



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at [wvOASIS.gov](http://wvOASIS.gov). As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at [WVPurchasing.gov](http://WVPurchasing.gov) with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

## Header @ 9

[List View](#)

## General Information | Contact | Default Values | Discount | Document Information | Clarification Request

Procurement Folder: 794738

Procurement Type: Central Purchase Order

Vendor ID: VS0000036982

Legal Name: BWI Technology LLC

Alias/DBA: Genesys Global

Total Bid: \$157,248.10

Response Date: 12/20/2020

Response Time: 21:00

Responded By User ID: Patrick.priester

First Name: Patrick

Last Name: Priester

Email: Patrick.priester@genesy:

SO Doc Code: CRFQ

SO Dept: 0211

SO Doc ID: GSD2100000015

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Close Time: 13:30

Status: Closed

Solicitation Description: Addendum No. 1  
Lighting Fixtures and Hardware

Total of Header Attachments: 9

Total of All Attachments: 9



Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

**State of West Virginia  
 Solicitation Response**

**Proc Folder:** 794738  
**Solicitation Description:** Addendum No. 1  
 Lighting Fixtures and Hardware  
**Proc Type:** Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2020-12-21 13:30	SR 0211 ESR12182000000004464	1

**VENDOR**  
 VS0000036982  
 BWI Technology LLC

**Solicitation Number:** CRFQ 0211 GSD2100000015  
**Total Bid:** 157248.1000000000058207660913 **Response Date:** 2020-12-20 **Response Time:** 21:00:30  
**Comments:** Addendums acknowledged.  
 We are submitting alternates for each item, of equal or better products.

**FOR INFORMATION CONTACT THE BUYER**  
 Melissa Pettrey  
 (304) 558-0094  
 melissa.k.pettrey@wv.gov

**Vendor Signature X** **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	3.1.1 Barron Trace Lite RCL Series Light or Equal	85.00000	EA	123.340000	10483.90

Comm Code	Manufacturer	Specification	Model #
39110000			

**Commodity Line Comments:** Includes 360 degree microwave motion sensor. Cost without sensor is \$73.34

**Extended Description:**

3.1.1 Barron Trace Lite RCL Series Light or Equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	3.1.2 Metalux Cruz Series AMSEM or Equal	35.00000	EA	243.830000	8534.05

Comm Code	Manufacturer	Specification	Model #
39110000			

**Commodity Line Comments:**

**Extended Description:**

3.1.2 Metalux Cruz Series AMSEM 24CZ-LD5-40SE-S-UNV-EL7W-L835-CD1-SVPD1-DV-U Light or Equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	3.1.3 Metalux Cruz Series AMSEGEN or Equal	10.00000	EA	288.770000	2887.70

Comm Code	Manufacturer	Specification	Model #
39110000			

**Commodity Line Comments:**

**Extended Description:**

3.1.3 Metalux Cruz Series AMSEGEN 24CZ-LD5-40SE-S-UNV-ERTD-L835-CD1-SVPD1-DV-U Light or Equal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	3.1.4 Metalux Cruz Series Type AMS or Equal	840.00000	EA	117.980000	99103.20

Comm Code	Manufacturer	Specification	Model #
39110000			

**Commodity Line Comments:**

**Extended Description:**

3.1.4 Metalux Cruz Series Type AMS 24CZ-LD5-40SE-S-UNV-L835-CDI-SVPD1-DV U Light or Equal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	3.1.5 Metalux Cruz Series 22CZ-LD5-39E-S-UNV-L835-DC1-U	100.00000	EA	51.690000	5169.00

Comm Code	Manufacturer	Specification	Model #
39110000			

**Commodity Line Comments:**

**Extended Description:**

3.1.5 Metalux Cruz Series 22CZ-LD5-39E-S-UNV-L835-DC1-U Light or Equal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
6	3.1.6 Cooper/Eaton Control OSW-P-010 Dimmer or Equal	200.00000	EA	58.500000	11700.00

Comm Code	Manufacturer	Specification	Model #
39110000			

**Commodity Line Comments:**

**Extended Description:**

3.1.6 Cooper/Eaton Control OSW-P-010 Dimmer or Equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
7	3.1.7 Cooper/Eaton EQ-CLIP-U Fixture Clips or Equal	1000.0000	EA	0.000000	0.00

Comm Code	Manufacturer	Specification	Model #
39110000			

**Commodity Line Comments:** Included with fixtures quoted.

**Extended Description:**

3.1.7 Cooper/Eaton EQ-CLIP-U Fixture Clips or Equal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
8	3.1.8 Hubbell ATP 1500C Motion Detector with Acuity Sensor	75.00000	EA	80.670000	6050.25

Comm Code	Manufacturer	Specification	Model #
39110000			

**Commodity Line Comments:**

**Extended Description:**

3.1.8 Hubbell ATP 1500C Motion Detector with Acuity Sensor Switch and Low 35 Power Relay Included or Equal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
9	3.1.9 LUMARK by Cooper Prevail-XL Lights and Mounting Hard.	37.00000	EA	360.000000	13320.00

Comm Code	Manufacturer	Specification	Model #
39110000			

**Commodity Line Comments:**

**Extended Description:**

3.1.9 LUMARK by Cooper Prevail-XL Discrete Lighting PRV-XL PA4B 750 U 5WQ, Standard, BZ, PA4 96 LED's Per Panel or Equal (Parking Lot Lights and Mounting Hardware).

# AREA LIGHT SERIES

## OUTDOOR

### FEATURES

- Slim Profile die-cast aluminum housing
- Factory Select Finishes: Bronze (BRZ), Black (BLK), Silver (SLV) & White (WHT)
- Custom colors finishes available<sup>1</sup>
- Type II, III, IV, & VS optics available
- Optional Spill Light Control via Integral Shield (HSS)
- UPMB - Universal Pole Mounting Bracket (std.)
- 1.5G/3G ANSI C136.31-2010 mounting option available
- Toolless hinged drop down driver access
- 120-277V Universal Voltage or 347-480V High Voltage
- 0-10V Dimmable Driver (std.)
- Battery backup option available (56W, 90W)
- PIR Occupancy, Photocell, & Bi-Level Dimming Sensors Available
- 3-Pin & 7-Pin ANSI C136.41 Control Receptacle Options
- Wireless control integrated luminaire
- 3000K, 4000K & 5000K CCT
- >70 Color Rendering Index (CRI)
- Calculated L70 >100,000 hrs @ 25°C per TM-21-11
- IP66 Rated Luminaire
- Dark Sky Compliant<sup>1,2</sup>
- 5 Year Warranty
- ETL Listed for Wet Locations
- DesignLights Consortium® Premium Qualified Luminaire

<sup>1</sup> 3000K is IDA Listed

<sup>2</sup> Must select UPMB, ARM6, WMB, or HTMA mounting options to qualify



407-478-3759  
www.ilp-inc.com



### SUITABLE APPLICATIONS

- Parking Structures
- Roadways
- Parks
- Education
- Hospitals
- Car Dealerships
- Roadways
- Shopping Centers

### ORDERING GUIDE:

SERIES	WATTS	DRIVER	CCT	OPTIC	MOUNTING	FINISH <sup>6</sup>
<b>AL</b> Area Light Series	<b>56W</b>	<b>U</b> 120-277V	<b>50</b>	<b>T2</b>	<b>UPMB</b> Universal Pole Mount Bracket Square (std.)	<b>BLANK</b> Bronze
	<b>90W</b>	<b>HV<sup>2</sup></b> 347-480V	<b>40</b>	<b>T3</b>	<b>UPMB/R</b> Universal Pole Mount Bracket Round (4-5")	<b>BLK</b> Black
	<b>110W</b>		<b>30</b>	<b>T4</b>	<b>ARM6-S</b> 6" Straight Arm Adaptor for Square Pole	<b>SLV</b> Silver
	<b>150W</b>			<b>T5S</b>	<b>ARM6-Rx<sup>3</sup></b> 6" Straight Arm Adaptor for Round Pole	<b>WHT</b> White
	<b>190W</b>				<b>AL-SLFP</b> 2 3/8" Adjustable Slip Fitter	<b>CC</b> Custom Color
	<b>225W</b>				<b>AL-SB<sup>4</sup></b> Adjustable Trunnion Mount Bracket	
	<b>270W</b>				<b>HTMA</b> Horizontal Tenon Mount Bracket	
	<b>375W</b>				<b>WMB<sup>4</sup></b> Wall Mount Bracket	
					<b>LARGE-WMB<sup>5</sup></b> Large Housing Wall Mount Bracket	

OPTIONS		CONTROLS	
Factory Installed		BASIC - Factory Installed	
<b>HSS<sup>1</sup></b>	Integral House Side Shield	<b>CR3P</b>	Universal 3-Pin control receptacle
<b>SP1<sup>7,8</sup></b>	10KA Max Univolt Surge Protector	<b>CR7P<sup>13</sup></b>	Universal 7-Pin control receptacle ANSI C136.41
<b>SP2<sup>7,8</sup></b>	22KA Max Univolt Surge Protector	<b>USB<sup>11</sup></b>	User Select Bi-Level Dim Occ. Sensor
<b>SP480V2<sup>8</sup></b>	20kA Max 347-480V Surge Protector	<b>BDXX<sup>12</sup></b>	Preset Bi-Level Dim Sensor (xx=% ex: 20,30)
<b>FI/ILBCP05<sup>9</sup></b>	5W LED Factory Installed Battery Backup	<b>BDXXPC<sup>12</sup></b>	Preset Bi-Level Dim Sensor w/ photocell (xx=% ex: 20,30)
<b>FI/ILBCP05/HE<sup>9</sup></b>	5W 120-277V LED High Efficacy CEC Title 20 Battery Backup (32°F-100°F)	<b>WLOS</b>	PIR Occupancy Sensor
<b>FUSE/SXXX</b>	Single-line Voltage Fuse (120, 277 or 347V)	<b>ADVANCED - Factory Installed</b>	
<b>FUSE/DXXX</b>	Dual-line Voltage Fuse (208, 240 or 480V)	<b>SU/5S/LR/IL<sup>2,7</sup></b>	Enlighted 5S Individual Lighting (IL) Sensor with Control Unit
<b>SMLxxxx</b>	Specified Lumen Output (xxxx = lumen output)	<b>SU/5S/LR/CL<sup>2,7</sup></b>	Enlighted 5S Connected Lighting (CL) Sensor with Control Unit
<b>SD347<sup>7,10</sup></b>	347V Step Down Transformer	<b>SU/5S/LR/IOT<sup>2,7</sup></b>	Enlighted 5S Internet of Things (IOT) Sensor with Control Unit
<b>SD480<sup>7,10</sup></b>	480V Step Down Transformer	<b>LPL/INT<sup>2,7</sup></b>	Limelight by Lutron Wireless Control System w/ Sensor (8-15ft)
<b>TPS/L</b>	Tamperproof Fixture Latches	<b>LPM/INT<sup>2,7</sup></b>	Limelight by Lutron Wireless Control System w/ Sensor (15-30ft)
<b>TPS/FF</b>	Tamperproof Screws Full Fixture	<b>LPH/INT<sup>2,7</sup></b>	Limelight by Lutron Wireless Control System w/ Sensor (30-40ft)
		<b>IRTEC/W/B<sup>2,7,12</sup></b>	IR-TEC OS-NET Wireless Control System w/ Sensor
Ship with Accessories		Ship with Accessories	
<b>GS<sup>1</sup></b>	External Glare Shield	<b>PCU<sup>7</sup></b>	Electronic UNIV Photocell (120-277V)
<b>FSIR/100</b>	FSP-2x1 Remote Programmer Tool		
<b>SRP/281</b>	IR-TEC OS-NET Remote Sensor Configuration Tool		
<b>TLPC/UNIV</b>	Photocell for use w/ CRxP option (120-277V)		
<b>TLPC/HV</b>	Photocell for use w/ CRxP option (347V-480V)		

<sup>1</sup> Does not qualify for DLC

<sup>2</sup> Not available with SD347 or SD480 options

<sup>3</sup> Must specify pole diameter (3"-6")

<sup>4</sup> EXCLUDES 270W-375W

<sup>5</sup> 270W-375W ONLY

<sup>6</sup> Bronze, Black, Silver & White finishes are standard. Consult factory for pricing & availability of other finishes; subject to longer lead times

<sup>7</sup> Not available with HV option

<sup>8</sup> SP1/SP2 specified in combination w/ battery backups, separate surge protectors are required per electrical line

<sup>9</sup> 56W-90W ONLY

<sup>10</sup> EXCLUDES 56W-90W

<sup>11</sup> Requires FSIR/100 remote to program

<sup>12</sup> Requires SRP/281 to program

<sup>13</sup> Dimming leads will be wired to receptacle unless otherwise specified

# AREA LIGHT SERIES

## OUTDOOR

LED SYSTEMS INFO <sup>1</sup>		3000K			4000K			5000K			Watts <sup>2</sup>	DLC Listing	Replaces
Part Numbers	Optic	Lumens	Efficacy	BUG Rating	Lumens	Efficacy	BUG Rating	Lumens	Efficacy	BUG Rating			
AL-56W	T2	7,780 lm	133 lm/W	B2-U0-G2	8,484 lm	147 lm/W	B2-U0-G2	8,558 lm	149 lm/W	B2-U0-G2	58 W	Premium	250W MH
	T3	7,576 lm	130 lm/W	B2-U0-G2	8,457 lm	147 lm/W	B2-U0-G2	8,531 lm	148 lm/W	B2-U0-G2			
	T4	7,515 lm	129 lm/W	B2-U0-G2	8,217 lm	143 lm/W	B2-U0-G2	8,289 lm	144 lm/W	B2-U0-G2			
	T5S	7,707 lm	132 lm/W	B3-U0-G2	8,430 lm	146lm/W	B2-U0-G2	8,505 lm	148 lm/W	B3-U0-G2			
AL-90W	T2	12,137 lm	130 lm/W	B3-U0-G3	12,782 lm	135 lm/W	B3-U0-G3	12,894 lm	137 lm/W	B3-U0-G3	94 W	Premium	250W MH
	T3	11,784 lm	126 lm/W	B3-U0-G3	12,741 lm	135 lm/W	B3-U0-G3	12,853 lm	136 lm/W	B3-U0-G3			
	T4	11,689 lm	125 lm/W	B2-U0-G2	12,380 lm	131 lm/W	B2-U0-G2	12,489 lm	132 lm/W	B2-U0-G2			
	T5S	12,024 lm	128 lm/W	B4-U0-G2	12,702 lm	135 lm/W	B4-U0-G2	12,813 lm	136 lm/W	B4-U0-G2			
AL-110W	T2	16,640 lm	147 lm/W	B3-U0-G3	17,584 lm	156 lm/W	B3-U0-G3	17,739 lm	158 lm/W	B3-U0-G3	113 W	Premium	400W MH
	T3	16,205 lm	143 lm/W	B3-U0-G3	17,528 lm	156 lm/W	B3-U0-G3	17,682 lm	157 lm/W	B3-U0-G3			
	T4	16,074 lm	142 lm/W	B3-U0-G3	17,031 lm	151 lm/W	B3-U0-G3	17,181 lm	153 lm/W	B3-U0-G3			
	T5S	16,485 lm	145 lm/W	B4-U0-G2	17,473 lm	155 lm/W	B4-U0-G2	17,627 lm	157 lm/W	B4-U0-G2			
AL-150W	T2	19,533 lm	133 lm/W	B3-U0-G3	21,671 lm	146 lm/W	B3-U0-G3	21,861 lm	147 lm/W	B3-U0-G3	149 W	Premium	400W MH
	T3	19,022 lm	130 lm/W	B3-U0-G3	21,601 lm	145 lm/W	B3-U0-G3	21,601 lm	145 lm/W	B3-U0-G3			
	T4	18,869 lm	129 lm/W	B3-U0-G3	20,989 lm	141 lm/W	B3-U0-G3	21,173 lm	142 lm/W	B3-U0-G3			
	T5S	19351 lm	132 lm/W	B4-U0-G2	21,534 lm	145 lm/W	B4-U0-G2	21,723 lm	146 lm/W	B4-U0-G2			
AL-190W	T2	24,185 lm	128 lm/W	B4-U0-G4	26,664 lm	142 lm/W	B4-U0-G4	26,898 lm	143 lm/W	B4-U0-G4	188 W	Premium	600W MH
	T3	23,552 lm	125 lm/W	B3-U0-G3	26,579 lm	142 lm/W	B3-U0-G3	26,812 lm	143 lm/W	B3-U0-G3			
	T4	23,362 lm	124 lm/W	B3-U0-G4	25,825 lm	137 lm/W	B3-U0-G4	26,052 lm	139 lm/W	B3-U0-G4			
	T5S	23,959 lm	127 lm/W	B5-U0-G3	26,496 lm	141 lm/W	B5-U0-G3	26,729 lm	142 lm/W	B5-U0-G3			
AL-225W	T2	28,370 lm	124 lm/W	B4-U0-G4	30,326 lm	131 lm/W	B4-U0-G4	30,592 lm	135 lm/W	B4-U0-G4	232 W	Premium	600W MH
	T3	27,688 lm	120 lm/W	B3-U0-G4	30,229 lm	131 lm/W	B3-U0-G4	30,495 lm	135 lm/W	B3-U0-G4			
	T4	27,405 lm	119 lm/W	B3-U0-G4	29,372 lm	127 lm/W	B3-U0-G4	29,630 lm	131 lm/W	B3-U0-G4			
	T5S	28,166 lm	122 lm/W	B5-U0-G3	30,135 lm	130 lm/W	B5-U0-G3	30,400 lm	134 lm/W	B5-U0-G3			
AL-270W	T2	37,589 lm	139 lm/W	B4-U0-G4	40,094 lm	149 lm/W	B4-U0-G4	40,446 lm	150 lm/W	B4-U0-G4	270 W	Premium	1000W MH
	T3	36,605 lm	136 lm/W	B4-U0-G4	39,966 lm	148 lm/W	B4-U0-G4	40,317 lm	150 lm/W	B4-U0-G4			
	T4	36,310 lm	135 lm/W	B4-U0-G5	38,833 lm	144 lm/W	B4-U0-G5	38,655 lm	147 lm/W	B4-U0-G5			
	T5S	37,238 lm	138 lm/W	B5-U0-G5	39,842 lm	148 lm/W	B5-U0-G5	39,630 lm	150 lm/W	B5-U0-G5			
AL-375W	T2	48,914 lm	128 lm/W	B5-U0-G5	52,323 lm	137 lm/W	B5-U0-G5	52,783 lm	138 lm/W	B5-U0-G5	383 W	Premium	1000W MH
	T3	47,634 lm	125 lm/W	B4-U0-G5	52,156 lm	136 lm/W	B4-U0-G5	52,614 lm	137 lm/W	B4-U0-G5			
	T4	47,250 lm	124 lm/W	B4-U0-G5	50,677 lm	132 lm/W	B4-U0-G5	51,122 lm	134 lm/W	B4-U0-G5			
	T5S	48,457 lm	127 lm/W	B5-U0-G4	51,993 lm	136 lm/W	B5-U0-G4	52,450 lm	137 lm/W	B5-U0-G4			

<sup>1</sup>Values are nominal, see IES file for more detail

<sup>2</sup>Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

## EPA RATINGS

	ARM6-S	UPMB	HTMA	AL-SLPF	AL-SB
<b>SMALL: AL-56W &amp; 90W</b>	0.61 ft <sup>2</sup>	0.76 ft <sup>2</sup>	0.58 ft <sup>2</sup>	0.71 ft <sup>2</sup>	0.60 ft <sup>2</sup>
<b>MEDIUM: AL-110W, 150W, 190W, &amp; 225W</b>	0.77 ft <sup>2</sup>	0.92 ft <sup>2</sup>	0.73 ft <sup>2</sup>	0.84 ft <sup>2</sup>	0.76 ft <sup>2</sup>
<b>LARGE: AL-270W &amp; 375W</b>	1.03 ft <sup>2</sup>	1.17 ft <sup>2</sup>	0.98 ft <sup>2</sup>	1.10 ft <sup>2</sup>	NA

WEIGHT
17lb
23lb - 26lb
40lb

\* EPA Ratings listed assume fixture is mounted horizontally. For adjustable mounting options, EPA will vary with selected angle.

# AREA LIGHT SERIES

## OUTDOOR

### SPECIFICATIONS

#### CONSTRUCTION

The AL series features a slim profile die-cast aluminum housing available in 3 different sizes for a fully scalable solution. The versatile 8 optional mounting methods allows for easy installation while the toolless swappable hinged door allows for quick drop down driver access for maintenance. The fully gasketed housing is IP66 rated for whole luminaire ingress protection. The AL Series is protected with a durable bronze polyester powder coat finish to withstand extreme weather changes without cracking or peeling. Alternate standard or custom finishes are wet painted over the bronze powdercoat.

#### ELECTRICAL

High-performance driver features over-voltage, under-voltage, short circuit and over temperature protection. 0-10V dimming (10% - 100%) standard. Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac). L70 >100,000 hrs. in accordance of IESNA TM-21-11 projected values at 25°C Ambient temperature. Total harmonic distortion: <20%. Power factor: >0.90. Input power stays constant over life. Minimum 6kV surge rating meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2). Additional protection is available in 10kV and 20kV options. Optional 120-277V standard battery backups and CEC Title 20 compliant battery backups are available in the small size housing (56W-90W). The 90-minute batteries provide constant power to the LED system, ensuring code compliance and a test switch/indicator button is installed on the housing for ease of maintenance.

#### INSTALLATION

The versatile AL series comes with 8 optional mounting methods. The 1.5G rated quick mount standard UPMB or UPMB/R arm allows for pole mounting to any square or 4-5" round poles and is slotted to install onto any pole with a vertical mounting pattern between 2"-4 $\frac{1}{8}$ ". The 1.5G rated ARM6-S or ARM6-Rx allows for pole mounting to any square or 3"-6 $\frac{1}{2}$ " round poles. The 3G rated HTMA is designed for straight horizontal 2"(2 $\frac{3}{8}$ " OD) mast arms. The 1.5G rated Adjustable Slip fitter (AL-SLFP) mounts to any vertical or horizontal tenon 2" pipe (2 $\frac{3}{8}$ " OD) allowing for tilting the AL up to 70° from horizontal plane. The trunnion bracket (AL-SB) enables the AL to be used for general flood applications and can tilt the AL series up to 70° from the horizontal plane (56W-225W only). The Wall mount bracket allows for easy installation to any vertical wall surface. All mounting methods are provided with a 3-wire 3' outdoor rated cord is provided for wiring. 5-wire cord optional for external dimming, consult factory.

#### WARRANTY

5 Year Warranty (Terms and Conditions apply). See Website for more details. <https://www.ilp-inc.com/documents/>

#### OPTICS

The IP66 silicone gasket sealed optical chamber utilizes proprietary polycarbonate refractive optics to provide exceptional coverage and uniformity in IES Types 2, 3, 4, & 5S. Available in 5000K, 4000K, and 3000K, color temperatures per ANSI C78.377. Minimum CRI of 70. The optical integrated House side shield (HSS) option allows for improved back-light control without any large shields taking away from the site. The AL series produces Zero uplight and is IDA listed in 3000K color temperature. Optional field installed 3-sided glare shield accessory is available for on-site external house side protection.

#### THERMAL

The AL Series features an array of High-efficacy LED's mounted on a metal core circuit board. The LED boards are mounted directly to the cast aluminum housing with heat dissipating fins to provide excellent thermal performance extending the life of electronic components. Operating Ambient Temperature: -40°C to +50°C (-40°F to 122°F). Operating temperature for standard and CEC Compliant battery backup: -0°C to +50°C (-32°F to +122°F).

#### CONTROLS

**Standalone Controls:** Two ½" NPT apertures allow for field installed 120-277V universal electronic pencil photocells. Factory installed 3-Pin & 7-Pin ANSI C136.41 Control Receptacle Options available. Twist lock photocells sold separately (See accessories). Optional PIR sensors available installed in housing hinged door. Sensors provide optional on/off control, photocell capability, bi-level dimming, and the remote configuration tool allows for on-site modifications.

**Wireless Control Systems:** The AL Series is wireless mesh controls ready with IR-TEC, Enlighted, and Lutron Limelight wireless control platforms. Available with and without PIR sensors. Inquire with factory for more information or for additional controls options, including customer supplied items.

#### CERTIFICATIONS

ETL Listed for wet locations. Tested in accordance with IESNA LM-79 and LM-80 standards. BAA compliant. RoHS Compliant. IDA compliant; with 3000K color temperature selection. Title 24 Compliant; see local ordinance for qualification information. IP66 rated Luminaire per IEC 60598. IP66 rated optical chamber. DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

# AREA LIGHT SERIES

## OUTDOOR

### OPTIONS



#### HSS

##### Integral House Side Shield

Delivers backlight control that significantly reduces light spill behind the pole for applications with pole locations close to adjacent properties. Shown with Medium AL-110W - 225W



#### GS

##### External Glare Shield

3-sided field installable external glare shield. Shown with Medium AL-110W - 225W



#### UPMB (/R)

Square or 4-5" Round Universal Pole Mounting Bracket



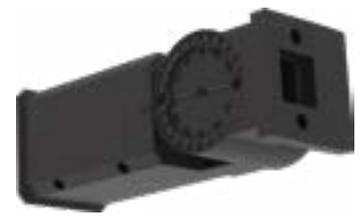
#### WMB

Wall Mount Bracket (56W-225W)



#### LARGE-WMB

Large Wall Mount Bracket (270W-375W)



#### AL-SLPF

Adjustable Slip Fitter



#### AL-SB

Swivel Bracket (56W-225W)



#### HTMA

Horizontal Tenon Mount Adaptor

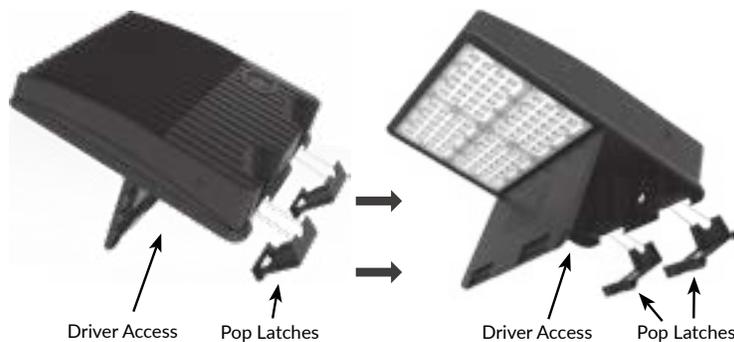


#### ARM6-S (Rx)

6" Straight Arm Adaptor for Square or Round Pole 3"-6", (must specify diameter)

### ADDITIONAL FEATURES

#### TOOLLESS DRIVER ACCESS



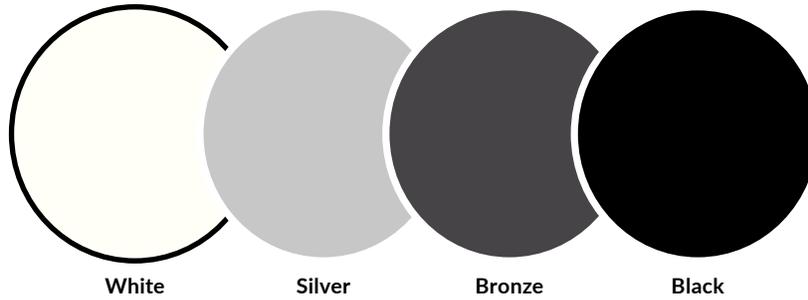
Shown with Medium AL-110W - 225W

# AREA LIGHT SERIES

## OUTDOOR

### ADDITIONAL FEATURES CONT'D

#### FACTORY SELECT FINISH GUIDE

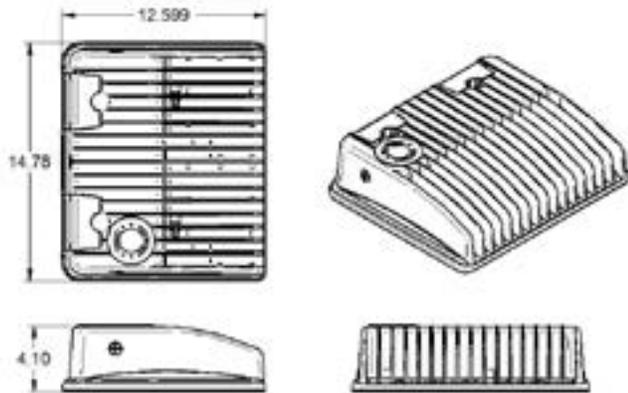


COLOR NAME AND DESCRIPTION		SHEEN	PRICING
WHT	- ILP White	SEMI GLOSS	Standard
SLV	- ILP Silver - Ultrasonic Chrome	GLOSS	Standard
BRZ	- ILP Bronze	SEMI GLOSS	Standard
BLK	- ILP Black	SEMI GLOSS	Standard

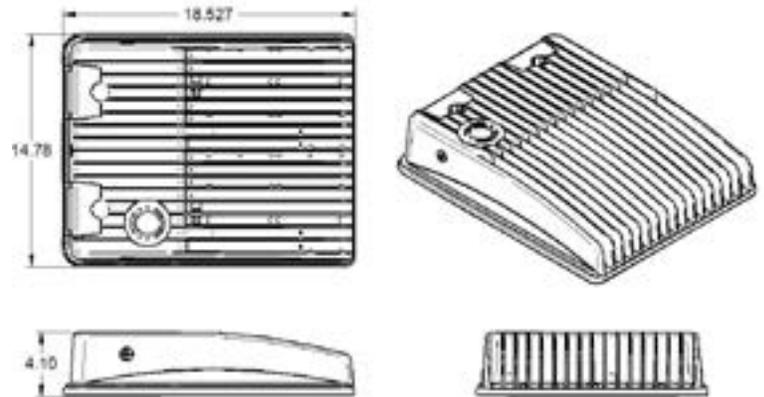
COLORS SHOWN ABOVE ARE TO BE USED AS REFERENCE, NOT EXACT MATCH. PLEASE REQUEST PAINT CHIPS FOR EXACT MATCH.

### LINE DRAWINGS

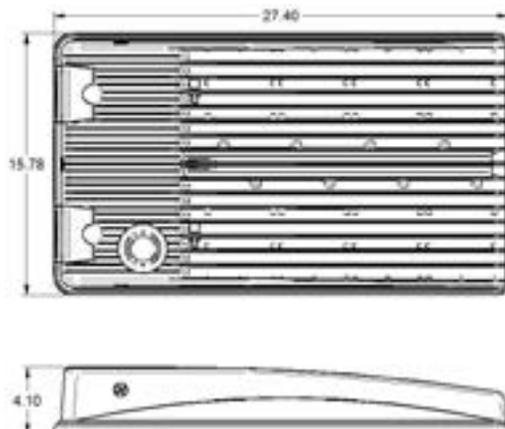
#### SMALL: 56W-90W



#### MEDIUM: 110W-225W



#### LARGE: 270W-375W

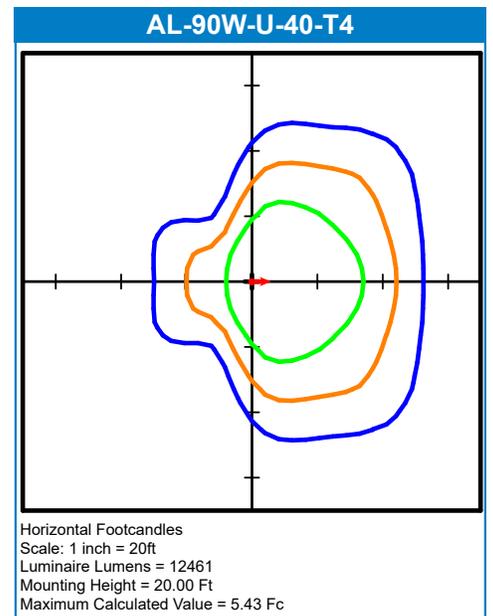
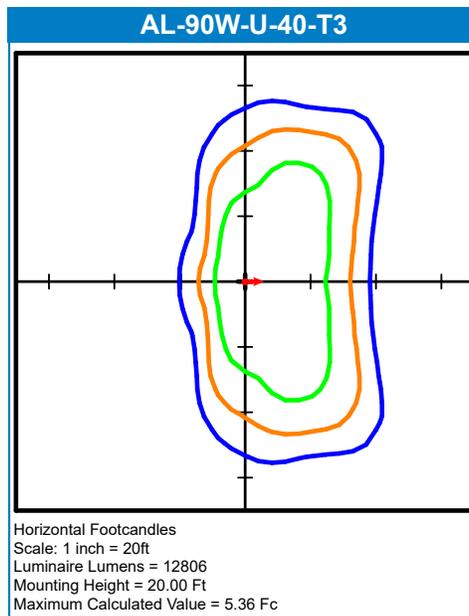
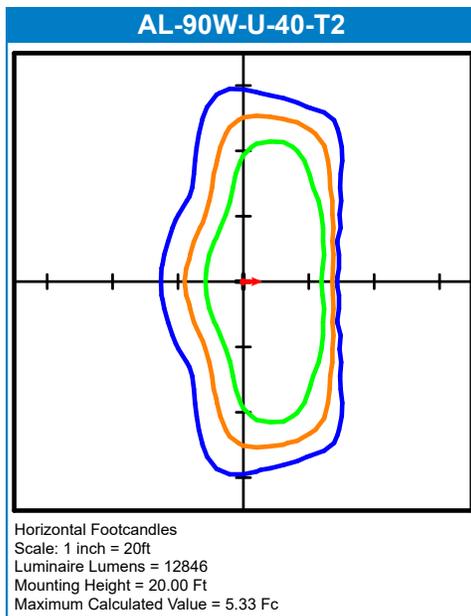
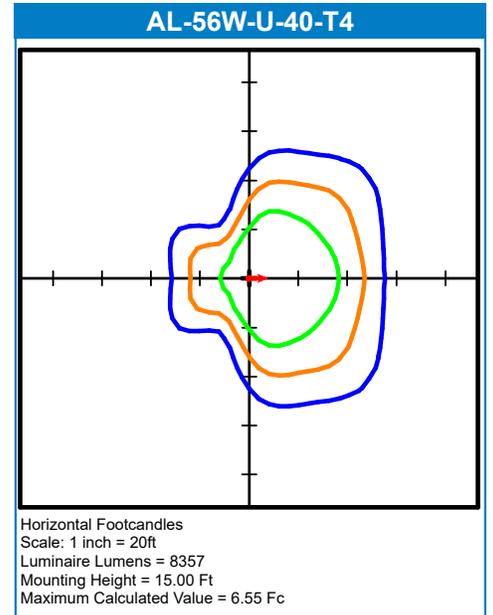
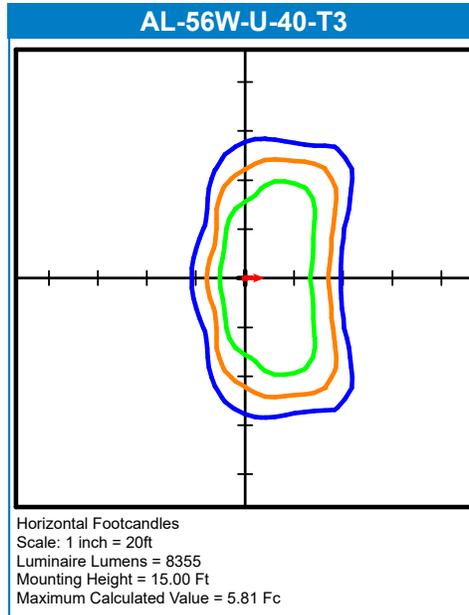
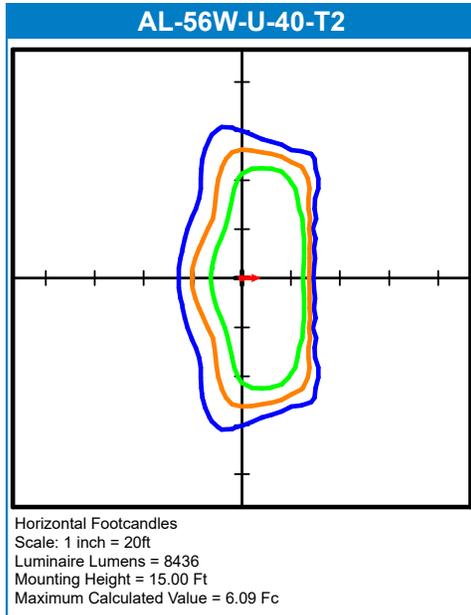


# AREA LIGHT SERIES

## OUTDOOR

### PHOTOMETRIC REPORTS

Photometric values based upon tests performed in compliance with LM-79. IES files can be downloaded at [www.ilp-inc.com](http://www.ilp-inc.com)  
Blue = .5 fc, Orange = 1 fc, & Green = 2 fc



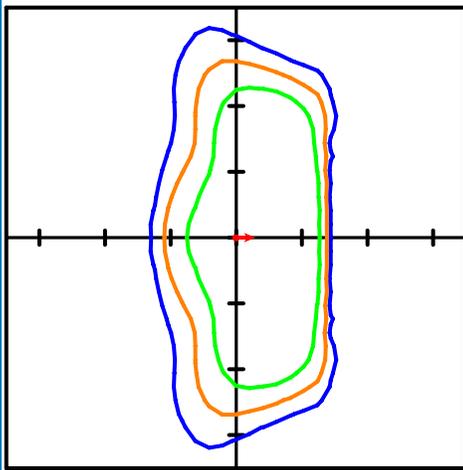
# AREA LIGHT SERIES

## OUTDOOR

### PHOTOMETRIC REPORTS

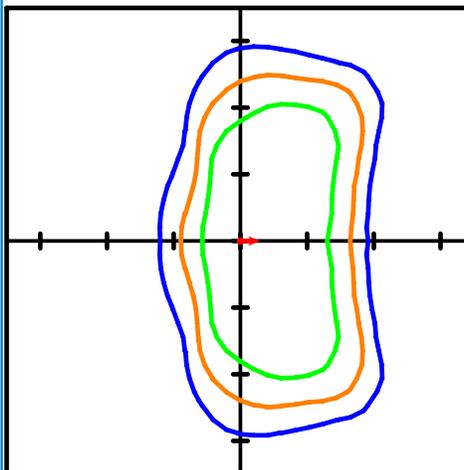
Photometric values based upon tests performed in compliance with LM-79. IES files can be downloaded at [www.ilp-inc.com](http://www.ilp-inc.com)  
Blue = .5 fc, Orange = 1 fc, & Green = 2 fc

AL-110W-U-40-T2



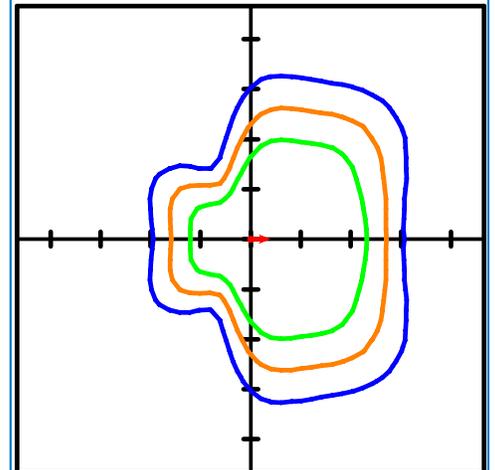
Horizontal Footcandles  
Scale: 1 inch = 20ft  
Luminaire Lumens = 17489  
Mounting Height = 20.00 Ft  
Maximum Calculated Value = 7.37 Fc

AL-110W-U-40-T3



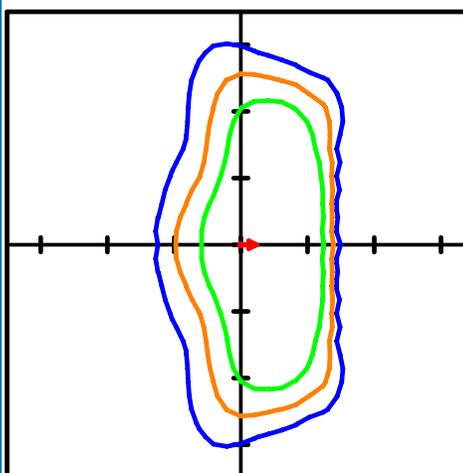
Horizontal Footcandles  
Scale: 1 inch = 20ft  
Luminaire Lumens = 16600  
Mounting Height = 20.00 Ft  
Maximum Calculated Value = 6.19 Fc

AL-110W-U-40-T4



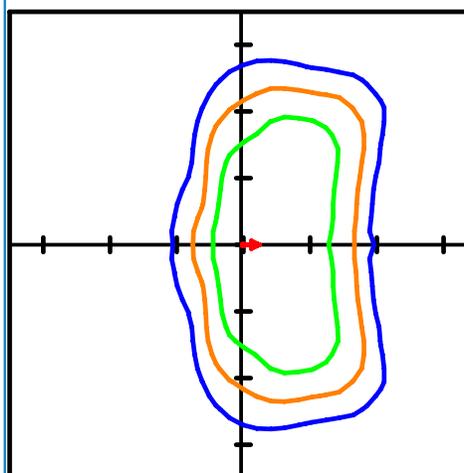
Horizontal Footcandles  
Scale: 1 inch = 20ft  
Luminaire Lumens = 17031  
Mounting Height = 15.00 Ft  
Maximum Calculated Value = 13.05 Fc

AL-150W-U-40-T2



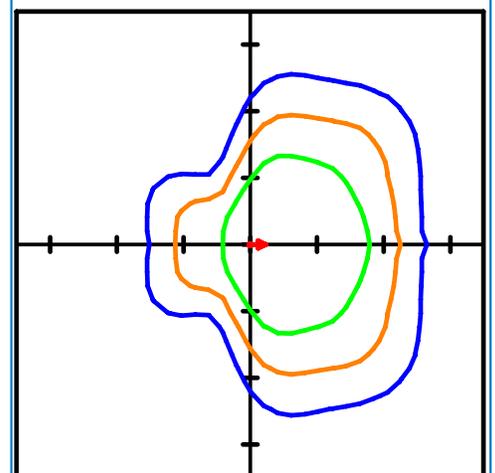
Horizontal Footcandles  
Scale: 1 inch = 25ft  
Luminaire Lumens = 21715  
Mounting Height = 25.00 Ft  
Maximum Calculated Value = 5.61 Fc

AL-150W-U-40-T3



Horizontal Footcandles  
Scale: 1 inch = 25ft  
Luminaire Lumens = 21541  
Mounting Height = 25.00 Ft  
Maximum Calculated Value = 5.40 Fc

AL-150W-U-40-T4



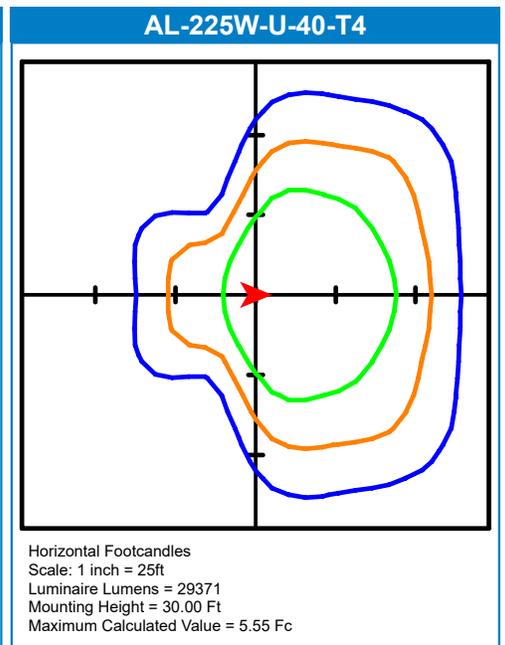
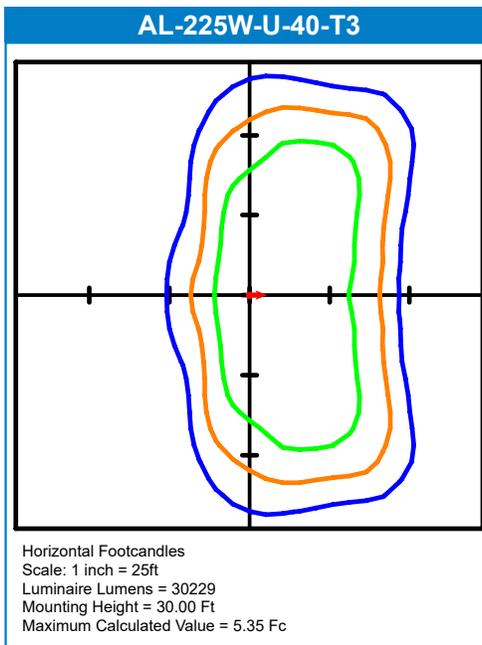
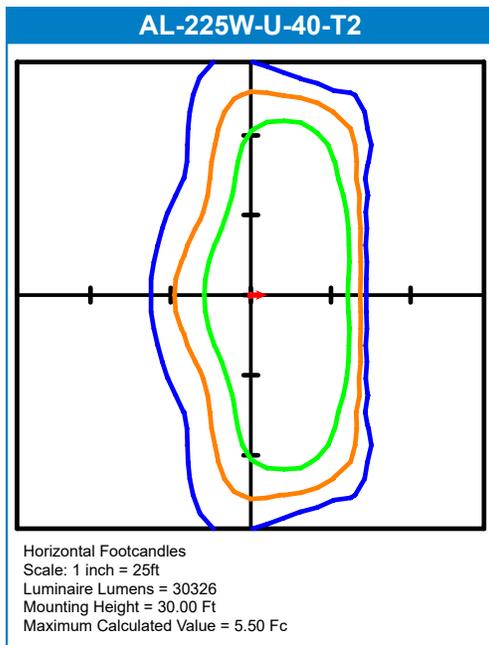
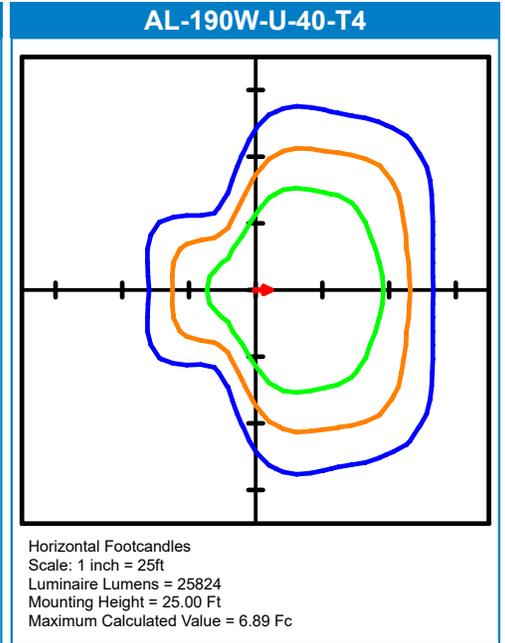
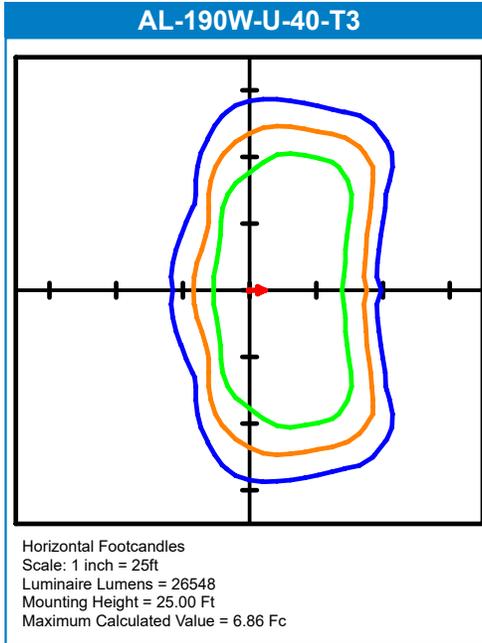
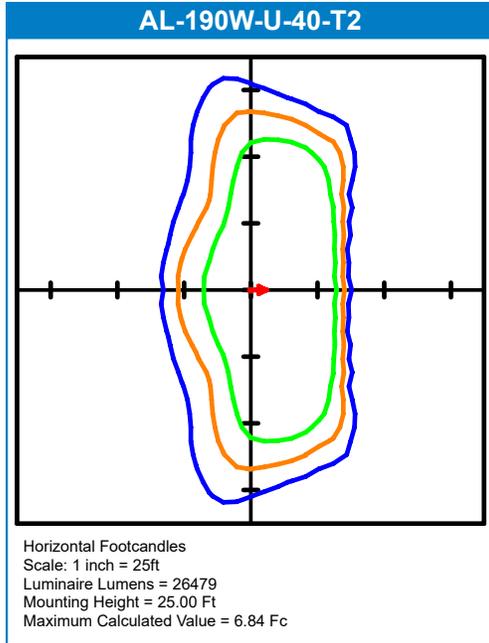
Horizontal Footcandles  
Scale: 1 inch = 25ft  
Luminaire Lumens = 20988  
Mounting Height = 25.00 Ft  
Maximum Calculated Value = 5.62 Fc

# AREA LIGHT SERIES

## OUTDOOR

### PHOTOMETRIC REPORTS

Photometric values based upon tests performed in compliance with LM-79. IES files can be downloaded at [www.ilp-inc.com](http://www.ilp-inc.com)  
Blue = .5 fc, Orange = 1 fc, & Green = 2 fc



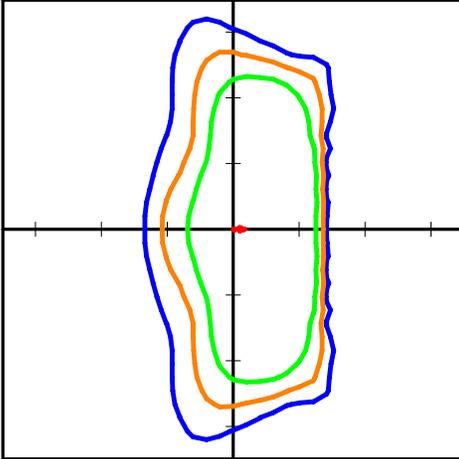
# AREA LIGHT SERIES

## OUTDOOR

### PHOTOMETRIC REPORTS

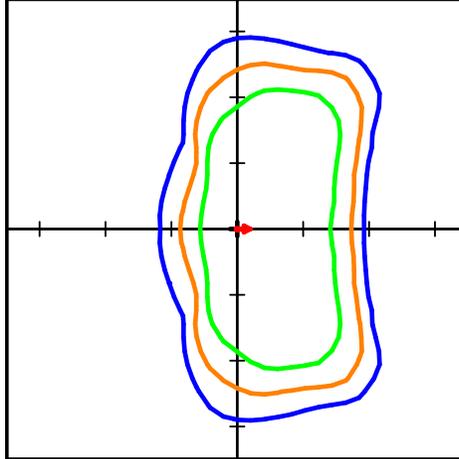
Photometric values based upon tests performed in compliance with LM-79. IES files can be downloaded at [www.ilp-inc.com](http://www.ilp-inc.com)  
Blue = .5 fc, Orange = 1 fc, & Green = 2 fc

AL-270W-U-40-T2



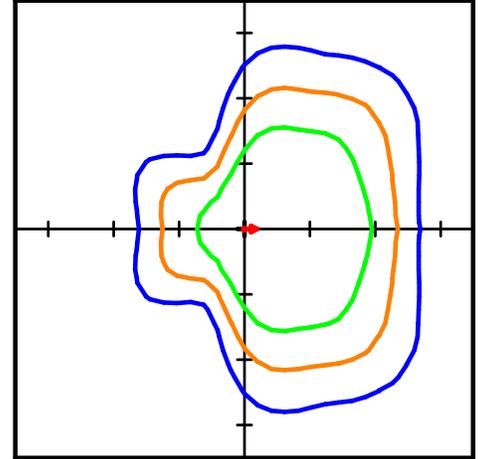
Horizontal Footcandles  
Scale: 1 inch = 20ft  
Luminaire Lumens = 40930  
Mounting Height = 30.00 Ft  
Maximum Calculated Value = 7.53 Fc

AL-270W-U-40-T3



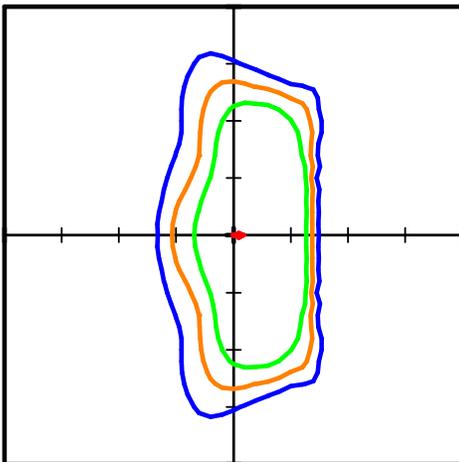
Horizontal Footcandles  
Scale: 1 inch = 30ft  
Luminaire Lumens = 40520  
Mounting Height = 30.00 Ft  
Maximum Calculated Value = 7.22 Fc

AL-270W-U-40-T4



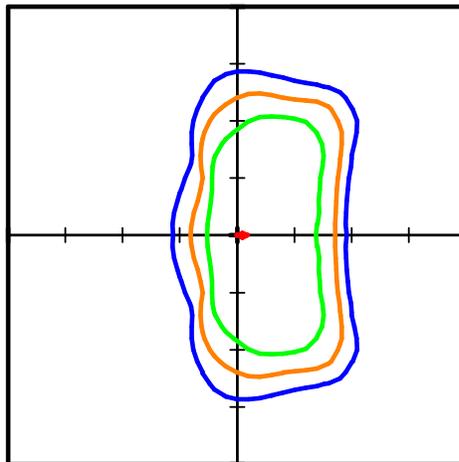
Horizontal Footcandles  
Scale: 1 inch = 30ft  
Luminaire Lumens = 38832  
Mounting Height = 30.00 Ft  
Maximum Calculated Value = 7.22 Fc

AL-375W-U-40-T2



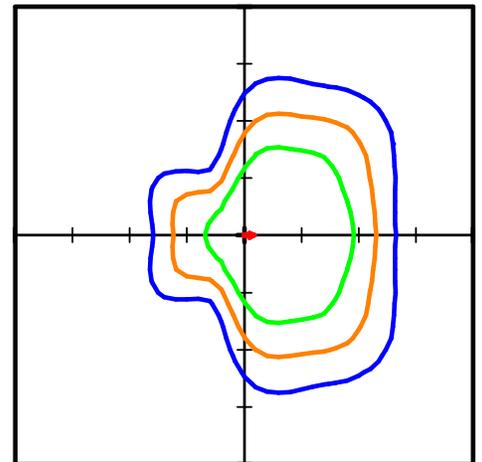
Horizontal Footcandles  
Scale: 1 inch = 40ft  
Luminaire Lumens = 52278  
Mounting Height = 35.00 Ft  
Maximum Calculated Value = 7.01 Fc

AL-375W-U-40-T3



Horizontal Footcandles  
Scale: 1 inch = 40ft  
Luminaire Lumens = 52158  
Mounting Height = 35.00 Ft  
Maximum Calculated Value = 7.18 Fc

AL-375W-U-40-T4



Horizontal Footcandles  
Scale: 1 inch = 40ft  
Luminaire Lumens = 50676  
Mounting Height = 35.00 Ft  
Maximum Calculated Value = 6.91 Fc

Project Name:	Part Number:	Type:
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# VALUE SQUARE CANOPY

## LED CANOPY/PARKING GARAGE



407-478-3759  
www.ilp-inc.com

### FEATURES

- Rugged low-profile die-cast aluminum housing
- UV stabilized and impact resistant polycarbonate lenses
- Up to 3% uplight eliminates cave effect
- Quick mounting plate with hook on feature allow for easy installation
- Three 1/2" coin plugs on sides for conduit or photocell
- 4000K or 5000K Color Temperature; Consult Factory for Alternate CCTs
- >80 Color Rendering Index (CRI)
- 0-10V Dimmable Driver to 10%
- IP65 Rated Luminaire
- 120-277V Universal Voltage or 347-480V High Voltage
- Optional Microwave sensor for 360° occupancy detection
- Optional Universal Pencil Photocell
- 5 Year Warranty
- UL Listed for Wet Locations
- DesignLights Consortium® Premium Qualified Luminaire



Diffuse Medium Lens



Parking Garage Wide Lens



### SUITABLE APPLICATIONS

- Walkways
- Building Perimeter/Security Lighting
- Loading docks
- Entrances
- Stairways
- Car Ports
- Parking Garages

### ORDERING GUIDE:

SERIES	LUMENS	DRIVER	CCT	LENS	FINISH
CP Value Square Canopy	5L	U 120-277V	50	BLANK Diffuse Medium	BLANK Bronze
	7L	HV 347-480V	40	PG Parking Garage Wide	WHT <sup>1</sup> White
	9L				BLK <sup>1</sup> Black

OPTIONS	CONTROLS OPTIONS
Factory Installed	Basic
SP1 <sup>2</sup> 10kA Max Univolt Surge Protection	PCU <sup>2</sup> Universal Button (120-277V)
SP2 <sup>2</sup> 22kA Max Univolt Surge Protection	MWS <sup>2</sup> Microwave Sensor (120-277V)
FUSE/SXXX <sup>2</sup> Single-line Voltage Fuse (120, 277)	
FUSE/DXXX <sup>2</sup> Dual-line Voltage Fuse (208, 240)	

<sup>1</sup>Consult factory for availability; subject to longer lead-times and minimum order quantities.  
<sup>2</sup>Not available in HV



### QUICK SHIP ITEMS:

SERIES	LUMENS	DRIVER	CCT
CP Value Square Canopy	5L	U 120-277V	50
	7L		40
	9L		

# VALUE SQUARE CANOPY

## LED CANOPY/PARKING GARAGE

LED SYSTEMS INFORMATION <sup>1</sup>		4000K		5000K		Watts <sup>2</sup>	DLC Listing	Replaces
Part Numbers	Lens	Lumens	Efficacy	Lumens	Efficacy			
CP-5L	BLANK	5,090 lm	127 lm/W	5,104 lm	128 lm/W	40W	Premium	150W
CP-7L	BLANK	7,328 lm	124 lm/W	7,730 lm	131 lm/W	59W	Premium	175W
CP-9L	BLANK	8,192 lm	124 lm/W	8,260 lm	125 lm/W	66W	Premium	250W
CP-5L	PG	5,093 lm	127 lm/W	5,256 lm	131 lm/W	40W	Premium	150W
CP-7L	PG	7,602 lm	129 lm/W	7,926 lm	134 lm/W	59W	Premium	175W
CP-9L	PG	8,455 lm	128 lm/W	8,744 lm	132 lm/W	66W	Premium	250W

<sup>1</sup>Values are nominal, see IES file for more detail  
<sup>2</sup>Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

## SPECIFICATIONS

### CONSTRUCTION

Value Square Canopy luminaires feature a rugged low-profile die-cast aluminum housing with a durable Bronze polyester powder coat finish to withstand extreme weather changes without cracking or peeling (Consult factory for availability of alternate finishes). The UV stabilized and impact resistant polycarbonate lenses are designed to provide maximum rigidity and optical transmissions up to 92% . The lenses seal to the housing with a one-piece gasket creating an IP65 rating for maximum ingress protection.

### ELECTRICAL

High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection. 0-10V dimming (10% - 100%) standard. Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac). L70 >50,000 hrs. in accordance of IESNA TM-21-11 Projected values at 25°C Ambient temperature. Total harmonic distortion: <20%. Power factor: >0.90. Input power stays constant over life. Minimum 2.5kV surge rating.

### INSTALLATION

The Value Square Canopy luminaires feature an integral quick surface mount bracket, eliminating the need to open the luminaire during installation to the Junction box or ceiling surface resulting in IP65 ingress protection that is effortless and secure. Three ½” conduit entry points allow for surface-conduit wiring. The CP can also be pendant mounted with ¾” pendant stems (provided by others). Fixture leads exit the back of the casting through a water-tight connector.

### WARRANTY

5 Year Warranty (Terms and Conditions apply). See Website for more details. <https://www.ilp-inc.com/documents/>

### OPTICS

Value Square Canopy ships standard with a diffuse prismatic lens that virtually eliminates glare and optimizes the delivered light for maximum visual comfort. The Value Square Canopy is also available with an optional prismatic wide distribution lens that is designed specifically to maximize fixture spacing for parking garage applications. Available in 4000K or 5000K color temperature (CCT) per ANSI C78.377. Consult factory for availability of alternate CCTs.

### THERMAL

The Value Square Canopy features an array of High-efficacy LED's on a metal core circuit board. The LED board is mounted directly to a cast aluminum housing with heat dissipating fins to provide excellent thermal performance extending the life of electronic components. Operating Ambient Temperature: -40°C to +40°C (-40°F to 104°F)

### CONTROLS

Optional Microwave sensor available for 360 degree motion detection discretely installed behind the polycarbonate lens. The MWS is pre-configured to the unique site application requirements; See page 3 for more details. Three ½” apertures allow for field or factory installed 120-277V universal electronic photocell.

### CERTIFICATIONS

UL Listed for wet locations. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified. Title 24 Compliant with MWS option; see local ordinance for qualification information. Tested in accordance with IESNA LM-79 and LM-80 standards.

# VALUE SQUARE CANOPY

## LED CANOPY/PARKING GARAGE

### CONTROLS OPTIONS

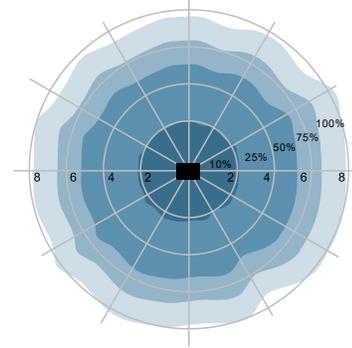
#### PCU

Three 1/2" apertures allow for field or factory installed 120-277V universal electronic pencil photocell.



#### MWS Occupancy Sensor

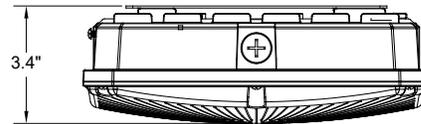
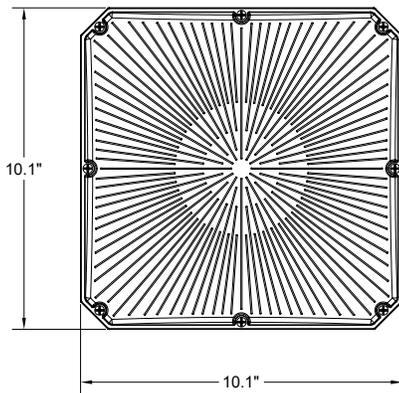
The integral microwave occupancy sensor activates switching of luminaire light levels. The Microwave occupancy sensor is discretely installed behind the polycarbonate lens and is available for universal (120-277V) only. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Low light level (10% maximum drive current) is activated when target zone is absent of motion activity for ~3 minutes. Detection Area: 100%, Standby Time: Disabled, Daylight Sensor: Disabled. See coverage diagram for detection cone. Consult Factory for alternate settings.



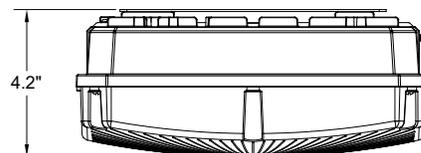
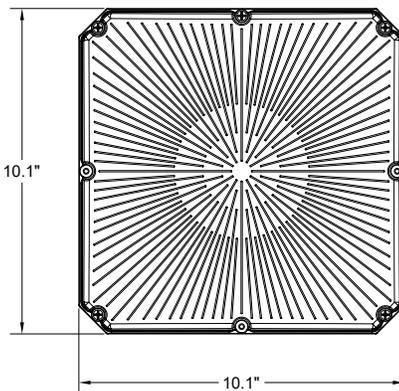
Ceiling mounting pattern (Unit: Ft)  
Suggested installation height: 9 - 33ft

### LINE DRAWINGS

#### Diffuse Medium Lens



#### Parking Garage Wide Lens




**SENSORWORX®**


# 0-10V DIMMING WALL SWITCH SENSOR

LINE VOLTAGE

## OVERVIEW

The **SENSORWORX** family of wall switch occupancy/vacancy sensors provides a simple yet cost effective lighting control solution for many retrofit applications. Designed with contractors in mind, the **SENSORWORX** 0-10V dimming wall switch sensor is significantly shallower than typical dimmers and sensors, resulting in less crowded wall boxes. Additionally, versatile wiring enables usage with or without a neutral and allows reversal of line and load connections. **SENSORWORX** products utilize the latest passive infrared technology and digital signal processing techniques to provide unmatched motion detection performance. These units are also available with an integrated microphone to provide overlapping passive acoustic occupancy detection for rooms with obstructions or where occupant motion is limited. For dimming adjustment, intuitive raise and lower buttons are present in addition to an on/off button.

## BASIC OPERATION

Sensors detect movement in the infrared energy that radiates from occupants as they move within the devices field-of-view. Once occupancy is identified, the sensor's internal relay switches power on to the connected lighting. All units can also be configured to operate in Vacancy Mode (e.g., require lights be manually switched on). Once lights are on and if equipped with passive dual technology (PIR/Acoustic), the unit's microphone is enabled to further enhance detection. An internal timer is set to keep lights on during brief periods of inactivity, and is reset every time occupancy is signaled by either the passive infrared or acoustic detection technologies. Ambient daylight detection can also be enabled in equipped units so that lights are held off in rooms with sufficient light contribution from windows or skylights.

## SPECIFICATIONS

### ELECTRICAL

**OPERATING VOLTAGE**

120/277 VAC, 50/60 Hz

**LOAD RATINGS**

MAX: 800W @ 120VAC

1200W @ 277VAC

MIN: None

**LOAD TYPES**

LED Driver/Lamps

CFL, Electronic/Magnetic Ballasts (Fluorescent)

Tungsten (Incandescent)

**DIMMING COMPATIBILITY**

0-10 VDC ballasts or drivers compliant

with IEC 60929 Annex E.2

**DIMMING LOAD**

- 50 mA (sink only)

### ENVIRONMENTAL

**OPERATING TEMP**

32°F to 122°F (0°C to 50°C)

**RELATIVE HUMIDITY**

0-95% Non-Condensing, Indoor Use Only

### PHYSICAL

**SIZE**

2.74"H x 1.68"W x 1.39"D

(6.96 x 4.27 x 3.53 cm)

Not Including Mounting Strap

**WEIGHT**

4.5 oz

**MOUNTING**

Single Gang Switch Box



## FEATURES

### ELECTRICAL FEATURES

- Interchangeable Line & Load Wires - Impossible to Wire Backwards
- Accommodates Neutral (3-Wire) and No-Neutral (2-Wire) Installation
- Electronically Timed Switching Ensures Long Relay Life
- Compatible with 0-10V Dimmable LED, and Fluorescent Lighting
- Meets NEC 404.2(c) & 404.22 Guidelines Regarding Powering Over Ground & Current Leakage

### PHYSICAL FEATURES

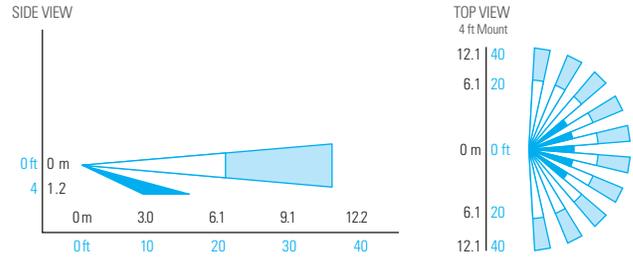
- Enclosure is 25-40% Shallower than Other Sensors (< 1" Depth into Wallbox)
- Unique Bat-Wing Shaped Lens Provides Enhanced Peripheral Detection
- Self-Grounding Mounting Strap
- Modern Look and Intuitive Easy-Tap Buttons for On/Off, Raise, & Lower
- Rugged Vandal Resistant Lens
- Settings are Adjustable Without Removing Cover Plate

### OPERATIONAL FEATURES

- Wall-To-Wall Passive Infrared Small Motion Detection
- Passive Acoustic Detection (Optional) - Prevents False Offs when No Motion is Present
- 100% Passive Detection Methods - No Interference Potential from External Devices
- Configurable Sensor Settings Including Time Delays and Occupancy/Vacancy Operating Modes
- Configurable Dimming Parameters including High/Low Trims, Turn on Levels, and Curve Types
- Blue Locator LED when Lights are Off

# COVERAGE PATTERNS

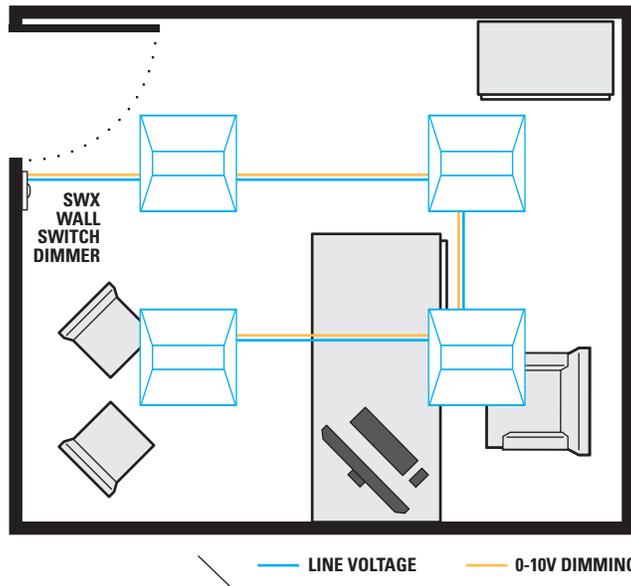
- 30" to 48" (0.76 - 1.22 m) recommended mounting height
- Wall to wall (~180 degree) coverage
- Small motion (e.g., hand movement) detection up to 20 ft (6.10 m), ~625 ft<sup>2</sup>
- Large motion (e.g., walking) detection greater than 36 ft (10.97 m), ~ 2025 ft<sup>2</sup>
- Overlapping acoustic detection of occupants over entire coverage area
- Advanced signal processing filters out nuisance noises while not effecting overall sensitivity



# APPLICATIONS

A wall switch sensor is typically used to retrofit an existing wall switch in a small room or enclosed space. A Passive Infrared (PIR) only sensor is sufficient for spaces where line of site is maintained and occupants are periodically moving (e.g., copy rooms, storage rooms). Dual technology sensors are necessary where occupants may be partially blocked from the sensor's direct view or where they may be stationary (e.g., private offices or restrooms with stalls).

- Private Restrooms
- Copy Rooms
- Restroom with Stalls
- Small Meeting Room
- Small Office
- Vestibule
- Storage Room
- Break Room



## ✓ CODE COMPLIANCE

This wall switch sensor can be used to meet many requirements of ASHRAE 90.1 (2016), IECC (2015), and Title 24 (2016).

- Occupancy Operation: Auto On/Auto Off
- Vacancy Operation: Manual On/Auto Off
- Partial On Operation:
  - Auto On to 50%
  - Users can raise or lower light level manually
  - Auto Off

**ASHRAE®**  
STANDARD 90.1 - 2016

**IECC®**  
2015 STANDARD



## DIMMING APPLICATION TABLE

MODEL #	DETECTION TYPE		DEFAULT OPERATING MODE <sup>1,2</sup>	
	PIR	ACOUSTIC	NAME	DESCRIPTION
SWX-101-D	•		Partial On	Auto-On to 50%
SWX-103-D	•		Vacancy	Manual On to Last Level
SWX-111-D	•		Partial On	Auto-On to 50%
SWX-121-D	•	•	Partial On	Auto-On to 50%
SWX-123-D	•	•	Vacancy	Manual On to Last Level
SWX-131-D	•	•	Partial On	Auto-On to 50%

1. ALL MODES ARE ENERGY CODE COMPLIANT  
2. MODES ON ALL UNITS ARE FIELD CONFIGURABLE

# ORDERING INFO

SAMPLE MODEL # SWX-101-D-WH

PRODUCT	DETECTION	DEFAULT OPERATIONAL MODE	DIMMING	COLOR <sup>1</sup>	PACKAGE COUNT
<b>SWX</b> Wall Switch Sensor	Passive Infrared (PIR) <b>0</b> Passive Infrared (PIR) + Daylight <b>1</b> Passive Dual Technology (PIR/Acoustic) <b>2</b> Passive Dual Technology (PIR/Acoustic) + Daylight <b>3</b>	Auto On to 50% (Partial On) <b>1</b> Manual On (Vacancy) <sup>3</sup> <b>3</b> Vacancy Only (CA Title 20/24) <sup>3</sup> <b>4</b>	0-10V Dimming <b>-D</b>	White <b>-WH</b> Ivory <b>-IV</b> Light Almond <b>-LA</b> Gray <b>-GY</b>	Single <b>Blank</b> 10 Pack <sup>2</sup> <b>-J10</b>

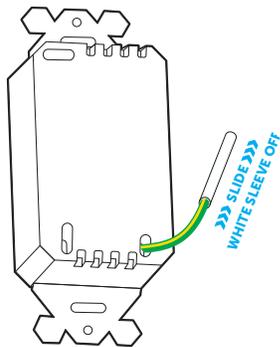
ACCESSORY	COLOR
<b>SWX-199</b> Single Gang Wall Plate	White <b>-WH</b> Ivory <b>-IV</b> Light Almond Gray <b>-LA -GY</b>

NOTE 1: WALLPLATE NOT INCLUDED  
NOTE 2: THE CONTRACTOR PACK OPTION (-J10) REDUCES JOB SITE WASTE AND INVENTORY TIME  
NOTE 3: DAYLIGHT FEATURES DISABLED IN VACANCY MODE

# WIRING

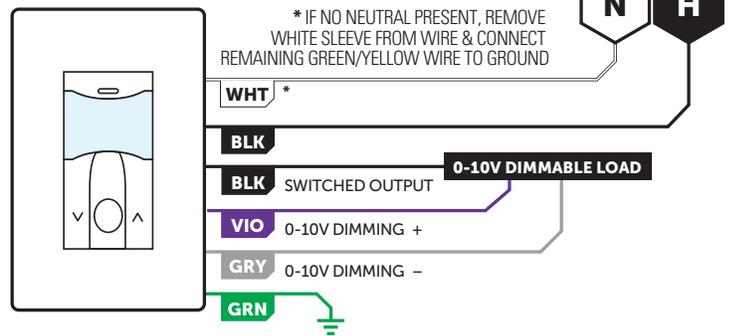
- Unit works both in installations where neutral connection is available as well as installations where only ground connection is present.
- If no neutral is present, remove the white sleeve from the wire & connect the now Green/Yellow wire to ground (see diagram below).
- The White wire (or Green/Yellow wire underneath the removable sleeve) MUST be connected to neutral (or Ground if sleeve is removed) for the unit to operate.
- The all Green wire is just for safety.
- Never connect Violet or Gray wire to line voltage.
- The unit's two black wires are interchangeable (e.g., one connects to line power, one connects to load).

## NEUTRAL TO GROUND WIRE CONVERSION DETAIL



## STANDARD WIRING

### WALL SWITCH SENSOR w/ DIMMING

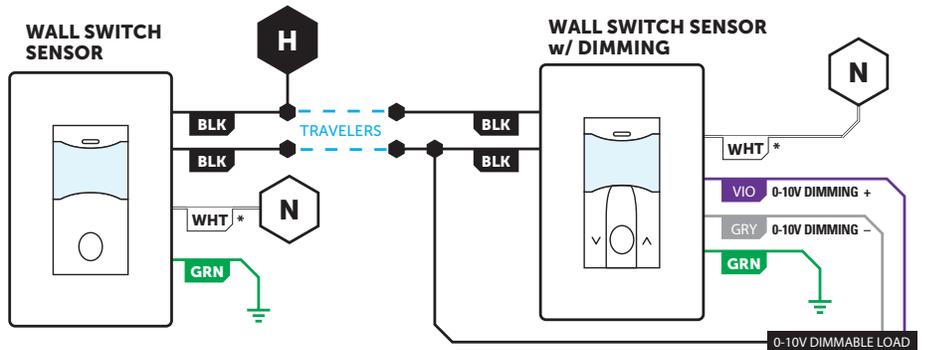


**NOTE:** This product is UL listed and meets NEC 404.2(c) & 404.22 guidelines regarding powering over ground & current leakage. Powering over ground is permitted for replacement / retrofit only.

## 3-WAY WIRING

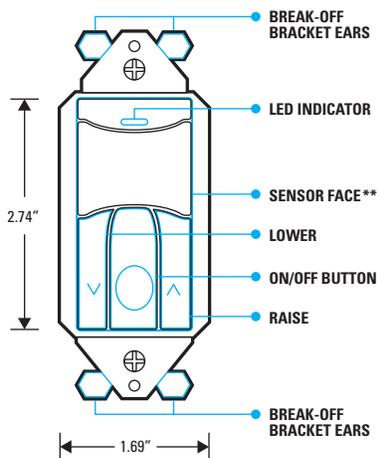
### TWO SENSORS IN PARALLEL

- Only one sensor can be model with 0-10V Dimming
- Both sensors must time out for lights to turn off (or both buttons must be switched)
- Recommended for Automatic On (Occupancy) applications only

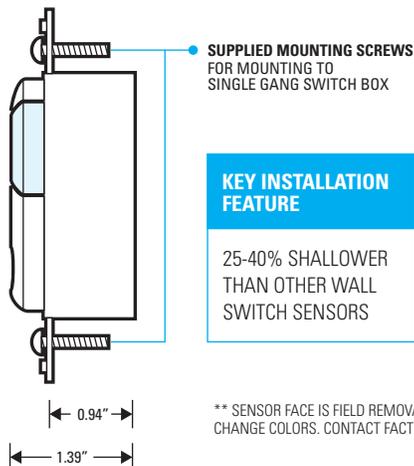


# INSTALLATION

## FRONT



## SIDE



### KEY INSTALLATION FEATURE

25-40% SHALLOWER THAN OTHER WALL SWITCH SENSORS

\*\* SENSOR FACE IS FIELD REMOVABLE IN ORDER TO CHANGE COLORS. CONTACT FACTORY FOR ADDITIONAL FACES

# OPERATION SETTINGS

## TIME DELAY

- Test mode, 30 sec, 5-30 minutes
- 5 sec test mode expires after 10 minutes

## HIGH-END & LOW-END TRIM

- High-end trim enables energy saving task tuning by setting a maximum level (100%-50%) that which users are allowed to raise lights
- Low-end trim enables minimum user level of dimmer to be raised

## TURN ON/TURN OFF DIMMING OPERATION

- Sensor turns on lighting to last user level or a preset level (100%, 50%, or custom)
- Sensor can turn off lighting by switching off power (by opening relay) or dimming below electronic off level
- Lighting can also be held at low-end trim level during unoccupied/off state

## FADE ON/FADE OFF TIMES

- Adjustable time for level to ramp up to turn-on level (0.75 sec, 1.5 sec, 3 sec, 5 sec, or 15 sec)
- Adjustable time interval for level to ramp down to off (0.75 sec, 1.5 sec, 3 sec, 5 sec, or 15 sec)

## DIMMING CURVE

- The dimming curve defines how dimmers adjust their voltage output in response to button commands
- Linear (default), Square Law, Logarithmic

## AMBIENT LIGHT (DAYLIGHT) DETECTION

- Sensor holds lights off when ambient light is present
- Manual threshold levels or auto-selection of threshold level
- Disabled when in Vacancy (Manual On) mode

## TURN-ON SENSITIVITY

- When enabled, this setting reduces the sensor's PIR sensitivity for initial turn-ons in order to eliminate false on caused by reflective surfaces like windows
- Unit returns to full sensitivity after initial turn-on

## OPERATIONAL MODES

**SENSORWORX** wall switch sensors are intelligent devices that provide both excellent energy savings and enhanced user convenience. Users can choose from several pre-programmed operational modes that best fit their preferences and applicable energy codes.

### Vacancy Mode

Manual On / Automatic Off operation. Lights can also be switched off manually. This mode provides increased energy savings but requires the user to initially turn on the lights. Models SWX-103, SWX-104, SWX-123, and SWX-124 default to Vacancy modes.

### Occupancy Mode

Automatic On and Automatic Off operation. If lights are switched off manually, the Automatic On functionality is temporarily disabled to allow the person a few seconds to leave the room before switching back to Automatic On operation. However, if the person remains in the space the unit will stay in a manual on state until the switch is pressed again. This mode is the default operation of SWX-101, SWX-111, SWX-121, and SWX-131 models.

### Automatic On w/ Exit Time Mode

Automatic On and Automatic Off operation. If lights are switched off manually, the Automatic On functionality is disabled for a fixed 30 seconds.

### Override Off Mode

Automatic On and Automatic Off operation until lights are switched off manually, at which point Automatic On functionality is disabled until the switch is pressed again.

### Disabled Switch Mode

Automatic On and Automatic Off operation only. Switch functionality to manually turn on/off lights is disabled.

### Presentation Mode

If lights are switched off manually, the Automatic On functionality is disabled until the space becomes unoccupied and the sensor's time delay expires.

## LED FUNCTIONALITY

- White LED blinks upon occupancy detection
- Blue LED serves as a switch locator when lights are off
- LED functionality can be disabled





**SENSORWORX®**

# CEILING MOUNT OCCUPANCY SENSOR

LOW VOLTAGE

## OVERVIEW

The **SENSORWORX®** family of ceiling mount occupancy sensors provides a range of control solutions for spaces with finished ceilings (e.g., tiles, sheetrock, and plaster). Preferred by contractors for their simple, yet flexible, mounting methods, **SENSORWORX** sensors reduce installation time and fuss. **SENSORWORX** products utilize the latest passive infrared technology and digital signal processing techniques to provide unmatched detection performance. Additionally, **SENSORWORX** units are available with an integrated microphone to provide overlapping passive acoustic occupancy detection for rooms with obstructions or where occupant motion will be limited. Enhanced options for this sensor family include a photocell that will override lights off if sufficient ambient light is present, active daylight harvesting for 0-10V lighting, and an isolated relay for interfacing external systems (e.g., HVAC/BAS).

## BASIC OPERATION

Sensors detect movement in the infrared energy that radiates from occupants as they move within the devices field-of-view. Once occupancy is identified, the sensor signals a connected power/relay pack to switch on the connected lighting. If equipped with passive dual technology (PIR/Acoustic), the unit's microphone is then also enabled to further enhance detection while the lights are on. An internal timer is set to keep lights on during brief periods of inactivity, and is reset every time occupancy is signaled by either the passive infrared or acoustic detection technologies.

## APPLICATIONS

A single sensor can be used in small spaces like a private office, however, multiple low voltage sensors can be easily wired together to provide coverage for larger spaces like an open office.

- Classrooms
- Hallways
- Private Restrooms
- Open Areas
- Small Offices
- Break Rooms
- Conference Rooms
- Copy Rooms

## FEATURES

- Digital Passive Infrared (PIR) Detection
- Passive Acoustic Detection (Optional)
- 360° Coverage Patterns
- Compact Size and Matte Finish
- Four Contractor Friendly Mounting Methods
- Mounting Nipple Attachment with Integrated Hole Saw
- Convenient Test Mode and Adjustable Time Delays
- Optional Photocell, Daylight Harvesting, & Isolated Relay

## SPECIFICATIONS

### ELECTRICAL

**OPERATING VOLTAGE**  
12-24 VAC/VDC

**CURRENT DRAW**  
2mA (PIR models)  
10mA (Dual Tech. models)

**OUTPUT**  
Logic High VDC (Occupied Mode)

**RECOMMENDED POWER PACK**  
SWX-900 Series (**SENSORWORX**)

**DIMMING CAPACITY (-D OPTION)**  
50mA

**DIMMING COMPATIBILITY**  
0-10 VDC Ballasts or Drivers  
Compliant with IEC 60929 Annex E.2

**ISOLATED RELAY RATING**  
1A @ 30 VDC/VAC

### ENVIRONMENTAL

**OPERATING TEMP**  
32°F to 122°F (0°C to 50°C)

**RELATIVE HUMIDITY**  
0-95% Non-Condensing,  
Indoor Use Only

### PHYSICAL

**SIZE**  
4.00" Diameter x 1.25" H  
(10.16 x 3.17 cm)

**WEIGHT**  
4.75 oz

**COLOR**  
White

### OPERATION

**TIME DELAYS**  
30 sec to 30 min  
10 minute default  
5 sec test mode

### CODE COMPLIANCE

Sensors can be used to meet ASHRAE 90.1, IECC, & Title 24 energy code requirements



# ORDERING INFO

SAMPLE MODEL # SWX-222-1

	PRODUCT	DETECTION	COVERAGE	VOLTAGE	OPTIONS
<b>SWX</b>	Ceiling Mount Sensor <b>2</b>	Passive Infrared (PIR) <b>0</b> Passive Infrared (PIR) + Photocell <b>1</b> Passive Dual Technology (PIR/Acoustic) <b>2</b> Passive Dual Technology (PIR/Acoustic) + Photocell <b>3</b>	Small Motion 360° <b>1</b> Large Motion 360° <b>2</b> High Bay 360° <b>3</b> <sup>1</sup>	Low Voltage <b>-1</b>	Daylight Harvesting (0-10V) <b>-D</b> <sup>2</sup> Isolated Auxiliary Relay <b>-AR</b>

## ACCESSORIES

**SWX-299-JP** - Ceiling Sensor Trim Ring for Mounting to Single Gang Mudring, Handy Box, or 4" Octagon Box

**Note 1:** Not available on Dual Tech. units

**Note 2:** Only available on units w/ Photocells

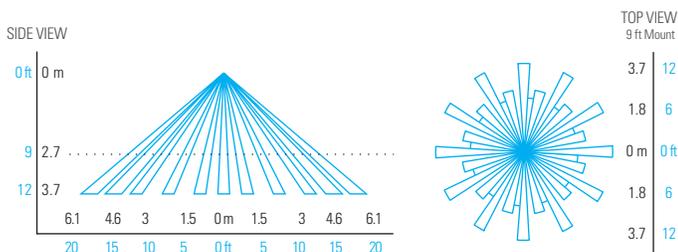
# COVERAGE

## PASSIVE INFRARED (PIR)

- 8 to 15 ft (2.44 to 4.57 m) mounting height recommended for small and large motion lenses. For 15 to 40 ft (2.44 to 12.20 m) mounting heights use high bay lens.
- Detection range improves when walking across beams as compared to into beams
- Lenses can be swapped in field if necessary, contact technical support for assistance

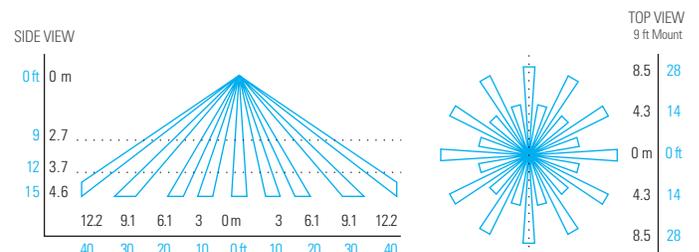
### SMALL MOTION 360°

- Best choice for detection of small motions from sitting occupants (e.g., hand motion)
- ~500 ft<sup>2</sup> of coverage



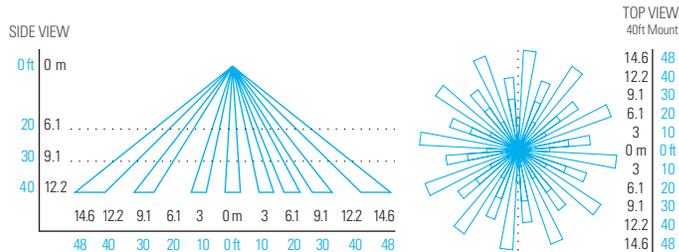
### LARGE MOTION 360°

- Best choice for detection of larger motion (e.g., walking)
- ~2000 ft<sup>2</sup> of coverage
- One of the longer segments of the coverage pattern aligns with the screw hole axis on the sensor (shown as dotted line on Top View diagram below)



### HIGH BAY 360°

- Best choice for mounting heights above 15ft
- Recommended for gyms, warehouses, and other high ceiling areas where multiple sensor coverage is required
- Not recommended for areas where occupants are sitting
- Gaps between outer segments get larger as mounting height increases
- Not available with acoustic (dual technology)



## DUAL TECHNOLOGY (PIR/ACOUSTIC)

- Units with dual technology (SWX-221-1 and SWX-222-1) have overlapping acoustic detection of the complete PIR coverage area
- A PIR event is required to initially enable acoustic detection
- Sounds indicating occupancy reset the sensor's time delay while non-occupant noises are filtered out
- Occupant sounds alone will not keep lights on indefinitely, PIR motion must be periodically detected for lights to remain on for an extended time
- After sensor time out expires, acoustic detection remains enabled for 10 seconds to enable voice reactivation of lights for additional convenience and safety

# DAYLIGHT HARVESTING & PHOTOCCELL OPERATION

Units with the integrated photocell option can provide on/off or inhibit only control of lighting. Units with the daylight harvesting option can also directly dim 0-10V lighting.

### DAYLIGHT HARVESTING

- Lights will gradually dim in order to maximize energy savings while maintaining desired overall lighting level.
- Recommend for spaces where it is important to not distract occupants (e.g., offices, classrooms).
- Option to dim to low trim or turn lighting off.

### ON/OFF PHOTOCCELL CONTROL

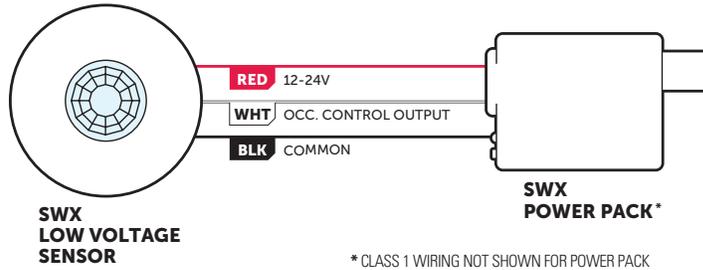
- Lights are switched off if ambient light level surpasses threshold and back on if level drops.
- Recommended for public spaces (hallways, entryways, etc) where fully switching of lighting off and on will not cause distraction of occupants.

### INHIBIT ONLY PHOTOCCELL CONTROL

- Lighting is held off if sufficient ambient light level is present upon initial occupancy.
- Lighting will turn on if light level drops below setpoint.
- Once on, lighting will only turn off from vacancy or a manual switch, never from daylight.

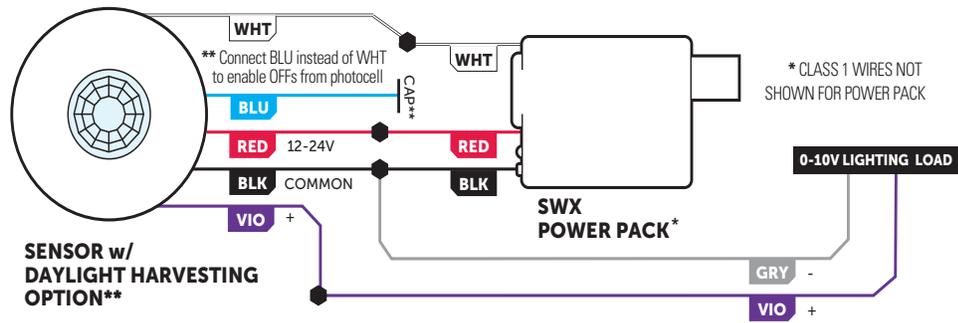
# WIRING

## STANDARD WIRING



## OCCUPANCY + DAYLIGHT HARVESTING

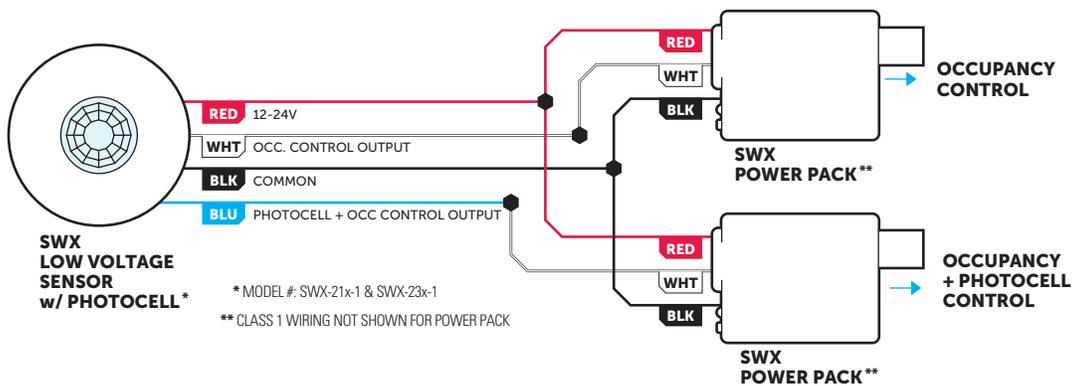
- Lights will gradually dim in order to maximize energy savings while maintaining desired overall lighting level.
- Lights will dim only to low trim if white wire is connected to power pack. Connect blue wire to power pack to switch lighting completely off from daylight.



\*\* e.g. SWX-211-1-D or SWX-231-1-D

## SEPARATE OCCUPANCY ZONE & OCCUPANCY + ON/OFF PHOTOCELL ZONE

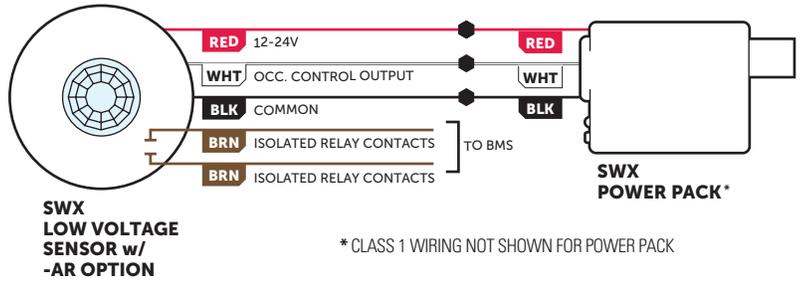
- During occupied state, photocell output (blue wire) will turn lights off if ambient light level surpasses threshold and back on if level drops.
- Also configurable to prevent lights from initially turning on, but not to turn them off once lights are on (i.e. Inhibit Only operation).



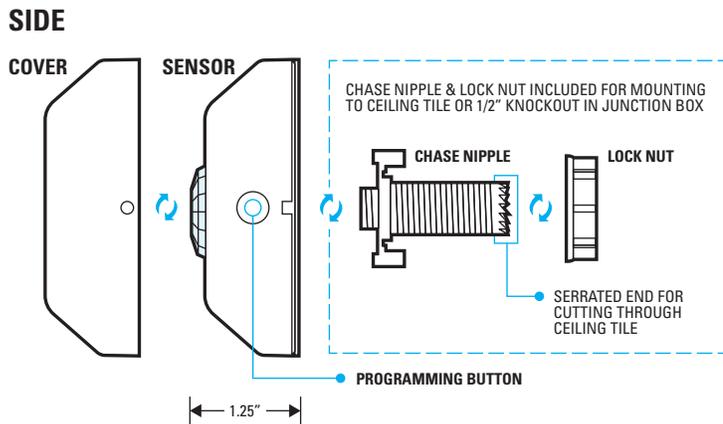
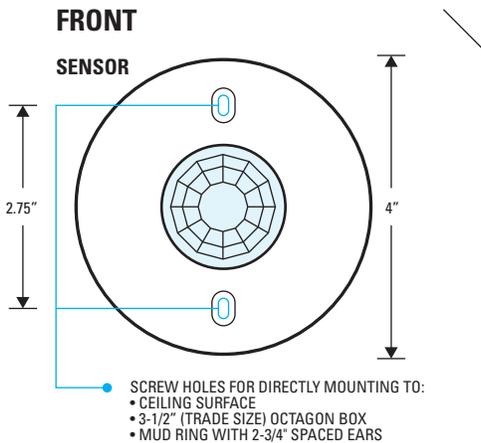
# WIRING CONT.

## SENSOR INTERFACE TO BMS

- The auxiliary output relay (model option -AR) is designed to interface with many types of BMS, VAV units, and relay panels
- Operation of relay (brown wires) is configurable:
  - By default the relay latches closed when occupancy is detected (white wire goes high)
  - Relay can be configured to alternatively follow the occupancy + photocell (blue wire) output
  - Relay polarity (open vs closed) can also be reversed



# INSTALLATION OPTIONS



**Note:** If mounting to a Single Gang Mudring, Handy Box, or 4" Octagon Box, a trim ring is required. Part Number: **SWX-299-JP**.





**SENSORWORX®**

# POWER PACK CONTROLLER

LINE VOLTAGE

## OVERVIEW

**SENSORWORX** power pack controllers transform incoming line voltage power to Class 2 low voltage as needed by sensors or other control devices. Additionally, they switch on/off power to the connected lighting load as directed by the sensors and controls. **SENSORWORX** power packs utilize a powerful microprocessor to optimize its switching timing in order to ensure long relay life even when controlling high-inrush LEDs and ballast loads. As with all **SENSORWORX** products, these power packs are easy to install and incorporate features which reduce contractor labor time. An elongated chase nipple with snaps for quick installation and an optional snap-on low voltage wire chamber make for a hassle free contractor experience. All **SENSORWORX** products are proudly made in the USA.

## BASIC OPERATION

An input signal indicating occupancy from one or more connected sensors will signal the pack's integrated relay to close. Once closed, line voltage will flow through the relay and turn on the connected lighting load. When the input signal indicates the occupied period has ended, the relay will open and lighting will switch off. This pack is also available with an auxiliary switch input to enable manual on, hold on, and hold off configurations. Partial off (e.g. auto off to 50%) and partial on (e.g., auto on to 50%) operation can also be achieved using the optional 0-10V stepped dimming output.

## FEATURES

- Powers Low Voltage Sensors
- Switches Line Voltage Loads
- Electronically Timed Switching Ensures Long Relay Life
- Integrated Test/Programming Button
- Plenum Rated (UL 2043)
- Optional Snap-On Attachment Provides Chamber for Low Voltage Wire Connections
- Optional Switch Input for Manual On, Hold On, or Hold Off Operation
- Optional 0-10V Stepped Dimming Output for Partial Off or Partial On Operation

## SPECIFICATIONS

### ELECTRICAL

**OPERATING VOLTAGE**

120/277 VAC

**CLASS 2 OUTPUT RATINGS**

18 VDC, 150 mA

**RELAY CURRENT REQS**

55 mA

**LOAD RATINGS**

20A @ 120 V - General Purpose Plug Load

20A @ 120/277 VAC - General Purpose, Tungsten, Magnetic Ballast

16A @ 120/277 VAC - Electronic Ballast, LED Driver

**DC LOAD RATINGS**

20A @ 28 VDC (MAX)  
1A @ 5 VDC (MIN)

**DIMMING LOAD**

(Models with -D2 option only)  
50mA, (0-10 VDC ballasts or drivers compliant with IEC 60929 Annex E.2)

**MOTOR LOAD**

1 HP

### ENVIRONMENTAL

**OPERATING TEMP**

32°F to 122°F (0°C to 50°C)

**RELATIVE HUMIDITY**

0-95% Non-Condensing, Indoor Use Only

**ROHS COMPLIANT**

### PHYSICAL

**SIZE**

3.00" H x 2.25" W x 1.88" D  
(7.62 cm x 5.72 cm x 4.78 cm)

**WEIGHT**

6.00 oz.

**COLOR**

Blue

**MOUNTING**

1/2" Knockout

**RELAY TEST BUTTON**

**LED STATUS INDICATOR**

Bi-color White & Blue

### OTHER

**LISTINGS**  
UL/CUL



## ORDERING INFO

SAMPLE MODEL # SWX-900-AX

	PRODUCT	FUNCTIONALITY	VOLTAGE	AUX SWITCH INPUT	STEPPED DIMMING (0-10V)
<b>SWX</b>	Power Pack <b>9</b>	Single Relay + 150 mA Supply <b>0</b> Secondary Relay <b>1</b> 150 mA Supply <b>2</b>	120/277 V <b>0</b>	None <b>Blank</b> Auxiliary Switch Input <b>AX</b>	Partial Off / On Control* <b>D2</b>

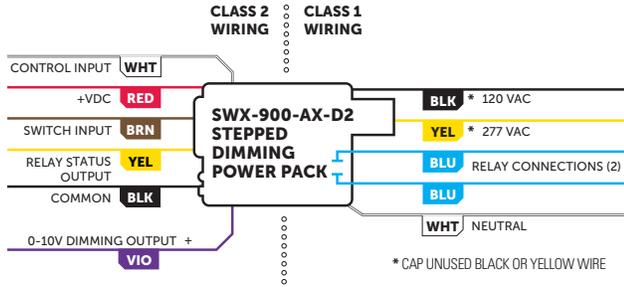
\*Requires -AX option

ACCESSORY	DESCRIPTION
<b>SWX-999</b>	Snap-On Low Voltage Wiring Chamber

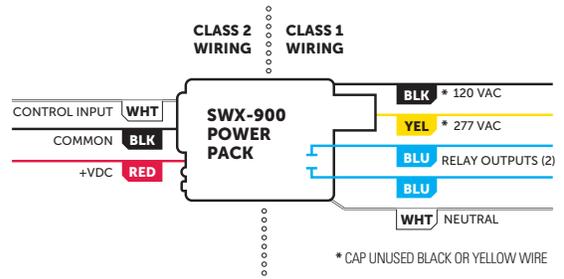
# WIRING

## BASIC SENSOR WIRING

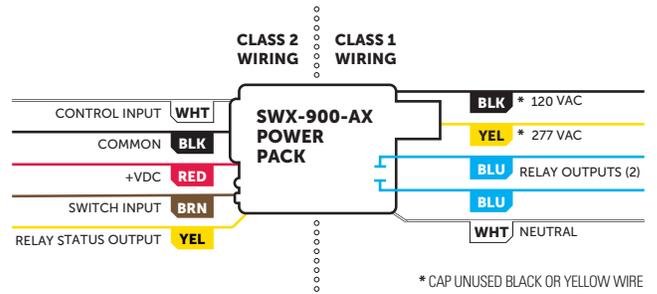
### MODEL #: SWX-900-AX-D2



### MODEL #: SWX-900

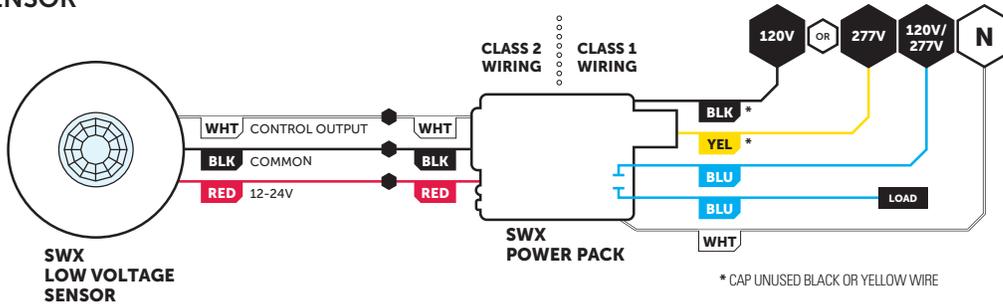


### MODEL #: SWX-900-AX

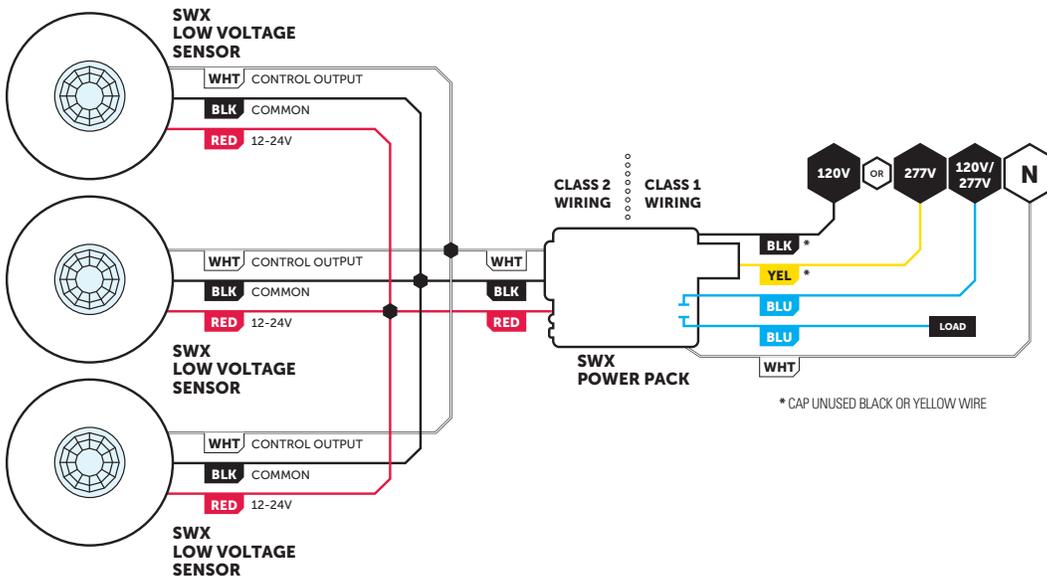


## COMMON WIRING CONFIGURATIONS

### SINGLE SENSOR

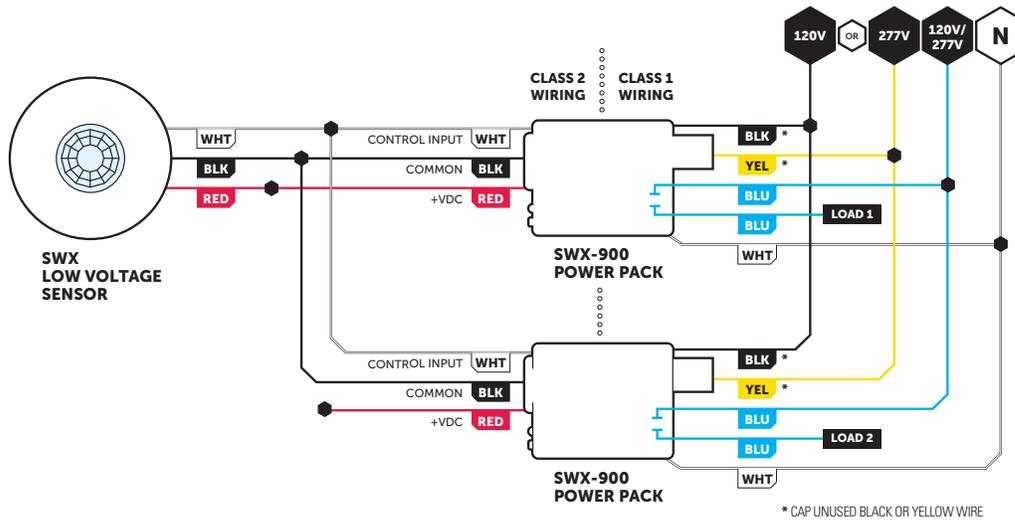


### MULTIPLE SENSOR

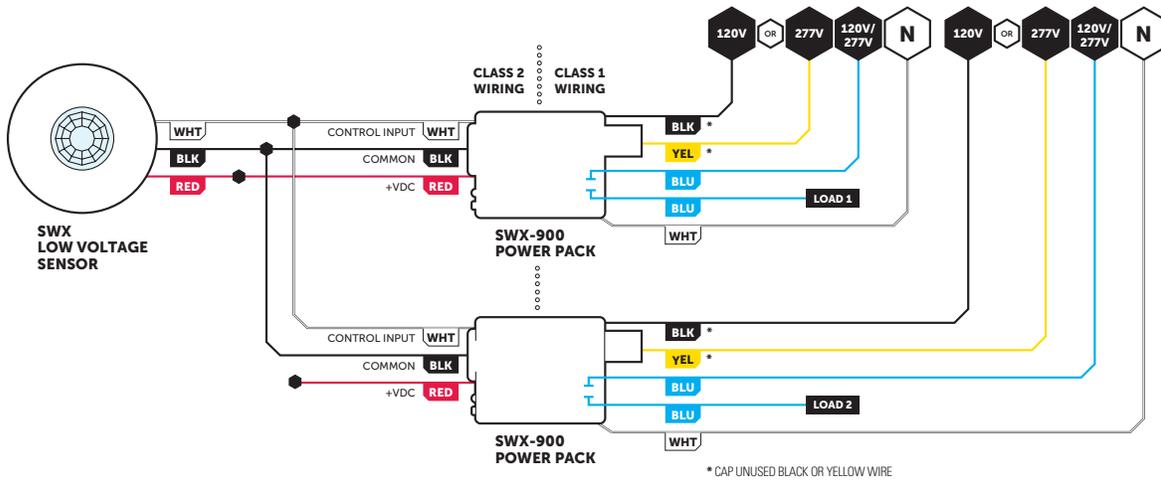


# WIRING CONT.

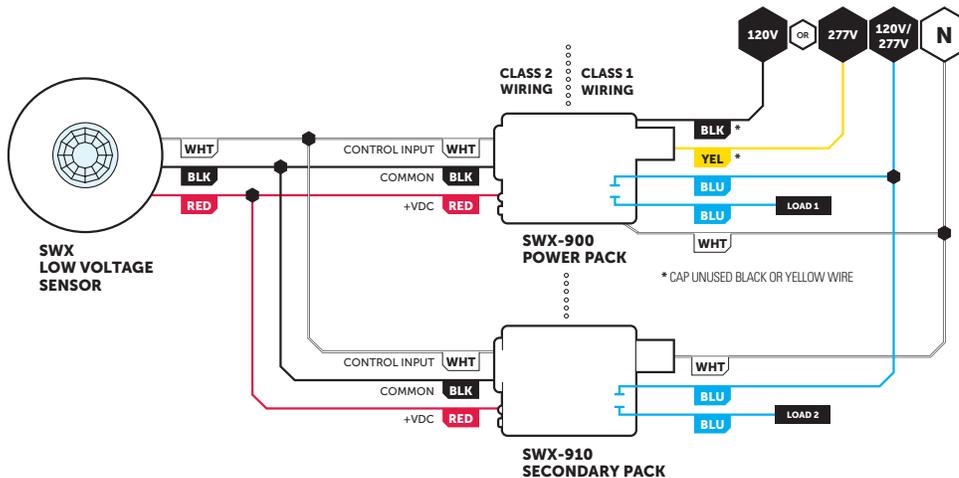
## MULTIPLE POWER PACKS WITH COMMON LINE FEEDS



## MULTIPLE POWER PACKS WITH SEPARATE LINE FEEDS



## POWER PACK w/ SECONDARY RELAY PACK

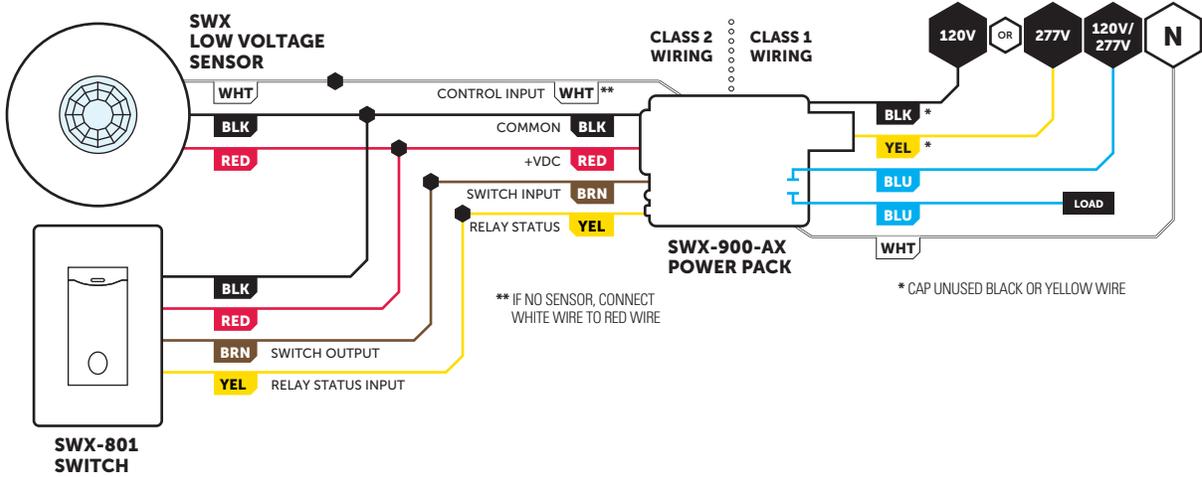


# WIRING CONT.

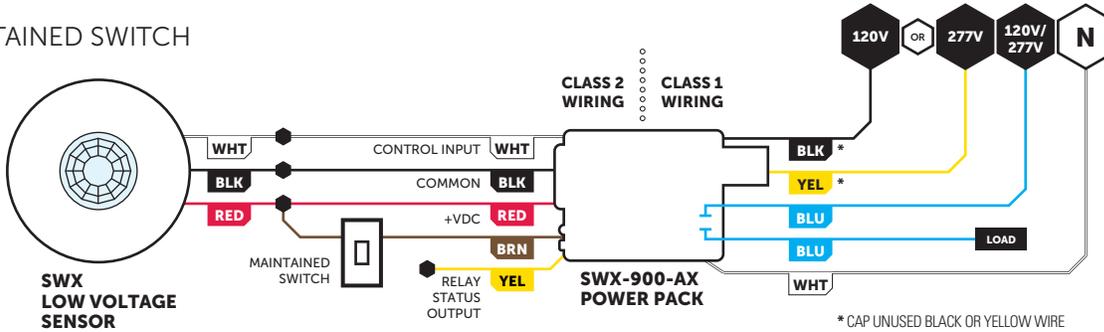
## POWER PACK CONNECTED TO SWITCH (requires -AX option)

- Some energy codes require **Manual On** (also called **Vacancy**) operation where an occupant is required to initially switch on lighting. The sensor then ensures lights are turned off once the space is unoccupied
- Interfacing momentary switches such as the SWX-801-xx or SWX-803-xx are recommended, however maintained switches can also be utilized
- For momentary switches, the power pack will react on the leading edge of a pulse on the brown input wire
- For maintained switches, any change of state on the brown wire that lasts longer than 0.5 seconds will be read by the power pack as one action
- If no sensor is present, tie power pack low voltage white wire to low voltage red wire

## MOMENTARY SWITCH

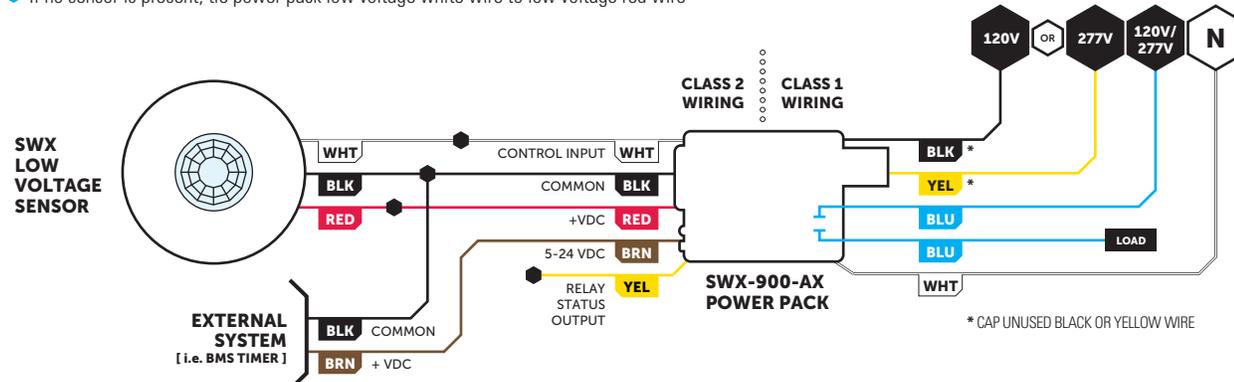


## MAINTAINED SWITCH



## POWER PACK w/ SWITCH SIGNAL FROM EXTERNAL SYSTEM

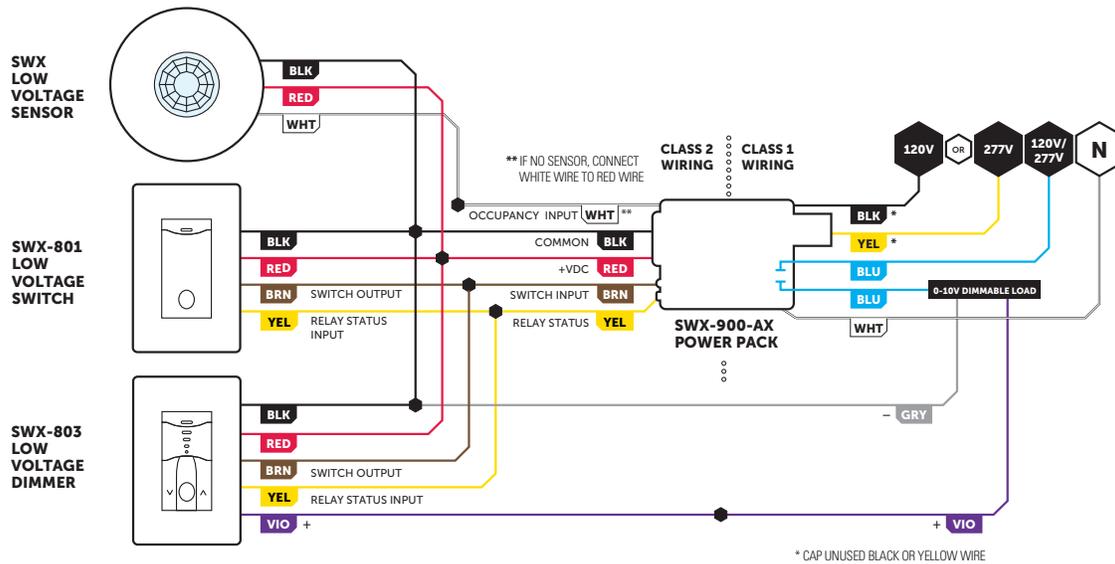
- Typical for Hold On and Hold Off applications
- BROWN switch input can be activated by external signals +5VDC or higher (i.e. logic high)
- For hold on and hold off applications, switch input can also be configured to activate on logic low
- If no sensor is present, tie power pack low voltage white wire to low voltage red wire



# WIRING CONT.

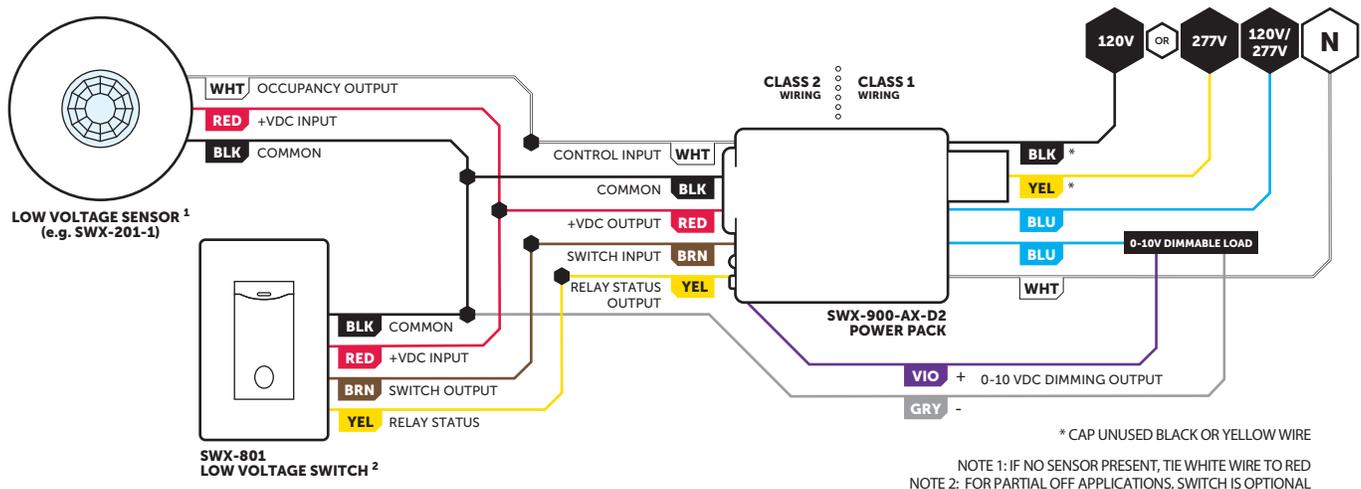
## MULTI-WAY SWITCHING (requires -AX option)

- Switching a powerpack from multiple locations (i.e., 3-way, 4-way switching) can be achieved using multiple **SENSORWORX** model# **SWX-801-xx** switches or a combination of one model# **SWX-803-xx** dimmer and one or more model# **SWX-801-xx** switches.
- Note that only one dimmer should be used per multi-way application.
- If no sensor is present, tie power pack low voltage white wire to low voltage red wire



## PARTIAL OFF or PARTIAL ON OPERATION (requires -AX-D2 options)

- For areas such as stairwells, the **SWX-900-AX-D2** unit can be used to achieve **Partial Off** operation where lighting is at the full bright level when occupied and dropped to the 50% level during unoccupied periods.
- **Partial On** operation is also enabled by the **SWX-900-AX-D2** unit. In this configuration lighting is only allowed to automatically turn on to a 50% level. Once on, an occupant may step lighting to the 100% level by pressing a wall switch. The sensor then ensures lights are turned off once the space is unoccupied.
- When in partial on mode the **SWX-900-AX-D2** unit will turn on connected 0-10V lighting to 50% (level is user configurable) once initially triggered from an occupancy sensor or manual switch. The unit will then step lighting up to 100% (level is user configurable) when the connected switch is pressed. Lighting will turn off if another switch press is detected or when all connected sensors go to their unoccupied state.
- Additional configurable parameters include; Turn On Dim Level, Turn Off Scheme, Fade On/Fade Off Rates, and High/Low Dimming Trim Levels.
- Using the **SENSORWORX** model# **SWX-801-xx** momentary switch is recommended for this application, however other manufacturers switches may also be utilized.

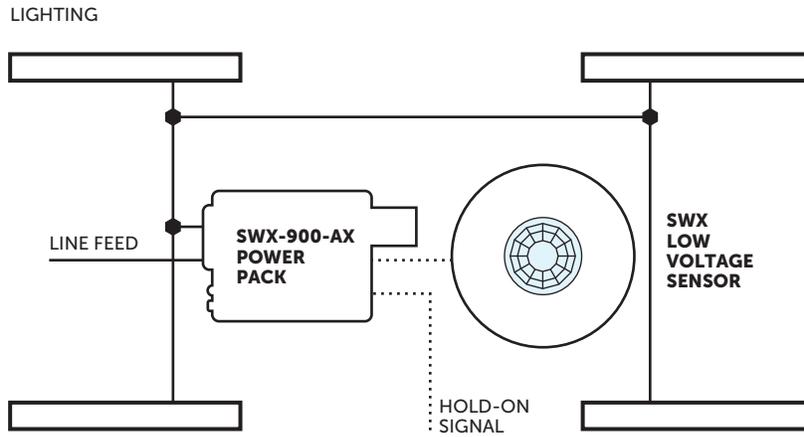




# APPLICATION NOTES CONT.

## SENSOR OVERRIDE / HOLD ON APPLICATION (e.g. RETAIL)

During open hours, a signal from a time clock (connected to the BROWN switch input on the **SWX-900-AX**) holds lights on, regardless of occupancy. After hours, the clock's schedule releases the hold on signal enabling the occupancy sensor to take over.



## POWER PACK CAPACITY

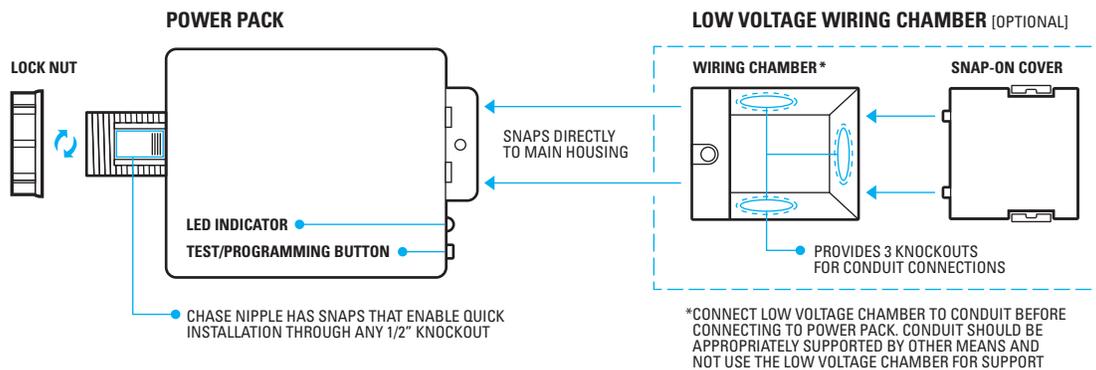
**SWX-900** series power packs can supply power to several occupancy sensors and additional secondary relay packs. Following the below formula ensures adequate power will be available. Note the **SWX-900's** relay has already been factored into the formula.

$$[(\# \text{ of PIR SENSORS}^*) \times 2\text{mA}] + [(\# \text{ of DUAL TECH SENSORS}) \times 10\text{mA}] + [(\# \text{ of SWX-910}) \times 55\text{mA}] < [(\# \text{ of SWX-900}) \times 95\text{mA}]$$

PIR SENSORS OR LOW VOLT. WALL SWITCHES		+	DUAL TECH SENSORS		+	SECONDARY PACKS SWX-910		=	TOTAL POWER REQUIRED	<	POWER SUPPLIED BY ONE SWX-900
#	POWER REQUIRED		#	POWER REQUIRED		#	POWER REQUIRED				
15	30mA	+	0	0	+	0	0	=	30mA	<	95mA
15	30mA	+	0	0	+	1	55mA	=	85mA	<	95mA
0	0	+	9	90mA	+	0	0	=	90mA	<	95mA
7	14mA	+	8	80mA	+	0	0	=	94mA	<	95mA

\*or low voltage wall switches

# INSTALLATION OPTIONS



Project Name:

Part Number:

Type:

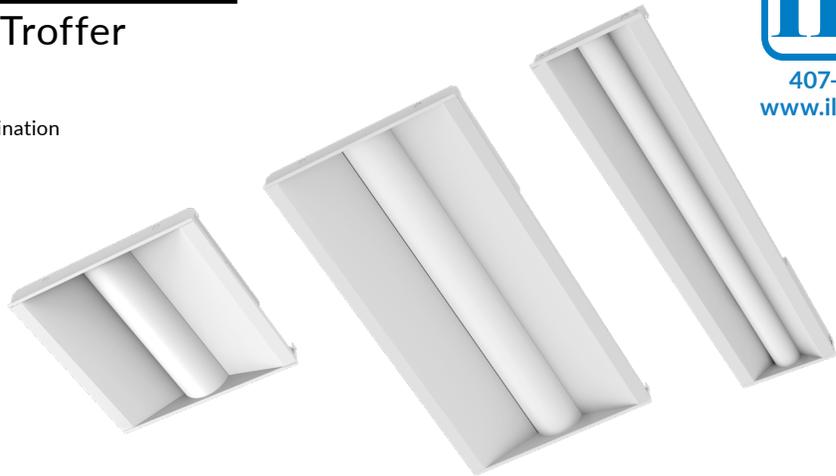
**VAT**

# Volumetric Adjustable Troffer

407-478-3759  
www.ilp-inc.com

## FEATURES

- Highly Versatile Volumetric Center Basket Troffer
- Matte White Post Paint Finish for Uniform Indirect Illumination
- High Transmission PMMA Frosted Polycarbonate Lens
- 1x4, 2x2 & 2x4 Sizes
- Recessed, Surface & Flange Mount Options
- Field Selectable or Factory Set Lumen Output
  - 2,500 to 7,500 Lumen Range
- Field Selectable or Factory Set CCT
  - 3000K, 3500K & 4000K CCT
- Advanced Wireless Controls Options
  - Fixture maintains CCT Selectable Function
- High Efficacy—Up to 148 lm/W
- >80 Color Rendering Index (CRI)
- Calculated L70 > 100,000 Hrs
- 120-277V Universal Dimming Driver (100%–10%)
- 5 Year Warranty
- ETL Listed
- DesignLights Consortium® Premium Qualified Luminaire



## SUITABLE APPLICATIONS

- Education
- Healthcare
- Commercial Office
- Storage Facility
- Retail
- Grocery Store

## ORDERING GUIDE:

SERIES	LUMENS (select one)	DRIVER	CCT
VAT14 1x4 Volumetric Troffer	25L/32L/38L - Lumen Selectable 25L 32L 38L	U 120-277V	CCTS - CCT Selectable 30K - 35K - 40K 40 35 30
VAT22 2x2 Volumetric Troffer	25L/31L/36L - Lumen Selectable 25L 31L 36L		
VAT24 2x4 Volumetric Troffer	43L/48L/54L - Lumen Selectable 43L 48L 54L 60L/64L/70L - Lumen Selectable 60L 64L 70L		

OPTIONS		CONTROLS	
Factory Installed		Advanced	
SR	Sensor Ready Driver	ES <sup>4,5,6</sup>	EasySense Grouping Sensor
BLD <sup>7</sup>	Bi-Level Dimming Driver (100% / 50%) w/ two hot leads	5E/2W/IL <sup>4,6</sup>	Enlighted 5E Two Wire Individual Lighting (IL) Sensor
FI/ILBCP05	5W LED Factory Installed Battery Backup	5E/2W/CL <sup>4,6</sup>	Enlighted 5E Two Wire Connected Lighting (CL) Sensor
FI/ILBCP05/HE <sup>1</sup>	5W LED Factory Installed Battery Backup	5E/2W/IOT <sup>4,6</sup>	Enlighted 5E Two Wire IOT Lighting (IOT) Sensor
FI/ILBCP07	7W LED Factory Installed Battery Backup	VDO <sup>3,4,6</sup>	Lutron Vive DFCSJ-OEM-OCC Daylight & Occupancy Sensor
FI/ILBCP07/HE <sup>1</sup>	7W LED Factory Installed Battery Backup	VRF <sup>3,4,6</sup>	Lutron Vive DFCSJ-OEM-RF Radio Frequency Only
FI/ILBCP10	10W LED Factory Installed Battery Backup		
FI/ILBCP10/HE <sup>1</sup>	10W LED Factory Installed Battery Backup		
FI/ILBCP12	12W LED Factory Installed Battery Backup		
SD347 <sup>2</sup>	347V Step Down Transformer		
WHIP/6FT	6FT MC Cable w/ 3 leads attached to power (non-dimming)		
WHIP/6FT/4WIRE	6FT MC Cable w/ 3 leads attached to power & 1 lead for battery backup (non-dimming function)		
WHIP/6FT/5WIRE	6FT MC Cable w/ 3 leads attached to power and 2 lead attached to dimming		
WHIP/6FT/6WIRE	6FT MC Cable w/ 3 leads attached to power & 2 leads to dimming and 1 to battery backup		
Ship With Accessories			
ES/PCD <sup>8</sup>	EasySense Pre-Programmed Control Device		
ES/WWS/DR	EasySense Dual Rocker Wireless Wall Switch		
SM	Surface Mount Kit		
FLGK	Flange Mount Kit		

<sup>1</sup>CETC Title 20 Compliant<sup>2</sup>Does not qualify for DLC<sup>4</sup>View controls page for more detail (pg. 3)<sup>6</sup>Fixture maintains CCT selectable function, if CCTS is selected in ordering guide<sup>7</sup>120V Applications Only<sup>3</sup>Must be used with SR Sensor Ready Driver<sup>5</sup>Must be used with ES/PCD for commissioning<sup>8</sup>One needed per project



# Volumetric Adjustable Troffer



## QUICK SHIP ITEMS:

SERIES	LUMENS (select one)	DRIVER	CCT
VAT14 1x4 Volumetric Troffer	25L/32L/38L - Lumen Selectable	U 120-277V	CCTS - CCT Selectable 30K - 35K - 40K
VAT22 2x2 Volumetric Troffer	25L/31L/36L - Lumen Selectable		
VAT24 2x4 Volumetric Troffer	43L/48L/54L - Lumen Selectable 60L/64L/70L - Lumen Selectable		

LED SYSTEMS INFO <sup>1</sup>	3000K		3500K		4000K		Watts <sup>2</sup>	CRI	DLC Listing	Ambient Temp. Range	Replaces
	Part Numbers	Lumens	Efficacy	Lumens	Efficacy	Lumens					
VAT14-25L-U-XX	2,701 lm	138 lm/W	2,855 lm	146 lm/W	2,768 lm	141 lm/W	20W	>80	Premium	-4°F - 122°F	1T8
VAT14-32L-U-XX	3,323 lm	135 lm/W	3,512 lm	143 lm/W	3,406 lm	138 lm/W	25W				2T8
VAT14-38L-U-XX	3,846 lm	132 lm/W	4,062 lm	142 lm/W	3,942 lm	136 lm/W	29W				2T8
VAT22-25L-U-XX	2,659 lm	137 lm/W	2,863 lm	148 lm/W	2,738 lm	142 lm/W	19W	>80	Premium	-4°F - 122°F	2T8
VAT22-31L-U-XX	3,258 lm	135 lm/W	3,508 lm	145 lm/W	3,355 lm	139 lm/W	24W				2T8
VAT22-36L-U-XX	3,760 lm	131 lm/W	4,049 lm	141 lm/W	3,876 lm	135 lm/W	29W				3T8
VAT24-43L-U-XX	4,609 lm	139 lm/W	4,888 lm	147 lm/W	4,755 lm	143 lm/W	33W	>80	Premium	-4°F - 122°F	2T8
VAT24-48L-U-XX	5,144 lm	136 lm/W	5,457 lm	144 lm/W	5,308 lm	140 lm/W	38W				3T8
VAT24-54L-U-XX	5,826 lm	131 lm/W	6,173 lm	144 lm/W	6,014 lm	137 lm/W	43W				3T8
VAT24-60L-U-XX	6,315 lm	137 lm/W	6,698 lm	145 lm/W	6,512 lm	141 lm/W	46W				4T8
VAT24-64L-U-XX	6,686 lm	135 lm/W	7,092 lm	143 lm/W	6,895 lm	139 lm/W	50W				2T5
VAT24-70L-U-XX	7,323 lm	131 lm/W	7,759 lm	145 lm/W	7,555 lm	136 lm/W	56W				2T5

<sup>1</sup>Values are nominal, see IES file for more detail

<sup>2</sup>Electrical data at 25C (77F). Actual wattage may differ by +/-10%

## SPECIFICATIONS

### CONSTRUCTION

Steel housing white finish body for rigidity, durability and ease of installation. Matte white post paint finish for uniform indirect illumination. Designed to achieve maximum performance and improved aesthetics.

### ELECTRICAL

Class 2 LED light engine for high efficacy and long life. Calculated L70 > 100,000 hrs. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient. Power Factor > 0.90. Standard 120-277 Vac 0-10V dimmable (10%-100%) with optional 347 Vac step down transformer. Optional emergency battery backups available to meet critical life safety lighting requirements. Lumen and CCT Selectable fixtures allow for ease of adjustment with switches located on top side of driver. Lumen Selectable fixtures ship at the highest lumen output. CCT Selectable fixtures ship at 3000K.

### INSTALLATION

VAT fits into standard 15/16" & 16/16" T-grid ceiling. Optional Flange Kit (FLGK) for recessed drywall mounting & Surface Mount (SM) to ceiling mount options available. Access plate installed on top of fixture for easy hardwire power connections. Optional factory installed power flex conduit whip (WHIP) available to reduce electrical installation time.

### OPTICS

Standard high transmission PMMA frosted polycarbonate lens. Field removeable lens for easy access to LED boards, drivers and maintenance.

### CONTROLS

Factory installed advanced sensor options available. Sensor mounts within the body of the fixture, see controls page for more detail (pg.3). Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide. Inquire with manufacturer for more controls options, including customer supplied items.

### CERTIFICATIONS

ETL listed to US and Canadian safety standards. Suitable for insulation contact with Type IC rated. Suitable for damp locations. Title 24 Compliant with sensor option; see local ordinance for qualification information. DLC (DesignLights Consortium) Premium Qualified. Please refer to the DLC Qualified Products List at [www.Designlights.org/QPL](http://www.Designlights.org/QPL) to confirm specific product qualifications.

### WARRANTY

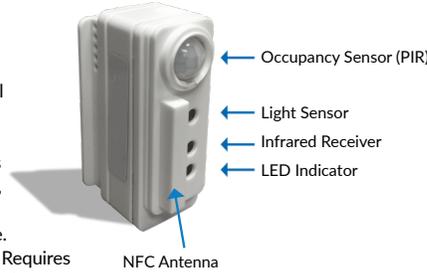
5 Year Warranty (Terms and Conditions apply)

## ADVANCED CONTROLS OPTIONS

### EASYSENSE

#### ES

EasySense sensor combines occupancy sensing, daylight harvesting & institutional tuning in one compact solution. This is an ideal control for any commercial application. Each sensor allows you to turn on/off occupancy and/or daylight harvesting functions as well as set the full light output, background light level, occupancy prolong time, occupancy grace fading time and occupancy time out/hold time. Ability to place up to 40 fixtures in one group. Requires use of EasySense Pre-Programmed Control Device (ES/PCD), or approved phone from compatibility list; one needed per project. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### ES/PCD

Pre-Programmed EasySense Control Device. One needed per project. Sensor can also be programmed with the approved compatible cell phone (listed to the right).

#### Compatible Cell Phones:

- LG G3
- LG G Vista
- LG G4
- Samsung S5
- Samsung S5 WHT
- Samsung Note 4
- Samsung Note Edge
- Samsung Galaxy S7 Edge
- Samsung Galaxy J3
- Samsung Galaxy J7
- Samsung S8
- Samsung Galaxy S9
- Nexus 5X
- Nexus 6P

#### ES/WWS/DR

Optional Wireless / Batteryless Dual Rocker Wall Switch. Up to 100ft range. Functions include: On/Off, dimming and setting of (2) scenes for full room control.



#### Specifications:

- Wireless
- Batteryless
- Dual Rocker
- ZigBee®
- 30 - 100ft Range

#### Functions:

1. On (Hold to brighten up)
2. Off (Hold to dim down)
3. Scene 1
4. Scene 2

### LUTRON VIVE

#### VDO

Vive DFCSJ-OEM-OCC integral fixture control sensor with daylight & occupancy. Vive provides intuitive programming allowing for maximum flexibility with wireless communication and sensing as desired. Lutron system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### VRF

Vive DFCSJ-OEM-RF integral fixture control with Radio Frequency (RF) communication. Vive provides intuitive programming allowing for maximum flexibility with wireless communication as desired. Lutron system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



### ENLIGHTED

#### 5E/2W/IL

Bundled System with Enlighted 5E sensor (SU-5E-IL), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes ability to group fixtures together and connect to a switch to zone fixtures for group operation. Provided with factory installed components only. Enlighted system not required for commissioning. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### 5E/2W/CL

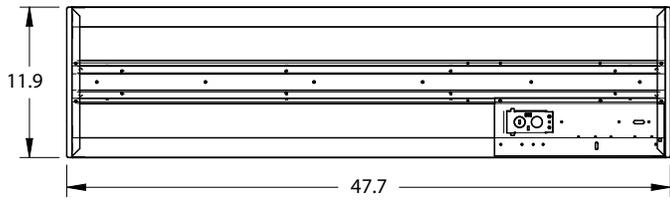
Bundled System with Enlighted 5E sensor (SU-5E-CL), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. The Energy Manager provides data analysis for all data collected by the Enlighted Smart Sensors for energy, occupancy and environment. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.

#### 5E/2W/IOT

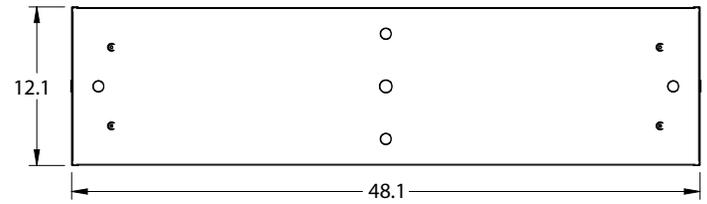
Bundled System with Enlighted 5E sensor (SU-5E-IOT), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. Energy Manager provides data analysis for all data collected by Enlighted Smart Sensors for energy, occupancy & environment. Additionally, the IOT functionality takes the data access and function beyond just lighting to a wide range of applications beyond the standard connected lighting controls. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.

### LINE DRAWINGS

#### 1x4 Dimensions

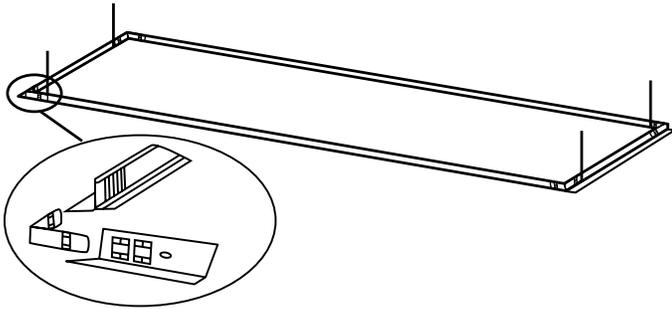


#### 1x4 Surface Mount Dimensions

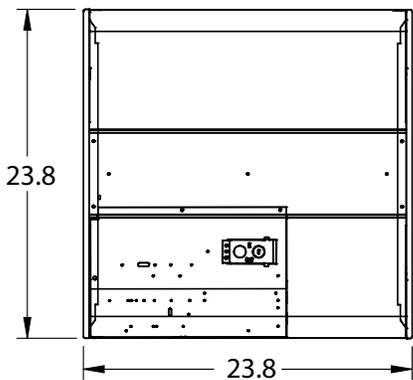


#### 1x4 Flange Kit

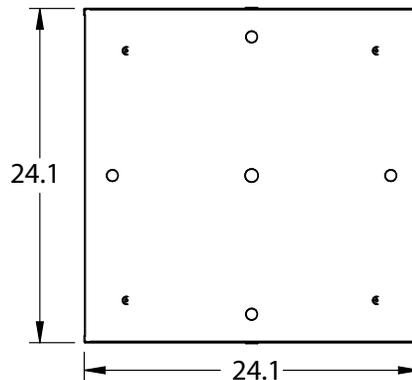
Ceiling opening is 12.25" x 48.25"



#### 2x2 Dimensions

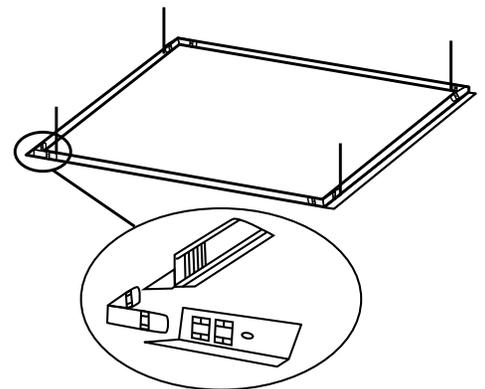


#### 2x2 Surface Mount Dimensions



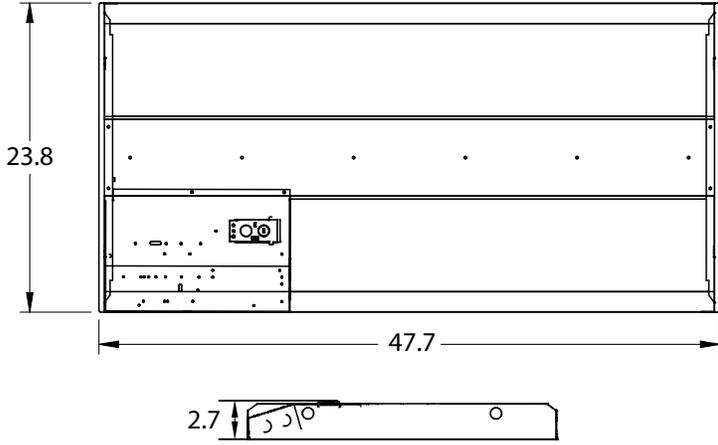
#### 2x2 Flange Kit

Ceiling opening is 24.25" x 24.25"

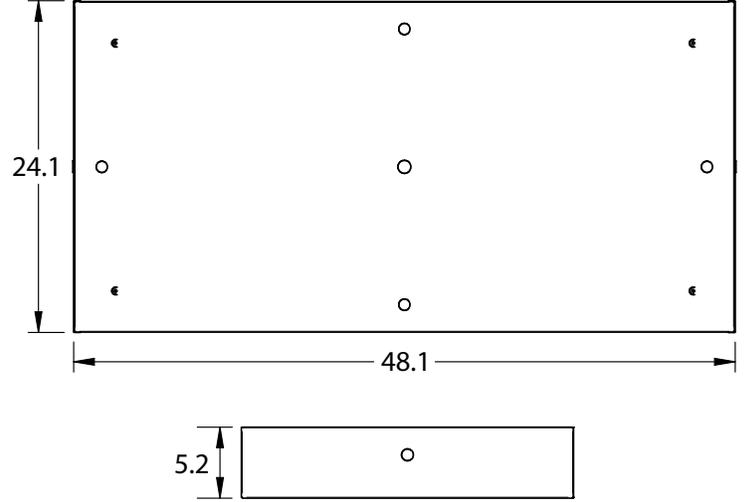


### LINE DRAWINGS

#### 2x4 Dimensions

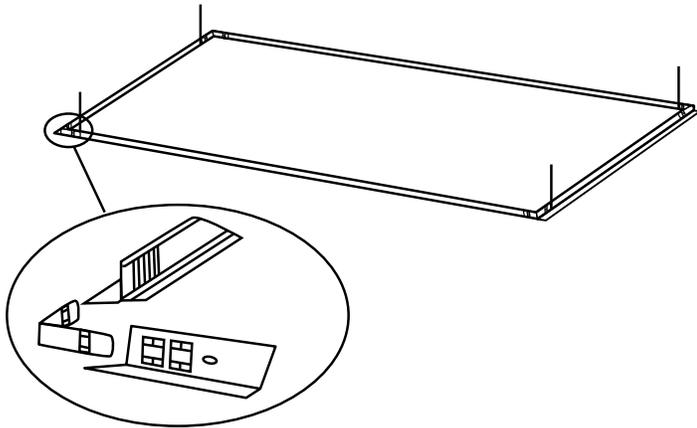


#### 2x4 Surface Mount Dimensions



#### 2x4 Flange Kit

Ceiling opening is 24.25" x 48.25"

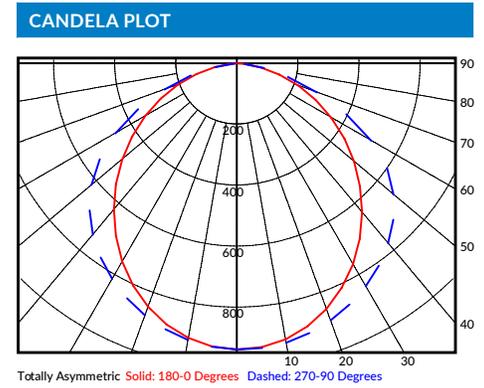


# Volumetric Adjustable Troffer

## PHOTOMETRIC DATA

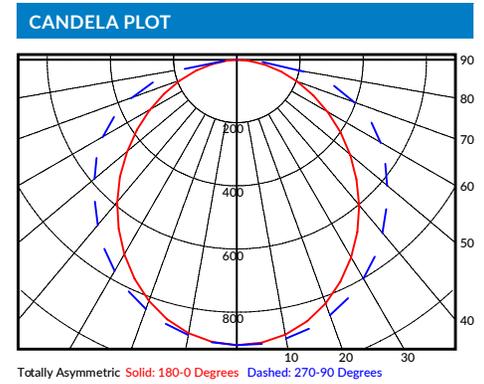
LUMINAIRE DATA	
Part Number	VAT14-25L-U-40
Description	1x4 Volumetric Adjustable Troffer, 2,768 Lumens, 4000K
Fixture Lumens (lm)	2,768 lm
Wattage (W)	20 W
Efficacy (lm/W)	141 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,194	44%
0° - 60°	2,135	79%
0° - 90°	2,698	100%
90° - 180°	0	0%
0° - 180°	2,768	100%



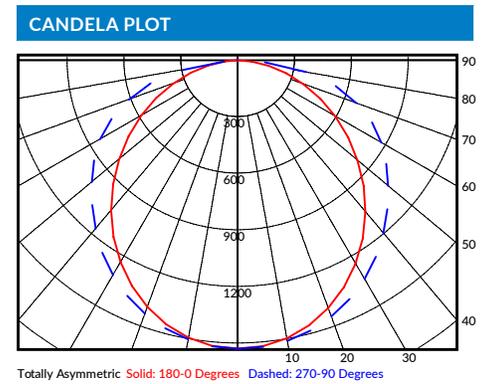
LUMINAIRE DATA	
Part Number	VAT22-25L-U-40
Description	2x2 Volumetric Adjustable Troffer, 2,738 Lumens, 4000K
Fixture Lumens (lm)	2,738 lm
Wattage (W)	19 W
Efficacy (lm/W)	142 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,136	43%
0° - 60°	2,011	76%
0° - 90°	2,656	100%
90° - 180°	0	0%
0° - 180°	2,738	100%



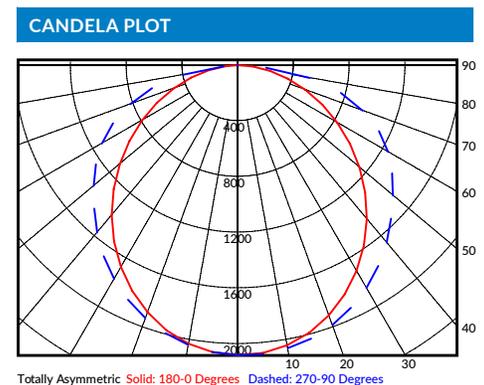
LUMINAIRE DATA	
Part Number	VAT24-43L-U-40
Description	2x4 Volumetric Adjustable Troffer, 4,755 Lumens, 4000K
Fixture Lumens (lm)	4,755 lm
Wattage (W)	33 W
Efficacy (lm/W)	143 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,936	42%
0° - 60°	3,451	75%
0° - 90°	4,605	100%
90° - 180°	0	0%
0° - 180°	4,755	100%



LUMINAIRE DATA	
Part Number	VAT24-60L-U-40
Description	2x4 Volumetric Adjustable Troffer, 6,512 Lumens, 4000K
Fixture Lumens (lm)	6,512 lm
Wattage (W)	46 W
Efficacy (lm/W)	141 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	2,638	42%
0° - 60°	4,712	75%
0° - 90°	6,309	100%
90° - 180°	0	0%
0° - 180°	6,512	100%





VAT

# Volumetric Adjustable Troffer



407-478-3759  
www.ilp-inc.com

## FEATURES

- Highly Versatile Volumetric Center Basket Troffer
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- 1x4, 2x2 & 2x4 Sizes
- Recessed, Surface & Flange Mount Options
- Field Selectable or Factory Set Lumen Output
  - 2,500 to 7,500 Lumen Range
- Field Selectable or Factory Set CCT
  - 3000K, 3500K & 4000K CCT
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  - Fixture maintains CCT Selectable Function
- High Efficacy—Up to 148 lm/W
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- ETL Listed
- DesignLights Consortium® Premium Qualified Luminaire



## SUITABLE APPLICATIONS

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- Healthcare
- Commercial Office
- Storage Facility
- Retail
- Grocery Store

## ORDERING GUIDE:

SERIES	LUMENS (select one)	DRIVER	CCT
VAT14 1x4 Volumetric Troffer	25L/32L/38L - Lumen Selectable 25L 32L 38L	U 120-277V	CCTS - CCT Selectable 30K - 35K - 40K 40 35 30
VAT22 2x2 Volumetric Troffer	25L/31L/36L - Lumen Selectable 25L 31L 36L		
VAT24 2x4 Volumetric Troffer	43L/48L/54L - Lumen Selectable 43L 48L 54L 60L/64L/70L - Lumen Selectable 60L 64L 70L		

OPTIONS		CONTROLS	
Factory Installed		Advanced	
SR	Sensor Ready Driver	ES <sup>4,5,6</sup>	EasySense Grouping Sensor
BLD <sup>7</sup>	Bi-Level Dimming Driver (100% / 50%) w/ two hot leads	5E/2W/IL <sup>4,6</sup>	Enlighted 5E Two Wire Individual Lighting (IL) Sensor
FI/ILBCP05	5W LED Factory Installed Battery Backup	5E/2W/CL <sup>4,6</sup>	Enlighted 5E Two Wire Connected Lighting (CL) Sensor
FI/ILBCP05/HE <sup>1</sup>	5W LED Factory Installed Battery Backup	5E/2W/IOT <sup>4,6</sup>	Enlighted 5E Two Wire IOT Lighting (IOT) Sensor
FI/ILBCP07	7W LED Factory Installed Battery Backup	VDO <sup>3,4,6</sup>	Lutron Vive DFCSJ-OEM-OCC Daylight & Occupancy Sensor
FI/ILBCP07/HE <sup>1</sup>	7W LED Factory Installed Battery Backup	VRF <sup>3,4,6</sup>	Lutron Vive DFCSJ-OEM-RF Radio Frequency Only
FI/ILBCP10	10W LED Factory Installed Battery Backup		
FI/ILBCP10/HE <sup>1</sup>	10W LED Factory Installed Battery Backup		
FI/ILBCP12	12W LED Factory Installed Battery Backup		
SD347 <sup>2</sup>	347V Step Down Transformer		
WHIP/6FT	6FT MC Cable w/ 3 leads attached to power (non-dimming)		
WHIP/6FT/4WIRE	6FT MC Cable w/ 3 leads attached to power & 1 lead for battery backup (non-dimming function)		
WHIP/6FT/5WIRE	6FT MC Cable w/ 3 leads attached to power and 2 lead attached to dimming		
WHIP/6FT/6WIRE	6FT MC Cable w/ 3 leads attached to power & 2 leads to dimming and 1 to battery backup		
Ship With Accessories			
ES/PCD <sup>8</sup>	EasySense Pre-Programmed Control Device		
ES/WWS/DR	EasySense Dual Rocker Wireless Wall Switch		
SM	Surface Mount Kit		
FLGK	Flange Mount Kit		

<sup>1</sup>CET Title 20 Compliant

<sup>2</sup>Does not qualify for DLC

<sup>3</sup>View controls page for more detail (pg. 3)

<sup>4</sup>Fixture maintains CCT selectable function, if CCTS is selected in ordering guide

<sup>7</sup>120V Applications Only

<sup>5</sup>Must be used with SR Sensor Ready Driver

<sup>6</sup>Must be used with ES/PCD for commissioning

<sup>8</sup>One needed per project



# Volumetric Adjustable Troffer



## QUICK SHIP ITEMS:

SERIES	LUMENS (select one)	DRIVER	CCT
VAT14 1x4 Volumetric Troffer	25L/32L/38L - Lumen Selectable	U 120-277V	CCTS - CCT Selectable 30K - 35K - 40K
VAT22 2x2 Volumetric Troffer	25L/31L/36L - Lumen Selectable		
VAT24 2x4 Volumetric Troffer	43L/48L/54L - Lumen Selectable 60L/64L/70L - Lumen Selectable		

LED SYSTEMS INFO <sup>1</sup>	3000K		3500K		4000K		Watts <sup>2</sup>	CRI	DLC Listing	Ambient Temp. Range	Replaces
Part Numbers	Lumens	Efficacy	Lumens	Efficacy	Lumens	Efficacy					
VAT14-25L-U-XX	2,701 lm	138 lm/W	2,855 lm	146 lm/W	2,768 lm	141 lm/W	20W	>80	Premium	-4°F - 122°F	1T8
VAT14-32L-U-XX	3,323 lm	135 lm/W	3,512 lm	143 lm/W	3,406 lm	138 lm/W	25W				2T8
VAT14-38L-U-XX	3,846 lm	132 lm/W	4,062 lm	142 lm/W	3,942 lm	136 lm/W	29W				2T8
VAT22-25L-U-XX	2,659 lm	137 lm/W	2,863 lm	148 lm/W	2,738 lm	142 lm/W	19W	>80	Premium	-4°F - 122°F	2T8
VAT22-31L-U-XX	3,258 lm	135 lm/W	3,508 lm	145 lm/W	3,355 lm	139 lm/W	24W				2T8
VAT22-36L-U-XX	3,760 lm	131 lm/W	4,049 lm	141 lm/W	3,876 lm	135 lm/W	29W				3T8
VAT24-43L-U-XX	4,609 lm	139 lm/W	4,888 lm	147 lm/W	4,755 lm	143 lm/W	33W	>80	Premium	-4°F - 122°F	2T8
VAT24-48L-U-XX	5,144 lm	136 lm/W	5,457 lm	144 lm/W	5,308 lm	140 lm/W	38W				3T8
VAT24-54L-U-XX	5,826 lm	131 lm/W	6,173 lm	144 lm/W	6,014 lm	137 lm/W	43W				3T8
VAT24-60L-U-XX	6,315 lm	137 lm/W	6,698 lm	145 lm/W	6,512 lm	141 lm/W	46W				4T8
VAT24-64L-U-XX	6,686 lm	135 lm/W	7,092 lm	143 lm/W	6,895 lm	139 lm/W	50W				2T5
VAT24-70L-U-XX	7,323 lm	131 lm/W	7,759 lm	145 lm/W	7,555 lm	136 lm/W	56W				2T5

<sup>1</sup>Values are nominal, see IES file for more detail  
<sup>2</sup>Electrical data at 25C (77F). Actual wattage may differ by +/-10%

## SPECIFICATIONS

### CONSTRUCTION

Steel housing white finish body for rigidity, durability and ease of installation. Matte white post paint finish for uniform indirect illumination. Designed to achieve maximum performance and improved aesthetics.

### ELECTRICAL

Class 2 LED light engine for high efficacy and long life. Calculated L70 > 100,000 hrs. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient. Power Factor > 0.90. Standard 120-277 Vac 0-10V dimmable (10%-100%) with optional 347 Vac step down transformer. Optional emergency battery backups available to meet critical life safety lighting requirements. Lumen and CCT Selectable fixtures allow for ease of adjustment with switches located on top side of driver. Lumen Selectable fixtures ship at the highest lumen output. CCT Selectable fixtures ship at 3000K.

### INSTALLATION

VAT fits into standard 15/16" & 16/16" T-grid ceiling. Optional Flange Kit (FLGK) for recessed drywall mounting & Surface Mount (SM) to ceiling mount options available. Access plate installed on top of fixture for easy hardwire power connections. Optional factory installed power flex conduit whip (WHIP) available to reduce electrical installation time.

### OPTICS

Standard high transmission PMMA frosted polycarbonate lens. Field removeable lens for easy access to LED boards, drivers and maintenance.

### CONTROLS

Factory installed advanced sensor options available. Sensor mounts within the body of the fixture, see controls page for more detail (pg.3). Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide. Inquire with manufacturer for more controls options, including customer supplied items.

### CERTIFICATIONS

ETL listed to US and Canadian safety standards. Suitable for insulation contact with Type IC rated. Suitable for damp locations. Title 24 Compliant with sensor option; see local ordinance for qualification information. DLC (DesignLights Consortium) Premium Qualified. Please refer to the DLC Qualified Products List at [www.Designlights.org/QPL](http://www.Designlights.org/QPL) to confirm specific product qualifications.

### WARRANTY

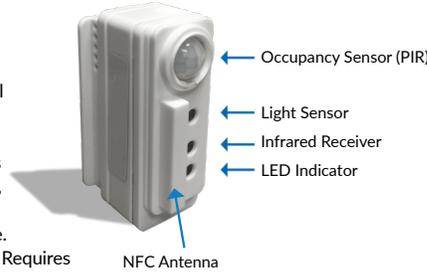
5 Year Warranty (Terms and Conditions apply)

## ADVANCED CONTROLS OPTIONS

### EASYSENSE

#### ES

EasySense sensor combines occupancy sensing, daylight harvesting & institutional tuning in one compact solution. This is an ideal control for any commercial application. Each sensor allows you to turn on/off occupancy and/or daylight harvesting functions as well as set the full light output, background light level, occupancy prolong time, occupancy grace fading time and occupancy time out/hold time. Ability to place up to 40 fixtures in one group. Requires use of EasySense Pre-Programmed Control Device (ES/PCD), or approved phone from compatibility list; one needed per project. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### ES/PCD

Pre-Programmed EasySense Control Device. One needed per project. Sensor can also be programmed with the approved compatible cell phone (listed to the right).

#### Compatible Cell Phones:

- LG G3
- LG G Vista
- LG G4
- Samsung S5
- Samsung S5 WHT
- Samsung Note 4
- Samsung Note Edge
- Samsung Galaxy S7 Edge
- Samsung Galaxy J3
- Samsung Galaxy J7
- Samsung S8
- Samsung Galaxy S9
- Nexus 5X
- Nexus 6P

#### ES/WWS/DR

Optional Wireless / Batteryless Dual Rocker Wall Switch. Up to 100ft range. Functions include: On/Off, dimming and setting of (2) scenes for full room control.



#### Specifications:

- Wireless
- Batteryless
- Dual Rocker
- ZigBee®
- 30 - 100ft Range

#### Functions:

1. On (Hold to brighten up)
2. Off (Hold to dim down)
3. Scene 1
4. Scene 2

### LUTRON VIVE

#### VDO

Vive DFCSJ-OEM-OCC integral fixture control sensor with daylight & occupancy. Vive provides intuitive programming allowing for maximum flexibility with wireless communication and sensing as desired. Lutron system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### VRF

Vive DFCSJ-OEM-RF integral fixture control with Radio Frequency (RF) communication. Vive provides intuitive programming allowing for maximum flexibility with wireless communication as desired. Lutron system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



### ENLIGHTED

#### 5E/2W/IL

Bundled System with Enlighted 5E sensor (SU-5E-IL), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes ability to group fixtures together and connect to a switch to zone fixtures for group operation. Provided with factory installed components only. Enlighted system not required for commissioning. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### 5E/2W/CL

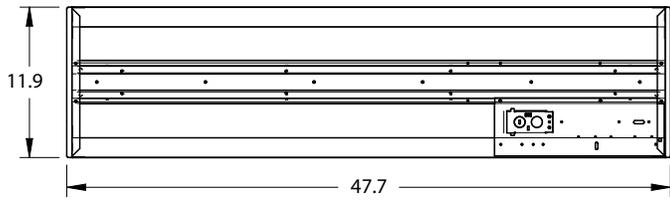
Bundled System with Enlighted 5E sensor (SU-5E-CL), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. The Energy Manager provides data analysis for all data collected by the Enlighted Smart Sensors for energy, occupancy and environment. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.

#### 5E/2W/IOT

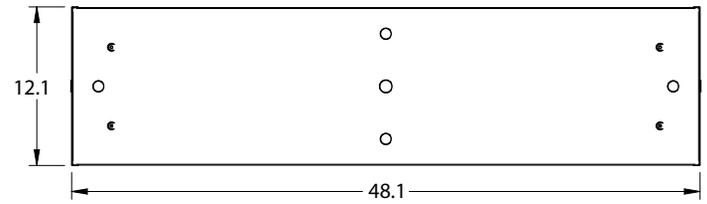
Bundled System with Enlighted 5E sensor (SU-5E-IOT), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. Energy Manager provides data analysis for all data collected by Enlighted Smart Sensors for energy, occupancy & environment. Additionally, the IOT functionality takes the data access and function beyond just lighting to a wide range of applications beyond the standard connected lighting controls. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.

### LINE DRAWINGS

#### 1x4 Dimensions

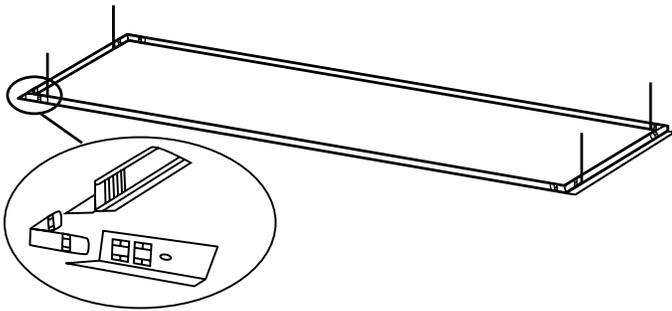


#### 1x4 Surface Mount Dimensions

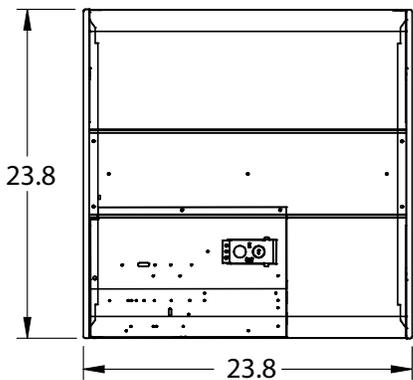


#### 1x4 Flange Kit

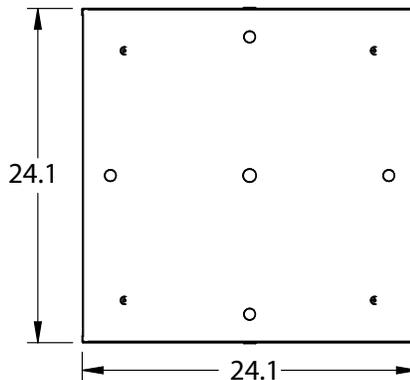
Ceiling opening is 12.25" x 48.25"



#### 2x2 Dimensions

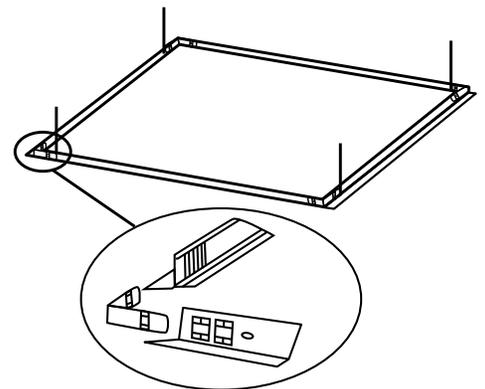


#### 2x2 Surface Mount Dimensions



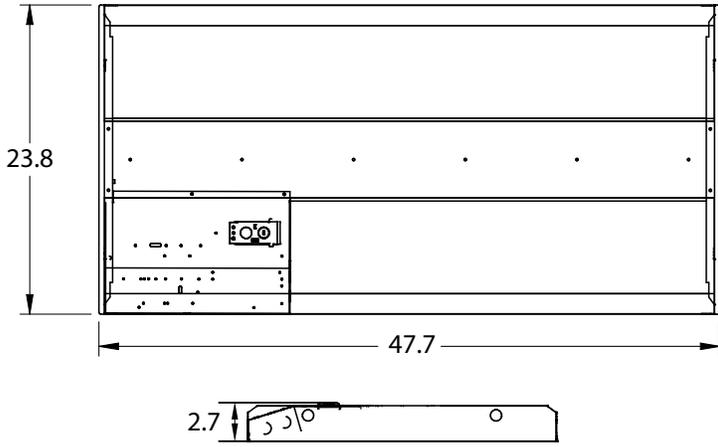
#### 2x2 Flange Kit

Ceiling opening is 24.25" x 24.25"

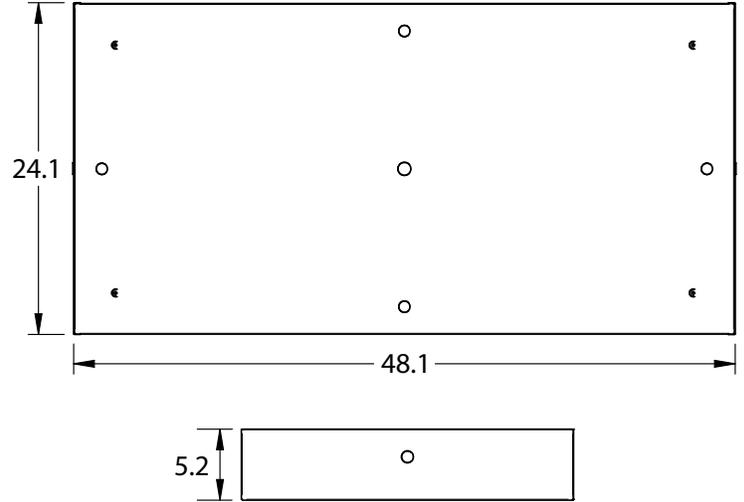


### LINE DRAWINGS

#### 2x4 Dimensions

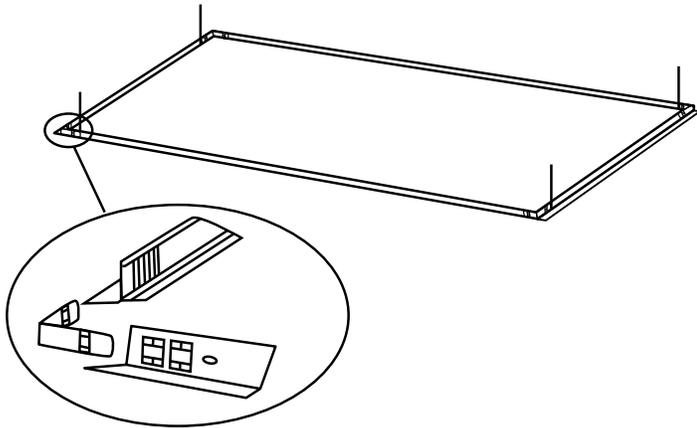


#### 2x4 Surface Mount Dimensions



#### 2x4 Flange Kit

Ceiling opening is 24.25" x 48.25"

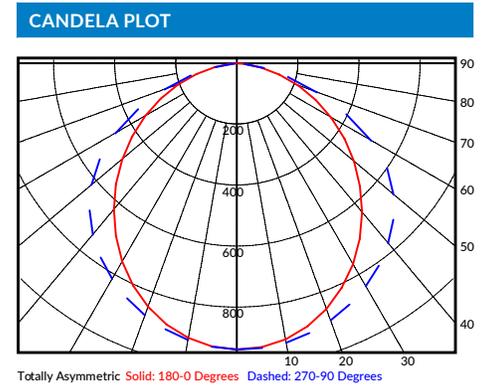


# Volumetric Adjustable Troffer

## PHOTOMETRIC DATA

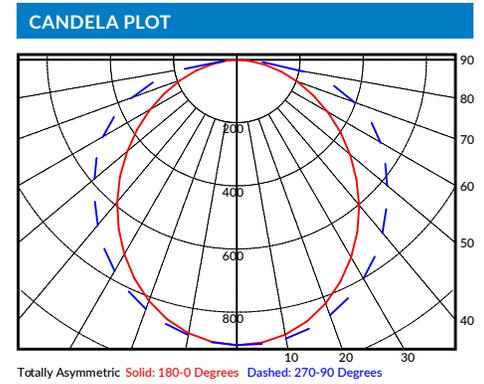
LUMINAIRE DATA	
Part Number	VAT14-25L-U-40
Description	1x4 Volumetric Adjustable Troffer, 2,768 Lumens, 4000K
Fixture Lumens (lm)	2,768 lm
Wattage (W)	20 W
Efficacy (lm/W)	141 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,194	44%
0° - 60°	2,135	79%
0° - 90°	2,698	100%
90° - 180°	0	0%
0° - 180°	2,768	100%



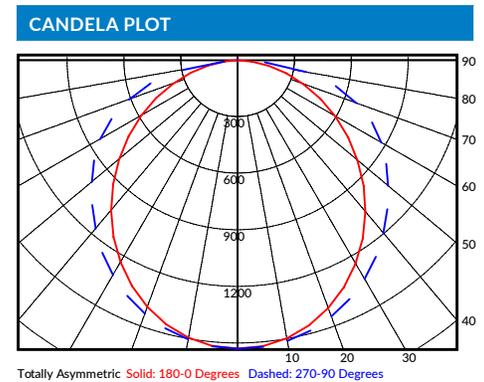
LUMINAIRE DATA	
Part Number	VAT22-25L-U-40
Description	2x2 Volumetric Adjustable Troffer, 2,738 Lumens, 4000K
Fixture Lumens (lm)	2,738 lm
Wattage (W)	19 W
Efficacy (lm/W)	142 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,136	43%
0° - 60°	2,011	76%
0° - 90°	2,656	100%
90° - 180°	0	0%
0° - 180°	2,738	100%



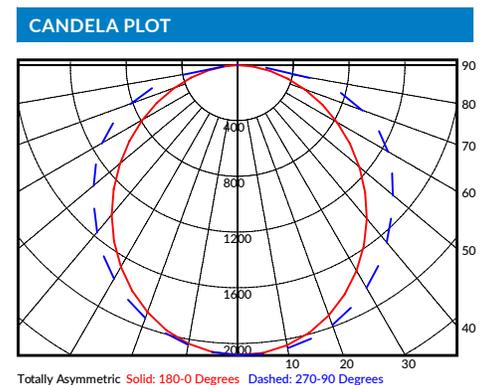
LUMINAIRE DATA	
Part Number	VAT24-43L-U-40
Description	2x4 Volumetric Adjustable Troffer, 4,755 Lumens, 4000K
Fixture Lumens (lm)	4,755 lm
Wattage (W)	33 W
Efficacy (lm/W)	143 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,936	42%
0° - 60°	3,451	75%
0° - 90°	4,605	100%
90° - 180°	0	0%
0° - 180°	4,755	100%



LUMINAIRE DATA	
Part Number	VAT24-60L-U-40
Description	2x4 Volumetric Adjustable Troffer, 6,512 Lumens, 4000K
Fixture Lumens (lm)	6,512 lm
Wattage (W)	46 W
Efficacy (lm/W)	141 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	2,638	42%
0° - 60°	4,712	75%
0° - 90°	6,309	100%
90° - 180°	0	0%
0° - 180°	6,512	100%



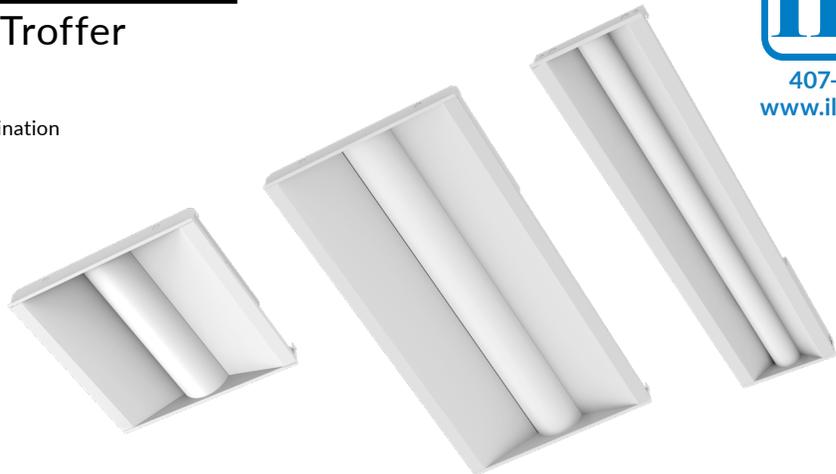


VAT

# Volumetric Adjustable Troffer



407-478-3759  
www.ilp-inc.com



## FEATURES

- Highly Versatile Volumetric Center Basket Troffer
- Matte White Post Paint Finish for Uniform Indirect Illumination
- High Transmission PMMA Frosted Polycarbonate Lens
- 1x4, 2x2 & 2x4 Sizes
- Recessed, Surface & Flange Mount Options
- Field Selectable or Factory Set Lumen Output
  - 2,500 to 7,500 Lumen Range
- Field Selectable or Factory Set CCT
  - 3000K, 3500K & 4000K CCT
- Advanced Wireless Controls Options
  - Fixture maintains CCT Selectable Function
- High Efficacy—Up to 148 lm/W
- >80 Color Rendering Index (CRI)
- Calculated L70 > 100,000 Hrs
- 120-277V Universal Dimming Driver (100%–10%)
- 5 Year Warranty
- ETL Listed
- DesignLights Consortium® Premium Qualified Luminaire



## SUITABLE APPLICATIONS

- Education
- Healthcare
- Commercial Office
- Storage Facility
- Retail
- Grocery Store

## ORDERING GUIDE:

SERIES	LUMENS (select one)	DRIVER	CCT
VAT14 1x4 Volumetric Troffer	25L/32L/38L - Lumen Selectable 25L 32L 38L	U 120-277V	CCTS - CCT Selectable 30K - 35K - 40K 40 35 30
VAT22 2x2 Volumetric Troffer	25L/31L/36L - Lumen Selectable 25L 31L 36L		
VAT24 2x4 Volumetric Troffer	43L/48L/54L - Lumen Selectable 43L 48L 54L 60L/64L/70L - Lumen Selectable 60L 64L 70L		

OPTIONS		CONTROLS	
Factory Installed		Advanced	
SR	Sensor Ready Driver	ES <sup>4,5,6</sup>	EasySense Grouping Sensor
BLD <sup>7</sup>	Bi-Level Dimming Driver (100% / 50%) w/ two hot leads	5E/2W/IL <sup>4,6</sup>	Enlighted 5E Two Wire Individual Lighting (IL) Sensor
FI/ILBCP05	5W LED Factory Installed Battery Backup	5E/2W/CL <sup>4,6</sup>	Enlighted 5E Two Wire Connected Lighting (CL) Sensor
FI/ILBCP05/HE <sup>1</sup>	5W LED Factory Installed Battery Backup	5E/2W/IOT <sup>4,6</sup>	Enlighted 5E Two Wire IOT Lighting (IOT) Sensor
FI/ILBCP07	7W LED Factory Installed Battery Backup	VDO <sup>3,4,6</sup>	Lutron Vive DFCSJ-OEM-OCC Daylight & Occupancy Sensor
FI/ILBCP07/HE <sup>1</sup>	7W LED Factory Installed Battery Backup	VRF <sup>3,4,6</sup>	Lutron Vive DFCSJ-OEM-RF Radio Frequency Only
FI/ILBCP10	10W LED Factory Installed Battery Backup		
FI/ILBCP10/HE <sup>1</sup>	10W LED Factory Installed Battery Backup		
FI/ILBCP12	12W LED Factory Installed Battery Backup		
SD347 <sup>2</sup>	347V Step Down Transformer		
WHIP/6FT	6FT MC Cable w/ 3 leads attached to power (non-dimming)		
WHIP/6FT/4WIRE	6FT MC Cable w/ 3 leads attached to power & 1 lead for battery backup (non-dimming function)		
WHIP/6FT/5WIRE	6FT MC Cable w/ 3 leads attached to power and 2 lead attached to dimming		
WHIP/6FT/6WIRE	6FT MC Cable w/ 3 leads attached to power & 2 leads to dimming and 1 to battery backup		
Ship With Accessories			
ES/PCD <sup>8</sup>	EasySense Pre-Programmed Control Device		
ES/WWS/DR	EasySense Dual Rocker Wireless Wall Switch		
SM	Surface Mount Kit		
FLGK	Flange Mount Kit		

\*ULTRANR - UL Transfer Device

<sup>1</sup>CEC Title 20 Compliant

<sup>2</sup>Does not qualify for DLC

<sup>4</sup>View controls page for more detail (pg. 3)

<sup>6</sup>Fixture maintains CCT selectable function,

<sup>7</sup>120V Applications Only

<sup>3</sup>Must be used with SR Sensor Ready Driver

<sup>5</sup>Must be used with ES/PCD for commissioning

if CCTS is selected in ordering guide

<sup>8</sup>One needed per project



# Volumetric Adjustable Troffer



## QUICK SHIP ITEMS:

SERIES	LUMENS (select one)	DRIVER	CCT
VAT14 1x4 Volumetric Troffer	25L/32L/38L - Lumen Selectable	U 120-277V	CCTS - CCT Selectable 30K - 35K - 40K
VAT22 2x2 Volumetric Troffer	25L/31L/36L - Lumen Selectable		
VAT24 2x4 Volumetric Troffer	43L/48L/54L - Lumen Selectable 60L/64L/70L - Lumen Selectable		

LED SYSTEMS INFO <sup>1</sup>	3000K		3500K		4000K		Watts <sup>2</sup>	CRI	DLC Listing	Ambient Temp. Range	Replaces
Part Numbers	Lumens	Efficacy	Lumens	Efficacy	Lumens	Efficacy					
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VAT14-38L-U-XX	3,846 lm	132 lm/W	4,062 lm	142 lm/W	3,942 lm	136 lm/W	29W				2T8
VAT22-25L-U-XX	2,659 lm	137 lm/W	2,863 lm	148 lm/W	2,738 lm	142 lm/W	19W	>80	Premium	-4°F - 122°F	2T8
VAT22-31L-U-XX	3,258 lm	135 lm/W	3,508 lm	145 lm/W	3,355 lm	139 lm/W	24W				2T8
VAT22-36L-U-XX	3,760 lm	131 lm/W	4,049 lm	141 lm/W	3,876 lm	135 lm/W	29W				3T8
VAT24-43L-U-XX	4,609 lm	139 lm/W	4,888 lm	147 lm/W	4,755 lm	143 lm/W	33W	>80	Premium	-4°F - 122°F	2T8
VAT24-48L-U-XX	5,144 lm	136 lm/W	5,457 lm	144 lm/W	5,308 lm	140 lm/W	38W				3T8
VAT24-54L-U-XX	5,826 lm	131 lm/W	6,173 lm	144 lm/W	6,014 lm	137 lm/W	43W				3T8
VAT24-60L-U-XX	6,315 lm	137 lm/W	6,698 lm	145 lm/W	6,512 lm	141 lm/W	46W				4T8
VAT24-64L-U-XX	6,686 lm	135 lm/W	7,092 lm	143 lm/W	6,895 lm	139 lm/W	50W				2T5
VAT24-70L-U-XX	7,323 lm	131 lm/W	7,759 lm	145 lm/W	7,555 lm	136 lm/W	56W				2T5

<sup>1</sup>Values are nominal, see IES file for more detail  
<sup>2</sup>Electrical data at 25C (77F). Actual wattage may differ by +/-10%

## SPECIFICATIONS

### CONSTRUCTION

Steel housing white finish body for rigidity, durability and ease of installation. Matte white post paint finish for uniform indirect illumination. Designed to achieve maximum performance and improved aesthetics.

### ELECTRICAL

Class 2 LED light engine for high efficacy and long life. Calculated L70 > 100,000 hrs. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient. Power Factor > 0.90. Standard 120-277 Vac 0-10V dimmable (10%-100%) with optional 347 Vac step down transformer. Optional emergency battery backups available to meet critical life safety lighting requirements. Lumen and CCT Selectable fixtures allow for ease of adjustment with switches located on top side of driver. Lumen Selectable fixtures ship at the highest lumen output. CCT Selectable fixtures ship at 3000K.

### INSTALLATION

VAT fits into standard 15/16" & 16/16" T-grid ceiling. Optional Flange Kit (FLGK) for recessed drywall mounting & Surface Mount (SM) to ceiling mount options available. Access plate installed on top of fixture for easy hardwire power connections. Optional factory installed power flex conduit whip (WHIP) available to reduce electrical installation time.

### OPTICS

Standard high transmission PMMA frosted polycarbonate lens. Field removeable lens for easy access to LED boards, drivers and maintenance.

### CONTROLS

Factory installed advanced sensor options available. Sensor mounts within the body of the fixture, see controls page for more detail (pg.3). Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide. Inquire with manufacturer for more controls options, including customer supplied items.

### CERTIFICATIONS

ETL listed to US and Canadian safety standards. Suitable for insulation contact with Type IC rated. Suitable for damp locations. Title 24 Compliant with sensor option; see local ordinance for qualification information. DLC (DesignLights Consortium) Premium Qualified. Please refer to the DLC Qualified Products List at [www.Designlights.org/QPL](http://www.Designlights.org/QPL) to confirm specific product qualifications.

### WARRANTY

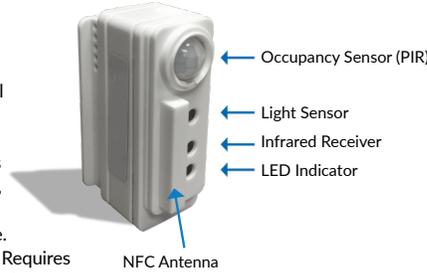
5 Year Warranty (Terms and Conditions apply)

## ADVANCED CONTROLS OPTIONS

### EASYSENSE

#### ES

EasySense sensor combines occupancy sensing, daylight harvesting & institutional tuning in one compact solution. This is an ideal control for any commercial application. Each sensor allows you to turn on/off occupancy and/or daylight harvesting functions as well as set the full light output, background light level, occupancy prolong time, occupancy grace fading time and occupancy time out/hold time. Ability to place up to 40 fixtures in one group. Requires use of EasySense Pre-Programmed Control Device (ES/PCD), or approved phone from compatibility list; one needed per project. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### ES/PCD

Pre-Programmed EasySense Control Device. One needed per project. Sensor can also be programmed with the approved compatible cell phone (listed to the right).

#### Compatible Cell Phones:

- LG G3
- LG G Vista
- LG G4
- Samsung S5
- Samsung S5 WHT
- Samsung Note 4
- Samsung Note Edge
- Samsung Galaxy S7 Edge
- Samsung Galaxy J3
- Samsung Galaxy J7
- Samsung S8
- Samsung Galaxy S9
- Nexus 5X
- Nexus 6P

#### ES/WWS/DR

Optional Wireless / Batteryless Dual Rocker Wall Switch. Up to 100ft range. Functions include: On/Off, dimming and setting of (2) scenes for full room control.



#### Specifications:

- Wireless
- Batteryless
- Dual Rocker
- ZigBee®
- 30 - 100ft Range

#### Functions:

1. On (Hold to brighten up)
2. Off (Hold to dim down)
3. Scene 1
4. Scene 2

### LUTRON VIVE

#### VDO

Vive DFCSJ-OEM-OCC integral fixture control sensor with daylight & occupancy. Vive provides intuitive programming allowing for maximum flexibility with wireless communication and sensing as desired. Lutron system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### VRF

Vive DFCSJ-OEM-RF integral fixture control with Radio Frequency (RF) communication. Vive provides intuitive programming allowing for maximum flexibility with wireless communication as desired. Lutron system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



### ENLIGHTED

#### 5E/2W/IL

Bundled System with Enlighted 5E sensor (SU-5E-IL), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes ability to group fixtures together and connect to a switch to zone fixtures for group operation. Provided with factory installed components only. Enlighted system not required for commissioning. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### 5E/2W/CL

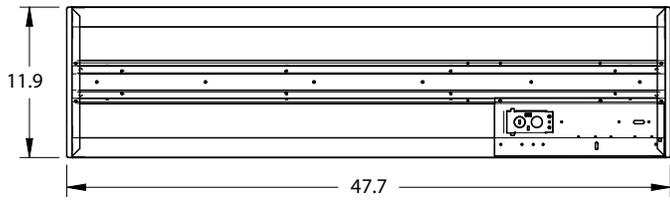
Bundled System with Enlighted 5E sensor (SU-5E-CL), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. The Energy Manager provides data analysis for all data collected by the Enlighted Smart Sensors for energy, occupancy and environment. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.

#### 5E/2W/IOT

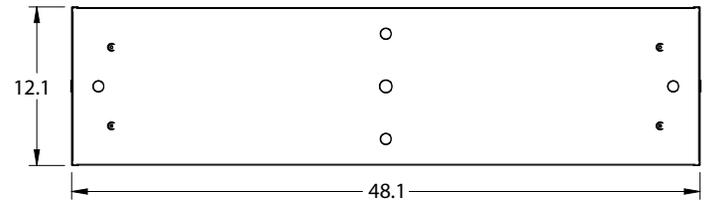
Bundled System with Enlighted 5E sensor (SU-5E-IOT), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. Energy Manager provides data analysis for all data collected by Enlighted Smart Sensors for energy, occupancy & environment. Additionally, the IOT functionality takes the data access and function beyond just lighting to a wide range of applications beyond the standard connected lighting controls. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.

### LINE DRAWINGS

#### 1x4 Dimensions

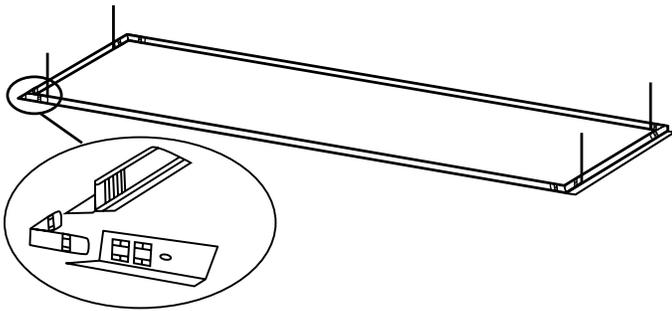


#### 1x4 Surface Mount Dimensions

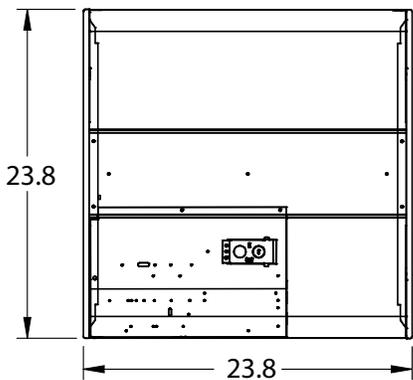


#### 1x4 Flange Kit

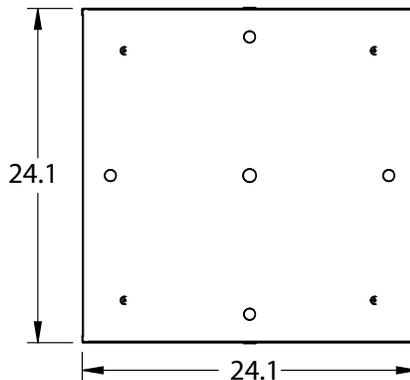
Ceiling opening is 12.25" x 48.25"



#### 2x2 Dimensions

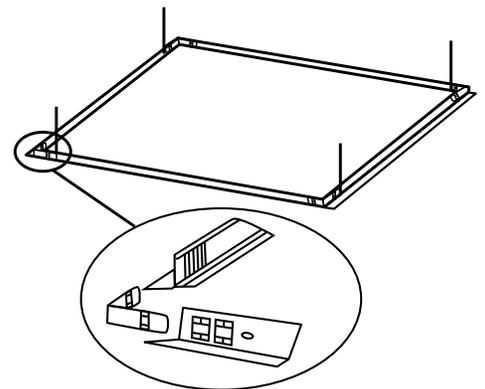


#### 2x2 Surface Mount Dimensions



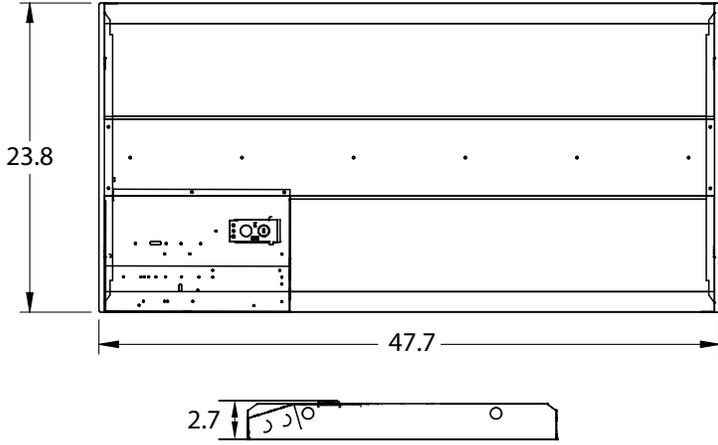
#### 2x2 Flange Kit

Ceiling opening is 24.25" x 24.25"

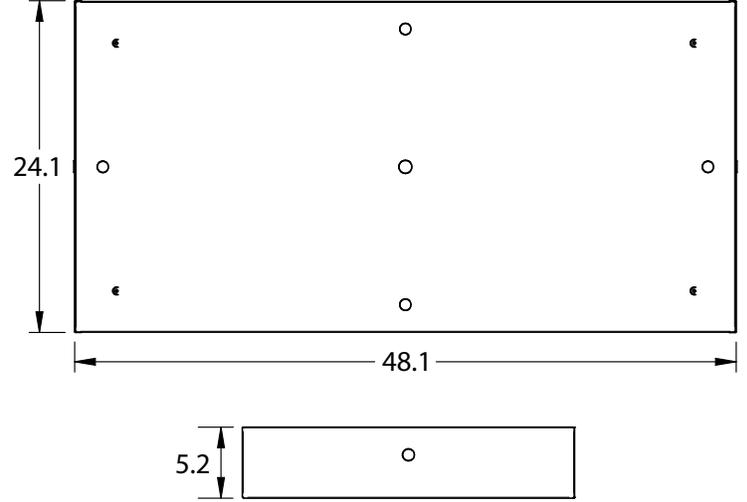


### LINE DRAWINGS

#### 2x4 Dimensions

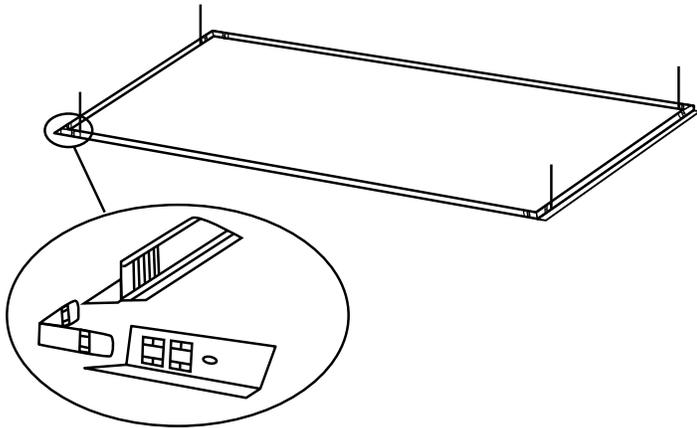


#### 2x4 Surface Mount Dimensions



#### 2x4 Flange Kit

Ceiling opening is 24.25" x 48.25"

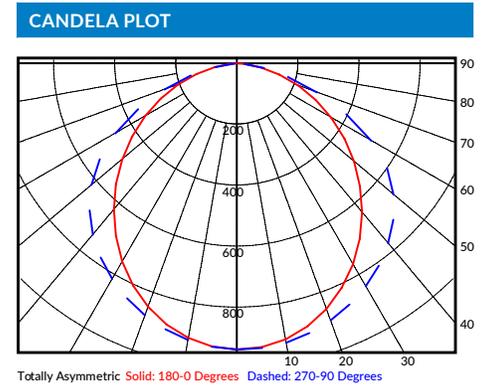


# Volumetric Adjustable Troffer

## PHOTOMETRIC DATA

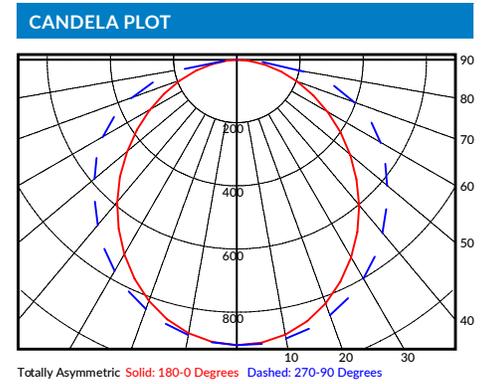
LUMINAIRE DATA	
Part Number	VAT14-25L-U-40
Description	1x4 Volumetric Adjustable Troffer, 2,768 Lumens, 4000K
Fixture Lumens (lm)	2,768 lm
Wattage (W)	20 W
Efficacy (lm/W)	141 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,194	44%
0° - 60°	2,135	79%
0° - 90°	2,698	100%
90° - 180°	0	0%
0° - 180°	2,768	100%



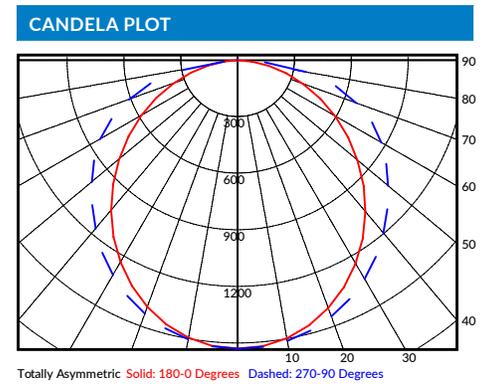
LUMINAIRE DATA	
Part Number	VAT22-25L-U-40
Description	2x2 Volumetric Adjustable Troffer, 2,738 Lumens, 4000K
Fixture Lumens (lm)	2,738 lm
Wattage (W)	19 W
Efficacy (lm/W)	142 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,136	43%
0° - 60°	2,011	76%
0° - 90°	2,656	100%
90° - 180°	0	0%
0° - 180°	2,738	100%



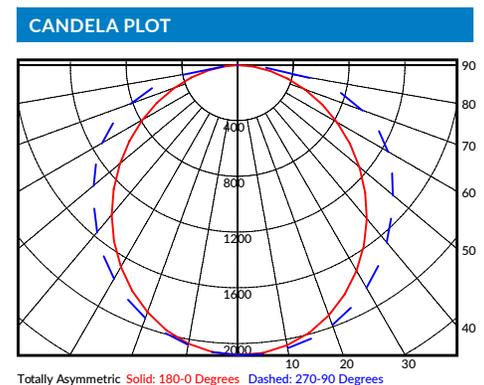
LUMINAIRE DATA	
Part Number	VAT24-43L-U-40
Description	2x4 Volumetric Adjustable Troffer, 4,755 Lumens, 4000K
Fixture Lumens (lm)	4,755 lm
Wattage (W)	33 W
Efficacy (lm/W)	143 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,936	42%
0° - 60°	3,451	75%
0° - 90°	4,605	100%
90° - 180°	0	0%
0° - 180°	4,755	100%



LUMINAIRE DATA	
Part Number	VAT24-60L-U-40
Description	2x4 Volumetric Adjustable Troffer, 6,512 Lumens, 4000K
Fixture Lumens (lm)	6,512 lm
Wattage (W)	46 W
Efficacy (lm/W)	141 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	2,638	42%
0° - 60°	4,712	75%
0° - 90°	6,309	100%
90° - 180°	0	0%
0° - 180°	6,512	100%



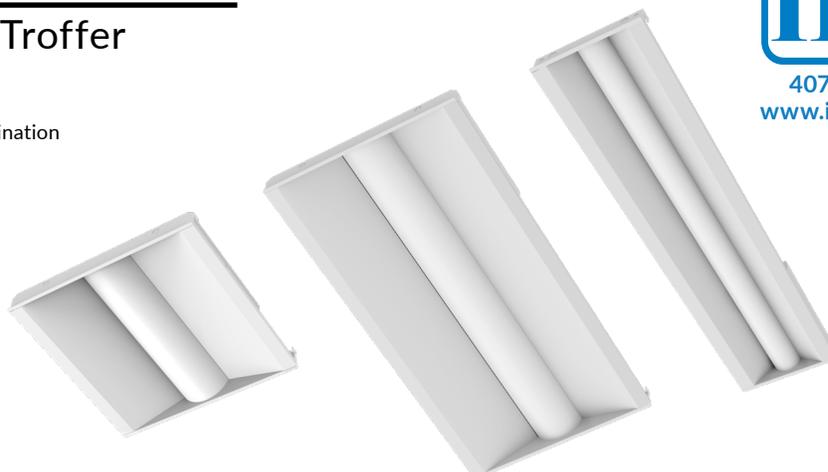


# VAT

## Volumetric Adjustable Troffer



407-478-3759  
www.ilp-inc.com



### FEATURES

- Highly Versatile Volumetric Center Basket Troffer
- Matte White Post Paint Finish for Uniform Indirect Illumination
- High Transmission PMMA Frosted Polycarbonate Lens
- 1x4, 2x2 & 2x4 Sizes
- Recessed, Surface & Flange Mount Options
- Field Selectable or Factory Set Lumen Output
  - 2,500 to 7,500 Lumen Range
- Field Selectable or Factory Set CCT
  - 3000K, 3500K & 4000K CCT
- Advanced Wireless Controls Options
  - Fixture maintains CCT Selectable Function
- High Efficacy—Up to 148 lm/W
- >80 Color Rendering Index (CRI)
- Calculated L70 > 100,000 Hrs
- 120-277V Universal Dimming Driver (100%–10%)
- 5 Year Warranty
- ETL Listed
- DesignLights Consortium® Premium Qualified Luminaire



### SUITABLE APPLICATIONS

- Education
- Healthcare
- Commercial Office
- Storage Facility
- Retail
- Grocery Store

### ORDERING GUIDE:

SERIES	LUMENS (select one)	DRIVER	CCT
VAT14 1x4 Volumetric Troffer	25L/32L/38L - Lumen Selectable	U 120-277V	CCTS - CCT Selectable 30K - 35K - 40K
	25L		40
	32L		35
	38L		30
VAT22 2x2 Volumetric Troffer	25L/31L/36L - Lumen Selectable		
	25L		
	31L		
	36L		
VAT24 2x4 Volumetric Troffer	43L/48L/54L - Lumen Selectable		
	43L		
	48L		
	54L		
	60L/64L/70L - Lumen Selectable		
	60L		
	64L/70L		

OPTIONS	CONTROLS
Factory Installed	Advanced
SR Sensor Ready Driver	ES <sup>4,5,6</sup> EasySense Grouping Sensor
BLD <sup>7</sup> Bi-Level Dimming Driver (100% / 50%) w/ two hot leads	5E/2W/IL <sup>4,6</sup> Enlighted 5E Two Wire Individual Lighting (IL) Sensor
FI/ILBCP05 5W LED Factory Installed Battery Backup	5E/2W/CL <sup>4,6</sup> Enlighted 5E Two Wire Connected Lighting (CL) Sensor
FI/ILBCP05/HE <sup>1</sup> 5W LED Factory Installed Battery Backup	5E/2W/IOT <sup>4,6</sup> Enlighted 5E Two Wire IOT Lighting (IOT) Sensor
FI/ILBCP07 7W LED Factory Installed Battery Backup	VDO <sup>3,4,6</sup> Lutron Vive DFCSJ-OEM-OCC Daylight & Occupancy Sensor
FI/ILBCP07/HE <sup>1</sup> 7W LED Factory Installed Battery Backup	VRF <sup>3,4,6</sup> Lutron Vive DFCSJ-OEM-RF Radio Frequency Only
FI/ILBCP10 10W LED Factory Installed Battery Backup	
FI/ILBCP10/HE <sup>1</sup> 10W LED Factory Installed Battery Backup	
FI/ILBCP12 12W LED Factory Installed Battery Backup	
SD347 <sup>2</sup> 347V Step Down Transformer	
WHIP/6FT 6FT MC Cable w/ 3 leads attached to power (non-dimming)	
WHIP/6FT/4WIRE 6FT MC Cable w/ 3 leads attached to power & 1 lead for battery backup (non-dimming function)	
WHIP/6FT/5WIRE 6FT MC Cable w/ 3 leads attached to power and 2 lead attached to dimming	
WHIP/6FT/6WIRE 6FT MC Cable w/ 3 leads attached to power & 2 leads to dimming and 1 to battery backup	
Ship With Accessories	
ES/PCD <sup>8</sup> EasySense Pre-Programmed Control Device	
ES/WWS/DR EasySense Dual Rocker Wireless Wall Switch	
SM Surface Mount Kit	
FLGK Flange Mount Kit	

<sup>1</sup>CEC Title 20 Compliant    <sup>2</sup>Does not qualify for DLC    <sup>3</sup>View controls page for more detail (pg. 3)    <sup>4</sup>Fixture maintains CCT selectable function, if CCTS is selected in ordering guide    <sup>5</sup>Must be used with SR Sensor Ready Driver    <sup>6</sup>Must be used with ES/PCD for commissioning    <sup>7</sup>120V Applications Only    <sup>8</sup>One needed per project



# Volumetric Adjustable Troffer



## QUICK SHIP ITEMS:

SERIES	LUMENS (select one)	DRIVER	CCT
VAT14 1x4 Volumetric Troffer	25L/32L/38L - Lumen Selectable	U 120-277V	CCTS - CCT Selectable 30K - 35K - 40K
VAT22 2x2 Volumetric Troffer	25L/31L/36L - Lumen Selectable		
VAT24 2x4 Volumetric Troffer	43L/48L/54L - Lumen Selectable 60L/64L/70L - Lumen Selectable		

LED SYSTEMS INFO <sup>1</sup>	3000K		3500K		4000K		Watts <sup>2</sup>	CRI	DLC Listing	Ambient Temp. Range	Replaces
	Part Numbers	Lumens	Efficacy	Lumens	Efficacy	Lumens					
VAT14-25L-U-XX	2,701 lm	138 lm/W	2,855 lm	146 lm/W	2,768 lm	141 lm/W	20W	>80	Premium	-4°F - 122°F	1T8
VAT14-32L-U-XX	3,323 lm	135 lm/W	3,512 lm	143 lm/W	3,406 lm	138 lm/W	25W				2T8
VAT14-38L-U-XX	3,846 lm	132 lm/W	4,062 lm	142 lm/W	3,942 lm	136 lm/W	29W				2T8
VAT22-25L-U-XX	2,659 lm	137 lm/W	2,863 lm	148 lm/W	2,738 lm	142 lm/W	19W	>80	Premium	-4°F - 122°F	2T8
VAT22-31L-U-XX	3,258 lm	135 lm/W	3,508 lm	145 lm/W	3,355 lm	139 lm/W	24W				2T8
VAT22-36L-U-XX	3,760 lm	131 lm/W	4,049 lm	141 lm/W	3,876 lm	135 lm/W	29W				3T8
VAT24-43L-U-XX	4,609 lm	139 lm/W	4,888 lm	147 lm/W	4,755 lm	143 lm/W	33W	>80	Premium	-4°F - 122°F	2T8
VAT24-48L-U-XX	5,144 lm	136 lm/W	5,457 lm	144 lm/W	5,308 lm	140 lm/W	38W				3T8
VAT24-54L-U-XX	5,826 lm	131 lm/W	6,173 lm	144 lm/W	6,014 lm	137 lm/W	43W				3T8
VAT24-60L-U-XX	6,315 lm	137 lm/W	6,698 lm	145 lm/W	6,512 lm	141 lm/W	46W				4T8
VAT24-64L-U-XX	6,686 lm	135 lm/W	7,092 lm	143 lm/W	6,895 lm	139 lm/W	50W				2T5
VAT24-70L-U-XX	7,323 lm	131 lm/W	7,759 lm	145 lm/W	7,555 lm	136 lm/W	56W				2T5

<sup>1</sup>Values are nominal, see IES file for more detail

<sup>2</sup>Electrical data at 25C (77F). Actual wattage may differ by +/-10%

## SPECIFICATIONS

### CONSTRUCTION

Steel housing white finish body for rigidity, durability and ease of installation. Matte white post paint finish for uniform indirect illumination. Designed to achieve maximum performance and improved aesthetics.

### ELECTRICAL

Class 2 LED light engine for high efficacy and long life. Calculated L70 > 100,000 hrs. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient. Power Factor > 0.90. Standard 120-277 Vac 0-10V dimmable (10%-100%) with optional 347 Vac step down transformer. Optional emergency battery backups available to meet critical life safety lighting requirements. Lumen and CCT Selectable fixtures allow for ease of adjustment with switches located on top side of driver. Lumen Selectable fixtures ship at the highest lumen output. CCT Selectable fixtures ship at 3000K.

### INSTALLATION

VAT fits into standard 15/16" & 16/16" T-grid ceiling. Optional Flange Kit (FLGK) for recessed drywall mounting & Surface Mount (SM) to ceiling mount options available. Access plate installed on top of fixture for easy hardwire power connections. Optional factory installed power flex conduit whip (WHIP) available to reduce electrical installation time.

### OPTICS

Standard high transmission PMMA frosted polycarbonate lens. Field removeable lens for easy access to LED boards, drivers and maintenance.

### CONTROLS

Factory installed advanced sensor options available. Sensor mounts within the body of the fixture, see controls page for more detail (pg.3). Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide. Inquire with manufacturer for more controls options, including customer supplied items.

### CERTIFICATIONS

ETL listed to US and Canadian safety standards. Suitable for insulation contact with Type IC rated. Suitable for damp locations. Title 24 Compliant with sensor option; see local ordinance for qualification information. DLC (DesignLights Consortium) Premium Qualified. Please refer to the DLC Qualified Products List at [www.Designlights.org/QPL](http://www.Designlights.org/QPL) to confirm specific product qualifications.

### WARRANTY

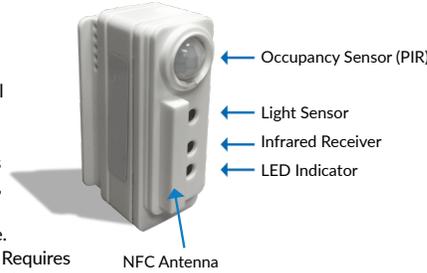
5 Year Warranty (Terms and Conditions apply)

## ADVANCED CONTROLS OPTIONS

### EASYSENSE

#### ES

EasySense sensor combines occupancy sensing, daylight harvesting & institutional tuning in one compact solution. This is an ideal control for any commercial application. Each sensor allows you to turn on/off occupancy and/or daylight harvesting functions as well as set the full light output, background light level, occupancy prolong time, occupancy grace fading time and occupancy time out/hold time. Ability to place up to 40 fixtures in one group. Requires use of EasySense Pre-Programmed Control Device (ES/PCD), or approved phone from compatibility list; one needed per project. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### ES/PCD

Pre-Programmed EasySense Control Device. One needed per project. Sensor can also be programmed with the approved compatible cell phone (listed to the right).

#### Compatible Cell Phones:

- LG G3
- LG G Vista
- LG G4
- Samsung S5
- Samsung S5 WHT
- Samsung Note 4
- Samsung Note Edge
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- Samsung Galaxy J7
- Samsung S8
- Samsung Galaxy S9
- Nexus 5X
- Nexus 6P

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#### Specifications:

- Wireless
- Batteryless
- Dual Rocker
- ZigBee®
- 30 - 100ft Range

#### Functions:

1. On (Hold to brighten up)
2. Off (Hold to dim down)
3. Scene 1
4. Scene 2

### LUTRON VIVE

#### VDO

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#### VRF

Vive DFCSJ-OEM-RF integral fixture control with Radio Frequency (RF) communication. Vive provides intuitive programming allowing for maximum flexibility with wireless communication as desired. Lutron system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



### ENLIGHTED

#### 5E/2W/IL

Bundled System with Enlighted 5E sensor (SU-5E-IL), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes ability to group fixtures together and connect to a switch to zone fixtures for group operation. Provided with factory installed components only. Enlighted system not required for commissioning. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.



#### 5E/2W/CL

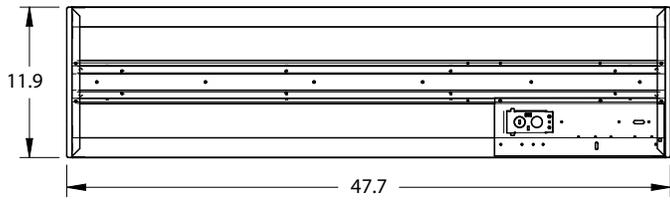
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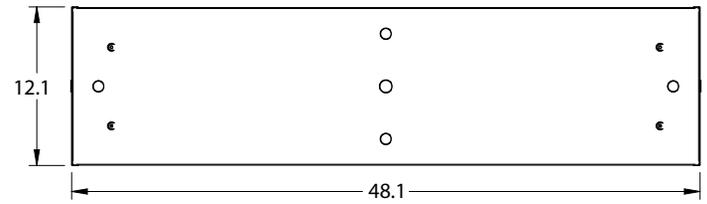
Bundled System with Enlighted 5E sensor (SU-5E-IOT), Cable (CBL-5E-CU4-30N) and Sensor Ready SR Driver. Fixtures are controlled based on occupancy and ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. Energy Manager provides data analysis for all data collected by Enlighted Smart Sensors for energy, occupancy & environment. Additionally, the IOT functionality takes the data access and function beyond just lighting to a wide range of applications beyond the standard connected lighting controls. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. Fixture maintains CCT selectable function when adding factory installed controls option, if CCTS is selected in ordering guide.

### LINE DRAWINGS

#### 1x4 Dimensions

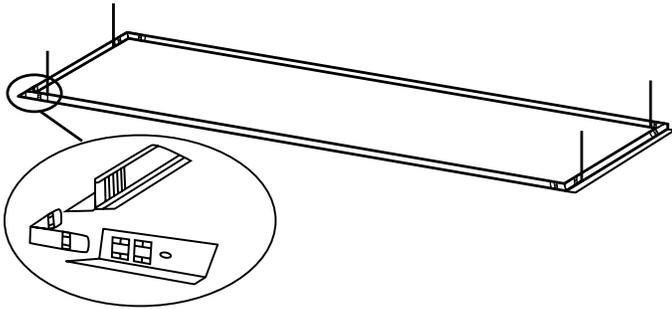


#### 1x4 Surface Mount Dimensions

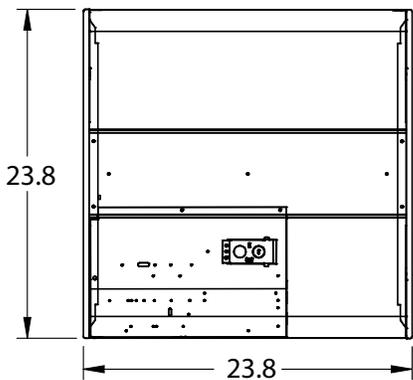


#### 1x4 Flange Kit

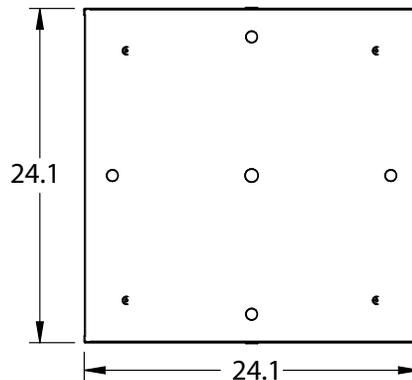
Ceiling opening is 12.25" x 48.25"



#### 2x2 Dimensions

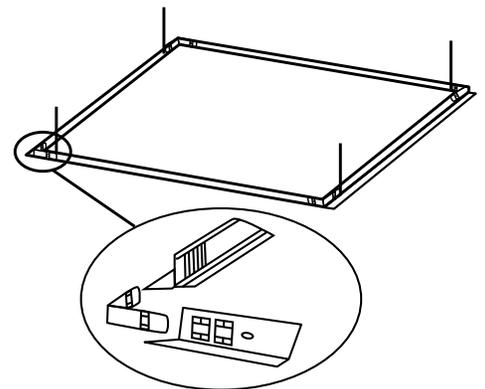


#### 2x2 Surface Mount Dimensions



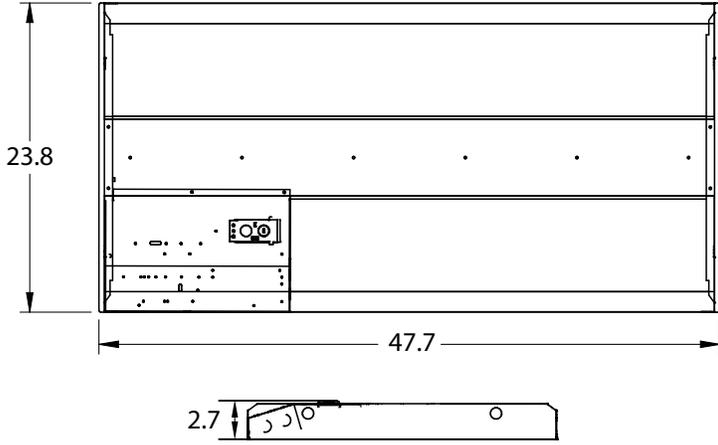
#### 2x2 Flange Kit

Ceiling opening is 24.25" x 24.25"

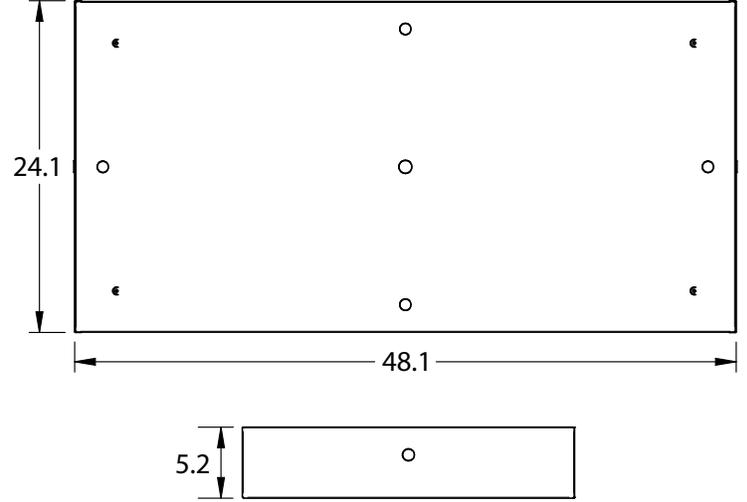


### LINE DRAWINGS

#### 2x4 Dimensions

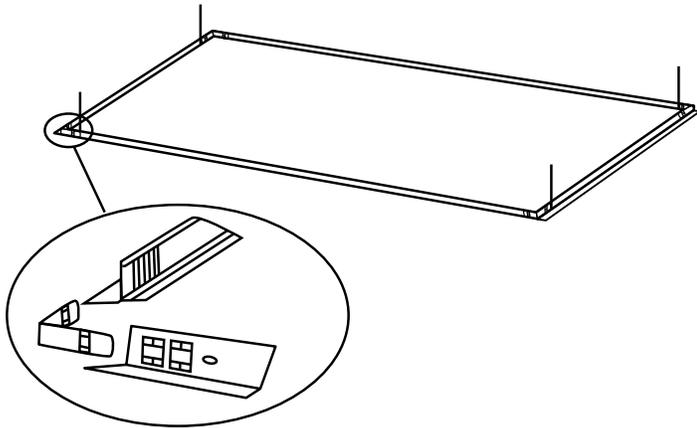


#### 2x4 Surface Mount Dimensions



#### 2x4 Flange Kit

Ceiling opening is 24.25" x 48.25"

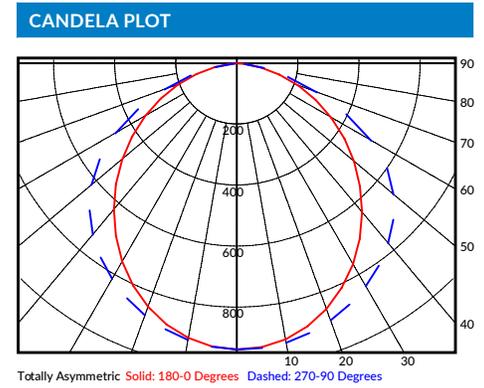


# Volumetric Adjustable Troffer

## PHOTOMETRIC DATA

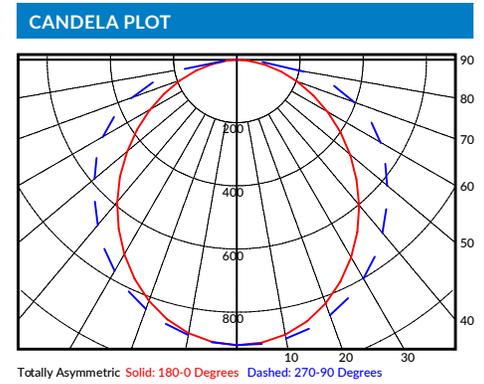
LUMINAIRE DATA	
Part Number	VAT14-25L-U-40
Description	1x4 Volumetric Adjustable Troffer, 2,768 Lumens, 4000K
Fixture Lumens (lm)	2,768 lm
Wattage (W)	20 W
Efficacy (lm/W)	141 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,194	44%
0° - 60°	2,135	79%
0° - 90°	2,698	100%
90° - 180°	0	0%
0° - 180°	2,768	100%



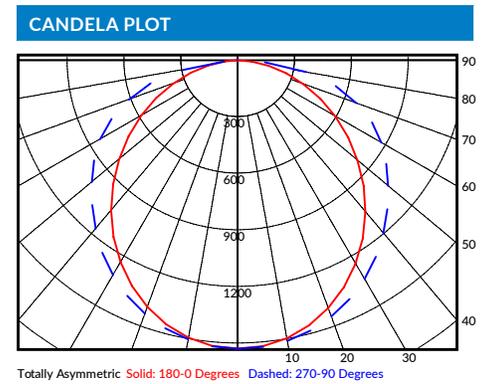
LUMINAIRE DATA	
Part Number	VAT22-25L-U-40
Description	2x2 Volumetric Adjustable Troffer, 2,738 Lumens, 4000K
Fixture Lumens (lm)	2,738 lm
Wattage (W)	19 W
Efficacy (lm/W)	142 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,136	43%
0° - 60°	2,011	76%
0° - 90°	2,656	100%
90° - 180°	0	0%
0° - 180°	2,738	100%



LUMINAIRE DATA	
Part Number	VAT24-43L-U-40
Description	2x4 Volumetric Adjustable Troffer, 4,755 Lumens, 4000K
Fixture Lumens (lm)	4,755 lm
Wattage (W)	33 W
Efficacy (lm/W)	143 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,936	42%
0° - 60°	3,451	75%
0° - 90°	4,605	100%
90° - 180°	0	0%
0° - 180°	4,755	100%



LUMINAIRE DATA	
Part Number	VAT24-60L-U-40
Description	2x4 Volumetric Adjustable Troffer, 6,512 Lumens, 4000K
Fixture Lumens (lm)	6,512 lm
Wattage (W)	46 W
Efficacy (lm/W)	141 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	2,638	42%
0° - 60°	4,712	75%
0° - 90°	6,309	100%
90° - 180°	0	0%
0° - 180°	6,512	100%

