DESCRIPTION

GRLED is a recessed lensed troffer series which offers a high quality luminaire designed 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 use in a variety of indoor spaces such as offices, schools, residential, hospitals or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length dieformed stiffeners and unibody endplate for added strength. Side flanges are hemmed for safe handling. 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. Drivers and internal components are accessible from below the ceiling and LED modules include plug-in low voltage connectors.

Controls

Metalux LED luminaires come standard with 0-10V dimming driver (10% standard, 1% optional). Options compatible with Eaton's Connected Lighting Systems: • WaveLinx sensor

- LumaWatt Pro sensor
- SVPD sensor
- SVI D Selisoi
- DLVP sensor and driver
- Fifth Light DALI driver

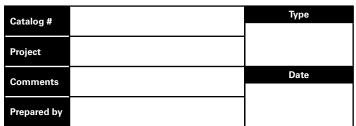
Other options include stepdimming and 3rd party drivers. Refer to the Connected Lighting options page and ordering information for more details.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI. TM21 rating up to L89 >60,000 hours. Electronic drivers are cULus recognized and available for 120-277V and 347V applications. Standard dimming is 0-10V to 10% with 1%, step and Fifth Light DALI dimming options available.

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.



Emergency/generator transfer options available – see ordering information for details.

Frame/Optical Shielding

Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens offering the balance of rigidity and light stability. Primary stocking skus come standard with robust .095 lens with other options available for maximum versatility.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments. Fixtures are suitable for direct insulation contact and are damp location listed. RoHS compliant. LED components comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www. designlights.org for details.



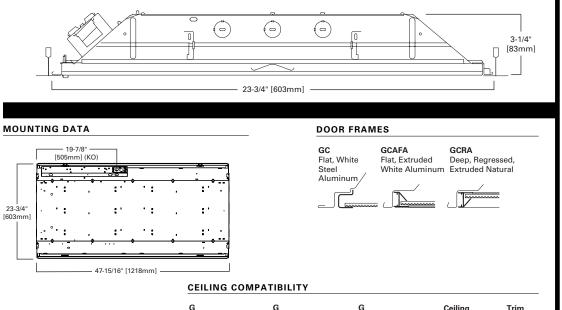
24GR LED LED

2' X 4' LED TROFFER

General Recessed LED Troffer For Use in Insulated Ceilings









August 14, 2018 10:46 AM

Metalux





 Ceiling
 Trim

 Type
 Type

 Exposed Grid
 G

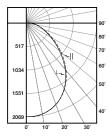
 Concealed T
 G

 Slot Grid
 G

 (Verify compatibility/ consult)
 Consult

Slot Grid

G Safe



24GR-LD5-48-F1-UNV-L835-CD1-U **Electronic Driver** Linear LED 3500K Spacing criterion: (II) 1.19 x mounting height, (⊥) 1.18 x mounting height Lumens: 4821 Input Watts: 37W Efficacy: 128.6 lm/ Test Report: 24GR-

LD5-48-F1-UNV-

L835-CD1-U.IES

Angle	Along II	45°	Across 1
0	2064	2064	2064
5	2061	2052	2057
10	2028	2019	2026
15	1972	1963	1968
20	1890	1879	1887
25	1779	1773	1774
30	1648	1638	1635
35	1493	1481	1467
40	1316	1299	1286
45	1128	1108	1087
50	946	921	893
55	767	740	717
60	606	574	563
65	468	437	440
70	349	329	344
75	256	243	265
80	172	168	190
85	95	90	105
90	0	0	0

Coefficients of Utilization

	Effe	ectiv	e floo	or cavi	ity ref	lecta	nce	20	%									
rc		8	0%			7	0%			50%	%		30%	b		10%	6	0%
rw	70	50	30	10	70	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	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	86	80	98	90	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	85	73	65	58	82	72	64	58	69	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47
6	72	60	51	45	71	59	51	45	57	50	44	55	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	33
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

Zonal Lumen Summary

Zona	l Lumen	Summary	Lumina	nce Data		
Zone	Lumens	% Fixture	Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
0-30	1564	32.4	45	2444	2401	2355
0-40	2486	51.6	55	2048	1977	1915
0-60	4001	83.1	65	1697	1584	1595
0-90	4821	100.0	75	1517	1439	1571
0-180	4821	100.0	85	1671	1580	1842

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
МТО	24GR-LD5-30-F1-UNV-L835-CD1-U	3074	23.4	131
МТО	24GR-LD5-34-F1-UNV-L835-CD1-U	3459	26.7	129
Stock	24GR-LD5-38-F1-UNV-L835-CD1-U	3880	30.6	127
МТО	24GR-LD5-42-F1-UNV-L835-CD1-U	4294	34.6	124
Stock	24GR-LD5-48-F1-UNV-L835-CD1-U	4821	37.4	129
МТО	24GR-LD5-56-F1-UNV-L835-CD1-U	5618	45.1	124
Stock	24GR-LD5-64-F1-UNV-L835-CD1-U	6462	48.1	134
МТО	24GR-LD5-72-F1-UNV-L835-CD1-U	7257	56.0	129
МТО	24GR-LD5-85-F1-UNV-L835-CD1-U	8567	70.3	122
МТО	24GR-LD5-90-F1-UNV-L835-CD1-U	9092	69.1	132
МТО	24GR-LD5-100-F1-UNV-L835-CD2-U	10030	71.7	140
МТО	24GR-LD5-120-F1-UNV-L835-CD2-U	12260	90.1	136
МТО	24GR-LD5-130-F1-UNV-L835-CD2-U	13290	90.2	134
МТО	24GR-LD5-150-F1-UNV-L835-CD2-U	15340	120.3	128
МТО	24GR-LD5-180-F1-UNV-L835-CD2-U	18050	144.2	125

24GR-LD5-64-F1-UNV-L835-CD1-U 80° 693 70° 60° 1386 208

Electronic Driver Linear LED 3500K Spacing criterion: (II) 1.19 x mounting height, (\perp) 1.18 x mounting height Lumens: 6462 Input Watts: 48W Efficacy: 134.2 lm/W Test Report: 24GR-LD5-64-F1-UNV-L835-CD1-U.IES

90

0

Angle	Along II	45°	Across 1
0	2767	2767	2767
5	2763	2750	2758
10	2718	2706	2716
15	2643	2631	2637
20	2534	2519	2529
25	2384	2376	2378
30	2209	2196	2192
35	2001	1985	1967
40	1764	1741	1724
45	1512	1486	1458
50	1267	1234	1198
55	1028	992	961
60	812	769	755
65	627	586	590
70	467	440	461
75	344	326	356
80	231	225	254
85	128	121	141

0

0

Coefficients of Utilization

	Effe	ectiv	e flo	or cav	ity ref	ecta	nce	20	%									
rc		8	0%			7	0%			50	%		30%	6		10%	6	0%
rw	70	50	30	10	70	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	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	86	80	98	90	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
1 2 3 4	85	73	65	58	82	72	64	58	69	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47
6	72	60	51	45	71	59	51	45	57	50	44	55	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
5 6 7 8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	33
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

Zonal Lumen Summary

Zone	Lumens	% Fixture	Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
0-30	2097	32.4	45	3276	3218	3157
0-40	3333	51.6	55	2746	2650	2567
0-60	5370	83.1	65	2275	2123	2138
0-90	6462	100.0	75	2034	1928	2105
0-180	6462	100.0	85	2241	2119	2469

Luminance Data

LENS TABLE

Approximate Lumen Multiplier						
F1	1.0					
F125	1.0					
A125	1.01					
A	1.01					
A19/156	.975					
FGW080	.85					

CCT TABLE

Approximate Color Temperature Multiplier							
5000K	1.016						
4000K	1.016						
3500K	1.0						
3000K	.982						
2700K	.930						

*Stocked in 3500K and 4000K others are MTO.



ORDERING INFORMATION

SAMPLE NUMBER: 24GR-LD5-48-F1-UNV-L835-CD1-U

Rating	LED Type	Voltage (2)	Driver Type	Number of Drivers
[Blank]=	LD5=LED 5.0	347V=347 Volt (14), (15)	CD=0-10V Dimming Driver	1=1 Driver
Standard		UNV=Universal Voltage 120-277 (3)	(10%-100% Dimming) ⁽⁹⁾	2=2 Drivers
ATW-SW4=	LED Lumen Output (11)	48V=48 Volt Low-voltage (Class 2)	HCD=0-10V Dimming Driver	
Chicago	30 =3000 100 =10000		(1%-100% Dimming) ⁽⁹⁾	Options
Rated	34 =3400 120 =12000	Options	SR=Sensor-ready Dimming Driver	PAF=Painted After Fabrication
	38=3800 130=13000	GL=Single Element Fuse	for LWIPD1 option	G1=Gasket, Door Frame and
Nidth / Length	42 =4200 150 =15000	GM=Double Element Fuse	(1%-100% Dimming) ^{(12), (B)}	Housing
4=2' x 4'	48 =4800 180 =18000	Emergency	5LTD=Fifth Light DALI Driver	G2=G1 plus Gasket between
	56 =5600	EL7W=7-watt, 120V-277V emergency	(10%-100% Dimming) ^{(8), (E)}	Lens and Door
Frim Type	64 =6400	battery pack installed ⁽⁴⁾	5LTHD=Fifth Light Dimming Driver	G3=G1 and G2 plus Gasketing
G=Grid/Lay-in	72 =7200	EL14W=14-watt 120V-277V emergency	(1%-100% Dimming) ^(E)	on Mounting Surface of
Standard) ⁽¹⁾	85 =8500	battery pack installed ⁽⁴⁾	LV1=DLVP Dimming Driver	Fixture Trims (5), (6)
G=Concealed T	90 =9000	ELV7W=7-watt, DLVP-compatible low voltage	(0%-100% Dimming) ^(c)	XFMR=Transformer
G=Slot Grid		emergency battery pack installed ^(C)	SD=Step Dimming Driver	
	Shielding	ELV14W =14-watt DLVP-compatible low voltage	(50% or 100% Dimming) ⁽⁷⁾	
Series (13)	F1=A12 .095 HP (Standard)	emergency battery pack installed (C)	LH=Lutron HiLume (LDE1 series) 19	
R=General Purpose Troffer	F125=A12 .125 HP	GTR2=Bodine Generator Transfer Relay (10)	with Soft-on Fade to Black dimn	
	A =A12 .095	ETRD=lota Emergency Transfer Relay with	L5=Lutron 5 Series (LDE5-Series) 59	
Door Frame	A125=A12 .125	dimming control (10)	LU=Lutron HiLume (L3D series) 1%	-100% EcoSystem/3-wire Driver
Standard=Flat White Steel Door	A19/156=#19 Pattern Acrylic	сст		
Leave Blank)	(.156" Thick)			
A=Flush White Extruded	FGW080=Frosted Glazed	L830=3000K		
Aluminum c/w Spring Latch	Lens .080	L835=3500K		
RA=Regressed White Extruded		L840=4000K		
Aluminum		L850 =5000K		
FAN=Flush Natural Anodized Ext		Flex		
RAN=Regressed Natural Anodize		A3/8-4/18GDIM=3/8" Flex with 0-10V Dimming L		
AB=Flush Black Extruded Alumi		Multiple other configurations available. See belo	ow for details.	
RAB=Regressed Black Extruded A				
A/WG=Prismatic Acrylic Lens, Wi				
	Lens, Wireguard & Doorfram	A		

Integrated Sensing Systems
SWPD1=WaveLinx Wireless Integrated Sensor (A)
LWIPD1=LumaWatt Pro Wireless Integrated Sensor (B)
LWTPD1=LumaWatt Pro Wireless Tile-mount Sensor (B)
SLVPD1=DLVP Low-voltage Integrated Sensor (C)
SVPD1=0-10V Stand-alone Integrated Sensor (D)



Packaging U=Unit Pack PAL=Job Pack, out of carton PALC=Job Pack, in carton

ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips (1) DF-24-W=2' x 4' Drywall Frame Kit ISHH-01=Programming Remote for Integrated Sensor (D) ISHH-02=Personal Control Remote for Integrated Sensor (D)

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⁾ 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 Im/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁵⁾ Gasketing only available with aluminum door frame. ⁽⁶⁾ Gasketing minimum. 125. ⁽⁷⁾ Step dimming (bi-level) 1 driver, 4200 - 10000, 2 driver, 12000 and up. ⁽¹⁰⁾ Reguires two drivers for 10000 lumens and above. ⁽¹⁰⁾ Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others). GTR2 option includes 2 relays on fixtures with dimming drivers. ETRD option only requires one relay when used on a dimming fixture. Must specify voltage as 120V or 277V when ordering these devices. ⁽¹¹⁾ Nominal lumen output. See table for actual values ⁽¹²⁾ SR driver required for 1200 lumens and up. ⁽¹⁶⁾ Seguired for 120 lumens and up. ⁽¹⁶⁾ Seguired for to 270 lumens. SD, 5LTD, and SR drivers with 347V are available but not DLC qualified.

Integrated Sensing and Control System Options

MTOTES: Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: ^(A) Consult WaveLinx system pages for additional details and compatibility. ^(B) Consult LumaWatt Pro system pages for additional details and compatibility. ^(B) Consult Fifth Light system pages for additional details and compatibility. ^(B) Consult Fifth Light system pages for additional details and compatibility. ^(C) Consult Marketplace Options - Lutron system pages for additional details and compatibility. ^(C) Consult Fifth Light system pages for additional details and compatibility. ^(C) Consult Marketplace Options - Lutron system pages for additional details and compatibility. ^(C) Consult Marketplace Options - Lutron system pages for additional details and compatibility.

Flexible Metal Conduit Options

Flex potions available for 0-10V dimming control, DALI dimming control, emergency and night light functions. 72-inch factory-installed and pre-wired to driver, fitted to luminaire housing access plate with 90° enclosed FMC connector. Not all options may be combined and installation ratings vary by type.
A3/8-4/18GDIM series notes: Factory installed dimming option 3/8° flexible metal conduit with 2-#18 power and ground wires and 2-#18 UL-listed jacketed 0-10V +/- control wires. Meets UL 66, 83, 1479, 1569, 1581, 2556.
NEC® 250.132, 303.203, 501, 502, 503, 503, 504, 505, 518, 520, 506, 518, 520, 506, 518, 520, 500, 518, 520, 500, 518, 520, 500, 518, 520, 500, 518, 520, 500, 518, 520, 500, 518, 520, 500, 518, 520 Installation per NEC® 300.22(C).

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

SHIPPING DATA

Catalog No.	Wt.	Pallet
24GR-LD5-48	20 lbs.	28

