DESCRIPTION

GRLED is a recessed lensed troffer series which offers a high quality luminaire dedicated 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 commercial office spaces, schools, hospitals or retail merchandising areas.

Catalog #	
Project	
Comments	
Prepared by	

Type	
Date	

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. 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.

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 from Cooper Controls (www.coopercontrol.com) to maximize energy savings.

Electrical
Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with typical CRI 85. Projected life is 60,000 hours at 70% lumen output. cULus listed. 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
Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing and driver cover finished with new 90% reflective white enamel for superior performance. "PAF" Painted After Fabrication option also available.

Hinging/Latching
Positive spring loaded steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side.

Frame/Optical Shielding
Die formed, flat steel door with frost #12 pattern acrylic prismatic lens offering the balance of rigidity and light stability. Primary stocking skus come standard with robust -.125 lens.

Compliance
Modules are UL recognized components and indoor luminaires are cULus listed for 25 C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.

24GR LED
LED

2' X 4' LED TROFFER
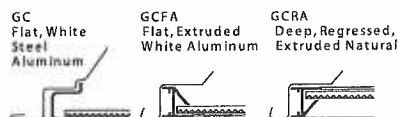
General Recessed LED Troffer
For Use in Insulated Ceilings

3-1/4" [83mm]

23-3/4" [603mm]
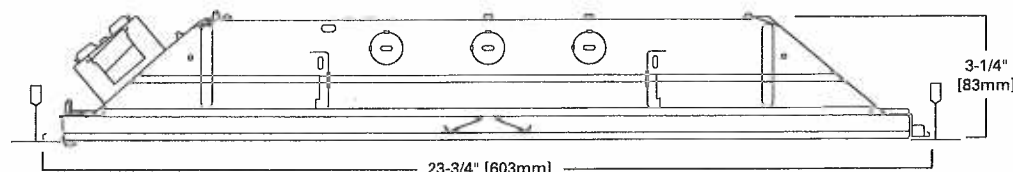
WATTAGE

Lumens Package	Wattage
3000	27W
3400	32W
3800	35W
4200	37W
4800	43W
5600	51W
6400	60W
7200	63W
8500	78W
9000	85W

MOUNTING DATA

47-15/16" [1218mm]

23-3/4" [603mm]

47-3/4" [1212mm]

DOOR FRAMES

GC
Flat, White
Steel
Aluminum

GCFA
Flat, Extruded
White Aluminum

GCRA
Deep, Regressed,
Extruded Natural

CEILING COMPATIBILITY

G
Grid/Lay-in
Standard

G
Concealed T

G
Slot Grid

Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G
Slot Grid	G

(Verify compatibility/ consult factory.)

FATON
Powering Business Worldwide

LINEAR DISCONNECT
Safe and convenient means of disconnecting power

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PHOTOMETRICS

24GR-LD4-48-F1-UNV-L835-U

Dimming Driver

Linear LED 3500K

Spacing criterion: (II) 1.2 x mounting height, (⊥) 1.2 x mounting height

Lumens: 4841

Input Watts: 43.7W

Efficacy: 110.8 lm/W

Test Report: 24GR-LD4-48-F1-UNV-L835-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	2060	2060	2060
5	2061	2051	2057
10	2028	2020	2026
15	1975	1967	1971
20	1894	1886	1892
25	1786	1780	1785
30	1656	1652	1646
35	1500	1489	1484
40	1328	1313	1304
45	1149	1125	1108
50	966	935	910
55	784	750	729
60	617	585	566
65	469	443	436
70	349	327	334
75	247	236	251
80	162	160	178
85	86	83	96
90	0	0	0

24GR-LD4-64-F1-UNV-L835-CD1-U

Dimming Driver

Linear LED 3500K

Spacing criterion: (II) 1.2 x mounting height, (⊥) 1.2 x mounting height

Lumens: 6398

Input Watts: 60.8W

Efficacy: 105.2 lm/W

Test Report: 24GR-LD4-64-F1-UNV-L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	2719	2719	2719
5	2721	2706	2717
10	2679	2666	2678
15	2607	2593	2609
20	2499	2489	2507
25	2358	2352	2357
30	2182	2178	2173
35	1986	1971	1963
40	1758	1738	1724
45	1518	1490	1472
50	1268	1234	1213
55	1032	994	965
60	817	773	753
65	622	587	577
70	461	431	443
75	326	311	334
80	217	213	234
85	111	112	128
90	0	0	0

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	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	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	80	73	68	78	71	66	75	70	65	72	68	64	62
4	85	73	65	59	82	72	64	58	70	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	73	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	34
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

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	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	95	92	90	91	89	87	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	90	80	73	68	78	71	66	75	70	65	72	68	64	62
4	85	73	65	59	82	72	64	58	70	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	41	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	1568	32.4
0-40	2499	51.6
0-60	4041	83.5
0-90	4841	100.0
0-180	4841	100.0

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	2070	32.4
0-40	3298	51.6
0-60	5338	83.4
0-90	6398	100.0
0-180	6398	100.0

ORDERING INFORMATION

SAMPLE NUMBER: 24GR-LD4-48-F1-UNV-L835-CD1-U

Rating
Blank= Standard
ATW-SW4= Chicago Rated

Width / Length
24=2' x 4'

Trim Type
G=Grid/Lay-in (Standard)[1]
G=Concealed T
G=Slot Grid

Series[10]
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

LED Type
LD4=LED 4.0

LED Lumens Output[5]
Stock
38=3800
48=4800
64=6400
MTO
30=3000
34=3400
42=4200
56=5600
72=7200
85=8500
90=9000

Shielding
F1=A12 .125 HP (Standard)
A=A12 .095
A125=A12 .125

Voltage[2]
UNV=Universal Voltage 120-277[3]

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]

CCT
L830=3000K
L835=3500K
L840=4000K
L850=5000K

Flex
Multiple Configurations Available

Driver Type
CD=0-10V Dimming Driver
SD=Step-Dim Driver[8]
5LTD=Fifth Light (DALI) Driver[9]

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[6], [7]

Packaging
U=Unit Pack
PALC=Palletized Fixtures in Carton

ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips[1]
DF-24-W=2' x 4' Drywall Frame Kit

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] Nominal lumen output. [6] Gasketing only available with aluminum door frame. [7] Gasketing minimum .125. [8] Step dimming (bi-level) 1 driver, 3400, 3800, 4200, 4800, 5600, 6400, 2 driver - 7200 lumen models. [9] DALI available from 3800 - 8500 lumen models. [10] DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.	Pallet
24GR-LD4-48	20 lbs.	24
24GR-LD4-64	20 lbs.	24

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	24GR-LD4-30-F1-UNV-L8XX-CD1-U	3009	27.60	109.02
MTO	24GR-LD4-34-F1-UNV-L8XX-CD1-U	3416	32.00	106.75
Stock	24GR-LD4-38-F1-UNV-L8XX-CD1-U	3766	35.99	104.64
MTO	24GR-LD4-42-F1-UNV-L8XX-CD1-U	4249	37.31	113.88
Stock	24GR-LD4-48-F1-UNV-L8XX-CD1-U	4841	43.71	110.75
MTO	24GR-LD4-56-F1-UNV-L8XX-CD1-U	5553	51.97	106.85
Stock	24GR-LD4-64-F1-UNV-L8XX-CD1-U	6398	60.80	105.23
MTO	24GR-LD4-72-F1-UNV-L8XX-CD1-U	7174	63.7	112.66
MTO	24GR-LD4-85-F1-UNV-L8XX-CD1-U	8513	78.82	108.01
MTO	24GR-LD4-90-F1-UNV-L8XX-CD1-U	9020	85.12	105.97

*Stocked in both 3500K and 4000K. Made to order (MTO) requires a typical four week lead time.

Luna® 2x4

LED
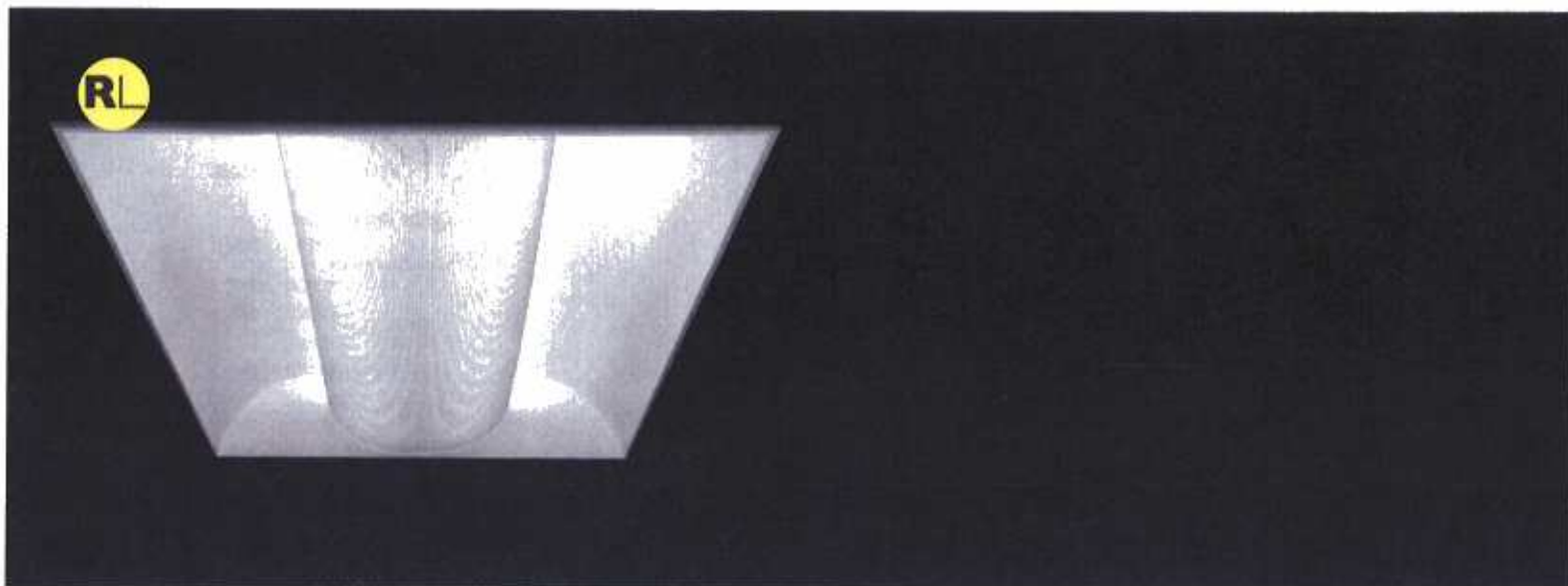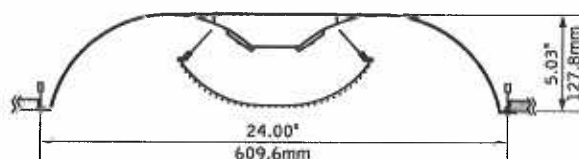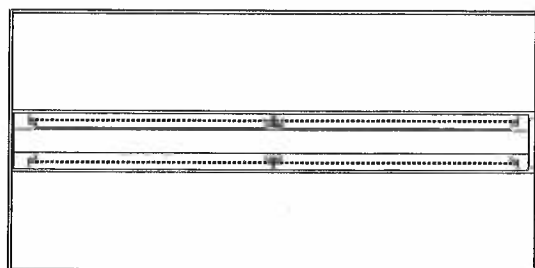
FOCAL POINT®

DIMENSIONAL DATA

5.03"
127.8mm

24.00"
609.6mm

Overall height for ST luminaire is 5.5"

FEATURES

Architectural recessed LED luminaire with perforated center basket.

Classic style updated with the latest technology.

Reflector and end caps form seamless one-piece housing.

High reflectance, low gloss Matte White finish controls glare.

Comparable output to fluorescent versions with reduced wattage.

Luna® LED provides high angle uniform distribution ideal for comfortable general illumination.

PERFORMANCE

Delivered Lumens: 5000lm

Total System Watts: 62W
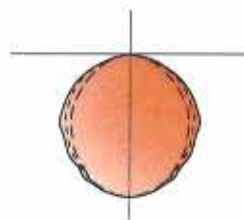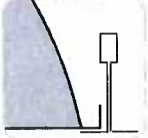
PRODUCT OVERVIEW

Lumen Output:	4000-5500lm
Wattage:	47-69W
LPW:	80-85
SDCM:	3
Lumen Maintenance:	L90 @ 114,000hrs

Photometric performance is measured in accordance with IESNA LM-79.
Visit focalpointlights.com for complete photometric data

A 1

MOUNTING INFORMATION

grid

specify "G" for flat 9/16" and 15/16" tee or "ST" for 9/16" slot tee grid types.

"G" flat tee   "ST" slot tee
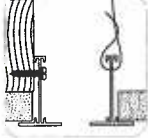
Overall height for ST luminaire is 5.50".

drywall frame kit

specify "DF" Drywall Frame Kit for drywall ceiling conditions.

Use tie–wire or screws to secure frame kit.

cut out dimensions:
2': Min: 24.25"
    Max: 24.563"
4': Min: 48.25"
    Max: 48.563"

SPECIFICATIONS

LED System

Proprietary linear LED module incorporates premium LEDs on a robust platform to achieve excellent thermal management. LEDs are placed to promote a uniform appearance. Available in 3000K, 3500K or 4000K with CRI>80. 0-10V dimming driver standard. LED modules and drivers are replaceable.

Construction

One-piece 20 Ga. steel reflector and housing. 20 Ga. steel ends form finished housing. LEDs are shielded by detachable 22 Ga. steel perforated shield with acrylic lens insert. LED shield is secured by four spring–pins allowing shield to hinge down for maintenance. Top access 20 Ga. steel driver compartment. Weight: 29 lbs.

Optic

One-piece 20 Ga. steel reflectors finished in Matte Satin White powder coat.

Electrical

Standard 120-277V driver includes 0-10V analog dimming, dimming range 100% – 10% Power factor > .9.

Emergency Battery

Bodine BSL310–CAN. Emergency output—10 watts for 90 minutes.
Bodine BSL20LV (U.S. only). Emergency output—20 watts for 90 minutes.

Labels

UL and cUL Listed. Suitable for Dry or Damp Locations, indoor use only.

Finish

Polyester powder coat applied over a 5-stage pre–treatment.

Lumen Maintenance

Calculated: L90 at 114,000 hours   Reported: L90 at >61,000 hours
Derived from EPA TM-21 calculator

Lifetime and warranty

LED System rated for operation in ambient environments up to 25°C. 5 year limited warranty.

PERFORMANCE CHART

Delivered Lumens	Tested System Watts	LPW
4000 Lumens	47	85
4500 Lumens	55	82
5000 Lumens	62	81
5500 Lumens	69	80

*Lumen output may vary +/-5%. Actual wattage may vary +/-5%. Wattage multiplier for 3000K is 1.17.

ORDERING

Luminaire Series		**FLUL**
Luna LED	FLUL	
Nominal Size		**24**
2' x 4'	24	
Shielding		**PS**
Perforated Shield	PS	
Lumen Output		
4000 Lumens	4000L	
4500 Lumens	4500L	
5000 Lumens (LD1 only)	5000L	
5500 Lumens (LD1 only)	5500L	
Color Temperature		
3000K (Wattage multiplier 1.17)	30K	
3500K	35K	
4000K	40K	
Circuit		**1C**
Single Circuit	1C	
Voltage		
120 Volt	120	
277 Volt	277	
UNV Volt (Cannot be specified with EM option)	UNV	
Driver		
0-10V - 10% Dimming	LD1	
Lutron A-Series 1% EcoSystem Digital 4000L & 4500L only. (2) drivers supplied, (2) EcoSystem addresses consumed (consult factory for 3-wire control)	L3D	
Mounting		
Drywall Frame Kit (Cut out dimensions: Min: 12.25"/Max: 12.563" Min: 48.25"/Max: 48.563")	F	
Grid	G	
Slot Tee	ST	
Factory Options		
Air Return (Adds 0.875" to overall height)	AR	
Chicago Plenum	CP	
Bodine BSL310 Emergency Battery (Adds 3.25" to overall height)	B310	
Bodine BSL20LV High Output Emergency Battery (Adds 3.25" to overall height. U.S. Only)	B20	
Positional Clip	EQ	
6' New York City Flex Whip	FNY	
6' Flex Whip	FW	
Finish		**WH**
Matte Satin White	WH	

QS 10 DAY*

Luna™ 2x4
LED

FLUL-24-PS-5000L-35K-1C-120-LD1-G-WH

Filename: FLUL24PS5000L35K.IES

Lumens: 5000lm
System Watts: 62 W
LPW: 81

CANDELPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle				
	0°	22.5°	45°	67.5°	90°
0°	1766	1766	1766	1766	1766
5°	1764	1761	1753	1754	1756
15°	1678	1680	1685	1698	1705
25°	1523	1533	1559	1594	1611
35°	1309	1331	1385	1441	1468
45°	1048	1091	1172	1244	1281
55°	759	825	927	1016	1055
65°	472	551	656	714	728
75°	239	294	329	363	371
85°	51	63	70	72	71
90°	0	0	0	0	0
95°	0	0	0	0	0
105°	0	0	0	0	0
115°	0	0	0	0	0
125°	0	0	0	0	0
135°	0	0	0	0	0
145°	0	0	0	0	0
155°	0	0	0	0	0
165°	0	0	0	0	0
175°	0	0	0	0	0
180°	0	0	0	0	0
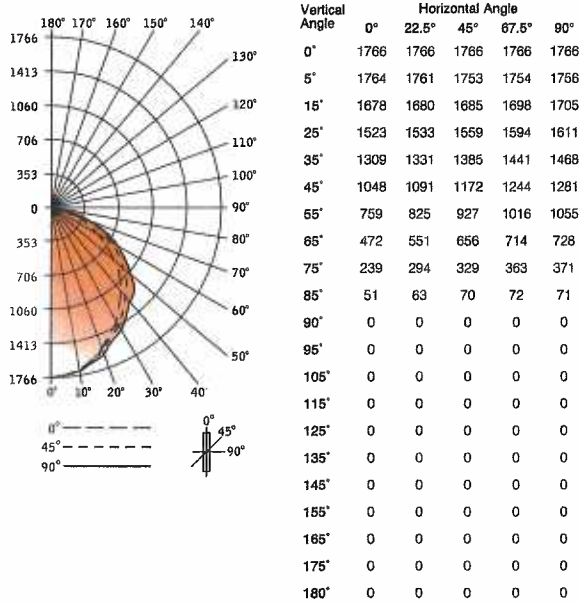
LUMEN SUMMARY

	Zone	Lumens	% Fixture
	0-30°	1364	27.3
	0-40°	2231	44.6
	0-60°	3952	79
Total Luminaire	0-90°	5000	100.0
	0-180°	5000	100.0

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	2123	2375	2595
55°	1894	2314	2634
65°	1601	2224	2467
75°	1323	1823	2054
85°	831	1152	1173

Go to www.focalpointlights.com for additional photometric data.

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DESCRIPTION

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Catalog #	Type
Project	
Comments	Date
Prepared by	

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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. See ordering information for details.

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22GR
LED

2' X 2' LED TROFFER

General Recessed LED Troffer For Use in Insulated Ceilings

3-1/4" [83mm]

23-3/4" [603mm]

MOUNTING DATA

23-3/4" [603mm]

23-3/4" [603mm]

DOOR FRAMES

GC
Flat, White
Steel
Aluminum

GCFA
Flat, Extruded
White Aluminum

GCRA
Deep, Regressed,
Extruded Natural

CEILING COMPATIBILITY

G
Grid/Lay-in
Standard

G
Concealed T

G
Slot Grid

Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G
Slot Grid	G
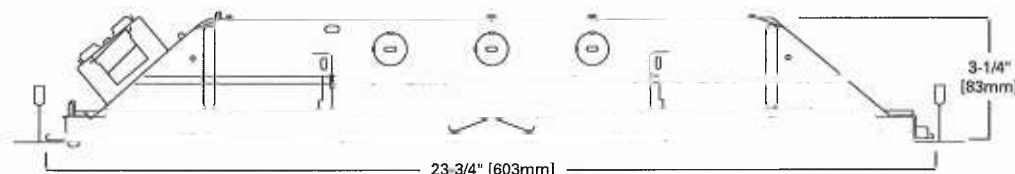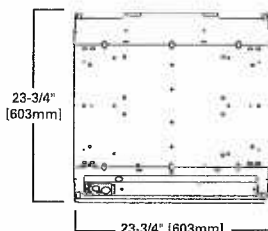
(Verify compatibility/ consult factory.)
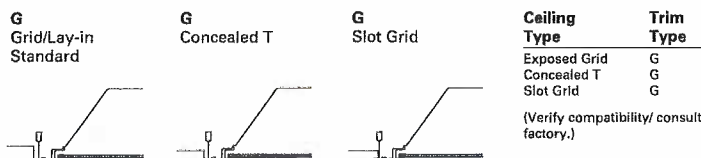
WATTAGE

Lumens Package	Wattage
2000	20W
2400	23W
2800	28W
3200	33W
3600	38W
4000	45W
4300	50W

LINEAR DISCONNECT
Safe and convenient means of disconnecting power

PHOTOMETRICS
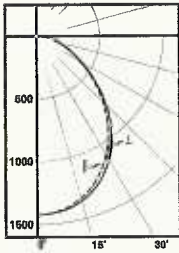
22GR-LD4-32-F1-UNV-L835-CD1-U

Dimming Driver

Linear LED 3500K

Spacing criterion:
(II) 1.1 x mounting height, (⊥) 1.2 x mounting height

Lumens: 3212

Input Watts: 33.2W

Efficacy: 96.7 lm/W

Test Report:
22GR-LD4-32-F1-UNV-L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1411	1411	1411
5	1404	1401	1410
10	1377	1377	1389
15	1328	1334	1350
20	1264	1273	1295
25	1180	1196	1223
30	1080	1101	1131
35	973	992	1020
40	853	867	893
45	730	739	757
50	604	611	624
55	486	489	503
60	378	379	390
65	295	286	293
70	226	211	218
75	170	155	155
80	119	106	103
85	65	56	54
90	0	0	0
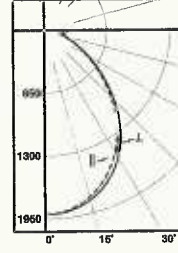
22GR-LD4-43-F1-UNV-L835-CD1-U

Dimming Driver

Linear LED 3500K

Spacing criterion:
(II) 1.2 x mounting height, (⊥) 1.2 x mounting height

Lumens: 4310

Input Watts: 50.5W

Efficacy: 85.3 lm/W

Test Report:
22GR-LD4-43-F1-UNV-L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1892	1892	1892
5	1884	1879	1892
10	1845	1846	1863
15	1782	1788	1814
20	1693	1708	1739
25	1582	1604	1639
30	1452	1477	1516
35	1306	1327	1368
40	1142	1161	1199
45	976	991	1020
50	808	821	842
55	651	653	672
60	509	511	523
65	392	384	393
70	302	285	290
75	230	208	209
80	160	141	140
85	88	75	71
90	0	0	0

Coefficients of Utilization

Effective floor cavity reflectance 20%

rc	80%				70%				50%			30%			10%			0%
rw / RCR	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	110	105	101	97	107	103	99	96	99	96	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	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	62
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54
5	78	66	58	52	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	45	54	49	44	42
7	68	55	46	41	66	54	46	40	53	45	40	51	45	40	50	44	40	38
8	63	50	42	37	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	44	37	33	43	37	33	31
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	40	34	30	28

Coefficients of Utilization

Effective floor cavity reflectance 20%

rc	80%				70%				50%			30%			10%			0%
rw / RCR	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	110	105	101	97	107	103	99	96	99	96	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	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	62
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54
5	78	66	58	52	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	45	54	49	44	42
7	68	55	46	41	66	54	46	40	53	45	40	51	45	40	50	44	40	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	44	37	33	43	37	33	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	1061	33.0
0-40	1680	52.3
0-60	2691	83.8
0-90	3212	100.0
0-180	3212	100.0

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1423	33.0
0-40	2254	52.3
0-60	3611	83.8
0-90	4310	100.0
0-180	4310	100.0

ORDERING INFORMATION

SAMPLE NUMBER: 22GR-LD4-27-F1-UNV-L835-CD1-U

Rating
Blank= Standard
ATW-SW4= Chicago Rated

Width / Length
22=2' x 2'

Trim Type
G=Grid/Lay-in (Standard)[1]
G=Concealed T
G=Slot Grid

Series [8]
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

LED Type
LD4=LED 4.0

LED Lumens Output [5]
Stock
24=2400
32=3200
43=4300
MTO
20=2000
28=2800
36=3600
40=4000

Shielding
F1=A12 .125 HP (Standard)
A=A12 .095
A125=A12 .125

Voltage [2]
UNV=Universal Voltage 120-277 [3]

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]

CCT
L830=3000K
L835=3500K
L840=4000K
L850=5000K

Flex
Multiple Configurations Available

Driver Type
CD=0-10V Dimming Driver
SD=Step-Dim (Bi Level) [8]
5LTD=Fifth Light (DALI) Driver [8]

Number of Drivers
1=1 Driver

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],[7]

Packaging
U=Unit Pack
PALC=Palletized Fixtures In Carton

ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips[1]
DF-22-W=2' x 2' Drywall Frame Kit

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] Nominal lumen output. [6] Gasketing only available with aluminum door frame. [7] Gasketing minimum .125. [8] Step-Dim (Bi-Level) and Fifth Light (DALI) only available for 3,200 lumen and above. [8] DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

SHIPPING DATA

| Catalog No.	Wt.	Pallet
22GR-LD4-32	10 lbs.	48
22GR-LD4-43	10 lbs.	48

β
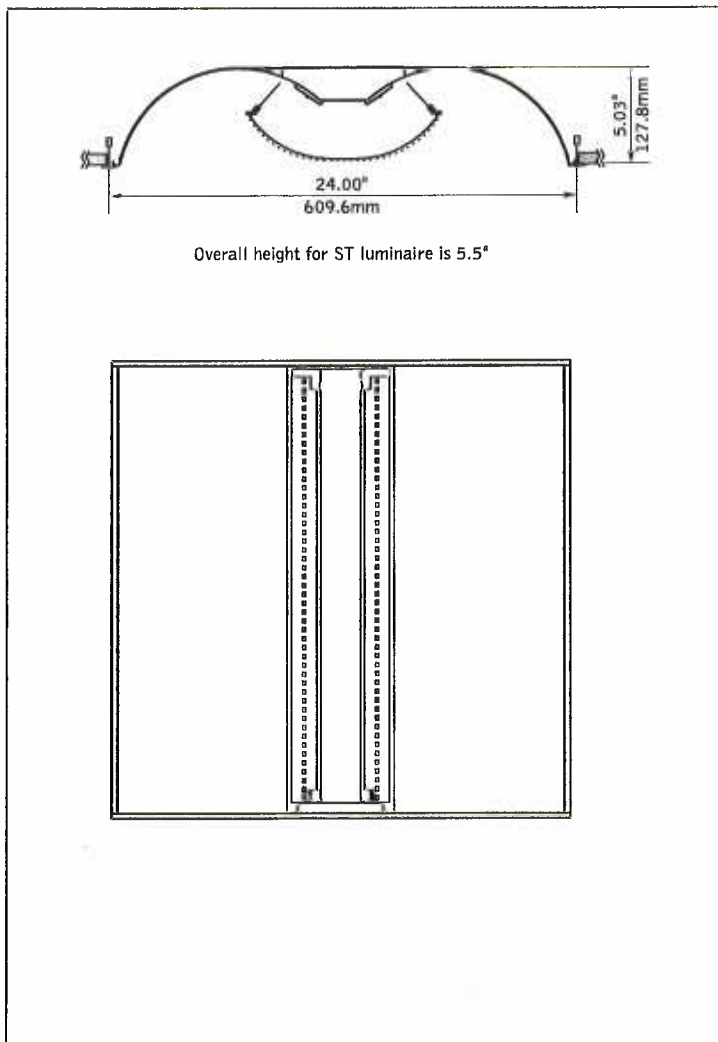
ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	22GR-LD4-20-F1-UNV-L8XX-CD1-U	2084	20.10	103.68
Stock	22GR-LD4-24-F1-UNV-L8XX-CD1-U	2432	23.78	102.27
MTO	22GR-LD4-28-F1-UNV-L8XX-CD1-U	2804	28.13	99.68
Stock	22GR-LD4-32-F1-UNV-L8XX-CD1-U	3212	33.15	96.89
MTO	22GR-LD4-36-F1-UNV-L8XX-CD1-U	3598	38.86	92.59
MTO	22GR-LD4-40-F1-UNV-L8XX-CD1-U	4016	45.31	88.63
Stock	22GR-LD4-43-F1-UNV-L8XX-CD1-U	4310	50.43	85.47

*Stocked in both 3500K and 4000K. Made to order (MTO) requires a typical four week lead time.
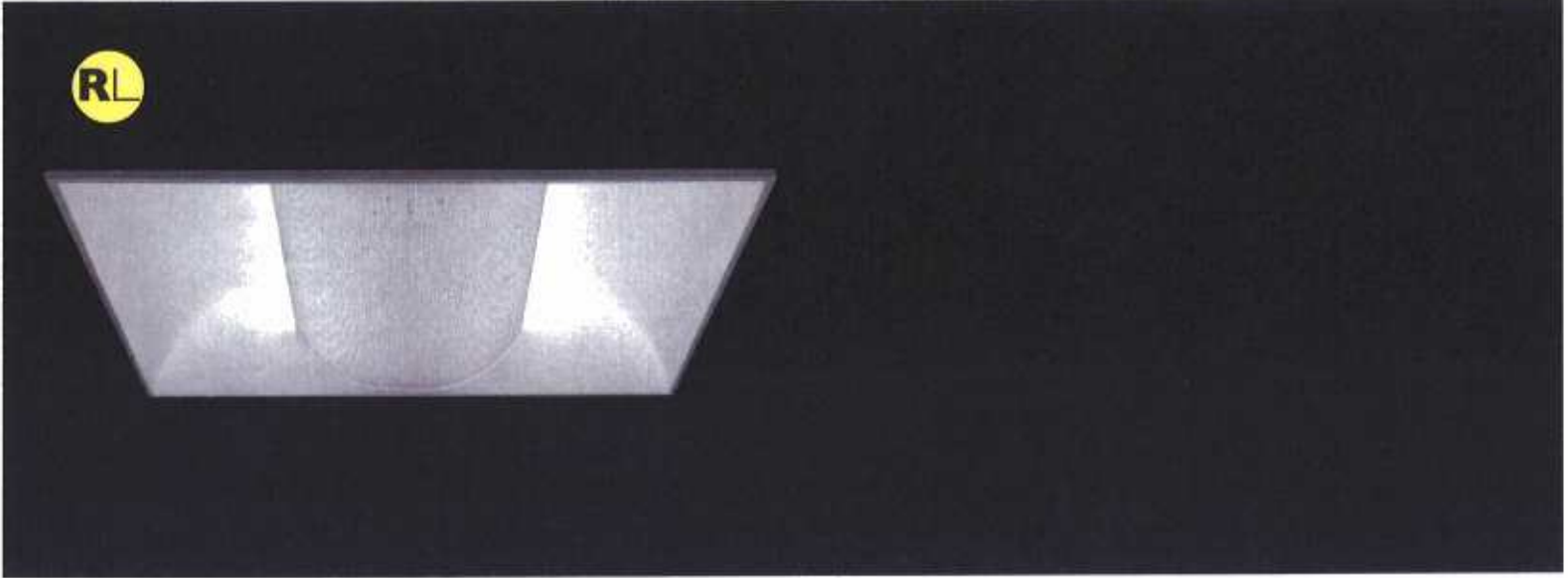
Luna® 2x2
LED

B1 RECESSED
B2 SURFACE

DIMENSIONAL DATA

24.00"
609.6mm

5.03"
127.8mm

Overall height for ST luminaire is 5.5"

FEATURES

Architectural recessed LED luminaire with perforated center basket.

Classic style updated with the latest technology.

Reflector and end caps form seamless one-piece housing.

High reflectance, low gloss Matte White finish controls glare.

Comparable output to fluorescent versions with reduced wattage.

Luna® LED provides high angle uniform distribution ideal for comfortable general illumination.

PERFORMANCE

Delivered Lumens: 2500lm

Total System Watts: 31W

PRODUCT OVERVIEW

Lumen Output:	2000-3500lm
Wattage:	23-47W
LPW:	74-87
SDCM:	3
Lumen Maintenance:	L90 @ 98,000hrs

Photometric performance is measured in accordance with IESN(...)
Visit focalpointlights.com for complete photometric data
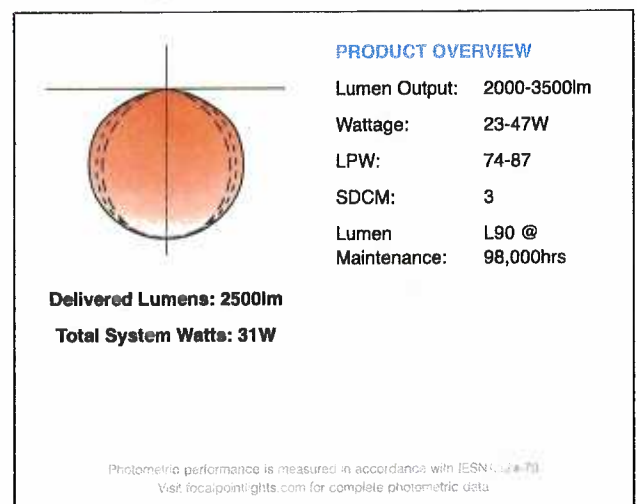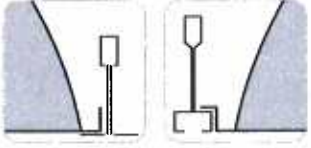
B1 RECESSED
B2 SURFACE

MOUNTING INFORMATION

grid
specify "G" for flat 9/16" and 15/16" tee or "ST" for 9/16" slot tee grid types.
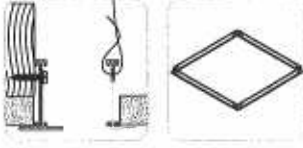
"G" flat tee   "ST" slot tee

Overall height for ST luminaire is 5.50".

drywall frame kit
specify "DF" Drywall Frame Kit for drywall ceiling conditions.

Use tie–wire or screws to secure frame kit.

cut out dimensions:
2': Min: 24.25"
    Max: 24.563"

SPECIFICATIONS

LED System
Proprietary linear LED module incorporates premium LEDs on a robust platform to achieve excellent thermal management. LEDs are placed to promote a uniform appearance. Available in 3000K, 3500K or 4000K with CRI>80. 0-10V dimming driver standard. LED modules and drivers are replaceable.

Construction
One-piece 20 Ga. steel reflector and housing. 20 Ga. steel ends form finished housing. LEDs are shielded by detachable 22 Ga. steel perforated shield with acrylic lens insert. LED shield is secured by four spring–pins allowing shield to hinge down for maintenance. Top access 20 Ga. steel driver compartment. Weight: 29 lbs.

Optic
One-piece 20 Ga. steel reflectors finished in Matte Satin White powder coat.

Electrical
Standard 120-277V driver includes 0-10V analog dimming, dimming range 100% - 10% Power factor > .9.

Emergency Battery
Bodine BSL310–CAN. Emergency output—10 watts for 90 minutes.
Bodine BSL20LV (U.S. only). Emergency output—20 watts for 90 minutes.

Labels
UL and cUL Listed. Suitable for Dry or Damp Locations, indoor use only.

Finish
Polyester powder coat applied over a 5-stage pre–treatment.

Lumen Maintenance
Calculated: L90 at 98,000 hours   Reported: L90 at >61,000 hours
Derived from EPA TM-21 calculator

Lifetime and warranty
LED System rated for operation in ambient environments up to 25°C. 5 year limited warranty.

PERFORMANCE CHART

Delivered Lumens	Tested System Watts	LPW
2000 Lumens	23	87
2500 Lumens	31	81
3000 Lumens	39	77
3500 Lumens	47	74

Lumen output may vary +/- 5% Actual wattage may vary +/- 5% Wattage multiplier for 3000K is 1.17

ORDERING

Luminaire Series		**FLUL**
Luna LED	FLUL	
Nominal Size		**22**
2' x 2'	22	
Shielding		**PS**
Perforated Shield	PS	
Lumen Output		
2000 Lumens	2000L	
2500 Lumens	2500L	
3000 Lumens	3000L	
3500 Lumens	3500L	
Color Temperature		
3000K	30K	
(Wattage multiplier 1.17)		
3500K	35K	
4000K	40K	
Circuit		**1C**
Single Circuit	1C	
Voltage		
120 Volt	120	
277 Volt	277	
UNV Volt	UNV	
(Cannot be specified with EM option)		
Driver		
0-10V - 10% Dimming	LD1	
Lutron A-Series	L3D	
1% EcoSystem Digital		
3500L: (2) drivers supplied,		
(2) EcoSystem addresses consumed		
(Consult factory for 3-wire control)		
Mounting		
Drywall Frame Kit	F	
(Cut out dimensions:		
Min: 12.25"/Max: 12.563")		
Grid	G	
Slot Tee	ST	
Factory Options		
Air Return	AR	
(Adds 0.875" to overall height)		
Chicago Plenum	CP	
Bodine BSL310 Emergency Battery	B310	
(Adds 3.25" to overall height)		
Bodine BSL20 High Output	B20	
Emergency Battery		
(Adds 3.25" to overall height. U.S. Only)		
Positional Clips	EQ	
6' New York City Flex Whip	FNY	
6' Flex Whip	FW	
Finish		**WH**
Matte Satin White	WH	

QS 10 DAY*

Focal Point LLC reserves the right to change specifications for product improvement without notification.

*For more information visit focalpointlights.com/reference or consult factory.

Luna™ 2x2
LED

FLUL-22-PS-2500L-35K-1C-120-LD1-G-WH

Filename: FLUL22PS2500L35K.IES

Lumens: 2500lm
System Watts: 31W
LPW: 81

CANDELPOWER DISTRIBUTION
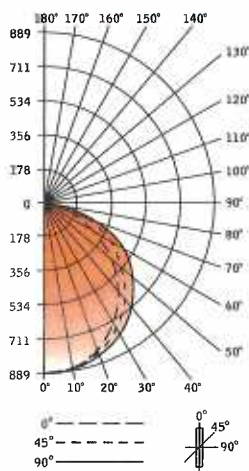
Vertical Angle	Horizontal Angle				
	0°	22.5°	45°	67.5°	90°
0°	889	889	889	889	889
5°	882	883	883	884	885
15°	839	842	849	856	860
25°	760	766	784	803	813
35°	656	666	698	728	743
45°	517	539	585	628	652
55°	369	404	461	514	542
65°	226	264	323	361	387
75°	113	135	162	184	194
85°	25	29	33	36	38
90°	0	0	0	0	0
95°	0	0	0	0	0
105°	0	0	0	0	0
115°	0	0	0	0	0
125°	0	0	0	0	0
135°	0	0	0	0	0
145°	0	0	0	0	0
155°	0	0	0	0	0
165°	0	0	0	0	0
175°	0	0	0	0	0
180°	0	0	0	0	0

LUMEN SUMMARY

	Zone	Lumens	% Fixture
	0-30°	685	27.4
	0-40°	1121	44.9
	0-60°	1981	79
Total	0-90°	2499	100.0
Luminaire	0-180°	2500	100.0

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	2137	2421	2700
55°	1884	2351	2764
65°	1566	2234	2616
75°	1279	1829	2194
85°	823	1104	1269

Go to www.focalpointlights.com for additional photometric data.

∏ U L I T E ™

lighting facts LED Product Partner
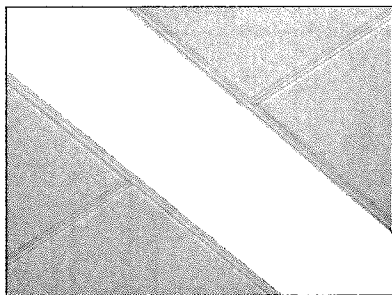
Type:	Project:	Qty:
	Date:	
Catalog #:		

Description:

The Nulite Regolo RG6 LED series is a recessed, nominal 6" wide profile, slot unit designed for grid ceiling systems. This product is ideal for illuminating corridors, open and private offices, classrooms, lobbies and general purpose rooms.

Specifications:

Construction: The housing consists of visible extruded aluminum trim rails with formed cold rolled steel back channel and heavy gauge end caps. Stainless steel alignment tabs and white snap-in joiner clips are used for continuous row applications. Luminaire is finished textured white.

Reflector / Driver: Reflector / driver cover is finished with high reflectance white paint. Constant current electronic driver with 0-10V dimming input; dimming range from 100% down to 10%. Universal (UNV) voltage is from 120 - 277V, 50/60 Hz.

Shielding: Extruded frosted acrylic or satin white acrylic snap-in lens with DR.

LED Module: Distributed LED array in a variety of lumen output packages. LED color is available in (L30) 3000K, (L35) 3500K or (L40) 4000K. Module is replaceable. L90 ≥ 100,000 hours.

Mounting: Ceiling grid system. Can be installed in the popular lay-in ceiling systems which has a 6" on-center zone. Non-IC rated. Individual mount or continuous runs.

Labels: ETL listed, conforms to UL Standard 1598 / 8750 and CSA Standard C22.2, Damp location.

Warranty: 5-year limited LED luminaire warranty.

Flush Lens

5-1/2" [140mm]
5-1/2" [140mm]
1" Tee | 5" [127mm] | Screw Slot
6" [152mm]
Grid on-center
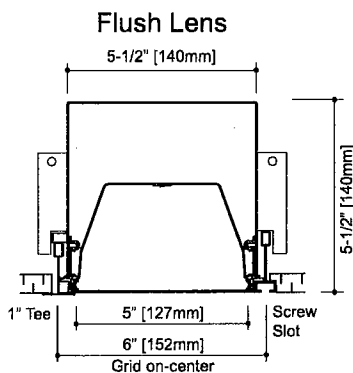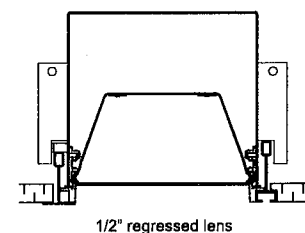
Regressed Lens

1/2" regressed lens

Shallow Housing

3-7/8" [98mm]

Ordering Information

Sample: RG6-13L40-UNV-DIM-1C-FRF-20'

Series	Lumen Package[2]/ Color		Voltage	Driver	Circuit	Shielding / Position		Length	Options
RG6[1]									
RG6 (Grid Nom. 6")	05 (~531 lm/ft, 6.3W/ft)	L30	UNV	DIM[3] Dimming	1C Single Circuit	FR (Frosted)	F (Flush lens)	2'	CP Chicago Plenum
	06 (~677 lm/ft, 8.3W/ft)	L35	120	SD[4] Step Dimming	1E Single Circuit w/ EM Circuit	ST (Satin white)	R (Regressed lens)	3'	SH[6] Shallow Housing
	09 (~820 lm/ft, 10.4W/ft)	L40	277		1B Single Circuit w/ Battery Pack			4'	OS End of run Occupancy Sensor
	10 (~964 lm/ft, 12.5W/ft)							5'	DS End of run Daylight Sensor
	13 (~1295 lm/ft, 16.7W/ft)							6'	FLEX3 6' of Flex, 3-wire, No Dimming
	17 (~1608 lm/ft, 20.8W/ft)							7'	FLXD1[7] 6' of Flex, sleeved 5-wires ("Class 1" low voltage controls wires sleeved with power feed)
								8'	
								Continuous Runs[5] XX' Specify run length in 1 foot increments. Consult factory for custom lengths.	FLXD2[7] 6' of Flex, sleeved 3-wires ("Class 2" low voltage controls wires not sleeved in flex)
									Consult factory for Corner Accessories

Notes:
1. *Some products are DesignLights Consortium™ Qualified, refer to www.designlights.org Qualified Products List.*
2. *Nominal lumen output per foot for frosted lens.*
3. *0-10V dimming inputs; dimming range 100% down to 10%, consult factory for specifications.*
4. *Consult factory.*
5. *6" increments are common custom lengths. We can provide custom run length down to the nearest (+/- 1/8").*
6. *We recommend our Satin White lens for the Regressed position in the shallow housing.*
7. *Dimming Flex: Choose "Class 1" or "Class 2" wiring, consult all electrical codes.*

∏ led Technology

Ceiling Grid Details

1" Grid Detail

Standard Tile

9/16" Grid Detail
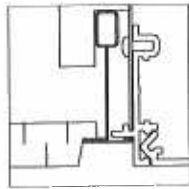
Tegular Tile
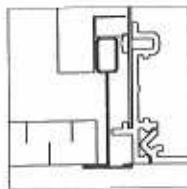
Standard Tile - 1-1/2"
"T" height & supported by
grid hook extension
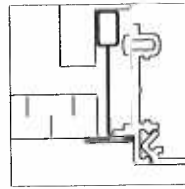
Standard Tile - Drop-down
Luminaire

Screw Slot Detail
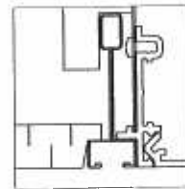
Tegular Tile

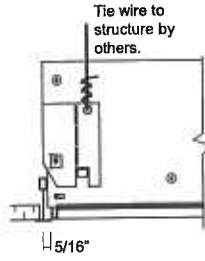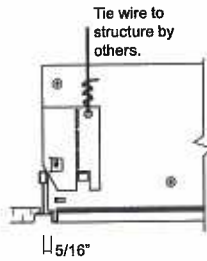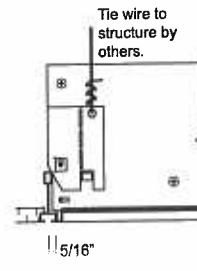### 1" End Detail

Tie wire to
structure by
others.

5/16"

9/16" End Details

Tie wire to
structure by
others.

5/16"

Tie wire to
structure by
others.

5/16"

Tie wire to
structure by
others.

5/16"

Screw Slot End Detail

Tie wire to
structure by
others.

5/16"
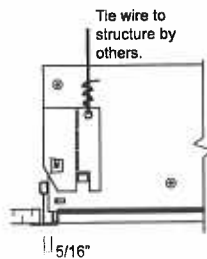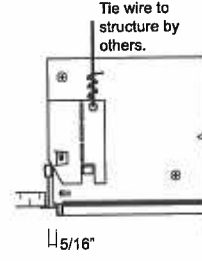
Lens Options

Shielding

Frosted

Frosted Lens
This diffuser is designed for a balance between efficiency and lens uniformity.
(Transmission ~ 89%)

Satin White Lens
This diffuser is designed for visible lens uniformity. It's recommended for re-gressed lens configuration in our shallow housing.
(Transmission ~ 69%)

Position

Regressed Lens - "R"

1/2" Regressed Lens (Satin White lens
is recommended)

Sensor Option
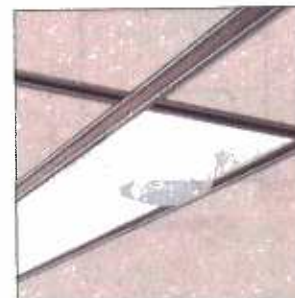
Occupancy or Daylight Sensor in a
nominal 3" long insert plate.

Specifications and dimensions are subject to change without notification.

Individual Lengths

Number of Housings

23-3/8"
24"

35-3/8"
36"

47-3/8"
48"

59-3/8"
60"

71-3/8"
72"

83-3/8"
84"

95-3/8"
96"

Continuous Row Joiner Detail

Shown in RG6

Plug-in wire connector(s)

Tie wire to structure by others.

Grid hook

(2) Snap-in Joiner clips

Grid and supports by others

(2) Stainless steel alignment tabs
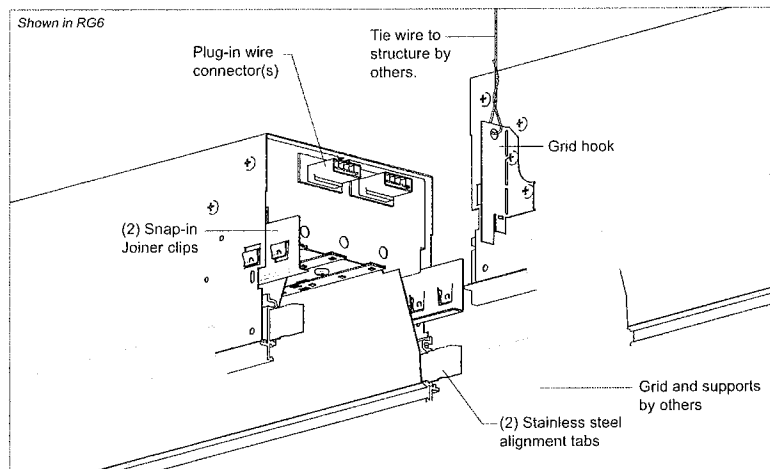
Continuous Run Lengths

Run Length

Number of Housings

Housing	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'	30'	31'	32'	33'	34'	35'	36'	37'	38'	39'	40'	41'	42'	43'	44'
2'	1																																										
3'		1																																									
4'			1					1	1	1	1					1	1	1	1					1	1	1	1					1	1	1	1					1	1	1	1
5'				1				1				1				1				1				1				1				1				1				1			
6'					1				1				1				1				1				1				1				1				1				1		
7'						1				1				1				1				1				1				1				1				1				1	
8'							1				1	1	1	1	2	1	1	1	2	2	2	2	3	2	2	2	3	3	3	3	4	3	3	3	4	4	4	4	5	4	4	4	5

Specifications and dimensions are subject to change without notification.   2015 Rev. C2

Nulite Lighting   10770 East 51st Avenue, Denver, CO 80239   **Phone 303-287-9646 Fax 303-287-0316**   **www.nulite-lighting.com**

6" LED 1300 LUMEN SERIES 20 WATT **MRR-06216**

SmartLED™ MRI Lighting Systems

Regressed Lensed Downlight • White Trim
Up to 90,000 Hour Life (L70) • Type IC
LM-80 Qualified • LM-79 Certified Photometry

pia'll

Use With:
- SmartSupply™ LPS-1220A
- SmartFilter™ RFI-3100D

> Use of SmartSupply™ and SmartFilter™ REQUIRED or Kirlin warranty is null and void

Specifications

Delivered System Performance*
- Standard MFL distribution: 1348 delivered lumens / 64 LPW / 0.8 SC.
- -NFL: 1348 lumens / 64 LPW / 0.4 SC.
- -WFL: 1249 lumens / 60 LPW / 1.2 SC.
- 20 watt LED array. 3500°K standard (or see Options -27K, -30K or -41K).
- Up to 85 CRI and 90,000 hour life (L70**). For 90+ CRI, see Option -HC.
- Fully sustainable: removable for servicing.

Thermal Management System
- All aluminum proprietary heat sink, components and housing maximize cool operation and long life while minimizing maintenance.

SmartSupply™ (Remote Power Supply) Required - Order Separately
- Digitally controlled. Drives up to 12-20W luminaires, with 6 configurable channels. Maximum 100 ft. cable length from SmartSupply™ to fixture.
- 100-1% full range dimming in up to 3 zones.
- LPS-1220A: Compatible with 0-10V DC dimming controls. See vendor qualified list in the Owner's Manual (760412-00-00).
- Suitable for dry, non-plenum locations only with ambient temperature range of -20°C

(-4°F) to 40°C (104°F). 115 - 277V isolated circuit only; maximum input voltage 290V; 50-60 Hz.
- For more information, see specification sheet for LPS-1220A.

SmartFilter™ (RFI / EMI Filter) Required - Order Separately
- Protects up to 3 SmartSupply channels.
- For more information see specification sheet for RFI-3100D.

SmartPower™ Battery Backup
- EMI-21220 for emergency power.
- See specification sheet; order separately.

Trim Assembly
- Seamless tapered aluminum self-flanged trim with white finish.
- Optional (white only) anti-microbial Kirlin BioGard™ finish, see Option -BG.
- Regressed tempered prismatic spread lens.

Acrylic Enameled Aluminum Housing
- Rustproof and corrosion resistant: Exceeds 1000 hour ASTM 5% salt spray test.
- Shallow depth fits restricted plenums.
- Cool operation: Extends life of all components.
- Fully sustainable: Entire luminaire, including light engine, is modular, easily visible, serviced through aperture. Built-in plaster flange.
- Air Tight design available, see Option -AT.

Outlet Box
- Prewired. 100% aluminum. U.L. listed.
- Accessible. ½" knockouts.

Installation
- Requires minimum 18 AWG twisted pair shielded wire from SmartSupply™ to fixtures.
- Recesses in ceilings up to 1¼" thick or see Option -79.
- Aluminum 27" hanger bars with adjustable mounting brackets (2) supplied.

UL, C-UL (Canada) Listings
- Wet, damp, dry locations, covered ceilings.
- Type IC: for direct contact with insulation.

CE & FCC Compliance
- Meets IEC/EN 60601-1-2 electromagnetic compatibility standard for medical electrical equipment.
- FCC Part 15 certified for EMI/RFI emissions.

5 Year FIVE YEAR Limited Warranty
- Complete standard fixture.

Performance at a Glance
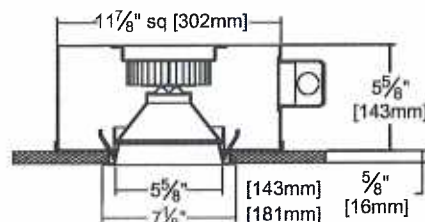
11⅞" sq [302mm]
5⅝" [143mm]
5⅝" [143mm]
7⅛" [181mm]
⅝" [16mm]
Ceiling Cut-out 6¾" Dia.

Air Tight Optional

L70** for Kirlin Luminaires

In Open Plenum	90,000 hours
In Insulation (Type IC)	60,000 hours

**Hours at 70% lumen maintenance

27" [686mm]
16½" [419mm]
11⅞" sq [302mm]
14⅜" [364mm]
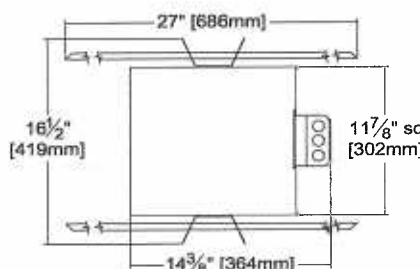
EEE Exceptional Energy Efficiency

STANDARD (MFL) DISTRIBUTION	
Lumens:	1348
Beam:	~48°
SC:	0.8
LPW:	64
Effic:	95.0%
ITL Test:	79862
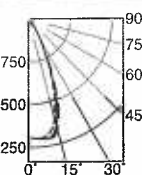
Complete photometry for standard and optional distributions on next page

FC CE IEC

THE KIRLIN COMPANY
3401 EAST JEFFERSON AVENUE • DETROIT, MICHIGAN 48207-4232
(313) 259-6400 • Fax: (313) 259-9409 OR (313) 259-3121 • www.kirlinlighting.com

*See note next page

SmartLED™ MRI Lighting Systems
Luminaires • SmartSupply • SmartFilter

CATALOG NUMBER
MRR-06216

Detailed Photometry - Installed Fixture
Photometric testing done in accordance with IESNA LM-79-08

Photometry from I.T.L., Boulder, CO

STANDARD (MFL)
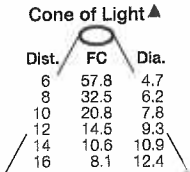
Lumens: 1348
Beam: ~48°
SC: 0.8
LPW: 64
Effic: 95.0%
ITL Test: 79862

EEE

Total System Watts 21.1

Cone of Light▲

Dist.	FC	Dia.
6	57.8	4.7
8	32.5	6.2
10	20.8	7.8
12	14.5	9.3
14	10.6	10.9
16	8.1	12.4

	CANDLEPOWER DISTRIBUTION				
	0.0	22.5	45.0	67.5	90.0
0	2081	2081	2081	2081	2081
5	2100	2102	2107	2107	2102
10	1802	1882	2003	1979	1927
15	750	822	907	854	803
20	200	213	212	214	208
25	57	58	54	58	58
30	24	24	24	24	24
35	15	15	15	16	15
40	7	6	7	7	7
45	1	1	1	2	1
90	0	0	0	0	0

Option -NFL

Lumens: 1344
Beam: ~24°
SC: 0.4
LPW: 64
Effic: 94.7%
ITL Test: 79861

EEE

Total System Watts 21.0

Cone of Light▲

Dist.	FC	Dia.
6	159.2	2.4
8	89.5	3.2
10	57.3	4.0
12	39.8	4.8
14	29.2	5.6
16	22.4	6.5

	CANDLEPOWER DISTRIBUTION				
	0.0	22.5	45.0	67.5	90.0
0	5730	5730	5730	5730	5730
5	5058	5061	5073	5084	5082
10	2090	2057	1985	1976	1993
15	535	475	429	448	496
20	122	106	97	102	116
25	32	31	32	29	29
30	15	15	16	15	15
35	9	10	9	10	9
40	6	6	6	6	6
45	1	1	1	1	2
90	0	0	0	0	0
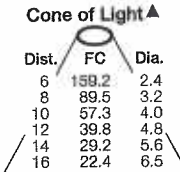
Option -WFL

Lumens: 1249
Beam: ~64°
SC: 1.2
LPW: 60
Efficiency: 77.0%
ITL Test: 83254

EEE

Total System Watts 20.8

Cone of Light▲

Dist.	FC	Dia.
6	15.7	7.5
8	8.8	10.0
10	5.7	12.5
12	3.9	15.0
14	2.9	17.5
16	2.2	20.0

	CANDLEPOWER DISTRIBUTION				
	0.0	22.5	45.0	67.5	90.0
0	566	566	566	566	566
5	566	565	565	565	566
10	563	559	557	559	560
15	520	520	522	518	515
20	429	433	441	432	430
25	301	308	311	304	302
30	162	164	169	165	166
35	84	85	85	84	84
40	43	43	43	43	42
45	10	10	10	10	9
90	0	0	0	0	0
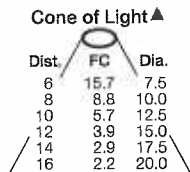
LM-80 Qualified • LM-79 Certified Photometry

* LED manufacturers maintain a tolerance of ±7% on flux (lumens) and power (electrical) measurements. Kirlin photometrics are actual test data from Independent Testing Laboratories (ITL) where photometry was measured from 1418 lumen (20W) and 1622 lumen (20W -WFL) light engines (within the established tolerance).

▲**Cone of Light Key**
(Dia. (in ft.) shown is where FC value is half the FC at nadir.)

Ft. Distance from fixture
FC Footcandles at nadir (0°)
Dia. Circle of light at 50% of FC

Options

Color Temperature (CCT)
-27K Color temperature 2700°K instead.
-30K Color temperature 3000°K instead.
-41K Color temperature 4100°K. Consult factory.
-HC 90+ CRI instead. Use with Option -27K or -30K only. Reduces output by ~15%.

Optics
-NFL Narrow flood distribution. (0.4 SC)
-WFL Wide flood distribution. (1.2 SC)

Trims
-32 White oversize trim ring. Specify O.D.
-45 Gasket between trim flange and ceiling.
-46 Gasket between trim and lens.
-94 Custom color/finish. Specify. Consult factory.
-BG Anti-microbial Kirlin BioGard™ white (only) trim finish.

Other
-79 Extension collar for up to 2" thick ceilings.
-99 Special modification. Consult factory.
-AT Air tight medical grade sealed housing with Type IC. Meets ASTM E283 restricted airflow of 2 CFM maximum.

3 Steps To "Artifact-Free" Imaging

1. Use complete Kirlin SmartLED™ MRI system: Luminaires, RFI-3100D SmartFilter™, LPS-1220A SmartSupply™

2. Use a minimum #18 AWG twisted, shielded pair wire

3. Use a 0-10V wall box dimmer that is approved for use with SmartSupply™ (consult Owner's Manual); wall dimmers must be located outside of room shield and must <u>not</u> be filtered through RFI-3100D SmartFilter™
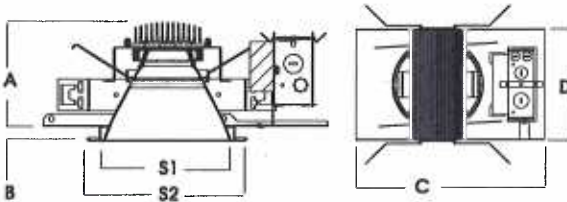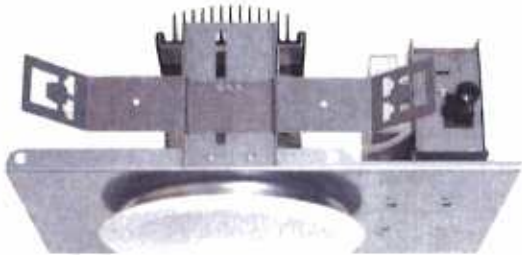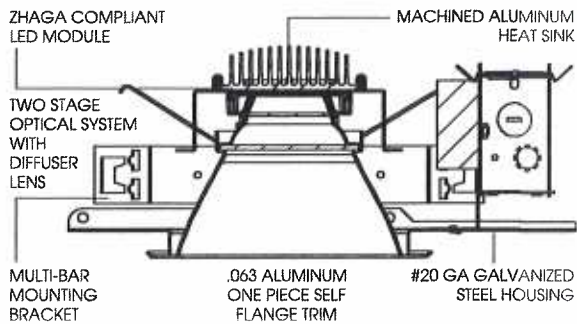
SUBMITTAL DATA

APPROVAL STAMP

ARRA QUALIFIED

JOB NAME

TYPE

WATTAGE   VOLTAGE

CATALOG NUMBER

SmartLED MRI
REV FEB 2015

ZHAGA COMPLIANT LED MODULE

MACHINED ALUMINUM HEAT SINK

TWO STAGE OPTICAL SYSTEM WITH DIFFUSER LENS

MULTI-BAR MOUNTING BRACKET

.063 ALUMINUM ONE PIECE SELF FLANGE TRIM

#20 GA GALVANIZED STEEL HOUSING

6" ROUND LED DOWNLIGHT

OS SERIES / 35 WATT MAX

SGE6LEDOS

APPLICATION

6" LED recessed open aperture downlight for general downlighting.

FEATURES

Delivers a range of 510-2650 lumens. Two-stage optical system for smooth light distribution. Zhaga LED module for ease of maintenance and replacement. Shallow plenum design. Tool-less LED module, driver, and J-Box access. Multi-Bar mounting brackets. BH27 Standard mounting bars included. Posi-lock trim retention torsion springs. Integral 0.625" collar, with plaster option (PR) for up to 3" thick ceiling.

FINISH

Variety of powdercoat and anodized finishes available.

ELECTRONICS

LED module features high brightness white Nichia LEDs. 3-step MacAdam Ellipses binning and CRI 84 minimum. Variety of electronic 120v/277v and dimming drivers.

CONSTRUCTION

Extruded and machined 6063-H32 aluminum heatsink. Carbon gasket for optimal thermal management. Housing/frame constructed of #20 ga. galvanized steel to resist corrosion. Self flanged one piece trim spun from 0.063" high purity aluminum and finished to specification.

CODE COMPLIANCE

Energy Star qualified. ARRA Compliant. Non-IC rated. ETL/UL/CSA listed for damp locations. LM79/LM80/TM21 data available. Optional Wet location. Manufactured and built to UL standards No. 1598/8750.

A	B	C	D	S1	S2
4.97 126.2 mm	0.625 15.87 mm	13.3 337.8 mm	7.9 200.7 mm	5.8 147.3 mm	7.5 190.5 mm

SERIES	LED	KELVIN	DRIVER	OPTIONS	TRIM / FINISH	TRIM OPTIONS
SGE6LEDOS	**9W** 578 Lumens*	27K-2700° K 30K-3000° K 35K-3500° K 40K-4000° K	**E1-Electronic, 120v** **E2-Electronic, 277v** **DO2W1-Spectrum 2 Wire Phase** Dimming, 120v 9w Only **DO101-Spectrum 0-10v** Dimming, 120v to1%	**BH27-27" Mounting Bars** Standard **BH6-6"-12" Expandable Mounting Bars** **BH12-12"-24" Expandable Mounting Bars**	**AR6223OS- MW-Matte White** 6" Trim **SG-Semi-Diffuse** Low Iridescent **CL-Specular Alzak** **HZ-Matte Low Iridescent**	**SO-Micro Prism Solite™ Lens** Standard **GL-Clear Glass Lens** **FG-Frosted Glass Lens** **BLU-Blue Lens** **GS-Gasket for Flange**
	14W 1033 Lumens*		**DO102-Spectrum 0-10v** Dimming, 277v to1% **DS101-Spectrum 0-10v** Dimming, 120v to10%	**CB24-C-Channel Bars** **FS-Fusing** **EM1-Emergency Battery Pack 120v**	**MB-Matte Black** **PT-Platinum** **PF-Polished Flange**	**WL-Wet Location**
	25W 1685 Lumens*		**DS102-Spectrum 0-10v** Dimming, 277v to10% **DLTE1-Lutron 2 Wire Phase** Dimming, 120v Only	**EM2-Emergency Battery Pack 277v** **CR-Corrosion Resistant** **PR-Plaster Ring**	**WE-Wheat Alzak** **CC-Custom Color**	
	35W 2523 Lumens*		**DL331-Lutron Hi Lume** Dimming, 120v **DL332-Lutron Hi Lume** Dimming, 277v **DL3E1-Lutron ECO System**	**TBC-T-bar Clips (for BH27)** **GR-Goof Ring** **EB-Eco Black Powdercoat**	Matte White Flange Standard	
	*E1-AR6223OS-MW-SO Delivered Lumens at 3500°K		Dimming, 120v **DL3E2-Lutron ECO System** Dimming, 277v	See Product Options Page For Ordering, Detail and Specifications		
			Contact Factory for Additional Dimming or Control Options			

EXAMPLE: SGE6LEDOS25W35KE1/AR6223OS MW SO

OSRAM LED Technology included

5 YEAR WARRANTY

Dimensions and values shown are nominal. Spectrum Lighting is continually improving products and reserves the right to make changes that will not alter performance or appearance with or without written notice.

SPECTRUM LIGHTING INC.

PROJECT:

TYPE:

CAT. NO.:

MADE IN THE USA

WWW.SPECLIGHT.COM • 994 JEFFERSON STREET, FALL RIVER, MA 02721 • 508.678.2303 FAX 508.678.2260

1501

SGE6LEDOS14W35KE1-AR6223OSMWSO

CANDLEPOWER CURVE

TEST: 20141008-M-14W

Angle	CP at 0°	Lumens/Zone
0	834	
5	829	
10	806	8%
15	762	
20	708	28%
25	637	
30	538	56%
40	213	79%
50	85	
60	46	94%
70	27	
80	12	99%
90	0	100%
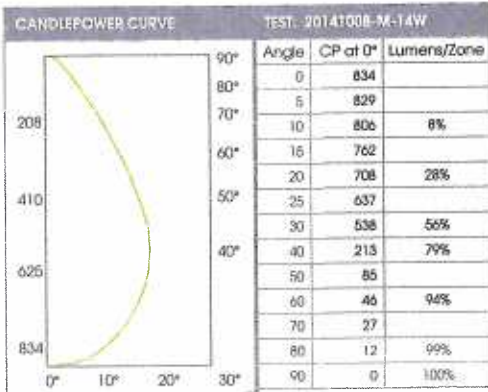
Delivered Lumens: 1033
Luminaire Watts: 14.4
LER: 72

CP @ 0' (Nadir): 834
Beam Angle: 67°
Spacing Ratio: 1.04

SINGLE UNIT: PERFORMANCE
INITIAL FOOTCANDLES AND BEAM ANGLE DIAMETERS

Mounting Height*	FC at Center	Diameter of Beam**	FC at Beam**
5.5'	28	7.3'	10
6.5'	20	8.6'	7
7.5'	15	9.9'	5
8.0'	13	10.6'	5
8.5'	12	11.3'	4
9.0'	10	11.9'	4
10.0'	8	13.2'	3
11.0'	7	14.6'	2

* From aperture to horizontal surface below.
** At IESNA defined Beam Angle, to 50% Max. CP.

MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES
INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT

Ceiling Height	Fixture Spacing	RCR 2: Large Room		RCR 4: Medium Room	
		FC*	W/Sq. Ft.	FC*	W/Sq. Ft.
8'	4'	56	0.79	54	0.90
	5'	40	0.56	40	0.68
9'	5'	36	0.51	38	0.64
	6'	25	0.35	30	0.51
10'	5'	32	0.46	29	0.48
	6'	28	0.40	24	0.40
11'	6'	26	0.36	23	0.38
	7'	19	0.27	18	0.29
Delivered Illuminance Rating: (DIR)		71 FC per W/Sq. Ft.		60 FC per W/Sq. Ft.	
		*Average Footcandles at 2.5' above floor.			

CCT: 3500° K   CRI: 84   CCT Output Factors: 40K 103%, 30K 95%, 27K 89%   Multiplier for FC Values of 9W: 0.56

SGE6LEDOS25W35KE1-AR6223OSMWSO

CANDLEPOWER CURVE

TEST: 20141008-M-25W

Angle	CP at 0°	Lumens/Zone
0	1361	
5	1352	
10	1315	8%
15	1243	
20	1155	28%
25	1039	
30	878	56%
40	347	79%
50	139	
60	75	94%
70	43	
80	19	99%
90	0	100%
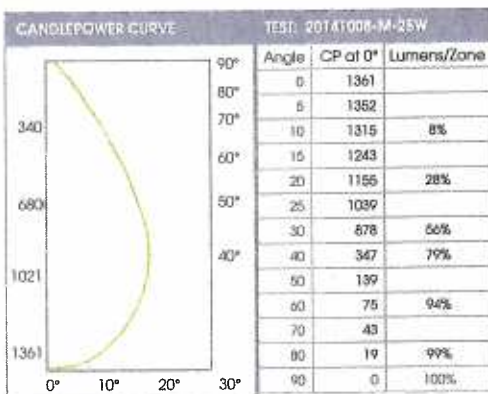
Delivered Lumens: 1685
Luminaire Watts: 25.6
LER: 66

CP @ 0 (Nadir): 1361
Beam Angle: 67°
Spacing Ratio: 1.04

SINGLE UNIT: PERFORMANCE
INITIAL FOOTCANDLES AND BEAM ANGLE DIAMETERS

Mounting Height*	FC at Center	Diameter of Beam**	FC at Beam**
6.5'	32	8.6'	11
7.5'	24	9.9'	8
8.5'	21	10.6'	7
9.0'	19	11.3'	7
9.5'	17	11.9'	6
10.0'	14	13.2'	5
11.0'	11	14.6'	4
12.0'	9	15.9'	3

* From aperture to horizontal surface below.
** At IESNA defined Beam Angle, to 50% Max. CP.

MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES
INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT

Ceiling Height	Fixture Spacing	RCR 2: Large Room		RCR 4: Medium Room	
		FC*	W/Sq. Ft.	FC*	W/Sq. Ft.
9'	5'	58	0.90	63	1.14
	6'	41	0.63	49	0.90
10'	5'	53	0.81	47	0.85
	6'	46	0.71	39	0.71
11'	6'	42	0.65	37	0.67
	7'	31	0.48	29	0.52
12'	7'	29	0.45	30	0.54
	8'	25	0.39	22	0.40
Delivered Illuminance Rating: (DIR)		64 FC per W/Sq. Ft.		55 FC per W/Sq. Ft.	
		*Average Footcandles at 2.5' above floor.			

CCT: 3500° K   CRI: 84   CCT Output Factors: 40K 103%, 30K 95%, 27K 89%

SGE6LEDOS35W35KE1-AR6223OSMWSO

CANDLEPOWER CURVE

TEST: 20141008

Angle	CP at 0°	Lumens/Zone
0	2038	
5	2025	
10	1969	8%
15	1862	
20	1730	28%
25	1557	
30	1315	56%
40	520	79%
50	208	
60	113	94%
70	65	
80	28	99%
90	0	100%
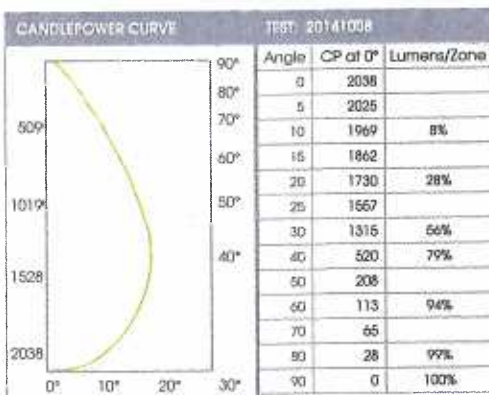
Delivered Lumens: 2523
Luminaire Watts: 35.2
LER: 72

CP @ 0" (Nadir): 2038
Beam Angle: 67°
Spacing Ratio: 1.04

SINGLE UNIT: PERFORMANCE
INITIAL FOOTCANDLES AND BEAM ANGLE DIAMETERS

Mounting Height*	FC at Center	Diameter of Beam**	FC at Beam**
7.5'	36	9.9'	13
8.5'	32	10.6'	11
9.5'	28	11.3'	10
10.0'	25	11.9'	9
11.0'	20	13.2'	7
11.5'	17	14.6'	6
12.0'	14	15.9'	5
14.0	10	18.5'	4

* From aperture to horizontal surface below.
** At IESNA defined Beam Angle, to 50% Max. CP.

MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES
INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT

Ceiling Height	Fixture Spacing	RCR 2: Large Room		RCR 4: Medium Room	
		FC*	W/Sq. Ft.	FC*	W/Sq. Ft.
10'	5'	79	1.12	70	1.17
	6'	69	0.98	58	0.98
11'	6'	64	0.89	55	0.92
	7'	47	0.66	43	0.72
12'	7'	44	0.62	44	0.74
	8'	38	0.53	33	0.55
14'	7'	44	0.62	39	0.65
	8'	37	0.53	29	0.49
Delivered Illuminance Rating: (DIR)		70 FC per W/Sq. Ft.		59 FC per W/Sq. Ft.	
		*Average Footcandles at 2.5' above floor.			

CCT: 3500° K   CRI: 84   CCT Output Factors: 40K 103%, 30K 95%, 27K 89%

PROJECT:

TYPE:

CAT. NO.:

MADE IN THE USA

SPECTRUM LIGHTING INC.

DESCRIPTION

The Lumark Wal-Pak Series of wall luminaires 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. IP65 Rated. Six available lamp sources including patent pending energy efficient LED, pulse start metal halide, compact fluorescent, ceramic metal halide, standard metal halide and high pressure sodium. UL/cUL wet location listed. The Wal-Pak wall luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways and loading docks.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Housing
Rugged one-piece 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 IP65 ingress protection rated. Not recommended for car wash applications.

Electrical
Ballasts, 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. Three ½" threaded conduit entry points allow for thru-branch wiring. 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 withstand a 3kV surge test and is Class 2 rated for 120-277V with an operating temperature of -30 to 60 C.

Wal-Pak LED systems maintain greater than 70% of the initial light output after 50,000 hours of operation. UL listed HID high power factor ballasts are Class H insulation rated (metal halide: 150, 175, 200, 250, 320, 350, 400W [-30 C / -20 F], (high pressure sodium: 50, 70, 100, 150, 250, 400W [-40 C / -40 F]. High efficiency HID ballasts are available in 120V, 208V, 240V, 277V, 347V and 480V. Compact fluorescent high power factor ballasts are Class P insulation rated for 120-277V and have a starting temperature of -18 C / 0 F.

Optical
Highly reflective anodized aluminum reflectors provide high efficiency illumination. Optical assemblies include impact resistant borosilicate refractive glass, Solite™ flat diamond patterned glass and full cutoff IESNA compliant configurations. Patent pending, solid state LED luminaires are thermally optimized with 2400 or 4000 sourced lumen package modules. HID models are offered in horizontal medium or mogul-based metal halide [MH / MP] or high pressure sodium [HP] lamps. T6 ceramic metal halide [CM] and 4-pin compact fluorescent [CF] lamp models offer high efficiency energy saving illumination.

Door Assembly
Single point, captive stainless steel hardware secures the removable hinged door allowing for ease of installation and maintenance. Door assembly is hinged at the bottom for easy removal, installation and re-lamping.

Finish
Housing and door are protected with 5-stage TGIC dark bronze polyester powder coat paint. Premium TGIC power coat finishes withstand extreme climate changes while providing optimal color and gloss retention. Optional premium colors are available.

WP WAL-PAK
2400 - 4000 Lumen LED
39 - 400W
High Pressure Sodium
Pulse Start Metal Halide
Metal Halide
Ceramic Metal Halide
32 - 140W
Compact Fluorescent

WALL MOUNT LUMINAIRE

TECHNICAL DATA
UL/cUL Wet Location Listed
IP65 Rated
40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
EISA ®, ARRA, Title 20 Compliant
LM79 / LM80 Compliant

ENERGY DATA
Reactor Ballast Input Watts
50W HPS NPF (58 Watts)
70W HPS NPF (82 Watts)
100W HPS NPF (118 Watts)
150W HPS NPF (175 Watts)
High Reactance Ballast Input Watts
50W MP HPF (69 Watts)
70W MP HPF (94 Watts)
100W MP HPF (129 Watts)
150W MP HPF (185 Watts)
CWA Ballast Input Watts
200W HPS HPF (250 Watts)
200W MP HPF (227 Watts) ®
250W MP HPF (283 Watts) ®
320W MP HPF (365 Watts) ®
350W MP HPF (400 Watts) ®
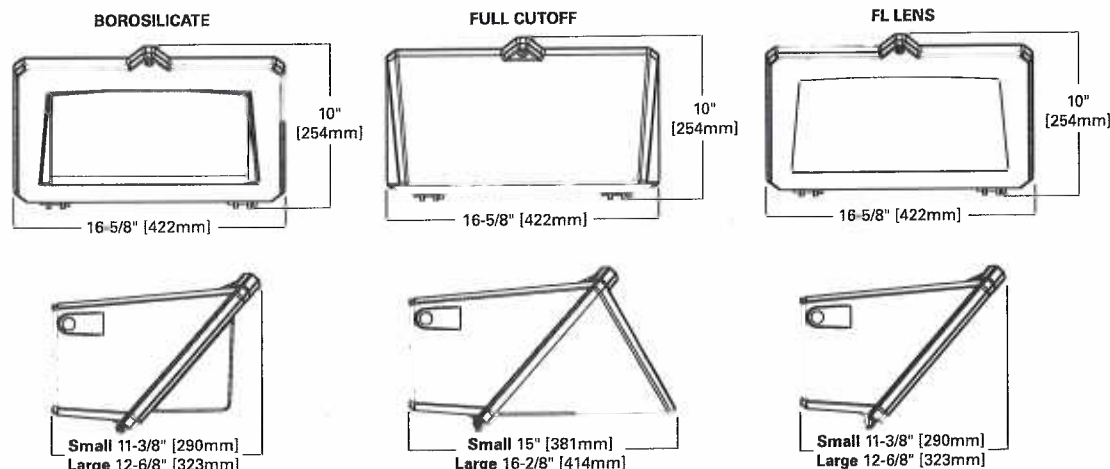400W HPS HPF (465 Watts)
400W MP HPF (452 Watts) ®

SHIPPING DATA
Approximate Net Weight:
32-42 lbs. (15-19 kgs.)   ADH092103 pc
2012-01-12 09:08:16

DARK SKY COMPLIANT | FCO Full Cutoff

DIMENSIONS

BOROSILICATE

10" [254mm]

16-5/8" [422mm]

Small 11-3/8" [290mm]
Large 12-6/8" [323mm]

FULL CUTOFF

10" [254mm]

16-5/8" [422mm]

Small 15" [381mm]
Large 16-2/8" [414mm]

FL LENS

10" [254mm]

16-5/8" [422mm]

Small 11-3/8" [290mm]
Large 12-6/8" [323mm]

ORDERING INFORMATION

Sample Number: MPWP-GL-250-MT-2EM/SC/MR

Lamp Type
MP=Pulse Start Metal Halide
HP=High Pressure Sodium
LD=Solid State Light-Emitting Diodes (LED)
CF=Compact Fluorescent [1]
CM=Ceramic Metal Halide [2]
MH= Metal Halide [3]

Series
WP=Wal-Pak

Door Type [4]
GL=Borosilicate Glass Door
FC= Full Cutoff Door
FL=Flat Solite Glass Door
PL=Polycarb Refractor Door

Lamp Wattage [5]
LED
2A=(2 Package), 28W
4A=(4 Package), 40W
MP
50=50W
70=70W
100=100W
150=150W
200=200W
250=250W
320=320W
350=350W
400=400W
MH
175=175W
250=250W
400=400W

HP
50=50W
70=70W
100=100W
150=150W
250=250W
400=400W
CM
39=39W
70=70W
100=100W
150=150W
CF
32=32W
42=42W
57=57W
70=70W
64=(2-32)
84=(2-42)
114=(2-57)
140=(2-70)

Voltage [6]
120V=120V
208V=208V
240V=240V
277V=277V
347V=347V [7]
480V=480V
DT=Dual-Tap
MT=Multi-Tap
TT=Tri-Tap
5T=5-Tap
E= Electronic Ballast [8]
ED=Electronic LED Driver

Options [9]
F1=Single fuse [10]
F2=Double fuse [10]
PE=Photocontrol button [10]
LL=Includes lamp [2]
BK=Black housing
WH=White housing
GM=Graphite Metallic housing
AP=Grey housing
DP=Dark Platinum housing
DIMA=CF Dimming Ballast [11]
DIMB=CF Dimming Ballast [11]
SGL=Solite Glass Lens [12]
Q=Quartz Restrike T4 Lamp [13]
EM=Emergency Quartz Restrike T4 Lamp with Time Delay Relay [13]
EM/SC=Emergency Separate Circuit T4 Lamp [13]
QMR=Emergency Back-Up 1-MR16 Lamp [14,15]
2QMR=Emergency Back-Up 2-MR16 Lamps [14,15]
2QMR/SC=Emergency Back-Up MR16 and EM separate circuit 2-MR16 Lamp [14,15]
EMMR=Emergency Back-Up 1-MR16 Lamp with Time Delay Relay [14,15]
2EMMR=Emergency Back-Up 2-MR16 Lamps with Time Delay Relay [14,15]
2EMMR/SC=Emergency Back-Up 1-MR16 Lamp with Time Delay Relay and EM Separate Circuit [14,15,16]
EM/SC/MR=Emergency Back-Up Separate Circuit 1-MR16 Lamp [14,15,16]
2EM/SC/MR=Emergency Back-Up Separate Circuit 2-MR16 Lamps [14,15,16]
EM/SC/12V=Emergency Separate Circuit 12V 1-MR16 Lamp [14,16,17]
2EM/SC/12V=Emergency Separate Circuit 12V 2-MR16 Lamps [14,16,17]
EMI40=Emergency Cold Temperature UL 924 CF Power Pack 1 Lamp [18]
EMI40/2L=Emergency Cold Temperature UL 924 CF Power Pack 2 Lamp [18]
CF-EM=Emergency UL924 CF Power Pack 1 Lamp [19]
CF-EM/2L=Emergency UL924 CF Power Pack 2 Lamp [19]
EMLED-CD=LED Battery Back-Up Cold Temperature [20]

Accessories [21]
WG/WPGL=Wire Guard Borosilicate Glass Lens Door
WG/WPFC=Wire Guard Full Cutoff Door
WG/WPFL=Wire Guard FL Lens Door
TR/WP=Tamper Resistant Screw and Bit
VS/WPGL=Polycarbonate Vandal Shield for Borosilicate Glass Lens Door

STOCK SAMPLE NUMBER - LAMP INCLUDED

SAMPLE NUMBER: WPP40C

Series
WP=Wal-Pak

Lamp Type
L=LED
P=Pulse Start Metal Halide
S=High Pressure Sodium

Lamp Wattage
2A=28W
4A=40W
10=100W
15=150W
25=250W
32=320W
40=400W

Door/Glass Type
Blank =Standard
C =Full Cutoff Door

NOTES: Options not available with stock products. Refer to standard order information to add options. MT is standard. Lamp Type: MP not available in 100W. HPS not available in 320W or Full Cutoff [C] Door. Borosilicate glass door is standard. 2A and 4A models available in LED only. LED models are 120-277V.

LED LUMEN TABLE

BUG RATING	B	U	G	Delivered Lumens [22]		B	U	G	Delivered Lumens [22]
Borosilicate Glass Door (GL)					Flat Lens Door (FL)				
LDWP-GL-2A-ED	0	3	2	1836	LDWP-FL-2A-ED	0	2	1	1454
LDWP-GL-4A-ED	1	3	2	2795	LDWP-FL-4A-ED	0	3	1	2084
Polycarbonate Lens (PL)					Full Cutoff Door (FC)				
LDWP-PL-2A-ED	0	3	2	1508	LDWP-FC-2A-ED	0	1	1	1090
LDWP-PL-4A-ED	1	3	2	2297	LDWP-FC-4A-ED	0	1	1	1313

For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-07BugRatingsAddendum.pdf

NOTES: 1 CF Single lamp offered in all door configurations. CF dual lamp models not offered with FL door type. 70W models not available with EMI40-2L, CF-EM, CF-EM-2L. CF not available in 347V.
2 All CM models offered with T6 envelope G12 lamp base. T6 Lamp included with CM models. Order LL with CM models. Ceramic Metal Halide (CM) is available with (MP) pulse start metal halide or E - Electronic Ballast. 400W MP must be ordered with LL option to be Title 20 Complaint.
3 MH products available for non-US markets only.
4 Small housing offered for 175W and below, CF and LD models. Large housing for 200W-400W. FL door not available with CF or 200-400W models. Polycarbonate lens available in models up to 175W max including LD. Polycarbonate lens not available with full cutoff door or FL models. Solite stipple glass is standard for FL lens. Clear glass is standard for full cutoff door types except for LD. LD full cutoff door is standard with solite glass.
5 LED packages based on 67 CRI/5000K package at 25°C ambient. MH and MP 175W and below are medium base all others are mogul base. CF, 64, 84, 114 and 140 models are offered in borosilicate glass and full cutoff doors only. In cold temperatures, compact fluorescent lamps produce lower illumination levels. CF 140 models and 400W HPS rated for 25°C.
6 See Voltage Chart for descriptions. 5T available in 400W MH models only. 90°C Rated wire required for thru-branch wiring for units 175W and lower. 105°C Rated wire required for thru-branch wiring for units 200W and higher. Thru-branch wiring is rated for 40°C for LD and 175W and below. Higher wattage thru-branch wiring is rated for use in 25°C ambient operating environments.
7 347V not available with thru-branch wiring. For 347 or 480V LD specify voltage. ED will be supplied with integral step down transformer. 347V not available with CF lamps.
8 Available with 70-150W MP or CM lamps. E is standard for all CF models. All electronic ballasts are universal 120-277V.
9 Not all options can be combined. Only one emergency or battery back-up option available within the fixture. CF Models utilize EMI40, EMI40/2L, CF/EM or CF-EM/2L option for emergency egress. LD Models utilize EM-LED or EMLED-CD options only for battery back-up.
10 Must specify voltage. F1=120, 277 or 347V. F2=208, 240 or 480V. PE=120, 208, 240 or 277V.
11 DIMA dimming ballast, specify number of lamps, available for 1 or 2-26W or 1-32W, 1-42W. DIMB available for 2-42W, 1-57W or 1-70W.
12 SGL optional on HID and CF models only. See note number 4.
13 Q or EM not available with LD or E electronic ballast. Q or EM Minimum HID wattage is 70 watts. EM/SC available in 120V only, EM/SC not available with LD. Maximum 100W 120V T4 DC Bayonet Quartz lamp. Lamp supplied by others.
14 QMR, 2QMR, EMMR, 2EMMR & 2EMMR/SC not available with LD or E electronic ballast. Minimum HID wattage is 70 watts.
15 1 or 2 GU10 base 50W max - 120V Halogen. Lamps supplied by others. EM/SC/MR, 2EM/SC/MR, EM/SC/12V, 2EM/SC/12V not available with LD.
16 Emergency lamp leads out of the back of the unit to auxillary power. Lamps independently wired to separate circuits.
17 Low Voltage 1 or 2 GU5.3 MR16 base, 12V DC, 35W max. Lamps supplied by others.
18 For use in 25°C ambient operating temperature environments. EMI40, EMI40/2L used for CF lamps. Specify 120 or 277V. EMI40 supports 1-70W CF max, EMI40/2L supports 2-32W CF max. Minimum -18°C/-4°F.
19 For use in 25°C ambient operating temperature environments. Specify 120 or 277V, CF-EM supports up to 1-57W CF. CF-EM/2L supports 2-18W CF, 18W lamps supplied by others. Minimum temperature is 32°C/0°F.
20 EMLED-CD available with 4A models only. For use in 25°C ambient operating temperature environments. Specify 120 or 277V. EMLED-CD minimum -20°C/-4°F. Battery pack is a UL recognized component.
21 Order separately.
22 Delivered lumens subject to change. Consult IES file for details.

VOLTAGE CHART

DT=Dual-Tap	120/277 (wired 277V)
MT=Multi-Tap	120/208/240/277 (wired 277V)
TT=Tri-Tap	120/277/347 (wired 347V)
5T=5 Tap	120/208/240/277/480 (wired 480V)
E=Electronic Ballast	120-277V (Universal) (50/60 HZ)
ED=Electronic LED Driver	120-277V (Universal) (50/60 HZ)

LAMP TYPE	WATTAGE
Pulse Start Metal Halide	50, 70, 100, 150, 200, 250, 320, 350, 400W
Metal Halide	175, 250, 400W
High Pressure Sodium	50, 70, 100, 150, 250, 400W
T6 Ceramic Metal Halide	39, 70, 100, 150W
Compact Fluorescent	(1) 32, (1) 42, (1) 57, (1) 70, (2) 32, (2) 42, (2) 57, (2) 70
LED	2A (2 Package) 28W, 4A (4 Package) 40W

COOPER Lighting
www.cooperlighting.com

NOTE: Specifications and dimensions subject to change without notice.
Visit our web site at www.cooperlighting.com
Customer First Center 1121 Highway 74 South Peachtree City, GA 30269 770.486.4800 FAX 770.486.4801

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DESCRIPTION

600 Luminous Square Vanity Luminaire. ADA complaint.
Available in energy efficient LED
Interior Wall Luminous Vanity Luminaire
Aluminum orstainless steel end caps and an aluminum body
Integral electronic HPF, multi-volt 120/277V (347V Canada)
Standard: Natural Aluminum; Premium: Contact factory for finishes
Universal mounting back for a standard 3" plaster ring or switch-box
UL and CUL approved for interior and damp locations; ADA compliant

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

Material
Painted, plated cold-rolled steel, brass, copper or aluminum end caps and an aluminum body with an extruded matte white acrylic diffuser.

Finish
Standard: Natural Aluminum (NA). [Sustainable Design]
Premium: Aluminum Paint (ALP), Bronze Metallic Paint (BM), Gold Metallic Paint (GM), Matte White (MW), Gun Metal (GNM), Lacquered Satin Aluminum (SAL), Satin Stainless Steel (SSS), Satin Chrome (SC), Polished Chrome (PC), Satin Brass (SB), Polished Brass (PB), Satin Copper (SCP), Polished Copper (PCP), Oxidized Copper (OCP), Satin Nickel (SN), Polished Nickel (PN) or Custom Color (CC).

Optics
Refer to www.shaperlighting.com for complete photometrics.

Ballast
Integral electronic HPF, multi-volt 120/277V (347V Canada), thermally protected with end-of-life circuitry to accommodate the specified lamp wattage.

Lamping Options
Fluorescent Tubes
24": Two (2) 14W T5 linear fluorescent lamps.

36": Two (2) 21W T5 linear fluorescent lamps.
Fluorescent socket injection molded plastic. Lamps furnished by others.

LED
24": L1:1300 Nominal lumens at max 12.6W
24" or 36": L3:2000 Nominal lumens at max 18.9W

Long-life LED system coupled with electrical driver to deliver optimal performance. Electronic drivers are available for 120-277 applications. A 0-10V dimming control is available (Standard) on all models.

Installation
Supplied with a universal mounting back for a standard 3" plaster ring or switch-box. 36" Luminaire has additional mounting holes to ensure secure attachment. Horizontal or vertical mount. Shaper luminaires are designed for interior installations only.

Options
Dimming Ballast - Lutron (DML), Remote Emergency Ballast - Supplied by others (REM), Hand Painted Faux Linen Diffuser (LND), Damp Location (DL):SAL and painted finishes only. Energy Star Rating - Contact factory.

Labels
U.L. and C.U.L approved for indoor and damp location. See options for damp location finishing requirements. Shaper's DL option is for interior applications (only) that have more than average moisture (i.e. bathroom, laundry room, etc.) but are not UL listed for pool, sauna, shower, whirlpool and any exterior applications (i.e. covered garage or building entrance) with exposure to weather elements such as rain, wind, etc. ADA compliant.

Modifications
Shaper's skilled craftspeople with their depth of experience offer the designer the flexibility to modify standard wall luminaires for project specific solutions. Contact the factory regarding scale options, unique finishes, mounting, additional materials/colors, or decorative detailing.
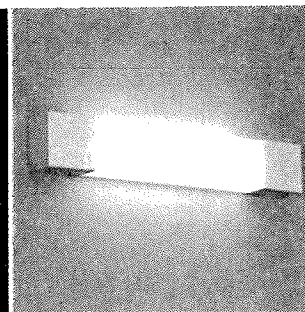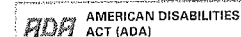

600 SERIES

Interior Wall Luminaire
Luminous Square Vanity

ARRA
Shaper Lighting certifies that its products satisfy the requirements of Section 1605 of the American Recovery and Reinvestment Act (also known as the ARRA Buy American provision).

AMERICAN DISABILITIES ACT (ADA)
Shaper offers a large selection of ADA interior and exterior wall luminaires. ADA requires all fixtures below 68" to have a maximum projection of 4".

QUICK SHIP (QS)
Shaper's Quick Ship program features over thirty-four fixtures with finish options such as Satin Chrome, Natural Aluminum and Satin Brass and a wide variety of lamp selections. All products ship in five days from receipt of order.

SUSTAINABLE DESIGN
Shaper has a long-standing history of offering environmentally-friendly fixtures. The copper and bronze alloys used in our exterior luminaires feature up to 98% recycled content, contribute less undesirable air emissions compared to painted aluminum and are easy to recycle.

Cooper Lighting
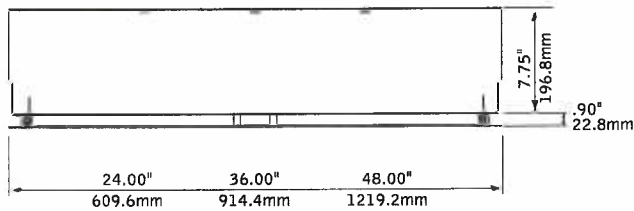by EATON

Specifications and dimensions subject to change without notice.
Consult your representative for additional options and finishes.
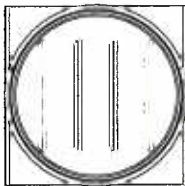
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ORDERING INFORMATION

Sample Number: 600-24-W-T5/2/14-277V- ALP-DL

Series	Size	Mounting Type	Lamp	Voltage	Finish	Options
600=Luminous Sconce Vanity	24=24" 36=36"	W=Wall	T5/2/14[1] T5/2/21[2]	120V 277V 347V	Standard NA=Natural Aluminum **Premium**	DL=Damp Location[5] DML=Dimming Ballast (Lutron)[1,2] LND=Hand Painted Faux Linen Diffuser REM=Remote Emergency Ballast[3,4]
	LED Size 24=24" 36=36"		**LED Lamp** L1/827[1,3] L3/827[1,2,3] L1/830[1,3] L3/830[1,2,3] L1/835[1,3] L3/835[1,2,3] L1/840[1,3] L3/840[1,2,3]	**UNV** (120-277V)	ALP=Aluminum Paint BM=Bronze Metallic Paint CC=Custom Color GM=Gold Metallic Paint GNM=Gun Metal MW=Matte White OCP=Oxidized Copper PC=Polished Chrome PCP=Polished Copper PN=Polished Nickel SAL=Lacquered Satin Aluminum SB=Satin Brass SC=Satin Chrome SCP=Satin Copper SN=Satin Nickel SSS=Satin Stainless Steel	

Notes:
[1] Available in 24".
[2] Available in 36".
[3] Interior applications only.
[4] Supplied by others
[5] SAL or painted finishes only
LED Lamp:
L1-1300 nominal lumens at max 12.6W
L3-2000 nominal lumens at max 18.9W

MOUNTING TYPE

24" (61 cm)   4"   4"

4"
(10.1 cm)   4"

600 - 24" FLUORESCENT or LED

36" (91.4 cm)   4"   4"

4"
(10.1 cm)   4"

600 - 36" FLUORESCENT or LED

Cooper Lighting
by EATON

ADS042648
2014-06-20 10:59:59

Skydome™
LED

FOCAL POINT®

DIMENSIONAL DATA

7.75" 196.8mm

.90" 22.8mm

24.00"	36.00"	48.00"
609.6mm	914.4mm	1219.2mm

led options

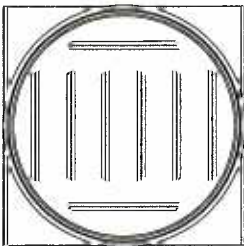**2' diameter**

3' diameter

4' diameter

FEATURES

2', 3' and 4' diameter recessed direct LED with lens.

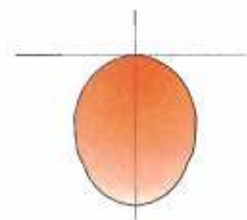Frosted acrylic diffuser provides high transmission and uniform distribution.

Universal ceiling trim rings are suitable for both grid & drywall applications.

Skydome™ is an excellent choice for open public spaces such as concourses, lobbies, reception areas and meeting rooms.

PERFORMANCE

4' Diameter, Standard Output

Delivered Lumens: 7000lm

Total System Watts: 70W

PRODUCT OVERVIEW

Lumen Output:	2000-1700lm
Wattage:	27-185W
LPW:	65-100
SDCM:	3
Lumen Maintenance:	L90 @ 74,000hrs

Photometric performance is measured in accordance with IESNA LM-79. Visit focalpointlights.com for complete photometric data.

MOUNTING INFORMATION
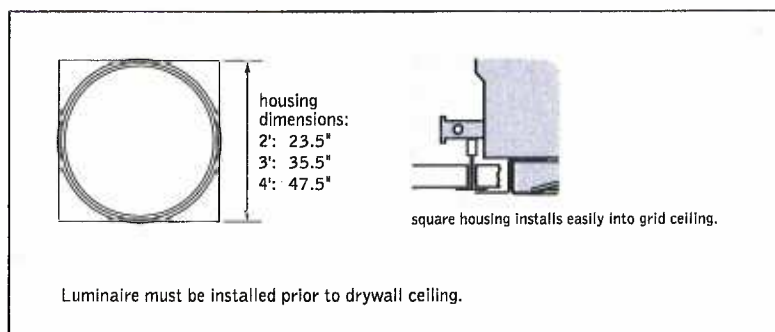
housing dimensions:
2': 23.5"
3': 35.5"
4': 47.5"

square housing installs easily into grid ceiling.

Luminaire must be installed prior to drywall ceiling.

SPECIFICATIONS

LED System
Proprietary linear LED module incorporates premium LEDs on a robust platform to achieve excellent thermal management. LEDs are placed to promote a uniform appearance. Available in 3000K, 3500K or 4000K with CRI>80. 0-10V dimming driver standard. LED modules and drivers are replaceable from below.

Construction
Two-piece 20 Ga. steel reflector and housing. Spun steel trim ring and doorframe. Bottom access 20 Ga. steel driver compartment. 2' unit weight: 24 lbs., 3' unit weight: 44 lbs., 4' unit weight: 58 lbs.

Optic
One-piece 20 Ga. steel reflector finished in High Reflectance White powder coat. .125" frosted acrylic diffuser is held by one-piece spun steel doorframe and secured to the housing by torsion springs. Flat frosted Lens.

Electrical
Standard 120-277V driver includes 0-10V analog dimming. Power factor > .9. Optional EcoSystem drivers from Lutron available. Emergency battery: Bodine BSL310-CAN. Emergency output—10 watts for 90 minutes.

Labels
UL and cUL listed. Suitable for Dry or Damp Locations, indoor use only.

Finish
Polyester powder coat applied over a 5-stage pre-treatment.

Lumen Maintenance
Calculated: L90 at 74,000 hours   Reported: L90 at >61,000 hours
Derived from EPA TM-21 calculator

Warranty
LED system rated for operation in ambient environments up to 25°C. 5 year limited warranty.

PERFORMANCE CHART

Nominal Size	Delivered Lumens	Tested System Watts	LPW
	2000	27	74
2'	3000	43	70
	4000	62	65
	4000	49	82
3'	5000	63	79
	7000	93	75
	9000	127	71
	7000	70	100
	9000	94	96
4'	11000	118	93
	14000	153	92
	17000	185	92

Tested lumens may vary +/- 5%. Actual wattage may vary +/- 5%.

ORDERING

		FSDL
Luminaire Series		
Skydome LED	FSDL	
Nominal Size		
2' Diameter	22	
3' Diameter	33	
4' Diameter	44	
Shielding		**FLXP**
Flat Frosted Diffuser	FLXP	
Lumen Output		
2' Diameter		
2000 Lumen	2000L	
3000 Lumen	3000L	
4000 Lumen	4000L	
3' Diameter		
4000 Lumen	4000L	
5000 Lumen	5000L	
7000 Lumen	7000L	
9000 Lumen	9000L	
4' Diameter		
7000 Lumen	7000L	
9000 Lumen	9000L	
11,000 Lumen	11000L	
14,000 Lumen	14000L	
17,000 Lumen	17000L	
Color Temperature		
3000K	30K	
3500K	35K	
4000K	40K	
Circuit		**1C**
Single Circuit	1C	
Voltage		
120 Volt	120	
277 Volt	277	
UNV Volt	UNV	
(Cannot be specified with EM option)		
Driver		
(See driver reference for driver quantity)		
0-10V - 10% Dimming	LD1	
0-10V -1% Dimming	L11	
Lutron A-Series	L3D	
1% EcoSystem Digital		
(Consult factory for 3-wire control)		
Lutron H-Series - 1% Dimming	LH1	
Lutron 5-Series	LU5	
5% EcoSystem Digital		
DALI - 1% Dimming	D11	
Mounting		**U**
Universal	U	
Factory Options		
Chicago Plenum	CP	
Emergency Battery*	EM	
6' New York City Flex Whip	FNY	
6' Flex Whip	FW	
Finish		**WH**
Matte Satin White	WH	

Skydome™
LED - 2' RECESSED

FSDL-22-FLXP-2000L-35K-1C-120-LD1-U-WH

Filename:	FSDL22FLXP2000L35K.IES
Test #:	18930.0

Lumens:	2004lm
System Watts:	27.4W
LPW:	73

CANDELPOWER DISTRIBUTION
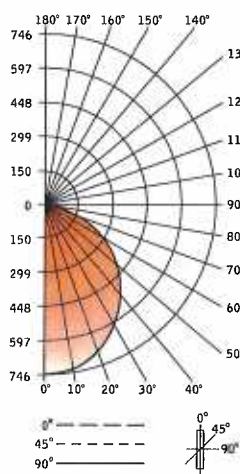
Vertical Angle	Horizontal Angle 0°	22.5°	45°	67.5°	90°	Zonal Lumens
0°	746	746	746	746	746	
5°	745	743	742	742	741	71
15°	716	715	713	713	712	202
25°	655	655	651	653	652	302
35°	566	573	564	573	568	358
45°	468	472	469	473	471	365
55°	360	359	356	363	362	323
65°	240	239	236	242	236	237
75°	116	118	116	119	115	124
85°	22	21	20	20	23	23
90°	0	0	0	0	0	
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

LUMEN SUMMARY

	Zone	Lumens	% Fixture
	0-30°	575	28.7
	0-40°	933	46.6
	0-60°	1620	80.9
Total	0-90°	2004	100.0
Luminaire	0-180°	2004	100.0

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	3322	3329	3344
55°	3151	3114	3169
65°	2847	2810	2810
75°	2254	2254	2233
85°	1255	1135	1315

Go to www.focalpointlights.com for additional photometric data.

Skydome™
LED - 2' RECESSED

FSDL-22-FLXP-4000L-35K-1C-120-LD1-U-WH

Filename:	FSDL22FLXP4000L35K.IES
Test #:	18932.0

Lumens:	3988lm
System Watts:	62.1W
LPW:	64

CANDELPOWER DISTRIBUTION
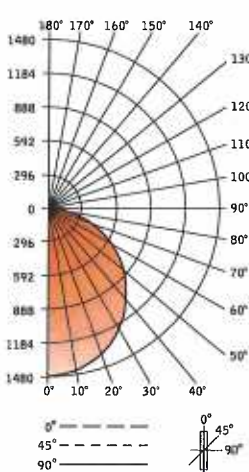
Vertical Angle	Horizontal Angle 0°	22.5°	45°	67.5°	90°	Zonal Lumens
0°	1480	1480	1480	1480	1480	
5°	1479	1476	1475	1471	1472	141
15°	1417	1409	1407	1409	1414	400
25°	1299	1291	1295	1294	1295	599
35°	1138	1117	1133	1134	1131	710
45°	940	932	934	935	932	724
55°	718	720	712	712	717	642
65°	493	482	483	482	482	480
75°	238	231	231	245	232	249
85°	36	34	43	51	40	45
90°	0	0	0	0	0	
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

LUMEN SUMMARY

	Zone	Lumens	% Fixture
	0-30°	1139	28.6
	0-40°	1849	46.4
	0-60°	3214	80.6
Total	0-90°	3988	100.0
Luminaire	0-180°	3988	100.0

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	6677	6633	6619
55°	6282	6229	6273
65°	5856	5736	5724
75°	4614	4477	4496
85°	2099	2449	2332

Go to www.focalpointlights.com for additional photometric data.

Skydome™
LED - 3' RECESSED

CANDELPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	22.5°	45°	67.5°	90°	
0°	1619	1619	1619	1619	1619	
5°	1609	1609	1608	1606	1608	154
15°	1520	1519	1517	1519	1519	431
25°	1343	1340	1340	1343	1348	621
35°	1133	1131	1131	1131	1136	711
45°	938	933	933	940	944	725
55°	683	678	681	683	688	612
65°	461	457	457	462	466	457
75°	224	224	225	225	229	239
85°	52	52	52	52	52	57
90°	0	0	0	0	0	
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

LUMEN SUMMARY

	Zone	Lumens	% Fixture
	0-30°	1205	30.1
	0-40°	1916	47.8
	0-60°	3253	81.2
Total	0-90°	4005	100.0
Luminaire	0-180°	4005	100.0

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	2587	2573	2605
55°	2321	2315	2341
65°	2126	2110	2149
75°	1692	1698	1723
85°	1153	1172	1153

Go to www.focalpointlights.com for additional photometric data.

Skydome™
LED - 3' RECESSED

CANDELPOWER DISTRIBUTION
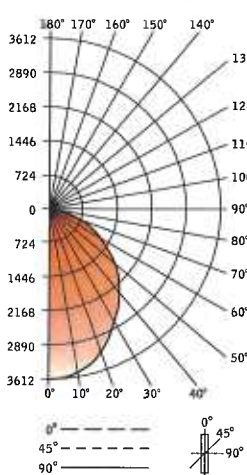
Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	22.5°	45°	67.5°	90°	
0°	3612	3612	3612	3612	3612	
5°	3594	3594	3594	3592	3594	343
15°	3402	3398	3398	3398	3404	964
25°	3004	2998	2997	3002	3004	1389
35°	2556	2546	2548	2554	2569	1604
45°	2094	2085	2085	2096	2102	1620
55°	1527	1518	1518	1527	1544	1368
65°	1023	1017	1023	1032	1034	1018
75°	502	499	499	502	508	530
85°	115	117	117	117	117	128
90°	0	0	0	0	0	
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

LUMEN SUMMARY

	Zone	Lumens	% Fixture
	0-30°	2695	30.1
	0-40°	4299	48.0
	0-60°	7286	81.3
Total	0-90°	8962	100.0
Luminaire	0-180°	8962	100.0

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	5777	5752	5798
55°	5193	5161	5250
65°	4721	4721	4773
75°	3785	3757	3827
85°	2581	2622	2622

Go to www.focalpointlights.com for additional photometric data.

Skydome™
LED - 4' RECESSED

CANDELPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	22.5°	45°	67.5°	90°	
0°	2662	2662	2662	2662	2662	
5°	2643	2640	2638	2638	2638	252
15°	2506	2505	2506	2506	2507	710
25°	2252	2248	2250	2250	2255	1042
35°	1974	1969	1966	1973	1984	1239
45°	1661	1651	1651	1666	1671	1284
55°	1230	1228	1227	1233	1239	1104
65°	837	835	837	835	844	830
75°	412	412	406	409	415	434
85°	93	93	93	93	93	102
90°	0	0	0	0	0	
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	
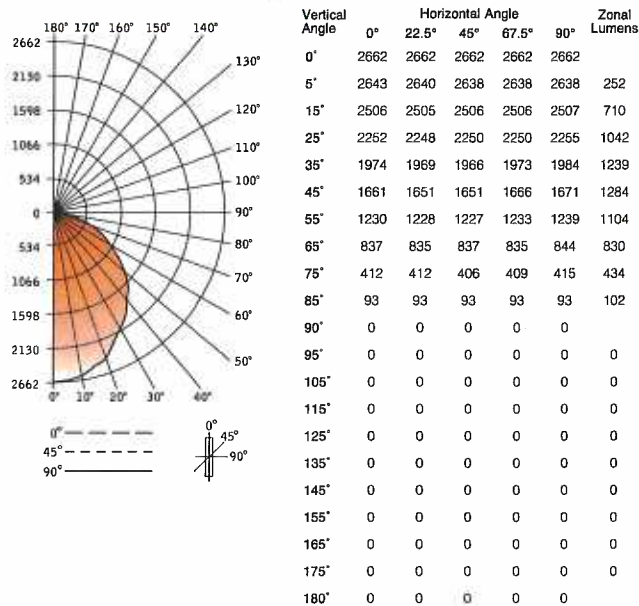
LUMEN SUMMARY

	Zone	Lumens	% Fixture
	0-30°	2004	28.6
	0-40°	3243	46.3
	0-60°	5631	80.5
Total	0-90°	6997	100.0
Luminaire	0-180°	6997	100.0

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	2403	2389	2418
55°	2194	2189	2209
65°	2026	2026	2044
75°	1631	1606	1639
85°	1095	1095	1095

Go to www.focalpointlights.com for additional photometric data.

Skydome™
LED - 4' RECESSED

CANDELPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	22.5°	45°	67.5°	90°	
0°	6474	6474	6474	6474	6474	
5°	6420	6415	6410	6407	6407	612
15°	6083	6075	6075	6083	6083	1723
25°	5468	5455	5457	5468	5478	2529
35°	4793	4775	4773	4783	4819	3006
45°	4034	4016	4006	4034	4049	3117
55°	2984	2981	2971	2994	2994	2677
65°	2031	2018	2031	2039	2052	2017
75°	1001	996	994	996	1017	1057
85°	227	227	219	219	224	243
90°	0	0	0	0	0	
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	
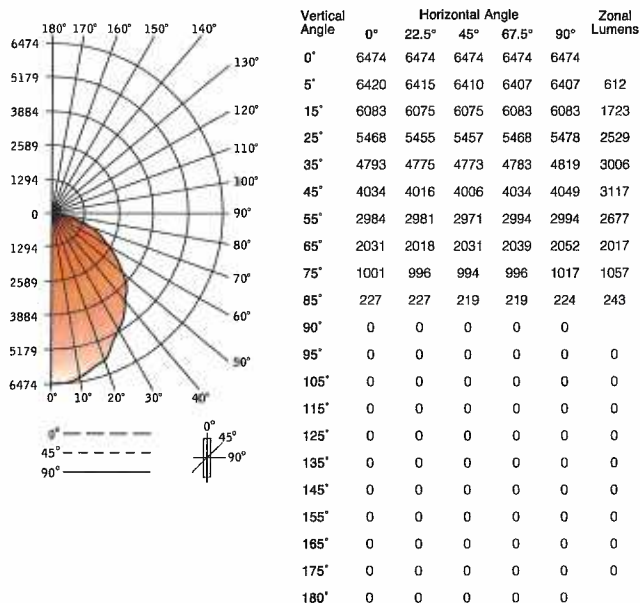
LUMEN SUMMARY

	Zone	Lumens	% Fixture
	0-30°	4864	28.6
	0-40°	7870	46.3
	0-60°	13663	80.5
Total	0-90°	16980	100.0
Luminaire	0-180°	16980	100.0

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	5837	5796	5859
55°	5322	5299	5341
65°	4917	4917	4967
75°	3959	3928	4020
85°	2659	2569	2629

Go to www.focalpointlights.com for additional photometric data.

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.

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

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. 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
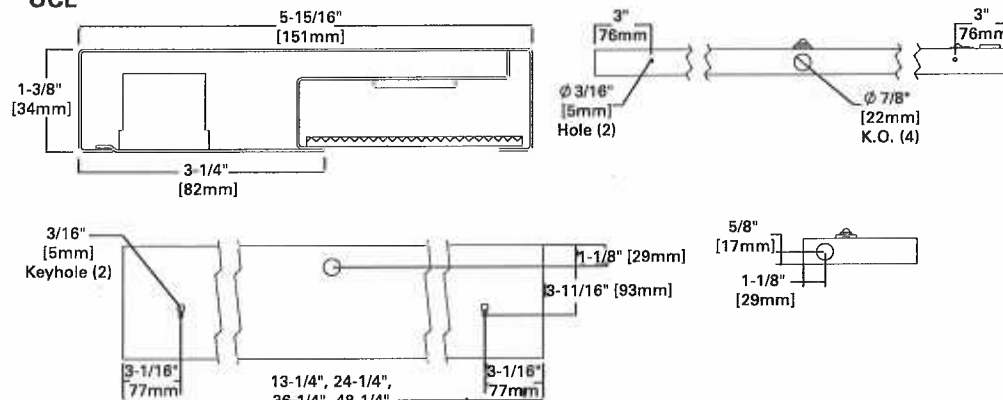
UCLV
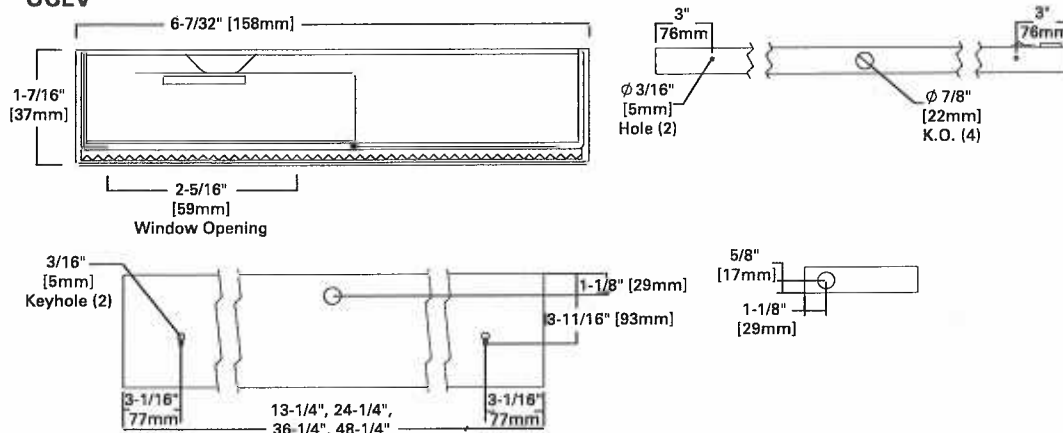
Nominal Length	Nominal Input Watts
1' (300mm)	6.9
2' (600mm)	9.1
3' (900mm)	18.3
4' (1200mm)	30.4

Nominal Length	Nominal Delivered Lumens*
1' (300mm)	600
2' (600mm)	800
3' (900mm)	1600
4' (1200mm)	2400

*A12125 Lens

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

LD4=LED Version 4.0

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,[5] Single Circuit, Non-Dimming
EDD1=Electronic Driver, Single Circuit, 0-10V Dimming,10%
ED1D1=Electronic Driver, Single Circuit, 0-10V Dimming, 1%

UNV=120-277

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)
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)
IP63=IP63 rated (UCLV only)

Notes:
1. Consult factory for compatibility with other options.
2. Must specify voltage.
3. 120V.
4. Not available UCLV.
5. Standard "EDC1" driver, low voltage leads not connected to driver.
   "EDD1" and "ED1D1" driver, low voltage leads connected to driver.

isolite

## DIE-CAST LED EXIT SIGN

- Illumination approximately
  4 times brighter than UL 924 requirement
- Battery diagnostic monitoring system
  on all emergency units
- Full self-diagnostics available
- Master remote options available
- 4-hour standard emergency run time
- As low as 1 Watt of power consumption
  on AC models
- Specialty finishes upon request
- Listed by UL to UL 924 standard; meets NFPA
  Life Safety Code 101

Dimensions

13 1/2"

8 1/4"

2 3/8"

3/4"

Master
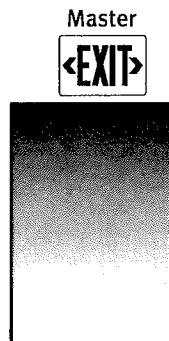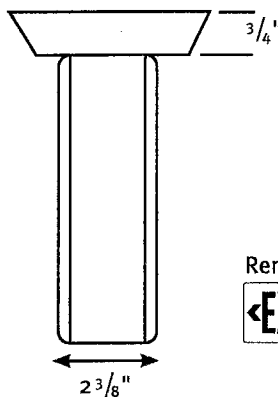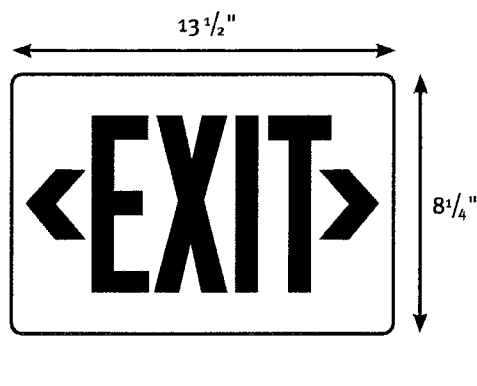
‹EXIT›

Remote

‹EXIT›

Master/Remote
Low-level exit (remote)
is powered by another (master).
Contact Isolite for
master/remote specification

Specifications

Overall size: 13 1/2" x 8 1/4" x 2 3/8" – Single or Double

Canopy size: 4 3/4" x 4 3/4" x 3/4"

Weight: AC model: 4.5 lbs.
EM Model: 5.25 lbs.

Construction: Two piece, thick wall, heavy-duty, die-cast
aluminum alloy

Letters: 6" high; 3/4" stroke

Arrows: NFPA type, universal field-selectable chevrons

Input power: AC models: red: 1.0 watts; green: 1.3 watts
EM models: red: 2.0 watts; green: 2.5 watts

Approvals: UL Listed to UL 924 Standard, NFPA Life
Safety Code 101

Electronics:
- Battery diagnostic monitoring system standard on all emergency models
- Full diagnostic system available
- Zero current low-voltage disconnect
- Line-latch prevents unnecessary discharge of battery during installation
- Brownout protection
- LED AC present indicator and push-to-test switch
- 120 or 277 VAC field-selectable inputs
- Illumination approximately 4 times the UL 924 Standard requirements
- Fully self-contained components with captive screws
- Quick install push wire connectors
- Specialty finishes upon request (contact factory)

Warranty: Isolite offers a 5-year limited warranty. For further
details, refer to General Warranty and Obligations
in Isolite manual.

Ordering Information

Series	Operation	LED	Faces	Housing Color	Mounting		Options
LPDC	AC = AC Only	R = Red	S = Single	AB = Brushed Face, Black Trim	UN = Universal Canopy	DL = Damp Location	2C = Dual Circuit[3]
	EM = NiCad Battery	G = Green	D = Double	BB = All Black	PA = 12" Swivel Pendant	FL = Flasher	VR = Vandal Resistant Lens
				WW = All White	PB = 24" Swivel Pendant	BZ = Buzzer	CW = Custom Wording[2]
				AA = All Brushed Aluminum	PC = 36" Swivel Pendant	BF = Buzzer/Flasher	MR = Master w LPDC-VR Remote
				AW = Brushed Face, White Trim	PD = 48" Swivel Pendant	TP = Tamperproof	MRTL = Master w/TL-VR Remote
				CC = Custom Color	FR = Fully Recessed	Screws	MRFR = Master w/LPDC-FR
						SD = Self Diagnostics[1]	Remote
						SDAL = SD w/Alarm	FA = 12-24V Fire Alarm Interface
						WG = Wireguard[4]	WL = Wet Location (See Max Series)

Example: LPDC-EM-R-S-AB-UN-DL   Note: 1 = EM Unit Only Note: 2 = Consult Factory Note: 3 = AC Unit Only Note: 4 = Surface Mount Only

:: isolite

Call the Isolite office nearest you.

Project_____

Date_____Type_____

Catalog Number _____

Remarks _____

Visit us on the web at **www.isolite.com** or email sales@isolite.com

PRODUCTS

LUMINOUS SKYCEILINGS

Configurations

Rectilinear

EcoSlim LED

Circular

Elliptical

Revelation (NEW)

Personal Revelation (NEW)

Custom

Image Library

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Documentation

Documentation

Personal Revelation SkyCeilings

The **Personal Revelation SkyCeiling** is a virtual skylight mounted over patient beds. Designed as an illusion of nature™ that deepens biophilic engagement—our innate, genetic-based need to affiliate with nature—this restorative installation triggers an automatic "relaxation response" in the physiology.

As a unique 2' X 6' portal to nature, the Personal Revelation SkyCeiling features a deeper architectural reveal that effortlessly directs perspective and opens interior spaces to the healing properties of open skies.

Key Features

- Proprietary mega-format digital file library

- Custom SkyTiles create a photographic canvas of unmatched detail and realism

- Daylight-quality 6500K high CRI artificial light accurately reproduces the subtle hues and saturation of real skies

- 2.75" (6.99 cm) deep elevator with angled reveal

- Independent, modular system, works with or without the ceiling grid

- Simple installation

- Integrated dimmable LED lighting

Benefits

- Enhanced illusion of an architectural skylight

- Profound biophilic engagement with Open Skies Image Technology™, designed to affect spatial perception

DESCRIPTION

Our updated WNLED series is a versatile utility based, traditionally styled LED wraparound series which can be used in a broad range of commercial, schools, institutional, retail and residential applications. This high quality luminaire series utilizes the latest solid state LED lighting and advanced electronic driver technology which provides optimal lighting performance and maximizing energy savings. WNLED is designed to provide long service life eliminating re-lamping issues and minimizing maintenance common with traditional fluorescent.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Housing consists of die formed cold rolled steel. Ends formed with the housing for strength and provisions for continuous row aligners. Steel end plates with 7/8" KO and light-seal embossment. Driver cover can be removed by taking out four pan screws.

Controls
WNLED is Powered by Fifth Light, with standard a 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. Dimming range is 10% to 100%; varies by control device.

Electrical
Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K and 5000K with a typical CRI 85. Projected life is 60,000 hours at 70% lumen output. UL listed. Electronic drivers are available for 120-277V applications. A 0-10V dimming driver is standard.

Finish
Multistage iron phosphate pretreatment ensures maximum bonding and rust inhibitor. High reflective paint after fabrication, baked white enamel finish is standard.

Channel/Wireway Cover
Die formed heavy gauge steel. Tight fit for ease of maintenance.

Shielding
Acrylic, high performance, frost blend. Sides have inside linear prisms and bottom has pyramidal prisms for low brightness control.

Installation
Fixture may be surface, pendant, or stem mounted. See accessories below for ordering information.
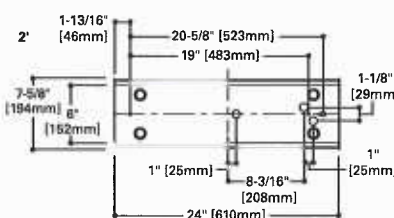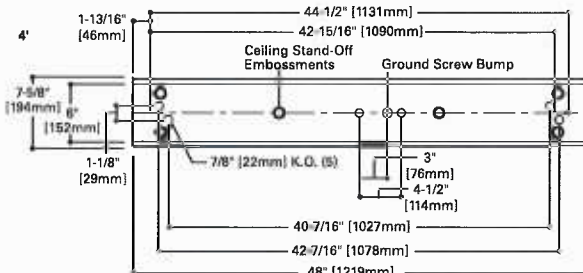
Compliance
UL Listed.

WNLED
LED

Utility LED Wraparound

powered by
fifthlight

MOUNTING DATA

WATTAGE

Length	Lumens	Wattage
2 ft.	2800	28
4 ft.	3200	28
4 ft.	4000	36
4 ft.	5000	47

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock*/ MTO**	Lumen Type	Length	Catalog Number	Nomial Lumens	Wattage	lm/W
MTO	Standard	2 ft.	2WNLED-LD4-28SL-F-UNV-L8XX-CD1-U	2786	28	101
MTO	Standard	4 ft.	4WNLED-LD4-32SL-F-UNV-L8XX-CD1-U	3298	28	118
Stock	Standard	4 ft.	4WNLED-LD4-40SL-F-UNV-L8XX-CD1-U	4062	36	113
Stock	Standard	4 ft.	4WNLED-LD4-50SL-F-UNV-L8XX-CD1-U	4966	47	107

* Stocked in 3500K and 4000K
** Also available in 3000k, 5000K

FAT-N
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ISO

PHOTOMETRICS

4WNLED-LD4-32SL-F-UNV-L835-CD1-U

Electronic Driver
Linear LED 3500K
Spacing criterion:
(II) 1.2 x mounting
height, (⊥) 1.2 x
mounting height
Lumens: 3298
Input Watts: 28.0W
Efficacy: 117.8 lm/W
Test Report:
4WNLED-LD4-32SL-F-UNV-L835-CD1-U.IES

Candlepower

Angle	Along ‖	45°	Across ⊥
0	1124	1124	1124
5	1124	1120	1116
10	1103	1102	1100
15	1069	1071	1071
20	1023	1029	1031
25	966	975	978
30	899	913	918
35	826	845	853
40	747	771	781
45	669	695	707
50	586	615	631
55	504	535	554
60	422	455	476
65	342	377	400
70	265	302	327
75	190	231	257
80	121	164	190
85	56	100	125
90	0	44	70

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	0
RCR																		
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	107	102	97	93	103	99	95	91	94	90	87	89	86	84	84	82	80	78
2	97	89	82	76	94	86	80	74	82	76	72	78	73	69	74	70	67	64
3	88	78	69	63	85	76	68	62	72	65	60	68	63	58	65	60	57	54
4	81	69	60	53	78	67	59	53	64	57	51	61	55	50	58	53	49	46
5	74	62	52	46	72	60	52	45	57	50	44	55	48	43	52	47	42	40
6	69	55	46	40	66	54	46	40	52	44	39	50	43	38	47	42	37	35
7	64	50	41	35	62	49	41	35	47	40	34	45	39	34	43	38	33	31
8	59	46	37	32	57	45	37	31	43	36	31	41	35	30	40	34	30	28
9	55	42	34	28	54	41	33	28	40	33	28	38	32	27	37	31	27	25
10	52	39	31	26	50	38	31	26	37	30	25	35	29	25	34	29	24	23

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	855	25.9
0-40	1381	41.9
0-60	2390	72.5
0-90	3109	94.3
0-180	3298	100.0

4WNLED-LD4-40SL-F-UNV-L835-CD1-U

Electronic Driver
Linear LED 3500K
Spacing criterion:
(II) 1.2 x mounting
height, (⊥) 1.2 x
mounting height
Lumens: 4062
Input Watts: 36.0W
Efficacy: 112.8 lm/W
Test Report:
4WNLED-LD4-40SL-F-UNV-L835-CD1-U.IES

Candlepower

Angle	Along ‖	45°	Across ⊥
0	1386	1386	1386
5	1385	1380	1375
10	1360	1357	1354
15	1318	1320	1320
20	1261	1266	1268
25	1190	1201	1203
30	1109	1125	1128
35	1018	1042	1048
40	922	951	964
45	823	857	868
50	721	759	773
55	620	660	678
60	521	561	584
65	421	464	492
70	326	372	403
75	234	285	317
80	148	201	233
85	70	123	154
90	1	57	89

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	0
RCR																		
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	107	102	97	93	103	99	95	91	94	90	87	89	86	84	84	82	80	78
2	97	89	82	76	94	86	80	74	82	76	72	78	73	69	74	70	67	64
3	88	78	69	63	85	76	68	62	72	65	60	68	63	58	65	61	57	54
4	81	69	60	53	78	67	59	53	64	57	51	61	55	50	58	53	49	46
5	74	62	52	46	72	60	52	45	57	50	44	55	48	43	52	47	42	40
6	69	55	46	40	66	54	46	40	52	44	39	50	43	38	47	42	37	35
7	64	50	41	35	62	49	41	35	47	40	34	45	39	34	43	38	33	31
8	59	46	37	32	57	45	37	31	43	36	31	41	35	30	40	34	30	28
9	55	42	34	28	54	41	33	28	40	33	28	38	32	27	37	31	27	25
10	52	39	31	26	50	38	31	26	37	30	25	35	29	25	34	29	24	23

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1054	25.9
0-40	1702	41.9
0-60	2945	72.5
0-90	3832	94.3
0-180	4062	100.0

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (12,000 hours)	Theoretical L70 (Hours)
25°C	80.7%	85,000

Max Ambient temp in compliance with UL: 40°C

ORDERING INFORMATION

SAMPLE NUMBER: 4WNLED-LD4-40-F-UNV-L840-CD1-U

Length
2=2 ft.
4=4 ft.

Series
WNLED=Utility LED Wraparound

Lamp Type
LD4=LED 4.0

LED Lumens Output
28=2800 [1]
32=3200
40=4000
50=5000

Lens
F=Frost Acrylic (standard)

Voltage
347=347V [2]
480=480V [2]
UNV=Universal Voltage 120-277

CCT
L830=3000K
L835=3500K
L840=4000K
L850=5000K

Driver Type
CD=0-10V Dimming Driver (10% - 100% Dimming)

Number of Drivers
1=1 Driver
2=2 Drivers

Packaging
U=Unit Pack

ACCESSORIES

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)

NOTES: [1] 2 ft. model. [2] 4 ft. model only.
Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
2WNLED	5 lbs.
4WNLED	9 lbs.

FATON
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.

DESCRIPTION

The Impact Elite family of wall luminaires is the ideal complement to site design. Incorporating modular LightBAR™ technology, the Impact Elite luminaire provides outstanding uniformity and energy-conscious illumination. Combined with a rugged construction, the Impact Elite luminaire is the ideal facade and security luminaire for zones surrounding schools, office complexes, apartments and recreational facilities. UL/cUL listed for wet locations.

McGraw-Edison

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

Construction
Heavy-wall, die-cast aluminum housing and removable hinged door frame for precise tolerance control and repeatability. Hinged door inset for clean mating with housing surface and secured via two captive fasteners. Optional tamper-resistant Torx™ head fasteners offer vandal resistant access to the electrical chamber.

Optics
Choice of six patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics 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.

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 are 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 an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Emergency egress options for -20°C ambient environments and occupancy sensor available.

Mounting
Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" mechanism for quick installation. Secured with two captive corrosion resistant black oxide coated allen head set screws concealed but accessible from bottom of fixture.

Finish
Cast 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 colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.
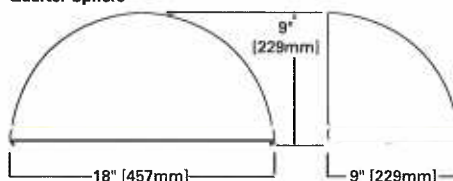
Warranty
Five-year warranty.
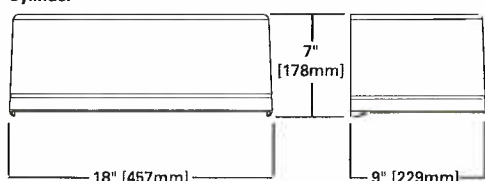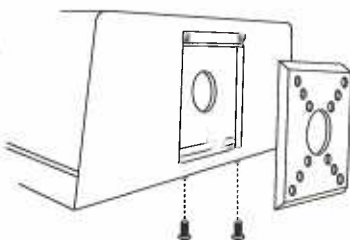
ISC/ISS/IST/ISW
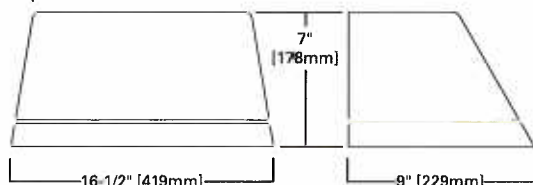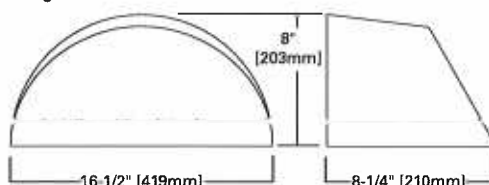## IMPACT ELITE LED

1 - 2 LightBARs
Solid State LED

WALL MOUNT LUMINAIRE

CERTIFICATION DATA
UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightBARs
ISO 9001
DesignLights Consortium® Qualified*

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

SHIPPING DATA
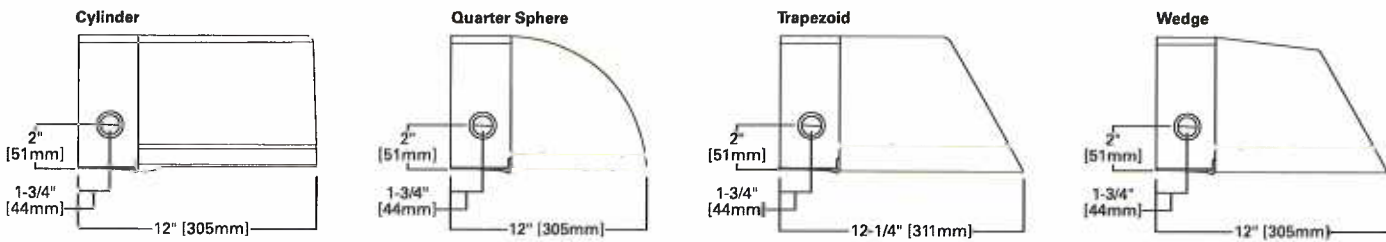**Approximate Net Weight:**
18 lbs. (8 kgs.)

DIMENSIONS

Cylinder
7" [178mm]
18" [457mm]
9" [229mm]

Quarter Sphere
9" [229mm]
18" [457mm]
9" [229mm]

Trapezoid
7" [178mm]
16-1/2" [419mm]
9" [229mm]

Wedge
8" [203mm]
16-1/2" [419mm]
8-1/4" [210mm]

HOOK-N-LOCK MOUNTING

EAT•N
Powering Business Worldwide

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2015-06-03 10:00:35

THRUWAY BACK BOX

Cylinder

2" [51mm]
1-3/4" [44mm]
12" [305mm]

Quarter Sphere

2" [51mm]
1-3/4" [44mm]
12" [305mm]

Trapezoid

2" [51mm]
1-3/4" [44mm]
12-1/4" [311mm]

Wedge

2" [51mm]
1-3/4" [44mm]
12" [305mm]

POWER AND LUMENS BY BAR COUNT

Number of LightBARs		E01	E02	F01	F02
		21 LED LightBAR		7 LED LightBAR	
Drive Current		350mA		1A	
Power (Watts)	120-277V	25W	47W	26W	50W
Current (A)	120V	0.22	0.40	0.22	0.42
	277V	0.10	0.18	0.10	0.19
Power (Watts)	347V or 480V	31W	52W	32W	55W
Current (A)	347V	0.11	0.16	0.11	0.17
	480V	0.16	0.18	0.16	0.18
Optics					
BL2	Lumens	2,738	5,476	2,260	4,521
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1
BL3	Lumens	2,702	5,405	2,231	4,462
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G1
BL4	Lumens	2,613	5,225	2,157	4,313
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G1
GZW	Lumens	2,785	5,570	2,299	4,598
	Bug Rating	B2-U0-G2	B3-U0-G3	B1-U0-G1	B2-U0-G2
SLR/SLL	Lumens	2,435	4,869	2,010	4,020
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G2

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 Maintenance (Percent) vs Hours (Thousands). 25°C — 40°C — 50°C

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10 C	1.02
15 C	1.01
25 C	1.00
40 C	0.99
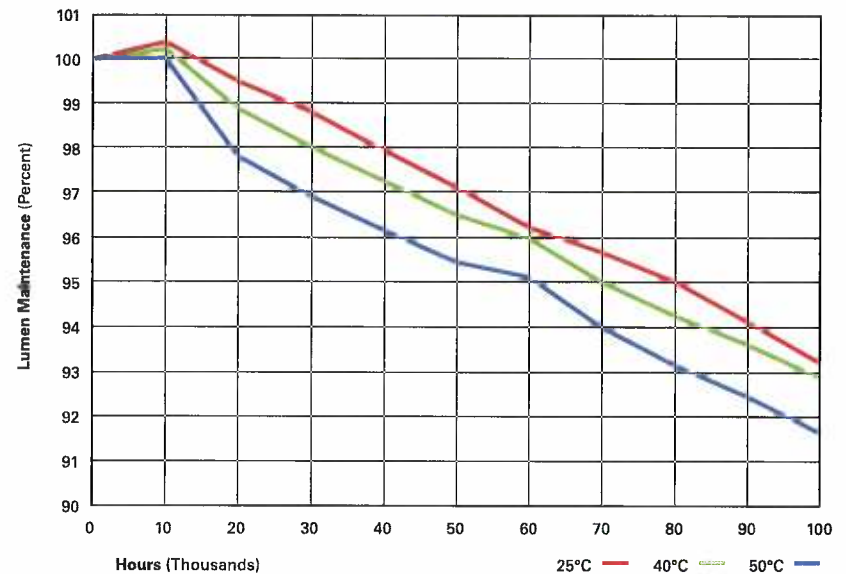
ORDERING INFORMATION

Sample Number: ISC-E02-LED-E1-BL3-GM

Product Family [1]	Number of LightBARs [2,3]	Lamp Type	Voltage	Distribution	Color [5]
ISC=Impact Elite LED Small Cylinder **ISS**=Impact Elite LED Small Quarter Sphere **IST**=Impact Elite LED Small Trapezoid **ISW**=Impact Elite LED Small Wedge	**E01**=(1) 21 LED LightBAR **E02**=(2) 21 LED LightBARs **F01**=(1) 7 LED LightBAR **F02**=(2) 7 LED LightBARs	**LED**=Solid State Light Emitting Diodes	**E1**=Electronic (120-277V) **347**=347V **480**=480V [4]	**BL2**=Type II w/Back Light Control **BL3**=Type III w/Back Light Control **BL4**=Type IV w/Back Light Control **GZW**=Wall Grazer Wide **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White

Options (Add as Suffix)	Accessories (Order Separately) [11]
2L=Two Circuits [6] **7030**=70 CRI / 3000K CCT [7] **7050**=70 CRI / 5000K CCT [7] **7060**=70 CRI / 5700K CCT [7] **8030**=80 CRI / 3000K CCT [7] **P**=Button Type Photocontrol (Available in 120, 208, 240 or 277V. Must Specify Voltage) **OSB**=Occupancy Sensor with Back Box (Specify 120V or 277V) [8] **BBB-XX**=Battery Pack with Back Box (Specify 120V or 277V) [9] **CWB-XX**=Cold Weather Battery Pack with Back Box (Specify 120V or 277V) [10] **DIM**=0-10V Dimming Drivers **LCF**=LightBAR Cover Plate Matches Housing Finish **ULG**=Uplight Glow **TR**=Tamper Resistant Hardware	**MA1253**=10kV Circuit Module Replacement **MA1254-XX**=Thruway Back Box - Impact Elite Trapezoid **MA1255-XX**=Thruway Back Box - Impact Elite Cylinder **MA1256-XX**=Thruway Back Box - Impact Elite Quarter Sphere **MA1257-XX**=Thruway Back Box - Impact Elite Wedge

NOTES:
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Standard 4000K CCT and greater than 70 CRI. LightBARs for downlight use only.
3. 21 LED LightBAR powered by 350mA and 7 LED LightBAR powered by 1A.
4. 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).
5. Custom and RAL color matching available upon request. Consult your lighting representative at Eaton for more information.
6. Low-level output varies by bar count. Consult factory. Not available with 347V or 480V. Available with two bars (E02 or F02) only.
7. Extended lead times apply.
8. Available with E02 or F02, only one bar on street side will be wired to sensor. Time delay factory setting 15-minutes. When ordered with PC option, both bars are connected to photocontrol as primary switching means. Standard sensor lens covers 8' mounting height, 360° coverage, maximum 48' diameter. Not available in all configurations or with BBB or CWB options.
9. Specify 120V or 277V. LED standard integral battery pack is rated for minimum operating temperature 32°F (0°C). Operates one bar for 90-minutes. Not available in all configurations or with OSB option. Consult factory.
10. Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates one bar for 90-minutes. Not available in all configurations or with OSB option. Consult factory.
11. Replace XX with color suffix.

S193 — Back mount

S294 — Ceiling mount

S190/S290 SERIES
Surface single compartment

The S190/S290 Series of signs offer clean styling in an exit sign size. The extruded aluminum housings feature a black polyester finish with copy on white snap-in panels. The wider S190 Series is available with incandescent, fluorescent, or LED. Several options are available, and the sign may be specified for wet location mounting. Many standard copy options are in stock, and custom panels are available as required.

Custom color copy available as an option

S191 — Recessed

S191 SERIES
Recessed single compartment

The extruded aluminum trim features a black polyester coating with copy on white snap-in panels. Incandescent, fluorescent, or LED lamps is available, and the sign may be specified for wet location mounting, and other options. Many standard copy options are in stock, and custom panels are available as required.

S252S-L — Surface housing with LED lamps

Illustrated with energized
Read-Out Face option

S252 — Recessed

S252 SERIES
Small recessed single compartment

The compact S252 Series signs provide a less obtrusive presence where smaller copy is acceptable. It is available with incandescent, fluorescent, or LED lamps and with several options. Many standard copy options are in stock, and custom panels are available as required.

Read-Out Face option provides blank appearance unless sign is energized.

**C.W. Cole & Company, Inc.
2560 N. Rosemead Boulevard
South El Monte, CA 91733-1593**

**Tel.   (626) 443-2473
Fax   (626) 443-9253
info@colelighting.com
www.colelighting.com**

Signs

REST ROOMS

13-1/2" (343mm)
7-7/8" (200mm)
8-7/8" (225mm)

3-7/8" (98mm) — S190
2" (51mm) — S290

SPECIFICATIONS
Construction
- Fixture is constructed of extruded aluminum
- Finish is black polyester coating • Copy is silk-screened on white butyrate snap-in panel
- Bracket is die-cast aluminum with black finish
- cULus listed, for wet locations when specified

Electrical
- S190 signs are wired for two 25W T6½ intermediate base incandescent lamps • Two 7W compact fluorescent lamps optional on S190 only (120V standard) • S290 signs are wired for two 25W T6½ DC bayonet base incandescent lamps • Two 1.5W LED modules optional (universal voltage)

Mounting
Sign mounts directly to junction box

DO NOT ENTER

14-7/8" (378mm)
9-1/8" (232mm)
8-1/4"x 14" (210 x 356mm)
4" (102mm)
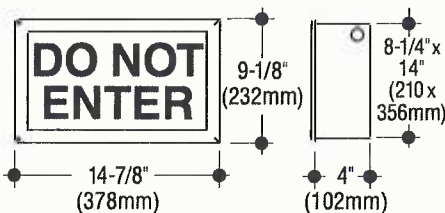
SPECIFICATIONS
Construction
- Fixture is constructed of 18 gauge steel, suitable for poured concrete construction with extruded aluminum trim • Finish on trim is black polyester coating; housing is white polyester coating • Copy is silk-screened on white butyrate snap-in panel • cULus listed, suitable for wet locations when specified

Electrical
- Wired for two 25W T6½ intermediate base incandescent lamps • Two 7W compact fluorescent lamps optional (120V standard) • Two 1.5W LED modules optional (universal voltage)

Mounting
Housing has holes for mounting.

Surface

IN USE

9-3/8" (238mm)
5-5/8" (143mm)
4" (102mm)

Recessed

IN USE

9-3/8" (238mm)
5-5/8" (143mm)
5"x 8" (127 x 203mm)
3-3/4" (95mm)

SPECIFICATIONS
Construction
- Fixture is constructed of 16 gauge steel recessed housing suitable for poured concrete construction • Trim and surface housing finish is metallic aluminum polyester coating; recessed housing is white polyester coating • Copy is silk-screened on white acrylic • cETLus listed, suitable for wet locations when specified

Electrical
- Wired for one 25W A19 incandescent lamp • One 7W compact fluorescent lamp optional (120V standard) • One 1.5W LED modules optional (universal voltage)

Mounting
Surface sign mounts to junction box. Recessed housing has flanges with holes for mounting, suitable for any wall construction.

S190/S290 SERIES

Catalog Numbers

Back Mount	S193-*	S293-*
Ceiling Mount	S194-*	S294-*
End Mount	S192-*	S292-*
		* selected Group D copy

Options
Double Face: Add suffix -D.
Fluorescent: S190 only. Add suffix -F. 277V: Add -277.
Flasher: Incandescent only. Add suffix -FL.
Read-Out Face: Blank until lighted. Add suffix -ROF.
Stencil Face: Add suffix -STF.
Wet Locations: Add suffix -W.
LED: Add suffix -L.
Custom: Copy or Color. Add suffix -CC.

S191 SERIES

Catalog Numbers
Recessed Mount   S191- (selected Group D copy)

Options
Fluorescent: Add suffix -F. 120V is standard; for 277V, add suffix -277.
Flasher: Incandescent only. Add suffix -FL.
Read-Out Face: Blank until lighted. Add suffix -ROF.
Stencil Face: Add suffix -STF.
Wet Locations: Add suffix -W.
LED: Add suffix -L.
Custom: Copy or Color. Add suffix -CC.

S252 SERIES

Catalog Numbers
Surface Mount   S252S- (selected Group E copy)
Recessed Mount   S252- (selected Group E copy)

Options
Fluorescent: Add suffix -F. 120V is standard; for 277V, add suffix -277.
Read-Out Face: Blank until lighted. Add suffix -ROF.
Stainless Steel: Satin finished. Add suffix -N.
Stencil Face: Add suffix -STF.
Wet Locations: Add suffix -W.
LED: Add suffix -L.
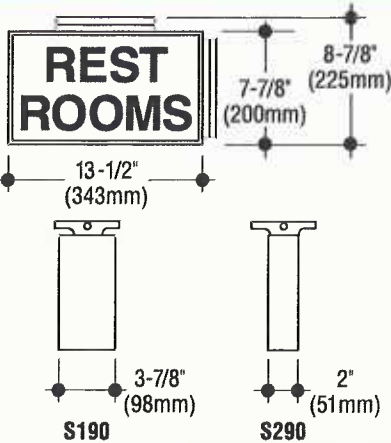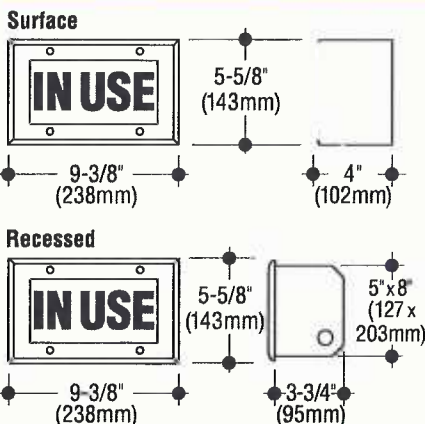**Custom:** Copy or Color. Add suffix -CC.

COLE
Lighting

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South El Monte, CA 91733-1593

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Fax   (626) 443-9253
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www.colelighting.com

Standard Copy Options

Group D

X-RAY ROOM IN OPERATION DO NOT ENTER	IN USE	AREA OF RESCUE ASSISTANCE	DO NOT ENTER
X-RAY ON	X-RAY IN USE	BEAM ON	ON THE AIR
LASER IN USE	DARKROOM IN USE	ROOM IN USE	FIRE ESCAPE
MEN	WOMEN	STAIRS	
ATM	ELEVATORS		REST ROOMS

Group E

DARKROOM IN USE	DO NOT ENTER
X-RAY ON	X-RAY IN USE
LASER IN USE	IN USE
ON AIR	ATM
	This chart indicates standard colors

Luminous SkyCeilings™   O AND P

S ky Factory Luminous SkyCeilings—virtual skylights—faithfully reproduce the subtle visual stimuli of real sky. As unique biophilic design elements, SkyCeilings enliven the innate human connection to nature and promote the healing relaxation responses of comfort, inner stability, and vitality.

Sky Factory's *Open Skies Image Technology*™ deepens biophilic engagement and dramatically transforms even the largest interiors into more natural-feeling spaces. The company's award-winning *illusions of nature*™ are unsurpassed in quality, engineering, and artistry.

A single circle or oval virtual skylight is an effective focal point in public spaces.

Luminous SkyCeilings are the perfect solution to claustrophobic or fully enclosed medical spaces, transforming the environment into more expansive, comfortable areas.
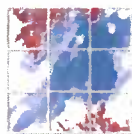
Luminous SkyCeiling Shapes

Luminous SkyCeilings come in virtually all linear and curvilinear shapes and sizes; they can also be manufactured to designers' custom specifications.
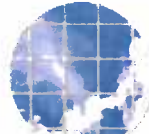
CUSTOM   RECTILINEAR   CIRCULAR   ELLIPTICAL

O

P