

DESCRIPTION

GR LED is a lensed troffer series. This high quality luminaire is dedicated to the latest solid state lighting and electronic driver technology for optimal performance and energy efficiency. The GR LED is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The GR LED series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. 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 GR LED 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.coopercontrols.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.

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/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and baked white enamel finish. Flat and regressed aluminum doors also available. Positive light seals. Light stabilized, acrylic prismatic lens. Standard #12 pattern.

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.

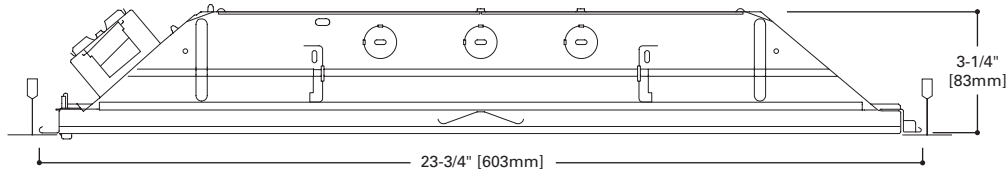


2GR LED LED

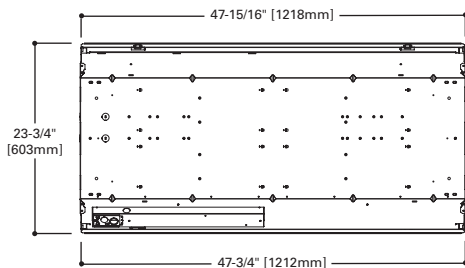
2' X 4' LED TROFFER

General Recessed LED Troffer

For Use in Insulated Ceilings



MOUNTING DATA



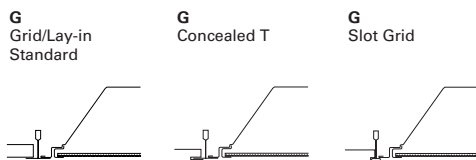
DOOR FRAMES



WATTAGE

Lumens Package	Wattage
3800	38W
4800	49W
6400	65W
8500	85W

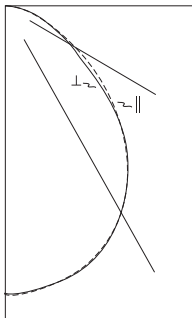
CEILING COMPATIBILITY



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

(Verify compatibility/ consult factory.)

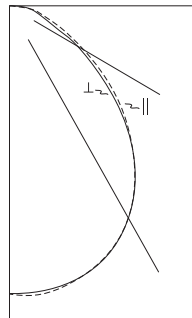
PHOTOMETRICS



2GR-LD1-48-A-UNV-L835-CD1-U
 Dimming Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.2 x
 mounting height
 Efficiency: 100%
 Lumens: 4833
 Input Watts: 48.6W
 Efficacy: 99.4 LPW
 Test Report:
 2GR-LD1-48-A-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	2115	2115	2115
5	2119	2105	2111
10	2093	2080	2084
15	2041	2032	2039
20	1965	1961	1969
25	1864	1858	1864
30	1734	1729	1733
35	1578	1567	1573
40	1392	1369	1379
45	1174	1160	1163
50	959	956	905
55	769	725	684
60	582	505	524
65	422	334	386
70	308	213	294
75	224	159	240
80	167	132	191
85	93	80	112
90	0	0	0



2GR-LD1-64-A-UNV-L835-CD1-U
 Dimming Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.2 x
 mounting height
 Efficiency: 100%
 Lumens: 6808
 Input Watts: 70.6W
 Efficacy: 96.4 LPW
 Test Report:
 2GR-LD1-64-A-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	2960	2960	2960
5	2984	2955	2970
10	2944	2921	2929
15	2861	2841	2871
20	2766	2759	2747
25	2622	2617	2623
30	2439	2422	2442
35	2232	2210	2205
40	1967	1931	1941
45	1657	1636	1624
50	1350	1357	1277
55	1078	1030	973
60	824	717	732
65	599	468	547
70	431	302	421
75	316	224	338
80	233	187	267
85	136	113	155
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance						20%								
	80%		70%		50%										
rw	70	50	30	10	70	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	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	91	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	63
4	86	74	66	60	83	73	66	60	71	64	59	68	63	58	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	49
6	73	61	53	46	72	60	52	46	58	51	46	57	50	46	43
7	68	56	47	41	67	55	47	41	53	46	41	52	46	41	39
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	35
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	32
10	56	43	36	31	55	43	36	31	42	35	31	41	35	30	29

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rw	70	50	30	10	70	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	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	73
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	63
4	86	74	66	60	83	73	66	60	71	64	59	68	63	58	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	49
6	73	61	52	46	72	60	52	46	58	51	46	57	50	45	43
7	68	56	47	41	67	55	47	41	53	46	41	52	45	40	39
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	35
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	31
10	56	43	36	31	55	43	36	31	42	35	31	41	35	30	29

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	1629	33.7
0-40	2607	53.9
0-60	4147	85.8
0-90	4833	100.0
0-180	4833	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2542	2512	2518
55	2053	1935	1826
65	1529	1210	1398
75	1325	941	1420
85	1634	1405	1968

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	2289	33.6
0-40	3666	53.8
0-60	5839	85.8
0-90	6808	100.0
0-180	6808	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3588	3542	3516
55	2878	2749	2597
65	2170	1695	1982
75	1969	1325	1999
85	2389	1985	2723

ORDERING INFORMATION

SAMPLE NUMBER: 2GR-LD1-48-A-UNV-L835-CD1-U

<p>Rating Blank= Standard ATW-SW4= Chicago Rated</p> <p>Width 2=2' Width</p> <p>Trim Type G=Grid/Lay-in (Standard)⁽¹⁾ G=Concealed T G=Slot Grid</p> <p>Series⁽⁶⁾ R=General Purpose Troffer</p> <p>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</p>	<p>LED Type LD1=LED 1.0</p> <p>LED Lumens Output⁽⁵⁾ 38=3800 48=4800 64=6400 85=8500</p> <p>Shielding A=A12 .095 A125=A12 .125 A125MIN=A12 .125 MIN A19/156=A19 .156 F=A12 .095 Frost F125=A12 .125 Frost ND=No Door</p>	<p>Voltage⁽²⁾ UNV=Universal Voltage 120-277⁽³⁾</p> <p>Options GL=Single Element Fuse GM=Double Element Fuse</p> <p>Emergency EL=Emergency Installed, 700 Lumens^{(4), (9)} EL14=Emergency Installed, 1400 Lumens^{(4), (9)} EL10W=Emergency Installed, 10 Watts⁽¹⁰⁾</p> <p>CCT L830=3000K L835=3500K L840=4000K L850=5000K</p> <p>Flex Multiple Configurations Available</p>	<p>Driver Type CD=0-10V Dimming Driver SD=Step-Dim Driver 5LTD=Fifth Light (DALI) Driver</p> <p>Number of Drivers 1=1 Driver</p>	<p>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^{(7), (8)}</p>	<p>Packaging U=Unit Pack PALC=Palletized Fixtures In Carton</p>
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ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips⁽¹¹⁾
 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⁾ EL options are non-integral. ⁽⁵⁾ Nominal lumen output. ⁽⁶⁾ DesignLights™ Consortium Qualified (all lumen packages). Refer to www.designlights.org Qualified Products List under Family Models for details. ⁽⁷⁾ Gasketing only available with aluminum door frame. ⁽⁸⁾ Gasketing minimum .125. ⁽⁹⁾ Must specify voltage (120V or 277V) when selecting EL option. ⁽¹⁰⁾ For delivered lumens, take lumens per watt of desired fixture and multiply by 10 watts (100 lp/W x 10 = 1000 lumens delivered).

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

SHIPPING DATA

Catalog No.	Wt.	Pallet
2GR-LD1-48	20 lbs.	24
2GR-LD1-64	20 lbs.	24