 x 30.0	0.1793	7	10.7	267	6.7	167	3.9	100	10-12	1 x 36 x 4	380
SSS 30 6G	30	6.0 x 30.0	0.1793	7	19	475	13.2	330	9	225	11-13	1 x 36 x 4	520
SSS 35 5G	35	5.0 x 35.0	0.1793	7	5.9	150	2.5	100	--	--	10-12	1 x 36 x 4	440
SSS 35 6G	35	6.0 x 35.0	0.1793	7	12.4	310	7.6	190	4.2	105	11-13	1 x 36 x 4	540
SSS 39 6G	39	6.0 x 39.0	0.1793	7	7.2	180	3	75	--	--	11-13	1 x 36 x 4	605

*For 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.

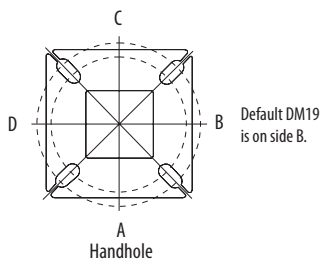
BASE DETAIL



POLE DATA								
Shaft base size	Bolt circle A	Bolt projection B	Base diameter C	Base plate thickness	Template description	Anchor bolt description	Anchor bolt and template number	Anchor bolt description
4"C	8" - 9"	3.25" - 3.75"	8" - 8.25"	0.75"	ABTEMPLATE PJ50004	AB18-0	ABSSS-4C	3/4"x18"x3"
4"G	8" - 9"	3.38" - 3.75"	8" - 8.25"	0.875"	ABTEMPLATE PJ50004	AB30-0	ABSSS-4G	3/4"x30"x3"
5"	10" - 12"	3.5" - 4"	11"	1"	ABTEMPLATE PJ50010	AB36-0	ABSSS-5	1"x36"x4"
6"	11" - 13"	4" - 4.50"	12.5"	1"	ABTEMPLATE PJ50011	AB36-0	N/A	1"x36"x4"



HANDHOLE ORIENTATION



IMPORTANT INSTALLATION NOTES:

- Do not erect poles without having fixtures installed.
- Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates.
- If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage.
- Lithonia Lighting is not responsible for the foundation design.



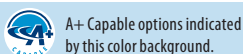
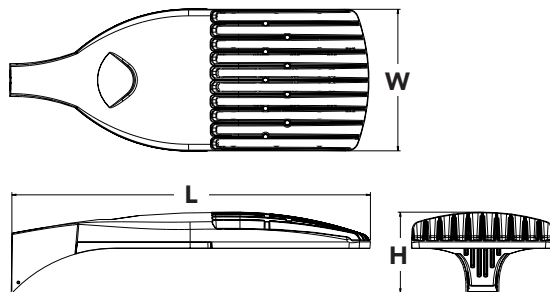
D-Series Size 1 LED Area Luminaire

d#series



Specifications

EPA:	1.01 ft ² (0.09 m ²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height:	7'-1/2" (19.0 cm)
Weight (max):	27 lbs (12.2 kg)



Catalog

Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a **shaded background**. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability¹
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a **shaded background**¹

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: [Link to Roam](#); [Link to DTL DLL](#)

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA DDBXD

DSX1LED						
Series	LEDs	Color temperature	Distribution	Voltage	Mounting	
DSX1 LED	Forward optics	30K 3000 K	T1S Type I short	T5S Type V short	MVOLT ⁴	Shipped included
	P1 P4 P7	40K 4000 K	T2S Type II short	T5M Type V medium	120 ⁵	SPA Square pole mounting
	P2 P5 P8	50K 5000 K	T2M Type II medium	T5W Type V wide	208 ⁵	RPA Round pole mounting
	P3 P6 P9	AMBPC Amber phosphor converted ²	T3S Type III short	BLC Backlight control ^{2,3}	240 ⁵	WBA Wall bracket
	Rotated optics		T3M Type III medium	LCCO Left corner cutoff ^{2,3}	277 ⁵	SPUMBA Square pole universal mounting adaptor ⁷
	P10 ¹ P12 ¹		T4M Type IV medium	RCCO Right corner cutoff ^{2,3}	347 ^{5,6}	RPUMBA Round pole universal mounting adaptor ⁷
	P11 ¹ P13 ¹		TFTM Forward throw medium		480 ^{5,6}	Shipped separately
			T5VS Type V very short			KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish) ⁸

Control options	Other options	Finish (required)
Shipped installed PER NEMA twist-lock receptacle only (controls ordered separate) ⁹ PER5 Five-wire receptacle only (controls ordered separate) ^{9,10} PER7 Seven-wire receptacle only (controls ordered separate) ^{9,10} DMG 0-10V dimming extend out back of housing for external control (leads exit fixture) DS Dual switching ^{11,12} PIR Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc ^{13,14} PIRH Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc ^{13,14} PIR1FC3V Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc ^{13,14}	PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc ^{13,14} BL30 Bi-level switched dimming, 30% ^{12,15} BL50 Bi-level switched dimming, 50% ^{12,15} PNMTDD3 Part night, dim till dawn ¹⁶ PNMT5D3 Part night, dim 5 hrs ¹⁶ PNMT6D3 Part night, dim 6 hrs ¹⁶ PNMT7D3 Part night, dim 7 hrs ¹⁶ FA0 Field adjustable output ¹⁷	Shipped installed HS House-side shield ¹⁸ SF Single fuse (120, 277, 347V) ⁵ DF Double fuse (208, 240, 480V) ⁵ L90 Left rotated optics ¹ R90 Right rotated optics ¹ BS Bird spikes EGS External glare shield DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white



Ordering Information

Accessories

Ordered and shipped separately.

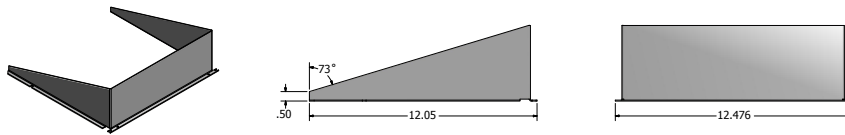
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) ¹⁹
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) ¹⁹
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) ¹⁹
DSHORT SBK U	Shorting cap ¹⁹
DSX1HS 30C U	House-side shield for 30 LED unit ¹⁸
DSX1HS 40C U	House-side shield for 40 LED unit ¹⁸
DSX1HS 60C U	House-side shield for 60 LED unit ¹⁸
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish) ²⁰
KMA8 DDBXD U	Master arm mounting bracket adaptor (specify finish) ⁷

For more control options, visit [DTL](#) and [ROAM](#) online.

NOTES

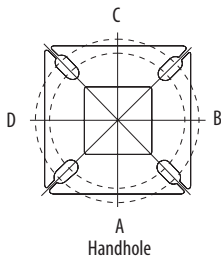
- P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
- AMBPC is not available with BLC, LCCO, RCCO or P4, P7, P8, P9 or P13.
- Not available with HS.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
- Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
- Not available in P1 or P10. Not available with BL30, BL50 or PNMT options.
- Existing drilled pole only. Available as a separate combination accessory; for retrofit use only: PUMBA (finish) U; 1.5 G vibration load rating per ANCI C136.31.
- Must order fixture with SPA option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
- Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Not available with DS option. Shorting cap included.
- If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Not available with DCR. Node with integral dimming. Shorting cap included.
- Provides 50/50 fixture operation via (2) independent drivers. Not available with PER, PER5, PER7, PIR or PIRH. Not available P1, P2, P3 or P4.
- Requires (2) separately switched circuits.
- Reference Motion Sensor table on page 3.
- Reference PER table on page 3 to see functionality.
- Not available with 347V, 480V, PNMT, DS. For PER5 or PER7, see PER Table on page 3.
- Not available with 347V, 480V, DS, BL30, BL50. For PER5 or PER7, see PER Table on page 3. Separate Dusk to Dawn required.
- Not available with other dimming controls options.
- Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
- Requires luminaire to be specified with PER, PER5 or PER7 option. See PER Table on page 3.
- For retrofit use only.

External Glare Shield



Drilling

HANDHOLE ORIENTATION



Tenon Mounting Slipfitter**

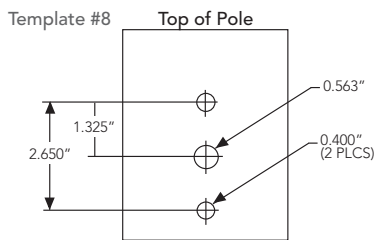
Tenon O.D.	Single Unit	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2-3/8"	AST20-190	AST20-280	AST20-290	AST20-320	AST20-390	AST20-490
2-7/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Pole drilling nomenclature: # of heads at degree from handhole (default side A)					
DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS
1 @ 90°	2 @ 280°	2 @ 90°	3 @ 120°	3 @ 90°	4 @ 90°
Side B	Side B & D	Side B & C	Round pole only	Side B, C, & D	Sides A, B, C, D

Note: Review luminaire spec sheet for specific nomenclature

Pole top or tenon O.D.	4.5" @ 90°	4" @ 90°	3.5" @ 90°	3" @ 90°	4.5" @ 120°	4" @ 120°	3.5" @ 120°	3" @ 120°
DSX SPA	Y	Y	Y	N	-	-	-	-
DSX RPA	Y	Y	N	N	Y	Y	Y	Y
DSX SPUMBA	Y	N	N	N	-	-	-	-
DSX RPUMBA	N	N	N	N	Y	Y	Y	N

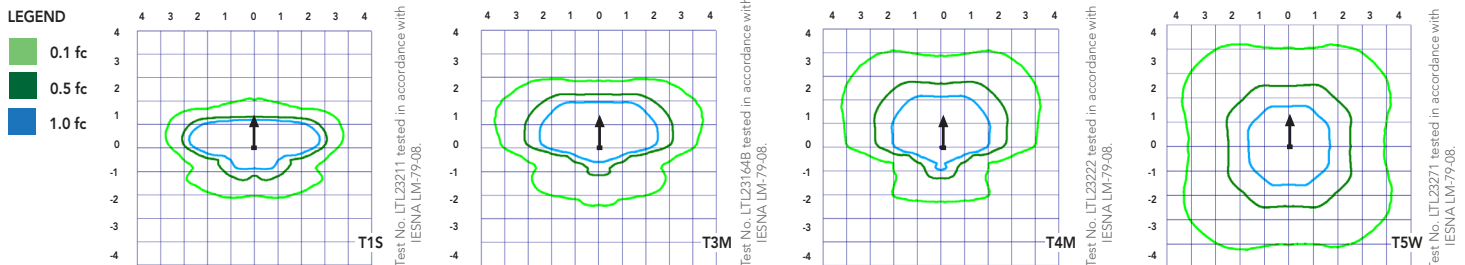
*3 fixtures @ 120 require round pole top/tenon.



Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit [Lithonia Lighting's D-Series Area Size 1 homepage](#).

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').



Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25000	50000	100000
Lumen Maintenance Factor	1.00	0.96	0.92	0.85

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A)					
					120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	530	54	0.45	0.26	0.23	0.19	0.10	0.12
	P2	30	700	70	0.59	0.34	0.30	0.25	0.20	0.16
	P3	30	1050	102	0.86	0.50	0.44	0.38	0.30	0.22
	P4	30	1250	125	1.06	0.60	0.52	0.46	0.37	0.27
	P5	30	1400	138	1.16	0.67	0.58	0.51	0.40	0.29
	P6	40	1250	163	1.36	0.78	0.68	0.59	0.47	0.34
	P7	40	1400	183	1.53	0.88	0.76	0.66	0.53	0.38
	P8	60	1050	207	1.74	0.98	0.87	0.76	0.64	0.49
	P9	60	1250	241	2.01	1.16	1.01	0.89	0.70	0.51
Rotated Optics (Requires L90 or R90)	P10	60	530	106	0.90	0.52	0.47	0.43	0.33	0.27
	P11	60	700	137	1.15	0.67	0.60	0.53	0.42	0.32
	P12	60	1050	207	1.74	0.99	0.87	0.76	0.60	0.46
	P13	60	1250	231	1.93	1.12	0.97	0.86	0.67	0.49

Motion Sensor Default Settings

Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min

*for use with Inline Dusk to Dawn or timer.

PER Table

Control	PER (3 wire)	PER5 (5 wire)		PER7 (7 wire)		
			Wire 4/Wire5		Wire 4/Wire5	Wire 6/Wire7
Photocontrol Only (On/Off)	✓	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM	✗	✓	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM with Motion (ROAM on/off only)	✗	⚠	Wires Capped inside fixture	⚠	Wires Capped inside fixture	Wires Capped inside fixture
Future-proof*	✗	⚠	Wired to dimming leads on driver	✓	Wired to dimming leads on driver	Wires Capped inside fixture
Future-proof* with Motion	✗	⚠	Wires Capped inside fixture	✓	Wires Capped inside fixture	Wires Capped inside fixture

✓ Recommended
✗ Will not work
⚠ Alternate

*Future-proof means: Ability to change controls in the future.



Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	P1	54W	T1S	6,457	2	0	2	120	6,956	2	0	2	129	7,044	2	0	2	130	3,640	1	0	1	70
				T2S	6,450	2	0	2	119	6,949	2	0	2	129	7,037	2	0	2	130	3,813	1	0	1	73
				T2M	6,483	1	0	1	120	6,984	2	0	2	129	7,073	2	0	2	131	3,689	1	0	1	71
				T3S	6,279	2	0	2	116	6,764	2	0	2	125	6,850	2	0	2	127	3,770	1	0	1	73
				T3M	6,468	1	0	2	120	6,967	1	0	2	129	7,056	1	0	2	131	3,752	1	0	1	72
				T4M	6,327	1	0	2	117	6,816	1	0	2	126	6,902	1	0	2	128	3,758	1	0	1	72
				TFTM	6,464	1	0	2	120	6,963	1	0	2	129	7,051	1	0	2	131	3,701	1	0	1	71
				T5VS	6,722	2	0	0	124	7,242	3	0	0	134	7,334	3	0	0	136	3,928	2	0	0	76
				T5S	6,728	2	0	1	125	7,248	2	0	1	134	7,340	2	0	1	136	3,881	2	0	0	75
				T5M	6,711	3	0	1	124	7,229	3	0	1	134	7,321	3	0	2	136	3,930	2	0	1	76
				T5W	6,667	3	0	2	123	7,182	3	0	2	133	7,273	3	0	2	135	3,820	3	0	1	73
				BLC	5,299	1	0	1	98	5,709	1	0	2	106	5,781	1	0	2	107					
				LCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80					
				RCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80					
30	700	P2	70W	T1S	8,249	2	0	2	118	8,886	2	0	2	127	8,999	2	0	2	129	4,561	1	0	1	67
				T2S	8,240	2	0	2	118	8,877	2	0	2	127	8,989	2	0	2	128	4,777	1	0	1	70
				T2M	8,283	2	0	2	118	8,923	2	0	2	127	9,036	2	0	2	129	4,622	1	0	2	68
				T3S	8,021	2	0	2	115	8,641	2	0	2	123	8,751	2	0	2	125	4,724	1	0	1	69
				T3M	8,263	2	0	2	118	8,901	2	0	2	127	9,014	2	0	2	129	4,701	1	0	2	69
				T4M	8,083	2	0	2	115	8,708	2	0	2	124	8,818	2	0	2	126	4,709	1	0	2	69
				TFTM	8,257	2	0	2	118	8,896	2	0	2	127	9,008	2	0	2	129	4,638	1	0	2	68
				T5VS	8,588	3	0	0	123	9,252	3	0	0	132	9,369	3	0	0	134	4,922	2	0	0	72
				T5S	8,595	3	0	1	123	9,259	3	0	1	132	9,376	3	0	1	134	4,863	2	0	0	72
				T5M	8,573	3	0	2	122	9,236	3	0	2	132	9,353	3	0	2	134	4,924	3	0	1	72
				T5W	8,517	3	0	2	122	9,175	4	0	2	131	9,291	4	0	2	133	4,787	3	0	1	70
				BLC	6,770	1	0	2	97	7,293	1	0	2	104	7,386	1	0	2	106					
				LCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79					
				RCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79					
30	1050	P3	102W	T1S	11,661	2	0	2	114	12,562	3	0	3	123	12,721	3	0	3	125					
				T2S	11,648	2	0	2	114	12,548	3	0	3	123	12,707	3	0	3	125					
				T2M	11,708	2	0	2	115	12,613	2	0	2	124	12,773	2	0	2	125					
				T3S	11,339	2	0	2	111	12,215	3	0	3	120	12,370	3	0	3	121					
				T3M	11,680	2	0	2	115	12,582	2	0	2	123	12,742	2	0	2	125					
				T4M	11,426	2	0	3	112	12,309	2	0	3	121	12,465	2	0	3	122					
				TFTM	11,673	2	0	2	114	12,575	2	0	3	123	12,734	2	0	3	125					
				T5VS	12,140	3	0	1	119	13,078	3	0	1	128	13,244	3	0	1	130					
				T5S	12,150	3	0	1	119	13,089	3	0	1	128	13,254	3	0	1	130					
				T5M	12,119	4	0	2	119	13,056	4	0	2	128	13,221	4	0	2	130					
				T5W	12,040	4	0	3	118	12,970	4	0	3	127	13,134	4	0	3	129					
				BLC	9,570	1	0	2	94	10,310	1	0	2	101	10,440	1	0	2	102					
				LCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76					
				RCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76					
30	1250	P4	125W	T1S	13,435	3	0	3	107	14,473	3	0	3	116	14,657	3	0	3	117					
				T2S	13,421	3	0	3	107	14,458	3	0	3	116	14,641	3	0	3	117					
				T2M	13,490	2	0	2	108	14,532	3	0	3	116	14,716	3	0	3	118					
				T3S	13,064	3	0	3	105	14,074	3	0	3	113	14,252	3	0	3	114					
				T3M	13,457	2	0	2	108	14,497	2	0	2	116	14,681	2	0	2	117					
				T4M	13,165	2	0	3	105	14,182	2	0	3	113	14,362	2	0	3	115					
				TFTM	13,449	2	0	3	108	14,488	2	0	3	116	14,672	2	0	3	117					
				T5VS	13,987	4	0	1	112	15,068	4	0	1	121	15,259	4	0	1	122					
				T5S	13,999	3	0	1	112	15,080	3	0	1	121	15,271	3	0	1	122					
				T5M	13,963	4	0	2	112	15,042	4	0	2	120	15,233	4	0	2	122					
				T5W	13,872	4	0	3	111	14,944	4	0	3	120	15,133	4	0	3	121					
				BLC	11,027	1	0	2	88	11,879	1	0	2	95	12,029	1	0	2	96					
				LCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72					
				RCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72					
30	1400	P5	138W	T1S	14,679	3	0	3	106	15,814	3	0	3	115	16,014	3	0	3	116					
				T2S	14,664	3	0	3	106	15,797	3	0	3	114	15,997	3	0	3	116					
				T2M	14,739	3	0	3	107	15,878	3	0	3	115	16,079	3	0	3	117					
				T3S	14,274	3	0	3	103	15,377	3	0	3	111	15,572	3	0	3	113					
				T3M	14,704	2	0	3	107	15,840	3	0	3	115	16,040	3	0	3	116					
				T4M	14,384	2	0	3	104	15,496	3	0	3	112	15,692	3	0	3	114					
				TFTM	14,695	2	0	3	106	15,830	3	0	3	115	16,030	3	0	3	116					
				T5VS	15,283	4	0	1	111	16,464	4	0	1	119	16,672	4	0	1	121					
				T5S	15,295	3	0	1	111	16,477	4	0	1	119	16,686	4	0	1	121					
				T5M	15,257	4	0	2	111	16,435	4	0	2	119	16,644	4	0	2	121					
				T5W	15,157	4	0	3	110	16,328	4	0	3	118	16,534	4	0	3	120					
				BLC	12,048	1	0	2	87	12,979	1	0	2	94	13,143	1	0	2	95					
				LCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71					
					8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71					

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics																								
LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lu-mens	B	U	G	LPW
40	1250	P6	163W	T1S	17,654	3	0	3	108	19,018	3	0	3	117	19,259	3	0	3	118					
				T2S	17,635	3	0	3	108	18,998	3	0	3	117	19,238	3	0	3	118					
				T2M	17,726	3	0	3	109	19,096	3	0	3	117	19,337	3	0	3	119					
				T3S	17,167	3	0	3	105	18,493	3	0	3	113	18,727	3	0	3	115					
				T3M	17,683	3	0	3	108	19,049	3	0	3	117	19,290	3	0	3	118					
				T4M	17,299	3	0	3	106	18,635	3	0	4	114	18,871	3	0	4	116					
				TFTM	17,672	3	0	3	108	19,038	3	0	4	117	19,279	3	0	4	118					
				TSVS	18,379	4	0	1	113	19,800	4	0	1	121	20,050	4	0	1	123					
				TSS	18,394	4	0	2	113	19,816	4	0	2	122	20,066	4	0	2	123					
				T5M	18,348	4	0	2	113	19,766	4	0	2	121	20,016	4	0	2	123					
				T5W	18,228	5	0	3	112	19,636	5	0	3	120	19,885	5	0	3	122					
				BLC	14,489	2	0	2	89	15,609	2	0	3	96	15,806	2	0	3	97					
				LCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72					
				RCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72					
40	1400	P7	183W	T1S	19,227	3	0	3	105	20,712	3	0	3	113	20,975	3	0	3	115					
				T2S	19,206	3	0	3	105	20,690	3	0	3	113	20,952	3	0	3	114					
				T2M	19,305	3	0	3	105	20,797	3	0	3	114	21,060	3	0	3	115					
				T3S	18,696	3	0	3	102	20,141	3	0	3	110	20,396	3	0	4	111					
				T3M	19,258	3	0	3	105	20,746	3	0	3	113	21,009	3	0	3	115					
				T4M	18,840	3	0	4	103	20,296	3	0	4	111	20,553	3	0	4	112					
				TFTM	19,246	3	0	4	105	20,734	3	0	4	113	20,996	3	0	4	115					
				TSVS	20,017	4	0	1	109	21,564	4	0	1	118	21,837	4	0	1	119					
				TSS	20,033	4	0	2	109	21,581	4	0	2	118	21,854	4	0	2	119					
				T5M	19,983	4	0	2	109	21,527	5	0	3	118	21,799	5	0	3	119					
				T5W	19,852	5	0	3	108	21,386	5	0	3	117	21,656	5	0	3	118					
				BLC	15,780	2	0	3	86	16,999	2	0	3	93	17,214	2	0	3	94					
				LCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70					
				RCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70					
60	1050	P8	207W	T1S	22,490	3	0	3	109	24,228	3	0	3	117	24,535	3	0	3	119					
				T2S	22,466	3	0	4	109	24,202	3	0	4	117	24,509	3	0	4	118					
				T2M	22,582	3	0	3	109	24,327	3	0	3	118	24,635	3	0	3	119					
				T3S	21,870	3	0	4	106	23,560	3	0	4	114	23,858	3	0	4	115					
				T3M	22,527	3	0	4	109	24,268	3	0	4	117	24,575	3	0	4	119					
				T4M	22,038	3	0	4	106	23,741	3	0	4	115	24,041	3	0	4	116					
				TFTM	22,513	3	0	4	109	24,253	3	0	4	117	24,560	3	0	4	119					
				TSVS	23,415	5	0	1	113	25,224	5	0	1	122	25,543	5	0	1	123					
				TSS	23,434	4	0	2	113	25,244	4	0	2	122	25,564	4	0	2	123					
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123					
				T5W	23,221	5	0	4	112	25,016	5	0	4	121	25,332	5	0	4	122					
				BLC	18,458	2	0	3	89	19,885	2	0	3	96	20,136	2	0	3	97					
				LCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72					
				RCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72					
60	1250	P9	241W	T1S	25,575	3	0	3	106	27,551	3	0	3	114	27,900	3	0	3	116					
				T2S	25,548	3	0	4	106	27,522	3	0	4	114	27,871	3	0	4	116					
				T2M	25,680	3	0	3	107	27,664	3	0	3	115	28,014	3	0	3	116					
				T3S	24,870	3	0	4	103	26,791	3	0	4	111	27,130	3	0	4	113					
				T3M	25,617	3	0	4	106	27,597	3	0	4	115	27,946	3	0	4	116					
				T4M	25,061	3	0	4	104	26,997	3	0	4	112	27,339	3	0	4	113					
				TFTM	25,602	3	0	4	106	27,580	3	0	4	114	27,929	3	0	4	116					
				TSVS	26,626	5	0	1	110	28,684	5	0	1	119	29,047	5	0	1	121					
				TSS	26,648	4	0	2	111	28,707	5	0	2	119	29,070	5	0	2	121					
				T5M	26,581	5	0	3	110	28,635	5	0	3	119	28,997	5	0	3	120					
				T5W	26,406	5	0	4	110	28,447	5	0	4	118	28,807	5	0	4	120					
				BLC	20,990	2	0	3	87	22,612	2	0	3	94	22,898	2	0	3	95					
				LCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71					
					15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71					

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Rotated Optics																								
LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
60	530	P10	106W	T1S	13,042	3	0	3	123	14,050	3	0	3	133	14,228	3	0	3	134	7,167	2	0	2	72
				T2S	12,967	4	0	4	122	13,969	4	0	4	132	14,146	4	0	4	133	7,507	2	0	2	76
				T2M	13,201	3	0	3	125	14,221	3	0	3	134	14,401	3	0	3	136	7,263	2	0	2	73
				T3S	12,766	4	0	4	120	13,752	4	0	4	130	13,926	4	0	4	131	7,424	2	0	2	75
				T3M	13,193	4	0	4	124	14,213	4	0	4	134	14,393	4	0	4	136	7,387	2	0	2	75
				T4M	12,944	4	0	4	122	13,945	4	0	4	132	14,121	4	0	4	133	7,400	2	0	2	75
				TFTM	13,279	4	0	4	125	14,305	4	0	4	135	14,486	4	0	4	137	7,288	1	0	2	74
				T5VS	13,372	3	0	1	126	14,405	4	0	1	136	14,588	4	0	1	138	7,734	3	0	1	78
				T5S	13,260	3	0	1	125	14,284	3	0	1	135	14,465	3	0	1	136	7,641	3	0	0	77
				T5M	13,256	4	0	2	125	14,281	4	0	2	135	14,462	4	0	2	136	7,737	3	0	2	78
				T5W	13,137	4	0	3	124	14,153	4	0	3	134	14,332	4	0	3	135	7,522	3	0	2	76
				BLC	10,906	3	0	3	103	11,749	3	0	3	111	11,898	3	0	3	112					
				LCCO	7,789	1	0	3	73	8,391	1	0	3	79	8,497	1	0	3	80					
				RCCO	7,779	4	0	4	73	8,380	4	0	4	79	8,486	4	0	4	80					
60	700	P11	137W	T1S	16,556	3	0	3	121	17,835	3	0	3	130	18,061	4	0	4	132	8,952	2	0	2	68
				T2S	16,461	4	0	4	120	17,733	4	0	4	129	17,957	4	0	4	131	9,377	2	0	2	72
				T2M	16,758	4	0	4	122	18,053	4	0	4	132	18,281	4	0	4	133	9,072	2	0	2	69
				T3S	16,205	4	0	4	118	17,457	4	0	4	127	17,678	4	0	4	129	9,273	2	0	2	71
				T3M	16,748	4	0	4	122	18,042	4	0	4	132	18,271	4	0	4	133	9,227	2	0	2	70
				T4M	16,432	4	0	4	120	17,702	4	0	4	129	17,926	4	0	4	131	9,243	2	0	2	71
				TFTM	16,857	4	0	4	123	18,159	4	0	4	133	18,389	4	0	4	134	9,103	2	0	2	69
				T5VS	16,975	4	0	1	124	18,287	4	0	1	133	18,518	4	0	1	135	9,661	3	0	1	74
				T5S	16,832	4	0	1	123	18,133	4	0	2	132	18,362	4	0	2	134	9,544	3	0	1	73
				T5M	16,828	4	0	2	123	18,128	4	0	2	132	18,358	4	0	2	134	9,665	3	0	2	74
				T5W	16,677	4	0	3	122	17,966	5	0	3	131	18,193	5	0	3	133	9,395	4	0	2	72
				BLC	13,845	3	0	3	101	14,915	3	0	3	109	15,103	3	0	3	110					
				LCCO	9,888	1	0	3	72	10,652	2	0	3	78	10,787	2	0	3	79					
				RCCO	9,875	4	0	4	72	10,638	4	0	4	78	10,773	4	0	4	79					
60	1050	P12	207W	T1S	22,996	4	0	4	111	24,773	4	0	4	120	25,087	4	0	4	121					
				T2S	22,864	4	0	4	110	24,631	5	0	5	119	24,943	5	0	5	120					
				T2M	23,277	4	0	4	112	25,075	4	0	4	121	25,393	4	0	4	123					
				T3S	22,509	4	0	4	109	24,248	5	0	5	117	24,555	5	0	5	119					
				T3M	23,263	4	0	4	112	25,061	4	0	4	121	25,378	4	0	4	123					
				T4M	22,824	5	0	5	110	24,588	5	0	5	119	24,899	5	0	5	120					
				TFTM	23,414	5	0	5	113	25,223	5	0	5	122	25,543	5	0	5	123					
				T5VS	23,579	5	0	1	114	25,401	5	0	1	123	25,722	5	0	1	124					
				T5S	23,380	4	0	2	113	25,187	4	0	2	122	25,506	4	0	2	123					
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123					
				T5W	23,165	5	0	4	112	24,955	5	0	4	121	25,271	5	0	4	122					
				BLC	19,231	4	0	4	93	20,717	4	0	4	100	20,979	4	0	4	101					
				LCCO	13,734	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72					
				RCCO	13,716	4	0	4	66	14,776	4	0	4	71	14,963	4	0	4	72					
60	1250	P13	231W	T1S	25,400	4	0	4	110	27,363	4	0	4	118	27,709	4	0	4	120					
				T2S	25,254	5	0	5	109	27,205	5	0	5	118	27,550	5	0	5	119					
				T2M	25,710	4	0	4	111	27,696	4	0	4	120	28,047	4	0	4	121					
				T3S	24,862	5	0	5	108	26,783	5	0	5	116	27,122	5	0	5	117					
				T3M	25,695	5	0	5	111	27,680	5	0	5	120	28,031	5	0	5	121					
				T4M	25,210	5	0	5	109	27,158	5	0	5	118	27,502	5	0	5	119					
				TFTM	25,861	5	0	5	112	27,860	5	0	5	121	28,212	5	0	5	122					
				T5VS	26,043	5	0	1	113	28,056	5	0	1	121	28,411	5	0	1	123					
				T5S	25,824	4	0	2	112	27,819	5	0	2	120	28,172	5	0	2	122					
				T5M	25,818	5	0	3	112	27,813	5	0	3	120	28,165	5	0	3	122					
				T5W	25,586	5	0	4	111	27,563	5	0	4	119	27,912	5	0	4	121					
				BLC	21,241	4	0	4	92	22,882	4	0	4	99	23,172	4	0	4	100					
				LCCO	15,170	2	0	4	66	16,342	2	0	4	71	16,549	2	0	4	72					
					15,150	5	0	5	66	16,321	5	0	5	71	16,527	5	0	5	72					

FEATURES & SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft²) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS

Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1

electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION

Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling pattern (template #8). Optional terminal block and NEMA photocontrol receptacle are also available.

LISTINGS

UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY

5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



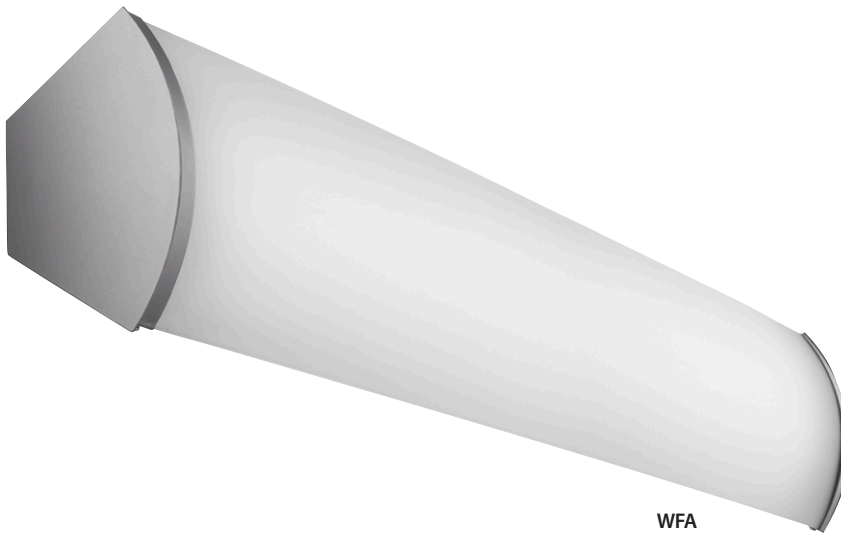


Wal14 | Wall



PRUDENTIAL LTG.

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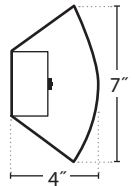


WFA

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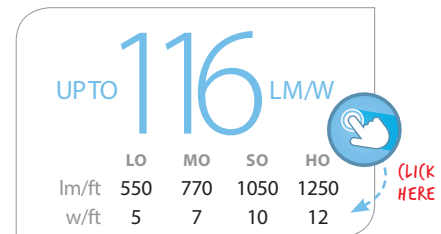
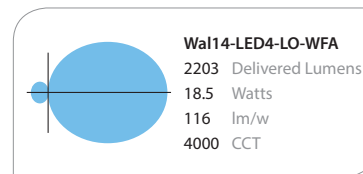
Job:

Perforated with 505



Perfect for hallways and stairwells.

An architectural wall fixture, open to wash light above and below. Frost acrylic fascias offer a warm, modern feel and integrated occupancy sensors help meet stringent energy codes.



Lumen output may vary +/- 5%
4000K used for lm/ft estimates above
3500K -2% llf, 3000K -4%, 2700K -6%
-10% LLF for 90 CRI (4K, 3500K and 3K)

See LED Details PDF for more info

SERIES	LED COLOR	OUTPUT	NOMINAL LENGTH	SHIELDING	COLOR/FINISH	CIRCUIT-ING	VOLTAGE	CEILING SYSTEMS	DRIVERS	OPTIONS & CONTROLS
WAL14										
	LED27 2700K (90CRI) LED3 3000K LED35 3500K LED4 4000K LED3-90 90CRI LED35-90 90CRI LED4-90 90CRI	LO Low MO Medium SO Standard HO High PROG Program-mable light output (Specify desired lm/ft or w/ft)	2' 3' 4' 6' 8' R (Row length in 1' increments)	WFA White Frost Acrylic (Standard) P Perforated	TMW Textured Matte White YGW Gloss White (Standard) Y Premium Color CC Custom Color	SC Single Circuit	UNV (120-277) 347 (Emergency battery requires a Step Down transformer)	WM Direct to Wall (Standard) SUR* Surface Mount VWM Vertical Wall Mount	ND Non-Dimming DM10 0-10v, 10% Dimming (Standard) DM01 0-10v, 1% Dimming STEP Step Dimming, 100-50-Off, Osram NOTE: Lumens and watts per foot may differ for STEP drivers, consult factory LDE5 5%, Lutron (Ecosystem) LDE1 1%, Lutron (Soft Fade to Black, Ecosystem) L3DA 1%, Lutron, 3 Wire ECO 1% 0-10v, EldoLED ECDA 1% DALI, EldoLED SOLO 0.1% 0-10v, EldoLED (Dim to Dark) SODA 0.1% DALI, EldoLED (Dim to Dark)	EML Emergency Battery, Low (1100 delivered lumens) 3' or longer fixtures or remote mount w/in 30' EMH Emergency Battery, High (1500 delivered lumens) 4' or longer fixtures or remote mount w/in 30' 505 WattStopper Ultrasonic Occupancy Sensor (WM only, 3' or longer fixtures) 505-STEP: Dim to 50% 505-DM: Dim to 1% PRUBIN Meticulous Binning and Labeling every LED Board within a 2-Step MacAdams Ellipse



Prudential Ltg. reserves the right to change design specifications or materials without notice. Please visit prulite.com for most current data.
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Wall Mount

1

11-01-2017



PHOTOMETRICS

Low Output:

WAL14-LED4-LO-WFA

2203 Delivered Lumens

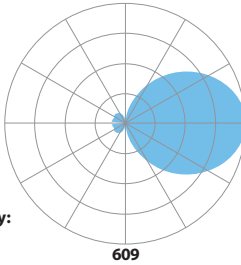
18.5 Watts

116 lm/w

4000 CCT

Light Labs

#L091407201



Zonal Lumen Summary:

0-90 = 50%

90-180 = 50%

Vertical Angle	0	25	45	65	90
0	609	609	609	609	609
5	604	604	604	605	605
15	574	576	579	581	583
25	521	525	531	538	541
35	449	456	465	476	481
45	365	375	386	401	408
55	276	286	300	360	327
65	184	194	203	233	245
75	92	108	136	162	178
85	19	66	96	118	127
90	1	26	48	67	74
95	9	27	38	50	55
105	33	47	55	55	53
115	50	59	71	77	78
125	61	66	79	90	94
135	68	76	82	93	99
145	71	82	86	90	95
155	64	78	87	91	93
165	69	66	78	87	91
175	73	72	63	55	59
180	0	0	0	0	0

LUMEN MAINTENANCE

Designed to last with cool running mid-power LEDs projected to maintain 90% (L90) of their initial output for 100,000 hours (at HO), and L70 exceeding 150,000 hours.

LED SYSTEM

LED modules and drivers are field replaceable.

PROG

(OPTIONAL)

Programmable light output. Specify desired lumens or watts per linear foot. Min: 2.5 w/ft, consult factory for requests above 12 w/ft.

BINNING

Standard binning (all Prudential LED boards) includes testing at the chip level and board integration to provide consistent color temperature within a 3-step MacAdam ellipse, with +/- 5% lumen output range and +/- .004 Duv.

PRUBIN™

(OPTIONAL)

Prudential Ltg's exclusive 'job binning' method that ensures color temperature consistency across all luminaires on a project. Meticulously testing and labeling **EVERY LED BOARD** to +/- 25 lumens, +/- 50k CCT and +/- .004 Duv — while also separating positive from negative — allows us to match color, hue and intensity throughout a project and provides a consistent color temperature within a 2-step MacAdam ellipse.

LABELS

ETL damp labeled and I.B.E.W. manufactured.

ELECTRICAL

Must specify LED dimming controls. LED fixtures have constant current driver(s) with less than 20% THD when loaded to a minimum of 60%. Drivers sink a maximum of 6mA per driver. DM10 LED drivers are 0-10V dimmable and are compatible with most 0-10V wall slide dimmers and direct 0-10V analog signal dimmers. Max driver size 1.65" w x 1.25" h.

CONSTRUCTION

Housing 20-gauge steel, >20% PC recycled, 100% recyclable

End Plates 20-gauge steel, >20% PC recycled, 100% recyclable

Lens Frosted acrylic, 100% recyclable

MOUNTING

Mounted directly to a wall or surface mounted on ceilings

WEIGHT

2 lbs/ft

WARRANTY

Single-source, 5 year limited warranty covers standard components and construction.



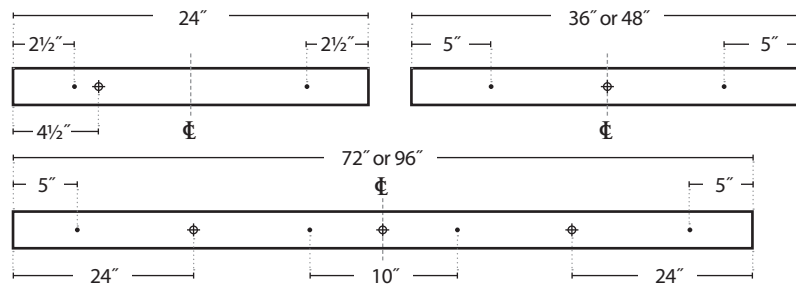


Choose from one of our Premium Colors with no set-up fee.

For paint chip samples, please e-mail: info@prulite.com

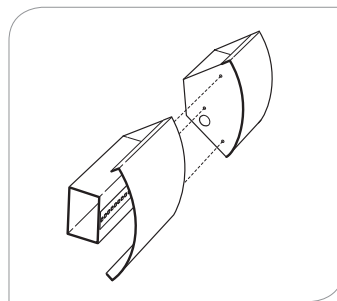


MOUNTING DETAIL



- Mounting Hole
- ◆ 3/8" Wiring K.O.

ADJOINING DETAIL



CONTROLS



Recessed wall luminaire

Housing: Constructed of die cast and extruded aluminum components with integral wiring compartment. Mounting tabs provided. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: One piece die cast aluminum faceplate. Clear tempered .157" thick glass with translucent white ceramic coating, machined flush to faceplate surface. Faceplate is secured by four (4) flush, socket head, stainless steel captive screws threaded into stainless steel inserts in the housing casting. Continuous high temperature, molded silicone rubber gasket for weather tight operation.

Electrical: 10.1 W LED luminaire, 11.8 total system watts, -30° C start temperature. Integral 120V through 277 V electronic LED driver, 0-10V dimming. The LED and driver are mounted on a removable plate for easy replacement. Standard LED color temperature is 3000K (available in 4000K; add suffix K4). Through Wiring: Maximum four (4) No. 12 AWG conductors (plus ground) suitable for 75°C. Provided with two (2) 1/2" NPT threaded conduit entries.

Note: Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

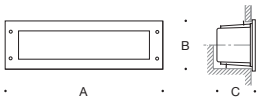
Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. These luminaires are available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

UL listed for US and Canadian Standards, suitable for wet locations and for installation within 3 feet of ground. Type non-IC. Protection class: IP65.

Luminaire Lumens: 142

Tested in accordance with LM-79-08

Type:
BEGA Product #:
Project:
Voltage:
Color:
Options:
Modified:



Lamp		A	B	C
22042	ADA 9W LED	13	4 7/8	4





4640 SERIES

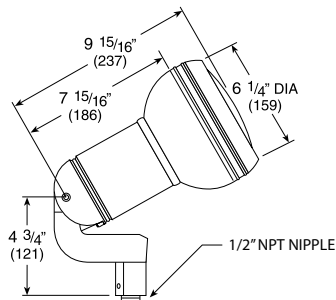
Knuckle Mount

White LED Accent Light

CATALOG NUMBER	
NOTES	
TYPE	

Specifications

L:	9 - 15/16"
	237 mm
W:	6 - 1/4"
	159 mm
H:	4 - 3/4"
	121 mm
Weight:	8 lbs



DESCRIPTION

The 4640 knuckle mount accent light is uniquely designed with rugged sealed die-cast aluminum construction and an offset swivel for balance. A wide range of photometric performances are available with internal and/or external glare control.

ORDERING INFORMATION

EXAMPLE: 4640 18LED WHT53K MVOLT WFL KM WMSA EA12 IHL BL

Model	Lamp type ¹	LED Color	Voltage	Distribution	Mounting	Mounting Options ³
4640	12LED 18LED	RED Red GRN Green BLU Blue AMBPC Phosphor Converted Amber WHT30K 3000°K Color Temp WHT41K 4100°K Color Temp WHT53K 5300°K Color Temp	MVOLT	NSP Narrow Spot MFL Medium Flood FL Flood WFL Wide Flood VWFL ² Very Wide Flood (no optics) HSP Horizontal Spot HFL Horizontal Flood	KM Knuckle Mount	Independent Mounting JBA Alum. J-Box JBB Bronze J-Box ARJB Architectural J-Box, Alum. SMSA_ 12"-48" Stanchion Mt, available in 6" increments. PSSA Pedestal Stanchion Mt PMSA Pole Mount Slip Fitter mounts over 2 18' OD Tenon WMC Wall Mt Cover WMSA Wall Mt with Splice Access
Mounting Options (Cont'd) ²		Accessories ⁵		Options		Finish
PSS_ 18", 24" and 36" Polymer Sealed Ground Spike		EA_ Extended Arm Mt, 12", 24" or 36"		Internal IHL Internal Honeycomb Louver FRF Frosted Filter		BL Black BZ Bronze DDB Dark Bronze DNA Natural Aluminum GN Green GR Gray
TRA Tree Mounted J-Box, Alum.		EA45_ 45° Extended Arm Mt, 12", 24" or 36"		External GS Glare Shield FGS Full Glare Shield, 6"		SND Sand STG Steel Gray TVG Terra Verde Green WH White CF Custom
TRB Tree Mounted J-Box, Bronze		EA90_ 90° Extended Arm Mt, 12", 24" or 36"		FGS_ Full Glare Shield, 8", 10", or 12" available LDIM Dimming Driver - 0-10 volt		_Z⁶ Zinc Undercoat (i.e. BLZ)
_TRAS⁴ Tree Mounted J-Box Alum. w/ mt strap, available with 1-4 J-Boxes per strap						
_TRBS⁴ Tree Mounted J-Box Bronze w/mt strap, available with 1-4 J-Boxes per strap						

Notes:

- 12LED = 12 chip board, 14 watts; 18LED = 18 chip board, 19 watts
- FRF filter needed with VWFL.
- See individual mounting specification sheets for conduit/drilling options.
- For multiple TRAS boxes the number of fixture heads and accessories will be equal to the number of boxes ordered.
- EA extending arm accessories are available with WMSA mountings only. Double EAD arms also available (consult factory).
- Add Zinc undercoat for harsh environments.



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Rev. 03/14/17
4640_KM_LED_WHITE

PERFORMANCE DATA

IP66

LUMEN OUTPUT

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Contact factory for performance data on any configurations not shown here.

	Distribution	Nema Type	Beam Angle (50%) H x V	Field Angle (10%) H x V	Watts	LPW	Delivered Lumens
18LED 3000K 80CRI	NSP	2 x 2	14.8 x 14.8	27.1 x 27.1	19	53	1,000
	MFL	6 x 6	35.7 x 35.7	109 x 109	19	54	1,000
	FL	5 x 5	75.8 x 56.2	95.7 x 83.4	19	48	900
	WFL	7 x 7	114.2 x 114.2	136.1 x 136.1	19	54	1,000
	HSP	3 x 3	20.8 x 20.8	38.9 x 38.9	20	57	1,100
	HFL	4 x 3	40.5 x 15.6	60.8 x 30.4	20	48	950
	VWFL	7 x 7	110.2 x 110.2	141 x 141	18	45	800
18LED 4000K 70CRI	NSP	2 x 2	14.8 x 14.8	27.1 x 27.1	19	90	1,700
	MFL	6 x 6	35.7 x 35.7	109 x 109	19	91	1,700
	FL	5 x 5	75.8 x 56.2	95.7 x 83.4	19	79	1,500
	WFL	7 x 7	114.2 x 114.2	136.1 x 136.1	19	90	1,700
	HSP	3 x 3	20.8 x 20.8	38.9 x 38.9	20	96	1,900
	HFL	4 x 3	40.5 x 15.6	60.8 x 30.4	20	80	1,600
	VWFL	7 x 7	110.2 x 110.2	141 x 141	18	77	1,400
18LED 5000K 70CRI	NSP	2 x 2	14.8 x 14.8	27.1 x 27.1	19	90	1,700
	MFL	6 x 6	35.7 x 35.7	109 x 109	19	91	1,700
	FL	5 x 5	75.8 x 56.2	95.7 x 83.4	19	79	1,500
	WFL	7 x 7	114.2 x 114.2	136.1 x 136.1	19	90	1,700
	HSP	3 x 3	20.8 x 20.8	38.9 x 38.9	20	96	1,900
	HFL	4 x 3	40.5 x 15.6	60.8 x 30.4	20	80	1,600
	VWFL	7 x 7	110.2 x 110.2	141 x 141	18	77	1,400

LED LIFE: L70/60,000 hours

OPERATING TEMPERATURE: -30°C Through 40°C

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the Fixture platform in a 25°C ambient, based on 8400 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1	0.99	0.98	0.96

Electrical Load

Light Engines	Drive Current (mA)	System Watts	Current (A)			
			120	208	240	277
18 LED	350mA	19	0.16	0.09	0.08	0.07

FEATURES & SPECIFICATIONS

MATERIAL: Fixture and Yoke: Die-cast copper-free aluminum alloy A360. All materials are chem-filmed or anodized prior to painting.

LED: White and Monochromatic LEDs, 18LED = 19W, 12LED = 14 watts.

VOLTAGE: MVOLT

DISTRIBUTION: See ordering guide.

LENS: Crowned tempered glass.

POWER SUPPLY: 120-277 Integral Power Supply.

MOUNTING: 1/2" NPT or PG-16 adjustable knuckle.

FINISH: Exterior parts are protected by a zinc-infused super durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climates without cracking or peeling.

FASTENERS: Stainless Steel.

LISTING: IP66, U.L., C.U.L.

WARRANTY: 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



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Rev. 03/14/17
4640_KM_LED_WHITE

FEATURES & SPECIFICATIONS

INTENDED USE — The MS Series LED is a linear solution ideal for open-ceiling or suspended applications with mounting heights from 14 to 20 feet. Available as a complete luminaire, based on the time-tested MS housing, the traditional fixture design offers time-saving installation options making it a favorite for contractors. It can be mounted in a continuous row or as a stand-alone unit. Its full-body construction and multiple mounting options adapt to a wide variety of suspended and open-ceiling applications.

Certain chemicals that may exist in end-user locations release airborne contaminants that can impact the integrity and safety of key fixture components. Please refer to the environmental compatibility chart located in the Product Selection Guide and/or the company website to ensure that these chemical interactions are considered when selecting fixtures. For additional information please consult an authorized factory representative. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — The full-body housing and optical assembly is precision-formed using 20-gauge steel. The optical assembly ships factory-installed into the housing and utilizes aircraft cable tethers to support the optical assembly during wiring. The lensing integrates seamlessly into the optical housing to provide a sealed chamber to mitigate dust and insect collection. A convenient access plate is located on the back of the channel for access to the wiring compartment.

Finish: High-gloss, baked white enamel finish. Five-stage iron phosphate pretreatment ensures superior paint adhesion and rust resistance.

OPTICS — Optical design distributes the light in the 0-60 deg. zone, which provides better utilization of light on task. Each linear bar is outfitted with premium, anodized MIRO 5° aluminum to ensure the highest lumens per watt can be achieved. A diffuse acrylic lens eliminates the pixels to minimize glare and improve uniformity.

ELECTRICAL — The MSL luminaire has 94% lumen maintenance at 60,000 hours with an expected life of greater than 100,000 hours. The MSL ships standard with a thermally protected dimming driver that dims down to 5% using 0-10V controls. Optional EldoLED driver allows for flicker-free dimming down to 1%. LEDs are driven to provide optimal lumens per watt and less heat to extend component life. The driver and optical housing are connected with mating plug for easy removal or future upgrade. Optional 12AWG through-wire harnesses is available for continuous-row installations.

INSTALLATION — A variety of mounting arrangements are available including tong hangers, aircraft cables and stems. Suitable for mounting in continuous-row or individual mounting. End caps include knockouts for through wiring and fixture attachment in row-mounting applications.

LISTINGS — UL and cUL listed to US and Canadian standards. For use in damp and dry locations with ambient temperatures ranging from -20°C (-4°F) to 30°C (86°F)

Catalog Number
Notes
Type



LED Low Bay

MSL

COMPLETE LUMINAIRE
4' or 8' Lengths



SPECIFICATIONS				
All dimensions are shown in inches (centimeters) unless otherwise noted.				
Series	Length	Width	Depth	Weight (excludes battery)
TMSL	96 (243.8)	10 (25.4)	3-1/4 (8.26)	26 lbs. (11.8 kg)
MSL	48 (121.9)	10 (25.4)	3-1/4 (8.26)	13 lbs. (5.9 kg)

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: MSL 4000LM L/V MVOLT GZ10 40K 80CRI WH

Series	Lumens	Louver	Voltage	Driver	Color temperature	Color rendering index
MSL	4000LM 4000 lumens	SBL Straight blade louver	MVOLT 120-277V	GZ10 0-10V dimming EZ1 EldoLED 1-100% dimming	30K 3000 K	80CRI 80 CRI
	8000LM 8000 lumens ¹	L/V Less louver	120 120V		35K 3500 K	90CRI 90 CRI
	10000LM 10000 lumens ¹		277 277V		40K 4000 K	
TMSL	8000LM 8000 lumens		347 347V ²		50K 5000 K	
	16000LM 16000 lumens ¹		480 480V ²			
	20000LM 20000 lumens ¹					

Options					Finish
E7W	Emergency battery pack, 7W (not available for California) ³	Cord sets: CS1W 6' white cord-set, straight blade NEMA 5-15P, 120V ⁵ CS11W 6' white cord-set, twist-lock NEMA L7-15P, 277V ⁵ CS93W 600V SEOOW white cord, no plug	Motion sensors: LCOZU Aisle motion sensor, pre-wired ⁵ LCHOSZU Aisle motion sensor, pre-wired; programmable dimming ⁵ LCPZU Aisle motion sensor with photocell; pre wired ⁵ LAOZU 360° motion sensor, pre-wired ⁵ LAHOSZU 360° motion sensor, pre-wired; programmable dimming ⁵ LAPZU 360° motion sensor with photocell, pre-wired ⁵		WH White MB Matte black
E10WLCP	Emergency battery pack, 10W Linear Constant Power, CA Title 20 compliant ³				
PLR1G	Single-circuit, plug-in wiring ⁴				
PLR22G	Two-circuit alternating plug-in wiring ⁴				
PLR1LVG	Single-circuit plug-in wiring with low voltage leads ⁴				
GLR	Internal fast-blow fuse ⁵				
CRE	Continuous row end; one hole for wiring to row, one flattened knockout to terminate the row ⁶				
CRM	Continuous row middle; both end plates have holes for row wiring ⁶				

See footnotes on page 2.

MSL LED Low Bay

Accessories: Order as separate catalog number.	
ZAC120	One adjustable aircraft cable with canopy, 120" ⁷
ZACFP120	One adjustable aircraft cable with feed (3 conductor) and canopy, 120" ⁷
ZACFPD120	One adjustable aircraft cable with feed (5 conductor) and canopy, 120" ⁷
ZAC240	One adjustable aircraft cable with canopy, 240" ⁷
ZACFP240	One adjustable aircraft cable with feed (3 conductor) and canopy, 240" ⁷
ZACFPD240	One adjustable aircraft cable with feed (5 conductor) and canopy, 120" ⁷
ZACVH	Aircraft 10' V hanger (one pair)
MSHBAC_	Adjustable aircraft cable system (specify 36, 72 or 120 inches) ⁷
MSHBACF_	Adjustable aircraft cable system with power feed (specify length as 36, 72 or 120 inches) (three-wire cable) ⁷
MSHBAC2F_	Adjustable aircraft cable system with power feed (specify length as 36, 72 or 120 inches) (four-wire cable) ⁷
SQ_	Swivel-stem hanger (specify lengths in 2" increments)
THMSHB	Tong hangers
WGMS8Z	4' wire guard, zinc coated (offers light-duty protection)
HC36	Hanger chain, 36"

Notes

- 1 Not available with EZ1 driver.
- 2 347 and 480V utilize a step-down transformer.
- 3 Must specify voltage, not available with 347V. Not available with CS1W, CS11W or any cord/plug set.
- 4 Requires CRE or CRM option.
- 5 Must specify voltage.
- 6 Not available with sensor options.
- 7 One cable per package.

OPERATIONAL DATA

Lumen package	Ambient rating (120V - 277V)	Driver compatibility	Delivered lumens						Watts		Comparable light source
			3500 K CCT, 80 CRI	4000 K CCT, 80 CRI	5000 K CCT, 80 CRI	3500 K CCT, 90 CRI	4000 K CCT, 90 CRI	5000 K CCT, 90 CRI	80 CRI	90 CRI	
MSL 4000	-4°F to 86°F (-20°C to -30°C)	EZ1 and GZ10	3,625	3,636	3,724	2,929	2,939	3,010	29	29	1-lamp 54T5H0, 2-lamp 32T8, 70-100W HID
MSL 8000	-4°F to 86°F (-20°C to -30°C)	GZ10	8,706	8,733	8,945	7,035	7,057	7,228	75	75	2-lamp 54T5H0, 4-lamp 32T8, 150-175 HID
MSL 10000	-4°F to 86°F (-20°C to -30°C)	GZ10	9,768	9,798	10,036	7,893	7,918	8,110	86	86	3-lamp 54T5H0, 4-lamp 32T8, 150-175 HID
TMSL 8000	-4°F to 86°F (-20°C to -30°C)	EZ1 and GZ10	7,250	7,273	7,450	5,859	5,877	6,020	58	58	2-lamp 54T5H0, 4-lamp 32T8, 150-175 HID
TMSL 16000	-4°F to 86°F (-20°C to -30°C)	GZ10	17,412	17,467	17,890	14,070	14,115	14,457	149	149	4-lamp 54T5H0, 8-lamp 32T8, 250 HID
TMSL 20000	-4°F to 86°F (-20°C to -30°C)	GZ10	19,535	19,597	20,072	15,786	15,836	16,220	181	181	6-lamp 54T5H0, 8-lamp 32T8, 250-315 HID

PROJECTED LUMEN MAINTENANCE

Operating hours	0	10,000	20,000	30,000	40,000	50,000	60,000	100,000
Lumen maintenance factor	1	0.99	0.98	0.97	0.96	0.95	0.94	0.91

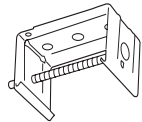
MOUNTING DATA

For unit or row installation, surface or stem mounting.

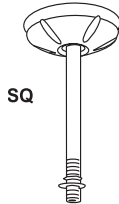
Unit installation — Minimum of two hangers required.

Row installation — One hanger per channel plus one per row required.

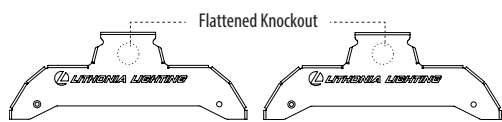
Hanging devices illustrated below.



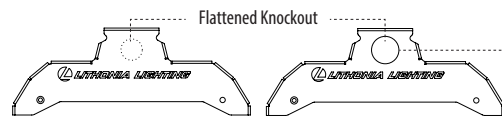
THM55HB



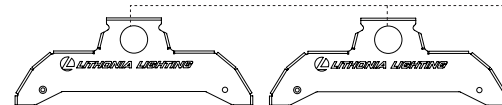
SQ



Blank - Standard option



CRE - Continuous Row End (for beginning of row)

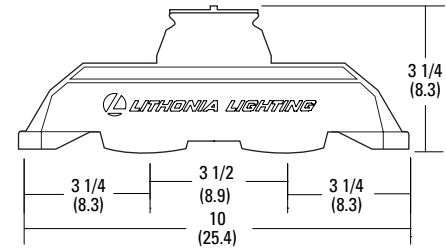
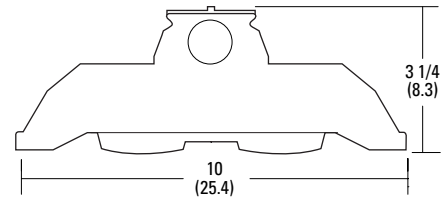


CRM - Continuous Row Mount (for middle fixture)

1-1/8" Hole

DIMENSIONS

All dimensions are in inches (centimeters) unless otherwise indicated.



A = 7/8 (2.2) KO

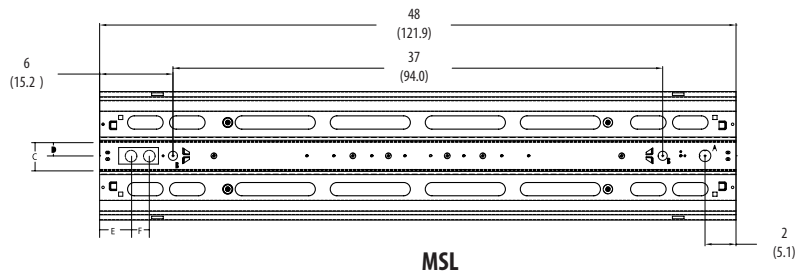
B = 3/4 (1.9) KO

C = 2-3/8 (6.0)

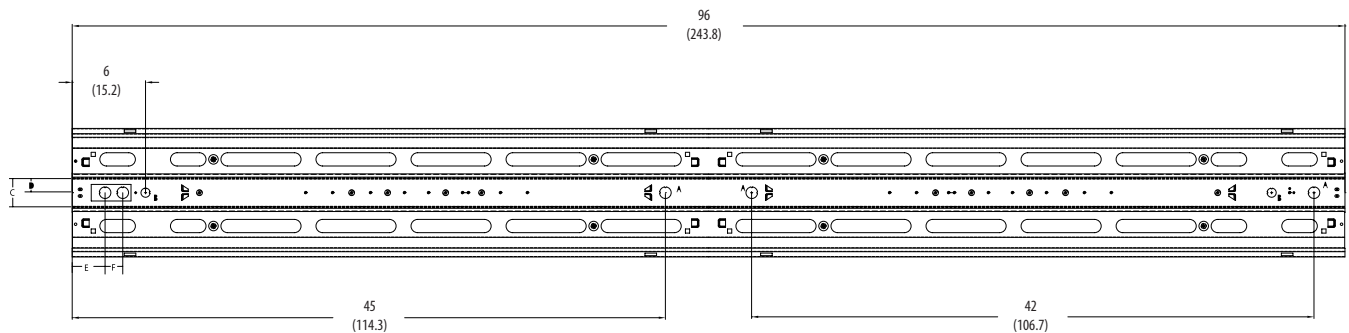
D = 1-1/4 (3.2)

E = 2-3/8 (6.0)

F = 1-3/8 (3.5)



MSL



TMSL

PHOTOMETRICS

See www.lithonia.com.

LSXR - Fixture Mount Sensor (see www.sensorswitch.com for additional information)

- Four interchangeable lenses.
- Integrated mounting bracket drops lens down 3" from chase nipple.
- Single or dual relay versions — designed with robust protection from the harsh switching requirements of T5 and LED loads.
- Photocell and 0-10VDC dimming options.
- No PIR field calibration or sensitivity adjustments required.

LSXR configuration	Comparable CMRB sensor	Old style sensor nomenclature
For shortest lead times use one of the following LSXR configurations		
LCOZU	CMRB 50	MSI
LCHOSZU	CMRB 50 D	MSID
LCPZU	CMRB 50 P	MSIPED
LAOZU	CMRB 6	MSI360
LAHOSZU	CMRB 6 D	MSI360D
LAPZU	CMRB 6 P	MSI360PED



SELECTIONS BELOW WILL EXTEND ORDER LEAD TIME. CONSULT YOUR SALES REPRESENTATIVE FOR DETAILS.

SINGLE RELAY**ORDERING INFORMATION**

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LAHOSZU

Series	Lens option	Dimming/Photocell	Max. dim Level	Min. dim level	Temp/Humidity	Default time delay
L LSXR passive infrared indoor occupancy sensor	A High mount, 360° B Low mount, 360° C High mount aisleway	O None ¹ H High/low occupancy operation P Switching photocell (on/off) M Dimming and switching photocell G Dimming and switching photocell with high/low occupancy operation	0 10 VDC 9 9 VDC 8 8 VDC 7 7 VDC	S Minimum dimming level of ballast 1 1 VDC 2 2 VDC 3 3 VDC 4 4 VDC 5 5 VDC 6 6 VDC	Z None T Low temperature	I 30 seconds D 2.5 minutes X 5 minutes R 7.5 minutes U 10 minutes (with minimum 15 minutes on time) V 15 minutes W 20 minutes Y 30 minutes

Notes¹ Dimming level fields not required when this option is chosen.**DUAL RELAY (Available with 120, 277, and 347V only)****ORDERING INFORMATION**

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LA2KZU

Series	Lens option	Poles	Operating mode	Temp/Humidity	Default time delay
L LSXR passive infrared indoor occupancy sensor	A High mount, 360° B Low mount, 360° C High mount aisleway	2 Dual relay	J None K Alternating off relays (promotes even lamp wear) O Alternating off relays w/photocell P Switching photocell (on/off) E Photocell on/off (pole 1 only) F Photocell on/off - both poles (dual set-point)	Z None T Low temperature	I 30 seconds D 2.5 minutes X 5 minutes R 7.5 minutes U 10 minutes (with minimum 15 minutes on time) V 15 minutes W 20 minutes Y 30 minutes

Example: LENS 50 J100

Replacement lenses: Order as separate catalog number.		
Series	Lens type	Package quantity
Lens	6 High mount 360°	U Unit
	10 Low mount 360°	J10 10-pack
	50 High mount aisleway	J100 100-pack

FEATURES & SPECIFICATIONS

INTENDED USE — Square Straight Steel is a general purpose light pole for up to 39-foot mounting heights. This pole provides a robust yet cost effective option for mounting area lights and floodlights.

CONSTRUCTION — **Pole Shaft:** The pole shaft is of uniform dimension and wall thickness and is made of a weldable-grade, hot-rolled, commercial-quality steel tubing with a minimum yield of 55 KSI (11-gauge, .1196"), or 50 KSI (7-gauge, .1793"). Shaft is one-piece with a full-length longitudinal high-frequency electric resistance weld. Uniformly square in cross-section with flat sides, small corner radii and excellent torsional qualities. Available shaft widths are 4", 5" and 6".

Pole Top: A top cap is provided for all poles that will receive drilling patterns for side-mount luminaire arm assemblies or when ordered with PT option.

Handhole: A reinforced handhole with grounding provision is provided at 18" from the base. Positioning the handhole lower may not be possible and requires engineering review; consult Tech Support-Outdoor for further information. Every handhole includes a cover and cover attachment hardware. The handhole has a nominal dimension of 2.5" x 5".

Base Cover: A durable ABS plastic two-piece full base cover, finished to match the pole, is provided with each pole assembly. Additional base cover options are available upon request.

Anchor Base/ Bolts: Anchor base is fabricated from steel that meets ASTM A36 standards and can be altered to match existing foundations; consult factory for modifications. Anchor bolts are manufactured to ASTM F1554 Standards grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Top threaded portion (nominal 12") is hot-dipped galvanized per ASTM A-153.

HARDWARE — All structural fasteners are high-strength galvanized carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.

FINISH — Standard powder-coat finishes include Dark Bronze, White, Black, Medium Bronze and Natural Aluminum colors. Classic finishes include Sandstone, Charcoal Gray, Tennis Green, Bright Red and Steel Blue colors. Architectural Colors and Special Finishes are available by quote and include, but are not limited to Hot-dipped Galvanized, Paint over Hot-dipped Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes. Factory-applied primer paint finish is available for customer field-paint applications.

WARRANTY — 1-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

Catalog Number
Notes
Type



Anchor Base Poles

SSS

SQUARE STRAIGHT STEEL

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: SSS 20 5C DM19 DDB

SSS						
Series	Nominal fixture mounting height	Nominal shaft base size/wall thickness ¹	Mounting ²		Options	Finish ¹⁰
SSS	(See technical information table for complete ordering information.)	(See technical information table for complete ordering information.)	Tenon mounting	AERIS™ Suspend drill mounting ^{3,4}	Shipped installed	Standard colors
	10'-39' (for 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.)	4C 4" 11g (.1196") 4G 4" 7g (.1793") 5C 5" 11g (.1196") 5G 5" 7g (.1793") 6G 6" 7g (.1793")	PT Open top (includes top cap) T20 2-3/8" O.D. (2" NPS) T25 2-7/8" O.D. (2-1/2" NPS) T30 3-1/2" O.D. (3" NPS) T35 4" O.D. (3-1/2" NPS)	DM19AST_ 1 at 90° DM28AST_ 2 at 180° DM29AST_ 2 at 90° DM39AST_ 3 at 90° DM49AST_ 4 at 90°	L/AB Less anchor bolts (Include when anchor bolts are not needed) VD Vibration damper TP Tamper resistant handhole cover fasteners HAXy Horizontal arm bracket (1 fixture) ^{5,6} FDLxy Festoon outlet less electrical ⁵ CPL12/xy 1/2" coupling ⁵ CPL34/xy 3/4" coupling ⁵ CPL1/xy 1" coupling ⁵ NPL12/xy 1/2" threaded nipple ⁵ NPL34/xy 3/4" threaded nipple ⁵ NPL1/xy 1" threaded nipple ⁵ EHHxy Extra handhole ^{5,7} MAEX Match existing ⁸ USPOM United States point of manufacture ⁹ IC Interior coating ¹⁰ UL UL listed with label (Includes NEC compliant cover) NEC NEC 410.30 compliant gasketed handhole (Not UL Labeled)	DDB Dark bronze DWH White DBL Black DMB Medium bronze DNA Natural aluminum
			KAC/KAD/KSE/KSF/KVR/KVF Drill mounting ³ DM19 1 at 90° DM28 2 at 180° DM28 PL 2 at 180° with one side plugged DM29 2 at 90° DM39 3 at 90° DM49 4 at 90°	OMERO™ Suspend drill mounting ^{3,4} DM19MRT_ 1 at 90° DM28MRT_ 2 at 180° DM29MRT_ 2 at 90° DM39MRT_ 3 at 90° DM49MRT_ 4 at 90°		Classic colors DSS Sandstone DGC Charcoal gray DTG Tennis green DBR Bright red DSB Steel blue
			CSX/DSX/AERIS™/OMERO™/HLA/KAX Drill mounting ³ DM19AS 1 at 90° DM28AS 2 at 180° DM29AS 2 at 90° DM39AS 3 at 90° DM49AS 4 at 90°			Architectural Colors and Special Finishes ¹¹ Galvanized, Paint over Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes available.
					Shipped separately (replacement kit available) (blank) FBC Full base cover (plastic) (blank) TC Top cap (blank) HHC Handhole cover	

See footnotes next page.

SSS Square Straight Steel Poles

NOTES:

- 1. Wall thickness will be signified with a "C" (11 Gauge) or a "G" (7-gauge) in nomenclature. "C" - 0.1196" | "G" - 0.1793".
- 2. PT open top poles include top cap. When ordering tenon mounting and drill mounting for the same pole, follow this example: DM28/T20. The combination includes a required extra handhole.
- 3. Refer to the fixture spec sheet for the correct drilling template pattern and orientation compatibility.
- 4. Insert "1" or "2" to designate fixture size; e.g. DM19AST2.
- 5. Specify location and orientation when ordering option.
For "x": Specify the height above the base of pole in feet or feet and inches; separate feet and inches with a "-".
Example: 5ft = 5 and 20ft 3in = 20-3
For "y": Specify orientation from handhole (A,B,C,D)
Refer to the Handhole Orientation diagram below.
Example: 1/2" coupling at 5' 8", orientation C = CPL12/5-8C
- 6. Horizontal arm is 18" x 2-3/8" O.D. tenon standard, with radius curve providing 12" rise and 2-3/8" O.D..
- 7. Combination of tenon-top and drill mount includes extra handhole.

- 8. Must add original order number of existing pole(s).
- 9. Use when mill certifications are required.
- 10. Provides enhanced corrosion resistance.
- 11. Additional colors available; see www.lithonia.com/archcolors or Architectural Colors brochure (Form No. 794.3). Available by formal quote only, consult factory for details.

TECHNICAL INFORMATION — EPA (ft²) WITH 3-SECOND GUST PER AASHTO 2013																	
Series	Mounting Height (ft)*	Shaft Base Size	90 MPH	Max. weight	100 MPH	Max. weight	110 MPH	Max. weight	120 MPH	Max. weight	130 MPH	Max. weight	140 MPH	Max. weight	150 MPH	Max. weight	Approximate ship weight (lbs.)
SSS	10	4C	20	500	16	400	13	325	10.5	263	8.5	213	7	175	6	150	75
SSS	12	4C	16	400	13	325	10	250	8	200	6.5	163	5	125	4	100	90
SSS	14	4C	13.5	338	10	250	7.5	188	6	150	4.5	113	3.5	88	2.5	63	100
SSS	16	4C	10.5	263	7.5	188	5.5	138	4	100	3	75	1.5	38	1	25	115
SSS	18	4C	8	200	5.5	138	4	100	2.5	63	1.5	38	0.5	13	-	-	125
SSS	18	4G	13	325	9.5	238	7	175	5	125	3.5	88	2.5	63	1.5	38	185
SSS	18	5C	13	325	9.5	238	6.5	163	4.5	113	3	75	1.5	38	3.5	13	170
SSS	20	4C	6	150	4	100	2.5	63	1	25	-	-	-	-	-	-	140
SSS	20	4G	10.5	263	7.5	188	5.5	138	3.5	88	2	50	1	25			205
SSS	20	5C	10	250	7	175	4.5	113	2.5	63	1	25	-	-	-	-	185
SSS	20	5G	20	500	15	375	11.5	288	8.5	213	6	150	4.5	113	3	75	265
SSS	25	4C	2	50	0.5	13	-	-	-	-	-	-	-	-	-	-	170
SSS	25	4G	5.5	138	3	75	1.5	38	-	-	-	-	-	-	-	-	245
SSS	25	5C	4.5	113	2	50	-	-	-	-	-	-	-	-	-	-	225
SSS	25	5G	12	300	8.5	213	5.5	138	3	75	1.5	38	-	-	-	-	360
SSS	25	6G	19	475	13.5	338	9	225	5.5	138	3	75	1	25			445
SSS	30	4G	1.5	38	-	-	-	-	-	-	-	-	-	-	-	-	291
SSS	30	5C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265
SSS	30	5G	6.5	163	3.5	88	1	25	-	-	-	-	-	-	-	-	380
SSS	30	6G	11	275	6	150	2.5	63	-	-	-	-	-	-	-	-	520
SSS	35	5G	2	50	-	-	-	-	-	-	-	-	-	-	-	-	440
SSS	35	6G	4	100	-	-	-	-	-	-	-	-	-	-	-	-	540
SSS	39	6G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	605

AASHTO 2013 criteria is the most conservative existing EPA calculation. For poles not showing EPA values under AASHTO 2013, EPA values may exist under commercial criteria (see table below).

*For 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.

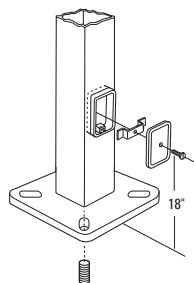
SSS Square Straight Steel Poles

TECHNICAL INFORMATION

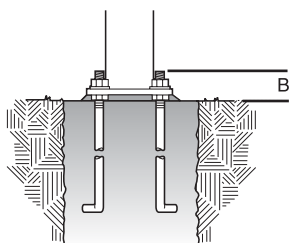
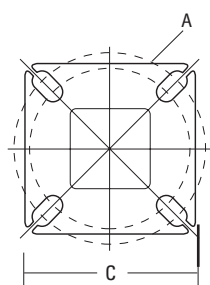
Catalog Number	Nominal Shaft Length (ft.)*	Pole Shaft Size (Base in. x Top in. x ft.)	Wall thick (in)	Gauge	EPA (ft²) with 1.3 gust						Bolt circle (in)	Bolt size (in. x in. x in.)	Approximate ship weight (lbs.)
					80 MPH	Max. weight	90 MPH	Max. weight	100 MPH	Max. weight			
SSS 10 4C	10	4.0 x 10.0	0.1196	11	30.6	765	23.8	595	18.9	473	8-9	3/4 x 18 x 3	75
SSS 12 4C	12	4.0 x 12.0	0.1196	11	24.4	610	18.8	470	14.8	370	8-9	3/4 x 18 x 3	90
SSS 14 4C	14	4.0 x 14.0	0.1196	11	19.9	498	15.1	378	11.7	293	8-9	3/4 x 18 x 3	100
SSS 16 4C	16	4.0 x 16.0	0.1196	11	15.9	398	11.8	295	8.9	223	8-9	3/4 x 18 x 3	115
SSS 18 4C	18	4.0 x 18.0	0.1196	11	12.6	315	9.2	230	6.7	168	8-9	3/4 x 18 x 3	125
SSS 20 4C	20	4.0 x 20.0	0.1196	11	9.6	240	6.7	167	4.5	150	8-9	3/4 x 18 x 3	140
SSS 20 4G	20	4.0 x 20.0	0.1793	7	14	350	11	275	8	200	8-9	3/4 x 30 x 3	198
SSS 20 5C	20	5.0 x 20.0	0.1196	11	17.7	443	12.7	343	9.4	235	10-12	1 x 36 x 4	185
SSS 20 5G	20	5.0 x 20.0	0.1793	7	28.1	703	21.4	535	16.2	405	10-12	1 x 36 x 4	265
SSS 25 4C	25	4.0 x 25.0	0.1196	11	4.8	150	2.6	100	1	50	8-9	3/4 x 18 x 3	170
SSS 25 4G	25	4.0 x 25.0	0.1793	7	10.8	270	7.7	188	5.4	135	8-9	3/4 x 30 x 3	245
SSS 25 5C	25	5.0 x 25.0	0.1196	11	9.8	245	6.3	157	3.7	150	10-12	1 x 36 x 4	225
SSS 25 5G	25	5.0 x 25.0	0.1793	7	18.5	463	13.3	333	9.5	238	10-12	1 x 36 x 4	360
SSS 30 4G	30	4.0 x 30.0	0.1793	7	6.7	168	4.4	110	2.6	65	8-9	3/4 x 30 x 3	295
SSS 30 5C	30	5.0 x 30.0	0.1196	11	4.7	150	2	50	--	--	10-12	1 x 36 x 4	265
SSS 30 5G	30	5.0 x 30.0	0.1793	7	10.7	267	6.7	167	3.9	100	10-12	1 x 36 x 4	380
SSS 30 6G	30	6.0 x 30.0	0.1793	7	19	475	13.2	330	9	225	11-13	1 x 36 x 4	520
SSS 35 5G	35	5.0 x 35.0	0.1793	7	5.9	150	2.5	100	--	--	10-12	1 x 36 x 4	440
SSS 35 6G	35	6.0 x 35.0	0.1793	7	12.4	310	7.6	190	4.2	105	11-13	1 x 36 x 4	540
SSS 39 6G	39	6.0 x 39.0	0.1793	7	7.2	180	3	75	--	--	11-13	1 x 36 x 4	605

*For 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.

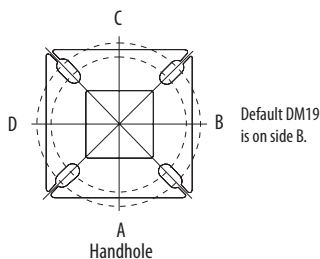
BASE DETAIL



POLE DATA								
Shaft base size	Bolt circle A	Bolt projection B	Base diameter C	Base plate thickness	Template description	Anchor bolt description	Anchor bolt and template number	Anchor bolt description
4"C	8" - 9"	3.25" - 3.75"	8" - 8.25"	0.75"	ABTEMPLATE PJ50004	AB18-0	ABSSS-4C	3/4"x18"x3"
4"G	8" - 9"	3.38" - 3.75"	8" - 8.25"	0.875"	ABTEMPLATE PJ50004	AB30-0	ABSSS-4G	3/4"x30"x3"
5"	10" - 12"	3.5" - 4"	11"	1"	ABTEMPLATE PJ50010	AB36-0	ABSSS-5	1"x36"x4"
6"	11" - 13"	4" - 4.50"	12.5"	1"	ABTEMPLATE PJ50011	AB36-0	N/A	1"x36"x4"



HANDHOLE ORIENTATION



IMPORTANT INSTALLATION NOTES:

- Do not erect poles without having fixtures installed.
- Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates.
- If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage.
- Lithonia Lighting is not responsible for the foundation design.

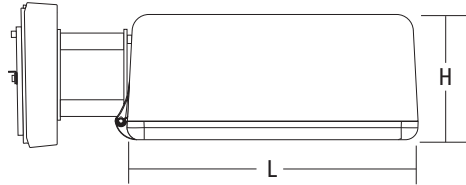


KAD LED LED Area Luminaire



Specifications

EPA:	1.2 ft ² (0.11 m ²)
Length:	17-1/2" (44.5 cm)
Width:	17-1/2" (44.5 cm)
Height:	7-1/8" (18.1 cm)
Weight (max):	36 lbs. (16.4 kg)



Catalog
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL[®] controls marked by a **shaded background**. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability¹
- This luminaire is part of an A+ Certified solution for ROAM[®]2 or XPoint[™] Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a **shaded background**¹

To learn more about A+,
visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately:
[Link to Roam](#); [Link to DTL DLL](#)

A+ Capable options indicated
by this color background.

Ordering Information

EXAMPLE: KAD LED 40C 1000 40K R5 MVOLT SPD04 DDBXD

KAD LED						
Series	LEDs	Drive current	CCT	Distribution	Voltage	Mounting ³
KAD LED	20C ¹ 20 LEDs 30C ¹ 30 LEDs 40C 40 LEDs 60C 60 LEDs	530 530 mA ¹ 700 700 mA 1000 1000 mA	30K 3000 K 40K 4000 K 50K 5000 K	R2 Type II R3 Type III R4 Type IV R5 Type V	MVOLT 277 ² 120 ² 347 ¹ 208 ² 480 ¹ 240 ²	Shipped included SPUMBAK ⁴ Square pole universal mounting adaptor ⁴ RPUMBAK ⁴ Round pole universal mounting adaptor ⁴ SPD ⁴ Square pole RPD ⁴ Round pole WBD ⁴ Wall bracket WWD ⁴ Wood pole or wall Shipped separately DAD12P Degree arm (pole) DAD12WB Degree arm (wall) KMA Mast arm external fitter

Options	Finish (required)
Shipped installed PER5 NEMA twist-lock five-wire receptacle only (no controls) ⁵ PER7 Seven-wire receptacle only (no controls) ⁵ SF Single fuse (120, 277, 347V) ² DF Double fuse (208, 240, 480V) ² PIR Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc ^{6,7} PIRH Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc ^{6,7} PIR1FC3V Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc ^{6,7} PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc ^{6,7} BL30 Bi-level switched dimming, 30% ^{7,8,9} BL50 Bi-level switched dimming, 50% ^{7,8,9}	Shipped separately¹¹ WG Wire guard PNMTDD3 Part night, dim till dawn ^{7,10} PNMT5D3 Part night, dim 5 hrs ^{7,10} PNMT6D3 Part night, dim 6 hrs ^{7,10} PNMT7D3 Part night, dim 7 hrs ^{7,10} HS Houseside shield ¹¹ DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white



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KAD-LED
Rev. 02/07/17

Ordering Information

Stock configurations are offered for shorter lead times:

Standard Part Number	Stock Part Number
KAD LED 30C 1000 40K R3 MVOLT PUMBAK09 DDBXD*	KADL 30C 40K R3
KAD LED 30C 1000 40K R5 MVOLT PUMBAK09 DDBXD*	KADL 30C 40K R5
KAD LED 40C 1000 40K R3 MVOLT PUMBAK09 DDBXD*	KADL 40C 40K R3
KAD LED 40C 1000 40K R5 MVOLT PUMBAK09 DDBXD*	KADL 40C 40K R5
KAD LED 30C 1000 40K R3 MVOLT PUMBAK09 PIRH DDBXD*	KADL 30C 40K R3 PIRH
KAD LED 30C 1000 40K R5 MVOLT PUMBAK09 PIRH DDBXD*	KADL 30C 40K R5 PIRH
KAD LED 40C 1000 40K R3 MVOLT PUMBAK09 PIRH DDBXD*	KADL 40C 40K R3 PIRH
KAD LED 40C 1000 40K R5 MVOLT PUMBAK09 PIRH DDBXD*	KADL 40C 40K R5 PIRH

*PUMBAK is not standard nomenclature.

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) ¹²
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) ¹²
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) ¹²
DSHORT SBK U	Shorting cap ¹²
KADLEDHS 20C U	Houseside shield for 20 LED unit
KADLEDHS 30C U	Houseside shield for 30 LED unit
KADLEDHS 40C U	Houseside shield for 40 LED unit
KADLEDHS 60C U	Houseside shield for 60 LED unit
KMA DDBXD U	Mast arm adapter (specify finish)
KADWG U	Wire guard accessory
PUMBAK DDBXD U*	Square and round pole universal mounting bracket adaptor (specify finish)

For more control options, visit [DTL](#) and [ROAM](#) online.

*Round pole top must be 3.25" O.D. minimum.

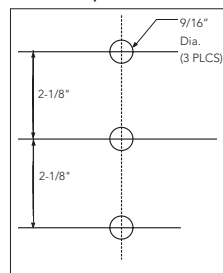
NOTES

- 20C or 30C LED are not available with 530 Drive Current and 347V or 480V
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
- 9" or 12" arm is required when two or more luminaires are oriented on a 90° drilling pattern.
- Available as a separate combination accessory: PUMBAK (finish) U.
- Mounting must be restricted to $\pm 45^\circ$ from horizontal aim per ANSI C136.10-2010. Not available with motion sensor.
- PIR and PIR1FC3V specify the [SensorSwitch SBGR-10-ODP](#) control; PIRH and PIRH1FC3V specify the [SensorSwitch SBGR-6-ODP](#) control; see [Outdoor Control Technical Guide](#) for details. Dimming driver standard. Not available with PER5 or PER7. Separate on/off require.
- Maximum ambient temperature with 347V or 480V is 30°C.
- Requires an additional switched circuit with same phase as main luminaire power. Supply circuit and control circuit are required to be in the same phase.
- Dimming driver standard. MVOLT only. Not available with 347V, 480V, PER5, PER7 or PNMT options.
- Dimming driver standard. MVOLT only. Not available with 347V, 480V, PER5, PER7, BL30 or BL50.
- Also available as a separate accessory; see Accessories information.
- Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item from Acuity Brands Controls.

Drilling

Template #5

Top of Pole

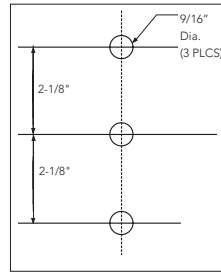


Tenon Mounting Slipfitter**

Tenon O.D.	Single Unit	2 at 180°	2 at 90° †	3 at 120°	3 at 90° †	4 at 90° †
2-3/8"	T20-190	T20-280	T20-290	T20-320 †	T20-390	T20-490
2-7/8"	T25-190	T25-280	T25-290	T25-320	T25-390	T25-490
4"	T35-190	T35-280	T35-290	T35-320	T35-390	T35-490

** For round pole mounting (RPDXX) only.

† Requires 9" or 12" arm.



Tenon Mounting Slipfitter**

Tenon O.D.	Single Unit	2 at 180°	2 at 90° †	3 at 120°	3 at 90° †	4 at 90° †
2-3/8"	T20-190	T20-280	T20-290	T20-320 †	T20-390	T20-490
2-7/8"	T25-190	T25-280	T25-290	T25-320	T25-390	T25-490
4"	T35-190	T35-280	T35-290	T35-320	T35-390	T35-490

** For round pole mounting (RPDXX) only.

† Requires 9" or 12" arm.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
20C	530 mA	35W	R2	4,140	1	0	1	118	4,446	1	0	1	127	4,473	1	0	1	128
			R3	4,123	1	0	1	118	4,427	1	0	1	126	4,455	1	0	1	127
			R4	4,128	1	0	1	118	4,433	1	0	1	127	4,460	1	0	1	127
			R5	4,381	2	0	1	125	4,704	3	0	1	134	4,734	3	0	1	135
	700 mA	45W	R2	5,271	1	0	1	117	5,660	1	0	1	126	5,696	1	0	2	127
			R3	5,250	1	0	2	117	5,637	1	0	2	125	5,672	1	0	2	126
			R4	5,256	1	0	2	117	5,644	1	0	2	125	5,679	1	0	2	126
			R5	5,578	3	0	1	124	5,990	3	0	1	133	6,027	3	0	1	134
	1000 mA	73W	R2	7,344	1	0	2	101	7,886	2	0	2	108	7,935	2	0	2	109
			R3	7,314	1	0	2	100	7,854	1	0	2	108	7,903	1	0	2	108
			R4	7,322	1	0	2	100	7,863	1	0	2	108	7,912	1	0	2	108
			R5	7,771	3	0	1	106	8,345	3	0	1	114	8,397	3	0	1	115
30C	530 mA	53W	R2	6,166	1	0	2	116	6,621	1	0	2	125	6,663	1	0	2	126
			R3	6,141	1	0	2	116	6,594	1	0	2	124	6,635	1	0	2	125
			R4	6,148	1	0	2	116	6,602	1	0	2	125	6,643	1	0	2	125
			R5	6,525	3	0	1	123	7,006	3	0	1	132	7,050	3	0	1	133
	700 mA	69W	R2	7,817	2	0	2	113	8,395	2	0	2	122	8,447	2	0	2	122
			R3	7,785	1	0	2	113	8,360	2	0	2	121	8,412	2	0	2	122
			R4	7,794	1	0	2	113	8,370	1	0	2	121	8,422	1	0	2	122
			R5	8,272	3	0	2	120	8,883	3	0	2	129	8,938	3	0	2	130
	1000 mA	108W	R2	10,755	2	0	2	100	11,549	2	0	2	107	11,621	2	0	2	108
			R3	10,711	2	0	2	99	11,502	2	0	2	106	11,574	2	0	2	107
			R4	10,724	2	0	2	99	11,515	2	0	2	107	11,587	2	0	2	107
			R5	11,381	3	0	2	105	12,221	4	0	2	113	12,297	4	0	2	114
40C	530 mA	71W	R2	8,156	2	0	2	115	8,758	2	0	2	123	8,812	2	0	2	124
			R3	8,122	2	0	2	114	8,722	2	0	2	123	8,776	2	0	2	124
			R4	8,132	1	0	2	115	8,732	1	0	2	123	8,786	1	0	2	124
			R5	8,630	3	0	2	122	9,267	3	0	2	131	9,325	3	0	2	131
	700 mA	94W	R2	10,286	2	0	2	109	11,045	2	0	2	118	11,114	2	0	2	118
			R3	10,244	2	0	2	109	11,000	2	0	2	117	11,069	2	0	2	118
			R4	10,256	2	0	2	109	11,013	2	0	2	117	11,081	2	0	2	118
			R5	10,884	3	0	2	116	11,688	4	0	2	124	11,761	4	0	2	125
	1000 mA	141W	R2	13,923	2	0	2	99	14,951	2	0	2	106	15,045	2	0	2	107
			R3	13,866	2	0	3	98	14,890	2	0	3	106	14,983	2	0	3	106
			R4	13,882	2	0	3	98	14,907	2	0	3	106	15,000	2	0	3	106
			R5	14,733	4	0	2	104	15,821	4	0	2	112	15,920	4	0	2	113
60C	530 mA	103W	R2	11,996	2	0	2	116	12,882	2	0	2	125	12,963	2	0	2	126
			R3	11,947	2	0	2	116	12,829	2	0	2	125	12,909	2	0	2	125
			R4	11,961	2	0	2	116	12,844	2	0	2	125	12,925	2	0	2	125
			R5	12,694	4	0	2	123	13,632	4	0	2	132	13,717	4	0	2	133
	700 mA	137W	R2	14,927	2	0	2	109	16,029	3	0	3	117	16,130	3	0	3	118
			R3	14,866	2	0	3	109	15,964	2	0	3	117	16,063	2	0	3	117
			R4	14,884	2	0	3	109	15,982	2	0	3	117	16,082	2	0	3	117
			R5	15,796	4	0	2	115	16,962	4	0	2	124	17,068	4	0	2	125
	1000 mA	216W	R2	19,328	3	0	3	89	20,754	3	0	3	96	20,884	3	0	3	97
			R3	19,248	3	0	3	89	20,669	3	0	4	96	20,799	3	0	4	96
			R4	19,271	3	0	3	89	20,693	3	0	4	96	20,823	3	0	4	96
			R5	20,452	4	0	2	95	21,962	4	0	2	102	22,099	4	0	2	102

Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	1.00
40°C	104°F	0.99

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **KAD LED** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	KAD LED 60C 1000			
	1.0	0.91	0.86	0.76
	KAD LED 40C 1000			
	1.0	0.93	0.88	0.79
	KAD LED 60C 700			
	1.0	0.98	0.97	0.94

Electrical Load

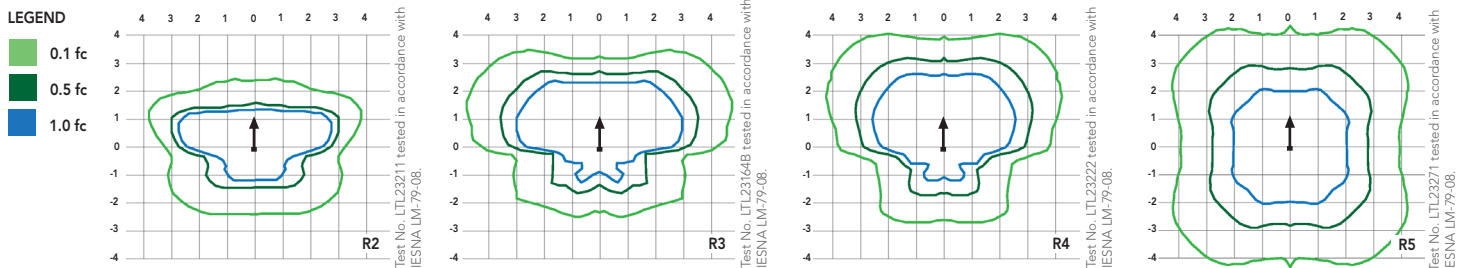
Number of LEDs	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
20	530	35	0.30	0.18	0.16	0.15	-	-
	700	45	0.39	0.23	0.20	0.18	0.15	0.12
	1000	73	0.61	0.35	0.31	0.27	0.22	0.17
30	530	53	0.44	0.26	0.23	0.20	-	-
	700	69	0.58	0.34	0.29	0.26	0.21	0.16
	1000	108	0.90	0.52	0.46	0.40	0.32	0.24
40	530	71	0.60	0.35	0.32	0.29	0.21	0.16
	700	94	0.79	0.46	0.41	0.36	0.27	0.20
	1000	141	1.18	0.68	0.59	0.52	0.42	0.30
60	530	103	0.87	0.50	0.44	0.39	0.29	0.22
	700	137	1.15	0.66	0.58	0.51	0.40	0.29
	1000	216	1.81	1.04	0.92	0.81	0.63	0.47

NOTE: All ratings in this table are for a nominal system operated at 25°C ambient temperature. Current and power specifications in this table do not include branch circuit derating specified in the National Electrical Code. Please observe all applicable electrical codes and ratings.

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [KAD LED homepage](#).

Isofootcandle plots for the KAD LED 60C 1000 40K. Distances are in units of mounting height (20').



FEATURES & SPECIFICATIONS

INTENDED USE

The energy savings and long life of the KAD LED area luminaire make it a reliable choice for illuminating streets, walkways, parking lots, and surrounding areas.

CONSTRUCTION

Single-piece die-cast, aluminum housing with contoured edges has a 0.12" nominal wall thickness. Die-cast door frame has an impact-resistant, tempered glass lens that is fully gasketed with one piece tubular silicone.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS

Precision-molded refractive acrylic lenses are available in four distributions. Light engines are available in standard 4000K, 3000K or 5000K (70 CRI) configurations.

ELECTRICAL

Light engine consists of high-efficacy LEDs mounted to a metal-core circuit board and aluminum heat sink, ensuring optimal thermal management and long life. Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Easily-serviceable surge protection device meets a minimum Category C Low (per ANSI/IEEE C62.41.2).

INSTALLATION

Included universal mounting block and extruded aluminum arm facilitate quick and easy installation using nearly any existing drilling pattern. Stainless steel bolts fasten the luminaire to the mounting block securing it to poles or walls. The KAD LED can withstand up to a 1.5 G vibration load rating per ANSI C136.31. The KAD LED also utilizes the standard K-Series (Template #5) for pole drilling.

LISTINGS

CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY

5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.





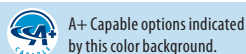
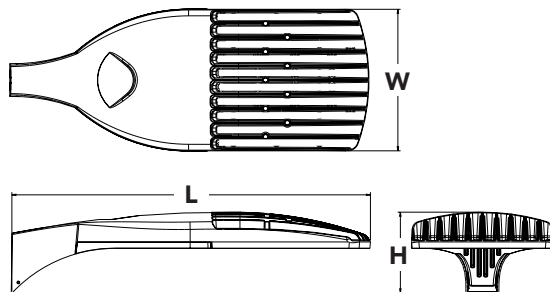
D-Series Size 1 LED Area Luminaire

d#series



Specifications

EPA:	1.01 ft ² (0.09 m ²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height:	7'-1/2" (19.0 cm)
Weight (max):	27 lbs (12.2 kg)



Catalog

Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a **shaded background**. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability¹
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a **shaded background**¹

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: [Link to Roam](#); [Link to DTL DLL](#)

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA DDBXD

DSX1LED					
Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	Forward optics P1 P4 P7 P2 P5 P8 P3 P6 P9 Rotated optics P10 ¹ P12 ¹ P11 ¹ P13 ¹	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted ²	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium TSVS Type V very short T5S Type V short T5M Type V medium T5W Type V wide BLC Backlight control ^{2,3} LCCO Left corner cutoff ^{2,3} RCCO Right corner cutoff ^{2,3}	MVOLT ⁴ 120 ⁵ 208 ⁵ 240 ⁵ 277 ⁵ 347 ^{5,6} 480 ^{5,6}	Shipped included SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor ⁷ RPUMBA Round pole universal mounting adaptor ⁷ Shipped separately KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish) ⁸

Control options	Other options	Finish (required)
Shipped installed PER NEMA twist-lock receptacle only (controls ordered separate) ⁹ PER5 Five-wire receptacle only (controls ordered separate) ^{9,10} PER7 Seven-wire receptacle only (controls ordered separate) ^{9,10} DMG 0-10V dimming extend out back of housing for external control (leads exit fixture) DS Dual switching ^{11,12} PIR Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc ^{13,14} PIRH Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc ^{13,14} PIR1FC3V Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc ^{13,14}	PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc ^{13,14} BL30 Bi-level switched dimming, 30% ^{12,15} BL50 Bi-level switched dimming, 50% ^{12,15} PNMTDD3 Part night, dim till dawn ¹⁶ PNMT5D3 Part night, dim 5 hrs ¹⁶ PNMT6D3 Part night, dim 6 hrs ¹⁶ PNMT7D3 Part night, dim 7 hrs ¹⁶ FA0 Field adjustable output ¹⁷	Shipped installed HS House-side shield ¹⁸ SF Single fuse (120, 277, 347V) ⁵ DF Double fuse (208, 240, 480V) ⁵ L90 Left rotated optics ¹ R90 Right rotated optics ¹ BS Bird spikes EGS External glare shield DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white



Ordering Information

Accessories

Ordered and shipped separately.

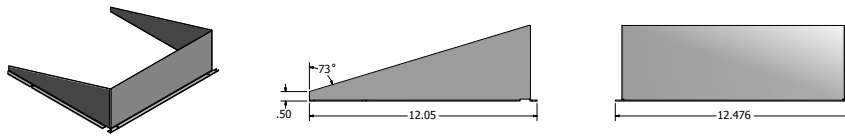
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) ¹⁹
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) ¹⁹
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) ¹⁹
DSHORT SBK U	Shorting cap ¹⁹
DSX1HS 30C U	House-side shield for 30 LED unit ¹⁸
DSX1HS 40C U	House-side shield for 40 LED unit ¹⁸
DSX1HS 60C U	House-side shield for 60 LED unit ¹⁸
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish) ²⁰
KMA8 DDBXD U	Master arm mounting bracket adaptor (specify finish) ⁷

For more control options, visit [DTL](#) and [ROAM](#) online.

NOTES

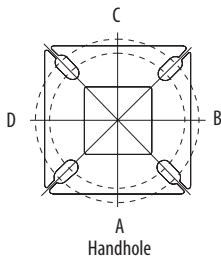
- P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
- AMBPC is not available with BLC, LCCO, RCCO or P4, P7, P8, P9 or P13.
- Not available with HS.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
- Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
- Not available in P1 or P10. Not available with BL30, BL50 or PNMT options.
- Existing drilled pole only. Available as a separate combination accessory; for retrofit use only: PUMBA (finish) U; 1.5 G vibration load rating per ANCI C136.31.
- Must order fixture with SPA option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
- Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Not available with DS option. Shorting cap included.
- If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Not available with DCR. Node with integral dimming. Shorting cap included.
- Provides 50/50 fixture operation via (2) independent drivers. Not available with PER, PER5, PER7, PIR or PIRH. Not available P1, P2, P3 or P4.
- Requires (2) separately switched circuits.
- Reference Motion Sensor table on page 3.
- Reference PER table on page 3 to see functionality.
- Not available with 347V, 480V, PNMT, DS. For PER5 or PER7, see PER Table on page 3.
- Not available with 347V, 480V, DS, BL30, BL50. For PER5 or PER7, see PER Table on page 3. Separate Dusk to Dawn required.
- Not available with other dimming controls options.
- Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
- Requires luminaire to be specified with PER, PER5 or PER7 option. See PER Table on page 3.
- For retrofit use only.

External Glare Shield



Drilling

HANDHOLE ORIENTATION



Tenon Mounting Slipfitter**

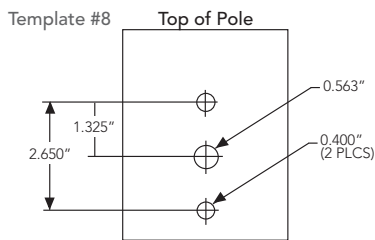
Tenon O.D.	Single Unit	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2-3/8"	AST20-190	AST20-280	AST20-290	AST20-320	AST20-390	AST20-490
2-7/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Pole drilling nomenclature: # of heads at degree from handhole (default side A)					
DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS
1 @ 90°	2 @ 280°	2 @ 90°	3 @ 120°	3 @ 90°	4 @ 90°
Side B	Side B & D	Side B & C	Round pole only	Side B, C, & D	Sides A, B, C, D

Note: Review luminaire spec sheet for specific nomenclature

Pole top or tenon O.D.	4.5" @ 90°	4" @ 90°	3.5" @ 90°	3" @ 90°	4.5" @ 120°	4" @ 120°	3.5" @ 120°	3" @ 120°
DSX SPA	Y	Y	Y	N	-	-	-	-
DSX RPA	Y	Y	N	N	Y	Y	Y	Y
DSX SPUMBA	Y	N	N	N	-	-	-	-
DSX RPUMBA	N	N	N	N	Y	Y	Y	N

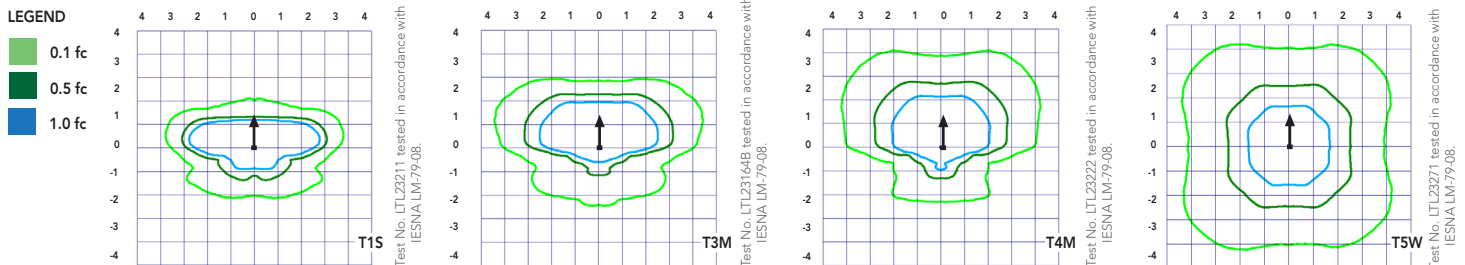
*3 fixtures @ 120 require round pole top/tenon.



Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit [Lithonia Lighting's D-Series Area Size 1 homepage](#).

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').



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DSX1-LED
Rev. 10/25/17
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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25000	50000	100000
Lumen Maintenance Factor	1.00	0.96	0.92	0.85

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A)					
					120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	530	54	0.45	0.26	0.23	0.19	0.10	0.12
	P2	30	700	70	0.59	0.34	0.30	0.25	0.20	0.16
	P3	30	1050	102	0.86	0.50	0.44	0.38	0.30	0.22
	P4	30	1250	125	1.06	0.60	0.52	0.46	0.37	0.27
	P5	30	1400	138	1.16	0.67	0.58	0.51	0.40	0.29
	P6	40	1250	163	1.36	0.78	0.68	0.59	0.47	0.34
	P7	40	1400	183	1.53	0.88	0.76	0.66	0.53	0.38
	P8	60	1050	207	1.74	0.98	0.87	0.76	0.64	0.49
	P9	60	1250	241	2.01	1.16	1.01	0.89	0.70	0.51
Rotated Optics (Requires L90 or R90)	P10	60	530	106	0.90	0.52	0.47	0.43	0.33	0.27
	P11	60	700	137	1.15	0.67	0.60	0.53	0.42	0.32
	P12	60	1050	207	1.74	0.99	0.87	0.76	0.60	0.46
	P13	60	1250	231	1.93	1.12	0.97	0.86	0.67	0.49

Motion Sensor Default Settings

Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min

*for use with Inline Dusk to Dawn or timer.

PER Table

Control	PER (3 wire)	PER5 (5 wire)		PER7 (7 wire)		
			Wire 4/Wire5		Wire 4/Wire5	Wire 6/Wire7
Photocontrol Only (On/Off)	✓	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM	✗	✓	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM with Motion (ROAM on/off only)	✗	⚠	Wires Capped inside fixture	⚠	Wires Capped inside fixture	Wires Capped inside fixture
Future-proof*	✗	⚠	Wired to dimming leads on driver	✓	Wired to dimming leads on driver	Wires Capped inside fixture
Future-proof* with Motion	✗	⚠	Wires Capped inside fixture	✓	Wires Capped inside fixture	Wires Capped inside fixture

✓ Recommended
✗ Will not work
⚠ Alternate

*Future-proof means: Ability to change controls in the future.



Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics																								
LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	P1	54W	T1S	6,457	2	0	2	120	6,956	2	0	2	129	7,044	2	0	2	130	3,640	1	0	1	70
				T2S	6,450	2	0	2	119	6,949	2	0	2	129	7,037	2	0	2	130	3,813	1	0	1	73
				T2M	6,483	1	0	1	120	6,984	2	0	2	129	7,073	2	0	2	131	3,689	1	0	1	71
				T3S	6,279	2	0	2	116	6,764	2	0	2	125	6,850	2	0	2	127	3,770	1	0	1	73
				T3M	6,468	1	0	2	120	6,967	1	0	2	129	7,056	1	0	2	131	3,752	1	0	1	72
				T4M	6,327	1	0	2	117	6,816	1	0	2	126	6,902	1	0	2	128	3,758	1	0	1	72
				TFTM	6,464	1	0	2	120	6,963	1	0	2	129	7,051	1	0	2	131	3,701	1	0	1	71
				T5VS	6,722	2	0	0	124	7,242	3	0	0	134	7,334	3	0	0	136	3,928	2	0	0	76
				T5S	6,728	2	0	1	125	7,248	2	0	1	134	7,340	2	0	1	136	3,881	2	0	0	75
				T5M	6,711	3	0	1	124	7,229	3	0	1	134	7,321	3	0	2	136	3,930	2	0	1	76
				T5W	6,667	3	0	2	123	7,182	3	0	2	133	7,273	3	0	2	135	3,820	3	0	1	73
				BLC	5,299	1	0	1	98	5,709	1	0	2	106	5,781	1	0	2	107					
				LCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80					
				RCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80					
30	700	P2	70W	T1S	8,249	2	0	2	118	8,886	2	0	2	127	8,999	2	0	2	129	4,561	1	0	1	67
				T2S	8,240	2	0	2	118	8,877	2	0	2	127	8,989	2	0	2	128	4,777	1	0	1	70
				T2M	8,283	2	0	2	118	8,923	2	0	2	127	9,036	2	0	2	129	4,622	1	0	2	68
				T3S	8,021	2	0	2	115	8,641	2	0	2	123	8,751	2	0	2	125	4,724	1	0	1	69
				T3M	8,263	2	0	2	118	8,901	2	0	2	127	9,014	2	0	2	129	4,701	1	0	2	69
				T4M	8,083	2	0	2	115	8,708	2	0	2	124	8,818	2	0	2	126	4,709	1	0	2	69
				TFTM	8,257	2	0	2	118	8,896	2	0	2	127	9,008	2	0	2	129	4,638	1	0	2	68
				T5VS	8,588	3	0	0	123	9,252	3	0	0	132	9,369	3	0	0	134	4,922	2	0	0	72
				T5S	8,595	3	0	1	123	9,259	3	0	1	132	9,376	3	0	1	134	4,863	2	0	0	72
				T5M	8,573	3	0	2	122	9,236	3	0	2	132	9,353	3	0	2	134	4,924	3	0	1	72
				T5W	8,517	3	0	2	122	9,175	4	0	2	131	9,291	4	0	2	133	4,787	3	0	1	70
				BLC	6,770	1	0	2	97	7,293	1	0	2	104	7,386	1	0	2	106					
				LCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79					
				RCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79					
30	1050	P3	102W	T1S	11,661	2	0	2	114	12,562	3	0	3	123	12,721	3	0	3	125					
				T2S	11,648	2	0	2	114	12,548	3	0	3	123	12,707	3	0	3	125					
				T2M	11,708	2	0	2	115	12,613	2	0	2	124	12,773	2	0	2	125					
				T3S	11,339	2	0	2	111	12,215	3	0	3	120	12,370	3	0	3	121					
				T3M	11,680	2	0	2	115	12,582	2	0	2	123	12,742	2	0	2	125					
				T4M	11,426	2	0	3	112	12,309	2	0	3	121	12,465	2	0	3	122					
				TFTM	11,673	2	0	2	114	12,575	2	0	3	123	12,734	2	0	3	125					
				T5VS	12,140	3	0	1	119	13,078	3	0	1	128	13,244	3	0	1	130					
				T5S	12,150	3	0	1	119	13,089	3	0	1	128	13,254	3	0	1	130					
				T5M	12,119	4	0	2	119	13,056	4	0	2	128	13,221	4	0	2	130					
				T5W	12,040	4	0	3	118	12,970	4	0	3	127	13,134	4	0	3	129					
				BLC	9,570	1	0	2	94	10,310	1	0	2	101	10,440	1	0	2	102					
				LCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76					
				RCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76					
30	1250	P4	125W	T1S	13,435	3	0	3	107	14,473	3	0	3	116	14,657	3	0	3	117					
				T2S	13,421	3	0	3	107	14,458	3	0	3	116	14,641	3	0	3	117					
				T2M	13,490	2	0	2	108	14,532	3	0	3	116	14,716	3	0	3	118					
				T3S	13,064	3	0	3	105	14,074	3	0	3	113	14,252	3	0	3	114					
				T3M	13,457	2	0	2	108	14,497	2	0	2	116	14,681	2	0	2	117					
				T4M	13,165	2	0	3	105	14,182	2	0	3	113	14,362	2	0	3	115					
				TFTM	13,449	2	0	3	108	14,488	2	0	3	116	14,672	2	0	3	117					
				T5VS	13,987	4	0	1	112	15,068	4	0	1	121	15,259	4	0	1	122					
				T5S	13,999	3	0	1	112	15,080	3	0	1	121	15,271	3	0	1	122					
				T5M	13,963	4	0	2	112	15,042	4	0	2	120	15,233	4	0	2	122					
				T5W	13,872	4	0	3	111	14,944	4	0	3	120	15,133	4	0	3	121					
				BLC	11,027	1	0	2	88	11,879	1	0	2	95	12,029	1	0	2	96					
				LCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72					
				RCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72					
30	1400	P5	138W	T1S	14,679	3	0	3	106	15,814	3	0	3	115	16,014	3	0	3	116					
				T2S	14,664	3	0	3	106	15,797	3	0	3	114	15,997	3	0	3	116					
				T2M	14,739	3	0	3	107	15,878	3	0	3	115	16,079	3	0	3	117					
				T3S	14,274	3	0	3	103	15,377	3	0	3	111	15,572	3	0	3	113					
				T3M	14,704	2	0	3	107	15,840	3	0	3	115	16,040	3	0	3	116					
				T4M	14,384	2	0	3	104	15,496	3	0	3	112	15,692	3	0	3	114					
				TFTM	14,695	2	0	3	106	15,830	3	0	3	115	16,030	3	0	3	116					
				T5VS	15,283	4	0	1	111	16,464	4	0	1	119	16,672	4	0	1	121					
				T5S	15,295	3	0	1	111	16,477	4	0	1	119	16,686	4	0	1	121					
				T5M	15,257	4	0	2	111	16,435	4	0	2	119	16,644	4	0	2	121					
				T5W	15,157	4	0	3	110	16,328	4	0	3	118	16,534	4	0	3	120					
				BLC	12,048	1	0	2	87	12,979	1	0	2	94	13,143	1	0	2	95					
				LCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71					
					8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71					

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics																								
LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lu-mens	B	U	G	LPW
40	1250	P6	163W	T1S	17,654	3	0	3	108	19,018	3	0	3	117	19,259	3	0	3	118					
				T2S	17,635	3	0	3	108	18,998	3	0	3	117	19,238	3	0	3	118					
				T2M	17,726	3	0	3	109	19,096	3	0	3	117	19,337	3	0	3	119					
				T3S	17,167	3	0	3	105	18,493	3	0	3	113	18,727	3	0	3	115					
				T3M	17,683	3	0	3	108	19,049	3	0	3	117	19,290	3	0	3	118					
				T4M	17,299	3	0	3	106	18,635	3	0	4	114	18,871	3	0	4	116					
				TFTM	17,672	3	0	3	108	19,038	3	0	4	117	19,279	3	0	4	118					
				TSVS	18,379	4	0	1	113	19,800	4	0	1	121	20,050	4	0	1	123					
				T5S	18,394	4	0	2	113	19,816	4	0	2	122	20,066	4	0	2	123					
				T5M	18,348	4	0	2	113	19,766	4	0	2	121	20,016	4	0	2	123					
				T5W	18,228	5	0	3	112	19,636	5	0	3	120	19,885	5	0	3	122					
				BLC	14,489	2	0	2	89	15,609	2	0	3	96	15,806	2	0	3	97					
				LCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72					
				RCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72					
40	1400	P7	183W	T1S	19,227	3	0	3	105	20,712	3	0	3	113	20,975	3	0	3	115					
				T2S	19,206	3	0	3	105	20,690	3	0	3	113	20,952	3	0	3	114					
				T2M	19,305	3	0	3	105	20,797	3	0	3	114	21,060	3	0	3	115					
				T3S	18,696	3	0	3	102	20,141	3	0	3	110	20,396	3	0	4	111					
				T3M	19,258	3	0	3	105	20,746	3	0	3	113	21,009	3	0	3	115					
				T4M	18,840	3	0	4	103	20,296	3	0	4	111	20,553	3	0	4	112					
				TFTM	19,246	3	0	4	105	20,734	3	0	4	113	20,996	3	0	4	115					
				TSVS	20,017	4	0	1	109	21,564	4	0	1	118	21,837	4	0	1	119					
				T5S	20,033	4	0	2	109	21,581	4	0	2	118	21,854	4	0	2	119					
				T5M	19,983	4	0	2	109	21,527	5	0	3	118	21,799	5	0	3	119					
				T5W	19,852	5	0	3	108	21,386	5	0	3	117	21,656	5	0	3	118					
				BLC	15,780	2	0	3	86	16,999	2	0	3	93	17,214	2	0	3	94					
				LCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70					
				RCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70					
60	1050	P8	207W	T1S	22,490	3	0	3	109	24,228	3	0	3	117	24,535	3	0	3	119					
				T2S	22,466	3	0	4	109	24,202	3	0	4	117	24,509	3	0	4	118					
				T2M	22,582	3	0	3	109	24,327	3	0	3	118	24,635	3	0	3	119					
				T3S	21,870	3	0	4	106	23,560	3	0	4	114	23,858	3	0	4	115					
				T3M	22,527	3	0	4	109	24,268	3	0	4	117	24,575	3	0	4	119					
				T4M	22,038	3	0	4	106	23,741	3	0	4	115	24,041	3	0	4	116					
				TFTM	22,513	3	0	4	109	24,253	3	0	4	117	24,560	3	0	4	119					
				TSVS	23,415	5	0	1	113	25,224	5	0	1	122	25,543	5	0	1	123					
				T5S	23,434	4	0	2	113	25,244	4	0	2	122	25,564	4	0	2	123					
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123					
				T5W	23,221	5	0	4	112	25,016	5	0	4	121	25,332	5	0	4	122					
				BLC	18,458	2	0	3	89	19,885	2	0	3	96	20,136	2	0	3	97					
				LCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72					
				RCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72					
60	1250	P9	241W	T1S	25,575	3	0	3	106	27,551	3	0	3	114	27,900	3	0	3	116					
				T2S	25,548	3	0	4	106	27,522	3	0	4	114	27,871	3	0	4	116					
				T2M	25,680	3	0	3	107	27,664	3	0	3	115	28,014	3	0	3	116					
				T3S	24,870	3	0	4	103	26,791	3	0	4	111	27,130	3	0	4	113					
				T3M	25,617	3	0	4	106	27,597	3	0	4	115	27,946	3	0	4	116					
				T4M	25,061	3	0	4	104	26,997	3	0	4	112	27,339	3	0	4	113					
				TFTM	25,602	3	0	4	106	27,580	3	0	4	114	27,929	3	0	4	116					
				TSVS	26,626	5	0	1	110	28,684	5	0	1	119	29,047	5	0	1	121					
				T5S	26,648	4	0	2	111	28,707	5	0	2	119	29,070	5	0	2	121					
				T5M	26,581	5	0	3	110	28,635	5	0	3	119	28,997	5	0	3	120					
				T5W	26,406	5	0	4	110	28,447	5	0	4	118	28,807	5	0	4	120					
				BLC	20,990	2	0	3	87	22,612	2	0	3	94	22,898	2	0	3	95					
				LCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71					
					15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71					

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Rotated Optics																								
LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
60	530	P10	106W	T1S	13,042	3	0	3	123	14,050	3	0	3	133	14,228	3	0	3	134	7,167	2	0	2	72
				T2S	12,967	4	0	4	122	13,969	4	0	4	132	14,146	4	0	4	133	7,507	2	0	2	76
				T2M	13,201	3	0	3	125	14,221	3	0	3	134	14,401	3	0	3	136	7,263	2	0	2	73
				T3S	12,766	4	0	4	120	13,752	4	0	4	130	13,926	4	0	4	131	7,424	2	0	2	75
				T3M	13,193	4	0	4	124	14,213	4	0	4	134	14,393	4	0	4	136	7,387	2	0	2	75
				T4M	12,944	4	0	4	122	13,945	4	0	4	132	14,121	4	0	4	133	7,400	2	0	2	75
				TFTM	13,279	4	0	4	125	14,305	4	0	4	135	14,486	4	0	4	137	7,288	1	0	2	74
				T5VS	13,372	3	0	1	126	14,405	4	0	1	136	14,588	4	0	1	138	7,734	3	0	1	78
				T5S	13,260	3	0	1	125	14,284	3	0	1	135	14,465	3	0	1	136	7,641	3	0	0	77
				T5M	13,256	4	0	2	125	14,281	4	0	2	135	14,462	4	0	2	136	7,737	3	0	2	78
				T5W	13,137	4	0	3	124	14,153	4	0	3	134	14,332	4	0	3	135	7,522	3	0	2	76
				BLC	10,906	3	0	3	103	11,749	3	0	3	111	11,898	3	0	3	112					
				LCCO	7,789	1	0	3	73	8,391	1	0	3	79	8,497	1	0	3	80					
				RCCO	7,779	4	0	4	73	8,380	4	0	4	79	8,486	4	0	4	80					
60	700	P11	137W	T1S	16,556	3	0	3	121	17,835	3	0	3	130	18,061	4	0	4	132	8,952	2	0	2	68
				T2S	16,461	4	0	4	120	17,733	4	0	4	129	17,957	4	0	4	131	9,377	2	0	2	72
				T2M	16,758	4	0	4	122	18,053	4	0	4	132	18,281	4	0	4	133	9,072	2	0	2	69
				T3S	16,205	4	0	4	118	17,457	4	0	4	127	17,678	4	0	4	129	9,273	2	0	2	71
				T3M	16,748	4	0	4	122	18,042	4	0	4	132	18,271	4	0	4	133	9,227	2	0	2	70
				T4M	16,432	4	0	4	120	17,702	4	0	4	129	17,926	4	0	4	131	9,243	2	0	2	71
				TFTM	16,857	4	0	4	123	18,159	4	0	4	133	18,389	4	0	4	134	9,103	2	0	2	69
				T5VS	16,975	4	0	1	124	18,287	4	0	1	133	18,518	4	0	1	135	9,661	3	0	1	74
				T5S	16,832	4	0	1	123	18,133	4	0	2	132	18,362	4	0	2	134	9,544	3	0	1	73
				T5M	16,828	4	0	2	123	18,128	4	0	2	132	18,358	4	0	2	134	9,665	3	0	2	74
				T5W	16,677	4	0	3	122	17,966	5	0	3	131	18,193	5	0	3	133	9,395	4	0	2	72
				BLC	13,845	3	0	3	101	14,915	3	0	3	109	15,103	3	0	3	110					
				LCCO	9,888	1	0	3	72	10,652	2	0	3	78	10,787	2	0	3	79					
				RCCO	9,875	4	0	4	72	10,638	4	0	4	78	10,773	4	0	4	79					
60	1050	P12	207W	T1S	22,996	4	0	4	111	24,773	4	0	4	120	25,087	4	0	4	121					
				T2S	22,864	4	0	4	110	24,631	5	0	5	119	24,943	5	0	5	120					
				T2M	23,277	4	0	4	112	25,075	4	0	4	121	25,393	4	0	4	123					
				T3S	22,509	4	0	4	109	24,248	5	0	5	117	24,555	5	0	5	119					
				T3M	23,263	4	0	4	112	25,061	4	0	4	121	25,378	4	0	4	123					
				T4M	22,824	5	0	5	110	24,588	5	0	5	119	24,899	5	0	5	120					
				TFTM	23,414	5	0	5	113	25,223	5	0	5	122	25,543	5	0	5	123					
				T5VS	23,579	5	0	1	114	25,401	5	0	1	123	25,722	5	0	1	124					
				T5S	23,380	4	0	2	113	25,187	4	0	2	122	25,506	4	0	2	123					
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123					
				T5W	23,165	5	0	4	112	24,955	5	0	4	121	25,271	5	0	4	122					
				BLC	19,231	4	0	4	93	20,717	4	0	4	100	20,979	4	0	4	101					
				LCCO	13,734	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72					
				RCCO	13,716	4	0	4	66	14,776	4	0	4	71	14,963	4	0	4	72					
60	1250	P13	231W	T1S	25,400	4	0	4	110	27,363	4	0	4	118	27,709	4	0	4	120					
				T2S	25,254	5	0	5	109	27,205	5	0	5	118	27,550	5	0	5	119					
				T2M	25,710	4	0	4	111	27,696	4	0	4	120	28,047	4	0	4	121					
				T3S	24,862	5	0	5	108	26,783	5	0	5	116	27,122	5	0	5	117					
				T3M	25,695	5	0	5	111	27,680	5	0	5	120	28,031	5	0	5	121					
				T4M	25,210	5	0	5	109	27,158	5	0	5	118	27,502	5	0	5	119					
				TFTM	25,861	5	0	5	112	27,860	5	0	5	121	28,212	5	0	5	122					
				T5VS	26,043	5	0	1	113	28,056	5	0	1	121	28,411	5	0	1	123					
				T5S	25,824	4	0	2	112	27,819	5	0	2	120	28,172	5	0	2	122					
				T5M	25,818	5	0	3	112	27,813	5	0	3	120	28,165	5	0	3	122					
				T5W	25,586	5	0	4	111	27,563	5	0	4	119	27,912	5	0	4	121					
				BLC	21,241	4	0	4	92	22,882	4	0	4	99	23,172	4	0	4	100					
				LCCO	15,170	2	0	4	66	16,342	2	0	4	71	16,549	2	0	4	72					
					15,150	5	0	5	66	16,321	5	0	5	71	16,527	5	0	5	72					

FEATURES & SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft²) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS

Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1

electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION

Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling pattern (template #8). Optional terminal block and NEMA photocontrol receptacle are also available.

LISTINGS

UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY

5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



FEATURES & SPECIFICATIONS

INTENDED USE — RTS poles are not to be utilized for Sportslighting applications requiring use of crossarms to mount luminaires. SPRTS series poles are the correct pole type for Sportslighting projects and are designed to be configured as a complete assembly with the desired crossarm(s) incorporated within the pole nomenclature description.

CONSTRUCTION — **Pole Shaft:** The pole shaft is of 11-gauge (0.1196") or 7-gauge (0.1793") with a uniform wall thickness and is made of a weldable-grade (ASTM A-595 Grade A or A572 Grade 55), hot-rolled, commercial-quality carbon steel tubing with a minimum yield of 55,000 psi. Shaft is one-piece construction with a full-length longitudinal high-frequency electric resistance weld and round in cross-section having a uniform linear taper of .14" per foot.

Pole Top: Options include tenon top, drilled for side mount fixture, tenon with drilling (includes extra handhole) and open top. Side drilled and open top poles include a removable steel top cap with set screws.

Handhole: A reinforced handhole with grounding provision is provided at 18" from the base end of the pole assembly. Every handhole includes a cover and cover attachment hardware. 3" x 5" rectangular handhole is provided on pole with 5.9" diameter. Pole shaft with diameters greater than 5.9" are provided with a 4" x 6.5" oval shaped handhole.

Base Cover: A two-piece ABS plastic full base cover is provided with each pole assembly on pole shaft diameters of 9" or less. Shaft sized greater than 9" have a sheet steel two-piece base cover. Additional base cover options are available upon factory request. Bolt cover caps can be substituted on most pole shaft sizes. Options include heavy duty two-piece cast aluminum full base cover and bolt cover caps. All base covers and bolt cover caps are finished to match pole.

Anchor Base/Bolts: Anchor base is fabricated from hot-rolled carbon steel plate that conforms with ASTM A36. Anchor bolts are manufactured to ASTM F1554 Standards Grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Upper portion of anchor bolt is galvanized per ASTM A-153; bolts have an "L" bend on bottom end and are galvanized a minimum of 12" on the threaded end. Each hot-dipped galvanized anchor bolt is furnished with two hex nuts and two flat washers.

HARDWARE — All structural fasteners are high-strength galvanized carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel, or stainless steel.

FINISH — Standard finishes include Dark Bronze, White, Black, Medium Bronze, Natural Aluminum, or Hot-dipped Galvanized finish. Classic colors include Sandstone, Charcoal Gray, Tennis Green, Bright Red and Steel Blue. Architectural Colors and Special Finishes are available by quote and include but are not limited to Hot-dipped Galvanized, Paint over Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes.

WARRANTY — 1-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

Catalog Number
Notes
Type

Anchor Base Poles

RTS

ROUND TAPERED STEEL



RTS Round Tapered Steel Poles

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: RTS 30 6-6B DM19 DDB

RTS			
Series	Nominal fixture mounting height	Nominal shaft base size/wall thickness ¹	Mounting ²
RTS	(See technical information table for complete ordering information.) 20'-50' (for 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.)	(See technical information table for complete ordering information.) 5-9B (.120") 6-5B (.120") 6-6B (.120") 7-0B (.120") 7-0F (.179") 7-3B (.120") 7-8B (.120") 8-0B (.120") 8-0F (.188") 8-5B (.120") 9-0B (.120") 9-0F (.179") 9-5B (.120") 10-0B (.120") 10-0F (.179") 11-0F (.179") 13-0F (.179") 13-0M (.239")	<u>Tenon mounting</u> PT Open top T20 2-3/8" O.D. (2" NPS) ² T25 2-7/8" O.D. (2-1/2" NPS) ² T30 3-1/2" O.D. (3" NPS) ² T35 4" O.D. (3-1/2" NPS) ² <u>KAC/KAD/KSE/KSF/KVR/KVF Drill mounting³</u> DM19 1 at 90° DM28 2 at 180° DM28PL 2 at 180° with one side plugged DM29 2 at 90° ² DM32 3 at 120° ² DM39 3 at 90° ² DM49 4 at 90° ² <u>CSX/DSX/AERIS™/OMERO™/HLA/KAX Drill mounting³</u> DM19AS 1 at 90° DM28AS 2 at 180° DM29AS 2 at 90° ² DM32AS 3 at 120° ² DM39AS 3 at 90° ² DM49AS 4 at 90° ² <u>AERIS™ Suspend drill mounting^{3,4}</u> DM19AST_ 1 at 90° DM28AST_ 2 at 180° DM29AST_ 2 at 90° DM39AST_ 3 at 90° DM49AST_ 4 at 90° <u>OMERO™ Suspend drill mounting^{3,4}</u> DM19MRT_ 1 at 90° DM28MRT_ 2 at 180° DM29MRT_ 2 at 90° DM39MRT_ 3 at 90° DM49MRT_ 4 at 90°

Options				Finish ¹¹	
<u>Shipped installed</u>		CPL12/xy 1/2" coupling ⁵	USPOM United States point of manufacture ⁹	<u>Standard colors</u>	<u>Classic colors</u>
L/AB Less anchor bolts (Include when anchor bolts are not needed)		CPL34/xy 3/4" coupling ⁵	IC Interior coating ¹⁰	DDB Dark bronze	DSS Sandstone
VD Vibration damper		CPL1/xy 1" coupling ⁵	UL UL listed with label (Includes NEC compliant cover)	DWH White	DGC Charcoal gray
TP Tamper resistant handhole cover fasteners		NPL12/xy 1/2" threaded nipple ⁵	NEC NEC 410.30 compliant gasketed handhole (Not UL Labeled)	DBL Black	DTG Tennis green
HAXy Horizontal arm bracket (1 fixture) ^{5,6}		NPL34/xy 3/4" threaded nipple ⁵		DMB Medium bronze	DBR Bright red
FDLxy Festoon outlet less electrical ⁵		NPL1/xy 1" threaded nipple ⁵		DNA Natural aluminum	DSB Steel blue
		EHHxy Extra handhole ^{5,7}		GALV Galvanized finish	<u>Architectural Colors and Special Finishes¹¹</u>
		MAEX Match existing ⁸		<u>Shipped separately (replacement kit available)</u>	Galvanized, Paint over Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes available.
				(blank) FBC Full base cover	
				(blank) TC Top cap	

NOTES:

- Wall thickness will be signified with a "C" (11 Gauge) or a "G" (7-gauge) in nomenclature. "C" - 0.1196" | "G" - 0.1793"
- PT open top poles include top cap. When ordering tenon mounting and drill mounting for the same pole, follow this example: DM28/T20. The combination includes a required extra handhole.
- Refer to the fixture spec sheet for the correct drilling template pattern and orientation compatibility.
- Insert "1" or "2" to designate fixture size; e.g. DM19AST2.
- Specify location and orientation when ordering option.
For "x": Specify the height above the base of pole in feet or feet and inches; separate feet and inches with a "-".
Example: 5ft = 5 and 20ft 3in = 20-3
For "y": Specify orientation from handhole (A,B,C,D) Refer to the Handhole Orientation diagram below.
Example: 1/2" coupling at 5' 8", orientation C = CPL12/5-8C
- Horizontal arm is 18" x 2-3/8" O.D. tenon standard with radius curve providing 12' rise.
- Combination of tenon-top and drill mount includes extra handhole.
- Must add original order number of existing pole(s).
- Use when mill certifications are required.
- Provides enhanced corrosion resistance.
- Additional colors available; see www.lithonia.com/archcolors or Architectural Colors brochure (Form No. 794.3). Available by formal quote only, consult factory for details.

RTS Round Tapered Steel Poles

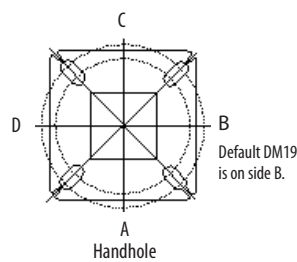
TECHNICAL INFORMATION — EPA (ft²) WITH 3-SECOND GUST PER AASHTO 2013																	
Series	Mounting Height (ft)*	Shaft Base Size	90 MPH	Max. weight	100 MPH	Max. weight	110 MPH	Max. weight	120 MPH	Max. weight	130 MPH	Max. weight	140 MPH	Max. weight	150 MPH	Max. weight	Approx. ship weight (lbs.)
RTS	20	5-9B	18	400	14.5	363	12	300	10	250	8.5	213	7	175	6	150	140
RTS	20	6-5B	22	550	18	450	15	375	13	325	11	275	9.5	238	8	200	160
RTS	25	5-9B	13	200	10.5	200	8.5	200	7	175	5.5	138	4.5	113	4	100	155
RTS	25	7-0B	19	475	16	400	13	325	11	275	9	225	8	200	7	175	200
RTS	25	7-0F	21	525	17	425	14	350	11.5	288	9.5	238	8.5	213	7	175	280
RTS	30	6-6B	12.5	200	10	200	7.5	188	6.5	163	5.5	138	4.5	113	3.5	88	200
RTS	30	8-0B	17.5	438	14	350	11.5	288	9.5	238	8	200	6.5	163	5.5	138	265
RTS	30	8-0F	30	750	24.5	613	20.5	513	17.5	438	15	375	12.5	313	11	275	380
RTS	35	7-3B	12	188	9.5	188	7.5	188	6	150	5	125	4	100	3.5	88	250
RTS	35	8-5B	14	350	11	275	9	225	7	175	6	150	5	125	4	100	315
RTS	35	9-5B	16.5	413	13.5	338	11	275	9	225	7.5	188	6	150	5	125	370
RTS	39	7-8B	11.5	188	9	188	6.5	163	5	125	4	100	3	75	2.5	63	285
RTS	39	9-0B	13	325	10	250	8	200	6.5	163	5	125	4	100	3.5	88	355
RTS	39	9-0F	24	600	19.5	488	16	400	13	325	11	275	9.5	238	8	200	515
RTS	45	10-0B	10	250	7.5	188	6	150	4.5	113	3.5	88	2.5	63	2	50	450
RTS	45	10-0F	20.5	513	16	400	13	325	10.5	263	9	225	7.5	188	6	150	650
RTS	50	10-0B	7.5	188	5.5	138	4	100	2.5	63	1.5	38	1	25	0.5	13	475
RTS	50	10-0F	17.5	413	13	325	10.5	263	8	200	6.5	163	5	125	4	100	680
RTS	50	11-0F	19	475	15	375	12	300	10	250	8	200	6.5	163	5	125	812

AASHTO 2013 criteria is the most conservative existing EPA calculation. For poles not showing EPA values under AASHTO 2013, EPA values may exist under commercial criteria (see table below).

TECHNICAL INFORMATION — EPA (ft2) with 1.3 gust											
Catalog Number	Nominal Shaft Length (ft.)*	Pole Shaft Size (Base in. x Top in. x ft.)	Wall thick (in)	Gauge	80 MPH	Max. weight	90 MPH	Max. weight	100 MPH	Max. weight	Bolt size (in. x in. x in.)
RTS 20 5-9B	20	5.9 x 3.1 x 20	0.120	11	19.3	482	15.1	377	12.2	305	1 x 36 x 4
RTS 20 6-5B	20	6.5 x 3.7 x 20	0.120	11	24.2	605	19.3	482	15.6	390	1 x 36 x 4
RTS 25 5-9B	25	5.9 x 2.4 x 25	0.120	11	12.5	312	9.9	247	8	200	1 x 36 x 4
RTS 25 7-0B	25	7.0 x 3.5 x 25	0.120	11	20.3	507	16.2	405	13.1	327	1 x 36 x 4
RTS 25 7-0F	25	7.0 x 3.5 x 25	0.179	7	30.5	760	24	625	19.8	495	1 x 36 x 4
RTS 30 6-6B	30	6.6 x 2.4 x 30	0.120	11	11.7	292	9.3	232	7.5	187	1 x 36 x 4
RTS 30 8-0B	30	8.0 x 3.8 x 30	0.120	11	18.9	473	14.9	373	12	300	1 x 36 x 4
RTS 30 8-0F	30	8.0 x 3.8 x 30	0.179	7	33.5	838	27	675	22	550	1-1/4 x 42 x 6
RTS 35 7-3B	35	7.3 x 2.4 x 35	0.120	11	11.2	280	8.9	222	7.1	177	1 x 36 x 4
RTS 35 8-5B	35	8.5 x 3.6 x 35	0.120	11	18.9	472	15.1	377	12.2	305	1 x 36 x 4
RTS 35 9-5B	35	9.5 x 4.6 x 35	0.120	11	23.2	580	18.2	455	14.5	363	1 x 36 x 4
RTS 39 7-8B	39	7.8 x 2.4 x 39	0.120	11	10.7	267	8.5	212	6.6	165	1 x 36 x 4
RTS 39 9-0B	39	9.0 x 3.6 x 39	0.120	11	17.2	430	13.5	338	10.8	270	1 x 36 x 4
RTS 39 9-0F	39	9.0 x 3.6 x 39	0.179	7	28.5	715	23	575	19	475	1-1/4 x 42 x 6
RTS 45 10-0B	45	10.0 x 3.7 x 45	0.120	11	17.4	435	13.5	338	10.6	265	1 x 36 x 4
RTS 45 10-0F	45	10.0 x 3.7 x 45	0.179	7	28.5	715	23	575	19	475	1-1/4 x 42 x 6
RTS 50 10-0B	50	10.0 x 3.0 x 50	0.120	11	13.2	330	10.6	265	8.3	208	1 x 36 x 4
RTS 50 10-0F	50	10.0 x 3.0 x 50	0.179	7	20.5	512	16.5	412	13.6	340	1-1/4 x 42 x 6
RTS 50 11-0F	50	11.0 x 3.0 x 50	0.179	7	29.9	748	23.5	588	18.6	465	1-1/4 x 42 x 6
RTS 50 13-0F	50	13.0 x 6.0 x 50	0.179	7	50.4	1260	39.7	992	31.4	785	1-1/4 x 54 x 6
RTS 50 13-0M	50	13.0 x 6.0 x 50	0.239	3	69.2	1730	55	1375	44.2	1105	1-3/4 x 84 x 6

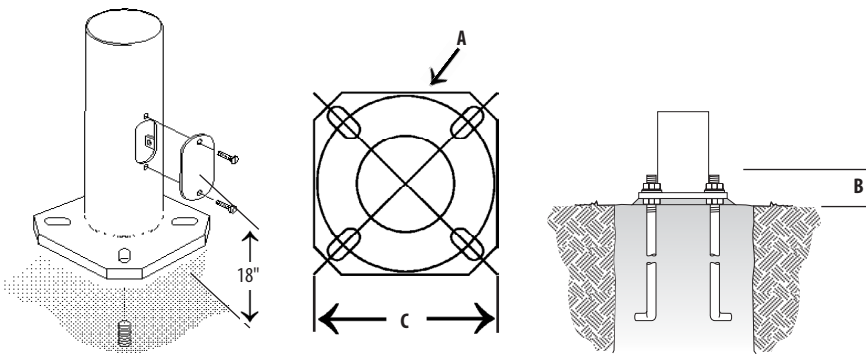
*For 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.

HANDHOLE ORIENTATION



POLE DATA					
Shaft base size	Bolt cirde A	Bolt projection B	Base square C	Template description	Anchor bolt description
5.9" B	9"	4.13"	10"	ABTEMPLATE PJ50075	AB36-0
6.5" B	9.5"	4.13"	10.5"	ABTEMPLATE PJ50074	AB36-0
7.0" B	10"	4.13"	10.88"	ABTEMPLATE PJ50077	AB36-0
7.0" F	10"	4.25"	10.88"	ABTEMPLATE PJ50076	AB36-0
6.6" B	9.5"	4.13"	10.5"	ABTEMPLATE PJ50078	AB36-0
8.0" B	11"	4.13"	11.5"	ABTEMPLATE PJ50079	AB36-0
8.0" F	11"	4.25"	11.5"	ABTEMPLATE PJ50080	AB42-0
7.3" B	10.5"	4.13"	11.25"	ABTEMPLATE PJ50081	AB36-0
8.5" B	11.5"	4.25"	12"	ABTEMPLATE PJ50082	AB36-0
9.5" B	13"	4.25"	13"	ABTEMPLATE PJ50083	AB36-0
7.8" B	11"	4.13"	11.5"	ABTEMPLATE PJ50084	AB36-0
9.0" B	12.5"	4.25"	12.38"	ABTEMPLATE PJ50085	AB36-0
9.0" F	12.5"	5"	12.38"	ABTEMPLATE PJ50086	AB42-0
10" B	13.5"	4.25"	14"	ABTEMPLATE PJ50087	AB36-0
10" F	13.5"	5"	14"	ABTEMPLATE PJ50088	AB42-0

BASE DETAIL



- IMPORTANT INSTALLATION NOTES:
- Do not erect poles without having fixtures installed.
 - Factory-supplied templates must be used when setting anchor bolts. Lithonia will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates.
 - If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage.
 - Bolt circles have +/- 1/2" tolerance.
 - For poles larger than 10" consult factory.



INDUSTRY-PRO LED VAPORTIGHT

OA SERIES / 16000 LUMENS MAX LED

lumen max
high bays



VT-LEDOA

APPLICATIONS

Industry-Pro LED Dust and Vaportight LED area light.

FEATURES

Produces wide general light distribution for warehouse, factory or retail applications. LED modules and drivers are replaceable and upgradable. Easy access driver compartment. Passive thermal management. Variety of mounting and finish options.

FINISH

Multi-stage polyester powder-coat process applied on our dedicated paint lines. A wide variety of standard and custom finishes are available. All exposed materials are chromate pretreated to resist corrosion.

ELECTRONICS

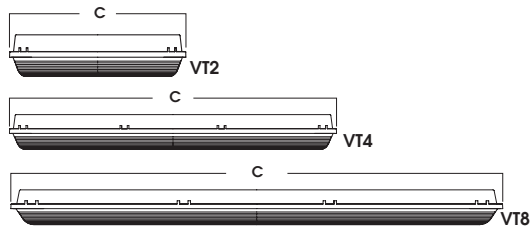
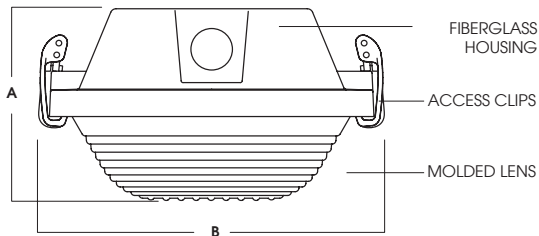
LED module features high brightness Osram LED system. 3-step MacAdam Ellipses binning and CRI 80 minimum. Variety of electronic 120v/277v and dimming drivers. LED system designed to exceed L70 standards.

CONSTRUCTION

Housing constructed of matte white fiberglass. Lens is clear prismatic polycarbonate.

CODE COMPLIANCE

ARRA Compliant. Optional Wet location. Manufactured and tested to UL standards No. 1598/8750.



SERIES	A	B	C
VT2	4.0	6.8	27.7
VT4	4.0	6.8	51.7
VT8	4.0	6.8	103.4

WATTAGE / LUMENS DATA		
PART NUMBER	SOURCE LUMENS ¹	SYSTEM WATTS
VT2LEDOA20L	2000	15
VT2LEDOA40L	4000	30
VT4LEDOA40L	4000	30
VT4LEDOA80L	8000	60
VT8LEDOA80L	8000	60
VT8LEDOA160L	16000	120

SERIES	LUMENS ¹	CCT	DRIVER / VOLTAGE ²	OPTIONS ³	MOUNTING ⁵
VT2LEDOA	20L 2000 Lm	30K 3000K	EX Electronic Driver, 120v/277v	FS Fusing	SM Surface Mount
VT4LEDOA	40L 4000 Lm	35K 3500K	DS10X 10% 0-10v Dimming, 120v/277v	OCC Occupancy Sensor	VH Stainless Steel
VT8LEDOA	60L 6000 Lm	40K 4000K		PHO Photo Sensor	V-Hole Hinges
	80L 8000 Lm			URS ⁴ IR Occupancy and Photo Sensor	NM3/8 3/8" Hub
	160L 16000 Lm			EM Emergency Battery	NM2 1/2" Hub
				HI/LOW Hi Low	NM3 3/4" Hub
				2CIR 2 Circuit	P ⁶ Plug
				2CIR 3 Circuit	H Hook
				WL Wet Location	HC Hook Cord 6" SJT
					HCP ⁵ Hook Cord and Plug

EXAMPLE: VT2LEDOA60L30KE1FSSM

NOTES:

1 Nominal Source Lumens 2 Contact Factory for Additional Options 3 See Product Options Page for Details 4 Inside Fixture 5 Specify Plug Style 6 Specify 120v/277v

Dimensions and values shown are nominal. Spectrum Lighting continually works to improve products and reserves the right to make changes which may alter the performance or appearance of products.



PROJECT:	TYPE: PARKING GARAGE
CAT. NO.:	VTLEDOA 60L 40K DS10X

WWW.SPECLIGHT.COM • 994 JEFFERSON STREET, FALL RIVER, MA 02721 • 508.678.2303 FAX 508.678.2260

OSRAM
LED Technology included



FEATURES & SPECIFICATIONS

INTENDED USE — A general purpose and energy-efficient surface-mounted or suspended LED fixture, suitable for wet, damp and/or cold locations. For vapor-tight demanding environments where moisture or dust is a concern and where relatively low fixture mounting heights and wide fixture spacing are common. Typical applications include industrial facilities, parking garages, retail malls, multi-purpose rooms, garden centers, and food processing. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable use.](#)

CONSTRUCTION — One-piece 5VA fiberglass housing with integral perimeter channel utilizing continuous poured-in-place NEMA 4X gasket. Approved as a wireway and for through wiring. Captive polymeric latches are standard. Stainless steel latches (#316) available as an option for food processing or more demanding applications.

Power connection is easily accomplished through pre-drilled holes. Fixture easily mounts to ceilings and other solid structures, or can be suspended with chain, cable or rod using stainless steel mounting brackets (included).

OPTICS — Injection molded, acrylic lens (.080" thick) provides high impact-resistance comparable to 100% DR. For L48 Medium Distribution, a UV stabilized polycarbonate diffuser is available (.080" thick) in clear or frosted for additional impact strength where vandal protection is desired.

Expected service life of 60,000 hours at 80% lumen maintenance (L80); predicted life of more than 100,000 hours.

ELECTRICAL — Utilizes high-efficiency LEDs mounted to core circuit boards. High-efficiency drivers operate 120 thru 277V, 347V and 480V offered with 0-10 volt dimming, allowing granular control when coupled with wireless networking controls. Integral 6kV/3kA surge protection, tested in accordance to IEEE/ANSI standards.

INSTALLATION — Fixture can be ceiling or suspended mounted. Pre-punched stainless steel mounting brackets are included (two per luminaire) for easy field-attachment of bolts, screws and other mounting hardware. A covered ceiling is not required to maintain wet location listing or IP rating.

LISTINGS — CSA certified to UL and C-UL standards. Listed for wet locations in ambient temps ranging from -35°C (-31°F) to 25°C (77°F) when fixture is surface mounted or up to 45°C (113°F) when fixture is suspended at least 6" from ceiling. IP65, IP66 and IP67 rated. NSF splash-zone 2 certified and meets FDA/USDA guidelines. Nema 4X rated lens and housing. 1500 PSI hose-down. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Stock configurations are offered for shorter lead times:

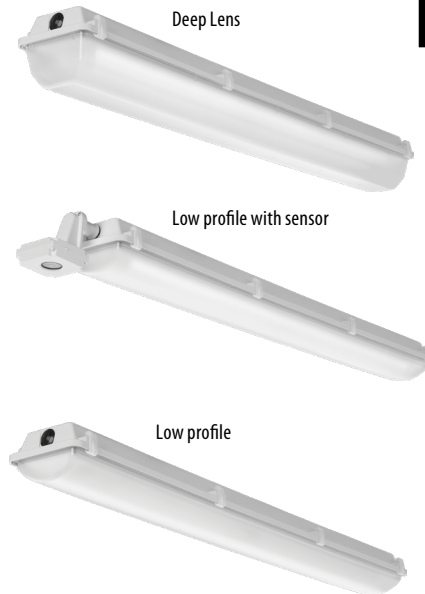
Standard Part Number	Stock Part Number
FEM L48 4000LM LPAFL MD MVOLT GZ10 40K 80CRI	FEM L48 4L MVOLT
FEM L48 4000LM LPAFL MD MVOLT GZ10 50K 80CRI	FEM L48 4L MVOLT 5K

Catalog Number
Notes
Type

Low-Profile Enclosed and Gasketed Industrial

FEM LED

CEILING/ SUSPENDED MOUNT



A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or XPoint™ Wireless control networks marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

FEM LED Low-Profile Enclosed and Gasketed



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: FEM L48 4000LM IMAFL WD MVOLT GZ10 40K 80CRI

Series	Length	Nominal Lumens	Diffuser	Distribution	Voltage	Driver	Color temperature	CRI
FEM	L48 48" ¹	3000LM 3,000 lumens	IMAFL Acrylic, lineal ribbed frosted lens	MD Medium	MVOLT MVOLT	GZ10 0 - 10V dimming	30K 3000K	80CRI 80 CRI
		4000LM 4,000 lumens		WD Wide ⁴	120 120V		35K 3500K	90CRI 90 CRI
		6000LM 6,000 lumens	IMACD Acrylic, clear deep lens		277 277V		40K 4000K	
		8000LM 8,000 lumens	IMAFD Acrylic, deep frosted lens		347 347V ⁵		50K 5000K	
		10000LM 10,000 lumens	LPAFL Acrylic, low profile frosted lens ³		480 480V ⁵			
	L96 96" ²		LPACL Acrylic, low profile clear lens ³					
		9000LM 9,000 lumens	LPPCL Polycarbonate, low profile clear lens ³					
		12000LM 12,000 lumens	LPPFL Polycarbonate, low profile frosted lens ³					
		15000LM 15,000 lumens						
		18000LM 18,000 lumens						
	20000LM 20,000 lumens							

Options

SF	Single fuse (available with 120, 277, 347) ⁶	CS88	6' Brad Harrison 16/3 cord and straight blade plug set ⁶	MSI10NWL	Low mount 360° integral motion sensor, wet location, On/Off operation ⁶
DF	Double Fusing (available with 347, 480V) ⁶	CS88L12	12' Brad Harrison 16/3 cord and straight blade plug set ⁶	MSI102L3VWL	Low mount 360° integral motion sensor, wet location, High/Low operation (bi-level) ⁶
BSL520	Bodine® emergency LED battery pack for -20°C and up ^{6,7}	CS88R	Brad Harrison receptacle	MSI10NWL DSCNWL	Low mount 360° integral motion sensor, wet location, On/Off operation for motion sensing, override Off due to daylight ⁶
BGTD	Generator transfer device ^{6,8}	CS89	6' white cord, 16/3, no plug, wet location		
SPD	Surge protection device, additional 10kV/5kA ⁶	CS89L12	12' white cord, 16/3, no plug, wet location	MSI10XAWL DSCXAWL	Xpoint wireless integral motion sensor, On/Off operation for motion sensing, override Off due to daylight ⁶
WLF	Wet location fitting (two outboard, top)	TRS	Tamper Resistant Torx® T10 screws		
WLFEND	Wet location fitting (one end)	DPMB	Dual pendant mounting bracket	XAD	XPoint™ wireless controller, 0-10V dimming ⁶
WLFEND2	Wet location fitting (both ends)	DL	Damp location		
		STSL	Stainless steel latches		

Accessories: Order as separate catalog number.

MHCH 36	Jack chain 36" (pair)
MHHK120	10' single leg air craft cable (ships as pair)
MHHK120SS	10' single leg air craft cable, stainless steel (ships as pair)
RK1 T10DRV	Torx® T10 screwdriver for TRS option
FEMDPMB	Dual pendant mounting bracket (ships as a pair)

Notes

- 1 Available with 3000LM, 4000LM, 6000LM, 8000LM, and 10000LM lumen packages. Not available with WD when using low profile diffuser.
- 2 Available with 9000LM, 12000LM, 15000LM, 18000LM, and 20000LM. Not available with low profile diffuser options.
- 3 Not available with L96. Not available with L48 when ordering WD option.
- 4 Not available with L48 when ordering low-profile lens options.
- 5 Utilizes step-down transformer. Not available with BGTD.
- 6 Must specify voltage.
- 7 Not available with 347 or 480V. For use in ambient temperature -20°C and up.
- 8 Available with 120V or 277V only. For use in ambient environments up to 25°C. Not available with L48 when ordering 10000LM lumen package. Not available with L96 when ordering 18000LM or 20000LM lumen packages.

FEM LED Low-Profile Enclosed and Gasketed

OPERATIONAL DATA

		Lumen packages	Wattage				Diffusers		
			120v	277v	347v	480v	Acrylic Lineal Frosted (IMAFL)	Frosted (IMAFD, LPAFL, LPPFL)	Clear (IMACD, LPACL, LPPCL)
L48 Medium Distribution <small>*test results reflect less than 1% difference between acrylic (clear/deep/low profile) and polycarbonate (low profile) lens</small>	Delivered Lumens at 30K 80CRI	3000LM	23	23	24	25	2972	3032	3071
		4000LM	31	30	31	32	4019	4100	4153
		6000LM	45	44	46	47	5925	6044	6122
		8000LM	69	67	70	71	7593	7746	7845
		10000LM	80	78	81	82	9781	9979	10107
	Delivered Lumens at 35K 80CRI	3000LM	23	23	24	25	3039	3100	3140
		4000LM	31	30	31	32	4109	4192	4246
		6000LM	45	44	46	47	6057	6179	6258
		8000LM	69	67	70	71	7762	7918	8020
		10000LM	80	78	81	82	9999	10201	10332
	Delivered Lumens at 40K 80CRI	3000LM	23	23	24	25	3086	3148	3189
		4000LM	31	30	31	32	4173	4257	4312
		6000LM	45	44	46	47	6151	6275	6356
		8000LM	69	67	70	71	7883	8042	8145
		10000LM	80	78	81	82	10155	10360	10493
	Delivered Lumens at 50K 80CRI	3000LM	23	23	24	25	3200	3264	3306
		4000LM	31	30	31	32	4326	4414	4470
		6000LM	45	44	46	47	6378	6506	6590
		8000LM	69	67	70	71	8173	8338	8445
		10000LM	80	78	81	82	10529	10741	10879

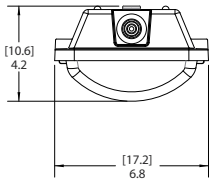
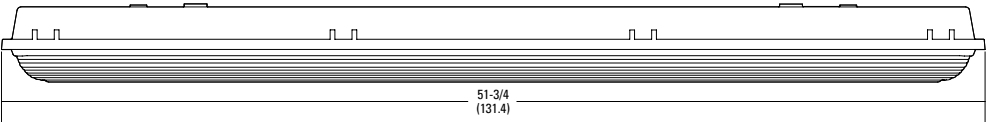
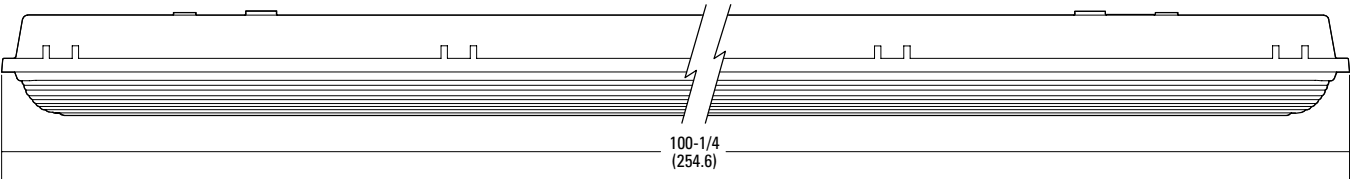
		Lumen packages	Wattage				Diffusers		
			120v	277v	347v	480v	Acrylic Lineal Frosted (IMAFI)	Acrylic Frosted (IMAFD)	Acrylic Clear (IMACD)
L96 Medium Distribution	Delivered Lumens at 30K 80CRI	9000LM	65	64	66	67	8718	8959	9072
		12000LM	88	86	89	90	11370	11685	11831
		15000LM	120	118	122	124	14263	14657	14841
		18000LM	145	141	146	148	16863	17330	17547
		20000LM	160	156	162	164	19313	19847	20096
	Delivered Lumens at 35K 80CRI	9000LM	65	64	66	67	8913	9159	9274
		12000LM	88	86	89	90	11624	11945	12095
		15000LM	120	118	122	124	14581	14984	15172
		18000LM	145	141	146	148	17239	17716	17938
		20000LM	160	156	162	164	19743	20289	20544
	Delivered Lumens at 40K 80CRI	9000LM	65	64	66	67	9051	9302	9419
		12000LM	88	86	89	90	11805	12131	12284
		15000LM	120	118	122	124	14808	15218	15409
		18000LM	145	141	146	148	17507	17992	18218
		20000LM	160	156	162	164	20051	20605	20864
	Delivered Lumens at 50K 80CRI	9000LM	65	64	66	67	9385	9644	9765
		12000LM	88	86	89	90	12239	12578	12736
		15000LM	120	118	122	124	15353	15778	15976
		18000LM	145	141	146	148	18152	18654	18888
		20000LM	160	156	162	164	20789	21364	21632

FEM LED Low-Profile Enclosed and Gasketed

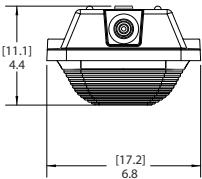
DIMENSIONS

Specifications subject to change without notice.
All dimensions are inches (centimeters) unless otherwise indicated.

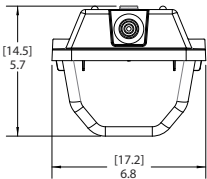
Weight (may vary with options or accessories)
FEM L48: 11.9 lbs (5.397kg)
FEM L96: 24.3 lbs (11.022kg)



Diffuser Type:
LPAFL
LPACL
LPPFL
LPPCL



Diffuser Type:
IMAFD



Diffuser Type:
IMAFD
IMACD

PHOTOMETRICS

See www.lithonia.com for photometry reports.

FEATURES & SPECIFICATIONS

INTENDED USE — A general purpose and energy-efficient surface-mounted or suspended LED fixture, suitable for wet, damp and/or cold locations. For vapor-tight demanding environments where moisture or dust is a concern and where relatively low fixture mounting heights and wide fixture spacing are common. Typical applications include industrial facilities, parking garages, retail malls, multi-purpose rooms, garden centers, and food processing. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable use.](#)

CONSTRUCTION — One-piece SVA fiberglass housing with integral perimeter channel utilizing continuous poured-in-place NEMA 4X gasket. Approved as a wireway and for through wiring. Captive polymeric latches are standard. Stainless steel latches (#316) available as an option for food processing or more demanding applications.

Power connection is easily accomplished through pre-drilled holes. Fixture easily mounts to ceilings and other solid structures, or can be suspended with chain, cable or rod using stainless steel mounting brackets (included).

OPTICS — Injection molded, acrylic lens (.080" thick) provides high impact-resistance comparable to 100% DR. For L48 Medium Distribution, a UV stabilized polycarbonate diffuser (.080" thick) in clear or frosted for additional impact strength where vandal protection is desired.

Expected service life of 60,000 hours at 80% lumen maintenance (L80); predicted life of more than 100,000 hours.

ELECTRICAL — Utilizes high-efficiency LEDs mounted to core circuit boards. High-efficiency drivers operate 120 thru 277V, 347V and 480V offered with 0-10 volt dimming, allowing granular control when coupled with wireless networking controls. Integral 6kV/3kA surge protection, tested in accordance to IEEE/ANSI standards.

INSTALLATION — Fixture can be ceiling or suspended mounted. Pre-punched stainless steel mounting brackets are included (two per luminaire) for easy field-attachment of bolts, screws and other mounting hardware. A covered ceiling is not required to maintain wet location listing or IP rating.

LISTINGS — CSA certified to UL and C-UL standards. Listed for wet locations in ambient temps ranging from -35°C (-31°F) to 25°C (77°F) when fixture is surface mounted or up to 45°C (113°F) when fixture is suspended at least 6" from ceiling. IP65, IP66 and IP67 rated. NSF splash-zone 2 certified and meets FDA/USDA guidelines. Nema 4X rated lens and housing. 1500 PSI hose-down. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Stock configurations are offered for shorter lead times:

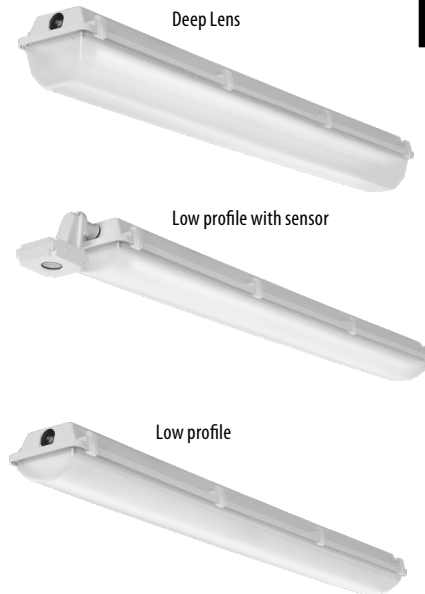
Standard Part Number	Stock Part Number
FEM L48 4000LM LPAFL MD MVOLT GZ10 40K 80CRI	FEM L48 4L MVOLT
FEM L48 4000LM LPAFL MD MVOLT GZ10 50K 80CRI	FEM L48 4L MVOLT 5K

Catalog Number
Notes
Type

Low-Profile Enclosed and Gasketed Industrial

FEM LED

CEILING/ SUSPENDED MOUNT



Deep Lens

Low profile with sensor

Low profile



A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or XPoint™ Wireless control networks marked by a **shaded background***

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

FEM LED Low-Profile Enclosed and Gasketed



A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: FEM L48 4000LM IMAFL WD MVOLT GZ10 40K 80CRI

Series	Length	Nominal Lumens	Diffuser	Distribution	Voltage	Driver	Color temperature	CRI			
FEM	L48 48" ¹	3000LM 3,000 lumens	IMAFL Acrylic, lineal ribbed frosted lens	MD Medium WD Wide ⁴	MVOLT MVOLT 120 120V 277 277V 347 347V ⁵ 480 480V ⁵	GZ10 0 - 10V dimming	30K 3000K	80CRI 80 CRI			
		4000LM 4,000 lumens					35K 3500K	90CRI 90 CRI			
		6000LM 6,000 lumens	IMACD Acrylic, clear deep lens				40K 4000K				
		8000LM 8,000 lumens	IMAFD Acrylic, deep frosted lens				50K 5000K				
		10000LM 10,000 lumens	LPAFL Acrylic, low profile frosted lens ³								
	L96 96" ²		LPACL Acrylic, low profile clear lens ³								
		9000LM 9,000 lumens	LPPCL Polycarbonate, low profile clear lens ³								
		12000LM 12,000 lumens	LPPFL Polycarbonate, low profile frosted lens ³								
		15000LM 15,000 lumens									
		18000LM 18,000 lumens									
	20000LM 20,000 lumens										

Options

SF	Single fuse (available with 120, 277, 347) ⁶	CS88	6' Brad Harrison 16/3 cord and straight blade plug set ⁶	MSI10NWL	Low mount 360° integral motion sensor, wet location, On/Off operation ⁶
DF	Double Fusing (available with 347, 480V) ⁶	CS88L12	12' Brad Harrison 16/3 cord and straight blade plug set ⁶	MSI102L3VWL	Low mount 360° integral motion sensor, wet location, High/Low operation (bi-level) ⁶
BSL520	Bodine® emergency LED battery pack for -20°C and up ^{6,7}	CS88R	Brad Harrison receptacle	MSI10NWL DSCNWL	Low mount 360° integral motion sensor, wet location, On/Off operation for motion sensing, override Off due to daylight ⁶
BGTD	Generator transfer device ^{6,8}	CS89	6' white cord, 16/3, no plug, wet location		
SPD	Surge protection device, additional 10kV/5kA ⁶	CS89L12	12' white cord, 16/3, no plug, wet location	MSI10XAWL DSCXAWL	Xpoint wireless integral motion sensor, On/Off operation for motion sensing, override Off due to daylight ⁶
WLF	Wet location fitting (two outboard, top)	TRS	Tamper Resistant Torx® T10 screws		
WLFEND	Wet location fitting (one end)	DPMB	Dual pendant mounting bracket	XAD	XPoint™ wireless controller, 0-10V dimming ⁶
WLFEND2	Wet location fitting (both ends)	DL	Damp location		
		STSL	Stainless steel latches		

Accessories: Order as separate catalog number.

MHCH 36	Jack chain 36" (pair)
MHHK120	10' single leg air craft cable (ships as pair)
MHHK120SS	10' single leg air craft cable, stainless steel (ships as pair)
RK1 T10DRV	Torx® T10 screwdriver for TRS option
FEMDPMB	Dual pendant mounting bracket (ships as a pair)

Notes

- 1 Available with 3000LM, 4000LM, 6000LM, 8000LM, and 10000LM lumen packages. Not available with WD when using low profile diffuser.
- 2 Available with 9000LM, 12000LM, 15000LM, 18000LM, and 20000LM. Not available with low profile diffuser options.
- 3 Not available with L96. Not available with L48 when ordering WD option.
- 4 Not available with L48 when ordering low-profile lens options.
- 5 Utilizes step-down transformer. Not available with BGTD.
- 6 Must specify voltage.
- 7 Not available with 347 or 480V. For use in ambient temperature -20°C and up.
- 8 Available with 120V or 277V only. For use in ambient environments up to 25°C. Not available with L48 when ordering 10000LM lumen package. Not available with L96 when ordering 18000LM or 20000LM lumen packages.

FEM LED Low-Profile Enclosed and Gasketed

OPERATIONAL DATA

		Lumen packages	Wattage				Diffusers		
			120v	277v	347v	480v	Acrylic Lineal Frosted (IMAFI)	Frosted (IMAFD, LPAFL, LPPFL)	Clear (IMACD, LPAFL, LPPCL)
L48 Medium Distribution <small>*test results reflect less than 1% difference between acrylic (clear/deep/low profile) and polycarbonate (low profile) lens</small>	Delivered Lumens at 30K 80CRI	3000LM	23	23	24	25	2972	3032	3071
		4000LM	31	30	31	32	4019	4100	4153
		6000LM	45	44	46	47	5925	6044	6122
		8000LM	69	67	70	71	7593	7746	7845
		10000LM	80	78	81	82	9781	9979	10107
	Delivered Lumens at 35K 80CRI	3000LM	23	23	24	25	3039	3100	3140
		4000LM	31	30	31	32	4109	4192	4246
		6000LM	45	44	46	47	6057	6179	6258
		8000LM	69	67	70	71	7762	7918	8020
		10000LM	80	78	81	82	9999	10201	10332
	Delivered Lumens at 40K 80CRI	3000LM	23	23	24	25	3086	3148	3189
		4000LM	31	30	31	32	4173	4257	4312
		6000LM	45	44	46	47	6151	6275	6356
		8000LM	69	67	70	71	7883	8042	8145
		10000LM	80	78	81	82	10155	10360	10493
	Delivered Lumens at 50K 80CRI	3000LM	23	23	24	25	3200	3264	3306
		4000LM	31	30	31	32	4326	4414	4470
		6000LM	45	44	46	47	6378	6506	6590
		8000LM	69	67	70	71	8173	8338	8445
		10000LM	80	78	81	82	10529	10741	10879

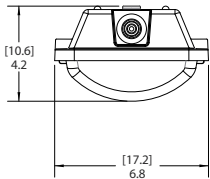
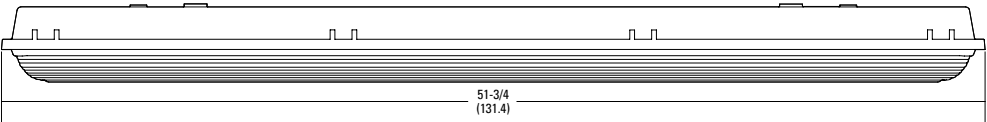
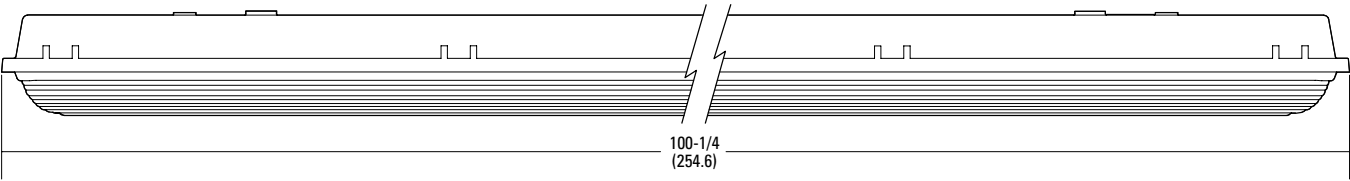
		Lumen packages	Wattage				Diffusers		
			120v	277v	347v	480v	Acrylic Lineal Frosted (IMAFI)	Acrylic Frosted (IMAFD)	Acrylic Clear (IMACD)
L96 Medium Distribution	Delivered Lumens at 30K 80CRI	9000LM	65	64	66	67	8718	8959	9072
		12000LM	88	86	89	90	11370	11685	11831
		15000LM	120	118	122	124	14263	14657	14841
		18000LM	145	141	146	148	16863	17330	17547
		20000LM	160	156	162	164	19313	19847	20096
	Delivered Lumens at 35K 80CRI	9000LM	65	64	66	67	8913	9159	9274
		12000LM	88	86	89	90	11624	11945	12095
		15000LM	120	118	122	124	14581	14984	15172
		18000LM	145	141	146	148	17239	17716	17938
		20000LM	160	156	162	164	19743	20289	20544
	Delivered Lumens at 40K 80CRI	9000LM	65	64	66	67	9051	9302	9419
		12000LM	88	86	89	90	11805	12131	12284
		15000LM	120	118	122	124	14808	15218	15409
		18000LM	145	141	146	148	17507	17992	18218
		20000LM	160	156	162	164	20051	20605	20864
	Delivered Lumens at 50K 80CRI	9000LM	65	64	66	67	9385	9644	9765
		12000LM	88	86	89	90	12239	12578	12736
		15000LM	120	118	122	124	15353	15778	15976
		18000LM	145	141	146	148	18152	18654	18888
		20000LM	160	156	162	164	20789	21364	21632

FEM LED Low-Profile Enclosed and Gasketed

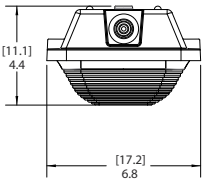
DIMENSIONS

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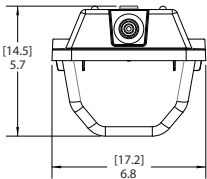
Weight (may vary with options or accessories)
FEM L48: 11.9 lbs (5.397kg)
FEM L96: 24.3 lbs (11.022kg)



Diffuser Type:
LPAFL
LPACL
LPPFL
LPPCL



Diffuser Type:
IMAFI



Diffuser Type:
IMAFD
IMACD

PHOTOMETRICS

See www.lithonia.com for photometry reports.

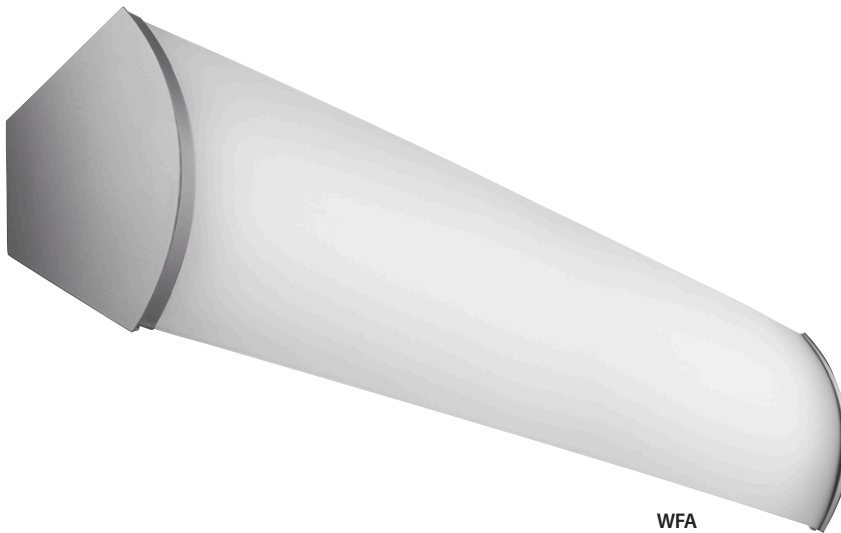


Wal14 | Wall



PRUDENTIAL LTG.

PRULITE.COM 213.746.0360

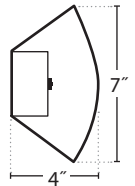


WFA

Type:

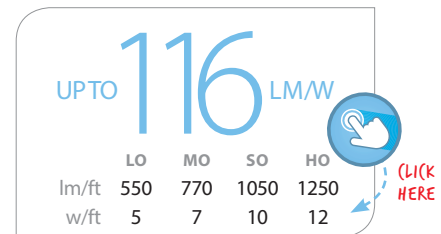
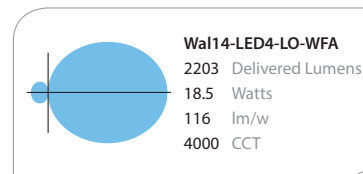
Job:

Perforated with 505



Perfect for hallways and stairwells.

An architectural wall fixture, open to wash light above and below. Frost acrylic fascias offer a warm, modern feel and integrated occupancy sensors help meet stringent energy codes.



Lumen output may vary +/- 5%
4000K used for lm/ft estimates above
3500K -2% llf, 3000K -4%, 2700K -6%
-10% LLF for 90 CRI (4K, 3500K and 3K)

See LED Details PDF for more info

SERIES	LED COLOR	OUTPUT	NOMINAL LENGTH	SHIELDING	COLOR/FINISH	CIRCUIT-ING	VOLTAGE	CEILING SYSTEMS	DRIVERS	OPTIONS & CONTROLS
WAL14										
	LED27 2700K (90CRI) LED3 3000K LED35 3500K LED4 4000K LED3-90 90CRI LED35-90 90CRI LED4-90 90CRI	LO Low MO Medium SO Standard HO High PROG Program-mable light output (Specify desired lm/ft or w/ft)	2' 3' 4' 6' 8' R (Row length in 1' increments)	WFA White Frost Acrylic (Standard) P Perforated	TMW Textured Matte White YGW Gloss White (Standard) Y Premium Color CC Custom Color	SC Single Circuit	UNV (120-277) 347 (Emergency battery requires a Step Down transformer)	WM Direct to Wall (Standard) SUR* Surface Mount VWM Vertical Wall Mount	ND Non-Dimming DM10 0-10v, 10% Dimming (Standard) DM01 0-10v, 1% Dimming STEP Step Dimming, 100-50-Off, Osram NOTE: Lumens and watts per foot may differ for STEP drivers, consult factory LDE5 5%, Lutron (Ecosystem) LDE1 1%, Lutron (Soft Fade to Black, Ecosystem) L3DA 1%, Lutron, 3 Wire ECO 1% 0-10v, EldoLED ECDA 1% DALI, EldoLED SOLO 0.1% 0-10v, EldoLED (Dim to Dark) SODA 0.1% DALI, EldoLED (Dim to Dark)	EML Emergency Battery, Low (1100 delivered lumens) 3' or longer fixtures or remote mount w/in 30' EMH Emergency Battery, High (1500 delivered lumens) 4' or longer fixtures or remote mount w/in 30' 505 WattStopper Ultrasonic Occupancy Sensor (WM only, 3' or longer fixtures) 505-STEP: Dim to 50% 505-DM: Dim to 1% PRUBIN Meticulous Binning and Labeling every LED Board within a 2-Step MacAdams Ellipse



Prudential Ltg. reserves the right to change design specifications or materials without notice. Please visit prulite.com for most current data.
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Wall Mount

1

11-01-2017



PHOTOMETRICS

Low Output:

WAL14-LED4-LO-WFA

2203 Delivered Lumens

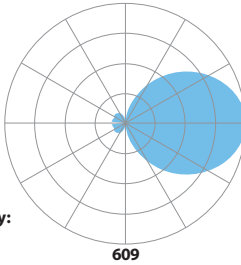
18.5 Watts

116 lm/w

4000 CCT

Light Labs

#L091407201



Zonal Lumen Summary:

0-90 = 50%

90-180 = 50%

Vertical Angle	0	25	45	65	90
0	609	609	609	609	609
5	604	604	604	605	605
15	574	576	579	581	583
25	521	525	531	538	541
35	449	456	465	476	481
45	365	375	386	401	408
55	276	286	300	360	327
65	184	194	203	233	245
75	92	108	136	162	178
85	19	66	96	118	127
90	1	26	48	67	74
95	9	27	38	50	55
105	33	47	55	55	53
115	50	59	71	77	78
125	61	66	79	90	94
135	68	76	82	93	99
145	71	82	86	90	95
155	64	78	87	91	93
165	69	66	78	87	91
175	73	72	63	55	59
180	0	0	0	0	0

LUMEN MAINTENANCE

Designed to last with cool running mid-power LEDs projected to maintain 90% (L90) of their initial output for 100,000 hours (at HO), and L70 exceeding 150,000 hours.

LED SYSTEM

LED modules and drivers are field replaceable.

PROG

(OPTIONAL)

Programmable light output. Specify desired lumens or watts per linear foot. Min: 2.5 w/ft, consult factory for requests above 12 w/ft.

BINNING

Standard binning (all Prudential LED boards) includes testing at the chip level and board integration to provide consistent color temperature within a 3-step MacAdam ellipse, with +/- 5% lumen output range and +/- .004 Duv.

PRUBIN™

(OPTIONAL)

Prudential Ltg's exclusive 'job binning' method that ensures color temperature consistency across all luminaires on a project. Meticulously testing and labeling **EVERY LED BOARD** to +/- 25 lumens, +/- 50k CCT and +/- .004 Duv — while also separating positive from negative — allows us to match color, hue and intensity throughout a project and provides a consistent color temperature within a 2-step MacAdam ellipse.

LABELS

ETL damp labeled and I.B.E.W. manufactured.

ELECTRICAL

Must specify LED dimming controls. LED fixtures have constant current driver(s) with less than 20% THD when loaded to a minimum of 60%. Drivers sink a maximum of 6mA per driver. DM10 LED drivers are 0-10V dimmable and are compatible with most 0-10V wall slide dimmers and direct 0-10V analog signal dimmers. Max driver size 1.65" w x 1.25" h.

CONSTRUCTION

Housing 20-gauge steel, >20% PC recycled, 100% recyclable

End Plates 20-gauge steel, >20% PC recycled, 100% recyclable

Lens Frosted acrylic, 100% recyclable

MOUNTING

Mounted directly to a wall or surface mounted on ceilings

WEIGHT

2 lbs/ft

WARRANTY

Single-source, 5 year limited warranty covers standard components and construction.

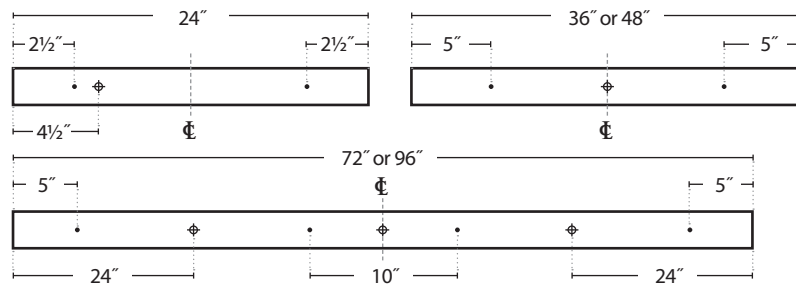


Choose from one of our Premium Colors with no set-up fee.

For paint chip samples, please e-mail: info@prulite.com

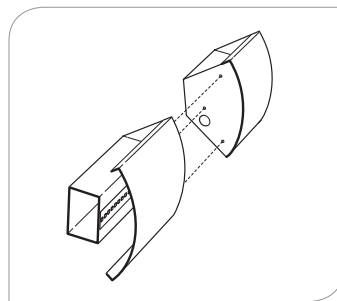


MOUNTING DETAIL



- Mounting Hole
- ◆ 3/8" Wiring K.O.

ADJOINING DETAIL



CONTROLS





TWR1 LED LED Wall Luminaire



Catalog
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

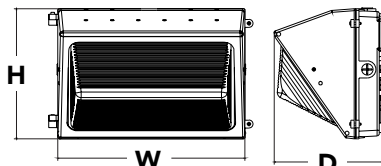
Specifications

Width: 12-15/16"
(32.9 cm)

Height: 9"
(22.9 cm)

Depth: 7-1/2"
(19 cm)

Weight: 11.95 lbs
(5.42kg)



Introduction

The popular TWR1 luminaire is now available with long-lasting, energy-efficient LED technology. Featuring a classic dayform, the TWR1 LED offers a traditional appearance and is powered by advanced LEDs.

The TWR1 LED luminaire is powerful yet energy efficient, capable of replacing up to a 350W metal halide luminaire while saving up to 86% in energy costs. Offering an expected service life of more than 20 years, the TWR1 LED eliminates frequent lamp and ballast replacements associated with traditional technologies.

Ordering Information

EXAMPLE: TWR1 LED P2 50K MVOLT DDBTXD

TWR1 LED							
Series	Performance Package		Color Temperature		Voltage	Controls	Finish
TWR1 LED	P2	3,450 lumens	40K	4000 K ¹	MVOLT ²	(blank) No controls	DDBTXD Textured dark bronze
	P3	4,470 lumens	50K	5000 K ¹	347	PE Photo control	
	P4	5,550 lumens					

NOTES

- Correlated color temperature (CCT) shown is nominal per ANSI C78, 377-2008.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).

FEATURES & SPECIFICATIONS

INTENDED USE

The TWR1 LED combines traditional wall pack design with high-output LEDs to provide an energy-efficient, low maintenance LED wall pack suitable for replacing up to 350W MH fixtures. The traditional shape helps maintain building aesthetics when replacing only a portion of your building's wall packs. TWR1 LED is ideal for outdoor applications such as carports, loading areas, driveways and parking areas.

CONSTRUCTION

Rugged cast-aluminum housing with bronze polyester powder paint for lasting durability. Door is hinged on the side so door swings out of the way during installation and service. Castings are sealed with a one-piece gasket to inhibit the entrance of external contaminants. MVOLT driver operates on any line voltage from 120-277V (50/60Hz). All luminaires have 6kV surge protection. Rated for outdoor installations, -40°C minimum ambient.

OPTICS

High-performance LEDs maintain up to 90% of light output at 100,000 hours of service life (L90/100,000 hours). Prismatic glass lens designed for superior lighting distribution, uniformity and fixture spacing. See Lighting Facts label and photometry reports for specific fixture performance.

INSTALLATION

Designed for wall mounting above four feet from ground. Housing is configured for mounting directly over a standard 4" outlet box (by others) or for surface wiring via any of three convenient 1/2" threaded conduit entry hubs.

LISTINGS

UL Listed to U.S. and Canadian safety standards for wet locations. Tested in accordance with IESNA LM-79 and LM-80 standards.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY

5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Fixture Model Number	System Watts	Lumens	LPW	CRI
TWR1 LED P2 40K MVOLT	28	3,442	122	80
TWR1 LED P2 50K MVOLT	28	3,519	125	80
TWR1 LED P2 40K 347	30	3,375	111	80
TWR1 LED P2 50K 347	30	3,408	113	80
TWR1 LED P3 40K MVOLT	40	4,466	113	80
TWR1 LED P3 50K MVOLT	40	4,554	116	80
TWR1 LED P3 40K 347	42	4,264	102	80
TWR1 LED P3 50K 347	42	4,294	104	80
TWR1 LED P4 40K MVOLT	49	5,551	113	80
TWR1 LED P4 50K MVOLT	49	5,695	116	80
TWR1 LED P4 40K 347	51	5,902	115	80
TWR1 LED P4 50K 347	51	6,045	119	80

Electrical Load

Fixture Model Number	System Watts	Current Load (A) @				
		120V	208V	240V	277V	347V
TWR1 LED P2 40K MVOLT	28	0.23	0.13	0.12	0.10	0.08
TWR1 LED P2 50K MVOLT	28	0.23	0.13	0.12	0.10	0.08
TWR1 LED P2 40K 347	30	0.25	0.14	0.13	0.11	0.09
TWR1 LED P2 50K 347	30	0.25	0.14	0.13	0.11	0.09
TWR1 LED P3 40K MVOLT	40	0.33	0.19	0.17	0.14	0.12
TWR1 LED P3 50K MVOLT	40	0.33	0.19	0.17	0.14	0.12
TWR1 LED P3 40K 347	42	0.35	0.20	0.18	0.15	0.12
TWR1 LED P3 50K 347	42	0.35	0.20	0.18	0.15	0.12
TWR1 LED P4 40K MVOLT	49	0.41	0.24	0.20	0.18	0.14
TWR1 LED P4 50K MVOLT	49	0.41	0.24	0.20	0.18	0.14
TWR1 LED P4 40K 347	51	0.43	0.25	0.21	0.18	0.15
TWR1 LED P4 50K 347	51	0.43	0.25	0.21	0.18	0.15

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections in a **40°C ambient**, based on 6,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	60,000	100,000
LM Factor TWR1 LED	1.0	>0.96	>0.94	>0.92	>0.90

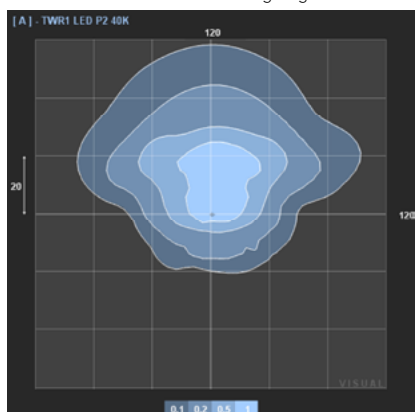
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting TWR1 LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards

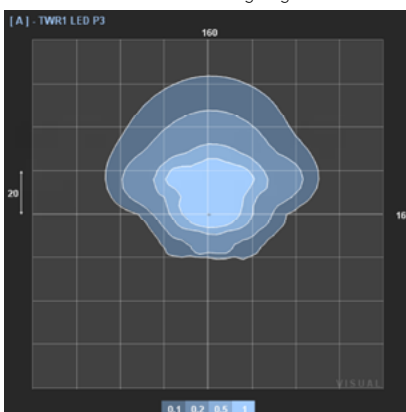
LEGEND

0.2 fc
0.5 fc
1.0 fc
2.0 fc

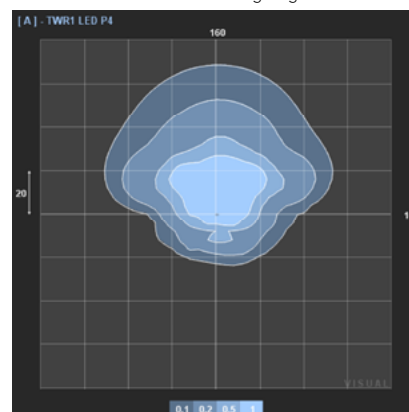
TWR1 LED P2 40K. Mounting height - 20'



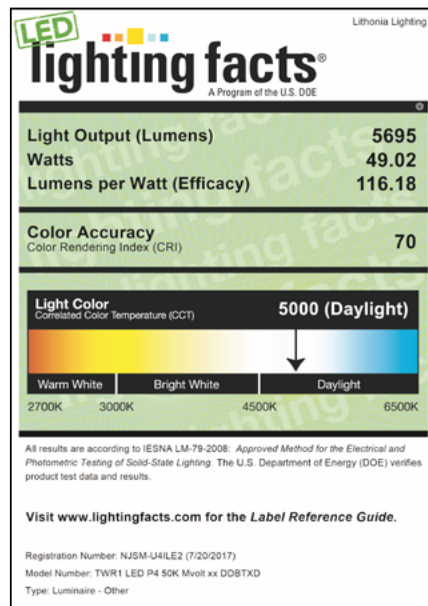
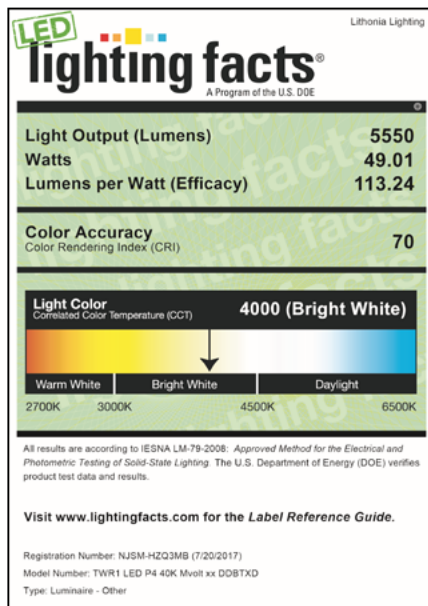
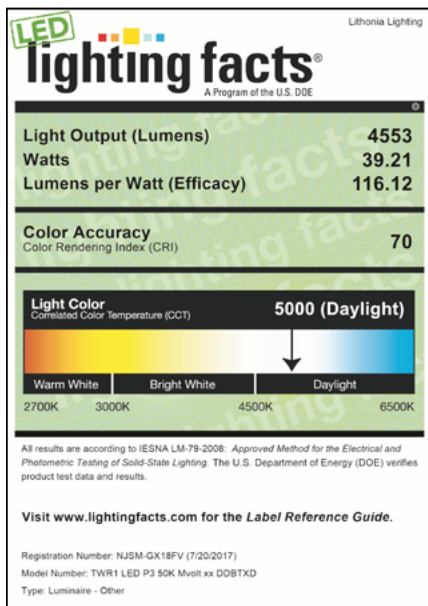
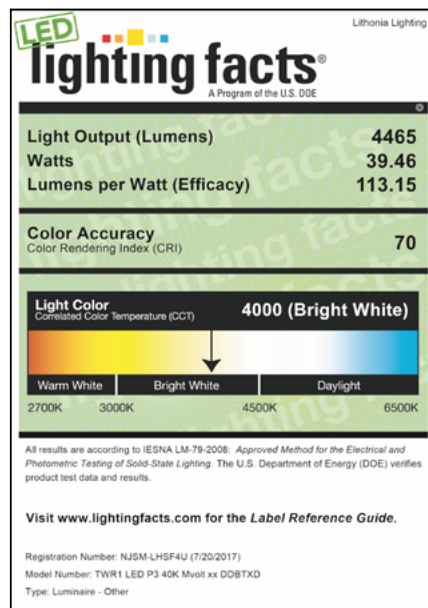
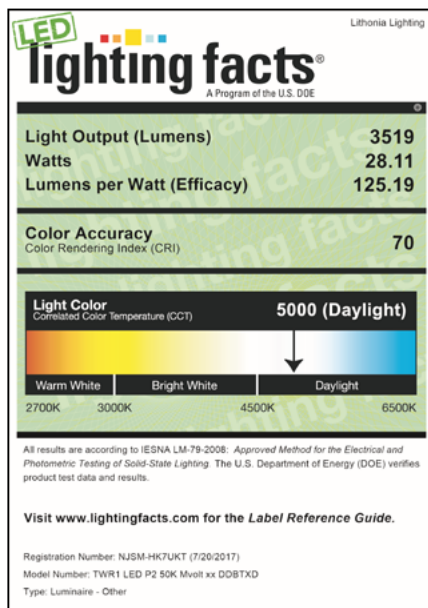
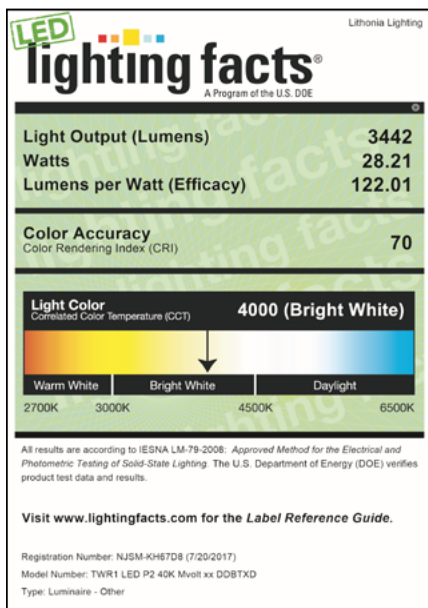
TWR1 LED P3. Mounting height - 20'



TWR1 LED P4. Mounting height - 20'



Lighting Facts Labels





TWR1 LED LED Wall Luminaire



Catalog
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

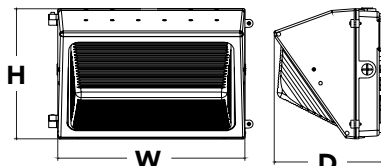
Specifications

Width: 12-15/16"
(32.9 cm)

Height: 9"
(22.9 cm)

Depth: 7-1/2"
(19 cm)

Weight: 11.95 lbs
(5.42kg)



Introduction

The popular TWR1 luminaire is now available with long-lasting, energy-efficient LED technology. Featuring a classic dayform, the TWR1 LED offers a traditional appearance and is powered by advanced LEDs.

The TWR1 LED luminaire is powerful yet energy efficient, capable of replacing up to a 350W metal halide luminaire while saving up to 86% in energy costs. Offering an expected service life of more than 20 years, the TWR1 LED eliminates frequent lamp and ballast replacements associated with traditional technologies.

Ordering Information

EXAMPLE: TWR1 LED P2 50K MVOLT DDBTXD

TWR1 LED					
Series	Performance Package		Color Temperature	Voltage	Controls
TWR1 LED	P2	3,450 lumens	40K 4000 K ¹	MVOLT ²	(blank) No controls
	P3	4,470 lumens	50K 5000 K ¹	347	PE Photo control
	P4	5,550 lumens			
					DDBTXD Textured dark bronze

NOTES

- Correlated color temperature (CCT) shown is nominal per ANSI C78, 377-2008.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).

FEATURES & SPECIFICATIONS

INTENDED USE

The TWR1 LED combines traditional wall pack design with high-output LEDs to provide an energy-efficient, low maintenance LED wall pack suitable for replacing up to 350W MH fixtures. The traditional shape helps maintain building aesthetics when replacing only a portion of your building's wall packs. TWR1 LED is ideal for outdoor applications such as carports, loading areas, driveways and parking areas.

CONSTRUCTION

Rugged cast-aluminum housing with bronze polyester powder paint for lasting durability. Door is hinged on the side so door swings out of the way during installation and service. Castings are sealed with a one-piece gasket to inhibit the entrance of external contaminants. MVOLT driver operates on any line voltage from 120-277V (50/60Hz). All luminaires have 6kV surge protection. Rated for outdoor installations, -40°C minimum ambient.

OPTICS

High-performance LEDs maintain up to 90% of light output at 100,000 hours of service life (L90/100,000 hours). Prismatic glass lens designed for superior lighting distribution, uniformity and fixture spacing. See Lighting Facts label and photometry reports for specific fixture performance.

INSTALLATION

Designed for wall mounting above four feet from ground. Housing is configured for mounting directly over a standard 4" outlet box (by others) or for surface wiring via any of three convenient 1/2" threaded conduit entry hubs.

LISTINGS

UL Listed to U.S. and Canadian safety standards for wet locations. Tested in accordance with IESNA LM-79 and LM-80 standards.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY

5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Fixture Model Number	System Watts	Lumens	LPW	CRI
TWR1 LED P2 40K MVOLT	28	3,442	122	80
TWR1 LED P2 50K MVOLT	28	3,519	125	80
TWR1 LED P2 40K 347	30	3,375	111	80
TWR1 LED P2 50K 347	30	3,408	113	80
TWR1 LED P3 40K MVOLT	40	4,466	113	80
TWR1 LED P3 50K MVOLT	40	4,554	116	80
TWR1 LED P3 40K 347	42	4,264	102	80
TWR1 LED P3 50K 347	42	4,294	104	80
TWR1 LED P4 40K MVOLT	49	5,551	113	80
TWR1 LED P4 50K MVOLT	49	5,695	116	80
TWR1 LED P4 40K 347	51	5,902	115	80
TWR1 LED P4 50K 347	51	6,045	119	80

Electrical Load

Fixture Model Number	System Watts	Current Load (A) @				
		120V	208V	240V	277V	347V
TWR1 LED P2 40K MVOLT	28	0.23	0.13	0.12	0.10	0.08
TWR1 LED P2 50K MVOLT	28	0.23	0.13	0.12	0.10	0.08
TWR1 LED P2 40K 347	30	0.25	0.14	0.13	0.11	0.09
TWR1 LED P2 50K 347	30	0.25	0.14	0.13	0.11	0.09
TWR1 LED P3 40K MVOLT	40	0.33	0.19	0.17	0.14	0.12
TWR1 LED P3 50K MVOLT	40	0.33	0.19	0.17	0.14	0.12
TWR1 LED P3 40K 347	42	0.35	0.20	0.18	0.15	0.12
TWR1 LED P3 50K 347	42	0.35	0.20	0.18	0.15	0.12
TWR1 LED P4 40K MVOLT	49	0.41	0.24	0.20	0.18	0.14
TWR1 LED P4 50K MVOLT	49	0.41	0.24	0.20	0.18	0.14
TWR1 LED P4 40K 347	51	0.43	0.25	0.21	0.18	0.15
TWR1 LED P4 50K 347	51	0.43	0.25	0.21	0.18	0.15

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections in a **40°C ambient**, based on 6,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	60,000	100,000
LM Factor TWR1 LED	1.0	>0.96	>0.94	>0.92	>0.90

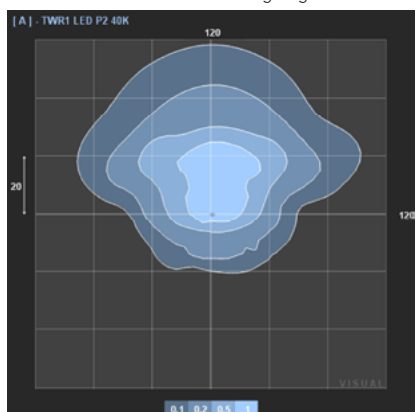
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting TWR1 LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards

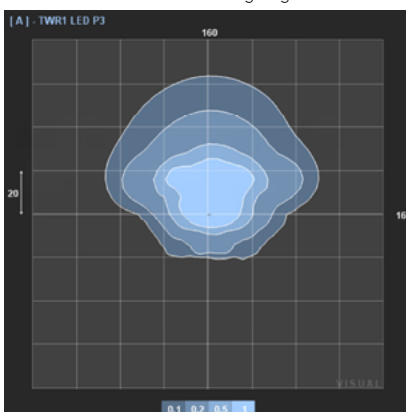
LEGEND

0.2 fc
0.5 fc
1.0 fc
2.0 fc

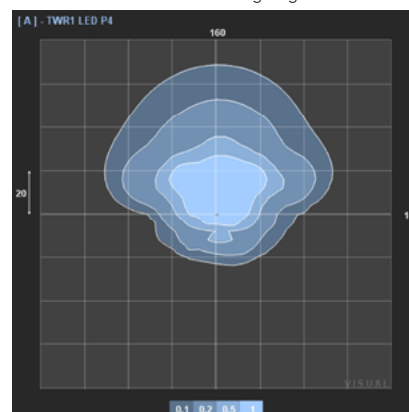
TWR1 LED P2 40K. Mounting height - 20'



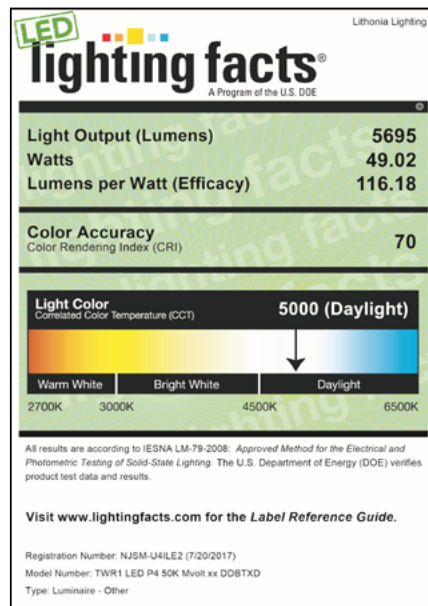
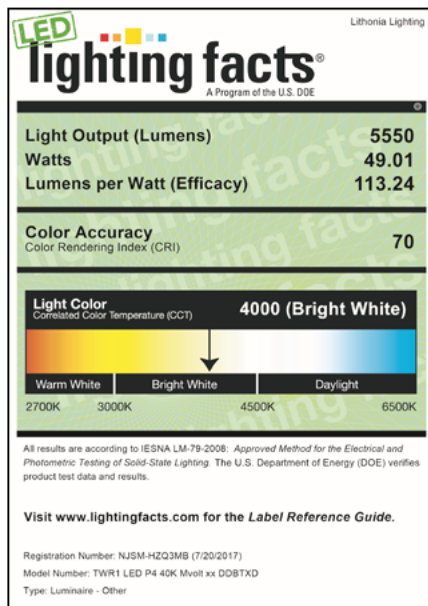
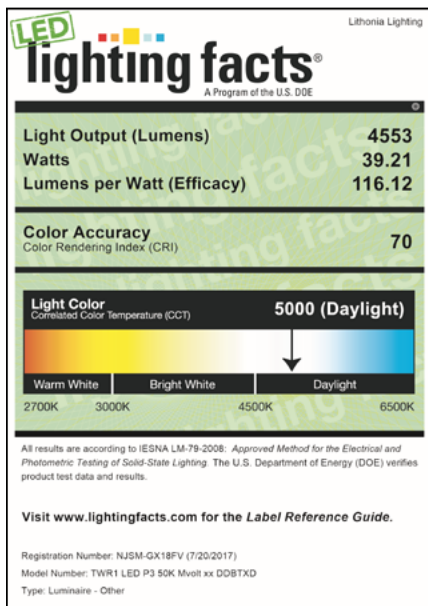
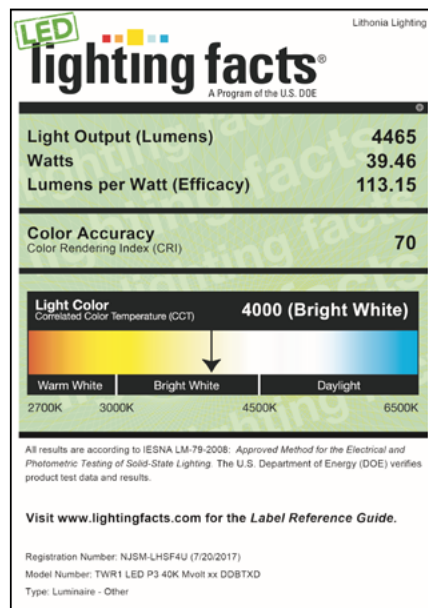
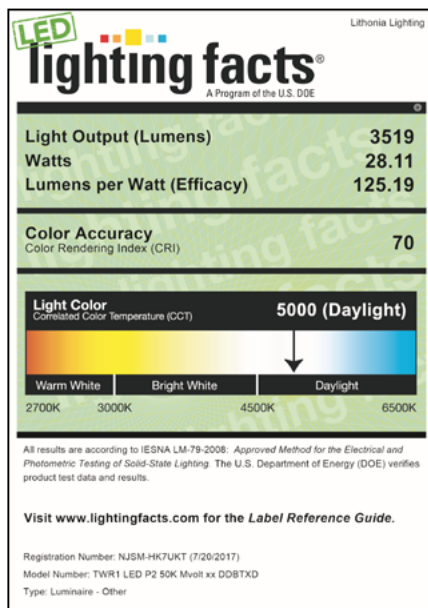
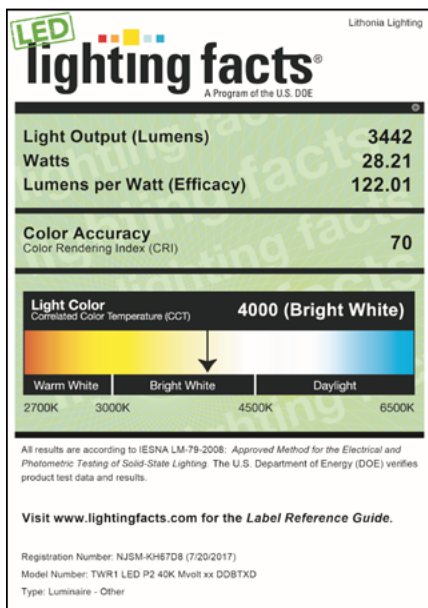
TWR1 LED P3. Mounting height - 20'



TWR1 LED P4. Mounting height - 20'



Lighting Facts Labels



FEATURES & SPECIFICATIONS

INTENDED USE — Ideal for applications requiring attractive, quick-installation exit signs and low energy consumption.

CONSTRUCTION — Engineering-grade thermoplastic housing is impact-resistant, scratch-resistant, and corrosion-proof. UL94V-0 flame rating. UV-stable resin resists discoloration from natural and man-made light sources.

Rugged unibody housing snaps together with no additional mechanical fasteners. Faceplate and back cover are interchangeable on housing. Positive snap-fit tabs hold faceplate securely, yet easily removable for lamp compartment access.

Universal directional Chevron inserts are easily removed and reinserted. Uniform illumination without shadows or hot spots. Reinforced, impact-resistant color panels. Letters 6" high with 3/4" stroke, with 100 ft. viewing distance rating, based upon UL924 standards.

U.S. Patent No. 5,526,251; 5,611,163; 5,739,639; 5,954,423; 5,988,825; 6,152,581; D383,501; D495,751 and 6,502,044. Other patents pending.

OPTICS — LEDs mounted on printed circuit boards. Low energy consumption — less than one watt. LED lamp operates in normal (AC input) and emergency (DC input) modes.

The typical life of the exit LED lamp is 10 years.

ELECTRICAL — Dual voltage input capability (120/277V).

Low-voltage disconnect prevents excessively deep discharge that can permanently damage battery. Conveniently located test switch and LED provide visual and manual means of monitoring system.

Constant-current series charger minimizes energy consumption and provides low operating costs. Printed circuit boards are 100% quality tested during manufacturing. Current-limiting charger circuitry protects printed circuit boards from shorts.

AC/LV reset (line latch) allows battery connection before AC power is applied and aids in preventing battery damage from deep discharge.

Crystal oscillator timing system with watchdog protection for precision accuracy.

Brownout protection is automatically switched to emergency mode when supply voltage drops below 80% of nominal.

Battery: Sealed, maintenance-free nickel-cadmium battery delivers 90-minutes capacity to emergency lamps. Two-state constant-current charge maximizes battery life and automatically recharges after battery discharge.

Diagnostics: Single-point microcomputer control for all electronic features.

Single multi-chromatic LED indicator to display two-state charging, test activation and three-state diagnostic status.

Test switch provides manual activation of 30-second diagnostic testing for on-demand visual inspection. Self-diagnostic testing for five minutes every 30 days and 30 minutes every six months.

Diagnostic evaluation of LED light source, AC to DC transfer, charging and battery condition. Continuously monitors AC functionality.

INSTALLATION — Universal (top-, end-, or back-) mounting. Easily removed mounting knockouts. J-box pattern on back panel. Housing snaps to canopy with four positive-locking tabs. Cam-locking pin tightly secures housing to canopy.

Ships standard with additional face plate.

LISTINGS — UL damp location listed 50°-104°F (10°-40°C) standard. NOM Certified (see options). Meets UL924, NFPA 101 (current Life Safety Code), NEC and OSHA illumination standards. NEMA Premium certified. Meets all applicable FCC requirements.

Catalog Number
Notes
Type



Thermoplastic Exits

LQM

LED LAMPS



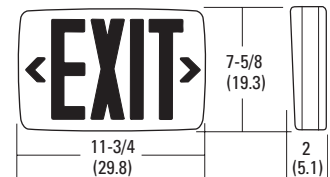
Specifications

Length: 11-3/4 (29.8)

Depth: 2 (5.1)

Height: 7-5/8 (19.3)

Weight: 2.6 lbs (1.2 kgs)



All dimensions are inches (centimeters) unless otherwise specified.

WARRANTY — 5-year limited warranty. (Battery is prorated.) Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

ORDERING INFORMATION

For shortest lead times, configure product using **bolded options**.

Example: LQM S W 3 R 120/277 EL N

LQM							
Family	Face type	Housing color	Number of faces	Letter color	Input voltage ²	Operation	Options
LQM	S Stencil P Panel ¹	(blank) Black W White	3 Single face with extra faceplate and color panel	R Red G Green	120/277 Dual voltage	(blank) AC only X2 Primary and secondary AC inputs provided ³ EL N Nickel cadmium battery	(blank) None NOM NOM certified for Mexico ⁴ SD Self-diagnostics ⁵ SDFIFA Self-diagnostics, fire alarm flashing interface and flashing emergency operation and intermittent audible alarm (one flash/one second) ⁵

Accessories: Order as separate item.			
ELA WG1	Back-mount wireguard ⁶	ELA WGEXE	End-mount wireguard ⁶
ELA WGEXT	Top-mount wireguard ⁶	ELA LQMUS12	12" stem kit ⁷

Notes

- Only available in custom signage. See spec sheet, [Custom-Signage](#).
- Some special voltages available. Consult factory.
- Must specify input voltage 120 or 277. Not available with other options.
- Available with stencil or panel faces in white housing.
- Only available with EL N operation.
- See spec sheet [ELA-WG](#).
- See spec sheet [ELA-Stemkits](#).

SPECIFICATIONS

ELECTRICAL				
Primary Circuit				
Type ¹	Typical LED life ²	Supply voltage	Input watts	Max. amps
Red LED AC Only	10 years	120	.62	.05
		277	.69	.06
Green LED AC Only	10 years	120	.62	.05
		277	.74	.06
Red LED Emergency	10 years	120	.71	.05
		277	.92	.06
Green LED Emergency	10 years	120	.66	.05
		277	.70	.06

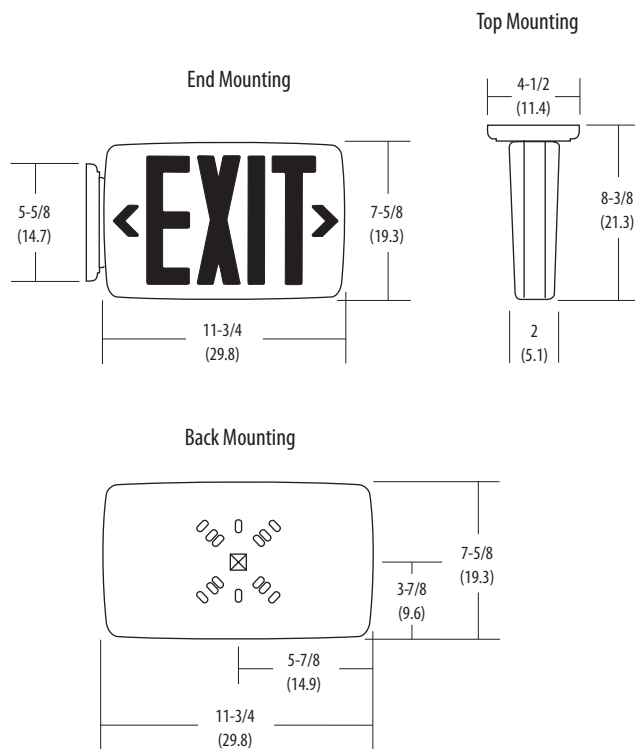
BATTERY				
Nickel Cadmium				
Voltage	Shelf life ³	Typical life ³	Maintenance ⁴	Optimum temperature ⁵
1.2	3 years	7-9 years	none	50°F - 104°F (10°C - 40°C)

Notes

- LED lamps operate in normal (AC input) and emergency (DC input) modes.
- Based on continuous operation. The typical life of the exit LED lamp is 10 years.
- At 77°F (25°C).
- All life safety equipment, including emergency lighting for path of egress must be maintained, serviced and tested in accordance with all National Fire Protection Association (NFPA) and local codes. Failure to perform the required maintenance, service, or testing could jeopardize the safety of occupants and will void all warranties.
- Optimum ambient temperature range where unit will provide capacity for 90 minutes. Higher and lower temperatures affect life and capacity.

MOUNTING

All dimensions are inches (centimeters) unless otherwise specified.
Shipping weight: 2.6 lbs. (1.2 kgs.)



FEATURES & SPECIFICATIONS

INTENDED USE — Ideal for applications requiring attractive, quick-installation exit signs and low energy consumption.

CONSTRUCTION — Engineering-grade thermoplastic housing is impact-resistant, scratch-resistant, and corrosion-proof. UL94V-0 flame rating. UV-stable resin resists discoloration from natural and man-made light sources.

Rugged unibody housing snaps together with no additional mechanical fasteners. Faceplate and back cover are interchangeable on housing. Positive snap-fit tabs hold faceplate securely, yet easily removable for lamp compartment access.

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U.S. Patent No. 5,526,251; 5,611,163; 5,739,639; 5,954,423; 5,988,825; 6,152,581; D383,501; D495,751 and 6,502,044. Other patents pending.

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Brownout protection is automatically switched to emergency mode when supply voltage drops below 80% of nominal.

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Diagnostic evaluation of LED light source, AC to DC transfer, charging and battery condition. Continuously monitors AC functionality.

INSTALLATION — Universal (top-, end-, or back-) mounting. Easily removed mounting knockouts. J-box pattern on back panel. Housing snaps to canopy with four positive-locking tabs. Cam-locking pin tightly secures housing to canopy.

Ships standard with additional face plate.

LISTINGS — UL damp location listed 50°-104°F (10°-40°C) standard. NOM Certified (see options). Meets UL924, NFPA 101 (current Life Safety Code), NEC and OSHA illumination standards. NEMA Premium certified. Meets all applicable FCC requirements.

Catalog Number
Notes
Type



QUANTUM®

Thermoplastic Exits

LQM

LED LAMPS



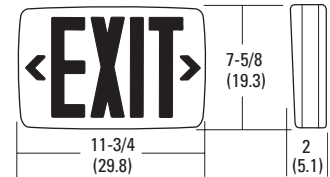
Specifications

Length: 11-3/4 (29.8)

Depth: 2 (5.1)

Height: 7-5/8 (19.3)

Weight: 2.6 lbs (1.2 kgs)



All dimensions are inches (centimeters) unless otherwise specified.

WARRANTY — 5-year limited warranty. (Battery is prorated.) Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

ORDERING INFORMATION

For shortest lead times, configure product using **bolded options**.

Example: LQM S W 3 R 120/277 EL N

LQM							
Family	Face type	Housing color	Number of faces	Letter color	Input voltage ²	Operation	Options
LQM	S Stencil P Panel ¹	(blank) Black W White	3 Single face with extra faceplate and color panel	R Red G Green	120/277 Dual voltage	(blank) AC only X2 Primary and secondary AC inputs provided ³ EL N Nickel cadmium battery	(blank) None NOM NOM certified for Mexico ⁴ SD Self-diagnostics ⁵ SDFIFA Self-diagnostics, fire alarm flashing interface and flashing emergency operation and intermittent audible alarm (one flash/one second) ⁵

Accessories: Order as separate item.			
ELA WG1	Back-mount wireguard ⁶	ELA WGEXE	End-mount wireguard ⁶
ELA WGEXT	Top-mount wireguard ⁶	ELA LQMUS12	12" stem kit ⁷

Notes

- Only available in custom signage. See spec sheet, [Custom-Signage](#).
- Some special voltages available. Consult factory.
- Must specify input voltage 120 or 277. Not available with other options.
- Available with stencil or panel faces in white housing.
- Only available with EL N operation.
- See spec sheet [ELA-WG](#).
- See spec sheet [ELA-Stemkits](#).

SPECIFICATIONS

ELECTRICAL				
Primary Circuit				
Type ¹	Typical LED life ²	Supply voltage	Input watts	Max. amps
Red LED AC Only	10 years	120	.62	.05
		277	.69	.06
Green LED AC Only	10 years	120	.62	.05
		277	.74	.06
Red LED Emergency	10 years	120	.71	.05
		277	.92	.06
Green LED Emergency	10 years	120	.66	.05
		277	.70	.06

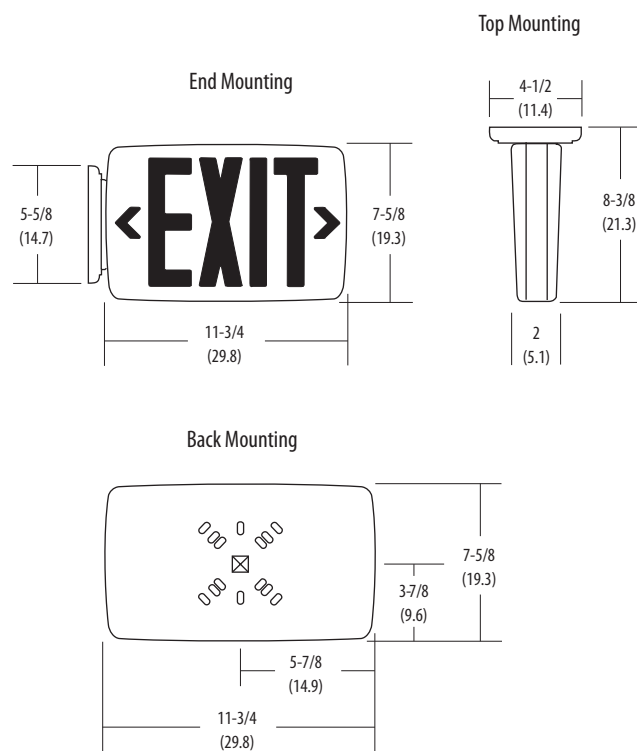
BATTERY				
Nickel Cadmium				
Voltage	Shelf life ³	Typical life ³	Maintenance ⁴	Optimum temperature ⁵
1.2	3 years	7-9 years	none	50°F - 104°F (10°C - 40°C)

Notes

- LED lamps operate in normal (AC input) and emergency (DC input) modes.
- Based on continuous operation. The typical life of the exit LED lamp is 10 years.
- At 77°F (25°C).
- All life safety equipment, including emergency lighting for path of egress must be maintained, serviced and tested in accordance with all National Fire Protection Association (NFPA) and local codes. Failure to perform the required maintenance, service, or testing could jeopardize the safety of occupants and will void all warranties.
- Optimum ambient temperature range where unit will provide capacity for 90 minutes. Higher and lower temperatures affect life and capacity.

MOUNTING

All dimensions are inches (centimeters) unless otherwise specified.
Shipping weight: 2.6 lbs. (1.2 kgs.)



APPLICATION GUIDE: STANDARD SPECIAL SIGNAGE

Lithonia Lighting offers special signage signs to suit many applications. The Signature and Quantum families highlighted below are illuminated with energy-efficient, long-life Light Emitting Diodes (LEDs).

WARRANTY — Complete warranty terms located at:

www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

Specifications subject to change without notice.

Catalog Number
Notes
Type



ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LE P 1 R EL N SW02

Family		Face type	Housing color		Number of faces		Letter color	Input voltage		Operation	
LE	Signature die-cast aluminum sign ¹	P Panel	(blank)	Matte black, brushed aluminum face	1	Single face	R Red	120/277 Dual voltage ⁵	(blank)	AC only	
LQM	Quantum thermoplastic sign ^{2,3}		W	White	2 Double face	3 Single face with extra faceplate and color panel ⁴	G Green		EL N	Nickel-cadmium battery	
Special wording											
SW01	AREA OF REFUGE ⁶		SW05	BEAM IN USE ^{6,7}	SW09	IN USE ^{6,7}		SW13	ON AIR ^{6,7}		
SW02	AREA OF RESCUE ⁶		SW06	DARK ROOM IN USE ^{6,7}	SW10	LASER IN USE ^{6,7}		SW14	ROOM IN USE ^{6,7}		
SW03	AREA OF RESCUE ASSISTANCE ⁶		SW07	EXIT Arabic/English ^{8,9}	SW11	MAGNET IN USE ^{6,7}		SW15	SALIDA ⁹		
SW04	AREA OF RESCUE ASSISTANCE with access pictogram ⁶		SW08	EXIT with access pictogram ⁹	SW12	NO EXIT ⁹		SW16	X-RAY IN USE ^{6,7}		
								SW17	Handicap Symbol ⁶		

Notes

- See spec sheet [LE-LRE](#) for complete specifications
- Only available in white housing. EL N operation only available in red letters for LQM family.
- See spec sheet [LQM](#) for complete specifications
- Only available with LQM family.

- Only required when ordering LQM family (ex: LQM P W 3 R 120/277 SW01).
- UL Listed as an electric sign.
- Not available with EL N operation.
- Only available in red letters.
- Not available with UL listing.

CUSTOM SIGNAGE

MAINTENANCE

All life safety equipment, including emergency lighting for path of egress must be maintained, serviced, and tested in accordance with all National Fire Protection Association (NFPA) and local codes. Failure to perform the required maintenance, service, or testing could jeopardize the safety of occupants and will void all warranties.