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 Solutions page 5
- VividTune™ Color Tuning Solutions page 6
- Product Warranty

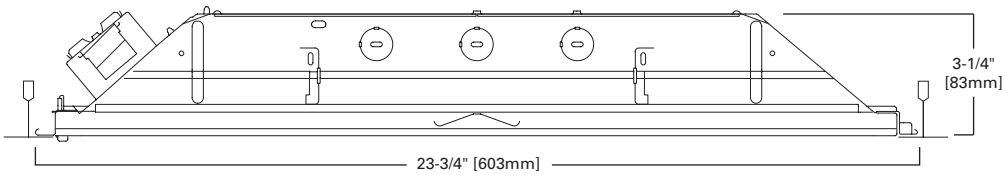
Product Certification

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 149 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
- Options to meet Build America, Buy America, Buy American and other domestic preference requirements

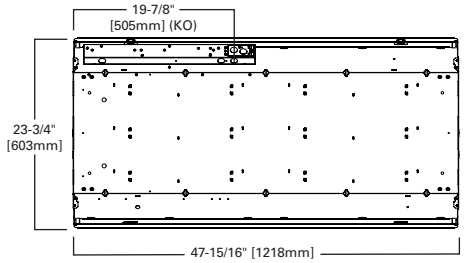
Dimensional and Mounting Details



Door Frames

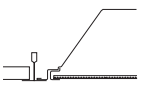


Mounting Data

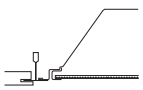


Ceiling Compatibility

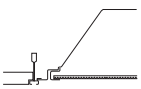
G
Grid/Lay-in
Standard



G
Concealed T



G
Slot Grid



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

(Verify compatibility/ consult factory.)

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

Domestic Preferences [1]	Rating	Width/Length	Trim Type	Series [3]	Door Frame	LED Type
[Blank]=Standard **BAA**=Buy American Act **TAA**=Trade Agreements Act **BABA**=Build America Buy America Act	**[Blank]**=Standard **ATW-SW4**=Chicago Rated	**24**=2' x 4'	**G**=Grid/Lay-in (Standard) [2] **G**=Concealed T **G**=Slot Grid	**R**=General Purpose Troffer	**Standard**=Flat White Steel Door (Leave Blank) [4] **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	**LD5**=LED 5.0
Notes (1) Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA), Trade Agreements Act of 1979 (TAA), or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America standards which is part of the Infrastructure and Investment Jobs Act (IIJA). Individual Government Agencies may have more stringent compliance standards. Please refer to DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.			**Notes** (2) An EQ Grid Clip is recommended for all 9/16" ceiling systems.	**Notes** (3) DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.	**Notes** (4) Only Standard door frames can support wireguard accessory.	

LED Lumen Output [5]	Shielding	Voltage [11]	Options	Emergency	CCT
30=3000 **34**=3400 **38**=3800 **42**=4200 **48**=4800 **56**=5600 **64**=6400 **72**=7200 [8] **85**=8500 [7], [8] **90**=9000 [6], [8] **100**=10000 [6], [8] **120**=12000 [6], [8] **130**=13000 [6], [8] **150**=15000 [6], [8], [9] **180**=18000 [6], [8], [9]	**F1**=Pattern 12, Frosted Acrylic, 0.095" thick **F125**=Pattern 12, Frosted Acrylic, 0.125" thick **A**=Pattern 12, Clear Acrylic, 0.095" thick **A125**=Pattern 12, Clear Acrylic, 0.125" thick **A19/156**=Pattern 19, Clear Acrylic, 0.156" thick [10] **FGW080**=Frosted Smooth Acrylic, 0.080" thick **A/WG**=0.095" Pattern 12 Clear Acrylic Lens, with Wireguard directly below lens	**347V**=347 Volt [13] **UNV**=Universal Voltage 120-277 [12] **120V**=120 Volt [14] **277V**=277 Volt [14]	**GL**=Single Element Fuse **GM**=Double Element Fuse	**EL7W**=7-watt 120V-277V emergency battery pack [15] **EL10W**=10-watt 120V-277V emergency battery pack [15] **EL14W**=14-watt 120V-277V emergency battery pack [15] **EL10WSD**=10W emergency battery pack with self-diagnostic installed [15], [18] **EL14WSD**=14W emergency battery pack with self-diagnostic installed [15], [18] **GTR2**=Bodine Generator Transfer Relay [16], [17] **ETRD**=Emergency Transfer Relay with dimming control [16] **WNPS**=WaveLinx with Normal Power Sensing Beacon [19], [20], [21], [22] **WEM**=WaveLinx Enabled UL924 [19], [21], [22]	**L830**=3000K **L835**=3500K **L840**=4000K **L850**=5000K **L930**=90CRI, 3000K **L935**=90CRI, 3500K **L940**=90CRI, 4000K **L950**=90CRI, 5000K **L83050**=80CRI 3000K-5000K White Tuning [23] **L93050**=90CRI 3000K-5000K White Tuning [23] **L82765**=80CRI 2700K-6500K White Tuning [23] **L92765**=90CRI 2700K-6500K White Tuning [23]
Notes (5) Nominal lumen output. See table for actual values. (6) White tuning not available with this model. (7) The maximum lumens on this version with VividTune option will be 8300, see IES files for actual performance values. (8) Not compatible with WN driver. (9) XMFR required for 15000 lumens and up.	**Notes** (10) A19/156 lens creates holographic effect on the surface of the lens.	**Notes** (11) Products also available in non-US voltages and frequencies for international markets. (12) Not available when specifying emergencies, voltage must be specific. (13) 347V is not available with the W2A driver. (14) Must specify voltage as 120V or 277V when ordering GTR2 option.		**Notes** (15) Factory installed 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. Battery option increases total height by 1 inch. (16) 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. (17) Must specify voltage as 120V or 277V when ordering GTR2 option. (18) EL10WSD and EL14WSD not available with 347V. (19) Only available as part of a WaveLinx control system; must order with WLS or WPS sensor. Compatible with UNV CD/HCD drivers only. (20) WNPS is compatible with ESP-L or ESP-P emergency control devices. (21) Cannot be combined with other emergency, control or relay options. (22) For UL924 compliance, WEM and WNPS luminaires must be installed in the same application space.	**Notes** (23) 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.

Factory Wiring	Driver Type
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 Driver (10%-100% Dimming) [26], [28], [29] **HCD**= 0-10V Driver (1%-100% Dimming) [26], [28], [29] **5LTD**=DALI Driver (5%-100% Dimming) [25] **5LTHD**=DALI Driver (1%-100% Dimming) **SD**=Step Dimming Driver (50% or 100% Dimming) [24] **LH**=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming [F] **W2A**=White Tuning, 2 ch, Intensity and CCT Control [27] , [28] **SR**=Sensor-ready Driver (1%-100% Dimming)
Flexible Metal Conduit Options 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. **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® 250.118, 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-30B); 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).	**Notes** (24) Step dimming (bi-level) 1 driver, 4200 - 10000, 2 driver, 12000 and up lumen model. (25) DALI available from 4200 - 9000 lumen models. Two drivers required for 10000 lumen models and up. (26) Requires two drivers for 10000 lumens and above. (27) 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. (28) WPS and WPN node used with CD, HCD or W2A drivers only. (29) WLS and WLN node used with CD or HCD drivers only. 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: (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

continued next page

Order Information
CONTINUED

No. of Drivers	Options	Integrated Sensing Systems	Packaging	Accessories [35]
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 [30], [31]	**[Blank]**=No Sensor **WLS**=WaveLinx LITE Integrated Sensor, Dim and Daylight, Bluetooth, 8'-15' MH [33], [B] **WPS**=WaveLinx PRO Integrated Sensor, Dim and Daylight, ZigBee, 8'-15' MH [32], [A] **WLN**=WaveLinx LITE Integrated Node, Dim and Daylight, Bluetooth [33], [B] **WPN**=WaveLinx PRO Integrated Node, Dim and Daylight, Zigbee [32], [A]	**U**=Unit Pack **PAL**=Job Pack, out of carton **PALC**=Job Pack, in carton	**EQ-CLIP-U**=T-BAR Safety Earthquake Clips [34] **DF-24W-U**=2' x 4' Drywall Frame Kit **SMK-24-W**=4" Tall Surface Mount Kit, 2' x 4' **SK-24-WT**=6.4" Tall Surface Mount Kit for complex options requiring extra space
	Notes (30) Gasketing only available with aluminum door frame. (31) Gasketing minimum .125	**Notes** (32) WPS and WPN node used with CD, HCD or W2A drivers only. (33) WLS and WLN node used with CD or HCD drivers only. 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 PRO system pages for additional details and compatibility. (B) Consult WaveLinx LITE system pages for additional details and compatibility.		**Notes** (34) An EQ Grid Clip is recommended for all 9/16" ceiling systems. (35) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

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)
- Integrated WaveLinx options provide wireless individual fixture control and enable code compliance, increased energy savings, grouping of fixtures, and connection to WaveLinx control systems
- DALI 2.0, Lutron, and step-dimming available

Electrical
- TM-21 life at 60,000 hours up to L88 and calculated L70 exceeds 162,000 hrs.
- Available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI
- Color accuracy ≤3-Step MacAdam ellipse (SDCM)
- Drivers available in 120-277V and 347V
- Tunable white options available with Cooper Lighting Solutions' VividTune

Emergency Battery Pack Option
- 120V-277V integral emergency battery pack comes in 7-watts, 10-watt, or 14-watts
- Self-diagnostic emergency battery available in 10 or 14-watts (NFPA 101® Life Safety Code®)
- Constant power to the LED system for controlled, predictable discharge
- Integrated test switch/indicator light visible from floor
- Min. 90-minute backup period for code compliance
- Integral emergency transfer relay available for generator equipped power systems

WNPS - WaveLinx Normal Power Sensing
- Normal Power Sensing (NPS) wireless beacon enabled luminaire that signals normal power is present
- Must be ordered with WaveLinx LITE or PRO sensor as part of a WaveLinx control system
- For UL924 compliance, WNPS enabled luminaires with standard product and compatible emergency control devices (ESP-P/ESP-L) must be installed in same application space

WEM - WaveLinx UL924 Emergency Sensor
- Emergency control devices (ESP-P/ESP-L) not required when WEM and WNPS luminaires are installed in the same application space
- For UL924 compliance, order WEM and WNPS luminaires in the same application space
- WEM must be ordered with WLS or WPS sensor as part of a WaveLinx control system

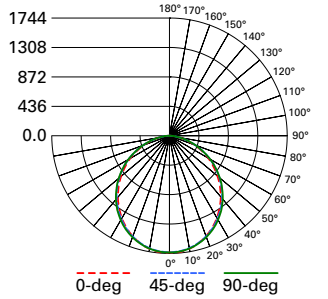
Frame/Optical Shielding
- Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens
- Primary stocking skus come standard with robust .095 lens
- Other options available for maximum versatility
- Replacement lenses available, contact factory

Compliance
- IC rated for insulation contact
- cULus listed for damp locations
- RoHS compliant
- Tested to IESNA LM-79 and LM-80
- Stated life per TM21 standards
- Can be used for State of California Title 24 high efficacy luminaire

BABA Domestic Preference Compliance
- This Cooper product is manufactured in the US and meets the BABA cost of components rule. To verify a configured product with specific accessories and options meets BABA Domestic Preference Requirements; submit this catalog number to Cooper Lighting Quotation team for validation by our Engineering and Manufacturing teams. Our BABA designation is based on the minimum compliance requirement for BABA. Individual Government Agencies may have more stringent compliance standards. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

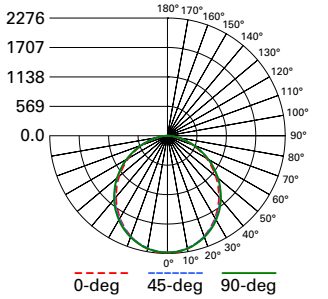
Photometric Data

View IES files



24GR-LD5-48-F1-UNV-L835-CD1-U

Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.21 x mounting height, (⊥) 1.24 x mounting height
Lumens: 4666
Input Watts: 33W
Efficacy: 141.4 lm/W
Test Report: 24GRLD5-48-F1-UNVL835-CD1-U.IES



24GR-LD5-64-F1-UNV-L835-CD1-U

Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.21 x mounting height, (⊥) 1.24 x mounting height
Lumens: 6091
Input Watts: 43.3W
Efficacy: 140.3 lm/W
Test Report: 24GRLD5-64-F1-UNVL835-CD1-U.IES

Energy and Performance Data

Stock or MTO	Catalog Logic (Rectilinear Shielding)	Delivered Lumens	Watts	Efficacy (lm/W)	Glare Performance	
					UGR (1)	Max Luminance (1)
MTO	24GR-LD5-30-F1-UNV-L835-CD1-U	2949	21.3	139	16.8	1337
MTO	24GR-LD5-34-F1-UNV-L835-CD1-U	3317	24	138	17.2	1504
Stock	24GR-LD5-38-F1-UNV-L835-CD1-U	3664	26.6	138	17.6	1662
MTO	24GR-LD5-42-F1-UNV-L835-CD1-U	4122	30.3	136	18.0	1869
Stock	24GR-LD5-48-F1-UNV-L835-CD1-U	4666	33	141	18.4	2116
MTO	24GR-LD5-56-F1-UNV-L835-CD1-U	5472	39.4	139	19.0	2481
Stock	24GR-LD5-64-F1-UNV-L835-CD1-U	6091	43.4	140	19.3	2762
MTO	24GR-LD5-72-F1-UNV-L835-CD1-U	6837	48.7	140	19.7	3100
MTO	24GR-LD5-85-F1-UNV-L835-CD1-U	8206	59.2	139	20.4	3721
MTO	24GR-LD5-90-F1-UNV-L835-CD1-U	8658	61.2	142	20.6	3926
MTO	24GR-LD5-100-F1-UNV-L835-CD2-U	9652	67.1	144	20.9	4377
MTO	24GR-LD5-120-F1-UNV-L835-CD2-U	11552	81.4	142	21.6	5238
MTO	24GR-LD5-130-F1-UNV-L835-CD2-U	12484	88.7	141	21.8	5661
MTO	24GR-LD5-150-F1-UNV-L835-CD2-U	14493	103.4	140	22.4	6572
MTO	24GR-LD5-180-F1-UNV-L835-CD2-U	17361	126.3	138	23.0	7873

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

Notes:
(1) UGR values per CIE 190:2010 with 4H, 8H, Reflectance: 70% Ceiling, 50% Wall, 20% Ref. Plane.

Luminance measured at 45-90 degrees from nadir.

UGR and Luminance values that meet WELL v2 L04 requirements for Managing Glare are shown with green highlighted cell (UGR < 16, Luminance < 6,000).

UGR and Luminance values that meet LEED v4.1 requirements for Glare Control are shown with green text (UGR < 19, Luminance < 7,000).

Key

	Meets WELL v2
TEXT	Meets LEED v4.1

Lumen Calculator

CCT Multiplier	80+CRI/90 CRI
3000K	0.99
3500K	1.00
4000K	1.03
5000K	1.02

Example of Lumen Adjustment Calculation

24GR-LD5-38-F1-UNV-L835-CD1-U
at 90CRI at 3500K

Lumen Adjustment Factor = 1.00

Total Light Output = 3,664 lm x 1.00 = 3,664 lm

Efficacy = $\frac{3{,}664\ lm}{26.6W}$ = 138 lm/W

Lens Table

Approximate Lumen Multiplier	
F1	1.00
F125	1.00
A125	1.00
A	0.97
A19/156	0.95
FGW080	0.85

Lumen Maintenance

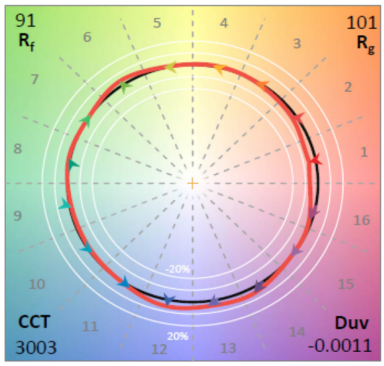
Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 88%	> 162,000

Shipping Data

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

TM-30 DATA FOR 90 CRI (3000K)

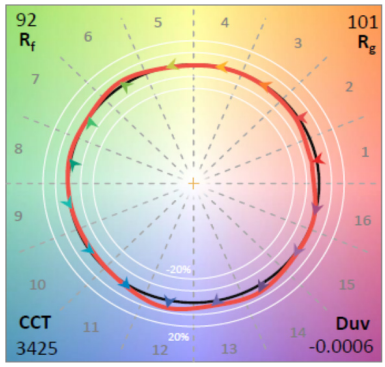
ANSI/IES TM-30-18 Color Rendition Report



Reference Illuminant — Test Source

TM-30 DATA FOR 90 CRI (3500K)

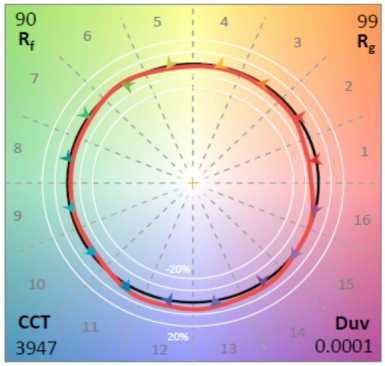
ANSI/IES TM-30-18 Color Rendition Report



Reference Illuminant — Test Source

TM-30 DATA FOR 90 CRI (4000K)

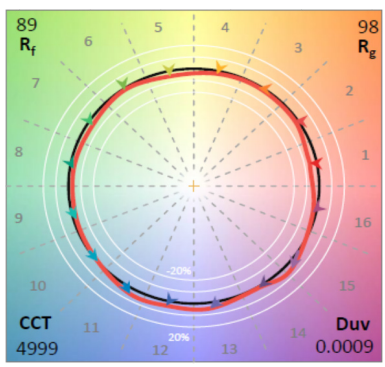
ANSI/IES TM-30-18 Color Rendition Report



Reference Illuminant — Test Source

TM-30 DATA FOR 90 CRI (5000K)

ANSI/IES TM-30-18 Color Rendition Report



Reference Illuminant — Test Source

TM-30 data is extrapolated from LM-79 integrating sphere tests. Contact factory for specific TM-30 data.

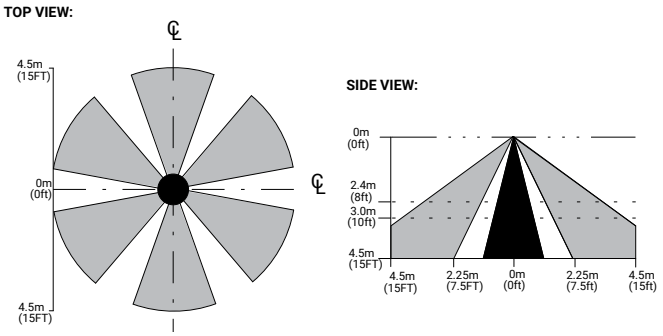
CRI	CCT	CRI	R_f	R_g	R9
80+	3000K	93	91	101	57
	3500K	95	92	101	73
	4000K	92	90	99	60
	5000K	93	89	98	69

Control Solutions

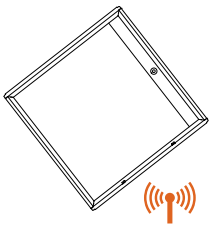
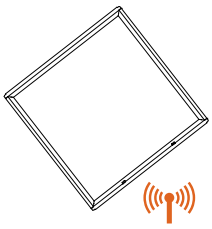
- WaveLinx LITE wireless
- WaveLinx PRO wireless
- WaveLinx CAT wired
- WaveLinx DALI wired

WaveLinx Digital Lighting Control Solutions

Integrated Sensor Coverage Pattern



***Note**: Installation of integrated sensors within 3-ft (1m) of HVAC air vents is not recommended. The pattern shown is intended solely as a general guide and is not to scale.*

With Integrated WaveLinx Sensor	With Integrated WaveLinx Node
	

Add a hidden WaveLinx Node (WPN, WLN) to your space lighting design!

To:

- Keep luminaire aesthetics
- Connect fixtures without space for a sensor, such as downlights
- Connect sealed fixtures without a standard sensor option such as products for clinical space

The GRLED with WaveLinx offers no-hassle lighting control with multiple luminaire level control solutions.

WaveLinx by Cooper Lighting Solutions is a wired and wireless solution for a single room, a parking lot, or an entire campus, helping meet energy codes, reduce energy use, and create healthier environments. As a true hybrid architecture, it enables the seamless integration of DALI, CAT, and PRO technologies and luminaires for unmatched reliability and flexibility, with sensor-enabled luminaires that can also share data with the WaveLinx CORE platform, further improving operations across office, education, healthcare, warehouse, and parking garage applications.

WaveLinx LITE is a Bluetooth wireless digital lighting control solution with out-of-the-box functionality that saves energy and meets energy codes. It's designed for applications that require occupancy-based, daylighting, or manual light control using WaveLinx LITE-enabled luminaires and a mobile app for cost-effective projects.

WaveLinx PRO is a Zigbee wireless solution that offers a rich portfolio of devices, WaveLinx PRO-enabled luminaires, and a mobile app and the WAC (WaveLinx Area Controller). It offers advanced energy savings and deep data integration to improve the occupant experience.

WaveLinx CAT is a scalable CAT5-wired solution for a single room and connected spaces, supporting applications that require occupancy-based, daylighting, or manual light control, with self-commissioning to meet energy codes and maximize energy savings.

WaveLinx DALI is a powerful two-wire DALI-2 solution for connected spaces, combining open-standard devices enabling interoperability with the simplicity of WaveLinx app-based commissioning. It delivers deterministic wired control, granular addressability, and tunable white.

Integrated Controls Options

Option	Out of the Box Functionality	Luminaire Level Lighting Control (LLLC)	Automatic Dimming Photocell	Occupancy Sensing	CCT Control*
WLS (WaveLinx LITE Sensor)	X	X	X	X	
WLN (WaveLinx LITE Node)		X			
WPS (WaveLinx PRO Sensor)		X	X	X	X
WPN (WaveLinx PRO Node)		X			X

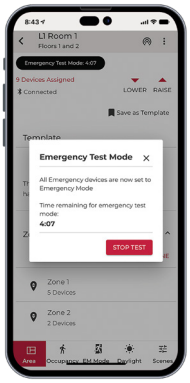
Note: *WaveLinx utilizes scenes to allow users to change an area's fixtures Correlated Color Temperature (CCT) and intensity using a commissioned wireless wallstation scene controller. To enable CCT adjustments through WaveLinx, include WPS or WPN devices in addition to VividTune or BioUp technologies for integrated fixture control. WPS with CCT controls the intensity of the fixture; an additional, externally mounted control device is needed to control the CCT. See RSP-P-010-347

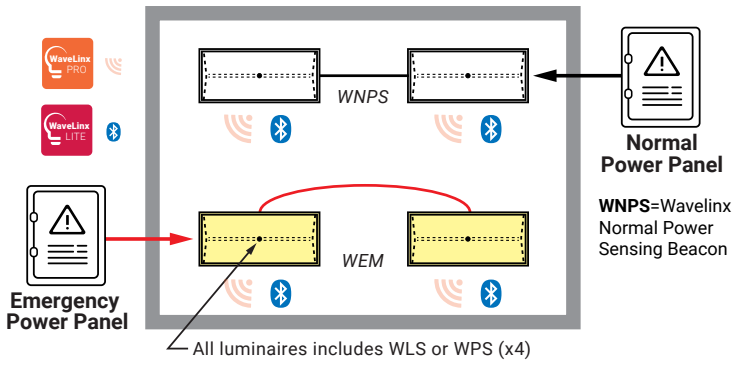
The WNPS and WEM (**UL924** option) only available with WLS or WPS sensors. Must be specified when ordered. WEM must be associated with a group that includes a normal power sensing device to receive NPS beacon. Learn more about WaveLinx EM here.

WaveLinx EM

The WaveLinx Emergency (WEM) solution offered by WaveLinx wireless (PRO and LITE) makes it easy to design your UL924 certified emergency lighting solution. Fixture-integrated WaveLinx Emergency Modules (WEM) override lighting controls and increases light output to emergency level (100%) until normal power is restored. Needs programming. WaveLinx emergency systems are designed to meet UL 924 standards. Learn more here.



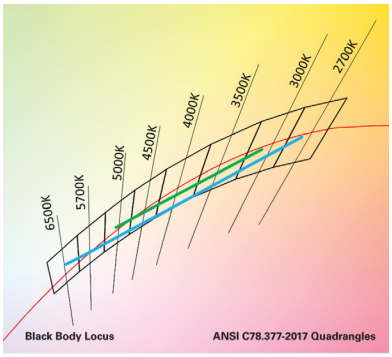




VividTune color tuning solutions

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)

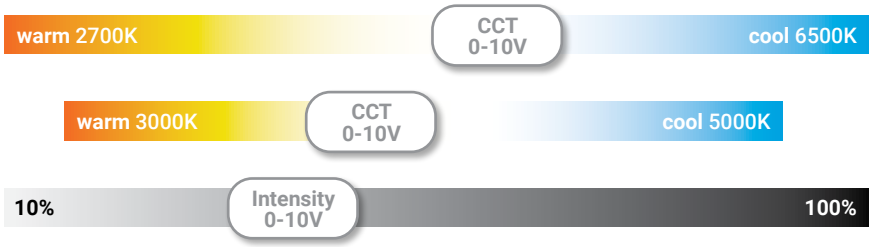
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.923	0.789
3000K	0.950	0.783	0.949	0.820
3500K	1.006	0.855	0.983	0.861
4000K	1.056	0.923	1.004	0.888
4500K	1.066	0.939	1.022	0.911
5000K	1.066	0.939	1.036	0.929
6500K	-	-	1.051	0.955

2' x 4' GRLED - Example of Approximate Lumen Calculation

CCT Setting	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
	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 for tunable white application guides.



Example of Lumen Adjustment Calculation

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

Adjusted Lumen = published lm x adjusted lm factor

Adjusted Lumen = 4821 x 1.006

Adjusted Lumen = 4849 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.*

Emergency Lighting

All buildings have to comply with emergency lighting codes to maintain their certificate of occupancy.
To enable this, Cooper Lighting Solutions has created multiple offerings to suit the building type and luminaire type.

Options to Enable Emergency (Stand Alone)

	Standard	Self-Diagnostic	FirstLink Connected ETO for Factory-Installed Only
Metalux Recessed, HALO, APG, Outdoor Medium forward voltage LED arrays usually 20-60V DC	**Batteries**: EBPLEDL7W, EBPLEDL14W **Inverters**: INVM-10W-AD	**Batteries**: EBPLED10WSD, EBPLED7.5WSD **Inverters**: INVM-25W-ADSD, INVM-50W-ADSD	**Batteries**: EBPLEDL10SF, EBPLEDL6SF
Metalux Industrial High forward voltage LED arrays usually 90-200V DC	**Batteries**: EBPLEDC1HV **Inverters**: INVM-10W-AD, INVM-100W-AD	**Inverters**: INVM-25W-ADSD, INVM-50W-ADSD	
How is emergency lighting inspection done?	Turn breakers off Walk around the building and collect compliance data.	No need to turn breakers off. Walk around, look up and collect compliance data.	No need to turn breaker off, No walking around. Open the app, push a button, and collect compliance data.

NOTE: 1. For factory installed First-Link EBP, order xSF option. Example: ETO_22CZ2-34HE-UNV-EBP10SF-L835-CD1-U (see Luminaire Order Info)
2. For factory installed standard EBP. Example: 22CZ2-34HE-UNV-EL7W-L835-CD1--U

Connected Emergency Lighting

ETO via Factory-Installed Only

Use our Connected Emergency Lighting products (FirstLink) to reduce the cost of compliance.

FirstLink is a complete and fully code compliant connected emergency egress lighting system comprised of FirstLink enabled exit signs, unit equipment, emergency LED drivers and the FirstLink application. The monthly and annual tests can be scheduled to be performed on a cadence. And the FirstLink app easy, instant access to compliance information and your system status. Reports can be easily exported to prove the system compliance status is 100%.

Compliance

- Avoid costly non-compliance fines
- Helps reduce risks and insurance premiums

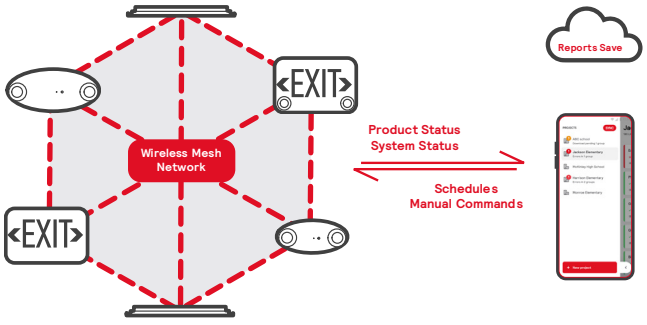
Convenience

- No ladders
- No documentation
- No searching for reports during an inspection.

Control

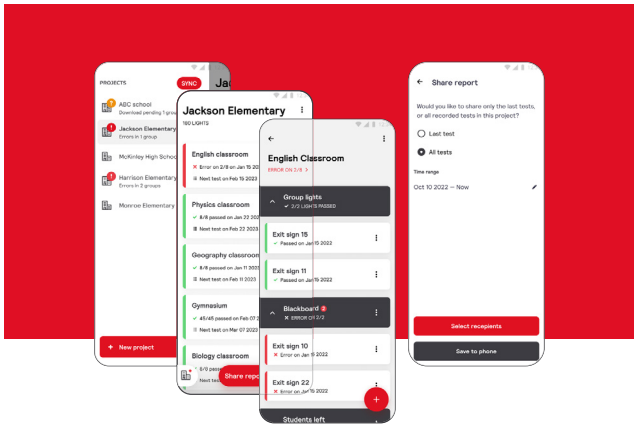
- Scheduling: Adjust the frequency and timing of testing.
- Troubleshooting: Receive complete product status information.
- Customization: Create custom groups and zones.

How does FirstLink work?



FirstLink is a standalone wireless mesh network that connects all devices and ensures a reliable connection through the network, even during the loss of individual devices.

If the app can communicate with just one device, the status of all devices can be read. Once the status is downloaded, the data is uploaded and saved to the cloud.



The FirstLink App

Complete control is in your hands

The FirstLink app is your portal to the FirstLink system. This easy-to-navigate iOS and Android application gives you the ability to configure your system, view and export results, change testing schedules, and more.

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