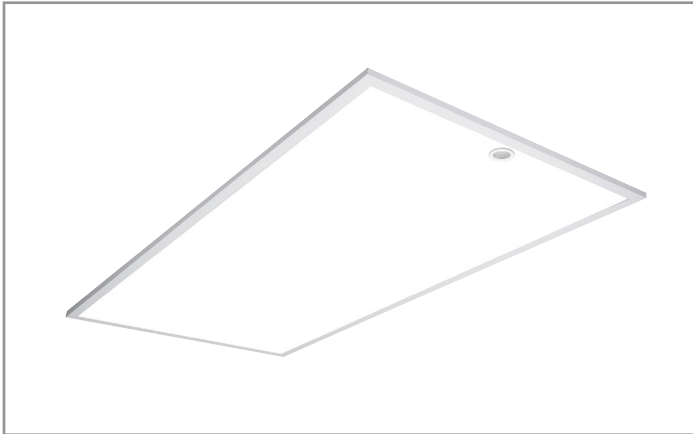| Project | | Catalog # | | Type | |
|---------|---|-----------|---|------|---|
| Prepared by | | Notes | | Date | |

# Metalux

## 24FPX LED Panel

2' x 4' Configurable LED Panel
Recessed in Insulated Ceilings or
Suspended/Surface Mount

### Typical Applications

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

### Interactive Menu

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

## Product Certification

UL CERTIFIED SAFETY | RoHS COMPLIANT | DLC DLC PREMIUM | DLC LISTED | IC RATED | IP5X | TAA | ISO SYSTEMS CERTIFIED

Efficiency Standards
T24 Can be used to comply with California Title 24 Non-Residential

## Product Features

damp location | MWS MODULAR WIRING SYSTEM CLICK HERE | Bluetooth | Connected Systems

## Top Product Features

- Variety of controls and emergency battery pack options in all sizes
- Low profile perfect for renovation or new construction
- Contractor friendly, quick and easy install
- Available in 3000K, 3500K, 4000K, and 5000K CCT
- Standard and high efficacy options available
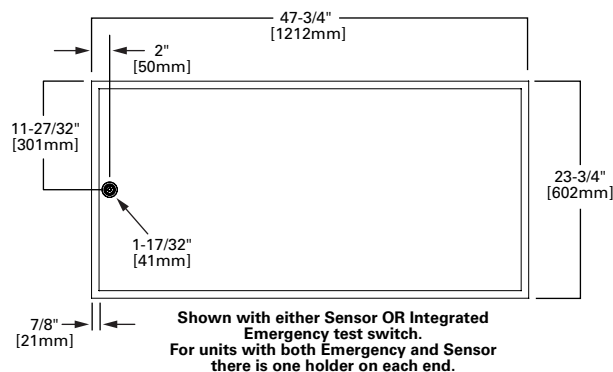- Options to meet Trade Agreements Act requirements

## Dimensional and Mounting Details



47-3/4" [1212mm]
2" [50mm]
11-27/32" [301mm]
23-3/4" [602mm]
1-17/32" [41mm]
7/8" [21mm]

**Shown with either Sensor OR Integrated
Emergency test switch.
For units with both Emergency and Sensor
there is one holder on each end.**

additional
product diagrams

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## Order Information

SAMPLE ORDER NUMBER: **24FPX-31-L840-SWPD1**

| Domestic Preferences | Rating | Width/Length | Series | LED Lumen Output | Voltage | Fuse Options | Emergency | CCT |
|---|---|---|---|---|---|---|---|---|
| Domestic Preferences [20] | Rating | Width/Length | Series | LED Lumen Output [2] | Voltage [5] | Fuse Options [7] | Emergency | CCT |
| **[Blank]**=Standard<br>**TAA**=Trade Agreements Act | **[Blank]**=Standard<br>**ATW-SW4**=Chicago Rated [1] | **24**=2' x 4' | **FPX**=Configurable Flat Panel | **31**=3100<br>**38**=3800 [3]<br>**47**=4700<br>**64**=6400 [4] | **[Blank]**=Universal Voltage 120-277<br>**347V**=347 Volt [6]<br>**48V**=48 Volt Low-voltage (Class 2) [C] | **[Blank]**=None<br>**GL**=Single Element Fuse<br>**GM**=Double Element Fuse | **[Blank]**=None<br>**EL7W**=7-watt, 120V-277V emergency battery pack installed [8]<br>**EL14W**=14-watt 120V-277V emergency battery pack installed [8]<br>**ELV7W**=Low-voltage system, 7-watt emergency battery pack [C]<br>**ELV14W**=Low-voltage system, 14-watt emergency battery pack [C]<br>**ETRD**=Iota Emergency Transfer Relay with dimming control [9], [10] | **L830**=3000K [11]<br>**L835**=3500K<br>**L840**=4000K<br>**L850**=5000K |
| **Notes**<br>(20) Only product configurations with this designated prefix are built to be compliant with the Trade Agreements Act of 1979 (TAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information. | **Notes**<br>(1) No sensor or installed FLEX options available with ATW-SW4 option. | | | **Notes**<br>(2) Lumens are approximate. Use IES files for actual performance. (3) 3000 lumens only available in HE. (4) Not compatible with WN driver. | **Notes**<br>(5) Products also available in non-US voltages and frequencies for international markets. (6) 347V with sensor and/or emergencies only available with HCD or SR. (C) Consult WaveLinx Low-Voltage or DLVP system pages for additional details and compatibility. | **Notes**<br>(7) Not available with the CD driver option. | **Notes**<br>(8) 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. (9) 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. 347 not available. (10) These options are only available with HCD and CD drivers. (C) Consult WaveLinx Low-Voltage or DLVP system pages for additional details and compatibility. | **Notes**<br>(11) 3000K only available 31 and 47 lumen options. |

| Efficacy | Flex | | Driver Type | Number of Drivers |
|---|---|---|---|---|
| Efficacy | Flex [13] | | Driver Type [14] | Number of Drivers |
| **[Blank]**=Standard<br>**HE**=High [12] | **[Blank]**=None<br>**A3/8-4/18GDIM**=Flex pre-installed with 5 conductors including ground and dimming leads<br>**A3/8-5/18GDIM**=Flex with 0-10V Dimming leads and Blue for alternate wiring. See below for details. | | **[Blank]**=CD<br>**HCD**=0-10V Driver (1%-100% Dimming)<br>**5LTD**=DALI Driver (5%-100% Dimming)<br>**5LTHD**=DALI Driver (1%-100% Dimming) [15]<br>**LV1**=Low-voltage System Driver (0%-100% Dimming) [C]<br>**SD**=Step Dimming Driver (50% or 100% Dimming)<br>**LH**=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming [F]<br>**SR**=Sensor-ready Driver (1%-100% Dimming) | **[Blank]**=1 Driver |
| **Notes**<br>(12) 3800 lumens only available in HE. | **Notes**<br>(13) Multiple options available in online configurator. See additional notes on Flex below.<br><br>**Flexible Metal Conduit Options**<br><br>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.<br><br>**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**<br>(14) Products also available in non-US voltages and frequencies for international markets. (15) Not available on 64 lumen option.<br><br>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: (C) Consult WaveLinx Low-Voltage or DLVP 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 | |

| Integrated Sensing Systems | Options | Packaging |
|---|---|---|
| Integrated Sensing Systems | Options | Packaging |
| **[Blank]**=No Sensor<br>**WAA**=WaveLinx Wireless Integrated Sensor [16], [A]<br>**WAB**=WaveLinx Lite Wireless Integrated Sensor [17], [B]<br>**WLA**=Low-voltage Integrated Sensor [18], [C]<br>**SVPD1**=0-10V Stand-alone Integrated Sensor [17], [D] | **[Blank]**=None<br>**SUS**=Suspension Mount [19] | **[Blank]**=Unit Pack<br>**PAL**=Job Pack, out of carton |
| **Notes**<br>(16) WAA sensor to be used with CD or W2A driver. (17) WAB and SVPD1 sensor to be used with CD driver. (18) WLA sensor to be used with LV driver.<br><br>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) WaveLinx Lite devices are not currently compatible with the WaveLinx Wireless Area Controller. Consult WaveLinx Lite system pages for additional details and compatibility. (C) Consult WaveLinx Low-Voltage or DLVP system pages for additional details and compatibility. (D) Consult SVPD series system pages for additional details and compatibility. | **Notes**<br>(19) Required for 1x4 and 2x4 suspended applications. | |

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## Accessories/Ordering Information [(21)]

**Surface Mount Kit –** Surface box with sufficient clearance for all options

| Catalog | UPC |
|---------|-----|
| FPXSURF24 | 080083867400 |

**Notes:** Surface mount kit is deep enough to fit all available options. Cannot be used with the FPSURF version.

**47-7/8"** [1217mm]

**3"** [76mm]

**23-7/8"** [607mm]
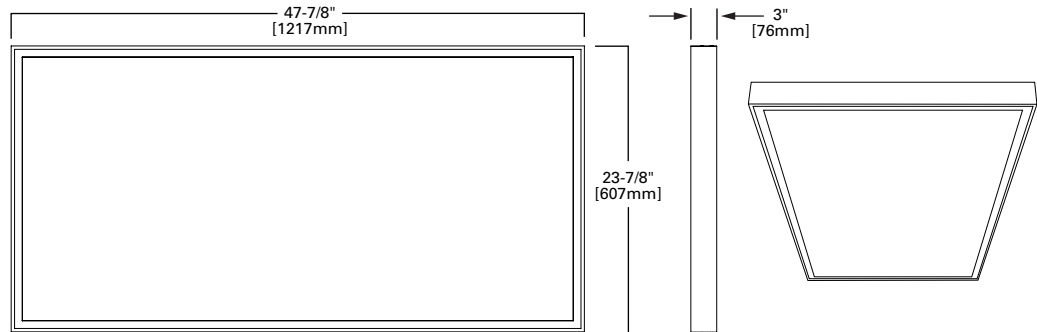
### Ceiling Retention

| Catalog | UPC |
|---------|-----|
| FPEQ | 080083802685 |

Required by some local codes
Order one set for each fixture
(Four clips per kit)
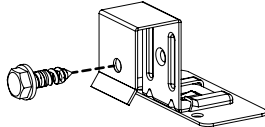
### Load Data (CD most common driver)

| | |
|---|---|
| Thd | 13% |
| Power Factor | 0.96 |
| Weight | 18.5 lbs. |
| Low Temp. Start | -20°C |

### Suspension Kit

| Catalog | UPC | Description |
|---------|-----|-------------|
| FPSUS2 | 080083802784 | 2 point Y-hanger suspension kit includes aircraft cable, carabiner, ceiling connection, SO cord, cord connectors and round 4" J-box cover plate |

Mounting height from ceiling
**Min.**=7-1/4" [184mm]
**Max**.=27" [286mm]

### Drywall Frame Kit

| Catalog | UPC |
|---------|-----|
| DF-24W-U | 662401232970 |

### Shipping Data

| Size | Wt. | Pallet (30" x 56") |
|------|-----|--------------------|
| 2' x 4' | 22 lbs. | 9 |

**Notes:** (21) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

# Product Specifications

### Construction
- Narrow aluminum bezel is tightly held to a die-formed code gauge steel back plate with flush perimeter and internal gasket
- Seamless corners to maximize the light emitting surface with a refined finish

### Mounting
- Integral grid clips and separate suspension clips provided for installation flexibility when additional retention is required
- Junction box constructed of code gauge galvanized steel with an easy access hinged door
- Multiple trade size knockouts provided on the top and sides
- Stock luminaire is less than 2.5" for use in shallow plenum or low ceiling spaces
- Surface mounting kits available
- Suspension options available from factory
- CCEA (Chicago Plenum) rating options available
- Factory installed flexible cable with dimming leads options available

### Integrated Controls
- Standard with 0-10V dimming driver (10% standard, 1% optional)
- WaveLinx wireless sensor compatible for standalone, controlled, connected, and IoT capability
- SVPD sensor compatible for standalone functionality
- Low-voltage sensor and driver compatible for WaveLinx Low-Voltage and DLVP applications
- DALI 2.0, Lutron, and step-dimming available

### Electrical
- Standard and High Efficacy models available
- LED's available in 3000K, 3500K, 4000K, and 5000K with a minimum of 80 CRI
- Color accuracy ≤3-Step MacAdam ellipse (SDCM)
- Projected lumen maintenance based on TM21 testing standards is L73 > 60,000 hours
- Emergency battery pack options available in 7W and 14W options. Battery pack options available as factory installed with fully integrated test switch
- Integral emergency transfer relay options available

### Optical Shielding
- Light guide with specialized features to optimize light extraction
- White frost lens with smooth pattern for uniform illumination
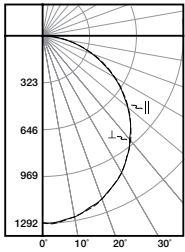- Scratch and impact resistant

### Compliance
- Indoor luminaires are cULus listed for 25C ambient environments
- IC rated for direct insulation contact
- RoHS compliant
- Damp location listed
- IESNA LM-79 and LM-80 standards compliant
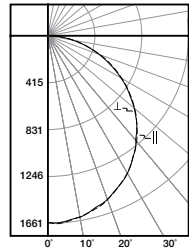- Can be used for State of California Title 24 high efficacy luminaire
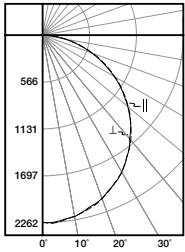
### Warranty
- Five year warranty.

## Photometric Data

**24FPX-38-L840-HE-SWPD1**
Electronic Driver
Linear LED 4000K
Spacing criterion: (II) 1.25 x mounting height,
(⊥) 1.25 x mounting height
Lumens: 3700
Input Watts: 28.7W
Efficacy: 128.9 LPW
Test Report: 24FPX-38-L840-HE-SWPD1.IES

**24FPX-47-L840-SWPD1**
Electronic Driver
Linear LED 4000K
Spacing criterion: (II) 1.25 x mounting height,
(⊥) 1.25 x mounting height
Lumens: 4756
Input Watts: 42.0W
Efficacy: 113.2 lm/W
Test Report: 24FPX-47-L840-SWPD1.IES

**24FPX-64-L840-SWPD1**
Electronic Driver
Linear LED 4000K
Spacing criterion: (II) 1.25 x mounting height,
(⊥) 1.25 x mounting height
Lumens: 6472
Input Watts: 63.3W
Efficacy: 102.2 lm/W
Test Report: 24FPX-64-L840-SWPD1.IES

## Energy and Performance Data by Catalog Number

| Catalog | Delivered Nominal Lumens | Watts | Efficacy (lm/W) | Input Current (A) | |
|---|---|---|---|---|---|
| | | | | 120V | 277V |
| 24FPX-31-L840-HCD | 3608 | 29.8 | 121.2 | .25 | .11 |
| 24FPX-38-L840-HE-HCD | 3780 | 28.9 | 130.8 | .25 | .11 |
| 24FPX-47-L840-HCD | 4858 | 43.2 | 112.5 | .36 | .16 |
| 24FPX-64-L840-HCD | 6611 | 63.3 | 104.5 | .53 | .23 |
| 24FPX-47-L840-SWPD1 | 4756 | 40.3 | 113.2 | .34 | .15 |
| 24FPX-64-L840-SWPD1 | 6472 | 63.3 | 102.2 | .53 | .23 |

### Lumen Calculator

| CCT Multiplier | 80 CRI |
|---|---|
| 3000K | 0.94 |
| 3500K | 1.00 |
| 4000K | 1.00 |
| 5000K | 1.03 |

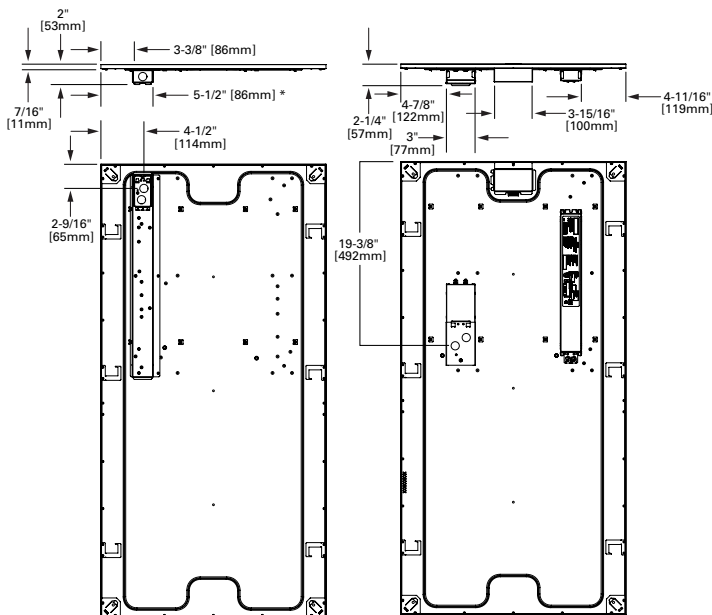**Example of Lumen Adjustment Calculation**

24FPX-47-L850-HCD
at 5000K

Lumen Adjustment Factor = 1.03

Total Light Output =
4,858 lm x 1.03 = 5,005 lm

$$\text{Efficacy} = \frac{5,005 \text{ lm}}{43.2 \text{ W}} = 115.9 \text{ lm/W}$$

## Dimensional and Mounting Details

2" [53mm]
3-3/8" [86mm]
5-1/2" [86mm] *
7/16" [11mm]
4-1/2" [114mm]
2-9/16" [65mm]
4-7/8" [122mm]
2-1/4" [57mm]
3" [77mm]
3-15/16" [100mm]
4-11/16" [119mm]
19-3/8" [492mm]

\* This dimension is 9" (21.6mm) on some configurations.
**Shown with HCD, Lutron and SD option**

\*\* Flex from EM is not shown.
**Shown with CD + EL7W option**

## Control Systems

- WaveLinx Wireless
- WaveLinx Wired
- WaveLinx Lite
- DLVP
- VividTune

**Connected Systems CLICK HERE**

The FPX with Integrated Sensor technology provides automatic energy savings without sacrificing performance. The FPX delivers superior lighting with integrated occupancy and daylighting controls.

For standalone and controlled applications, the WaveLinx Lite integral sensor provides out-of-the-box functionality with no gateways required and factory startup is not needed.

When more connectivity is required, the WaveLinx Wireless sensor meets modern code and utility requirements, delivers energy and cost savings, while enabling buildings to become smart buildings.
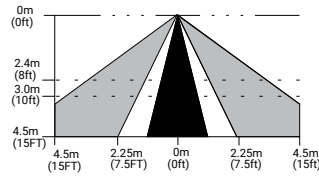
The WaveLinx Wireless Connected Lighting System combined with Trellix provides an open IoT platform and infrastructure that connects intelligent sensors leveraging the real-estate of the physical light fixture to solve higher complexity problems to deliver actionable insights through the aggregation of valuable data.
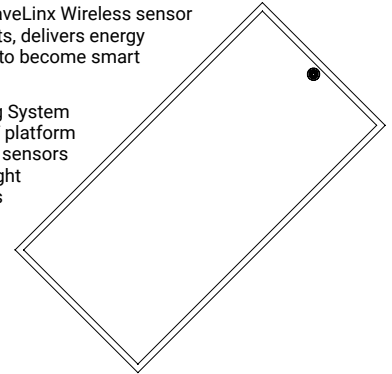
**TOP VIEW:**
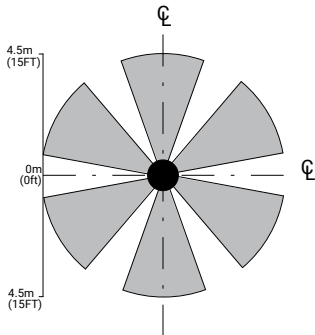
**SIDE VIEW:**

*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.*

## Systems comparison chart

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

| | Standalone | Controlled<br>WaveLinx Lite | Connected<br>WaveLinx Pro | Enterprise<br>Trellix |
|---|---|---|---|---|
| **Occupancy** | Yes | Yes | Yes | Yes |
| **Daylighting** | Yes | Yes | Yes | Yes |
| **Wallstations** | – | Yes | Yes | Yes |
| **Gateways** | – | – | 1 WAC | 300 WACs |
| **Devices (MAX)** | – | 50 per Area (1400 per site) | 200 per WAC2 | 32,500 per Core Enterprise |
| **Software** | – | WaveLinx Lite Mobile App | WaveLinx Pro Mobile App | Trellix Core |
| **Areas** | – | 28 per Site | 50 per WAC2 | up to 3,000 |
| **Zones** | – | 16 per Area | 16 per Area | up to 9,000 |
| **Scheduling** | – | – | Local | Global |
| **VividTune™** | – | – | Yes | Yes |
| **Plug-Load Control** | – | – | Yes | Yes |
| **Low-Voltage Power** | – | – | Yes | Yes |
| **Integration** | – | – | – | BACnet, API |
| **Dashboards** | – | – | – | Energy, Occupancy |
| **Configuration** | – | Installer | Technician | Technician / IT |

## SCALABILITY

devices → areas → floors → buildings

**COOPER** Lighting Solutions

**Cooper Lighting Solutions**
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

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Specifications and dimensions subject to change without notice.

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February 4, 2022 11:41 AM