

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.

Catalog #		Type
Project		
Comments		Date
Prepared by		

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. Gridlock 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.coopercontrol.com) to maximize energy savings.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500k or 4000k with typical CRI 85. Projected life is 50,000 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.

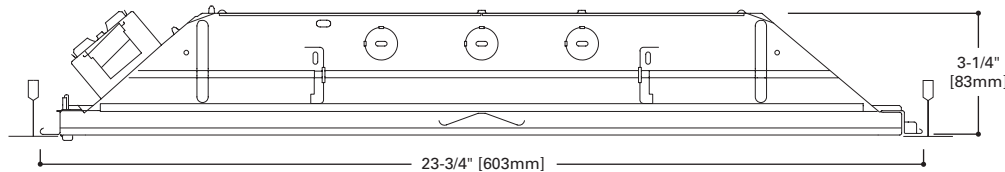


**2GR
LED**

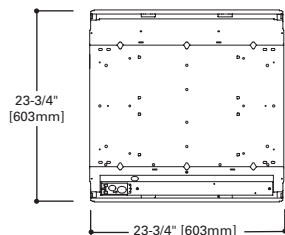
2' X 2' LED TROFFER

General Recessed LED Troffer

For Use in Insulated Ceilings



MOUNTING DATA



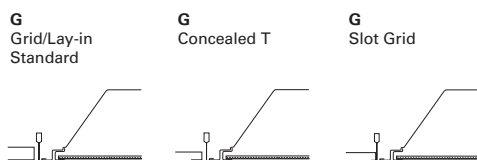
DOOR FRAMES



ENERGY DATA

Input Watts:
32=36W
43=49W

CEILING COMPATIBILITY



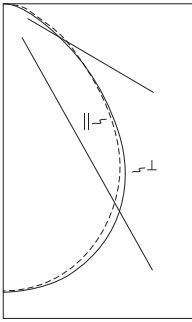
Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G
Slot Grid	G

(Verify compatibility/ consult factory.)

LINEAR DISCONNECT

Safe and convenient means of disconnecting power

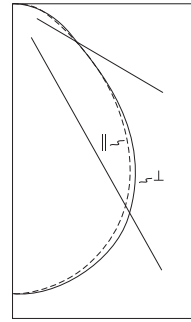
PHOTOMETRICS



2GR-LD1-32-A-UNV-L835-CD1-U
 Dimming Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.2 x mounting
 height, (L) 1.2 x
 mounting height
 Efficiency: 100%
 Lumens: 3221
 Input Watts: 36.2W
 Efficacy: 89 LPW
 Test Report:
 2GR-LD1-32-A-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1470	1470	1470
5	1465	1461	1471
10	1438	1437	1451
15	1391	1396	1415
20	1328	1335	1361
25	1250	1258	1296
30	1150	1165	1204
35	1038	1050	1085
40	896	904	945
45	740	758	784
50	596	621	604
55	471	461	463
60	362	331	352
65	271	223	266
70	199	145	203
75	143	105	161
80	104	85	123
85	57	50	70
90	0	0	0



2GR-LD1-43-A-UNV-L835-CD1-U
 Dimming Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.2 x mounting
 height, (L) 1.2 x
 mounting height
 Efficiency: 100%
 Lumens: 4351
 Input Watts: 48.9W
 Efficacy: 89 LPW
 Test Report:
 2GR-LD1-43-A-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1987	1987	1987
5	1976	1971	1987
10	1939	1940	1959
15	1879	1883	1910
20	1796	1804	1840
25	1686	1698	1749
30	1557	1571	1626
35	1399	1415	1469
40	1210	1221	1268
45	1004	1023	1054
50	809	839	815
55	639	626	627
60	493	445	479
65	368	300	358
70	271	194	274
75	192	142	218
80	142	115	166
85	78	68	97
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	106	102	98	107	103	100	97	99	96	94	95	93	91	86
2	101	94	87	82	99	92	86	81	88	84	79	85	81	78	74
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	56
5	79	68	59	53	77	66	59	53	64	58	52	63	56	52	49
6	74	61	53	47	72	60	53	47	59	52	46	57	51	46	44
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	39
8	64	51	43	38	63	51	43	38	49	43	38	48	42	37	35
9	60	47	40	34	59	47	39	34	46	39	34	44	38	34	32
10	57	44	36	31	55	43	36	31	42	36	31	42	35	31	29

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	106	102	98	107	103	100	97	99	96	94	95	93	91	86
2	101	94	87	82	99	92	86	81	88	83	79	85	81	78	74
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	56
5	79	68	59	53	77	66	59	53	64	58	52	63	56	52	49
6	74	61	53	47	72	60	53	47	59	52	46	57	51	46	44
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	39
8	64	51	43	38	63	51	43	38	49	43	38	48	42	37	35
9	60	47	40	34	59	47	39	34	46	39	34	44	38	34	32
10	57	44	36	31	55	43	36	31	42	36	31	42	35	31	29

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	1115	34.6
0-40	1170	55.0
0-60	2772	86.1
0-90	3221	100.0
0-180	3221	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3350	3432	3549
55	2629	2573	2584
65	2053	1689	2015
75	1769	1299	1991
85	2094	1837	2571

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	1505	34.6
0-40	2389	54.9
0-60	3744	86.1
0-90	4351	100.0
0-180	4351	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	4545	4631	4772
55	3566	3494	3500
65	2788	2272	2712
75	2375	1756	2696
85	2865	2498	3563

ORDERING INFORMATION

SAMPLE NUMBER: 2GR-LD1-32-A-UNV-L835-CD1-U

<p>Rating Blank= Standard ATW-SW4= Chicago Rated</p>	<p>LED Type LD1=LED 1.0</p> <p>LED Lumens Output⁽⁶⁾ 32=3200 43=4300</p>	<p>Voltage⁽²⁾ UNV=Universal Voltage 120-277⁽³⁾</p>	<p>Driver Type CD=0-10V Dimming Driver SD=Step-Dim (Bi Level) 5LTD=Fifth Light (DALI) 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>
<p>Width 2=2' Width</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>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>Number of Drivers 1=1 Driver</p>	<p>ACCESSORIES EQ-CLIP-U=T-BAR Safety Earthquake Clips⁽¹⁾ DF-22-W=2' x 2' Drywall Frame Kit</p>	
<p>Trim Type⁽⁶⁾ G=Grid/Lay-in (Standard)⁽¹⁾ G=Concealed T G=Slot Grid</p>					
<p>Series 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>					

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 (high lumen only). 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-LD1-32	10 lbs.	48
2GR-LD1-43	10 lbs.	48