Project Name:	Part Number:	Type:

LANCE
## VOLUMETRIC TROFFER RETROFIT KIT

ILP

FEATURES

- Troffer Retrofit Kit for recessed lighting applications
- One-piece unit with two universal mounting brackets
- Average install time less than 3 minutes
- Lightweight aluminum matte white finish body
- High transmission extruded PMMA frosted acrylic lens
- Air Return Options
- Advanced Wireless Controls Options
- 1x4, 2x2, 2x4 sizes
- 2,300 – 6,200 Delivered Lumens
- High Efficacy – Up to 155 lm/W
- 3000K – 5000K CCT
- 80 & 90 CRI Options
- Calculated L70 > 100,000 hours
- 0-10V Dimmable Driver (Dims to 10%)
- 5 Year Warranty (std); 10 Year Warranty Optional
- ETL Listed for UL1598C
- DesignLights Consortium® Premium Qualified Luminaire
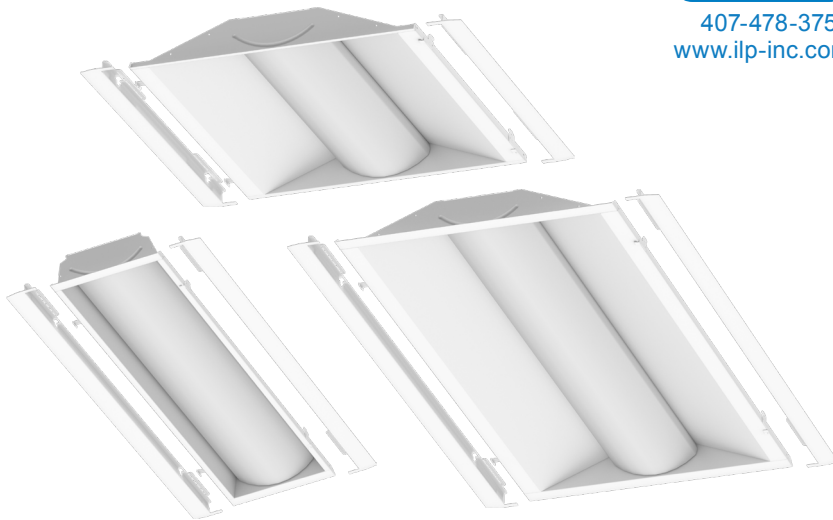
SUITABLE APPLICATIONS

- Education
- Healthcare
- Offices
- Hallways
- Multipurpose Rooms
- Conference Rooms

ORDERING GUIDE

SERIES	LUMENS (Select 1)		DRIVER		80CRI / CCT	FINISH		AIR RETURN		WARRANTY	
LANCE14	23L	40L	U[5]	120-277V	50	**BLANK**	Pre-paint white	**BLANK**	Std. Mounting Brackets	**BLANK**	5 Year
LANCE Troffer Kit 1'x4'	29L	49L	HV[6]	347V	40	**PAF**	Post-paint white	**AR/W**	Air Return White Reveal	**10YR**[7]	10 Year
		61L			35			**AR/B**	Air Return Black Reveal		
					30						
LANCE22	24L	37L			**90CRI / CCT**						
LANCE Troffer Kit 2'x2'	31L	48L			940[8]						
	34L				935[8]						
					930[8]						
LANCE24	30L	49L									
LANCE Troffer Kit 2'x4'	37L	54L									
	43L	62L									

DRIVER & EMERGENCY OPTIONS		CONTROLS OPTIONS	
Factory Installed		**Advanced**	
SR	Sensor Ready Driver	ES[1,4]	EasySense Sensor
DR	DALI Ready Driver	5E/CU/IL[4]	Enlighted 5E Individual Lighting (IL) Sensor w/ Control Unit
BLD	Bi-level dimming driver (100% / 50%) with two hot leads	5E/CU/CL[4]	Enlighted 5E Connected Lighting (CL) Sensor w/ Control Unit
LDE1	Lutron Hi-Lume Driver	5E/CU/IOT[4]	Enlighted 5E Internet of Things (IOT) Sensor w/ Control Unit
DIM1	1% Dimming Driver	5E/5W/IL[4]	Enlighted 5E Individual Lighting (IL) Sensor w/ Aux Driver / 5 Wire Connection
EM5	5W LED Factory Installed Battery Backup	5E/5W/CL[4]	Enlighted 5E Connected Lighting (CL) Sensor w/ Aux Driver / 5 Wire Connection
EM5/HE	5W LED Factory Installed Battery Backup - CEC Title 20 Compliant	5E/5W/IOT[4]	Enlighted 5E Internet of Things (IOT) Sensor w/ Aux Driver / 5 Wire Connection
EM7	7W LED Factory Installed Battery Backup	VDO[2,4]	Lutron Vive DFCSJ-OEM-OCC (Daylight and Occupancy)
EM7/HE	7W LED Factory Installed Battery Backup - CEC Title 20 Compliant	VRF[2,4]	Lutron Vive DFCSJ-OEM-RF (Radio Frequency Only)
EM10	10W LED Factory Installed Battery Backup	AWNR	Lutron Athena Wireless Node RF only
EM10/HE	10W LED Factory Installed Battery Backup - CEC Title 20 Compliant	**Ship With Accessories**	
EM10/HE-SD	10W Factory Installed Self Diagnostic Battery Backup	ES/PCD[3]	EasySense Pre-Programmed Control Device
EM12	12W LED Factory Installed Battery Backup	ES/WWS/DR	EasySense Dual Rocker Wireless Wall Switch

[1] Must be used with ES/PCD for commissioning
[2] Must be used with SR Sensor Ready Driver
[3] One needed per project
[4] View controls page for more detail (pg.3)
[5] Standard 120-277V Driver dimmable down to 10%

[6] Standard 347V High Voltage Driver dimmable down to 1%
[7] Contact Factory for more details
[8] Contact Factory for 90CRI DLC-Listed options

LANCE

VOLUMETRIC TROFFER RETROFIT KIT

SYSTEMS INFO¹	3000K CCT		3500K CCT		4000K CCT		5000K CCT		Watts²	CRI	Replaces
Part #	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	Efficacy			
LANCE14-23L	2,170	131	2,223	134	2,277	137	2,394	144	17 W	>80	1T8
LANCE14-29L	2,755	131	2,822	134	2,892	137	3,037	144	21 W	>80	2T8
LANCE14-40L	3,765	129	3,858	132	3,952	136	4,152	142	29 W	>80	2T8
LANCE14-49L	4,656	124	4,831	127	4,947	130	5,199	137	38 W	>80	2T8
LANCE14-61L	5,774	127	5,915	130	6,059	133	6,310	135	46 W	>80	3T8
LANCE22-24L	2,187	128	2,359	139	2,448	144	2,561	151	17 W	>80	2T8
LANCE22-31L	2,891	136	3,005	142	3,120	147	3,264	154	21 W	>80	2T8
LANCE22-34L	3,162	127	3,209	129	3,256	130	3,403	134	25 W	>80	3T8
LANCE22-37L	3,446	129	3,582	134	3,717	139	3,889	146	27 W	>80	3T8
LANCE22-48L	4,265	124	4,614	135	4,789	140	5,008	146	34 W	>80	4T8
LANCE24-30L	2,836	133	2,921	137	3,004	141	3,128	147	21 W	>80	2T8
LANCE24-37L	3,530	132	3,634	136	3,738	140	3,891	145	27 W	>80	2T8
LANCE24-43L	4,095	140	4,215	144	4,339	149	4,516	155	29 W	>80	3T8
LANCE24-49L	4,619	136	4,758	140	4,892	144	5,094	150	34 W	>80	3T8
LANCE24-54L	5,050	128	5,225	132	5,373	136	5,596	142	40 W	>80	3T8
LANCE24-62L	5,877	129	6,049	133	6,222	137	6,482	142	46 W	>80	4T8
LANCE14-23L	2,145	130	2,154	131	2,170	132	N/A	N/A	16 W	>90	1T8
LANCE14-29L	2,647	127	2,666	128	2,686	129	N/A	N/A	21 W	>90	2T8
LANCE14-40L	3,495	123	3,520	124	3,546	124	N/A	N/A	29 W	>90	2T8
LANCE14-49L	4,253	118	4,284	119	4,315	119	N/A	N/A	36 W	>90	2T8
LANCE14-61L	5,316	111	5,445	113	5,622	116	N/A	N/A	45 W	>90	3T8
LANCE22-24L	2,062	120	2,089	121	2,129	123	N/A	N/A	17 W	>90	2T8
LANCE22-31L	2,514	115	2,546	117	2,577	118	N/A	N/A	22 W	>90	2T8
LANCE22-34L	2,903	113	2,924	114	2,971	115	N/A	N/A	26 W	>90	3T8
LANCE22-37L	3,379	123	3,421	124	3,463	126	N/A	N/A	28 W	>90	3T8
LANCE22-48L	4,103	119	4,155	121	4,206	122	N/A	N/A	34 W	>90	4T8
LANCE24-30L	2,810	133	2,816	135	2,856	137	N/A	N/A	21 W	>90	2T8
LANCE24-37L	3,365	128	3,461	131	3,510	133	N/A	N/A	27 W	>90	2T8
LANCE24-43L	3,641	127	3,693	129	3,746	131	N/A	N/A	29 W	>90	3T8
LANCE24-49L	4,115	125	4,174	127	4,233	128	N/A	N/A	34 W	>90	3T8
LANCE24-54L	4,460	123	4,524	125	4,588	126	N/A	N/A	40 W	>90	3T8
LANCE24-62L	5,560	116	5,637	117	5,716	119	N/A	N/A	46 W	>90	4T8

¹ LED Chips are frequently updated therefore values are nominal ² Electrical data at 25C (77F). Actual wattage may differ by +/-10%. *Please refer to the DLC Qualified Products List at www. Designlights.org/QPL to confirm specific product qualifications.

SPECIFICATIONS

CONSTRUCTION
Light weight aluminum white body for rigidity, durability & ease of installation. One-piece unit with two universal mounting brackets for quick and easy installation. Optional paint after fabrication.

ELECTRICAL
Class 2 LED light engine for high efficacy and long life. Calculated L$_{70}$ > 100,000 hours. 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%). Optional 347V High Voltage (HV) driver. 1% dimming driver standard on optional 347V High Voltage (HV) drivers. Optional Sensor Ready & DALI Ready drivers for pairing with controls & integrated controls networks. Optional Bi-level dimming driver (100% / 50%), 1% dimming driver & Lutron Hi-Lume 1% dimming driver.

MOUNTING
One-piece door frame light engine with two universal mounting brackets for easy installation. See page 4 for step-by-step troffer kit installation instructions. Air return options include slots in mounting rails.

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

OPTICS
Standard high transmission extruded PMMA frosted acrylic volumetric lens. Removable lens for easy access to LED board and maintenance.

TROFFER COMPATIBILITY
LANCE is designed to fit into most existing parabolic and lensed troffers with a housing depth of 31/8" or greater. ILP recommends a test installation prior to ordering project quantities. Contact factory for additional troffer compatibility confirmation and custom size configuration options.

CONTROLS
Factory installed Advanced sensor options available. Sensor mounts within the body of the fixture. View controls page for more detail (pg.3). Inquire with manufacturer for additional controls options, including customer supplied items.

CERTIFICATIONS
ETL Listed to US & Canadian safety standards. ETL Listed for UL1598C. Suitable for damp locations. American Recovery & Reinvestment Act Funding Compliant. DLC (DesignLights Consortium) Premium Qualified, with some Standard Qualified configurations. Please refer to the DLC Qualified Products List at www.designlights.org/QPL to confirm specific product qualifications.

LANCE

VOLUMETRIC TROFFER RETROFIT KIT

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. Requires the use of EasySense Pre-Programmed Control Device (ES/PCD), or approved phone from compatibility list; one needed per project.

← Occupancy Sensor (PIR)
← Light Sensor
← Infrared Receiver
← LED Indicator
← NFC Antenna
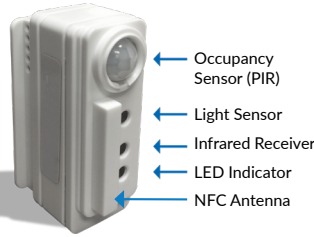
ES/PCD

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

Compatible Cell Phones:

- LG G4
- Samsung S4 Mini
- Samsung S4
- Samsung S5
- Samsung S6
- Samsung Note 4
- Samsung Note Edge 1

ES/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

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. Providing 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.

ENLIGHTED

5E/CU/IL

Bundled System with Enlighted 5E sensor (SU-5E-IL), Control Unit (CU-4E-FM) and Cable (CBL-5E-CU4-30N). Fixtures are controlled based on occupancy & 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 provided by others. Contact factory for more information.

5E/CU/CL

Bundled System with Enlighted 5E sensor (SU-5E-CL), Control Unit (CU-4E-FM) and Cable (CBL-5E-CU4-30N). 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/CU/IOT

Bundled System with Enlighted 5E sensor (SU-5E-IOT), Control Unit (CU-4E-FM) and Cable (CBL-5E-CU4-30N). 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)

5E/5W/IL

Bundled System with Enlighted 5E sensor (SU-5E-IL) & Cable (CBL-5E-CU4-30N) paired with a driver with auxiliary power and 5 wire connection. 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 provided by others. Contact factory for more information. (see image above)

5E/5W/CL

Bundled System with Enlighted 5E sensor (SU-5E-CL) & Cable (CBL-5E-CU4-30N) paired with a driver with auxiliary power & 5 wire connection. 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)
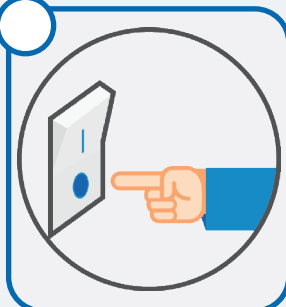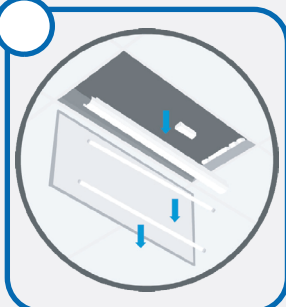
5E/5W/IOT

Bundled System with Enlighted 5E sensor (SU-5E-IOT) & Cable (CBL-5E-CU4-30N) paired w/ a driver w/ auxiliary power and 5 wire connection. Fixtures are controlled based on occupancy & ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. The 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)

LANCE
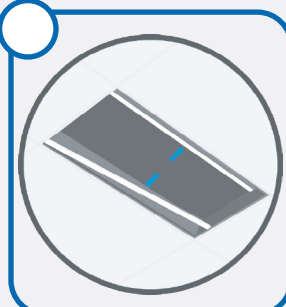## VOLUMETRIC TROFFER RETROFIT KIT

INSTALLATION INSTRUCTIONS

STEP 1
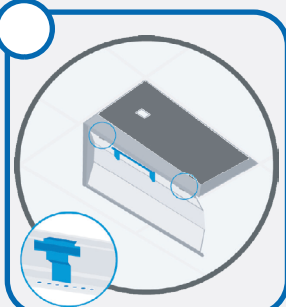
Shut off or disconnect power to the fixture.

STEP 2

Remove existing fluorescent lamps and components, then disconnect existing connections to the fluorescent ballast.
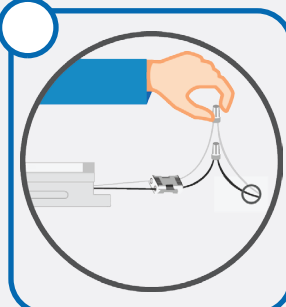
STEP 3

Gently lift the original housing and insert the brackets between the housing and the T-grid.
Allow the housing to rest on the brackets, securing them in place.
Optional tether included on the mounting brackets to secure the kit to the housing.
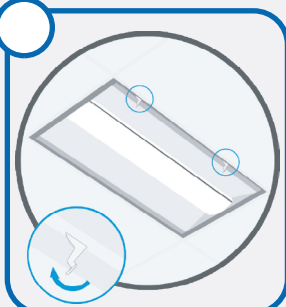
STEP 4

Hang the LANCE body by hooking the T-hinges into the respective slots in the bracket.

STEP 5

Connect the LANCE to AC power and ground.

STEP 6

Rotate the LANCE body up into the fixture and close the latches.
Turn on or reconnect power to the fixture to complete the installation.

ILP recommends a test installation prior to ordering project quantities.
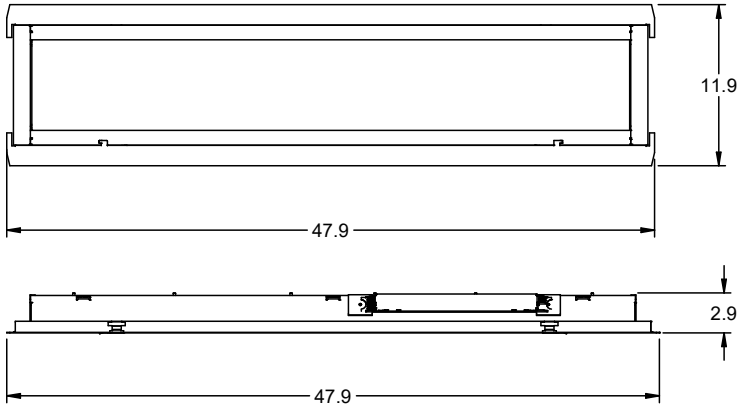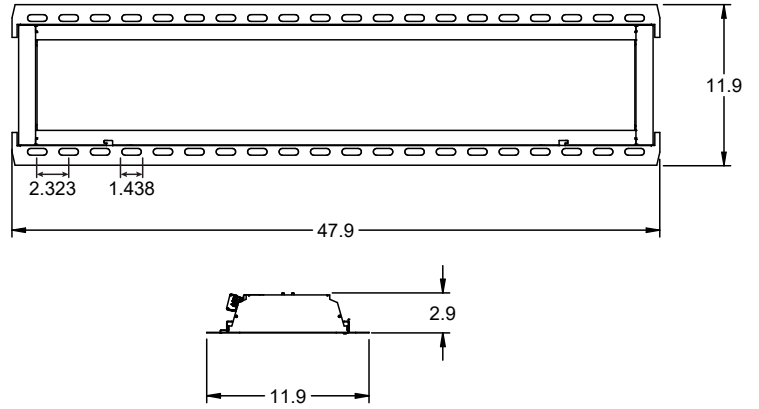
LANCE

VOLUMETRIC TROFFER RETROFIT KIT

LINE DRAWINGS
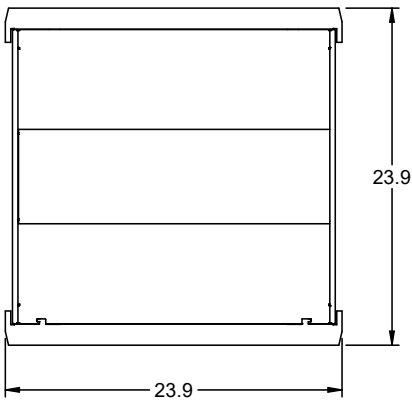
1'x4'

Shown with standard bracket

Shown with Air Return bracket

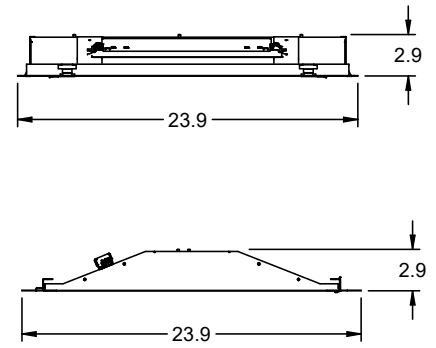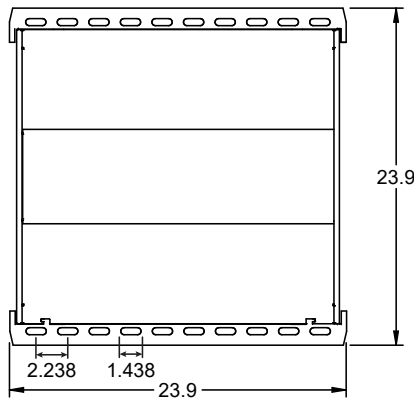11.9 | 47.9 | 11.9 | 47.9

2.323 | 1.438

2.9 | 47.9 | 2.9 | 11.9

2'x2'

Shown with standard bracket

Shown with Air Return bracket

23.9 | 23.9

2.9 | 23.9

23.9 | 2.238 | 1.438 | 23.9

2.9 | 23.9

2'x4'

Shown with standard bracket

Shown with Air Return bracket

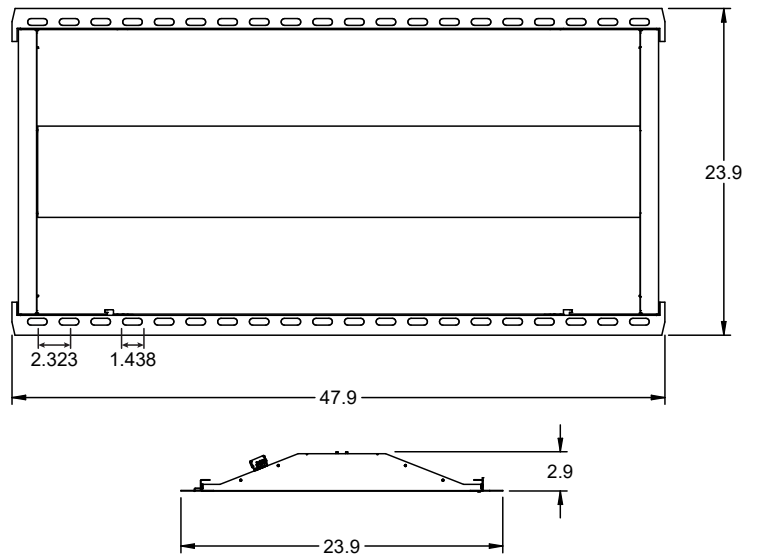23.9 | 23.9

2.323 | 1.438

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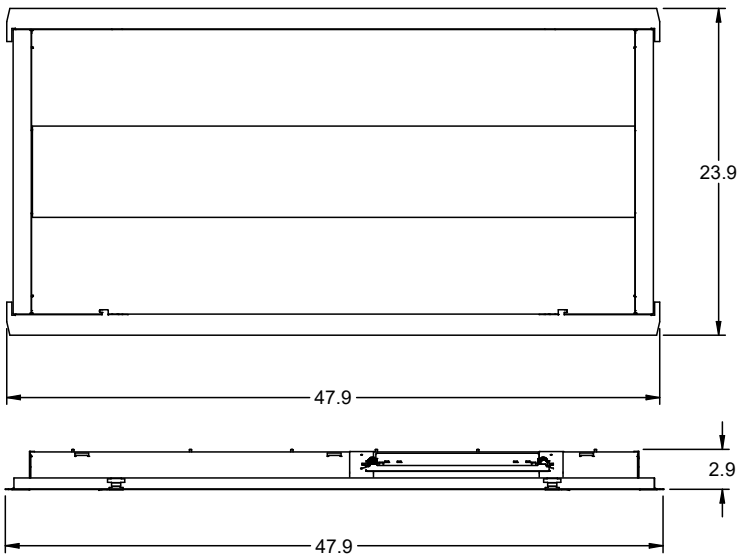
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VOLUMETRIC TROFFER RETROFIT KIT
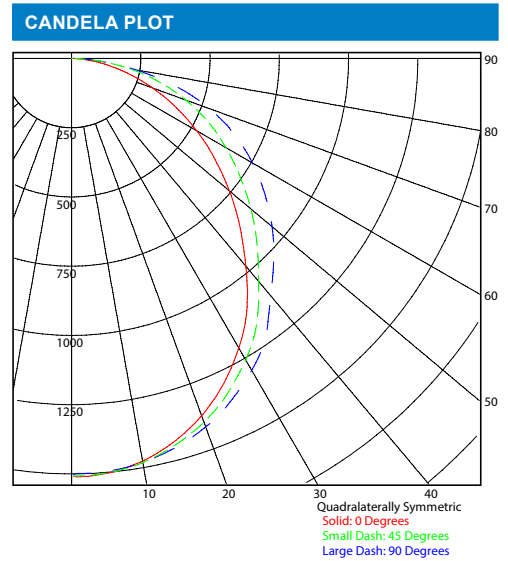
PHOTOMETRIC DATA

LUMINAIRE DATA

Part Number	LANCE14-40L-U-40
Description	Latch and Close LED Troffer Retrofit Kit for 1x4 fixture, 4,000lm, with Frosted Acrylic Lens.
Fixture Lumens (lm)	3,952 lm
Wattage (W)	29 W
Efficacy (lm/W)	136 lm/W
Mounting	Recessed
Spacing Criteria	0° = 1.22, 90° = 1.24

ZONAL LUMEN SUMMARY

Zone	Lumens (lm)	% Fixture
0° - 40°	1,858	47%
0° - 60°	3,203	81%
0° - 90°	3,952	100%
90° - 180°	0	0%
0° - 180°	3,952	100%

CANDELA PLOT

Quadralaterally Symmetric
Solid: 0 Degrees
Small Dash: 45 Degrees
Large Dash: 90 Degrees
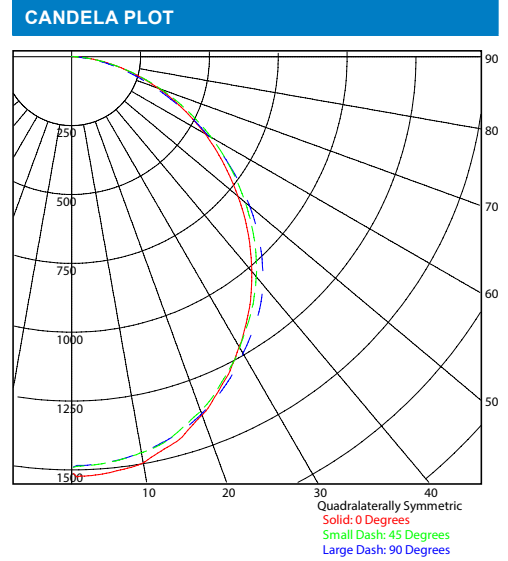
LUMINAIRE DATA

Part Number	LANCE22-37L-U-40
Description	Latch and Close LED Troffer Retrofit Kit for 2x2 fixture, 3,700lm, with Frosted Acrylic Lens.
Fixture Lumens (lm)	3,717 lm
Wattage (W)	27 W
Efficacy (lm/W)	139 lm/W
Mounting	Recessed
Spacing Criteria	0° = 1.20, 90° = 1.30

ZONAL LUMEN SUMMARY

Zone	Lumens (lm)	% Fixture
0° - 40°	1,652	44%
0° - 60°	2,875	77%
0° - 90°	3,717	100%
90° - 180°	0	0%
0° - 180°	3,717	100%

CANDELA PLOT

Quadralaterally Symmetric
Solid: 0 Degrees
Small Dash: 45 Degrees
Large Dash: 90 Degrees

LUMINAIRE DATA

Part Number	LANCE24-43L-U-40
Description	Latch and Close LED Troffer Retrofit Kit for 2X4 fixture, 4,300lm, with frosted acrylic lens.
Fixture Lumens (lm)	4,339 lm
Wattage (W)	29 W
Efficacy (lm/W)	149 lm/W
Mounting	Recessed
Spacing Criteria	0° = 1.20, 90° = 1.30

ZONAL LUMEN SUMMARY

Zone	Lumens (lm)	% Fixture
0° - 40°	1,860	43%
0° - 60°	3,311	76%
0° - 90°	4,339	100%
90° - 180°	0	0%
0° - 180°	4,339	100%

CANDELA PLOT

Quadralaterally Symmetric
Solid: 0 Degrees
Small Dash: 45 Degrees
Large Dash: 90 Degrees