VST Volumetric Selectable Troffer

ILP
407-478-3759
ilp-inc.com

FEATURES

- Highly Versatile Volumetric Selectable Troffer
- 2.1" Depth for Shallow Plenum Applications
- Matte White Post Paint Finish for Uniform Indirect Illumination
- Shallow Depth Design for Low Plenum Applications
- Grid, Flange, & Surface Mounting Options
- 1'x4', 2'x2', and 2'x4' Sizes
- Field Selectable or Factory Set Lumen Output
    - 2,600 - 7,400 Lumens Delivered Lumen Range
- Field Selectable or Factory Set CCT
    - 3500K, 4000K, & 5000K CCT
- Integrated Wireless Controls Options
- High Efficacy—Up to 150 lm/W
- >80 Color Rendering index (CRI)
- 0-10V Dimmable Driver (100%-10%)
- 120–277V Universal Voltage
- Bi-Level & 1% Dimming Driver Options
- Calculated L70 >100,000hrs
- Ambient Temperature Range (-4F to 104F)
- 5 Year Warranty (std); 10 Year Warranty Optional
- 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	WARRANTY	
VST14	1'x4' Volumetric Troffer	2L/3L/4L - Lumen Selectable 2L 3L 4L	**U** 120-277V	**CCTS** - CCT Selectable 35K - 40K - 50K **35** **40** **50**	(Blank) **10YR**	5YR 10YR
VST22	2'x2' Volumetric Troffer	2L/3L/4L - Lumen Selectable 2L 3L 4L				
VST24	2'x4' Volumetric Troffer	2L/3L/4L - Lumen Selectable 4L/5L/6L - Lumen Selectable 5L/6L/7L - Lumen Selectable 2L 3L 4L 5L 6L 7L				

OPTIONS		CONTROLS	
Factory Installed		**Advanced**	
SR [4]	Sensor-Ready Driver	ESMC [4,5]	EasySense Grouping Sensor
BLD [4]	Bi-Level Dimming Driver	5E/2W/CL [3,4]	Enlighted 5E Two Wire Connected Lighting (CL) Sensor
DIM1 [4]	1% Dimming Driver	5E/2W/IOT [3,4]	Enlighted 5E Two Wire IOT Lighting (IOT) Sensor
EM5	5W LED Factory Installed Battery Backup	VDO [3,4]	Lutron Vive Daylight & Occupancy Sensor
EM5/HE [1]	5W LED Factory Installed Battery Backup	VRF [3,4]	Lutron Vive Radio Frequency Only
EM7	7W LED Factory Installed Battery Backup	AWNR [3,4]	Lutron Athena Wireless Node RF Only
EM7/HE [1]	7W LED Factory Installed Battery Backup	AWNS [3,4]	Lutron Athena Wireless Node with Sensor
EM10	10W LED Factory Installed Battery Backup		
EM10/HE [1]	10W LED Factory Installed Battery Backup	**Ship with Accessories**	
EM10/HE/SD [1]	10W LED Factory Installed Self-Diagnosing Battery Backup	ESMC/WWS/DR	EasySense Dual Rocker Wireless Wall Switch
EM12	12W LED Factory Installed Battery Backup	+VSTxx SM	Surface Mount Kit (xx=size, 14=1x4)
SD347 [2]	347V Step Down Transformer	FLGK	Flange Mount Kit
MCx/3W	Metal Conduit (x=ft), 3-wire		
MCx/4W	Metal Conduit (x=ft), 4-wire		
MCx/5W	Metal Conduit (x=ft), 5-wire		
MCx/6W	Metal Conduit (x=ft), 6-wire		

[1] CEC Title 20 Compliant
[2] Does not qualify for DLC
[3] Must be used with SR Sensor Ready Driver
[4] Not compatible with the Lumen selectable and CCT selectable functions
[5] Requires Bluetooth enabled device for programming (provided by others)

Volumetric Selectable Troffer

QUICK SHIP ITEMS:

SERIES		LUMENS (select one)	DRIVER	CCT
VST14	1x4 Volumetric Troffer	**2L/3L/4L** - Lumen Selectable	**U** 120-277V	**CCTS** - CCT Selectable (3500K, 4000K, 5000K)
VST22	2x2 Volumetric Troffer	**2L/3L/4L** - Lumen Selectable		
VST24	2x4 Volumetric Troffer	**2L/3L/4L** - Lumen Selectable		
		4L/5L/6L - Lumen Selectable		
		5L/6L/7L - Lumen Selectable		

LED SYSTEMS INFORMATION	3500K		4000K		5000K		
Model Numbers	Lumens	Efficacy	Lumens	Efficacy	Lumens	Efficacy	Watts²
VST14-2L/3L/4L-U-CCTS	2594/3098/3629	134/130/125	2715/3243/3834	145/142/137	2632/3143/3653	136/132/126	19/24/29
VST14-2L-U-XX	2594	134	2715	145	2632	136	19
VST14-3L-U-XX	3098	130	3243	142	3143	132	24
VST14-4L-U-XX	3629	125	3834	137	3653	126	29
VST22-2L/3L/4L-U-CCTS	2614/3114/3627	136/133/126	2781/3313/3909	150/146/141	2696/3212/3790	140/137/131	19/24/29
VST22-2L-U-XX	2614	136	2781	150	2696	140	19
VST22-3L-U-XX	3114	133	3313	146	3212	137	24
VST22-4L-U-XX	3627	126	3909	141	3790	131	29
VST24-2L/3L/4L-U-CCTS	2858/3266/3910	132/129/125	3045/3480/4172	146/143/138	2959/3381/4036	137/134/129	22/25/31
VST24-4L/5L/6L-U-CCTS	4307/4774/5474	130/127/123	4598/5097/5843	144/141/136	4451/4935/5628	134/131/126	33/38/45
VST24-5L/6L/7L-U-CCTS	5872/6508/6805	132/128/123	6264/6942/7379	146/142/139	6058/6714/7064	136/132/128	45/51/55
VST24-2L-U-XX	2858	132	3045	146	2959	137	22
VST24-3L-U-XX	3266	129	3480	143	3381	134	25
VST24-4L-U-XX	3910	125	4172	138	4036	129	31
VST24-5L-U-XX	4774	127	5097	141	4935	131	38
VST24-6L-U-XX	5474	123	5843	136	5628	126	45
VST24-7L-U-XX	6805	123	7379	139	7064	128	55

¹Values are nominal, see IES file for more detail
²Electrical 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 4000K.

INSTALLATION
VST fits into standard 9/16" & 15/16" 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 (MC) 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 and Basic sensor options available to maximize energy savings. Sensors are installed integral to the fixture body. Please see more information below on Page 3. Inquire with manufacturer for additional 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 to confirm specific product qualifications.

WARRANTY
5 Year Warranty Standard; 10 Year Warranty Optional (Terms and Conditions apply).

ADVANCED CONTROLS OPTIONS

EASYSENSE

ESMC

EasySense sensor combines occupancy sensing, daylight harvesting and institutional tuning in one compact solution. This is an ideal control for any Commercial application. Each device 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 & occupancy time out/hold time. It can be easily controlled via the Philips MasterConnect Bluetooth App on a mobile phone.

- ← Occupancy Sensor (PIR)
- ← Light Sensor
- ← Infrared Receiver
- ← LED Indicator
- ← NFC Antenna

ESMC/WWS/DR

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

ENLIGHTED

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. (see image above)

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. (see image above)

LUTRON

VDO

Vive DFCSJ-OEM-OCC integral fixture control sensor with daylight & occupancy. Vive provides intuitive programming allowing for maximum flexibility with wireless communication & sensing as desired. Provided with factory installed components only. Lutron system provided by others. Sensor must be used in conjunction with Pico Switch/Dimmer. Cannot be used in conjunction with mechanical on/off power switch. Contact factory for more information.

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. Provided with factory installed components only. Lutron system provided by others. Sensor must be used in conjunction with Pico Switch/Dimmer. Cannot be used in conjunction with mechanical on/off power switch. Contact factory for more information.

AWNR

Athena wireless node is a radio frequency (RF) device that enables simple, digital control of individual light fixtures in an Athena control system. Enables individual wireless control of each fixture in an Athena control system. Accommodates zone and control changes without rewiring. All drivers on the link are controlled as a single zone. Provided with factory installed components only. Lutron Athena system provided by others.
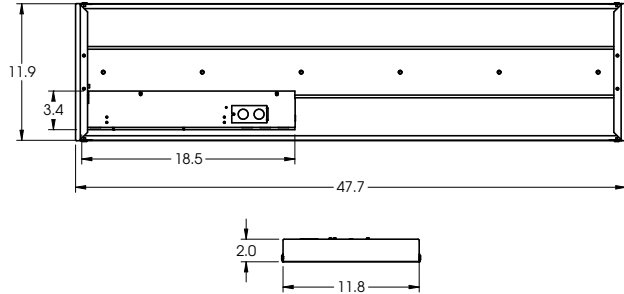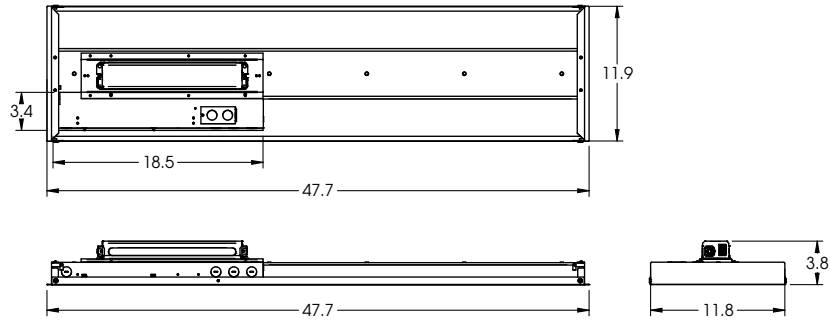

AWNS

Athena wireless node with a sensor that enables simple, digital control of individual light fixtures in an Athena control system. Provides wireless control of the fixture and includes a passive infrared (PIR) sensor for occupancy and a daylight sensor. Enables individual wireless control of each fixture in an Athena control system. Accommodates zone and control changes without rewiring. All drivers on the link are controlled as a single zone. Provided with factory installed components only. Lutron Athena system provided by others.
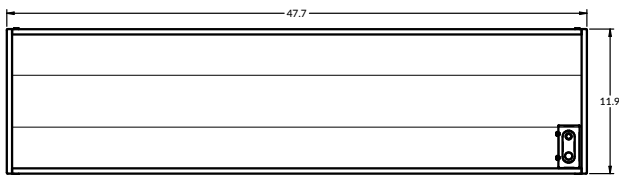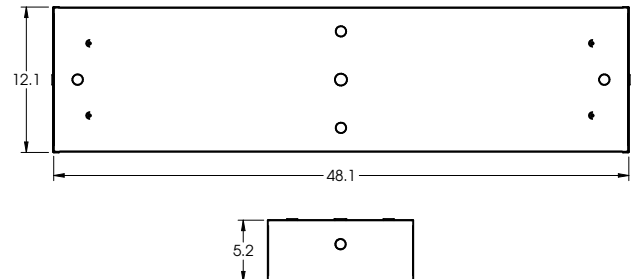
LINE DRAWINGS

1x4 Dimensions

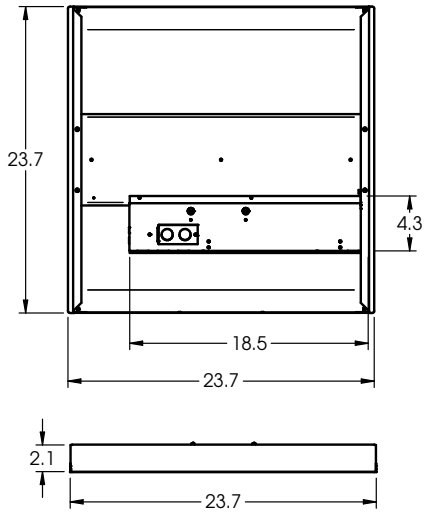### 1x4 Dimensions with EM10

1x4 Dimensions with ESMC

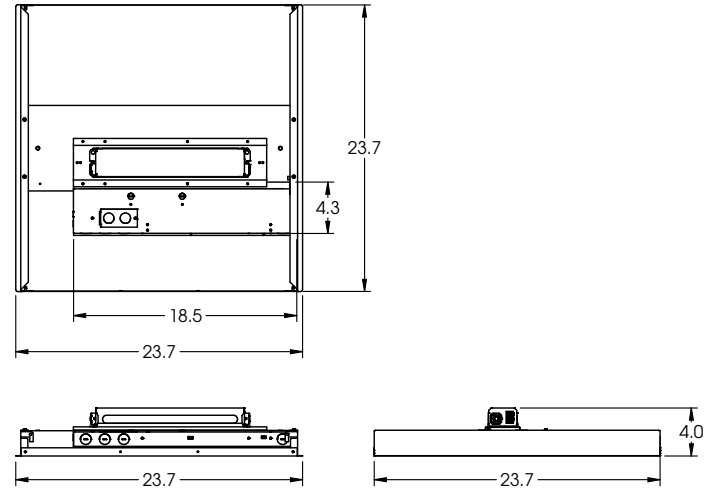### 1x4 Dimensions with Surface Mount
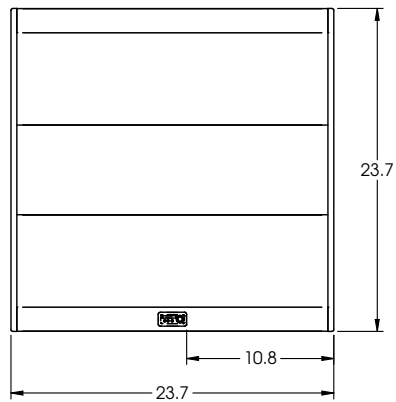
Volumetric Selectable Troffer
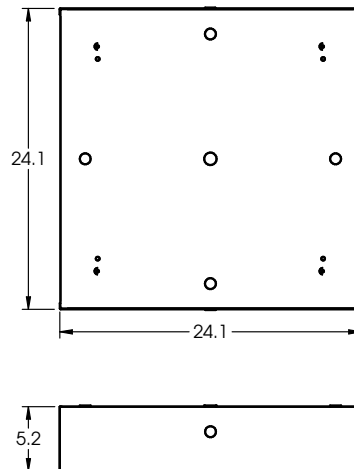
LINE DRAWINGS

2x2 Dimensions

2x2 Dimensions with EM10
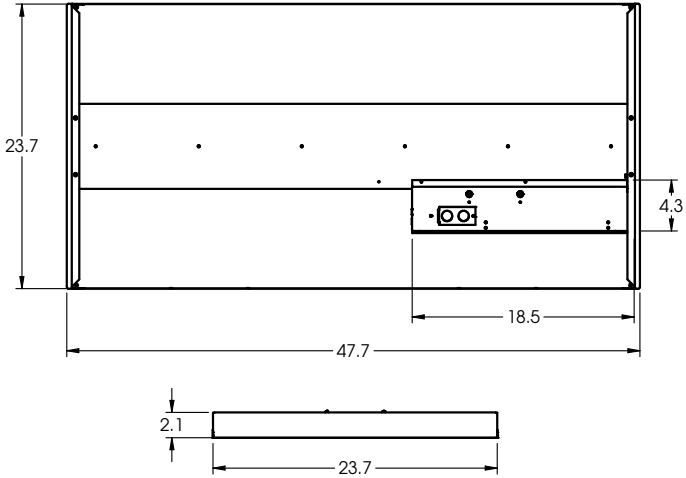

2x2 Dimensions with ESMC

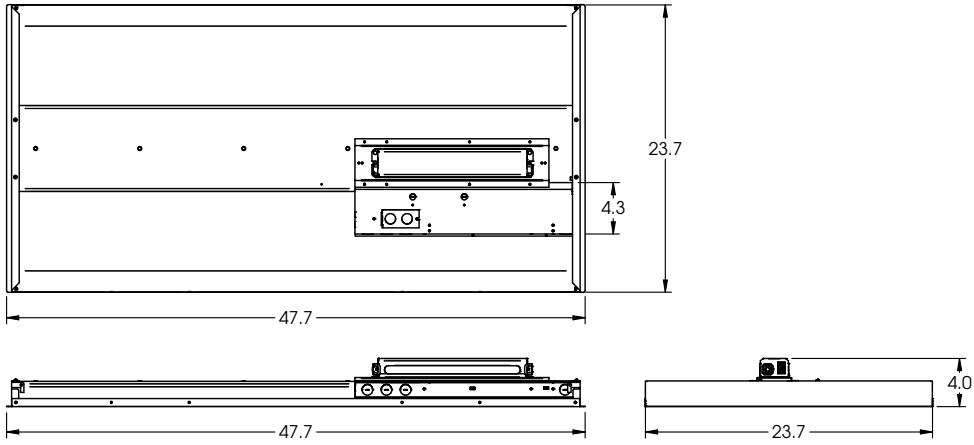### 2x2 Dimensions with Surface Mount

Volumetric Selectable Troffer
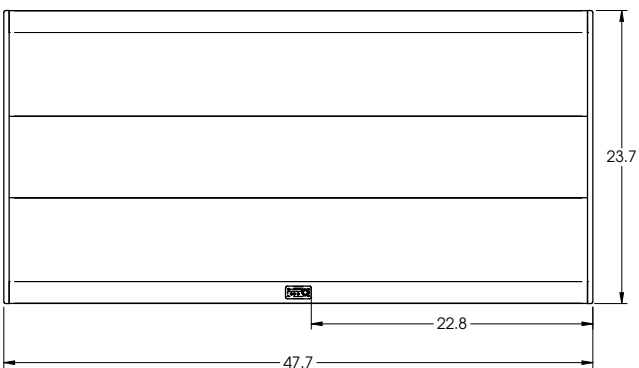
LINE DRAWINGS

2x4 Dimensions
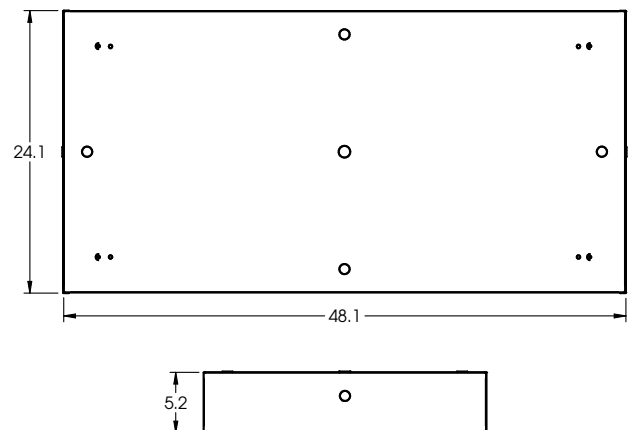

2x4 Dimensions with EM10

2x4 Dimensions with ESMC

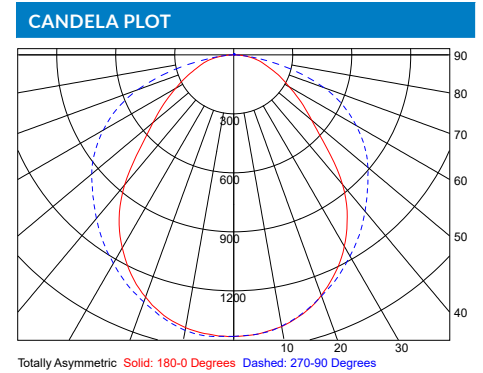### 2x4 Dimensions with Surface Mount

Volumetric Selectable Troffer
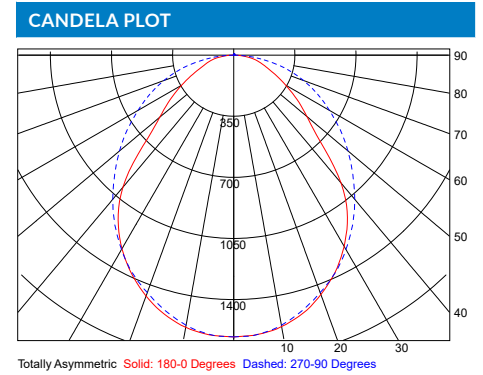
PHOTOMETRIC DATA

LUMINAIRE DATA

Part Number	VST14-2L/3L/4L-U-CCTS
Description	1x4 Volumetric Selectable Troffer, 4000lm, 4000K
Fixture Lumens (lm)	3,834 lm
Wattage (W)	27.9 W
Efficacy (lm/W)	137 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY

Zone	Lumens (lm)	% Fixture
0° - 40°	1,774	46%
0° - 60°	3,032	79%
0° - 90°	3,923	99%
90° - 180°	11	1%
0° - 180°	3,834	100%

CANDELA PLOT

Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees
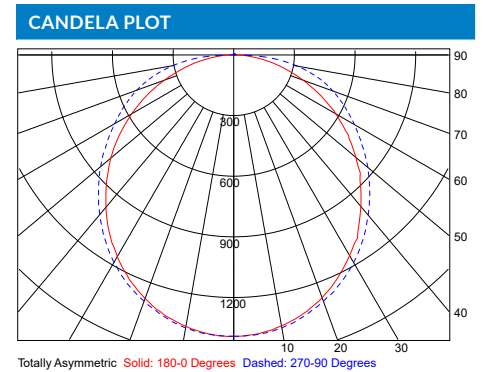
LUMINAIRE DATA

Part Number	VST22-2L/3L/4L-U-CCTS
Description	2x2 Volumetric Selectable Troffer, 4000lm, 4000K
Fixture Lumens (lm)	3,910 lm
Wattage (W)	27.7 W
Efficacy (lm/W)	141 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY

Zone	Lumens (lm)	% Fixture
0° - 40°	1,947	50%
0° - 60°	3,179	81%
0° - 90°	3,898	99%
90° - 180°	11	1%
0° - 180°	3,910	100%

CANDELA PLOT

Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees
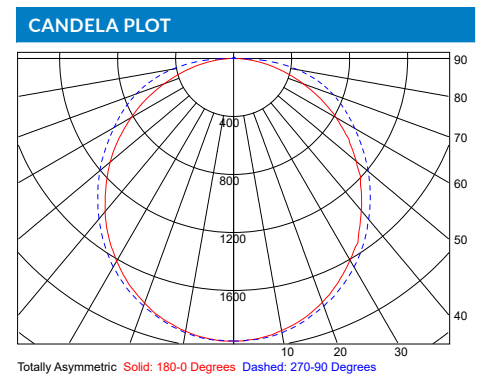
LUMINAIRE DATA

Part Number	VST24-2L/3L/4L-U-CCTS
Description	2x4 Volumetric Selectable Troffer
Fixture Lumens (lm)	4,172 lm
Wattage (W)	30.3 W
Efficacy (lm/W)	138 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY

Zone	Lumens (lm)	% Fixture
0° - 40°	1,757	42%
0° - 60°	3,117	75%
0° - 90°	4,161	99%
90° - 180°	12	1%
0° - 180°	4,172	100%

CANDELA PLOT

Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA

Part Number	VST24-4L/5L/6L-U-CCTS
Description	2x4 Volumetric Selectable Troffer
Fixture Lumens (lm)	5,844 lm
Wattage (W)	42.8 W
Efficacy (lm/W)	136 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY

Zone	Lumens (lm)	% Fixture
0° - 40°	2,462	42%
0° - 60°	4,365	75%
0° - 90°	5,827	99%
90° - 180°	17	1%
0° - 180°	5,844	100%

CANDELA PLOT

Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

VST

Volumetric Selectable Troffer

PHOTOMETRIC DATA

LUMINAIRE DATA

Part Number	VST24-5L/6L/7L-U-CCTS
Description	2x4 Volumetric Selectable Troffer
Fixture Lumens (lm)	7,380 lm
Wattage (W)	53.0 W
Efficacy (lm/W)	139 lm/W
Mounting	Recessed

ZONAL LUMEN SUMMARY

Zone	Lumens (lm)	% Fixture
0° - 40°	3,109	42%
0° - 60°	5,512	75%
0° - 90°	7,359	99%
90° - 180°	21	1%
0° - 180°	7,380	100%

CANDELA PLOT

Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees