

Project		Catalog #		Type	
Prepared by		Notes		Date	



# Metalux

## 24GR LED

2' x 4' LED Troffer  
General Recessed LED Troffer  
For Use in Insulated Ceilings

### Typical Applications

- Office • Schools • Residential • Hospitals
- Retail Merchandising Areas

### Interactive Menu

- Order Information [page 2](#)
- Photometric Data [page 3](#)
- Control Systems [page 3](#)
- VividTune™ Color Tuning Solutions [page 4](#)
- Product Warranty

### Product Certification



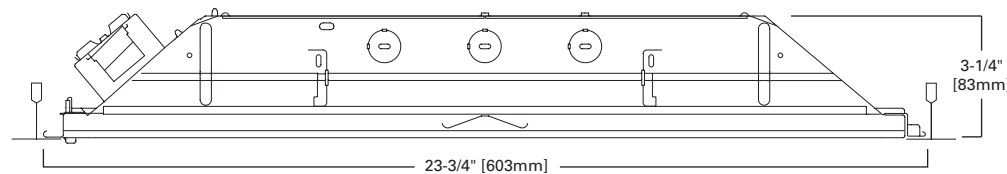
### Product Features



### Top Product Features

- Available in 2' x 4', 2' x 2' and 1' x 4'
- Multiple lumen packages up to 18,000 in 2x4 and 9,000 in 2x2
- Up to 140 lm/W for maximum energy savings versus fluorescent troffers
- Correlated Color Temperatures 3000K, 3500K, 4000K and 5000K at 80 and 90 CRI
- Standard 0-10V continuous dimming driver

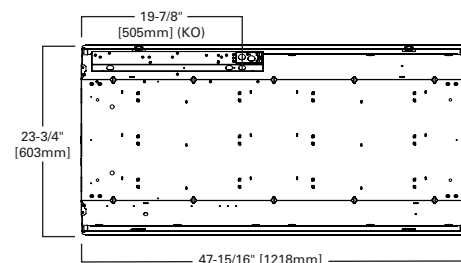
### Dimensional and Mounting Details



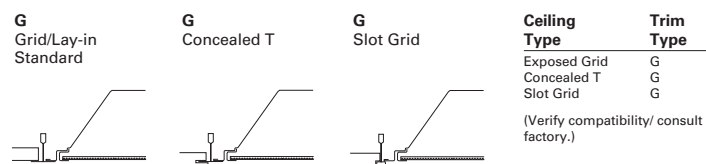
### Door Frames



### Mounting Data



### Ceiling Compatibility



## Order Information

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

Rating	Width / Length	Trim Type	Series	Door Frame	LED Type	LED Lumen Output	Shielding
[Blank]-Standard ATW-SWA- Chicago Rated	24=2' x 4'	G=Grid/Lay-in (Standard) <sup>(1)</sup> G=Concealed T G=Slot Grid	R=General Purpose Troffer	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 A/WG=Prismatic Acrylic Lens, Wireguard & Doorframe F1/WG=Frosted Prismatic Acrylic Lens, Wireguard & Doorframe	LD5=LED 5.0	30=3000 34=3400 38=3800 42=4200 48=4800 56=5600 64=6400 72=7200 <sup>(20)</sup> 85=8500 <sup>(18), (20)</sup> 90=9000 <sup>(16), (20)</sup> 100=10000 <sup>(16), (20)</sup> 120=12000 <sup>(16), (20)</sup> 130=13000 <sup>(16), (20)</sup> 150=15000 <sup>(16), (20)</sup> 180=18000 <sup>(16), (20)</sup>	F1=A12 .095 HP (Standard) F125=A12 .125 HP A=A12 .095 A125=A12 .125 A19/156=#19 Pattern Acrylic (.156" Thick) <sup>(15)</sup> FGW080=Frosted Glazed Lens .080
		<b>Notes</b>  (1) An EQ Grid Clip is recommended for all 9/16" ceiling systems.	<b>Notes</b>  (13) DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.			<b>Notes</b>  (11) Nominal lumen output. See table for actual values. (16) White tuning not available with this model. (18) The maximum lumens on this version with VividTune option will be 8300, see IES files for actual performance values. (20) Not compatible with WN driver.	<b>Notes</b>  (15) A19/156 lens creates holographic effect on the surface of the lens.

Voltage	Options	Emergency	CCT	Factory Wiring	Driver Type
347V=347 Volt <sup>(19)</sup> UNV=Universal Voltage 120-277 <sup>(3)</sup> 48V=48 Volt Low- voltage (Class 2)	GL=Single Element Fuse GM=Double Element Fuse	EL7W=7-watt, 120V-277V emergency battery pack installed <sup>(4)</sup> EL14W=14-watt 120V-277V emergency battery pack installed <sup>(4)</sup> ELV7W=7-watt, DLVP-compatible low voltage emergency battery pack installed <sup>(5)</sup> ELV14W=14-watt DLVP-compatible low voltage emergency battery pack installed <sup>(5)</sup> GTR2=Bodine Generator Transfer Relay <sup>(10)</sup> ETRD=lota Emergency Transfer Relay with dimming control <sup>(10)</sup>	L830=3000K L835=3500K L840=4000K L850=5000K L83050=80CRI 3000K-5000K White Tuning <sup>(17)</sup> L93050=90CRI 3000K-5000K White Tuning <sup>(17)</sup> L82765=80CRI 2700K-6500K White Tuning <sup>(17)</sup> L92765=90CRI 2700K-6500K White Tuning <sup>(17)</sup>	A3/8-4/18GDIM=3/8" Flex with 0-10V Dimming Leads Multiple other configurations available. See below for details. A3/8-5/18GDIM=Flex with 0-10V Dimming leads and Blue for alternate wiring. See below for details.	CD=0-10V Dimming Driver (10%-100% Dimming) <sup>(9)</sup> HCD=0-10V Dimming Driver (1%-100% Dimming) <sup>(9)</sup> SR=Sensor-ready Dimming Driver for LWIPD1 option (1%-100% Dimming) <sup>(12), (8)</sup> SLTD=Fifth Light DALI Driver (10%-100% Dimming) <sup>(8), (E)</sup> SLTHD=Fifth Light Dimming Driver (1%-100% Dimming) <sup>(8), (E)</sup> LV1=DLVP Dimming Driver (0%-100% Dimming) <sup>(7)</sup> SD=Step Dimming Driver (50% or 100% Dimming) <sup>(7)</sup> LH=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming <sup>(7)</sup> L5=Lutron 5 Series (LDE5-Series) 5%-100% EcoSystem Driver <sup>(7)</sup> W2A=White Tuning, 2 ch, Intensity and CCT Control <sup>(17)</sup> WN=WaveLinX Wireless Fixture, No Sensor. <sup>(A), (G), (H)</sup>
<b>Notes</b>  (2) Products also available in non-US voltages and frequencies for international markets. (3) Not available when specifying emergencies, voltage must be specific. (19) 347V is not available with the W2A driver.		<b>Notes</b>  (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 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. (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.  (C) Consult DLVP system pages for additional details and compatibility.	<b>Notes</b>  (17) White tuning provides correlated color temperatures (CCT) between 3000K (warm) to 5000K (cool) or 2700K (warm) to 6500K (cool). Must be used in conjunction with W2A.	<b>Flexible Metal Conduit Options</b>  Flex options 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. <b>A3/8-4/18GDIM series notes:</b> 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, 118, 300.22(C), 392, 396, 330, 501, 502, 503, 530, 504, 505, 518, 520, 530, 645, 72; Federal Specification A-A-59544 (formerly J-C-308); all applicable OSHA and HUD Requirements. UL Classified 1-, 2-, and 3-hour through penetration with applicable fire stop product (not included). May be surface mounted, fished and/or embedded in plaster. Cable tray and approved raceway rated, install per NEC®; Environmental Air-Handling Space Installation per NEC® 300.22(C).	<b>Notes</b>  (7) Step dimming (bi-level) 1 driver, 4200 - 10000, 2 driver, 12000 and up lumen model. (12) SR driver required for LWIPD1 only. PDR required for 120 lumens and up. (17) White tuning provides correlated color temperatures (CCT) between 3000K (warm) to 5000K (cool) or 2700K (warm) to 6500K (cool). Must be used in conjunction with W2A.  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 Enlightened system pages for additional details and compatibility. (C) Consult DLVP system pages for additional details and compatibility. (E) Consult Fifth Light system pages for additional details and compatibility. (F) Consult Marketplace Options - Lutron system pages for additional details and compatibility. Compatible only with driver series shown, and may require two or more drivers. Requires field commissioning to operate or dim. Contact Lutron at www. lutron.com. (G) Not compatible with GTR, ETRD, or integrated sensor options. (H) Available with UNV voltage only.

Number of Drivers	Options	Integrated Sensing Systems	Packaging	Accessories
Number of Drivers	Options	Integrated Sensing Systems	Packaging	Accessories
1=1 Driver 2=2 Drivers	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>(5), (4)</sup> XFMR=Transformer <sup>(14)</sup>	SWPD1=WaveLinX Wireless Integrated Sensor <sup>(A)</sup> LWIPD1=Enlightened Wireless Integrated Sensor <sup>(B)</sup> LWTPD1=Enlightened Wireless Tile-mount Sensor <sup>(B)</sup> SLVPD1=DLVP Low-voltage Integrated Sensor <sup>(C)</sup> SVPD1=0-10V Stand-alone Integrated Sensor <sup>(D)</sup>	U=Unit Pack PAL=Job Pack, out of carton PALC=Job Pack, in carton	EQ-CLIP-U=T-BAR Safety Earthquake Clips <sup>(1)</sup> DF-24-W=2' x 4' Drywall Frame Kit SK-24-WS=2' x 4' Shallow Surface Mount Kit SK-24-WT=2' x 4' Tall Surface Mount Kit ISHH-01=Programming Remote for Integrated Sensor <sup>(9)</sup> ISHH-02=Personal Control Remote for Integrated Sensor <sup>(9)</sup>
	<b>Notes</b>  (5)Gasketing only available with aluminum door frame. (6)Gasketing minimum .125. (14) XMFR required for 15000 lumens and up.	<b>Notes</b>  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 Enlightened system pages for additional details and compatibility. (C) Consult DLVP system pages for additional details and compatibility. (D) Consult SVPD series system pages for additional details and compatibility.		<b>Notes</b>  (1) An EQ Grid Clip is recommended for all 9/16" ceiling systems.  (D) Consult SVPD series system pages for additional details and compatibility.

## Product Specifications

### Construction

- Rigid housing is die formed of code gauge prime cold rolled steel
- Full length die-formed stiffeners and unibody endplate for added strength
- 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

- Standard with 0-10V dimming driver (10% standard, 1% optional)
- WaveLinX wireless fixture for sensor-less wireless control
- Options compatible with Cooper Lighting Solutions' Connected Lighting Systems: WaveLinX sensor, Enlighted sensor, SVPD sensor, DLVP sensor and driver, Fifth Light DALI driver

- Other options include step-dimming and 3rd party drivers

### Electrical

- Long-Life LED system to deliver optimal performance. TM21 rating up to L89 >60,000 hours.
- Available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI
- 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
- Color Tuning options available with Cooper Lighting Solutions' VividTune

### Emergency Battery Pack Option

- Optional 120V-277V integral emergency battery pack available in 7-watts, 14-watts
- 90-minute batteries provide constant power to the LED system
- Test switch/indicator button can be tested safely from the ground using a laser pointer

- Emergency/generator transfer options available

### Frame/Optical Shielding

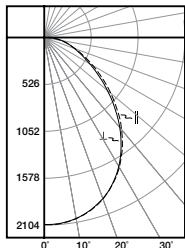
- Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens
- Primary stocking skus come standard with robust .095 lens
- Other options available for maximum versatility

### Compliance

- UL recognized components
- Indoor luminaires are cULus listed for 25°C ambient environments
- Suitable for direct insulation contact and are damp location listed
- RoHS compliant
- Tested according to IESNA LM-79 and LM-80 procedures

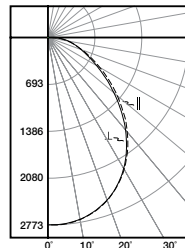
## Photometric Data

[View IES files](#)



### 24GR-LD5-48-F1UNV-L835-CD1-U

Electronic Driver  
 Linear LED 3500K  
 Spacing criterion: (H) 1.19 x mounting height,  
 (L) 1.18 x mounting height  
 Lumens: 4821  
 Input Watts: 37W  
 Efficacy: 128.6 lm/W  
 Test Report: 24GRLD5-48-F1-UNVL835-CD1-U.IES



### 24GR-LD5-64-F1UNV-L835-CD1-U

Electronic Driver  
 Linear LED 3500K  
 Spacing criterion: (H) 1.19 x mounting height,  
 (L) 1.18 x mounting height  
 Lumens: 6462  
 Input Watts: 48W  
 Efficacy: 134.2 lm/W  
 Test Report: 24GRLD5-64-F1-UNVL835-CD1-U.IES

## Energy and Performance 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

### Shipping Data

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

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24GR-LD5-30-F1-UNV-L835-CD1-U	3074	23.4	131
MTO	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
MTO	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
MTO	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
MTO	24GR-LD5-72-F1-UNV-L835-CD1-U	7257	56.0	129
MTO	24GR-LD5-85-F1-UNV-L835-CD1-U	8567	70.3	122
MTO	24GR-LD5-90-F1-UNV-L835-CD1-U	9092	69.1	132
MTO	24GR-LD5-100-F1-UNV-L835-CD2-U	10030	71.7	140
MTO	24GR-LD5-120-F1-UNV-L835-CD2-U	12260	90.1	136
MTO	24GR-LD5-130-F1-UNV-L835-CD2-U	13290	90.2	134
MTO	24GR-LD5-150-F1-UNV-L835-CD2-U	15340	120.3	128
MTO	24GR-LD5-180-F1-UNV-L835-CD2-U	18050	144.2	125

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

## Control Systems

- WaveLinX
- DLVP
- Enlighted
- iLumin Plus
- VividTune

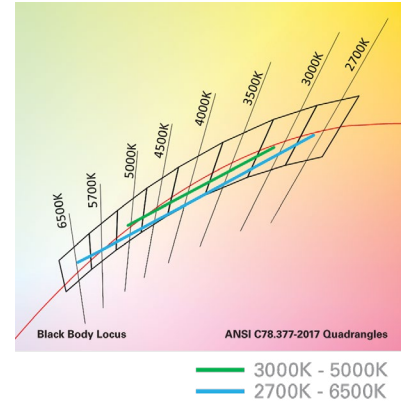


Connected Systems  
[CLICK HERE](#)



### 24GR LED with VividTune Tunable White

VividTune tunable white luminaires from Cooper Lighting Solutions deliver high-quality light in a broad range of continuously variable color temperatures and intensities. Create a dynamic environment by adjusting the ambient light warmer or cooler to influence mood, support the task at hand, or create a dramatic ambience. The ability to control correlated color temperature and intensity separately using simple controls is the next evolution of LED lighting for the commercial, educational, healthcare and hospitality space. The unparalleled flexibility and number of available lighting environments enable users to find the right light with tunable white.



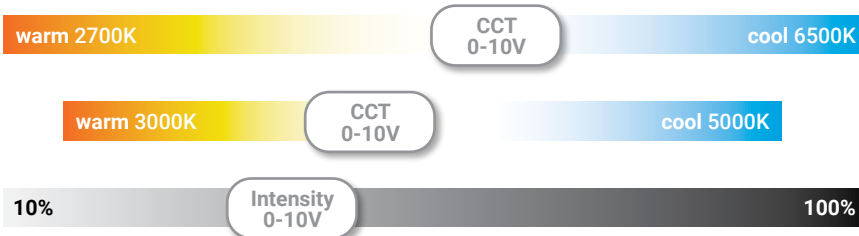
### Performance Data\*

Tunable White - Lumen Adjustment Factors (example only)				
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.923	0.789
3000K	0.950	0.783	0.949	0.820
3500K	1.006	0.855	0.983	0.861
4000K	1.056	0.923	1.004	0.888
4500K	1.066	0.939	1.022	0.911
5000K	1.066	0.939	1.036	0.929
6500K	-	-	1.051	0.955

2' x 4' GRLED - Example of Approximate Lumen Calculation			
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
CCT Setting	24GR-LD5-48-F1-UNV-L835-CD1-U	24GR-LD5-48-F1-UNV-L83050-W2A1-U	24GR-LD5-48-F1-UNV-L93050-W2A1-U
3000K	-	4582	3773
3500K	4821	4849	4122
4000K	-	5091	4451
4500K	-	5140	4529
5000K	-	5140	4529

### Controlling VividTune Tunable White

VividTune luminaires make tunable white more accessible by using simple and familiar controls. From wall dimmers to wireless controls, VividTune tunable white luminaires are compatible with industry standard 0-10V dimming controls. A single 0-10V dimming input is used to control intensity (brightness) while a second 0-10V dimming input is used to adjust CCT. For suggested control configurations, go to [www.cooperlighting.com](http://www.cooperlighting.com) for tunable white application guides.



### Example of Lumen Adjustment Calculation

24GR-LD5-48-F1-UNV-L83050-W2A1-U at 80 CRI tuned to 3500K

$$\text{Adjusted Lumen} = \text{published lm} \times \text{adjusted lm factor}$$

$$\text{Adjusted Lumen} = 4821 \times 1.006$$

$$\text{Adjusted Lumen} = 4849 \text{ lm}$$

\* Lumen adjustment factors are for reference and may be different for each product selected. Refer to IES files for actual performance data on each.