

## 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. 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 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.

### 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

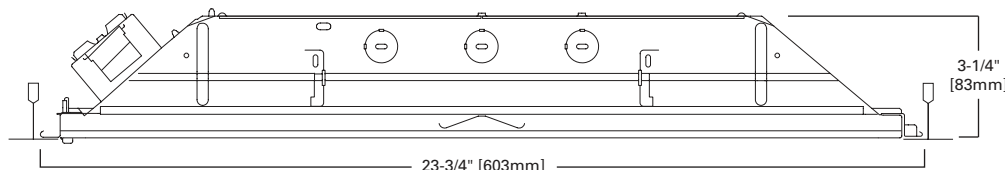
Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to [www.designlights.org](http://www.designlights.org)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



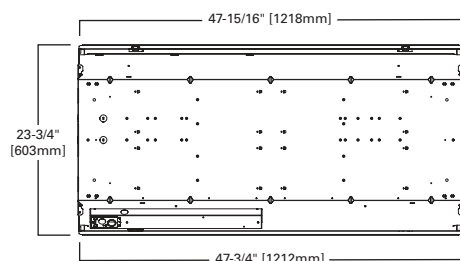
## 24GR LED LED

### 2' X 4' LED TROFFER

General Recessed LED Troffer  
For Use in Insulated Ceilings



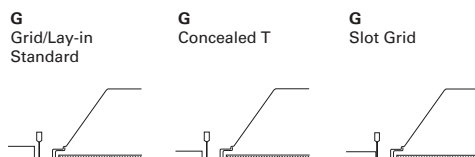
## MOUNTING DATA



## DOOR FRAMES



## CEILING COMPATIBILITY



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

(Verify compatibility/ consult factory.)

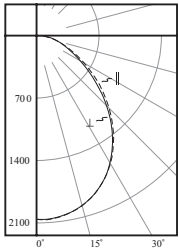
## WATTAGE

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

**LINEAR DISCONNECT**  
Safe and convenient means of disconnecting power



## PHOTOMETRICS

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

Dimming Driver

Linear LED 3500K

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

Lumens: 4841

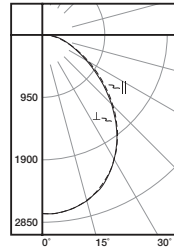
Input Watts: 43.7W

Efficacy: 110.8 lm/W

Test Report:

24GR-LD4-48-F1-  
UNV-L835-U-IES**Candlepower**

| Angle | Along | 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:  
(||) 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 | 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**

| rc<br>rw<br>RCR | Effective floor cavity reflectance 20% |     |     |     |     |     |     |     |     |     |     |     |
|-----------------|----------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                 | 80%                                    |     |     |     | 70% |     |     |     | 50% |     |     |     |
|                 | 70                                     | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 0   |
| 0               | 119                                    | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 100 |
| 1               | 109                                    | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 98  | 95  | 93  | 85  |
| 2               | 100                                    | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 72  |
| 3               | 92                                     | 82  | 74  | 68  | 90  | 80  | 73  | 68  | 78  | 71  | 66  | 62  |
| 4               | 85                                     | 73  | 65  | 59  | 82  | 72  | 64  | 58  | 70  | 63  | 57  | 54  |
| 5               | 78                                     | 66  | 57  | 51  | 76  | 65  | 57  | 51  | 63  | 56  | 50  | 47  |
| 6               | 73                                     | 60  | 51  | 45  | 71  | 59  | 51  | 45  | 57  | 50  | 44  | 42  |
| 7               | 67                                     | 54  | 46  | 40  | 66  | 54  | 46  | 40  | 52  | 45  | 40  | 37  |
| 8               | 63                                     | 50  | 42  | 36  | 61  | 49  | 41  | 36  | 47  | 40  | 36  | 34  |
| 9               | 59                                     | 46  | 38  | 33  | 58  | 45  | 38  | 33  | 44  | 37  | 32  | 30  |
| 10              | 55                                     | 43  | 35  | 30  | 54  | 42  | 35  | 30  | 41  | 34  | 30  | 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     |

**Coefficients of Utilization**

| rc<br>rw<br>RCR | Effective floor cavity reflectance 20% |     |     |     |     |     |     |     |     |     |     |     |
|-----------------|----------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                 | 80%                                    |     |     |     | 70% |     |     |     | 50% |     |     |     |
|                 | 70                                     | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 0   |
| 0               | 119                                    | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 100 |
| 1               | 109                                    | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 98  | 95  | 93  | 85  |
| 2               | 100                                    | 92  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 72  |
| 3               | 92                                     | 82  | 74  | 68  | 90  | 80  | 73  | 68  | 78  | 71  | 66  | 62  |
| 4               | 85                                     | 73  | 65  | 59  | 82  | 72  | 64  | 58  | 70  | 63  | 57  | 54  |
| 5               | 78                                     | 66  | 57  | 51  | 76  | 65  | 57  | 51  | 63  | 56  | 50  | 47  |
| 6               | 72                                     | 60  | 51  | 45  | 71  | 59  | 51  | 45  | 57  | 50  | 44  | 42  |
| 7               | 67                                     | 54  | 46  | 40  | 66  | 54  | 46  | 40  | 52  | 45  | 40  | 37  |
| 8               | 63                                     | 50  | 42  | 36  | 61  | 49  | 41  | 36  | 47  | 40  | 36  | 34  |
| 9               | 59                                     | 46  | 38  | 33  | 58  | 45  | 38  | 33  | 44  | 37  | 32  | 30  |
| 10              | 55                                     | 43  | 35  | 30  | 54  | 42  | 35  | 30  | 41  | 34  | 30  | 28  |

**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

|                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                        |                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| <b>Rating</b><br>Blank= Standard<br>ATW-SW4= Chicago Rated                                                                                                                                                                                                                                                                                       | <b>LED Type</b><br>LD4=LED 4.0                                                                                                                                        | <b>Voltage</b> <sup>(2)</sup><br>UNV=Universal<br>Voltage 120-277 <sup>(3)</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Driver Type</b><br>CD=0-10V Dimming Driver (10% - 100% Dimming)<br>HCD=0-10V Dimming Driver (1% - 100% Dimming) <sup>(10)</sup><br>SD=Step-Dim Driver <sup>(8)</sup><br>SLTD=Fifth Light DALI Driver (10% - 100% Dimming) <sup>(8)</sup> | <b>Options</b><br>PAF=Painted After Fabrication<br>G1=Gasket, Door Frame and Housing<br>G2=G1 plus Gasket between Lens and Door<br>G3=G1 and G2 plus Gasketing on Mounting Surface of Fixture Trims <sup>(6),(7)</sup> | <b>Packaging</b><br>U=Unit Pack<br>PALC=Palletized Fixtures In Carton |
| <b>Width / Length</b><br>24=2' x 4'                                                                                                                                                                                                                                                                                                              | <b>LED Lumens Output</b> <sup>(5)</sup><br>Stock<br>38=3800<br>48=4800<br>64=6400<br>MTQ<br>30=3000<br>34=3400<br>42=4200<br>56=5600<br>72=7200<br>85=8500<br>90=9000 | <b>Options</b><br>GL=Single Element Fuse<br>GM=Double Element Fuse<br><b>Emergency</b><br>EL7W=7-watt, 120V-277V emergency battery pack installed <sup>(4)</sup><br>EL14W=14-watt 120V-277V emergency battery pack installed <sup>(4)</sup><br>GTD2=Bodine Generator Transfer Device <sup>(11)</sup><br>ETS2=IOTA Emergency Transfer Switch <sup>(11)</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Number of Drivers</b><br>1=1 Driver<br>2=2 Drivers                                                                                                                                                                                       |                                                                                                                                                                                                                        |                                                                       |
| <b>Trim Type</b><br>G=Grid/Lay-in (Standard) <sup>(1)</sup><br>G=Concealed T<br>G=Slot Grid                                                                                                                                                                                                                                                      | <b>Shielding</b><br>F1=A12 .125 HP (Standard)<br>A=A12 .095<br>A125=A12 .125<br>A19/156=#19 Pattern Acrylic (.156" Thick)                                             | <b>Emergency</b><br>EL7W=7-watt, 120V-277V emergency battery pack installed <sup>(4)</sup><br>EL14W=14-watt 120V-277V emergency battery pack installed <sup>(4)</sup><br>GTD2=Bodine Generator Transfer Device <sup>(11)</sup><br>ETS2=IOTA Emergency Transfer Switch <sup>(11)</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                        |                                                                       |
| <b>Series</b> <sup>(10)</sup><br>R=General Purpose Troffer                                                                                                                                                                                                                                                                                       |                                                                                                                                                                       | <b>CCT</b><br>L830=3000K<br>L835=3500K<br>L840=4000K<br>L850=5000K<br><b>Flex</b><br>Multiple Configurations Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                        |                                                                       |
| <b>Door Frame</b><br>Standard=Flat White Steel Door (Leave Blank)<br>FA=Flush White Extruded Aluminum c/w Spring Latch<br>RA=Regressed White Extruded Aluminum<br>FAN=Flush Natural Anodized Extruded Aluminum<br>RAN=Regressed Natural Anodized Extruded Aluminum<br>FAB=Flush Black Extruded Aluminum<br>RAB=Regressed Black Extruded Aluminum |                                                                                                                                                                       | <b>NOTES:</b> <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 dimming (bi-level) 1 driver, 3400, 3800, 4200, 4800, 5600, 6400, 2 driver - 7200 lumen models. <sup>(9)</sup> DALI available from 3800 - 8500 lumen models. <sup>(10)</sup> DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details. <sup>(11)</sup> HCD option not available with 6400, 7200, 8500 and 9000 lumen versions. <sup>(12)</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. |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                        |                                                                       |

## ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips <sup>(11)</sup>  
DF-24-W=2' x 4' Drywall Frame Kit

Specifications &amp; dimensions subject to change without notice. Consult your Eaton 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.