

## 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.

## 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 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](http://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.

### 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.

Catalog #		Type
Project		
Comments		Date
Prepared by		

### 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

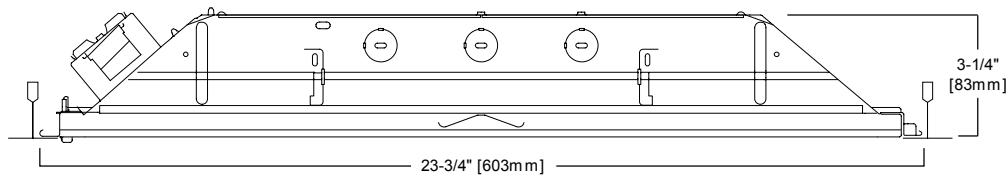
Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified.



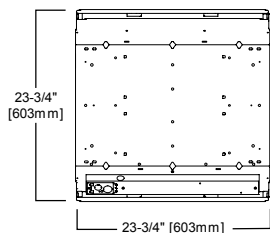
## 22GR LED

2' X 2' LED TROFFER

General Recessed LED Troffer  
For Use in Insulated Ceilings



## MOUNTING DATA



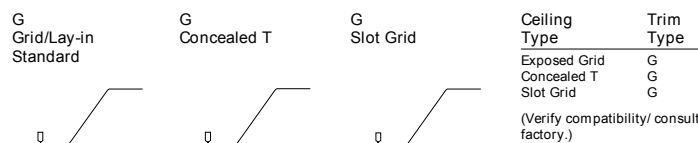
## DOOR FRAMES



## WATTAGE

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

## CEILING COMPATIBILITY

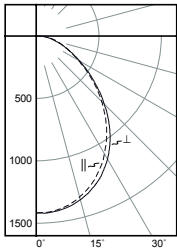


## LINEAR DISCONNECT

Safe and convenient means of disconnecting power

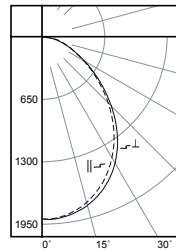


PHOTOMETRICS



**22GR-LD4-32-F1-UNV-L835-CD1-U**  
 Dimming Driver  
 Linear LED 3500K  
 Spacing criterion:  
 (||) 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	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	55	54	
90	0	0	0	



**22GR-LD4-43-F1-UNV-L835-CD1-U**  
 Dimming Driver  
 Linear LED 3500K  
 Spacing criterion:  
 (||) 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	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

rc	Effective floor cavity reflectance																				
	80%				70%				50%				30%				10%				0%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	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			

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

Coefficients of Utilization

rc	Effective floor cavity reflectance																				
	80%				70%				50%				30%				10%				0%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	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			

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

<p>Rating Blank=Standard ATW-SW4=Chicago Rated</p>	<p>LED Type LD4=LED 4.0</p>	<p>Voltage <sup>(2)</sup> UNV=Universal Voltage 120-277 <sup>(4)</sup></p>	<p>Driver Type CD=0-10V Dimming Driver SD=Step-Dim (Bi Level) <sup>(11)</sup> 5LTD=Fifth Light (DALI) Driver <sup>(11)</sup></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 <sup>(7),(8)</sup></p>	<p>Packaging U=Unit Pack PALC=Palletized Fixtures in Carton</p>
<p>Width / Length 22=2' x 2'</p>	<p>LED Lumens Output <sup>(5)</sup> Stock 24=2400 32=3200 43=4300 MTO 20=2000 28=2800 36=3600 40=4000</p>	<p>Options GL=Single Element Fuse GM=Double Element Fuse</p>	<p>Number of Drivers 1=1 Driver</p>		
<p>Trim Type <sup>(6)</sup> G=Grid/Lay-in (Standard) <sup>(11)</sup> G=Concealed T G=Slot Grid</p>	<p>Shielding F1=A12 .125 HP (Standard) A=A12 .095 A125=A12 .125</p>	<p>Emergency EL=Emergency Installed, 700 Lumens <sup>(4),(9)</sup> EL14=Emergency Installed, 1400 Lumens <sup>(4),(9)</sup> EL10W=Emergency Installed, 10 Watts <sup>(10)</sup></p>			
<p>Series R=General Purpose Troffer</p>	<p>CCT L830=3000K L835=3500K L840=4000K L850=5000K Flex Multiple Configurations Available</p>		<p>ACCESSORIES EQ-CLIP-U=T-BAR Safety Earthquake Clips <sup>(1)</sup> DF-22-W=2' x 2' Drywall Frame Kit</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: <sup>(1)</sup> An EQ Grid Clip is recommended for all 9/16" ceiling systems. <sup>(2)</sup> Products also available in non-US voltages and frequencies for international markets. <sup>(3)</sup> Not available when specifying emergencies, voltage must be specific. <sup>(4)</sup> EL options are non-integral. <sup>(5)</sup> Nominal lumen output. <sup>(7)</sup> Gasketing only available with aluminum door frame. <sup>(8)</sup> Gasketing minimum .125. <sup>(9)</sup> Must specify voltage (120V or 277V) when selecting EL option. <sup>(10)</sup> For delivered lumens, take lumens per watt of desired fixture and multiply by 100 watts (100 lp/W x 10 = 1000 lumens delivered). <sup>(11)</sup> Step-Dim (Bi-Level) and Fifth Light (DALI) only available for 3,200 lumen and above.

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

## ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	22GR-LD4-20-F1-UNV-L835-CD1-U	2084	20.10	103.68
Stock	22GR-LD4-24-F1-UNV-L835-CD1-U	2432	23.78	102.27
MTO	22GR-LD4-28-F1-UNV-L835-CD1-U	2804	28.13	99.68
Stock	22GR-LD4-32-F1-UNV-L835-CD1-U	3212	33.15	96.89
MTO	22GR-LD4-36-F1-UNV-L835-CD1-U	3598	38.86	92.59
MTO	22GR-LD4-40-F1-UNV-L835-CD1-U	4016	45.31	88.63
Stock	22GR-LD4-43-F1-UNV-L835-CD1-U	4310	50.43	85.47

\* Made to order (MTO) requires a typical four week lead time.