

# Grüv® 1.5"

## Recessed Linear LED



### Features

Prized for classic good looks, performance and flexibility, Grüv has taken a turn for the edgy. This Bauhaus-influenced family of linear LEDs has just expanded—by getting smaller. The Grüv 1.5" LED can climb walls, cross ceilings, literally go everywhere your design wants it to be. Get into Grüv. Perfect linear design, every time.

### Product Overview

|               |   |
|---------------|---|
| Type:         | Recessed Direct<br>Lens, Asymmetric, Grazer & Straight Blade Louver   |
| Wattage:      | 5W/ft, 10W/ft (other wattages available see p2)   |
| Lumen Output: | 3,263 max; 78.4 Lm/W (10W, 4ft fixture)   |
| Color Temp:   | 2700K, 3000K, 3500K, 4000K  |
| CRI:          | 83 typ. or 90+ typ  |
| Dimming:      | 0-10V, 1% dimming (standard)<br>Lutron Hi-lume® 2 wire (120V)<br>Lutron Hi-lume® EcoSystem, 1% dim, fade to off<br>DALI dimming, 1% dim |

\*International version available, see website for spec sheet.

### PROJECT:

### TYPE:

### Fixture Summary (see following pages for more information)

#### Ceiling Types

| 4" Tech Zone  | 6" Tech Zone | 9/16" | 15/16"              | Gyp Board |
|---------------|--------------|-------|---------------------|-----------|
| Yes (FR only) | No           | Yes   | Yes (FLG-GRID only) | Yes       |

| Millwork | Perimeter J-Mold |
|----------|------------------|
| Yes      | Yes              |

#### Performance Chart

| Wattage Per Foot | Delivered Lumens | LPW  | Color Temp |
|------------------|------------------|------|------------|
| 5                | 1840             | 87.6 | 3500K      |
| 10               | 3263             | 78.4 | 3500K      |

Data is based on 3500K-83 IES files available on website

Data is based on 4' fixture with performance lens

#### Electrical Data

| Wattage Per Foot |      | 4'           |      | 8'           |      |
|------------------|------|--------------|------|--------------|------|
|                  |      | System Watts | Amps | System Watts | Amps |
| 5                | 120V | 19           | 0.16 | 37           | 0.31 |
|                  | 277V | 21.3         | 0.08 | 38           | 0.14 |
| 10               | 120V | 40           | 0.33 | 80           | 0.66 |
|                  | 277V | 40           | 0.15 | 80           | 0.30 |

Electronic multi-volt (120-277VAC), constant current LED driver

#### Standard Patterns

| "L" | "J" | "U" | "O" | "Z" | Wall to Ceiling | Custom* |
|-----|-----|-----|-----|-----|-----------------|---------|
| Yes | Yes | Yes | Yes | Yes | Yes             | Yes     |

\*Submit drawing, consult factory



## PROJECT:

## TYPE:

### Ordering Information

| HW 120/277   |   |   |   |   |                                    |   |   |   |    |  |            |            |            |            |                     |                     |                     |                     |                |                |      |      |              |                       |      |      |              |  |  |  |       |  |  |  |   |  |  |
|--|---|---|---|---|------------------------------------|---|---|---|----|--|------------|------------|------------|------------|---------------------|---------------------|---------------------|---------------------|----------------|----------------|------|------|--------------|-----------------------|------|------|--------------|--|--|--|-------|--|--|--|---|--|--|
| 1  | 2   | 3   | 4   | 5   | 6                                  | 7   | 8 | 9 | 10 |  |            |            |            |            |                     |                     |                     |                     |                |                |      |      |              |                       |      |      |              |  |  |  |       |  |  |  |   |  |  |
| <b>1</b> <u>Model</u><br>GRUV1.5-FLG-A16+ - exposed flange<br>GRUV1.5-FLG-GRID-A16+ - exposed flange, grid mount<br>GRUV1.5-FR-GRID-A16+ - regressed lens grid<br>GRUV1.5-GB-A16+ - gyp board trimless mud-in<br>GRUV1.5-GRID-A16+ - grid mount<br>GRUV1.5-IS-A16+ - independently suspended, millwork<br>GRUV1.5-J/GB-A16+ - j-mold/gyp board trimless<br>GRUV1.5-J/GRID-A16+ - j-mold/grid<br>GRUV1.5-J/IS-A16+ - j-mold/independently suspended | <b>2</b> <u>Optics</u><br>PL - performance lens (standard)<br>SLDW - straight blade louver (wh) solid blades w/overlay<br>SLDB - straight blade louver (blk) solid blades w/overlay<br>SLDS - straight blade louver (slv) solid blades w/overlay<br>ASY - asymmetric lens (not for FR version)<br>GRZ - grazer lens (suggest cove installation, see page 7) | <b>3</b> <u>Wattage</u> (per foot)<br><u>Standard:</u><br>5 - 5W/ft<br>10 - 10W/ft<br><u>Optional:</u><br>3 - 3W/ft (4' minimum length required)<br>4 - 4W/ft (4' minimum length required), DLC listed (see additional notes below)<br>6 - 6W/ft<br>7 - 7W/ft<br>8 - 8W/ft<br>9 - 9W/ft | <b>4</b> <u>Color Temp</u><br>83 CRI:90+ CRI:<br>27 - 2700K-83 279 - 2700K-90+<br>30 - 3000K-83 309 - 3000K-90+<br>35 - 3500K-83 359 - 3500K-90+<br>40 - 4000K-83 409 - 4000K-90+ | <b>5</b> <u>Finish</u><br>HW - high reflectance matte white | <b>6</b> <u>Voltage</u><br>120/277 | <b>7</b> <u>Length</u> <table><tr><td colspan="2">x</td><td colspan="2">x</td></tr><tr><td>(Length A)</td><td>(Length B)</td><td>(Length C)</td><td>(Length C)</td></tr><tr><td>Length A (used for)</td><td>Length B (used for)</td><td>Length C (used for)</td><td>Length C (used for)</td></tr><tr><td>- all patterns</td><td>- all patterns</td><td>- PU</td><td>- PU</td></tr><tr><td>- IND/IND-S+</td><td>- PR - 2 lengths of 2</td><td>- PZ</td><td>- PZ</td></tr><tr><td>- CON/CON-S+</td><td></td><td></td><td></td></tr><tr><td>- CUS</td><td></td><td></td><td></td></tr></table> | x |   | x  |  | (Length A) | (Length B) | (Length C) | (Length C) | Length A (used for) | Length B (used for) | Length C (used for) | Length C (used for) | - all patterns | - all patterns | - PU | - PU | - IND/IND-S+ | - PR - 2 lengths of 2 | - PZ | - PZ | - CON/CON-S+ |  |  |  | - CUS |  |  |  | <b>8</b> <u>Configuration</u><br>IND - individual fixture, 2' to 8' in 1' increments<br>IND-S+ - individual with standard plus (see pg8, for GRID or J/GRID only)<br>CON - continuous run > than 8', specify to nearest foot<br>CON-S+ - continuous run with standard plus (see pg8, for GRID or J/GRID only)<br>CUS - custom made to measure, +/- 1/8" of customer supplied field dimensions<br><u>Standard Patterns (see page 8 for details):</u><br>PLL - L left, (2) straights + (1) 90° corner, leg right<br>PLR - L right, (2) straights + (1) 90° corner, leg left<br>PU - U shape, (3) straight lengths + (2) 90° corners<br>PR - Rectangle, (4) straight lengths + (4) 90° corners<br>PZ - Z shape, (3) straight lengths + (2) 90° corners<br>PWC - wall to ceiling (1) 90° Corner joining 2 segments<br><u>Custom Patterns:</u><br>PC - please provide drawings and consult factory | <b>9</b> <u>Drivers</u><br>0-10V - 1% electronic dimming , multi-volt (120-277VAC) constant current driver (standard).<br>**HILUME-A-LTE - On indefinite hold (Lutron "A" Series, 1% dim, 2-wire, 120V only)<br>HILUME-H-ECO - Lutron "H" Series, 1% dim, fade to off, EcoSystem<br>DALI - DALI Dimming 120-277VAC, 1% dim<br>** Lutron has placed "A" series driver on indefinite hold.<br>Contact Lutron customer support for further information. | <b>10</b> <u>Options/Accessories</u><br>CP - Chicago Plenum (CCEA)<br>ENLS - Enlighted Sensor (0-10V only and not available on 2' & 3' lengths; also not available for GRUV1.5-FR)<br>WHIP - 6' whip, 18/5 conductor<br>EMC-PF <sup>2</sup> - emergency circuit requires power feed located in last fixture section (for other locations consult factory)<br>PF <sup>2</sup> - Extra power feed for additional circuiting<br>EMB - emergency battery pack (not available for lengths under 4') |
| x  |   | x   |   |   |                                    |   |   |   |    |  |            |            |            |            |                     |                     |                     |                     |                |                |      |      |              |                       |      |      |              |  |  |  |       |  |  |  |   |  |  |
| (Length A)   | (Length B)  | (Length C)  | (Length C)  |   |                                    |   |   |   |    |  |            |            |            |            |                     |                     |                     |                     |                |                |      |      |              |                       |      |      |              |  |  |  |       |  |  |  |   |  |  |
| Length A (used for)  | Length B (used for)   | Length C (used for)   | Length C (used for)   |   |                                    |   |   |   |    |  |            |            |            |            |                     |                     |                     |                     |                |                |      |      |              |                       |      |      |              |  |  |  |       |  |  |  |   |  |  |
| - all patterns   | - all patterns  | - PU  | - PU  |   |                                    |   |   |   |    |  |            |            |            |            |                     |                     |                     |                     |                |                |      |      |              |                       |      |      |              |  |  |  |       |  |  |  |   |  |  |
| - IND/IND-S+   | - PR - 2 lengths of 2   | - PZ  | - PZ  |   |                                    |   |   |   |    |  |            |            |            |            |                     |                     |                     |                     |                |                |      |      |              |                       |      |      |              |  |  |  |       |  |  |  |   |  |  |
| - CON/CON-S+   |   |   |   |   |                                    |   |   |   |    |  |            |            |            |            |                     |                     |                     |                     |                |                |      |      |              |                       |      |      |              |  |  |  |       |  |  |  |   |  |  |
| - CUS  |   |   |   |   |                                    |   |   |   |    |  |            |            |            |            |                     |                     |                     |                     |                |                |      |      |              |                       |      |      |              |  |  |  |       |  |  |  |   |  |  |

DLC listed (4W fixture in 4', 5', 6', 7', 8' and runs to the nearest whole foot)

1 - Lengths less than 4' may have restrictions based upon wattage, lengths, drivers or other options.

2 - Not available with IND (individual) configuration.

\* The "A" refers to the sequential revision in a year and "XX" refers to the year of update. Updates coincide with improved performance while not changing the overall fixture aesthetic and are reflected in the published performance data. Please contact your Amerlux representative for explanations of changes.

## PROJECT:

## TYPE:

### Specifications

#### Application

Commercial and retail recessed ambient lighting can be customized with made to measure lengths, patterns, ceilings or wall mounted fixtures.

#### Construction

One piece extruded aluminum housing and trim. Die-formed, cold-rolled steel internal components and external mounting brackets. Numerous configurations accommodate most architectural ceiling conditions.

#### Optical

All lenses are snap-in, extruded acrylic, with a maximum length of 8'. Fixtures shipped with lenses installed. Amerlux's proprietary acrylic lens provides excellent transmission while effectively concealing source image. All louvers are retained with spring clips attached to louver side rails, for good fit and retention.

**PL** - Performance Lens provides high efficiency with greater lens surface brightness.

**SLD** - Straight blade Louver Direct has 1/2" high blades 1/2" on center with overlay.

**ASY** - Asymmetric 20° throw lens is backed high diffusion film that eliminates striations.

**GRZ** - Grazer lens for highlighting wall surfaces. Suggest cove installation. No overlay is used to enhance grazing performance. (see page 7)

#### LED

Amerlux's boards and patented connector design with brand name LEDs enables Amerlux fixtures to have excellent thermal management and offer a 5 year warranty. Our LED binning is within 3 MacAdam ellipse. Boards are configured for maximum flexibility resulting in even illumination no matter the fixture layout. LED boards are easily replaced in the field with just a Phillips screw driver.

**Color Temperature Options:** 2700K, 3000K, 3500K, 4000K

**CRI:** 83 typical, 90+ typical

R9: 16 @ CRI 83

R9: >50 @ CRI 92

**Life:** 50,000+ hr., > 70% of initial lumens (L70)

#### Electrical

**Wiring:** Supply wires are easily accessible through access plate on top of fixture.

**WHIP:** Optional factory installed 6' Greenfield whip (18/5 conductor) simplifies installation.

**Standard Wattage:** 5W/ft, 10W/ft.

**Optional Wattages:** 3W/ft, 4W/ft, 6W/ft, 7W/ft, 8W/ft, 9W/ft. (3W & 4W have a minimum length of 4'). For other wattages consult factory.

Emergency circuit via remote inverter or auxiliary emergency power supply (by others).

**This product complies with IEEE C62.41 for surge endurance up to 2.5KV.**

**Amerlux® recommends using additional surge protection with this unit (supplied by others), surge damage is not covered under warranty.**

**EMC-PF** - Emergency circuit requires power feed wire harness to be located in last fixture section for continuous runs. For other locations consult factory. Not available for individual (IND) configuration.

**PF** - Extra power feed wire harness for additional circuiting. Not available for individual (IND) configuration.

#### Drivers

**0-10V** - 1% electronic dimming, multi-volt (120-277VAC) constant current driver (standard). Cap leads for non-dim applications.

#### Optional Drivers:

**HILUME-A-LTE** - Lutron "A" Series, 1% dim, 2-wire, 120V only

**HILUME-H-ECO** - Lutron "H" Series, 1% dim, fade to off, EcoSystem

**DALI** - DALI Dimming 120-277VAC, 1% dim

#### Finish

**HW** - High reflectance, matte white powder coat paint. Baked on finish for maximum durability and color stability.

#### Configurations/Lengths

**IND** - Individual fixtures are made of single standard lengths of 2 ft to 8 ft (in 1' increments). These are stand alone fixtures with matching End Caps, supplied with the mounting hardware. Lengths less than 4' may have restrictions based upon wattage, lengths, drivers or other options.

**CON** - Continuous runs, > 8', specified to nearest whole foot length in 1' increments. Runs made from standard lengths have End Caps at the beginning and end of run. Runs > 60' may require second power feed. Each Housing has factory installed alignment pins. Mating fixtures are easily aligned and joined with "catch and latch" mechanisms out of sight, on top of the Housing. Wiring is made fast and positive with molded quick connectors.

**S+** - Standard Plus is a field cuttable filler bracket that can be used when an Individual fixture or a Continuous run isn't to the nearest foot (+3/4" to 6" max per end). See page 8 for details.

**CUS** - Custom made to measure runs are made to nearest 1/8" of customer supplied field measurements or drawings. Custom lengths use the same hardware for hairline joining.

**PXX** - Standard Patterns consist of 90° corners with standard lengths (4' to 8' in 1' increments), continuous runs or made to measure lengths. Depending upon complexity of the pattern drawings may be required from the customer. If ordering please give overall lengths.

**A'-B'-PLL** - L Left - (1) 90° Corner 2 segments. Specify overall segments: A' & B'

**A'-B'-PLR** - L Right - (1) 90° Corner 2 segments. Specify overall segments: A' & B'

**A'-B'-PR** - Rectangle - (4) 90° Corners joining 4 segments. Specify overall segments: A' & B'

**A'-B'-C'-PU** - U shape - (2) 90° Corners joining 3 segments. Specify overall segments: A', B', & C'

**A'-B'-C'-PZ** - Z shape - (2) 90° Corners joining 3 segments. Specify overall segments: A', B', & C'

**A'-B'-PWC** - Wall to Ceiling - 90° joining bracket. Specify overall segments: A' & B'

**See page 8 for layouts.**

**PC** - Custom Patterns may use standard lengths, Made To Measure, 90° or other corners (some limitations). Please provide drawing and consult factory.

**Please note: Corners have lit mitered Lens.**

#### Mounting

Intended for use in gypsum board, 9/16" Tee grid and Screw Slot, and millwork ceilings. Wall mounting J-Molding details available. For individual, continuous row, or pattern applications.

**Please note - fixtures to be installed before gypsum board ceiling.**

**GRUV1.5-FLG-A16** - exposed flange, fixture into gyp board ceiling

**GRUV1.5-FLG-GRID-A16** - exposed flange grid mount, fixture into 9/16" Tee ceiling

**GRUV1.5-FR-GRID-A16** - regressed lens grid, in 9/16" Screw Slot or Flat Tee ceilings (compatible with 4" TechZone™ & other 4" wide architectural ceiling systems)

**GRUV1.5-GB-A16** - gyp trimless mud, fixture plastered into gypsum board ceiling

**GRUV1.5-GRID-A16** - grid mount, in 9/16" Screw Slot or Flat Tee ceilings

**GRUV1.5-IS-A16** - independently suspended, fixture in wood ceiling

**GRUV1.5-J/GB-A16** - J mold/gyp trimless, plastered in ceiling - J Channel wall side

**GRUV1.5-J/GRID-A16** - J mold/grid, in 9/16" Screw Slot or Flat Tee ceilings - J Channel wall side

**GRUV1.5-J-IS-A16** - J mold/independently suspended in ceiling - J Channel wall side

#### Options

**EMB** - Emergency battery pack - 10W output power, 90 min of illumination time, up to 1300 lm of initial light output. Illuminated test-switch/charging indicator light is provided. Wattage consumption by EM: 2.5W/ft (4ft fixture), 1.66W/ft (6ft fixture), 1.25W/ft (8ft fixture). Request can be made to light up 4ft section on 8ft unit.

#### Certifications

Approved to UL standards for damp locations as tested by CSA.

Intended for indoor use only

Chicago Plenum (CCEA) optional.

IC rated

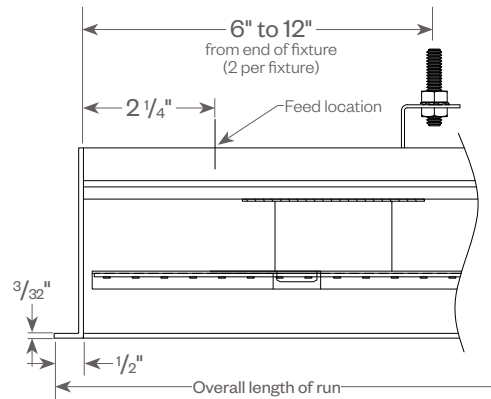
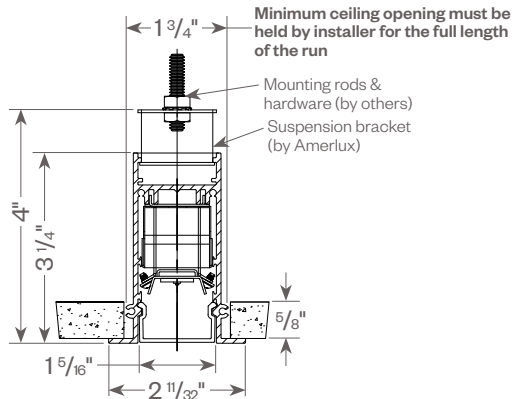
#### Warranty

Amerlux's 5 year limited warranty. Please consult Amerlux website for details.

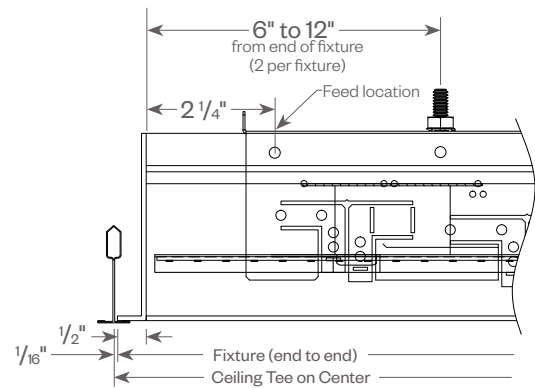
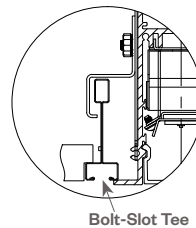
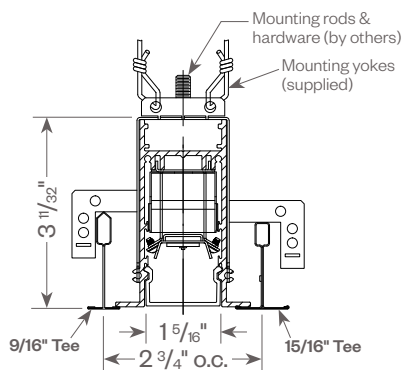
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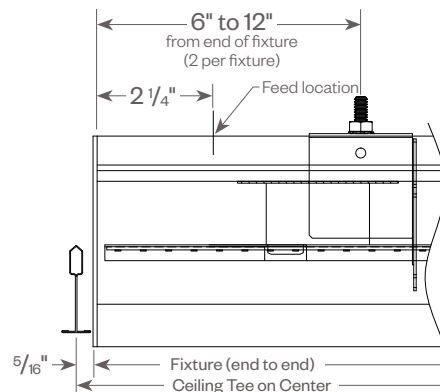
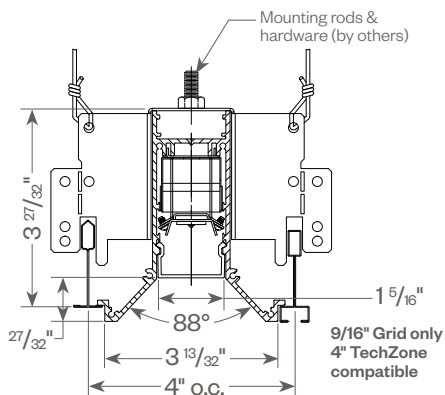
### GRÜV1.5-FLG (exposed flange)



### GRÜV1.5-FLG-GRID (flange, grid mount)



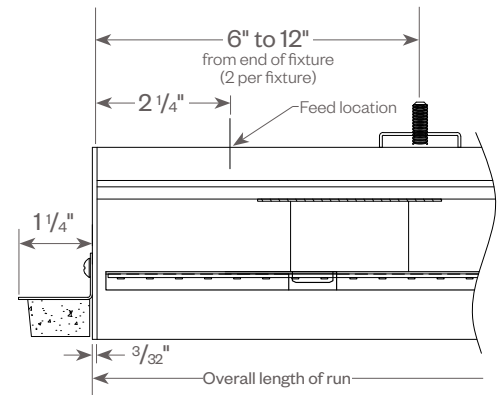
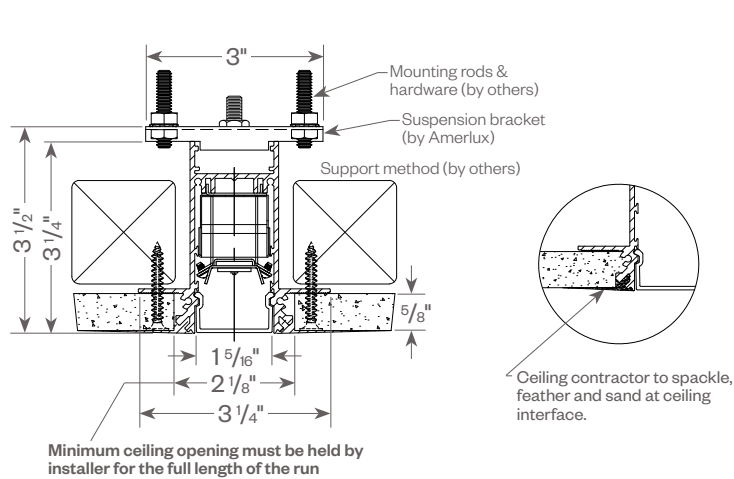
### GRÜV1.5-FR-GRID (regressed lens, grid)



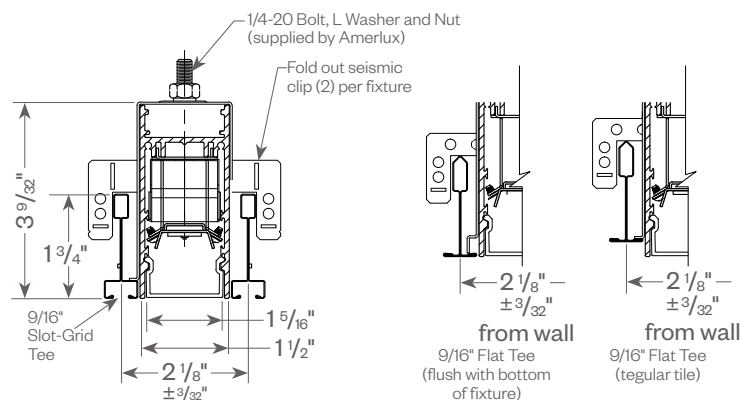
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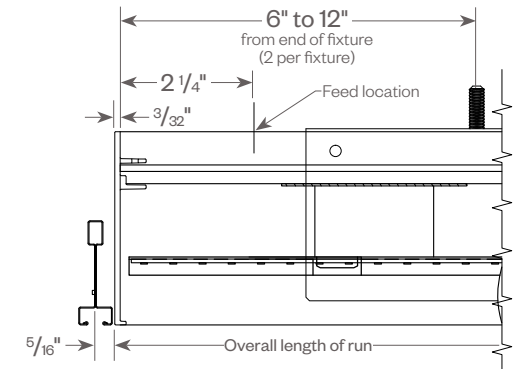
### GRÜV1.5-GB (gyp board trimless mud-in)



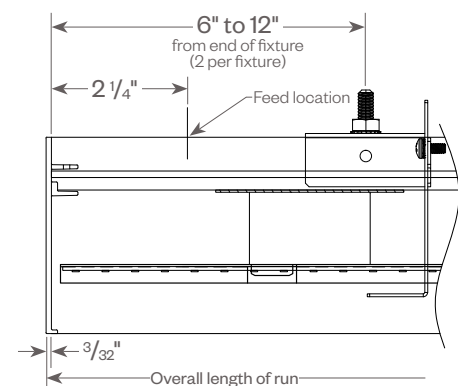
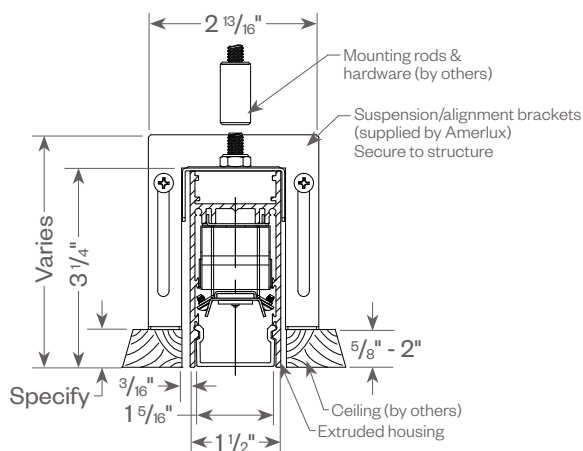
### GRÜV1.5-GRID (grid mount) Compatible (see pg 8)



Note: 9/16" Grid Only



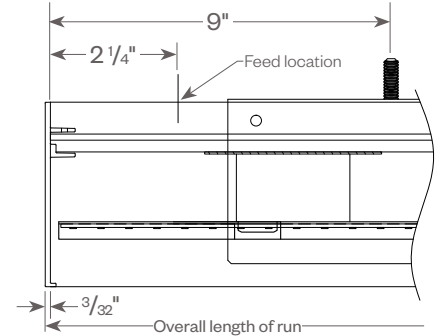
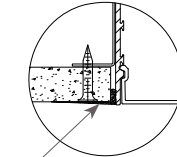
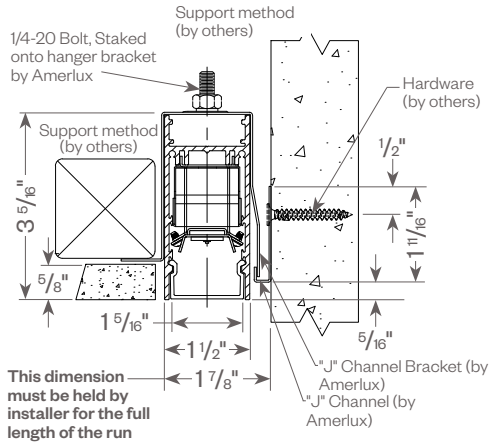
### GRÜV1.5-IS (independently suspended)



## PROJECT:

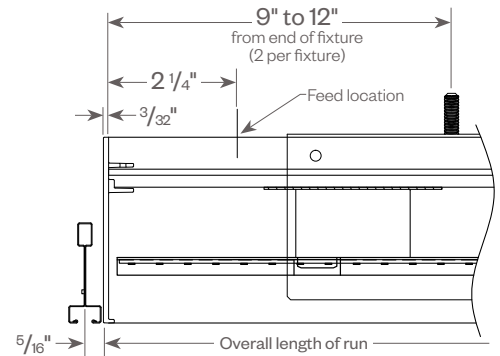
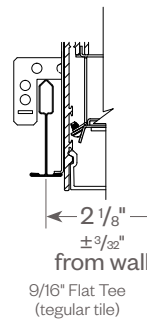
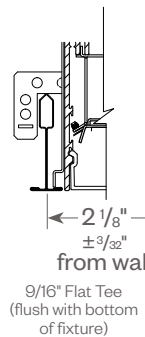
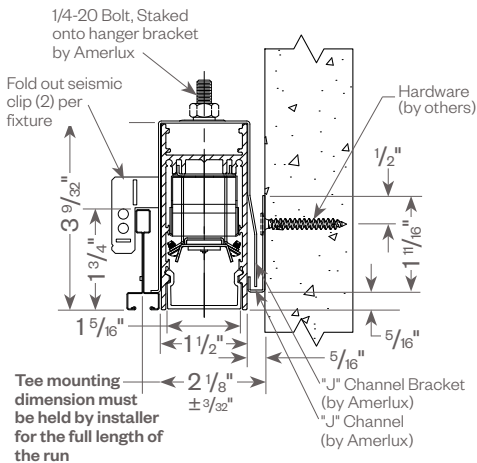
## TYPE:

### GRÜV1.5-J/GB (j-mold/gyp board trimless)

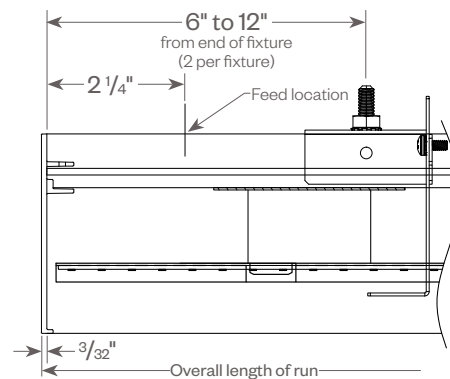
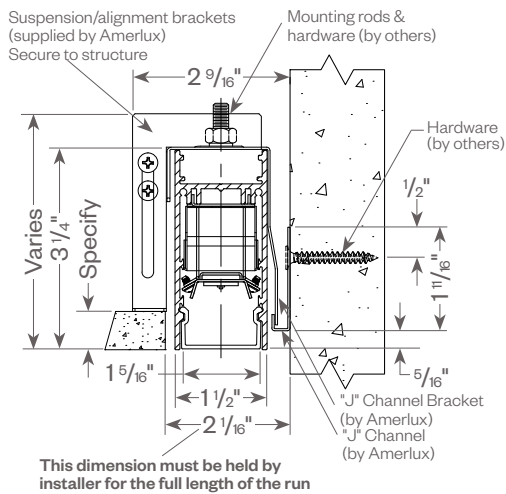


### GRÜV1.5-J/GRID (j-mold/grid mount)

Compatible (see pg 8)

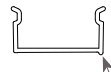


### GRÜV1.5-J/IS (j-mold/independently suspended)



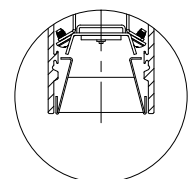
### OPTIONAL LENS/LOUVER

**NOTE: Not available for GRÜV1.5-FR-GRID**



For Asymmetric distribution this should be opposite the wall

Optional Asymmetric Lens



Optional Louver

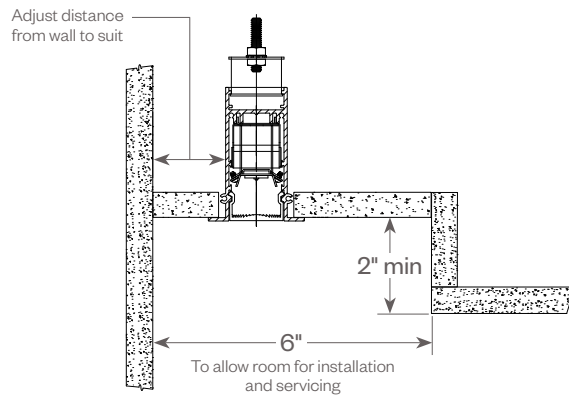
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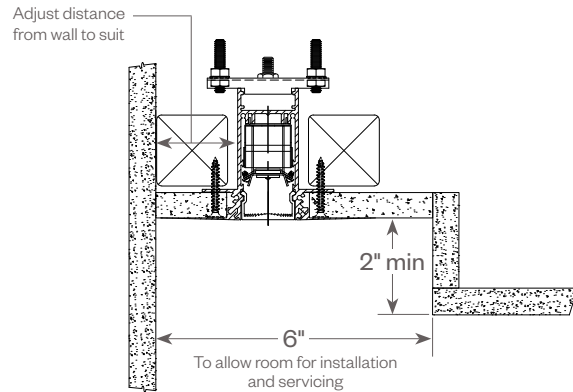
### GRAZER LENS OPTIONS:

The Grazer Lens for the Gruv 1.5 was created to provide an effective and low cost wall grazing lighting tool. A cove or valance is suggested to block direct glare at mid to high angles. Surface mounting requires the housing to be attached to the structure above. Some fixture disassembly and reassembly required.

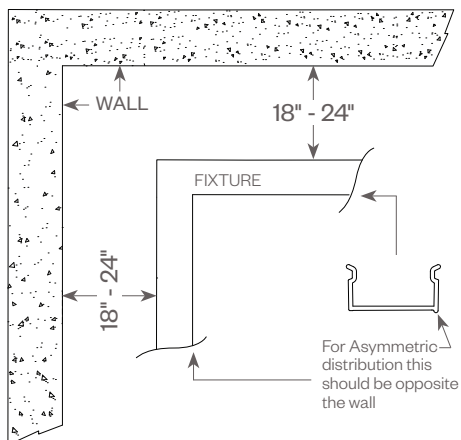
#### GRÜV1.5-FLG-GRZ (exposed flange)



#### GRÜV1.5-GB-GRZ (gyp board trimless mud-in)



### ASYMMETRIC LENS OPTION:





## PROJECT:

## TYPE:

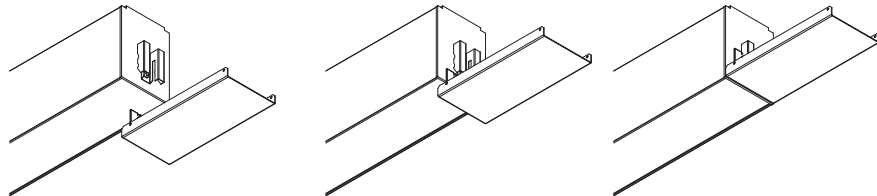


### STANDARD PLUS (FILLER):

Whenever a continuous run is less than a foot to the next full foot length consider ordering Standard Plus field cuttable bracket for a perfect look. Fits 9/16" Slot Grid and 9/16" T grid. It snaps in place easily from below and gets you close to the wall with a standard fixture. Saves time and money compared to made-to-measure. (max length: 6")

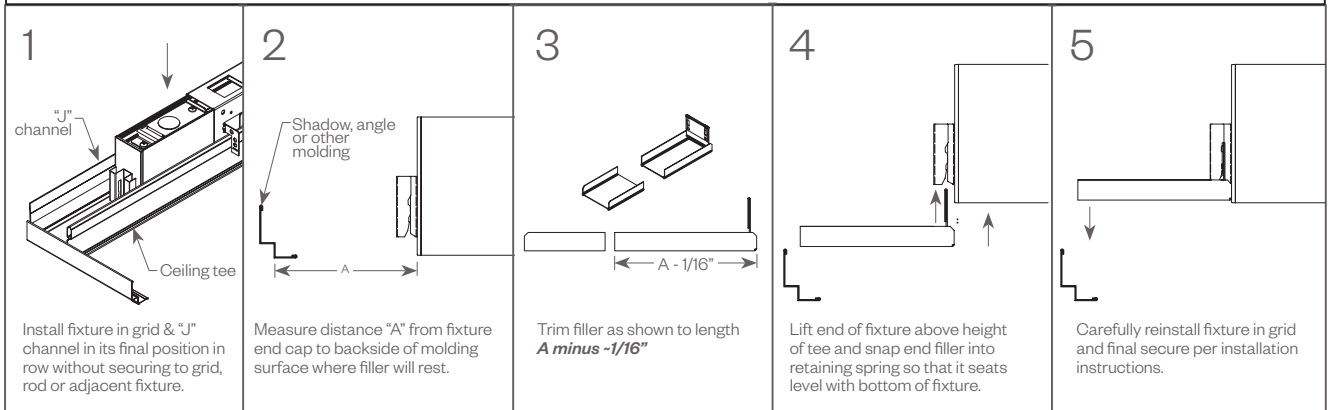


GRID VERSION



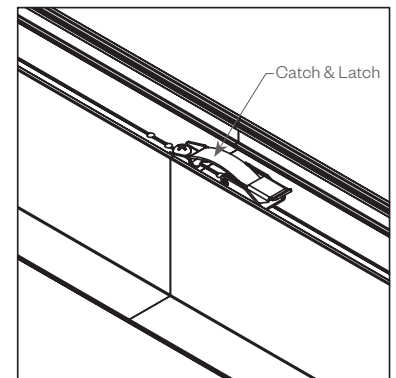
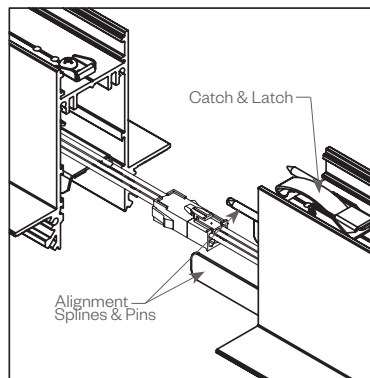
NOTE: Use with Gruv1.5-Grid and Gruv1.5-J/Grid

### FILLER TRIM AND INSTALLATION (GRUV 1.5 GRID SHOWN HERE)



### TOOLLESS JOINING:

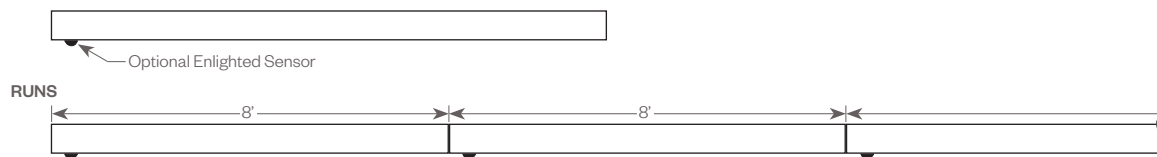
Line up the two housings by using the alignment splines & pins. Secure them together by using the Catch & Latch System on the top of the extrusion.



### OPTIONAL ENLIGHTED SENSOR:

Amerlux® and Enlighted have partnered to create building environments that are safer, and smarter, than ever before. At the heart of our partnership is Enlighted's Smart Sensor, the most advanced digital sensor available today. Integrated into Amerlux products, the sensor seamlessly collects and communicates dense data on building security, occupancy, performance, environmental conditions, ambient light levels, temperature, and energy consumption. This intelligence provides building managers with unprecedented guidance on cost savings and site-planning efficiencies. Enlighted Sensor (ENLS) is available with 0-10V driver only. Minimum run length is 4'. Enlighted power pack is provided with ENLS option. ENLS option is not available for use with GRUV1.5-FR

### 4 FT OR 8 FT DIRECT





## PROJECT:

## TYPE:

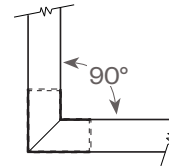
### GRUV 1.5" PATTERNS:

#### Standard Patterns

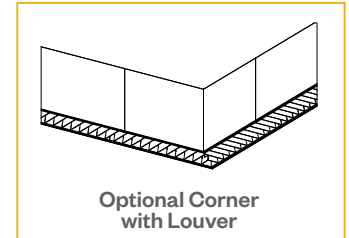
All corners are standard 90°, standard length legs.  
Use standard lengths: 4' min to 8' in 1 foot increments.  
Continuous runs must be the same length in pairs for closed configuration.

#### Custom Patterns

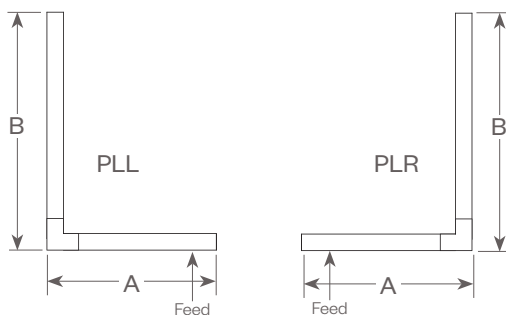
Please provide drawings of your configuration.  
Made to Measure: +/- 1/8", consult factory.  
PC - custom pattern, please provide drawings and consult factory



**Gruv 1.5 Lens**  
Mitered Lens



**Optional Corner**  
with Louver

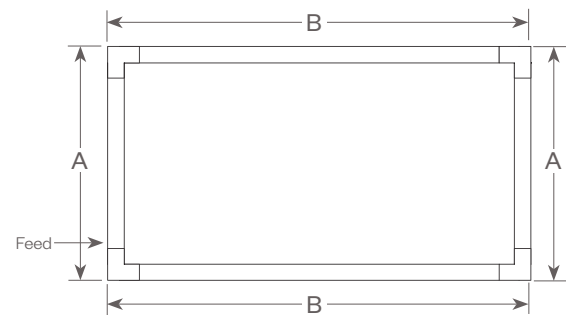


**PLL** - L Left, (2) straights + (1) 90° corner, leg right

**PLR** - L Right, (2) straights + (1) 90° corner, leg left

Provide overall lengths: A' & B'

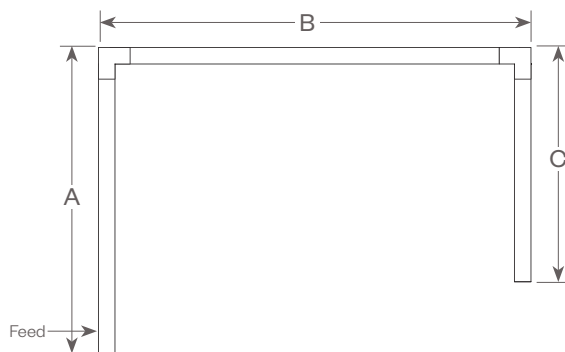
Nomenclature: A-B-PLL    A-B-PLR



**PR** - Closed Rectangle, (4) straight lengths + (4) 90° corners

Provide overall lengths: A' & B'

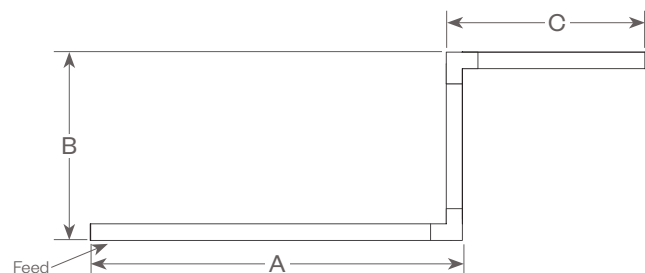
Nomenclature: A-B-PR



**PU** - Open U, (3) straight lengths + (2) 90° corners

Provide overall lengths: A', B' & C'

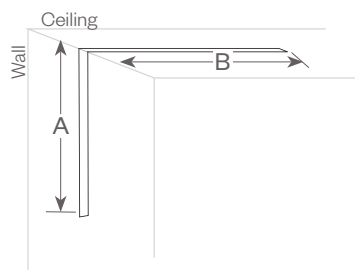
Nomenclature: A-B-C-PU



**PZ** - Open Z, (3) straight lengths + (2) 90° corners

Provide overall lengths: A', B' & C'

Nomenclature: A-B-C-PZ



**WC** - Wall to Ceiling - 90° joining bracket, 12" leg length standard

Provide overall lengths: A' & B'

Nomenclature: A-B-PWC

## PROJECT:

## TYPE:

**FIXTURE DATA:** (Complete photometric data (.ies format) available upon request)

**MULTIPLYING FACTORS:** (Multiplying Factor is based on 3500K-83 120V IES file on website)

| Wattage: | 3W   | 4W   | 5W  | 6W   | 7W   | 8W   | 9W   |
|----------|------|------|-----|------|------|------|------|
| Factor:  | 0.63 | 0.82 | 1.0 | 1.17 | 1.34 | 1.50 | 1.64 |

|         | Louver |     |
|---------|--------|-----|
| Finish: | SLV    | BLK |
| Factor: | 1.0    | .65 |

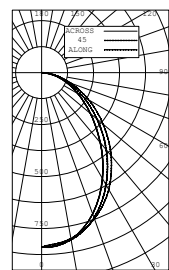
| CCT-CRI: | 2700K-83 | 3000K-83 | 3500K-83 | 4000K-83 | 2700K-90+ | 3000K-90+ | 3500K-90+ | 4000K-90+ |
|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|
| Factor:  | 0.91     | 0.96     | 1.0      | 1.01     | 0.80      | 0.84      | 0.88      | 0.89      |

### GRÜV 1.5" PERFORMANCE LENS 5W 3500K 4FT

Total Watts: 21

Total Lumens: 1,840

Source: 96 White LED's



LTL# 695285

#### ZONAL LUMEN SUMMARY

| Zone   | Lumens | %Fixt  |
|--------|--------|--------|
| 0-30   | 614    | 33.36  |
| 0-40   | 958    | 52.08  |
| 0-60   | 1535   | 83.42  |
| 0-90   | 1840   | 100.00 |
| 40-90  | 882    | 47.92  |
| 60-90  | 305    | 16.58  |
| 90-180 | 0      | 0.00   |
| 0-180  | 1840   | 100.00 |

Efficacy = 87.6 Lumens /Watt

#### COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

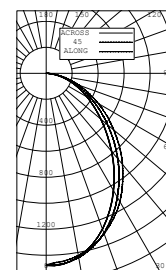
| RC  | 80   |      |      |      |
|-----|------|------|------|------|
| RW  | 70   | 50   | 30   | 10   |
| RCR |      |      |      |      |
| 0   | 1.19 | 1.19 | 1.19 | 1.19 |
| 1   | 1.10 | 1.06 | 1.03 | 0.99 |
| 2   | 1.02 | 0.95 | 0.89 | 0.8  |
| 3   | 0.94 | 0.85 | 0.78 | 0.72 |
| 4   | 0.88 | 0.77 | 0.69 | 0.64 |
| 5   | 0.81 | 0.70 | 0.62 | 0.56 |
| 6   | 0.75 | 0.63 | 0.55 | 0.49 |
| 7   | 0.69 | 0.57 | 0.49 | 0.44 |
| 8   | 0.65 | 0.52 | 0.44 | 0.39 |
| 9   | 0.60 | 0.48 | 0.40 | 0.35 |
| 10  | 0.56 | 0.44 | 0.36 | 0.31 |

### GRÜV 1.5" PERFORMANCE LENS 10W 3500K 4FT

Total Watts: 42

Total Lumens: 3,263

Source: 96 White LED's



LTL# 695286

#### ZONAL LUMEN SUMMARY

| Zone   | Lumens | %Fixt  |
|--------|--------|--------|
| 0-30   | 1082   | 33.16  |
| 0-40   | 1691   | 51.83  |
| 0-60   | 2716   | 83.25  |
| 0-90   | 3263   | 100.00 |
| 40-90  | 1572   | 48.17  |
| 60-90  | 547    | 16.75  |
| 90-180 | 0      | 0.00   |
| 0-180  | 3263   | 100.00 |

Efficacy = 78.4 Lumens /Watt

#### COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

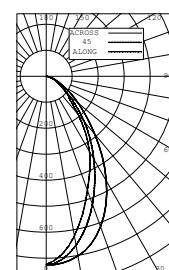
| RC  | 80   |      |      |      |
|-----|------|------|------|------|
| RW  | 70   | 50   | 30   | 10   |
| RCR |      |      |      |      |
| 0   | 1.19 | 1.19 | 1.19 | 1.19 |
| 1   | 1.10 | 1.06 | 1.03 | 0.99 |
| 2   | 1.02 | 0.95 | 0.89 | 0.84 |
| 3   | 0.94 | 0.85 | 0.78 | 0.72 |
| 4   | 0.87 | 0.77 | 0.69 | 0.63 |
| 5   | 0.81 | 0.70 | 0.61 | 0.55 |
| 6   | 0.75 | 0.63 | 0.55 | 0.49 |
| 7   | 0.69 | 0.57 | 0.49 | 0.43 |
| 8   | 0.65 | 0.52 | 0.44 | 0.39 |
| 9   | 0.60 | 0.48 | 0.40 | 0.34 |
| 10  | 0.56 | 0.44 | 0.36 | 0.31 |

### GRÜV 1.5" STRAIGHT BLADE LOUVER (SLV) 5W 3500K 4FT

Total Watts: 21

Total Lumens: 909

Source: 96 White LED's



LTL# 695287

#### ZONAL LUMEN SUMMARY

| Zone   | Lumens | %Fixt  |
|--------|--------|--------|
| 0-30   | 443    | 48.71  |
| 0-40   | 633    | 69.58  |
| 0-60   | 842    | 92.63  |
| 0-90   | 909    | 100.00 |
| 40-90  | 277    | 30.42  |
| 60-90  | 67     | 7.37   |
| 90-180 | 0      | 0.00   |
| 0-180  | 909    | 100.00 |

Efficacy = 43.3 Lumens /Watt

#### COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

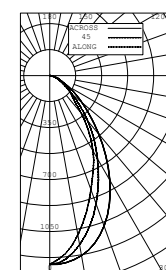
| RC  | 80   |      |      |      |
|-----|------|------|------|------|
| RW  | 70   | 50   | 30   | 10   |
| RCR |      |      |      |      |
| 0   | 1.19 | 1.19 | 1.19 | 1.19 |
| 1   | 1.12 | 1.09 | 1.06 | 1.04 |
| 2   | 1.06 | 1.00 | 0.96 | 0.92 |
| 3   | 0.99 | 0.92 | 0.87 | 0.82 |
| 4   | 0.94 | 0.85 | 0.79 | 0.74 |
| 5   | 0.88 | 0.79 | 0.72 | 0.67 |
| 6   | 0.83 | 0.73 | 0.66 | 0.62 |
| 7   | 0.78 | 0.68 | 0.61 | 0.56 |
| 8   | 0.74 | 0.63 | 0.56 | 0.52 |
| 9   | 0.69 | 0.58 | 0.52 | 0.47 |
| 10  | 0.65 | 0.54 | 0.48 | 0.43 |

### GRÜV 1.5" STRAIGHT BLADE LOUVER (SLV) 10W 3500K 4FT

Total Watts: 42

Total Lumens: 1,599

Source: 96 White LED's



LTL# 695288

#### ZONAL LUMEN SUMMARY

| Zone   | Lumens | %Fixt  |
|--------|--------|--------|
| 0-30   | 776    | 48.51  |
| 0-40   | 1109   | 69.33  |
| 0-60   | 1479   | 92.46  |
| 0-90   | 1599   | 100.00 |
| 40-90  | 491    | 30.67  |
| 60-90  | 121    | 7.54   |
| 90-180 | 0      | 0.00   |
| 0-180  | 1599   | 100.00 |

Efficacy = 38.4 Lumens /Watt

#### COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

| RC  | 80   |      |      |      |
|-----|------|------|------|------|
| RW  | 70   | 50   | 30   | 10   |
| RCR |      |      |      |      |
| 0   | 1.19 | 1.19 | 1.19 | 1.19 |
| 1   | 1.12 | 1.09 | 1.06 | 1.03 |
| 2   | 1.06 | 1.00 | 0.96 | 0.92 |
| 3   | 0.99 | 0.92 | 0.86 | 0.82 |
| 4   | 0.94 | 0.85 | 0.79 | 0.74 |
| 5   | 0.88 | 0.79 | 0.72 | 0.67 |
| 6   | 0.83 | 0.73 | 0.66 | 0.62 |
| 7   | 0.78 | 0.67 | 0.61 | 0.56 |
| 8   | 0.73 | 0.63 | 0.56 | 0.51 |
| 9   | 0.69 | 0.58 | 0.52 | 0.47 |
| 10  | 0.65 | 0.54 | 0.48 | 0.43 |

## PROJECT:

## TYPE:

**FIXTURE DATA:** (Complete photometric data (.ies format) available upon request)

**MULTIPLYING FACTORS:** (Multiplying Factor is based on 3000K-83 120V IES file on website)

| Wattage: | 3W   | 4W   | 5W  | 6W   | 7W   | 8W   | 9W   |
|----------|------|------|-----|------|------|------|------|
| Factor:  | 0.63 | 0.82 | 1.0 | 1.17 | 1.34 | 1.50 | 1.64 |

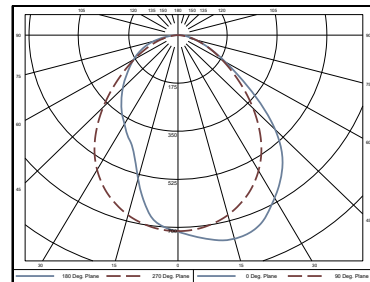
| CCT-CRI: | 2700K-83 | 3000K-83 | 3500K-83 | 4000K-83 | 2700K-90+ | 3000K-90+ | 3500K-90+ | 4000K-90+ |
|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|
| Factor:  | 0.95     | 1.0      | 1.04     | 1.05     | 0.83      | 0.88      | 0.92      | 0.94      |

### GRUV 1.5" ASYMMETRIC LENS 5W 3000K 4FT

Total Watts: 19

Total Lumens: 1,649

Source: 96 White LED's



LTL# 1103575

#### ZONAL LUMEN SUMMARY

| Zone   | Lumens | %Fixt  |
|--------|--------|--------|
| 0-40   | 836    | 50.7   |
| 0-60   | 1376   | 83.4   |
| 0-90   | 1649   | 100.00 |
| 90-180 | 0      | 0.00   |

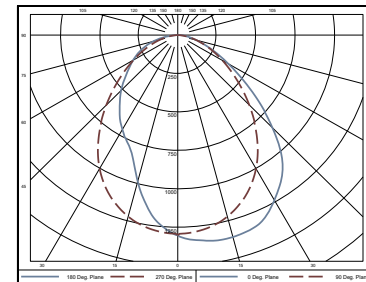
Efficacy = 85.4 Lumens /Watt

### GRUV 1.5" ASYMMETRIC LENS 10W 3000K 4FT

Total Watts: 39

Total Lumens: 3,002

Source: 96 White LED's



LTL# 1103574

#### ZONAL LUMEN SUMMARY

| Zone   | Lumens | %Fixt  |
|--------|--------|--------|
| 0-40   | 1508   | 50.2   |
| 0-60   | 2494   | 83.1   |
| 0-90   | 3002   | 100.00 |
| 90-180 | 0      | 0.00   |

Efficacy = 77.5 Lumens /Watt

#### COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

| RC | 80   | 70   | 50   | 30   | 10   |
|----|------|------|------|------|------|
| RW |      |      |      |      |      |
| 0  | 1963 | 1963 | 1963 | 1963 | 1963 |
| 1  | 1807 | 1734 | 1668 | 1609 | 1532 |
| 2  | 1654 | 1527 | 1421 | 1332 | 1249 |
| 3  | 1517 | 1352 | 1225 | 1124 | 1039 |
| 4  | 1395 | 1207 | 1069 | 964  | 879  |
| 5  | 1288 | 1085 | 943  | 839  | 754  |
| 6  | 1193 | 982  | 840  | 739  | 654  |
| 7  | 1109 | 894  | 755  | 658  | 578  |
| 8  | 1035 | 819  | 684  | 591  | 515  |
| 9  | 969  | 754  | 623  | 535  | 459  |
| 10 | 910  | 698  | 571  | 487  | 411  |

#### COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

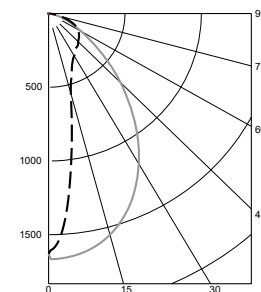
| RC | 80   | 70   | 50   | 30   | 10   |
|----|------|------|------|------|------|
| RW |      |      |      |      |      |
| 0  | 3574 | 3574 | 3574 | 3574 | 3574 |
| 1  | 3287 | 3153 | 3033 | 2925 | 2825 |
| 2  | 3008 | 2774 | 2581 | 2419 | 2274 |
| 3  | 2756 | 2456 | 2223 | 2038 | 1874 |
| 4  | 2534 | 2190 | 1939 | 1746 | 1584 |
| 5  | 2339 | 1968 | 1709 | 1518 | 1364 |
| 6  | 2166 | 1780 | 1522 | 1336 | 1184 |
| 7  | 2013 | 1621 | 1367 | 1188 | 1044 |
| 8  | 1878 | 1484 | 1237 | 1067 | 934  |
| 9  | 1758 | 1366 | 1127 | 965  | 844  |
| 10 | 1651 | 1264 | 1033 | 879  | 764  |

### GRUV 1.5" GRAZER LENS 5W 3500K\* 4FT

Total Watts: 20

Total Lumens: 1,731

Source: 96 White LED's



LTL# 11723886.02

#### ZONAL LUMEN SUMMARY

| Zone   | Lumens | %Fixt  |
|--------|--------|--------|
| 0-40   | 973    | 56.2   |
| 0-60   | 1461   | 84.4   |
| 0-90   | 1731   | 100.00 |
| 90-180 | 0      | 0.00   |

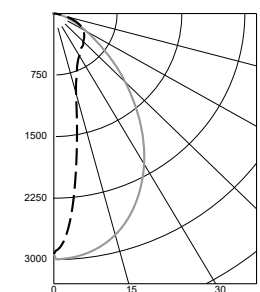
Efficacy = 87.9 Lumens /Watt

### GRUV 1.5" GRAZER LENS 10W 3500K\* 4FT

Total Watts: 39

Total Lumens: 3,106

Source: 96 White LED's



LTL# 11723886.01

#### ZONAL LUMEN SUMMARY

| Zone   | Lumens | %Fixt  |
|--------|--------|--------|
| 0-40   | 1747   | 56.2   |
| 0-60   | 2622   | 84.4   |
| 0-90   | 3106   | 100.00 |
| 90-180 | 0      | 0.00   |

Efficacy = 79 Lumens /Watt

#### COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

| RC | 80   | 70   | 50   | 30   | 10   |
|----|------|------|------|------|------|
| RW |      |      |      |      |      |
| 0  | 2013 | 2013 | 2013 | 2013 | 2013 |
| 1  | 1860 | 1794 | 1735 | 1682 | 1632 |
| 2  | 1712 | 1597 | 1501 | 1419 | 1344 |
| 3  | 1579 | 1431 | 1314 | 1220 | 1144 |
| 4  | 1463 | 1292 | 1165 | 1066 | 994  |
| 5  | 1361 | 1175 | 1044 | 945  | 874  |
| 6  | 1270 | 1077 | 944  | 848  | 784  |
| 7  | 1190 | 992  | 861  | 768  | 714  |
| 8  | 1119 | 919  | 791  | 702  | 654  |
| 9  | 1056 | 856  | 732  | 646  | 604  |
| 10 | 999  | 801  | 680  | 599  | 564  |

#### COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

| RC | 80   | 70   | 50   | 30   | 10   |
|----|------|------|------|------|------|
| RW |      |      |      |      |      |
| 0  | 3612 | 3612 | 3612 | 3612 | 3612 |
| 1  | 3338 | 3220 | 3114 | 3018 | 2924 |
| 2  | 3072 | 2866 | 2693 | 2547 | 2414 |
| 3  | 2834 | 2568 | 2358 | 2189 | 2044 |
| 4  | 2625 | 2319 | 2090 | 1914 | 1764 |
| 5  | 2442 | 2110 | 1873 | 1697 | 1544 |
| 6  | 2280 | 1932 | 1695 | 1522 | 1374 |
| 7  | 2136 | 1781 | 1546 | 1379 | 1234 |
| 8  | 2009 | 1650 | 1420 | 1260 | 1114 |
| 9  | 1895 | 1537 | 1313 | 1160 | 1014 |
| 10 | 1792 | 1438 | 1221 | 1075 | 934  |

\*See previous page for  
3500K multipliers

# Grüv® 1.5"

Recessed Linear LED



## PROJECT:

## TYPE:

**FIXTURE DATA:** (Complete photometric data (.ies format) available upon request)

**MULTIPLYING FACTORS:** (Multiplying Factor is based on 3500K-83 120V IES file on website)

| Wattage: | 3W   | 4W   | 5W  | 6W   | 7W   | 8W   | 9W   |
|----------|------|------|-----|------|------|------|------|
| Factor:  | 0.63 | 0.82 | 1.0 | 1.17 | 1.34 | 1.50 | 1.64 |

| CCT-CRI: | 2700K-83 | 3000K-83 | 3500K-83 | 4000K-83 | 2700K-90+ | 3000K-90+ | 3500K-90+ | 4000K-90+ |
|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|
| Factor:  | 0.91     | 0.96     | 1.0      | 1.01     | 0.80      | 0.84      | 0.88      | 0.89      |

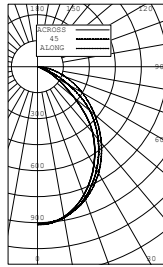
### GRÜV 1.5" FLARED REGRESSED (FR-GRID) 5W 3500K 4FT

Total Watts: 21

Total Lumens: 1,866

Source: 96 White LED's

LTL# 695280



#### ZONAL LUMEN SUMMARY

| Zone   | Lumens | %Fixt  |
|--------|--------|--------|
| 0-30   | 669    | 35.82  |
| 0-40   | 1052   | 56.34  |
| 0-60   | 1665   | 89.19  |
| 0-90   | 1866   | 100.00 |
| 40-90  | 815    | 43.66  |
| 60-90  | 202    | 10.81  |
| 90-180 | 0      | 0.00   |
| 0-180  | 1866   | 100.00 |

Efficacy = 88.5 Lumens / Watt

#### COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

| RC  | 80   |      |      |      |
|-----|------|------|------|------|
| RW  | 70   | 50   | 30   | 10   |
| RCR |      |      |      |      |
| 0   | 1.19 | 1.19 | 1.19 | 1.19 |
| 1   | 1.11 | 1.08 | 1.05 | 1.02 |
| 2   | 1.04 | 0.98 | 0.92 | 0.88 |
| 3   | 0.96 | 0.88 | 0.81 | 0.76 |
| 4   | 0.90 | 0.80 | 0.73 | 0.67 |
| 5   | 0.83 | 0.73 | 0.65 | 0.59 |
| 6   | 0.77 | 0.66 | 0.58 | 0.53 |
| 7   | 0.72 | 0.60 | 0.52 | 0.47 |
| 8   | 0.67 | 0.54 | 0.47 | 0.42 |
| 9   | 0.62 | 0.50 | 0.42 | 0.37 |
| 10  | 0.58 | 0.46 | 0.38 | 0.33 |

## PROJECT:

## TYPE:

### DIMMING COMPATIBILITY:

Amerlux® Gruv fixtures are compatible with all major dimming protocols prevalent in the United States. Please see below for general compatibilities and wiring diagrams. Amerlux recommends testing your unique dimming configuration as the exact full configuration (Dimmer, Fixture Quantity, Voltage, etc) may affect dimming performance.

**--- NOTE: INFORMATION BELOW IS FOR WIRED DIMMERS ONLY. FOR WIRELESS DIMMERS, CONSULT FACTORY ---**

### 0-10V - DIMMING (Standard)

Integrates into a variety of building management and daylighting controls

#### Notes:

- 120VAC or 277VAC\*
- Dims down to 1% light output
- Requires interface to turn off power to driver
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!

#### Compatible Dimmers†:

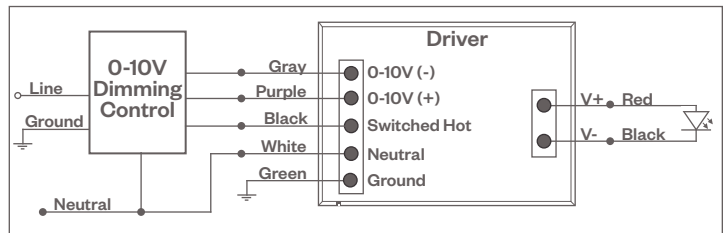
##### Wall Box

|                   |                     |                 |
|-------------------|---------------------|-----------------|
| <u>Lutron:</u>    | <u>Wattstopper:</u> | <u>Leviton:</u> |
| Diva - DVSTV      | ADF-120277          | Renoir II       |
| Maestro - MS-Z101 |                     |                 |
| Nova-T - NTSTV-DV |                     |                 |

##### Center System

Lutron Grafikx Eye with GRX-TV1 Interface

### 0-10V Wiring Diagram



### LUTRON HI-LUME ECOSYSTEM DIMMING

Integrates into Lutron EcoSystem building management

#### Notes:

- 120VAC or 277VAC\*
- Dims down to 1% light output
- EcoSystem Control
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!

#### Compatible Dimmers†:

##### Lutron ECO System

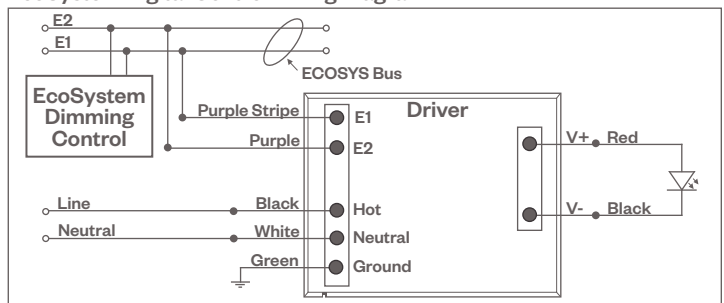
Pow Pak Dimming Modules  
Energi Savr Node  
Grafik Eye QS/Homeworks  
QS Control Unit  
Quantum Hub  
Homeworks QS/My Room

##### Central System

Lutron EcoSystem compatible controls

### HILUME-H-ECO

### EcoSystem Digital Control Wiring Diagram



#### Notes:

- \* Driver is 277VAC dimmable with appropriate dimmer (by others). All provided wiring diagrams show 120VAC wiring colors and method. Please refer to 277VAC dimmer installation instructions for 277VAC wiring diagrams.
- † The absence of a dimmer from the lists above does not imply incompatibility. Please consult factory for compatibility inquiries.

## PROJECT:

## TYPE:

### DIMMING COMPATIBILITY:

Amerlux® Gruv fixtures are compatible with all major dimming protocols prevalent in the United States. Please see below for general compatibilities and wiring diagrams. Amerlux recommends testing your unique dimming configuration as the exact full configuration (Dimmer, Fixture Quantity, Voltage, etc) may affect dimming performance.

**--- NOTE: INFORMATION BELOW IS FOR WIRED DIMMERS ONLY. FOR WIRELESS DIMMERS, CONSULT FACTORY ---**

### LUTRON HILUME-A-LTE DIMMING

Utilizes "Standard" incandescent dimmers that are in wide use in installations across the US. Best for retrofit applications where TRIAC dimmers are installed.

#### Notes:

- 120V only
- Dims down to less than 1% light output (most cases)
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!
- Must meet dimmer Minimum Load Requirements per dimming manufacturer

#### Compatible Dimmers†:

**Wall Box** (Incandescent Style, Wattage as required)

Lutron:

Diva

Maestro

Nova-T

Vareo

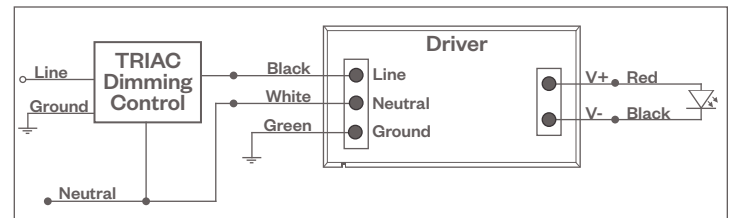
Skylark

#### Center System

Lutron "GP" Panel

Lutron Grafik Eye QS

Lutron HILUME-A-LTE Wiring Diagram



### DALI - DALI DIMMING 120V-277V

Digital control protocol allows individual fixture control

#### Notes:

- 120VAC - 277VAC\*
- Dims down to 1% light output in most cases

#### Compatible Dimmers†:

**Wall Box**

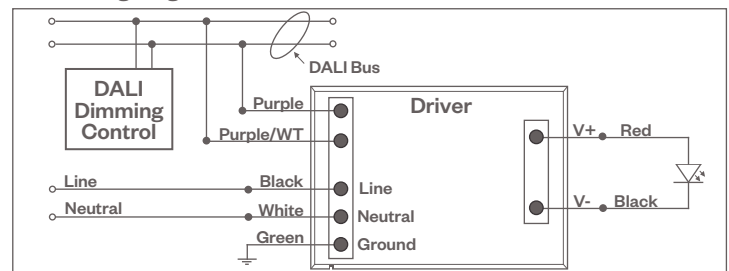
Leviton CD250 Controller

#### Center System

Dynalite

Fifth Light

DALI Wiring Diagram



#### Notes:

\* Driver is 277VAC dimmable with appropriate dimmer (by others). All provided wiring diagrams show 120VAC wiring colors and method. Please refer to 277VAC dimmer installation instructions for 277VAC wiring diagrams.

† The absence of a dimmer from the lists above does not imply incompatibility. Please consult factory for compatibility inquiries.

**PROJECT:**

**TYPE:**

**EMERGENCY FIXTURE WITH BUILTIN BATTERY PACK (EMB) WIRING:**

Note: EMB not available on lengths under 4'.

