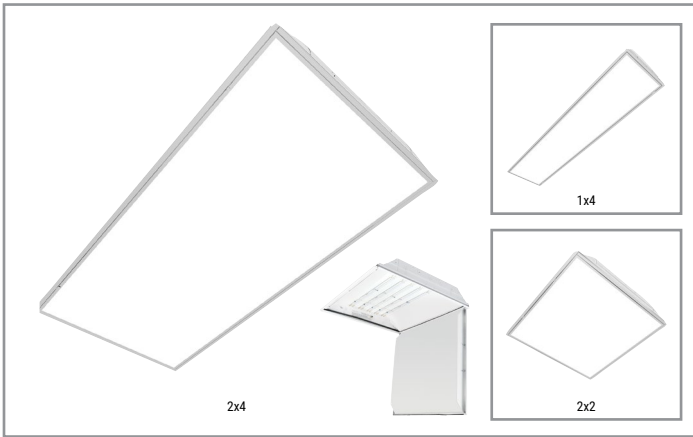


Project		Catalog #		Type	
Prepared by		Notes		Date	



Metalux

CGSB Panel

1x4 / 2x2 / 2x4
 Service from Below LED Panel
 Recessed, Surface, Suspended

Typical Applications

- Commercial Office Spaces • Schools • Healthcare
- Retail Merchandising Areas

Product Certification



Product Features



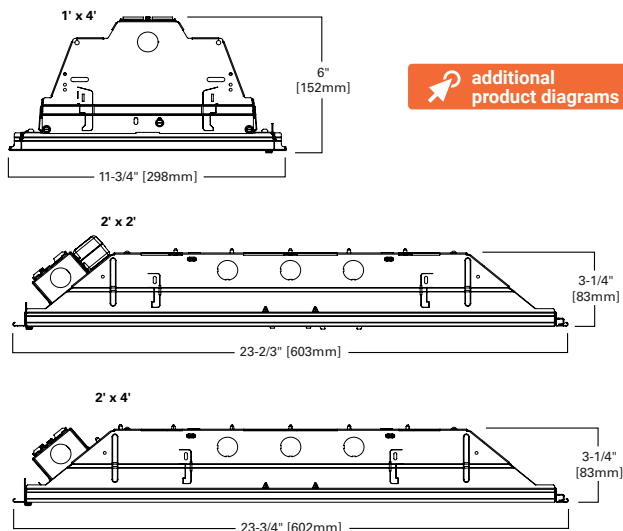
Interactive Menu

- Order Information page 2
- Photometric Data page 4
- Control Systems page 5
- Product Warranty

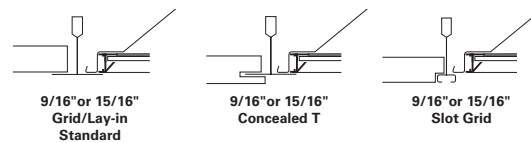
Top Product Features

- Available in 2' x 4', 2' x 2' and 1' x 4'
- Drivers and internal components are accessible from room side for ease of service after installation
- Integrated control and emergency options in all sizes
- Available in 3000K, 3500K, 4000K, and 5000K CCT, 80 and 90 CRI
- Standard 0-10V continuous dimming driver
- Options to meet Buy American and other domestic preference requirements

Dimensional and Mounting Details



Ceiling Compatibility



Ceiling Mounting Choices

Application	Catalog	UPC	Description
Hard Ceiling Recessed	DF-14W	662401232949	1x4 Dry Wall Frame Kit
Hard Ceiling Recessed	DF-22W	662401232963	2x2 Dry Wall Frame Kit
Hard Ceiling Recessed	DF-24W	662401232970	2x4 Dry Wall Frame Kit
Surface Mount	SK-14-WT	080083906703	1x4 Surface Mount Kit, Tall
Surface Mount	SK-22-WT	080083719396	2x2 Surface Mount Kit, Tall
Surface Mount	SK-22-WS	080083719402	2x2 Surface Mount Kit, Shallow
Surface Mount	SK-24-WS	080083719389	2x4 Surface Mount Kit, Tall
Surface Mount	SK-24-WT	080083719372	2x4 Surface Mount Kit, Shallow

Order Information

SAMPLE ORDER NUMBER: **24CGSB-40-EL14W-L840-WAA**

Domestic Preferences	Rating	Width/Length	Series	1x4 Lumen Output	2x2 Lumen Output	2x4 Lumen Output	Lens Options
Domestic Preferences ⁽¹⁾	Rating	Width/Length	Series	1x4 Lumen Output ^{(3), (5)}	2x2 Lumen Output ^{(3), (6)}	2x4 Lumen Output ^{(3), (7)}	Lens Options
[Blank] =Standard BAA =Buy American Act TAA =Trade Agreements Act	[Blank] =Standard ATW-SW4 =Chicago Rated ⁽²⁾	14 =1' x 4' 22 =2' x 2' 24 =2' x 4'	CGSB =Service from Below Panel Series	20 =2000 25 =2500 30 =3000 35 =3500 40 =4000 45 =4500 50 =5000 55 =5500 60 =6000 70 =7000	20 =2000 25 =2500 30 =3000 35 =3500 40 =4000 45 =4500 50 =5000 55 =5500 60 =6000 70 =7000 80 =8000	30 =3000 35 =3500 40 =4000 45 =4500 50 =5000 55 =5500 60 =6000 70 =7000 80 =8000 90 =9000	[Blank] =Smooth White Frosted Acrylic
Notes <small>(1) Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.</small>	Notes <small>(2) Installed Flex not available with ATW-SW4 option.</small>			Notes <small>(3) Lumens are approximate. Refer to performance tables and IES files for actual delivered lumens and wattage. (5) Custom lumen output available: 2000 to 7000 lumens. (6) Custom lumen output available: 2000 to 8000 lumens. (7) Custom lumen output available: 3000 to 9000 lumens.</small>			

Voltage	Fusing Options	Emergency	CCT / CRI	Flex
Voltage	Fusing Options	Emergency	CCT / CRI	Flex ⁽¹³⁾
[Blank] =120-277V 347V =347V ⁽⁸⁾ 48V =48 Volt Low-voltage (Class 2) ⁽⁸⁾	[Blank] =Standard No Fuse GL =Single Element Fuse GM =Double Element Fuse	[Blank] =No Emergency EL7W =7-watt, 120V-277V emergency battery pack ⁽⁹⁾ EL10W =10-watt 120V-277V emergency battery pack ⁽⁹⁾ EL14W =14-watt 120V-277V emergency battery pack ⁽⁹⁾ EL10WSD =10-watt 120V-277V emergency battery pack installed, with self-diagnostics ^{(9), (11)} EL14WSD =14-watt 120V-277V emergency battery pack installed, with self-diagnostics ^{(9), (11)} ETRD =Emergency Transfer Relay with dimming control ⁽¹⁰⁾ ELV7W =Low-voltage system, 7-watt emergency battery pack ^{(9), (C)} ELV14W =Low-voltage system, 14-watt emergency battery pack ^{(9), (C)} GTDU =Bodine Emergency Transfer Relay with dimming control ⁽¹⁰⁾	L830 =3000K, 80 CRI L835 =3500K, 80 CRI L840 =4000K, 80 CRI L850 =5000K, 80 CRI L930 =3000K, 90 CRI L935 =3500K, 90 CRI L940 =4000K, 90 CRI L950 =5000K, 90 CRI	[Blank] =No Flex Dimming Flex ⁽¹²⁾ A3/8-4/18GDIM =Flex, hot, neutral, ground, 2 dimming leads A3/8-5/18GDIM =Flex, 2 hots, neutral, ground, 2 dimming leads Non-Dimming Flex ⁽¹²⁾ A3/8-2/18G =Flex, hot, neutral, ground A3/8-3/18G =Flex, 2 hots, neutral, ground A3/8-4/18G =Flex, 3 hots, neutral, ground
Notes <small>(8) 347 with emergency is not available with SD Driver. (C) Consult WaveLinX Low-Voltage or DLVP system pages for additional details and compatibility.</small>		Notes <small>(9) 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. (10) Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others). ETRD option only requires one relay when used on a dimming fixture. (11) EL10WSD and EL14WSD not available with 347V.</small>		Notes <small>(12) Fixture height increases to 3-3/4". (13) Multiple options available in online configurator. See additional notes on Flex below.</small> Flexible Metal Conduit Options <small>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.</small>

Driver Type	Options	Integrated Sensor	Packaging	Accessories
Driver Type	Options	Integrated Sensor ⁽¹⁴⁾	Packaging	Accessories (order separately) ⁽¹⁵⁾
[Blank] =0-10V Driver (10%-100% Dimming) HCD =0-10V Driver (1%-100% Dimming) SLTD =DALI Driver (1%-100% Dimming) SD =Step Dimming Driver (50%,100% Dimming) LH =Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming LV =Low-voltage System Driver (0.1%-100% Dimming) ^(C)	FA =Flush White Extruded Aluminum Doorframe PAF =Painted After Fabrication	[Blank] =No Sensor WAA =WaveLinX PRO Wireless Integrated Sensor ^(A) WAB =WaveLinX LITE Wireless Integrated Sensor ^(B)	[Blank] =Unit Pack PAL =Job Pack, out of carton	EQ-CLIP-U =T-BAR Safety Earthquake Clips ⁽¹⁶⁾ DF-14W-U =1' x 4' Drywall Frame Kit DF-22W-U =2' x 2' Drywall Frame Kit DF-24W-U =2' x 4' Drywall Frame Kit SK-14-WT =1' x 4' Tall Surface Mount Kit SK-22-WS =2' x 2' Shallow Surface Mount Kit SK-24-WS =2' x 4' Shallow Surface Mount Kit
Notes <small>(C) Consult WaveLinX Low-Voltage or DLVP system pages for additional details and compatibility.</small>		Notes <small>(14) 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) WaveLinX LITE devices are not currently compatible with the WaveLinX Area Controller. Consult WaveLinX LITE system pages for additional details and compatibility.</small>		Notes <small>(15) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information. (16) An EQ Grid Clip is recommended for all 9/16" ceiling systems.</small>

Product Specifications

Construction

- Rigid housing is die formed of code gauge prime cold rolled steel
- Flat white pre-paint steel door comes standard
- 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
- 1/2" Regressed extruded aluminum door

Controls

- 0-10V dimming to 10% standard, 1% dimming available
- WaveLinX wireless sensor compatible for standalone, controlled, connected, and IoT capability
- DALI 2.0, Lutron, and step-dimming available

Electrical

- TM21 life at 60,000 hours up to L86 and calculated L70 exceeds 120,000 hrs
- Driver rated for FCC part 15 Class B for use in residential or commercial applications
- LED's available in 3000K, 3500K, 4000K, or 5000K at 80 CRI or 90 CRI minimum
- Color accuracy \leq 3-Step MacAdam ellipse (SDCM)
- Integral emergency battery pack options available in 7W, 10W, and 14W. Test switch located on fixture lens band. Self-diagnostic options available
- Emergency/generator transfer options available

Optical Shielding

- Micro-optics enable uniform distribution of the LEDs for uniform lens illumination
- Acrylic frosted smooth lens provides uniform illumination across the entire lens
- Durable lens with surface texture to minimize scratch and impact damage

Installation

- Drivers and internal components are accessible from floor. LED boards include plug-in connectors for easy replacement or servicing

Compliance

- cULus listed for 25°C ambient environments, indoor applications
- IC rated for direct insulation contact
- Tested to IESNA LM-79 and LM-80
- Stated life per TM21 standards
- Suitable for State of California Title 24 high efficacy luminaire
- FCC part 15 class B (residential) compliant

Warranty

- Five year limited warranty

Energy and Performance Data

Electrical Performance - CGSB (3500K, 80 CRI)

Size	Lumen Pkg	Delivered Lumens	Input Watts	Efficacy lm/W	UGR
1x4	2000	2070	22.5	91.99	18.8
	2500	2686	28.6	93.91	19.7
	3000	3098	32.7	94.74	20.2
	3500	3696	39	94.78	20.9
	4000	4246	44.2	96.06	21.3
	4500	4733	49.5	95.61	21.7
	5000	5114	58.2	87.87	22.0
	5500	5800	66.6	87.09	22.4
	6000	6386	68.3	93.51	22.7
2x2	7000	6937	74.8	92.74	23.0
	2000	2329	16.9	137.80	18
	2500	2891	20.4	141.70	18.8
	3000	3507	24.9	140.80	19.4
	3500	4063	29.2	139.10	19.9
	4000	4648	33.8	137.50	20.4
	4500	5251	38.2	137.50	20.8
	5000	5783	42.5	136.10	21.2
	5500	6361	46.2	137.70	21.5
2x4	6000	6955	53.6	129.80	21.8
	7000	8121	63	128.90	22.4
	8000	9278	72.6	127.80	22.8
	3000	3239	24.38	132.87	16.3
	3500	3660	27.48	133.17	16.7
	4000	4283	32.13	133.29	17.3
	4500	4672	35.45	131.79	17.6
	5000	5140	39.89	128.85	17.9
	5500	5918	45.43	130.27	18.4
6000	6463	50.97	126.80	18.7	
7000	6930	54.29	127.64	18.9	
8000	8332	66.92	124.50	19.6	
9000	9344	74.9	124.76	20.0	

Lumen Adjustment Factors 2x2

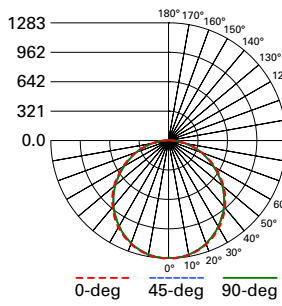
Size	CCT Multiplier	80 CRI	90 CRI
1x4	3000K	0.99	0.83
	3500K	1.00	0.85
	4000K	1.03	0.87
	5000K	1.05	0.89
2x2	2700K	0.90	0.76
	3000K	0.95	0.83
	3500K	1.00	0.84
	4000K	1.01	0.85
2x4	5000K	1.02	0.89
	3000K	0.99	0.83
	3500K	1.00	0.85
	4000K	1.03	0.87
	5000K	1.05	0.89

Shipping Data

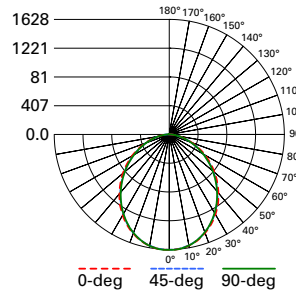
Catalog No.	Wt.	Pallet
14CGSB	10 lbs.	24
22CGSB	10 lbs.	56
24CGSB	20 lbs.	28

Photometric Data

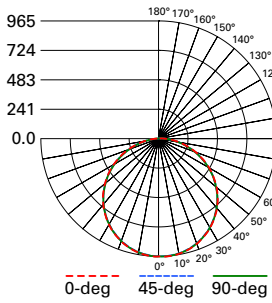
[View IES files](#)



14CGSB-35-L835
 Electronic Driver
 LED 3500K
 Spacing criterion: (II) 1.27 x mounting height, (⊥) 1.25 x mounting height
 Lumens: 3696.4
 Input Watts: 39W
 Efficacy: 94.8 LPW
 Test Report: 14CGSB-35-L835.IES

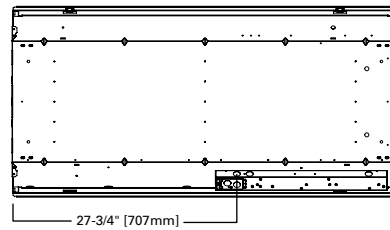
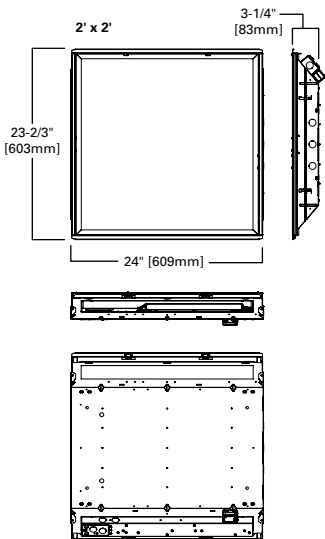
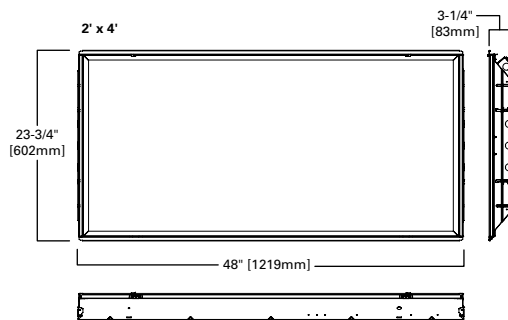
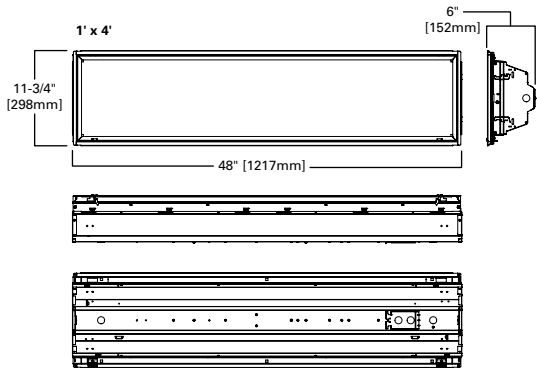


22CGSB-35-L835
 Electronic Driver
 LED 3500K
 Spacing criterion: (II) 1.2 x mounting height, (⊥) 1.18 x mounting height
 Lumens: 4063
 Input Watts: 29.2W
 Efficacy: 139.1 LPW
 Test Report: 22CGSB-35-L835.IES



24CGSB-45-L835
 Electronic Driver
 LED 3500K
 Spacing criterion: (II) 1.27 x mounting height, (⊥) 1.27 x mounting height
 Lumens: 2847.5
 Input Watts: 35.4W
 Efficacy: 80.4 LPW
 Test Report: 24CGSB-45-L835.IES

Dimensional and Mounting Details



Control Systems

- WaveLinX PRO Wireless
- WaveLinX LITE Wireless
- WaveLinX Wired



The CGSB with WaveLinX offers no-hassle lighting control with multiple luminaire level control solutions.

WaveLinX PRO is used for applications where spaces need to be connected to a lighting or building management system and to help building owners improve their operations, building environment, and tenants' experience by leveraging the data generated by the sensors. The WaveLinX PRO devices communicate with each other via the WaveLinX Area Controller which coordinates the data traffic between the devices, lighting apps and CORE platform. The WaveLinX Area Controller also hosts the time clock required if spaces need to be turned on/off at a specific time.

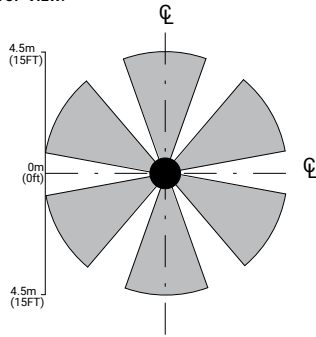
The WaveLinX PRO Sensor offers built-in occupancy and daylighting controls as well as luminaire level control including white tuning while the WaveLinX PRO Node offers luminaire level control and white tuning. If opting for the WaveLinX PRO Node option, a PRO Ceiling Sensor will most likely be needed within the space to control the lights based on occupancy and daylight levels.

WaveLinX LITE is used for single spaces where there is no need to manage the spaces remotely or exchange the sensor data with other sub-systems within the building or smart applications.

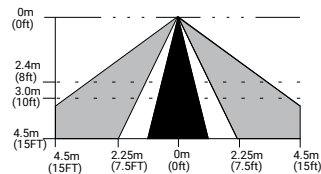
The WaveLinX LITE Sensor offers built-in occupancy and daylighting controls as well as luminaire level control.

Integrated Sensor Coverage Pattern

TOP VIEW:



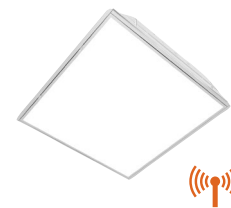
SIDE VIEW:



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



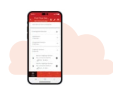
With Integrated WaveLinX Node

Systems comparison chart

Cooper Lighting Solutions provides many lighting system solutions designed to satisfy code requirements and meet the unique needs of any project.



Luminaire with standalone sensor



Standalone Spaces WaveLinX LITE



Standalone Spaces WaveLinX CAT



Networked Spaces WaveLinX PRO



Enterprise WaveLinX CORE

	Luminaire with standalone sensor	Standalone Spaces WaveLinX LITE	Standalone Spaces WaveLinX CAT	Networked Spaces WaveLinX PRO	Enterprise WaveLinX CORE
Occupancy	Yes	Yes	Yes	Yes	Yes
Daylighting	Yes	Yes	Yes	Yes	Yes
Wallstations	-	Yes	Yes	Yes	Yes
Gateways	-	-	-	1 WAC	300 WACs
Devices (MAX)	-	40 per Area (1120 per space)	40 per Area	200 per WAC2	32,500 per CORE Enterprise
Software	-	WaveLinX LITE Mobile App	WaveLinX CAT Mobile App	WaveLinX Mobile App	CORE
Areas	-	28 per Space	Unlimited	50 per WAC2	up to 3,000
Zones	-	16 per Area	16 per Area	16 per Area	up to 9,000
Scheduling	-	-	-	Local	Global
VividTune™	-	-	-	Yes	Yes
Plug-Load Control	-	Yes	Yes	Yes	Yes
Low-Voltage Power	-	-	Yes	Yes	Yes
Integration	-	-	-	-	BACnet, API
Dashboards	-	-	-	-	Energy, Occupancy
Configuration	-	Installer	Installer	Technician	Technician / IT

SCALABILITY

