| 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
- ETL Listed for UL1598C
- DesignLights Consortium® Premium Qualified Luminaire
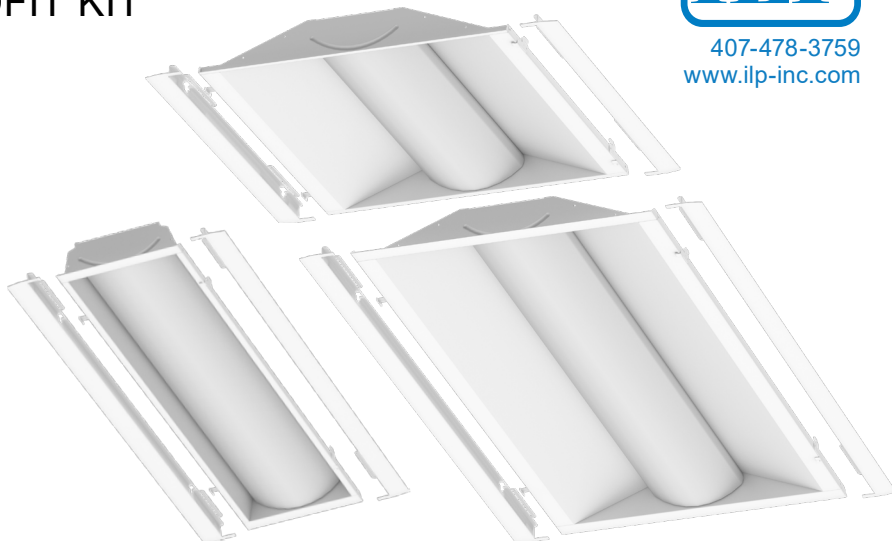
## SUITABLE APPLICATIONS

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

## ORDERING GUIDE

| SERIES | | LUMENS (Select 1) | | DRIVER | | 80CRI / CCT | FINISH | | AIR RETURN | |
|---|---|---|---|---|---|---|---|---|---|---|
| LANCE14 | LANCE Troffer Kit 1'x4' | 23L | 40L | U[5] | 120-277V | 50 | BLANK | Pre-paint white | BLANK | Std. Mounting Brackets |
| | | 29L | 49L | HV[6] | 347V | 40 | PAF | Post-paint white | AR/W | Air Return White Reveal |
| | | | 61L | | | 35 | | | AR/B | Air Return Black Reveal |
| | | | | | | 30 | | | | |
| LANCE22 | LANCE Troffer Kit 2'x2' | 24L | 37L | | | **90CRI / CCT** | | | | |
| | | 31L | 48L | | | 940 | | | | |
| | | 34L | | | | 935 | | | | |
| | | | | | | 930 | | | | |
| LANCE24 | LANCE Troffer Kit 2'x4' | 30L | 49L | | | | | | | |
| | | 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 with Control Unit |
| BLD | Bi-level dimming driver (100% / 50%) with two hot leads | 5E/CU/CL [4] | Enlighted 5E Connected Lighting (CL) Sensor with Control Unit |
| LDE1 | Lutron Hi-Lume Driver | 5E/CU/IOT [4] | Enlighted 5E Internet of Things (IOT) Sensor with Control Unit |
| DIM1 | 1% Dimming Driver | 5E/5W/IL [4] | Enlighted 5E Individual Lighting (IL) Sensor with Aux Driver/5 Wire Connection |
| FI/ILBCP05 | 5W LED Factory Installed Battery Backup | 5E/5W/CL [4] | Enlighted 5E Connected Lighting (CL) Sensor with Aux Driver/5 Wire Connection |
| FI/ILBCP07 | 7W LED Factory Installed Battery Backup | 5E/5W/IOT [4] | Enlighted 5E Internet of Things (IOT) Sensor with Aux Driver/5 Wire Connection |
| FI/ILBCP10 | 10W LED Factory Installed Battery Backup | VDO [2,4] | Lutron Vive DFCSJ-OEM-OCC (Daylight and Occupancy) |
| FI/ILBCP12 | 12W LED Factory Installed Battery Backup | VRF [2,4] | Lutron Vive DFCSJ-OEM-RF (Radio Frequency Only) |
| | | **Ship With Accessories** | |
| | | ES/PCD [3] | EasySense Pre-Programmed Control Device |
| | | 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%

# LANCE
## VOLUMETRIC TROFFER RETROFIT KIT

| LED SYSTEMS INFO[1] | 3000K CCT | | 3500K CCT | | 4000K CCT | | 5000K CCT | | Watts[2] | CRI | DLC | Replaces |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Part # | Lumens | Efficacy | Lumens | Efficacy | Lumens | Efficacy | Lumens | Efficacy | | | | |
| LANCE14-23L | 2,170 lm | 131 lm/W | 2,223 lm | 134 lm/W | 2,277 lm | 137 lm/W | 2,394 lm | 144 lm/W | 17 W | >80 | Premium | 1T8 |
| LANCE14-29L | 2,755 lm | 131 lm/W | 2,822 lm | 134 lm/W | 2,892 lm | 137 lm/W | 3,037 lm | 144 lm/W | 21 W | >80 | Premium | 2T8 |
| LANCE14-40L | 3,765 lm | 129 lm/W | 3,858 lm | 132 lm/W | 3,952 lm | 136 lm/W | 4,152 lm | 142 lm/W | 29 W | >80 | Premium | 2T8 |
| LANCE14-49L | 4,656 lm | 124 lm/W | 4,831 lm | 127 lm/W | 4,947 lm | 130 lm/W | 5,199 lm | 137 lm/W | 38 W | >80 | Premium | 2T8 |
| LANCE14-61L | 5,774 lm | 127 lm/W | 5,915 lm | 130 lm/W | 6,059 lm | 133 lm/W | 6,369 lm | 140 lm/W | 45 W | >80 | Premium | 3T8 |
| LANCE22-24L | 2,187 lm | 128 lm/W | 2,359 lm | 139 lm/W | 2,448 lm | 144 lm/W | 2,561 lm | 151 lm/W | 17 W | >80 | Premium | 2T8 |
| LANCE22-31L | 2,891 lm | 136 lm/W | 3,005 lm | 142 lm/W | 3,120 lm | 147 lm/W | 3,264 lm | 154 lm/W | 21 W | >80 | Premium | 2T8 |
| LANCE22-34L | 3,162 lm | 127 lm/W | 3,270 lm | 132 lm/W | 3,394 lm | 137 lm/W | 3,551 lm | 143 lm/W | 25 W | >80 | Premium | 3T8 |
| LANCE22-37L | 3,446 lm | 129 lm/W | 3,582 lm | 134 lm/W | 3,717 lm | 139 lm/W | 3,889 lm | 146 lm/W | 27 W | >80 | Premium | 3T8 |
| LANCE22-48L | 4,265 lm | 124 lm/W | 4,614 lm | 135 lm/W | 4,789 lm | 140 lm/W | 5,008 lm | 146 lm/W | 34 W | >80 | Premium | 4T8 |
| LANCE24-30L | 2,836 lm | 133 lm/W | 2,921 lm | 137 lm/W | 3,004 lm | 141 lm/W | 3,128 lm | 147 lm/W | 21 W | >80 | Premium | 2T8 |
| LANCE24-37L | 3,530 lm | 132 lm/W | 3,634 lm | 136lm/W | 3,738lm | 140 lm/W | 3,891 lm | 145 lm/W | 27 W | >80 | Premium | 2T8 |
| LANCE24-43L | 4,095 lm | 140 lm/W | 4,215 lm | 144 lm/W | 4,339 lm | 149 lm/W | 4,516 lm | 155 lm/W | 29 W | >80 | Premium | 3T8 |
| LANCE24-49L | 4,619 lm | 136 lm/W | 4,758 lm | 140 lm/W | 4,892 lm | 144 lm/W | 5,094 lm | 150 lm/W | 34 W | >80 | Premium | 3T8 |
| LANCE24-54L | 5,050 lm | 128 lm/W | 5,225 lm | 132 lm/W | 5,373 lm | 136 lm/W | 5,596 lm | 142 lm/W | 40 W | >80 | Premium | 3T8 |
| LANCE24-62L | 5,877 lm | 129 lm/W | 6,049 lm | 133 lm/W | 6,222 lm | 137 lm/W | 6,482 lm | 142 lm/W | 46 W | >80 | Premium | 4T8 |
| LANCE14-23L | 2,145 lm | 130 lm/W | 2,154 lm | 131 lm/w | 2,170 lm | 132 lm/W | N/A | N/A | 16 W | >90 | Premium | 1T8 |
| LANCE14-29L | 2,647 lm | 127 lm/W | 2,666 lm | 128 lm/W | 2,686 lm | 129 lm/W | N/A | N/A | 21 W | >90 | Premium | 2T8 |
| LANCE14-40L | 3,495 lm | 123 lm/W | 3,520 lm | 124 lm/W | 3,546 lm | 124 lm/W | N/A | N/A | 29 W | >90 | Premium | 2T8 |
| LANCE14-49L | 4,253 lm | 118 lm/W | 4,284 lm | 119 lm/W | 4,315 lm | 119 lm/W | N/A | N/A | 36 W | >90 | Premium | 2T8 |
| LANCE14-61L | 5,316 lm[3] | 111 lm/W | 5,445 lm[3] | 113 lm/W | 5,622 lm | 116 lm/W | N/A | N/A | 45 W | >90 | Premium | 3T8 |
| LANCE22-24L | 2,062 lm | 120 lm/W | 2,089 lm | 121 lm/W | 2,129 lm | 123 lm/W | N/A | N/A | 17 W | >90 | Premium | 2T8 |
| LANCE22-31L | 2,514 lm | 115 lm/W | 2,546 lm | 117 lm/W | 2,577 lm | 118 lm/W | N/A | N/A | 22 W | >90 | Standard | 2T8 |
| LANCE22-34L | 2,903 lm | 113 lm/W | 2,924 lm | 114 lm/W | 2,971 lm | 115 lm/W | N/A | N/A | 26 W | >90 | Standard | 3T8 |
| LANCE22-37L | 3,379 lm | 123 lm/W | 3,421 lm | 124 lm/W | 3,463 lm | 126 lm/W | N/A | N/A | 28 W | >90 | Premium | 3T8 |
| LANCE22-48L | 4,103 lm[3] | 119 lm/W | 4,155 lm | 121 lm/W | 4,206 lm | 122 lm/W | N/A | N/A | 34 W | >90 | Premium | 4T8 |
| LANCE24-30L | 2,810 lm | 133 lm/W | 2,816 lm | 135 lm/W | 2,856 lm | 137 lm/W | N/A | N/A | 21 W | >90 | Premium | 2T8 |
| LANCE24-37L | 3,365 lm | 128 lm/W | 3,461 lm | 131 lm/W | 3,510 lm | 133 lm/W | N/A | N/A | 27 W | >90 | Premium | 2T8 |
| LANCE24-43L | 3,641 lm | 127 lm/W | 3,693 lm | 129 lm/W | 3,746 lm | 131 lm/W | N/A | N/A | 29 W | >90 | Premium | 3T8 |
| LANCE24-49L | 4,115 lm | 125 lm/W | 4,174 lm | 127 lm/W | 4,233 lm | 128 lm/W | N/A | N/A | 34 W | >90 | Premium | 3T8 |
| LANCE24-54L | 4,460 lm | 123 lm/W | 4,524 lm | 125 lm/W | 4,588 lm | 126 lm/W | N/A | N/A | 40 W | >90 | Premium | 3T8 |
| LANCE24-62L | 5,560 lm | 116 lm/W | 5,637 lm | 117 lm/W | 5,716 lm | 119 lm/W | N/A | N/A | 46 W | >90 | Premium | 4T8 |

[1] LED Chips are frequently updated therefore values are nominal    [2] Electrical data at 25C (77F). Actual wattage may differ by +/-10%.    [3] Standard DLC Listing

## 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 into grid and hard-lid ceilings. 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 (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 3⅛" 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 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
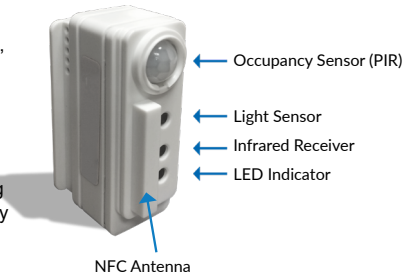
#### ES/PCD

Pre-Programmed EasySense Control Device. One needed per project. Sensor can also be programmed with the approved compatible cell phone (listed 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) scences for full room control.
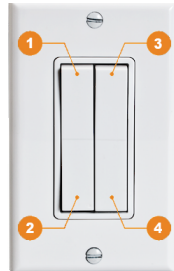
#### Specifications:
- Wireless
- Batteryless
- Dual Rocker
- ZigBee®
- 30 - 100ft Range

#### 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 and sensing as desired. Provided factory installed components only. Lutron system provided by others. 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 factory installed components only. Lutron system provided by others. Contact factory for more information.

### ENLIGHTED

#### 5E/CU/IL

Bundled System with Enlighted 5E sensor (SU-5E-IL), Control Unit (CU-4E-FM) & Cable (CBL-5E-CU4-30N). Fixtures are controlled based on occupancy & ambient light. Includes ability to group fixtures together & connect to a switch to zone fixtures for group operation. Provided 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 factory installed components only. Enlighted system provided by others. Contact factory for more information. (see image above)
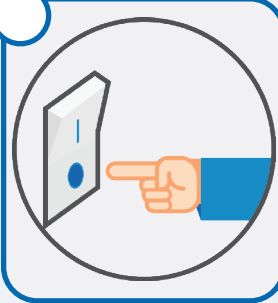
#### 5E/CU/IOT

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 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 factory installed components only. Enlighted system provided by others. Contact factory for more information. (see image above)
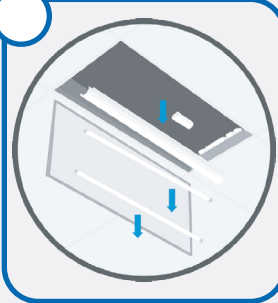
#### 5E/5W/CL

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

# LANCE
## VOLUMETRIC TROFFER RETROFIT KIT
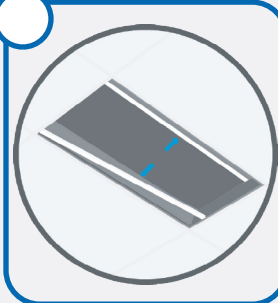
## INSTALLATION INSTRUCTIONS

### STEP 1

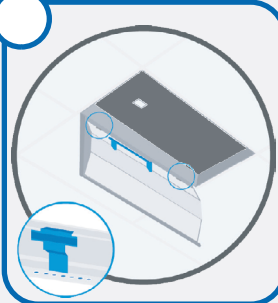Shut off or disconnect power to the fixture.

### STEP 2

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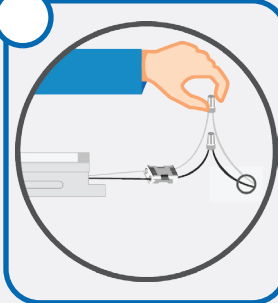
### STEP 3

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.
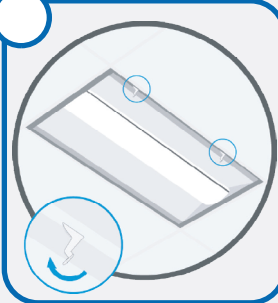Optional tether included on the mounting brackets to secure the kit to the housing.

### 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.
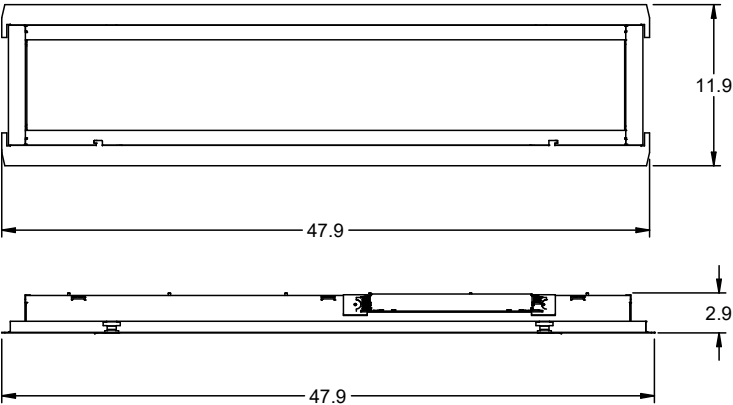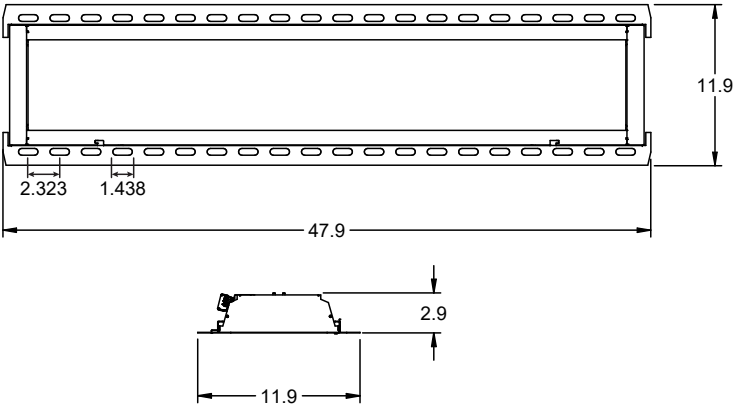
# LANCE

## VOLUMETRIC TROFFER RETROFIT KIT

### LINE DRAWINGS
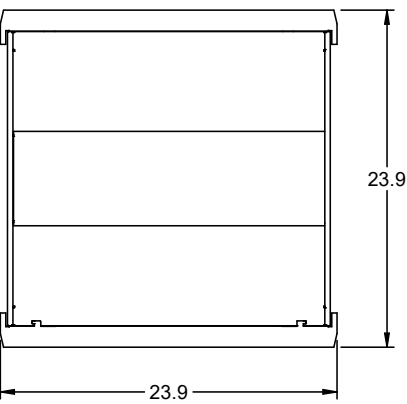
**1'x4'**

Shown with standard bracket



47.9 · 11.9 · 2.9 · 47.9

Shown with Air Return bracket



2.323 · 1.438 · 47.9 · 11.9 · 2.9 · 11.9

**2'x2'**

Shown with standard bracket



23.9 · 23.9

Shown with Air Return bracket



2.238 · 1.438 · 23.9 · 23.9 · 2.9 · 23.9 · 2.9 · 23.9

**2'x4'**

Shown with standard bracket



23.9 · 47.9 · 2.9 · 47.9

Shown with Air Return bracket



2.323 · 1.438 · 47.9 · 23.9 · 2.9 · 23.9
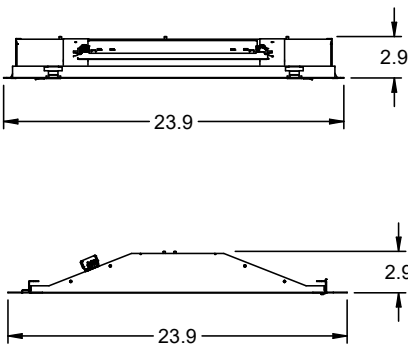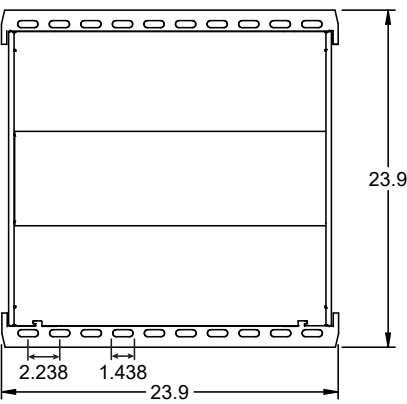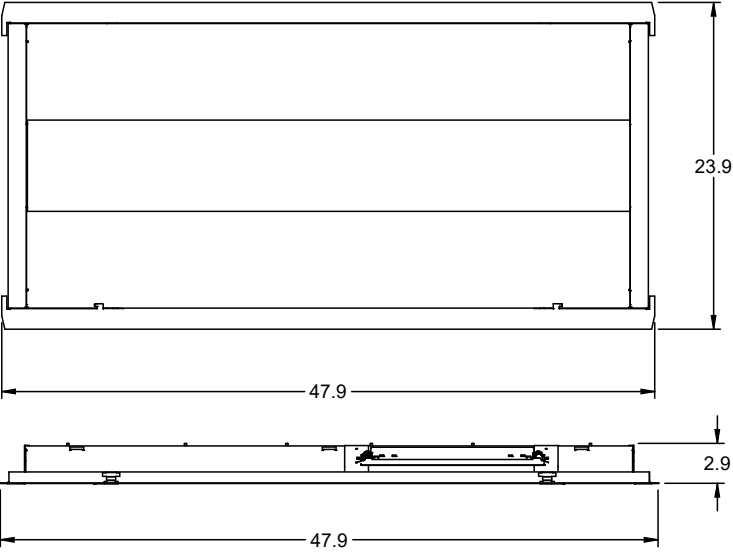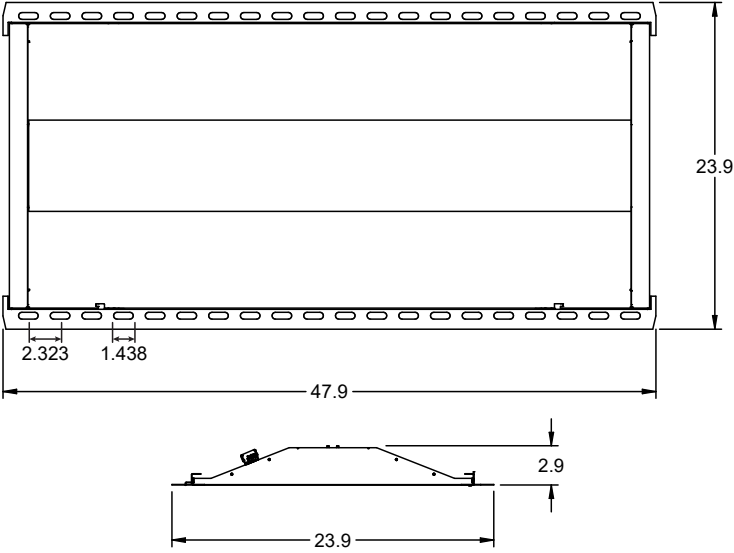
# LANCE
## VOLUMETRIC TROFFER RETROFIT KIT

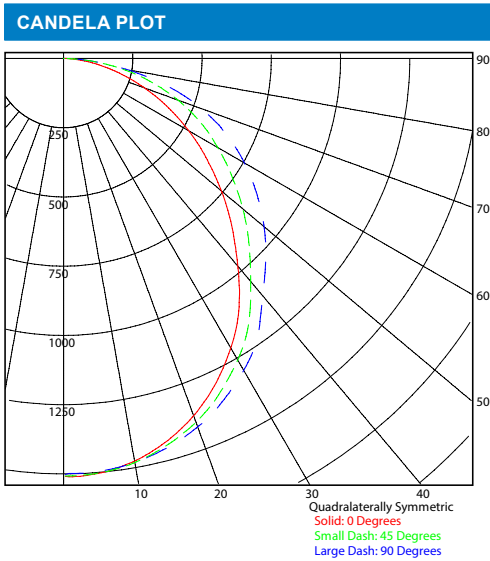## PHOTOMETRIC DATA

### 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
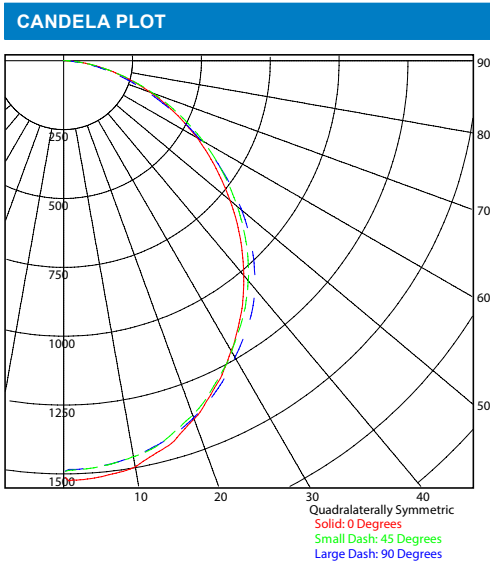
### LUMINAIRE DATA

| 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