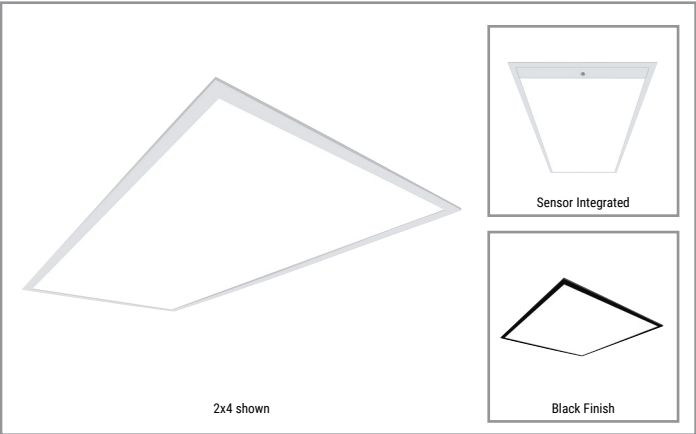


Project		Catalog #		Type	
Prepared by		Notes		Date	



# Metalux

## CGTX Panel

Configurable LED Panel,  
Recessed, Surface, Suspended

### Typical Applications

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

### Product Certification



### Product Features



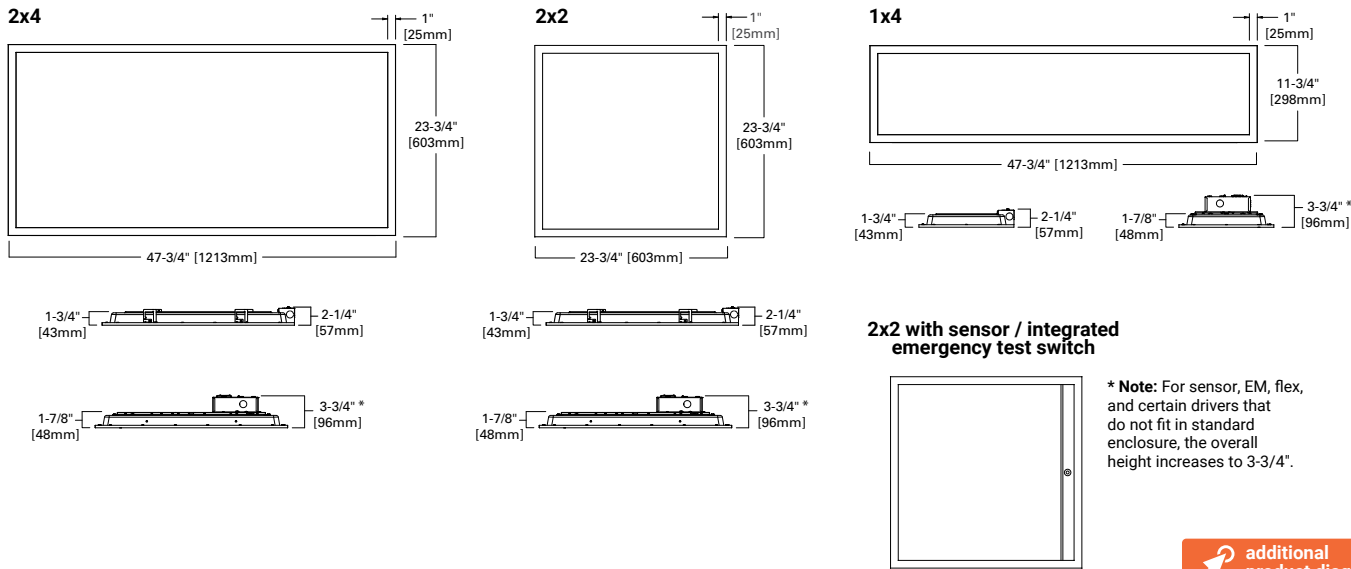
### Interactive Menu

- Order Information page 2
- Photometric Data page 5
- Control Solutions page 7
- Product Warranty

### Top Product Features

- Highly configurable to fit a large variety of applications
- Integrated control and emergency options in all sizes
- Standard and high efficiency available for further energy savings
- Available in 3000K, 3500K, 4000K, and 5000K CCT, 80 and 90 CRI
- Options to meet Buy American and other domestic preference requirements

### Dimensional and Mounting Details



additional  
product diagrams

## Order Information

SAMPLE ORDER NUMBER: **24CGTX-40-EL14W-L840-WLS**

Domestic Preferences	Rating	Width/Length	Series	1x4 Lumen Output		2x2 Lumen Output		2x4 Lumen Output	
Domestic Preferences <sup>(1)</sup>	Rating	Width/Length	Series	1x4 Lumen Output <sup>(3)</sup>		2x2 Lumen Output <sup>(3)</sup>		2x4 Lumen Output <sup>(3)</sup>	
[Blank]=Standard BAA=Buy American Act TAA=Trade Agreements Act	[Blank]=Standard ATW-SW4= Chicago Rated <sup>(2)</sup>	14=1' x 4' 22=2' x 2' 24=2' x 4'	CGTX=Configurable LED Panel	Standard 20=2000 30=3000 42=4200	High Efficiency 20HE=2000 30HE=3000 42HE=4200 70HE=7000 80HE=8000	Standard 20=2000 25=2500 35=3500 45=4500	High Efficiency 20HE=2000 25HE=2500 35HE=3500 45HE=4500 50HE=5000 60HE=6000	Standard 20=2000 30=3000 35=3500 40=4000 45=4500 55=5500 65=6500 72=7200	High Efficiency 20HE=2000 30HE=3000 35HE=3500 40HE=4000 45HE=4500 55HE=5500 65HE=6500 72HE=7200 80HE=8000 90HE=9000 100HE=10000 <sup>(4), (5)</sup>
<b>Notes</b> (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 <a href="#">DOMESTIC PREFERENCES</a> website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	<b>Notes</b> (2) Installed Flex not available with ATW-SW4 option.			<b>Notes</b> (3) Lumens are approximate. Refer to performance tables and IES files for actual delivered lumens and wattage. (4) 2x4 100E lumen output requires two drivers. (5) 2x4 100 lumen output requires two drivers.					

Lens Options	Voltage	Emergency	CCT / CRI	Flex/MWS
Lens Options	Voltage	Emergency <sup>(7)</sup>	CCT / CRI	Flex/MWS <sup>(13)</sup>
[Blank]=Smooth White Frosted	[Blank]=Universal Voltage 120-277 347V=347 Volt <sup>(6)</sup>	[Blank]=None EL7W=7-watt, 120V-277V emergency battery pack installed <sup>(8)</sup> EL14W=14-watt 120V-277V emergency battery pack installed <sup>(8)</sup> EL10W=10-watt 120V-277V emergency battery pack installed <sup>(8)</sup> EL10WSD=10-watt 120V-277V emergency battery pack installed, with self-diagnostics <sup>(8)</sup> GTRD=Bodine Emergency Transfer Relay with dimming control <sup>(9)</sup> ETRD=Iota Emergency Transfer Relay with dimming control <sup>(10)</sup>	L830=3000K, 80 CRI L835=3500K, 80 CRI L840=4000K, 80 CRI L850=5000K, 80 CRI L930=3000K, 90 CRI <sup>(11)</sup> L935=3500K, 90 CRI <sup>(11)</sup> L940=4000K, 90 CRI <sup>(11)</sup>  90 CRI only available with HE	[Blank]=None Dimming Flex <sup>(12)</sup> 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 <sup>(12)</sup> 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 MWS - Modular Wiring Systems - <a href="#">Fixture Fitting</a> <sup>(15)</sup> MW12FF12/3G=120V Fixture Feed, #12, 3 Conductors + Ground <sup>(14)</sup> MW27FF12/3G=277V Fixture Feed, #12, 3 Conductors + Ground <sup>(14)</sup> MW12FF12/2G-010V=120V Fixture Feed, #12, 2 Conductors, Ground, 0-10V Dimming <sup>(14)</sup> MW27FF12/2G-010V=277V Fixture Feed, #12, 2 Conductors, Ground, 0-10V Dimming <sup>(14)</sup>
<b>Notes</b>  (6) 347V with sensor and/or emergencies only available with HCD.	<b>Notes</b>  (7) Fixture height increases to 3'-3/4". (8) With integral test switch/indicator. 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. (9) Used to bypass local control during outage. Device is dual listed to UL 1008 (transfer switch) and UL 924 (switch bypass), 347V not available. (10) Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others). 347V not available.	<b>Notes</b>  (11) 90 CRI only available in HE lumen packages.	<b>Notes</b>  (12) Fixture height increases to 3'-3/4". (13) Multiple options available in online configurator. See additional notes on Flex below. (14) To be used with Modular Wiring System. Refer to MWS Fixture Fitting specification for additional details.(15) MWS Fixture Fitting increases overall fixture height to 4'-7/8".  <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.	

Driver Type	Number of Drivers	Integrated Sensing Systems	Options	Packaging
Driver Type	Number of Drivers	Integrated Sensing Systems <sup>(18)</sup>	Options	Packaging
[Blank]=CD 0-10V Driver (10%-100% Dimming) HCD=0-10V Driver (1%-100% Dimming) <sup>(16)</sup> SLTD=DALI Driver (1%-100% Dimming) <sup>(16)</sup> SD=Step Dimming Driver (50%,100% Dimming) <sup>(16)</sup> LH=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming <sup>(16), (F)</sup>	[Blank]=1 Driver Z=2 Drivers <sup>(17)</sup>	[Blank]=No Sensor WLS (formerly WAB)=WaveLinX LITE Wireless Sensor, Occupancy w/ photocell, Independent & Networked <sup>(19), (B)</sup> WPS (formerly WAA)=WaveLinX PRO Wireless Sensor, Occupancy w/ photocell, Networked <sup>(19), (A)</sup> WLN=WaveLinX LITE Wireless Control Node, without sensor <sup>(19), (B)</sup> WPN=WaveLinX PRO Wireless Control Node, without sensor <sup>(19), (A)</sup>	[Blank]=None BLKF=Black Frame, Matte Finish	[Blank]=Unit Pack PAL=Job Pack, out of carton
<b>Notes</b> (16) Fixture height increases to 3-3/4". 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 <a href="#">www.lutron.com</a> .	<b>Notes</b> (17) Fixture height increases to 3-3/4".	<b>Notes</b> (18) Fixture height increases to 3-3/4". (19) Must be used with CD or HCD driver. 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.		

## Product Specifications

### Construction

- Robust die-formed steel back plate to ensure durability
- Housing is absent of holes to resist debris/bug intrusion
- Aluminum frame weld and ground for a seamless appearance

### Mounting

- Integral grid/EQ clips provided and include suspension / wire retention features
- Grid clip includes fold up hang points. Use FPSUS24-ML or other desired suspension methods for direct suspension
- Large junction box constructed of code gauge galvanized steel with access plate
- Multiple 7/8" KO's provided, suitable for up to 12AWG wiring
- Surface kits available for use in grid or hard surfaces
- Factory installed MWS fixture fitting or flexible conduit available to reduce installation time
- FPSUS2-ML is a 2-point suspension kit includes aircraft cable, carabiner, ceiling connection, SO cord, cord connectors, round 4" J-box cover and #8 sheet metal screws

### Controls

- 0-10V dimming to 10% standard, 1% dimming available
- 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

- 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
- Drivers available in 120-277V; 0-10V drivers also available in 347V

### Optical Shielding

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

### Compliance

- cULus listed for 25°C ambient environments, indoor applications
- IC rated for direct insulation contact
- UL Damp Location listed
- IP5X rated from the room side with no modification needed
- Tested to IESNA LM-79 and LM-80
- Stated life per TM21 standards
- DesignLights Consortium® Qualified and classified for DLC Standard and DLC Premium, refer to [www.designlights.org](http://www.designlights.org) for details.
- Suitable for State of California Title 24 high efficacy luminaire
- FCC part 15 class A compliant
- Fixture is rated for NSF/ANSI standard 2 - Light fixture for Splash Zone and Non-Food Zone

### Warranty

- Five year warranty
- Extended warranty to 10 years available

### Surface Mounting Options

Catalog No.	Description	UPC	Kit Height
CGTSURF24	2x4 CGT Surface Mount Kit	080083083107	3-7/8"
CGTSURF22	2x2 CGT Surface Mount Kit	080083083121	3-7/8"
CGTSURF14	1x4 CGT Surface Mount Kit	080083083145	3-7/8"
SK-24-WS	2x4 SK Surface Mount Kit, Shallow	080083719389	5-1/16"
SK-22-WS	2x2 SK Surface Mount Kit, Shallow	080083719402	5-1/16"
SK-14-WT	1x4 SK Surface Mount Kit, Tall	080083906703	6-1/4"
<b>Note:</b> Cannot be used with EL10W, EL10WSD, GTRD, 100HE lumen output, MWS, or 347V with alternative driver. Metalux Universal Surface Mount kits are compatible with these configurations – see #SK-24, #SK-22, and #SK-14). <a href="#">Metalux Universal Surface Mount</a>			

### Drywall Frame Kit

Catalog No.	Description	UPC
DF-24W-U	2x4 dry wall frame kit	662401232970
DF-22W-U	2x2 dry wall frame kit	662401232963
DF-14W-U	1x4 dry wall frame kit	662401232949

### Surface Mount Kit

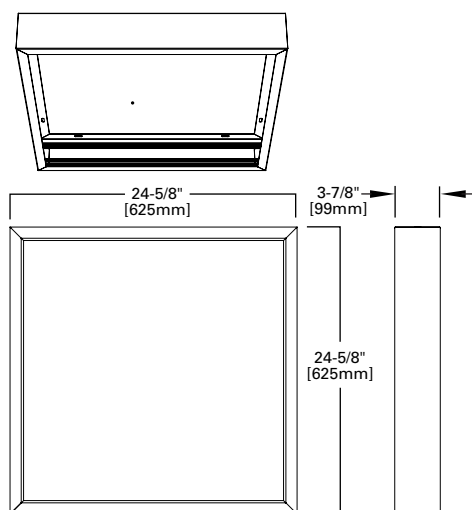
Size	Width	Length
1x4	12-5/8"	48-5/8"
2x2	24-5/8"	24-5/8"
2x4	24-5/8"	48-5/8"

### Suspension Kit

Catalog	UPC	Description
FPSUS2-ML	080083802784	ML / Max Load Kit for CGTX with options. 2 point Y-hanger suspension kit includes aircraft cable, carabiner, ceiling connection, SO cord, cord connectors, round 4" J-box cover plate, and #8 sheet metal screws.
Mounting height from ceiling <b>Min.</b> = 7-1/4" [184mm] <b>Max.</b> = 27" [286mm]		
<b>Note:</b> Suspension kit is intended to be used without surface mount box.		

### Shipping Data

	1x4	2x2	2x4
Packaged Weight (lb.)	10	10	16
Pallet Qty - Standard (Tall)	17 (11)	34 (22)	16 (11)
Pallet Size	30x53		
<b>Note:</b> Base configurations; options may add weight.			



CGTSURF22 Shown

Energy and Performance Data

Electrical & Optical Performance - CGTX (3500K, 80 CRI)

Size	Lumen Pkg	Delivered Lumens	Input Watts	Efficacy lm/W	Current (A)		Glare Performance	
					120V	277V	UGR <sup>(1)</sup>	Max Luminance <sup>(1)</sup>
1x4	2000	1815	16.4	120	0.14	0.06	18.3	1590
	3000	2679	23.9	122	0.20	0.09	19.7	2347
	4200	3911	31.7	134	0.26	0.11	21	3427
1x4 HE	2000 HE	1877	14.8	138	0.12	0.05	18.4	1645
	3000 HE	2820	22.4	137	0.19	0.08	19.9	2471
	4200 HE	3984	31.9	136	0.27	0.12	21.1	3491
	7000 HE	6372	52.5	132	0.44	0.19	22.7	5583
	8000 HE	7346	61.9	129	0.52	0.22	23.2	6437
2x2	2000	2041	15.1	135	0.13	0.05	18.8	1786
	2500	2536	18.9	134	0.16	0.07	19.5	2219
	3500	3606	27.9	129	0.23	0.10	20.8	3155
	4500	4424	36.1	123	0.30	0.13	21.5	3870
2x2 HE	2000 HE	2024	14.8	137	0.12	0.05	18.8	1771
	2500 HE	2598	19.2	135	0.16	0.07	19.6	2272
	3500 HE	3633	27.2	134	0.23	0.10	20.8	3178
	4500 HE	4650	36.2	128	0.30	0.13	21.7	4068
	5000 HE	5121	40.0	128	0.33	0.14	22	4480
	6000 HE	6004	47.4	127	0.40	0.17	22.5	5253
2x4	2000	2232	16.7	134	0.14	0.06	16.8	982
	3000	3135	23.7	132	0.20	0.09	18	1378
	3500	3742	28.4	132	0.24	0.10	18.6	1646
	4000	4008	30.3	132	0.25	0.11	18.8	1763
	4500	4649	35.6	131	0.30	0.13	19.4	2044
	5500	5546	44.1	126	0.37	0.16	20	2439
	6500	6606	53.4	124	0.45	0.19	20.6	2905
	7200	7416	60.9	122	0.51	0.22	21	3261
2x4 HE	2000 HE	2031	14.9	136	0.12	0.05	16.5	893
	3000 HE	2988	21.9	136	0.18	0.08	17.8	1314
	3500 HE	3480	25.6	136	0.21	0.09	18.3	1530
	4000 HE	4052	29.9	136	0.25	0.11	18.9	1782
	4500 HE	4662	34.7	134	0.29	0.13	19.4	2050
	5500 HE	5509	41.3	133	0.34	0.15	19.9	2422
	6500 HE	6610	49.9	132	0.42	0.18	20.6	2907
	7200 HE	6969	53.6	130	0.45	0.19	20.8	3064
	8000 HE	8176	63.5	129	0.53	0.23	21.3	3595
	9000 HE	9001	70.3	128	0.59	0.25	21.6	3957
	10000 HE	10451	82.6	127	0.69	0.30	22.2	4596

**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 Adjustment Factors

CCT Multiplier	80 CRI	90 CRI <sup>(2)</sup>
3000K	0.99	0.83
3500K	1.00	0.85
4000K	1.03	n/a
5000K	1.05	0.89

Notes: (2) 90 CRI only available in HE lumen outputs.

**Example of Lumen Adjustment Calculation**

24CGTX-45-L850  
at 5000K

Lumen Adjustment Factor = 1.05

Total Light Output =  
4,537 lm x 1.05 = 4,764 lm

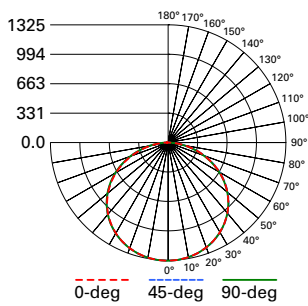
Efficacy =  $\frac{4,764 \text{ lm}}{35.6 \text{ W}}$  = 133 lm/W

Lumen Maintenance

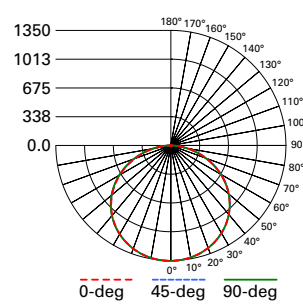
TM-21 Lumen Maintenance (60,000 hours) <sup>(3)</sup>	Theoretical L70 (Hours) <sup>(4)</sup>
> 86%	> 120,000

Notes: (3) Supported by IES TM-21 standards. (4) Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, that explains proper use of IES TM-21 and LM-80.

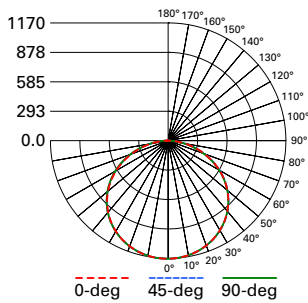
## Photometric Data

 View IES files
**14CGTX-42-L835**

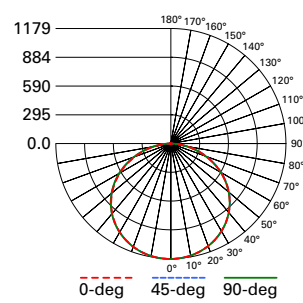
Electronic Driver  
LED 3500K  
Spacing criterion: (II) 1.26 x mounting height, (⊥) 1.27 x mounting height  
Lumens: 3911  
Input Watts: 31.7W  
Efficacy: 134 LPW  
Test Report: 14CGTX-42-L835.IES

**14CGTX-42HE-L835**

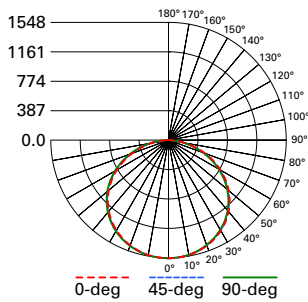
Electronic Driver  
LED 3500K  
Spacing criterion: (II) 1.26 x mounting height, (⊥) 1.27 x mounting height  
Lumens: 3984  
Input Watts: 31.9W  
Efficacy: 136 LPW  
Test Report: 14CGTX-42HE-L835.IES

**22CGTX-35-L835**

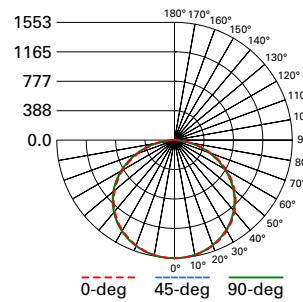
Electronic Driver  
LED 3500K  
Spacing criterion: (II) 1.26 x mounting height, (⊥) 1.26 x mounting height  
Lumens: 3606  
Input Watts: 27.9W  
Efficacy: 129 LPW  
Test Report: 22CGTX-35-L835.IES

**22CGTX-35HE-L835**

Electronic Driver  
LED 3500K  
Spacing criterion: (II) 1.26 x mounting height, (⊥) 1.26 x mounting height  
Lumens: 3633  
Input Watts: 27.2W  
Efficacy: 134 LPW  
Test Report: 22CGTX-35HE-L835.IES

**24CGTX-45-L835**

Electronic Driver  
LED 4000K  
Spacing criterion: (II) 1.27 x mounting height, (⊥) 1.26 x mounting height  
Lumens: 4649  
Input Watts: 35.6W  
Efficacy: 131 LPW  
Test Report: 24CGTX-45-L835.IES

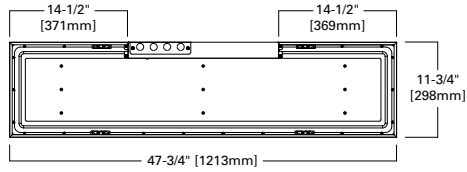
**24CGTX-45HE-L835**

Electronic Driver  
LED 4000K  
Spacing criterion: (II) 1.27 x mounting height, (⊥) 1.26 x mounting height  
Lumens: 4662  
Input Watts: 34.7W  
Efficacy: 134 LPW  
Test Report: 24CGTX-45HE-L835.IES

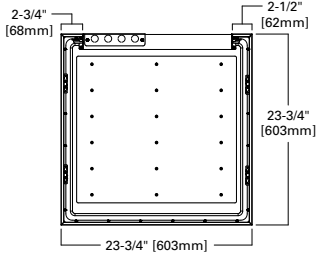
## Dimensional and Mounting Details

### Standard driver - no controls, EM, or flex

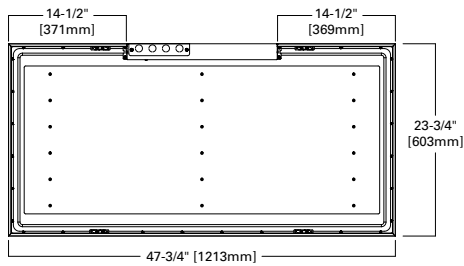
#### 1x4



#### 2x2

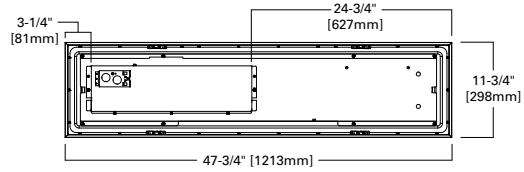


#### 2x4

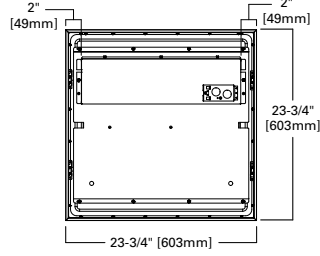


### Alternative driver, with controls, EM and/or flex

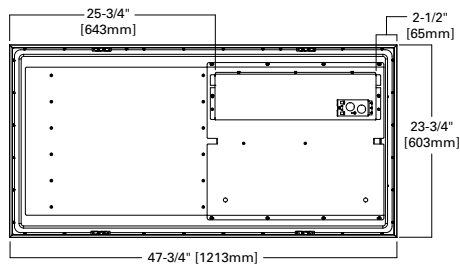
#### 1x4



#### 2x2



#### 2x4



## Control Solutions

- WaveLinX LITE wireless
- WaveLinX PRO wireless
- WaveLinX CAT wired
- WaveLinX Wired



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



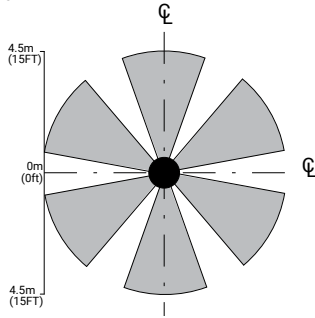
**WaveLinX PRO** is a wireless lighting control solution, for connected spaces, that significantly reduces a building's energy consumption. From a single floor to an entire campus, WaveLinX PRO connects more than lighting assets; it shares aggregated sensor data with the WaveLinX CORE platform and other building systems, so building owners can improve operations, spaces environment, and tenants' experience. WaveLinX PRO offers a rich portfolio of wireless devices, WaveLinX PRO-enabled luminaires, and an intuitive WaveLinX mobile app for office, education, warehouse, and parking garage applications.



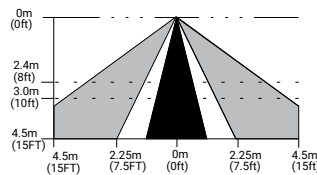
**WaveLinX LITE** is a cost effective, wireless digital lighting control solution, with out-of-the-box functionality, that saves energy and meets code. It's designed for applications that require occupancy-based, daylighting, or manual light control. Customize installations for office, education, warehouse and parking garages using the secure, simple mobile app.

### Integrated Sensor Coverage Pattern

TOP VIEW:

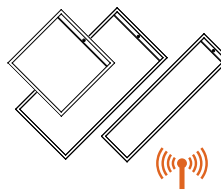


SIDE VIEW:

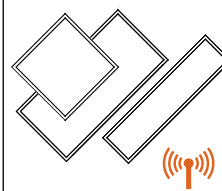


**Note:** Installation of integrated sensors within 3-ft (1m) of HVAC air vents is not recommended. The pattern shown is intended solely as a general guide and is not to scale.

With Integrated WaveLinX Sensor



With Integrated WaveLinX Node



Add a hidden WaveLinX sensor node (WPN, WLN) to your space lighting design!

**Allows to:**

- Keeps luminaire aesthetics
- Connect fixtures without the real estate to include sensor option such as downlights
- Connect sealed fixtures without a standard sensor option such as products for clinical space.

### Integrated Controls Options

Option	Out of the Box Functionality	Luminaire Level Lighting Control (LLC)	Automatic Dimming Photocell	Occupancy Sensing	CCT Control
WLS	X	X	X	X	
WLN		X			
WPS		X	X	X	X
WPN		X			X

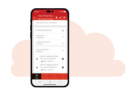
**Note:** WaveLinX utilizes scenes to allow users to change an area's fixtures Correlated Color Temperature (CCT) and intensity using commissioned manual wireless wallstation scene control. To enable CCT adjustments through WaveLinX, include WPS or WPN devices in addition to VividTune or BioUp technologies for integrated fixture control.

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