

## 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 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 90% 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.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

### 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

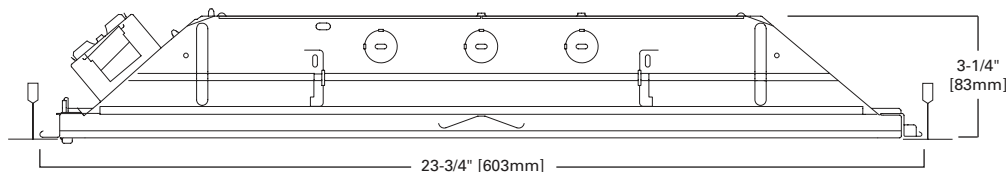
Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details.



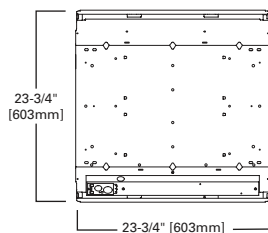
## 22GR LED

### 2' X 2' LED TROFFER

General Recessed LED Troffer For Use in Insulated Ceilings



## MOUNTING DATA



## DOOR FRAMES



## CEILING COMPATIBILITY

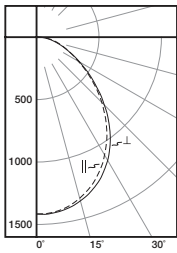
G	G	G	Ceiling Type	Trim Type
Grid/Lay-in Standard	Concealed T	Slot Grid	Exposed Grid	G
			Concealed T	G
			Slot Grid	G

(Verify compatibility/ consult factory.)

## WATTAGE

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

PHOTOMETRICS



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

Dimming Driver  
 Linear LED 3500K  
 Spacing criterion:  
 (II) 1.1 x mounting  
 height, (L) 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**

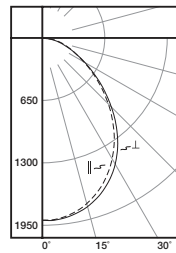
Angle	Along II	45°	Across ⊥
0	1411	1411	1411
5	1404	1401	1410
10	1377	1377	1389
15	1328	1334	1350
20	1264	1273	1295
25	1180	1196	1223
30	1080	1101	1131
35	973	992	1020
40	853	867	893
45	730	739	757
50	604	611	624
55	486	489	503
60	378	379	390
65	295	286	293
70	226	211	218
75	170	155	155
80	119	106	103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



**22GR-LD4-43-F1-UNV-L835-CD1-U**

Dimming Driver  
 Linear LED 3500K  
 Spacing criterion:  
 (II) 1.2 x mounting  
 height, (L) 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**

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	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><b>Rating</b> Blank= Standard ATW-SW4= Chicago Rated</p> <p><b>Width / Length</b> 22=2' x 2'</p> <p><b>Trim Type</b> G=Grid/Lay-in (Standard)<sup>(1)</sup> G=Concealed T G=Slot Grid</p> <p><b>Series</b><sup>(8)</sup> R=General Purpose Troffer</p> <p><b>Door Frame</b> 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><b>LED Type</b> LD4=LED 4.0</p> <p><b>LED Lumens Output</b><sup>(5)</sup> Stock 24=2400 32=3200 43=4300 MTO 20=2000 28=2800 36=3600 40=4000</p> <p><b>Shielding</b> F1=A12 .125 HP (Standard) A=A12 .095 A125=A12 .125 A19/156=#19 Pattern Acrylic (.156" Thick)</p>	<p><b>Voltage</b><sup>(2)</sup> UNV=Universal Voltage 120-277<sup>(3)</sup></p> <p><b>Options</b> GL=Single Element Fuse GM=Double Element Fuse</p> <p><b>Emergency</b> EL7W=7-watt, 120V-277V emergency battery pack installed<sup>(4)</sup> EL14W=14-watt 120V-277V emergency battery pack installed<sup>(4)</sup> GTD2=Bodine Generator Transfer Device<sup>(10)</sup> ETS2=IOTA Emergency Transfer Switch<sup>(10)</sup></p> <p><b>CCT</b> L830=3000K L835=3500K L840=4000K L850=5000K</p> <p><b>Flex</b> Multiple Configurations Available</p>	<p><b>Driver Type</b> CD=0-10V Dimming Driver (10% - 100% Dimming) HCD=0-10V Dimming Driver (1% - 100% Dimming) SD=Step-Dim Driver<sup>(8)</sup> 5LTD=Fifth Light DALI Driver (10% - 100% Dimming)<sup>(8)</sup></p> <p><b>Number of Drivers</b> 1=1 Driver</p>	<p><b>Options</b> 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>(6),(7)</sup></p>	<p><b>Packaging</b> U=Unit Pack PALC=Palletized Fixtures In Carton</p>
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**ACCESSORIES**

EQ-CLIP-U=T-BAR Safety Earthquake Clips<sup>(11)</sup>  
 DF-22-W=2' x 2' Drywall Frame Kit

**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> 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. <sup>(5)</sup> Nominal lumen output. <sup>(6)</sup> Gasketing only available with aluminum door frame. <sup>(7)</sup> Gasketing minimum .125. <sup>(8)</sup> Step-Dim (Bi-Level) and Fifth Light (DALI) only available for 4000 lumen and above. <sup>(9)</sup> DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details. <sup>(10)</sup> Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power.

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

**SHIPPING DATA**

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