# VARI

**LINEAR RETROFIT**

ILP
407-478-3759
ilp-inc.com

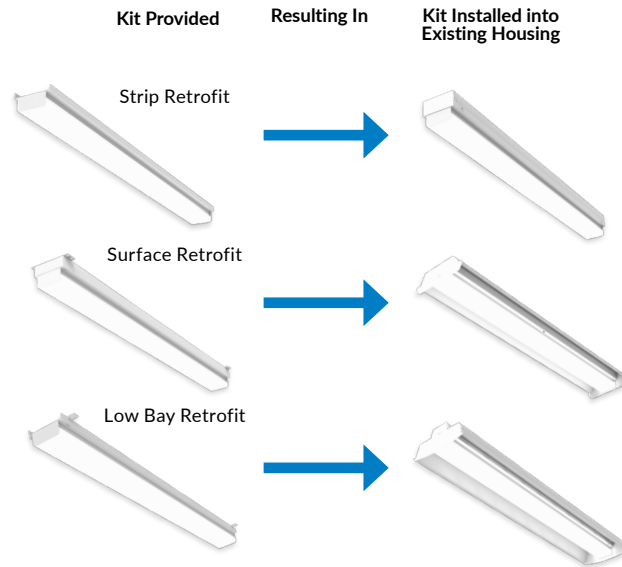## FEATURES

- Highly Configurable & Adaptable BAA Linear Retrofit
- Three Mounting Types – Strip, Surface, and Low Bay
- Strip Mounting Type Available with Fixed 4.3" & 5.0", Adjustable 2.8" to 5.5", and Custom Width Channel Options
- 4ft & 8ft Lengths Available
- 8 Lumen Packages Ranging 2,000 – 12,000
- 3500K, 4000K, 5000K CCT options
- Exceptionally High Efficiency up to 180 lm/W
- Precision Designed Curved & Flat Frosted Acrylic Lens Options
- Pair with Integrated Wireless Grouping Controls Options to Maximize Energy Savings
- 120-277V 0-10V, Bi-Level, and Line Voltage Driver Options
- Calculated L70 > 100,000 Hours
- -40°F up to 123°F Ambient Temperature Range
- ETL Listed for Dry and Damp Locations
- 5 Year Warranty (Standard); 10 Year Warranty Optional
- DesignLights Consortium® Premium Qualified Luminaire

**Kit Provided**  **Resulting In**  **Kit Installed into Existing Housing**

Strip Retrofit

Surface Retrofit

Low Bay Retrofit

## SUITABLE APPLICATIONS

- Education
- Healthcare
- Offices
- Grocery Store
- Retail
- Storage Facility
- Residential
- Stairwell

## ORDERING GUIDE:

| SERIES | LUMENS | LIGHT ENGINE | DRIVER | CCT | LENS OPTIONS | | MOUNTING TYPE [2] | | WARRANTY | |
|---|---|---|---|---|---|---|---|---|---|---|
| VLR4 | 2L | HE High Efficacy | U 120-277V | 35 | (BLANK) | No Lens | 43ST | Fixed 4.3" Strip Channel Width | (BLANK) | 5 YR Std. |
| | 3L | | | 40 | FFLGR | Frosted Flat Glare Reducing Lens | 50ST | Fixed 5.0" Strip Channel Width | 10YR | 10 YR |
| | 4L | | | 50 | | | ADJST | Adjustable Width Bracket Strip Channel (2.8" / 3.6 / 4.3" / 5.0" / 5.5") | | |
| | 6L | | | | FCLGR | Frosted Round Glare Reducing Lens | | | | |
| VLR8 | 5L | | | | | | xxST [3, 4] | Custom Width Strip Channel | | |
| | 6L | | | | | | | | | |
| | 8L | | | | | | SF | Surface | | |
| | 10L | | | | | | LB | Low Bay | | |
| | 12L | | | | | | | | | |

| OPTIONS | | CONTROLS OPTIONS | |
|---|---|---|---|
| **Factory Installed** | | **Basic** | |
| SR | Sensor Ready Driver | FIOS [5] | On/Off Occupancy Sensor |
| DR | DALI Ready Driver | FIOSPC [5] | On/Off Occupancy Sensor w/ Photocell |
| DIM1 [12] | 1% Dimming Driver | FIOSPC/DLH [5] | On/Off Occupancy Sensor w/ Daylight Harvesting |
| BLD [12, 14] | Bi-Level Dimming Driver w/ Two Hot Leads (100%/50%) | USBD [5, 11] | User Selectable Bi-Level Dimming Occupancy Sensor |
| LVD120 [12, 14] | Mark X Phase Dimming 120V | BDxx [5, 11] | Preset Bi-Level Dimming Occupancy Sensor (xx=% eg. 20,30) |
| RW/3W [6] | 3 Wire Raceway Wiring Harness for continuous wiring through fixtures (non-dim function) | BDxxPC [5, 11] | Preset Bi-Level Dimming Occupancy Sensor (xx=% eg. 20,30) w/ Photocell |
| RW/5W [6] | 5 Wire Raceway Wiring Harness for continuous wiring through fixture (dimming) | | |
| EM7 | 7W Factory Installed Battery Backup | | |
| EM7/HE | 7W Factory Installed Battery Backup - CEC Title 20 Compliant | | |
| EM10 | 10W Factory Installed Battery Backup | | |
| EM10/HE | 10W Factory Installed Battery Backup - CEC Title 20 Compliant | | |
| EM12 | 12W Factory Installed Battery Backup | | |
| GTD | Generator Transfer Device | **Advanced** | |
| UL924 | UL 924 Emergency Device | ESMC [5, 7] | EasySense Grouping Sensor for Mounting Heights < 10ft |
| SD480 [13] | 480V Step Down Transformer | 5E/5W/CL [5] | Enlighted 5E Connected Lighting (CL) Sensor w/ Aux Driver / 5 Wire Connection |
| SD347 [13] | 347V Step Down Transformer | 5E/5W/IOT [5] | Enlighted 5E Internet of Things (IOT) Sensor w/ Aux Driver / 5 Wire Connection |
| **Ship With Accessories** | | VDO [5, 10] | Lutron Vive DFCSJ-OEM-OCC (Daylight & Occupancy) |
| +VLRx WC [1] | 11ga Unpainted Galvanized Finish Wire Cage (X=2, 4, 8) | VRF [5, 10] | Lutron Vive DFCSJ-OEM-RF (RF Only) |
| ESMC/WWS/DR | EasySense Dual Rocker Wireless Wall Switch | AWNR [5] | Lutron Athena Wireless Node |
| +VLRx RS [9] | Reflector Kit, Symmetrical, White (x=2, 4, 8) | AWNS [5] | Lutron Athena Wireless Node with Sensor |
| +VLRx RA [9] | Reflector Kit, Asymmetrical, White (x=2, 4, 8) | | |

[1] Only to be used with 43ST mounting type
[2] See pages 5-7 for line drawings
[3] Minimum width is 2.8"
[4] Contact factory for more information

[5] Mounted Integral within Fixture Length
[6] Used only when mounting fixtures in continuous rows. One needed between each fixture.
[7] Easily Controlled via Mobile Phone with Bluetooth App

[8] Mounted to End Cap of existing fixture
[9] Only available with 43ST and 50ST Mounting Type
[10] Must be used with SR Sensor Ready Driver
[11] Modified coverage area (see page 3 for details)

[12] Not compatible with sensor options
[13] Cannot be combined with EM for VLR4
[14] Not compatible with SD347 or SD480

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## LED SYSTEMS INFORMATION

| LED SYSTEMS INFO [2] | LENS | 3500K | | 4000K | | 5000K | | WATTAGE [3] | REPLACES | DLC [1] |
|---|---|---|---|---|---|---|---|---|---|---|
| Part Numbers | | Lumens | Efficacy | Lumens | Efficacy | Lumens | Efficacy | | | |
| VLR4-2LHE | No Lens | 2820 | 168.0 | 2881 | 171.8 | 2962 | 175.8 | 16.8 | 1T8 | Standard |
| | FCLGR | 2668 | 159.1 | 2743 | 162.8 | 2802 | 166.6 | | | Standard |
| | FFLGR | 2681 | 160.0 | 2740 | 163.6 | 2816 | 167.3 | | | Standard |
| VLR4-3LHE | No Lens | 3788 | 162.1 | 3865 | 165.9 | 3958 | 169.7 | 23.3 | 2T8 | Standard |
| | FCLGR | 3584 | 153.6 | 3656 | 157.2 | 3745 | 160.9 | | | Standard |
| | FFLGR | 3602 | 154.3 | 3675 | 158.0 | 3763 | 161.6 | | | Standard |
| VLR4-4LHE | No Lens | 4499 | 159.0 | 4586 | 162.3 | 4708 | 166.1 | 28.3 | 2T8 | Standard |
| | FCLGR | 4257 | 150.3 | 4355 | 153.8 | 4454 | 157.4 | | | Standard |
| | FFLGR | 4278 | 151.0 | 4377 | 154.5 | 4476 | 158.1 | | | Standard |
| VLR4-6LHE | No Lens | 6581 | 147.0 | 6744 | 150.6 | 6911 | 154.1 | 44.8 | 3T8 | Premium [4] |
| | FCLGR | 6254 | 139.5 | 6396 | 142.8 | 6539 | 146.0 | | | Premium [4] |
| | FFLGR | 6271 | 140.0 | 6427 | 143.4 | 6571 | 146.7 | | | Premium [4] |
| VLR8-5LHE | No Lens | 5179 | 172.9 | 5286 | 176.5 | 5411 | 180.7 | 30.0 | 2T8 | Standard |
| | FCLGR | 4892 | 163.3 | 5009 | 167.2 | 5119 | 170.9 | | | Standard |
| | FFLGR | 4916 | 164.1 | 5034 | 168.1 | 5145 | 171.8 | | | Standard |
| VLR8-6LHE | No Lens | 6553 | 168.9 | 6699 | 172.7 | 6854 | 176.6 | 38.8 | 4T8 | Standard |
| | FCLGR | 6207 | 160.0 | 6349 | 163.6 | 6496 | 167.4 | | | Standard |
| | FFLGR | 6227 | 160.5 | 6382 | 164.5 | 6528 | 168.3 | | | Standard |
| VLR8-8LHE | No Lens | 9796 | 157.0 | 9998 | 160.2 | 10236 | 163.9 | 62.4 | 2T5HO | Standard |
| | FCLGR | 9253 | 148.3 | 9475 | 151.8 | 9684 | 155.3 | | | Standard |
| | FFLGR | 9299 | 149.0 | 9522 | 152.5 | 9732 | 156.0 | | | Standard |
| VLR8-10LHE | No Lens | 10638 | 152.0 | 10899 | 155.8 | 11148 | 159.3 | 70.0 | 2T5HO | Standard |
| | FCLGR | 10094 | 144.2 | 10327 | 147.6 | 10563 | 151.0 | | | Standard |
| | FFLGR | 10145 | 145.0 | 10378 | 148.3 | 10616 | 151.7 | | | Standard |
| VLR8-12LHE | No Lens | 13107 | 148.0 | 13404 | 151.3 | 13721 | 154.8 | 88.6 | 6T8 | Standard |
| | FCLGR | 12415 | 140.1 | 12711 | 143.4 | 12997 | 146.7 | | | Standard |
| | FFLGR | 12491 | 141.0 | 12760 | 144.1 | 13062 | 147.4 | | | Standard |

[1] Please check DLC website for updates and current listing  [2] Values are nominal, check IES file for more detail  [3] 2 Electrical data at 25C (77F). Actual wattage may differ by +/-10%
[4] Only VLR4-6LHE-LB is DLC Premium Listed. All other configurations are DLC Standard Listed

## ELECTRICAL DATA (AMPS)

| Lumen Package | Wattage[1] | 120V | 208V | 240V | 277V | 347V | 480V |
|---|---|---|---|---|---|---|---|
| VLR4-2LHE | 16.8 | 0.14 | 0.08 | 0.07 | 0.06 | 0.05 | 0.04 |
| VLR4-3LHE | 23.3 | 0.19 | 0.11 | 0.10 | 0.08 | 0.06 | 0.05 |
| VLR4-4LHE | 28.3 | 0.24 | 0.14 | 0.12 | 0.10 | 0.08 | 0.06 |
| VLR4-6LHE | 44.8 | 0.37 | 0.22 | 0.19 | 0.16 | 0.13 | 0.09 |
| VLR8-5LHE | 30.0 | 0.25 | 0.14 | 0.13 | 0.11 | 0.08 | 0.06 |
| VLR8-6LHE | 38.8 | 0.32 | 0.19 | 0.16 | 0.14 | 0.11 | 0.08 |
| VLR8-8LHE | 62.4 | 0.52 | 0.3 | 0.26 | 0.23 | 0.18 | 0.13 |
| VLR8-10LHE | 70.0 | 0.58 | 0.34 | 0.29 | 0.25 | 0.20 | 0.15 |
| VLR8-12LHE | 88.6 | 0.74 | 0.43 | 0.37 | 0.32 | 0.26 | 0.18 |

[1] Electrical data at 25C (77F). Actual wattage may differ by +/-10%

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# SPECIFICATIONS

### CONSTRUCTION
Steel housing channel for rigidity, durability, and ease of installation. Designed to achieve maximum performance and improved aesthetics. Designed to retrofit existing fluorescent strip, surface, and low bay fixtures. Product proudly assembled in the United States of America.

### ELECTRICAL
Class 2 LED light engine for high efficacy and long life. Calculated L70 > 100,000 hrs and L90 > 54,00hrs. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient. Power Factor > 0.90. THD < 20%. Standard 120-277 Vac 0-10V dimmable (10%-100%) with optional 347 Vac High Voltage, Bi-Level, 1% Dimming, and 120V Line Volage Dimming Options. Optional emergency battery backups, generator transfer device, and UL924 devices available to meet critical life safety lighting requirements.

### INSTALLATION
Designed to retrofit exising fluorescent strip, surface, and low bay fixtures. Strip mounting type offers fixed 4.3", 5.0", and Adjustable 2.8"/4.3"/5.0"/5.5" channel width options to mount to existing housings. Custom width options available as well; contact factory for more information. Surface mounting type standard with 5.6" width channel. Low Bay mounting type standard with 6.3" width channel. ILP recommends a trial installation prior to ordering project quantities.

### OPTICS
Standard without lens. Optional high impact resistant Curved and Flat Frosted Glare Reducing Acrylic lens available for durability and LED Glare reduction. Field removable lens section for easy access to driver channel for installation and maintenance.

### CONTROLS
Factory installed Advanced and Basic sensor options available to maximize energy savings. Please see more information below on Pages 4 & 5. Inquire with manufacturer for additional controls options, including customer supplied items.

### CERTIFICATIONS
ETL Listed to US and Canadian safety standards. Suitable for damp locations. Title 24 Compliant with sensor option; see local ordinance for qualification information. DLC (DesignLights Consortium) Premium and Standard 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).

# BASIC CONTROLS

### FIOS
Standard on/off motion sensor. Comes with 360 degree high bay lens, 360 degree low bay lens & aisle lens. 360 degree high bay lens factory installed, unless notified otherwise.

### FIOSPC
Motion sensor with the addition of photocell control. When installed, fixture will not activate unless 1. motion is detected and 2. light levels are below the preset level. When activated, fixture will turn on to 100% light output & will only shut off when one of the two levels mentioned above are met. If no motion is detected & light levels fall below preset level the fixture remains off.

### FIOSPC/DLH
Factory installed motion sensor with the addition of photocell control that will allow for daylight harvesting. When installed, fixture will not activate unless 1. motion is detected & 2. light levels are below the preset level. When activated, fixture will turn on only enough to meet the preset light levels and will adjust as the amount of light in the space adjusts between 100%-10%. If light levels are adequate the fixture will remain off.

### DHPC
Daylight Harvesting off photocell. Fixtures will continually dim up/down throughout the day based on light level readings taken from the photocell control.

### USBD
User Selectable Bi-Level Dimming. Allows the end user to manually select the unoccupied dimming level. Once motion is detected, the fixture will return to 100% light output.

### BDxx
Factory set Bi-Level Dimming. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied. Example: BD20 sets the fixture to dim down to 20% lumen output when the area is unoccupied. Once motion is detected, the fixture will return to 100% light output.

### BDxxPC
Factory set Bi-Level Dimming with motion and photocell. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied and will not return to 100% light output unless 1. motion is detected and 2.the light level is below the preset level. Example: BD20PC sets the fixture to dim down to 20% lumen output when the area is unoccupied and will not return to 100% light output unless the above conditions are met for both motion and light level readings.

### USBD, BDxx, BDxxPC - Modified Coverage

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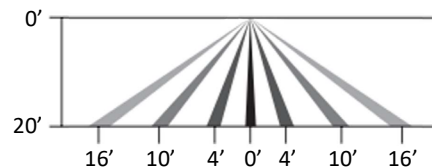
## ADVANCED CONTROLS OPTIONS

### 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) 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

### ENLIGHTED

#### 5E/5W/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/5W/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)

### 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.
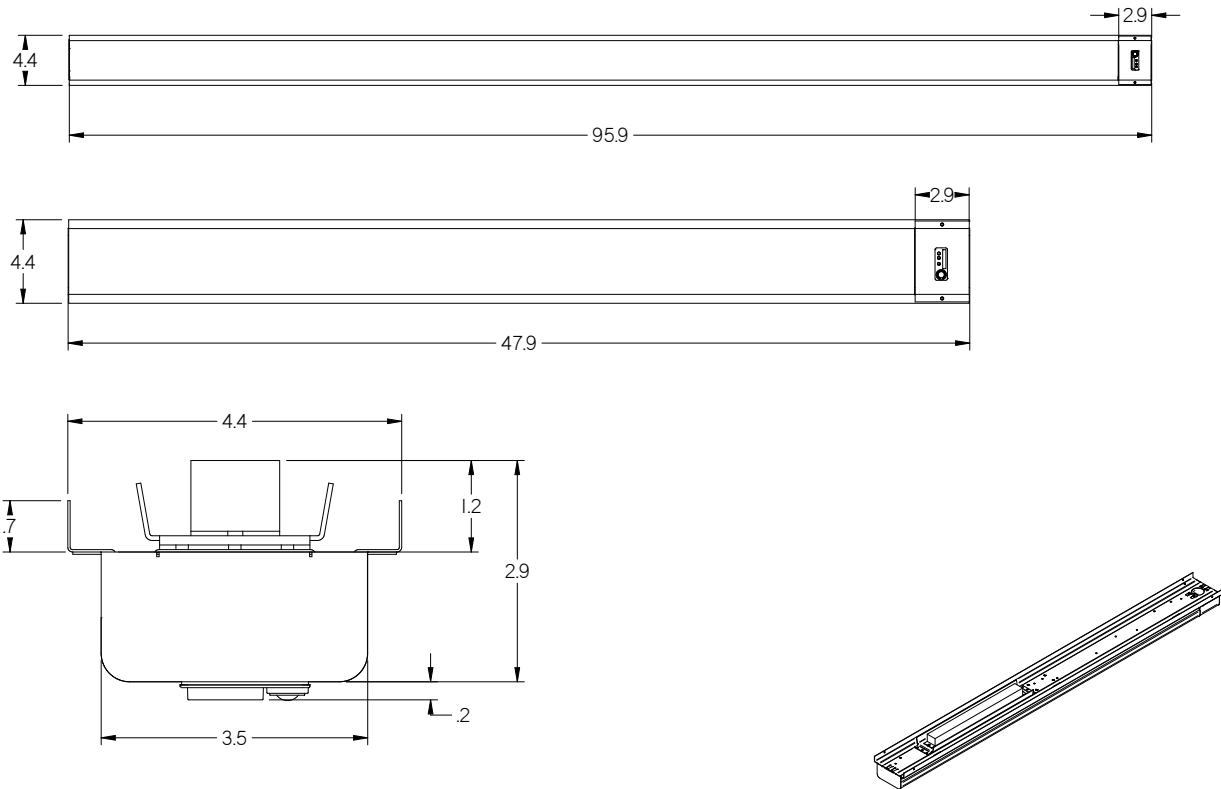
#### AWNS

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.

# VARI
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## LINE DRAWINGS

### FIXED 4.3" WIDE STRIP RETROFIT 43ST MOUNTING TYPE

4.4

95.9

4.4

47.9

4.4

1.2

2.9

.7

3.5
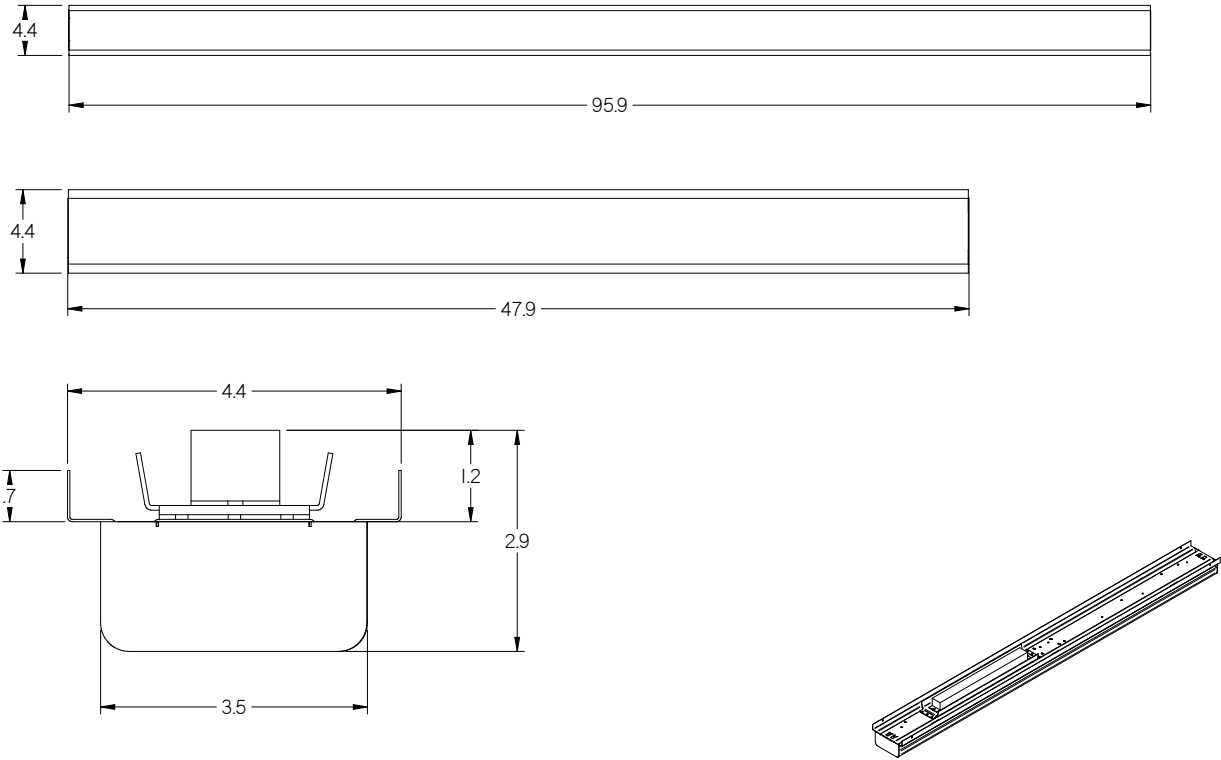
### FIXED 4.3" WIDE STRIP RETROFIT WITH SENSOR - 43ST MOUNTING TYPE

2.9

4.4

95.9

2.9

4.4

47.9

4.4

1.2

2.9

.7

.2

3.5

# VARI

## LINE DRAWINGS

### FIXED 4.3" WIDE STRIP RETROFIT - 43ST MOUNTING TYPE - with EM10

2.9

4.4

95.9

2.9

4.4

47.9

4.4

1.5

3.2

.7

3.5
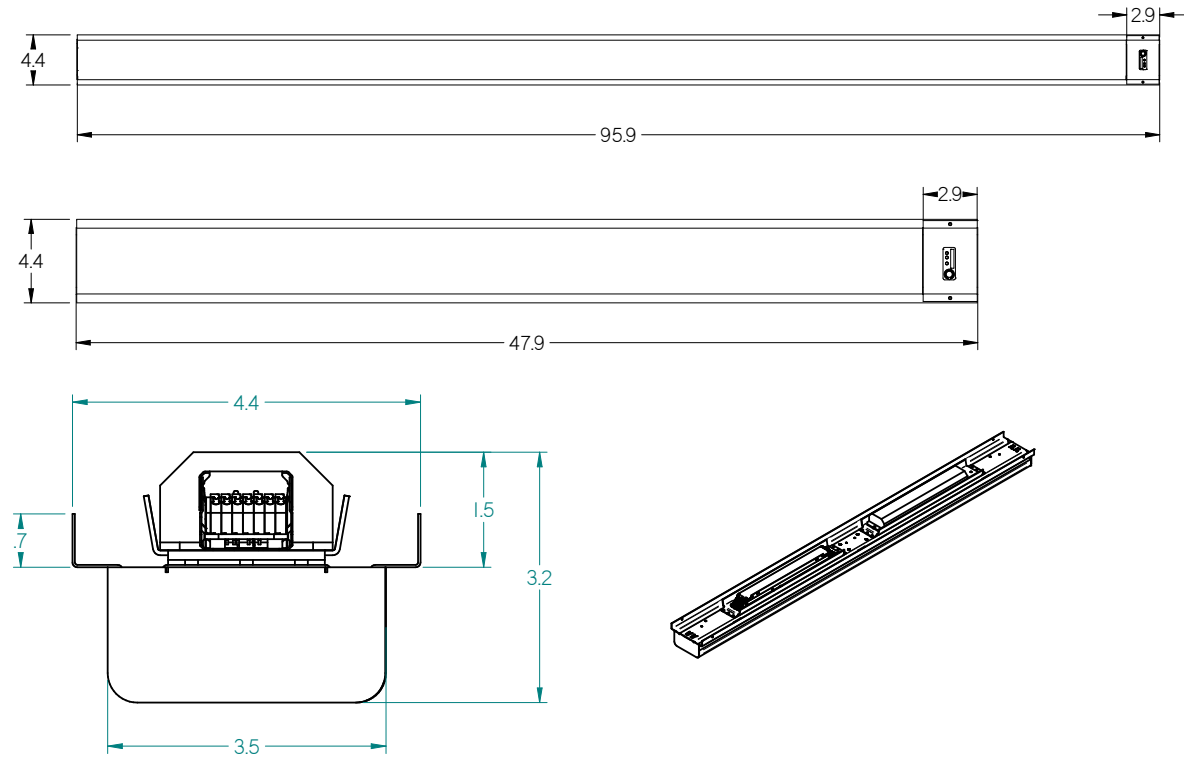
### FIXED 5.0" WIDE STRIP RETROFIT 50ST MOUNTING TYPE

5.1

95.9

5.1

47.9

5.1

1.2

2.9

.7

3.5

![VARI logo]
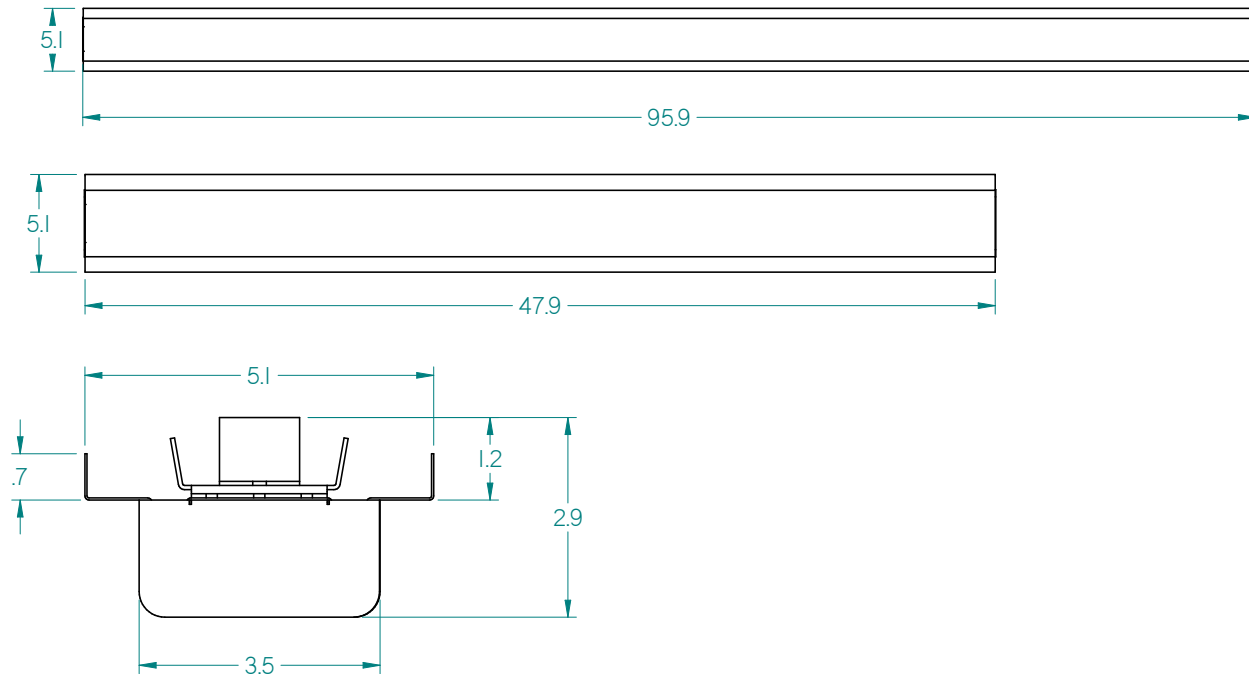
# LINEAR RETROFIT

## LINE DRAWINGS

### ADJUSTABLE STRIP RETROFIT - ADJST MOUNTING TYPE

5.6

95.9

5.6

47.9

4.4
(Adjustable)

5.6

.8

1.0
(Adjustable)

.8

1.2

2.9

3.5

5.070

4.370

3.570

2.820

1.500

6.250
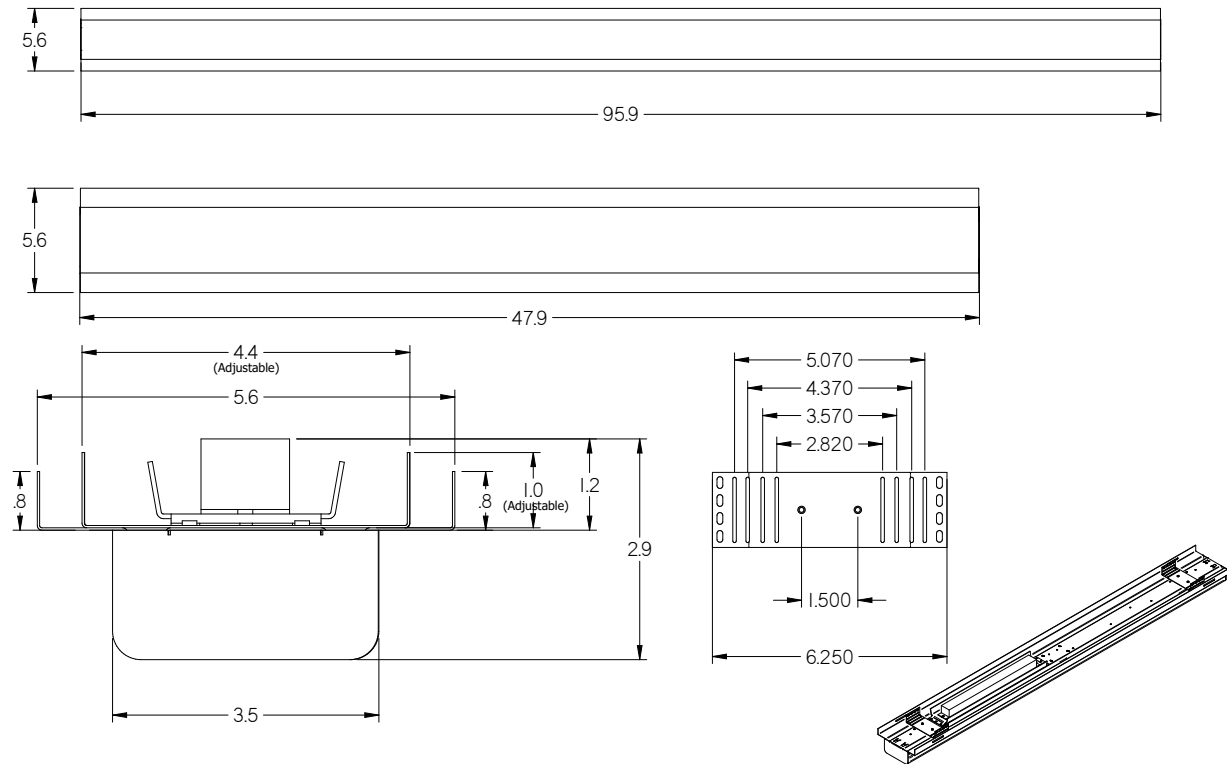
### SURFACE RETROFIT - SF MOUNTING TYPE

4.4

5.6

95.9

4.4

5.6

47.9

5.6

4.4

1.6

3.3

3.9

.8

1.5

5.0

3.6

# VARI
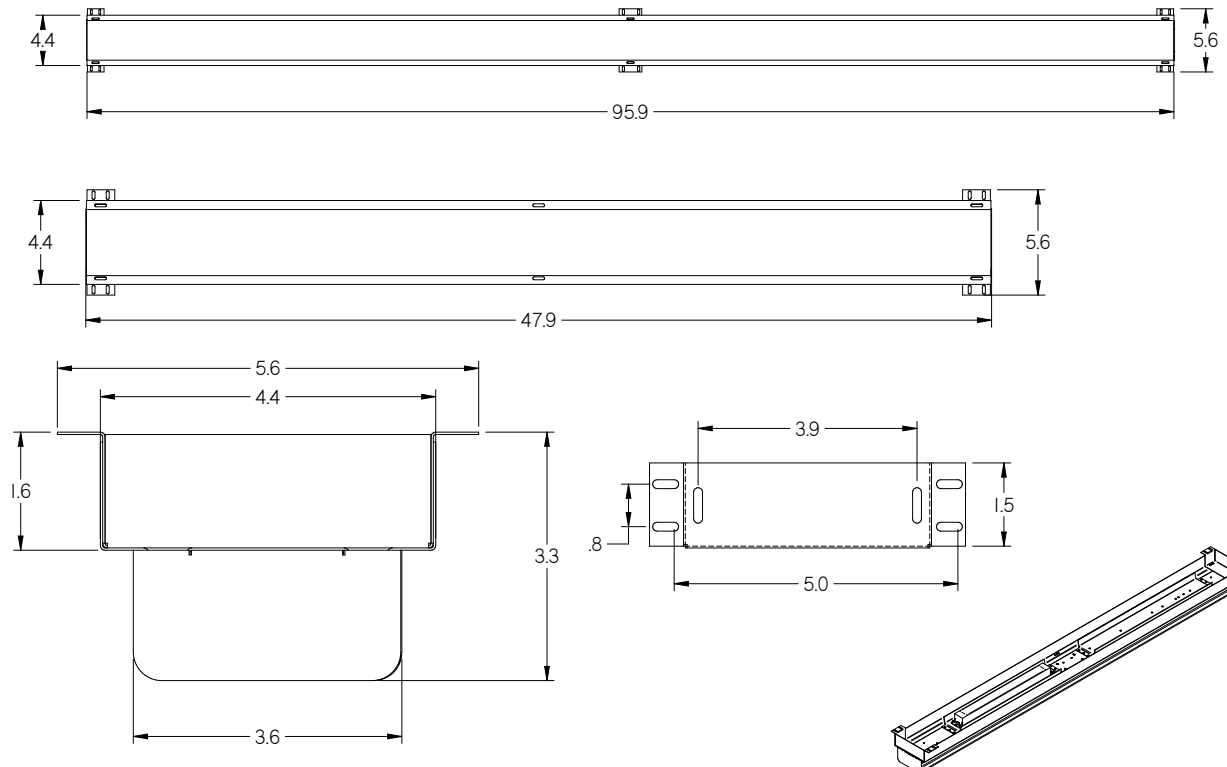
## LINEAR RETROFIT
### LINE DRAWINGS

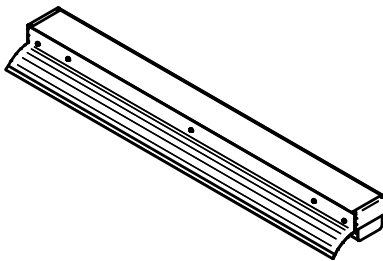**LOWBAY RETROFIT - LB MOUNTING TYPE**
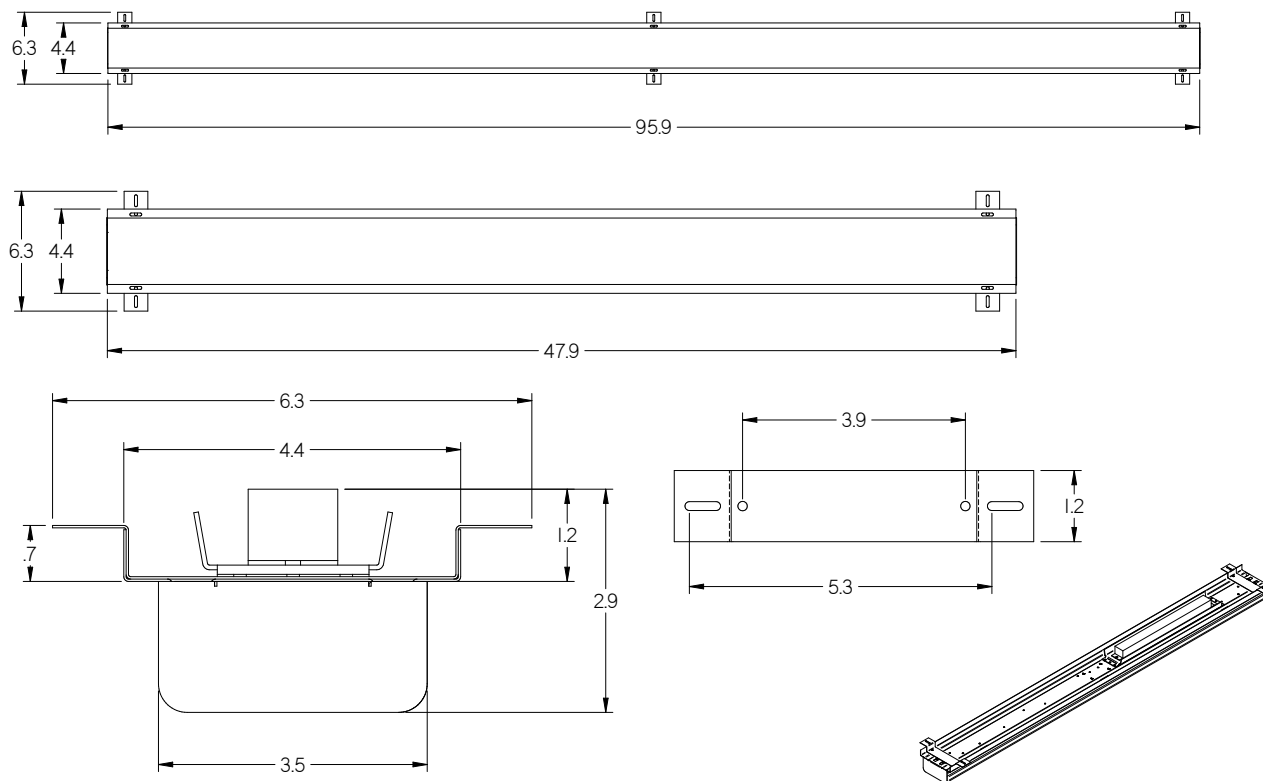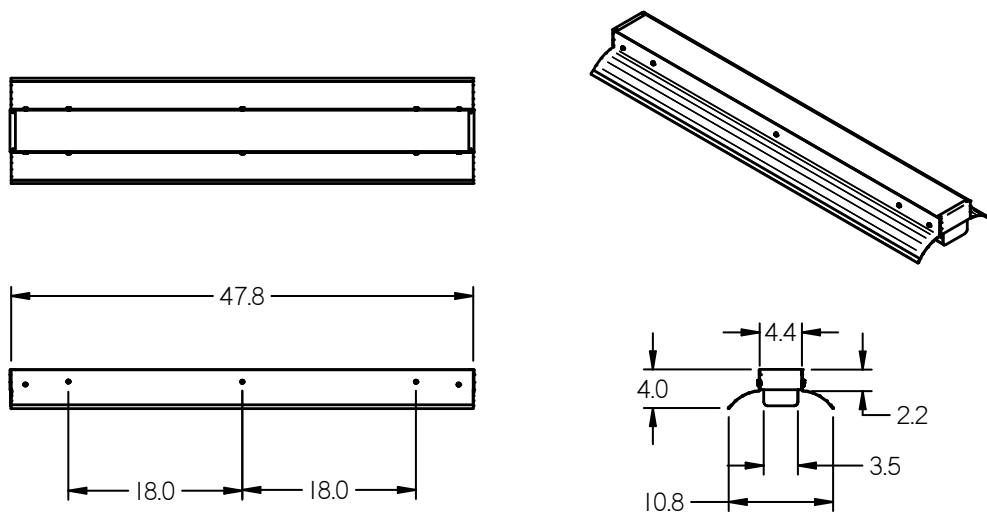
6.3  4.4

95.9

6.3  4.4

47.9

6.3

4.4

.7

1.2

2.9

3.5

3.9

5.3

1.2

**SYMMETRICAL REFLECTOR OPTION - RS[1]**
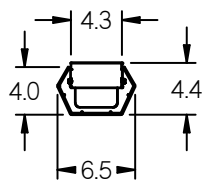
47.8

18.0   18.0

4.4

4.0

2.2

3.5

10.8

[1] Exact dimensions may differ based on type of housing used.
  Use for general dimension estimation only.

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### LINE DRAWINGS

**ASYMMETRICAL REFLECTOR OPTION - RA[1]**

47.8

18.0     18.0

4.4

4.0

10.8

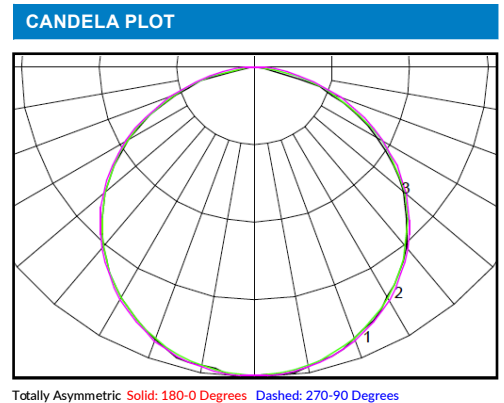**VLR4 WIRE CAGE[1]**

48.0

4.3

4.0     4.4

6.5
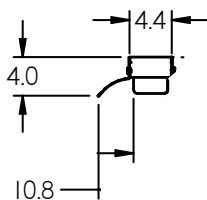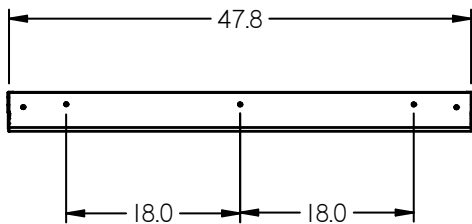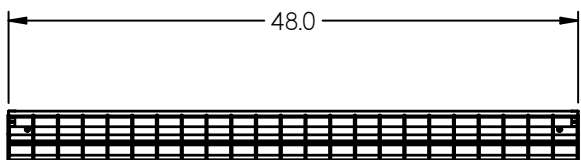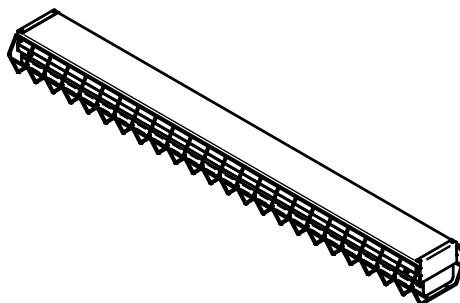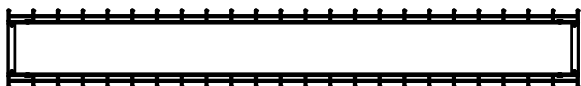
[1] Exact dimensions may differ based on type of housing used.
Use for general dimension estimation only.
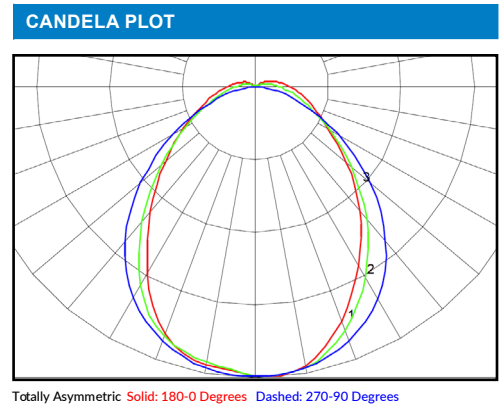
# VARI
## LINEAR RETROFIT

## PHOTOMETRIC DATA

### LUMINAIRE DATA

| Part Number | VLR4-3LHE-U-40 |
|---|---|
| Description | VARI 4ft High Efficacy Linear Retrofit, 3,000 Lumens, No Lens. |
| Fixture Lumens (lm) | 3865 |
| Wattage (W) | 23.3 |
| Efficacy (lm/W) | 165.9 |
| Mounting | Fixed Strip, Adjustable Strip, or Surface |
| Spacing Criteria | 0° = 1.3, 90° = 1.3 |

### ZONAL LUMEN SUMMARY

| Zone | Lumens (lm) | % Fixture |
|---|---|---|
| 0° - 40° | 1720 | 44.50% |
| 0° - 60° | 3096 | 80.10% |
| 0° - 90° | 3865 | 100.00% |
| 90° - 180° | 0 | 0.00% |
| 0° - 180° | 3865 | 100.00% |

### CANDELA PLOT



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

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### LUMINAIRE DATA

| Part Number | VLR4-3LHE-U-40-FCLGR |
|---|---|
| Description | VARI 4ft High Efficacy Linear Retrofit, 3,000 Lumens, Frosted Glare-Reducing Curved Lens. |
| Fixture Lumens (lm) | 3656 |
| Wattage (W) | 23.3 |
| Efficacy (lm/W) | 157.2 |
| Mounting | Fixed Strip, Adjustable Strip, or Surface |
| Spacing Criteria | 0° = 1.1, 90° = 1.26 |

### ZONAL LUMEN SUMMARY

| Zone | Lumens (lm) | % Fixture |
|---|---|---|
| 0° - 40° | 1733 | 47.40% |
| 0° - 60° | 2800 | 76.60% |
| 0° - 90° | 3499 | 95.70% |
| 90° - 180° | 157 | 4.30% |
| 0° - 180° | 3656 | 100.00% |

### CANDELA PLOT



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

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### LUMINAIRE DATA

| Part Number | VLR4-3LHE-U-40-FFLGR |
|---|---|
| Description | VARI 4ft High Efficacy Linear Retrofit, 3,000 Lumens, Frosted Glare-Reducing Flat Lens. |
| Fixture Lumens (lm) | 3675 |
| Wattage (W) | 23.3 |
| Efficacy (lm/W) | 158.0 |
| Mounting | Fixed Strip, Adjustable Strip, or Surface |
| Spacing Criteria | 0° = 1.16, 90° = 1.26 |

### ZONAL LUMEN SUMMARY

| Zone | Lumens (lm) | % Fixture |
|---|---|---|
| 0° - 40° | 1694 | 46.10% |
| 0° - 60° | 2815 | 76.60% |
| 0° - 90° | 3502 | 95.30% |
| 90° - 180° | 173 | 4.70% |
| 0° - 180° | 3675 | 100.00% |

### CANDELA PLOT



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