



**400 SERIES**  
**400-R REMODEL**  
**INTEGRAL POWER SUPPLY**  
INSTALLATION INSTRUCTIONS



SCAN QR CODE FOR INSTRUCTIONS

**WARNING:** Read and understand these instructions completely before installation. Disconnect power at circuit breaker or fuse panel before installation. Always allow LED assembly to cool before servicing. To be installed by qualified electricians only. Products should be installed in accordance with these instructions, local electrical codes, and the National Electric Code (NEC). These products may represent a possible shock or fire hazard if improperly installed.

Do not install where insulation or ambient temperatures will exceed maximum values noted in product specifications. See [www.8lighting.com](http://www.8lighting.com) for current product specifications.

**NOTE:** Number Eight Lighting fixtures are designed to meet the latest NEC requirements and are listed in full compliance with UL standards. Before attempting installation check and understand your local electrical code which sets the wiring standards and installation requirements for your locality.

**Save these instructions.**

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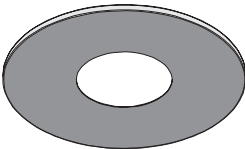
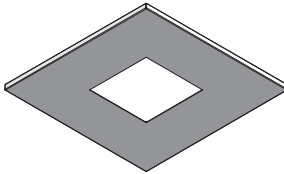
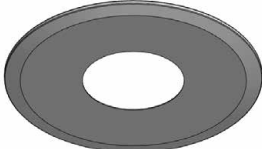
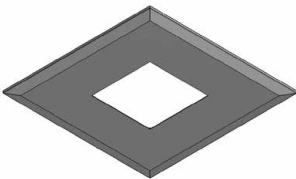
400 SERIES COMPONENTS

400 SERIES - AIR-TIGHT and I.C. RATED REMODEL LIGHT ENGINE with INTERNAL POWER SUPPLY

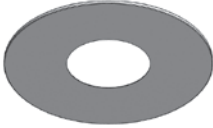


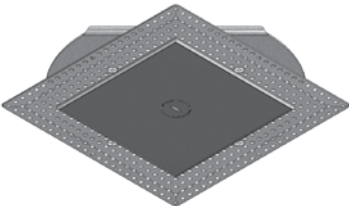


400-R REMODEL LIGHT ENGINE with INTEGRAL POWER SUPPLY

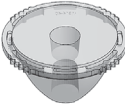


400 SERIES – FLANGED TRIMS

			
FLR-4 FLANGED ROUND FLAT TRIM PLATE	FLS-4 FLANGED SQUARE FLAT TRIM PLATE	FLR-4-BV FLANGED ROUND BEVELED TRIM PLATE	FLS-4-BV FLANGED SQUARE BEVELED TRIM PLATE

400 SERIES – FLANGELESS TRIMS

			
FR-4 TRIM PLATE	FR-4 FLANGELESS TRIM	FS-4 TRIM PLATE	FS-4 FLANGELESS TRIM

400 SERIES – OPTIC OPTIONS + ACCESSORIES

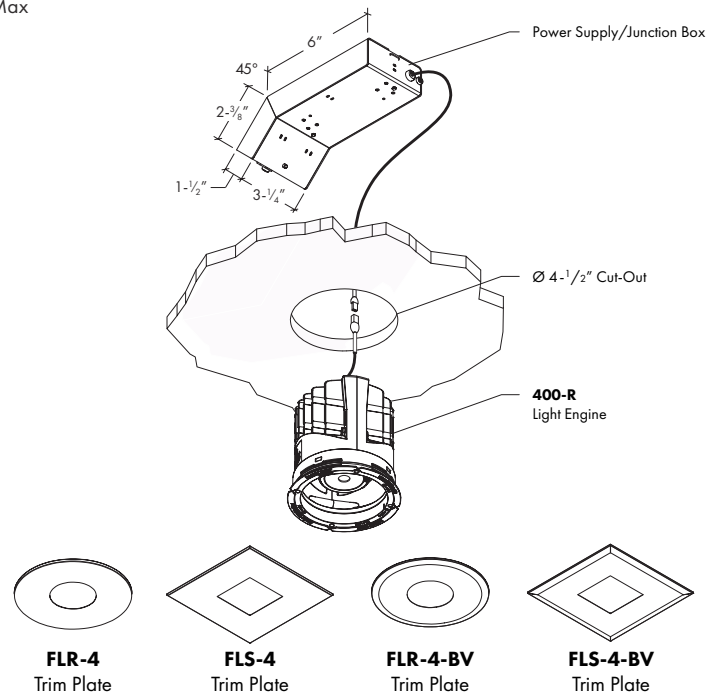
<div><div><b>TIR-10</b> 10° Very narrow spot*</div><div><b>TIR-15</b> 15° Narrow spot</div><div><b>TIR-25</b> 25° Narrow flood</div><div><b>TIR-40</b> 40° Flood</div><div>* For use with HI-2 LED option only</div></div> <div></div>	<div><div><b>NSP</b> Narrow softening lens</div><div><b>NFL</b> Medium softening lens</div><div><b>FL</b> Wide softening lens</div><div><b>WFL</b> Extra wide softening lens</div><div><b>LS</b> Linear spread lens</div></div> <div></div>	<div><div><b>CF-24</b> 2400K Color filter</div><div><b>CF-27</b> 2700K Color filter</div><div><b>CF-35</b> 3500K Color filter</div></div> <div></div>
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## REMODEL INSTALLATION-FLANGED TRIMS

**CEILING TYPES:** Sheetrock, Wood, & Stone

**CEILING THICKNESS:** ½" Min – 5 ½" Max

**CUT-OUT:** Ø 4 ½"



**Caution:** Cut-out must be within +/- 1/32" Ceiling material must be rigid and able to support weight of fixture (approximately 5lbs.). Not for use with acoustic tile or non-rigid ceiling materials.

### STEP 1 – ROUGH WIRING

**1a.** Disconnect power at circuit breaker.

**1b.** Review wiring diagrams on pages 10 & 11, wire accordingly.

**1c.** Install wiring to fixture location leaving a 12-18" flexible whip to facilitate installation/servicing.

**Note:** 0-10V, DALI or EcoSystem power supplies (if specified) require additional dimming control wiring.

### STEP 2 – CEILING CUT-OUT AND INSTALLATION

**2a.** Ensure location of fixture will be a minimum of ½" from edge of cut-out to nearest framing member and there will be sufficient space for installation of power supply assembly.

**2b.** (Skip this step if installing into existing ceiling)  
Install ceiling material over rough wiring.

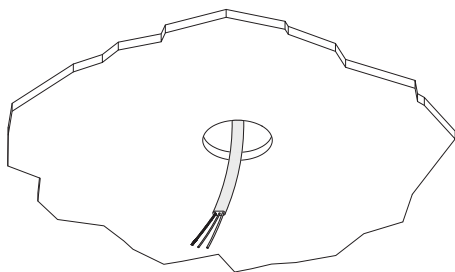
**Note:** Rough wiring will be accessible after making ceiling cut-out. Certain local electrical codes may require rough wiring to be installed in temporary junction box (not supplied) prior to installing ceiling.

**2c.** For sheetrock ceilings - apply all coats of finish and primer coating before making cut-out.

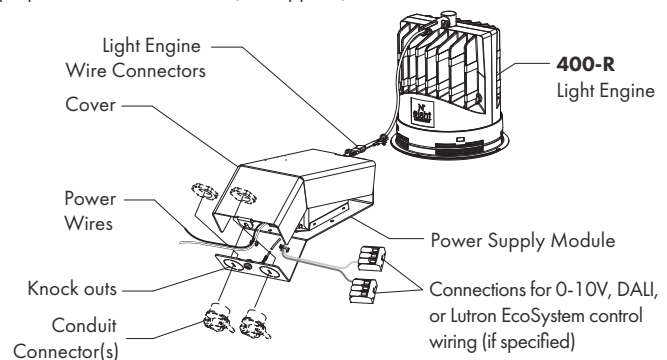
**2d.** Make Ø 4 ½" cut-out using appropriate hole saw.

### STEP 3 – FIXTURE WIRING

**3a.** Locate rough wiring and pull through ceiling cut-out ensuring a minimum of 6" of wire extends below the ceiling.



**3b.** Remove box cover on power supply assembly and install appropriate conduit connector (not supplied).

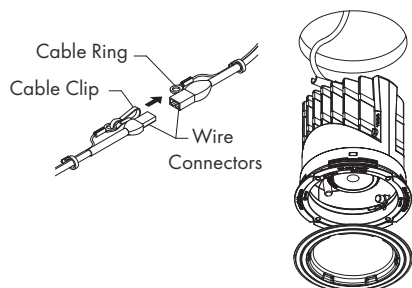


**3c.** Review wiring diagrams on page 10 & 11, wire accordingly. Place all wiring and connectors back in power supply box and replace cover.

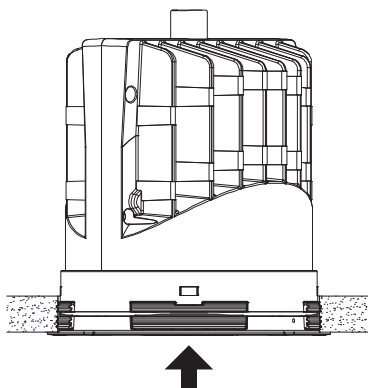
## REMODEL INSTALLATION – FLANGED TRIMS

### STEP 4 – LIGHT ENGINE WIRING AND INSTALLATION

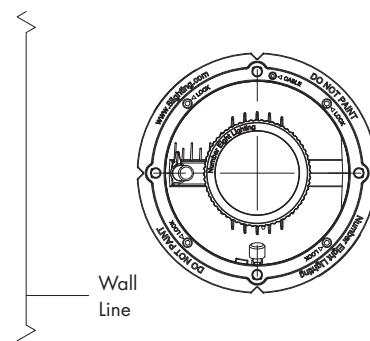
**4a.** Attach light engine wire connector & cable ring to power supply side wire connector & cable clip. Install power supply assembly through ceiling cut-out. Remove dust cover temporarily and save.



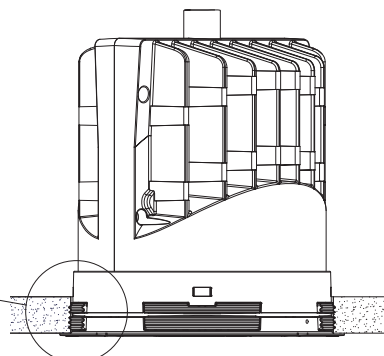
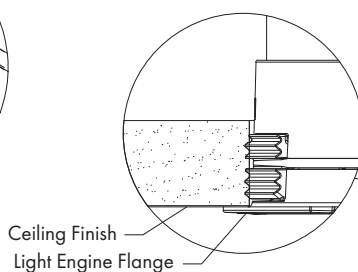
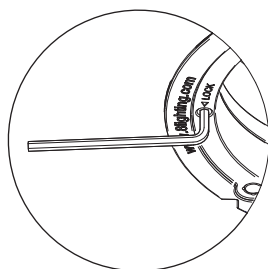
**4b.** Install light engine into cut-out.



**4c.** Rotate light engine flange so notches are aligned with adjacent walls or fixtures.

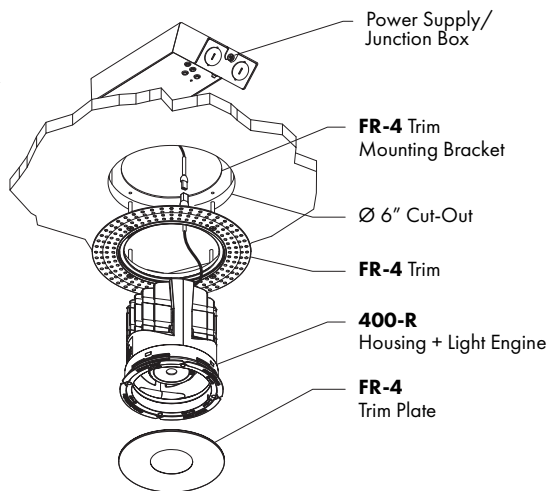


**4d.** Locate (4) four locking screws. While applying upward pressure on light engine flange, hand tighten using supplied 3/32" hex-key. Ensure light engine flange is tight against ceiling. **Caution:** Ceiling finish must not extend above backside of light engine flange.



**4e.** Re-install temporary dust cover until after ceiling has been completely finished.

## REMODEL INSTALLATION – FLANGELESS TRIMS

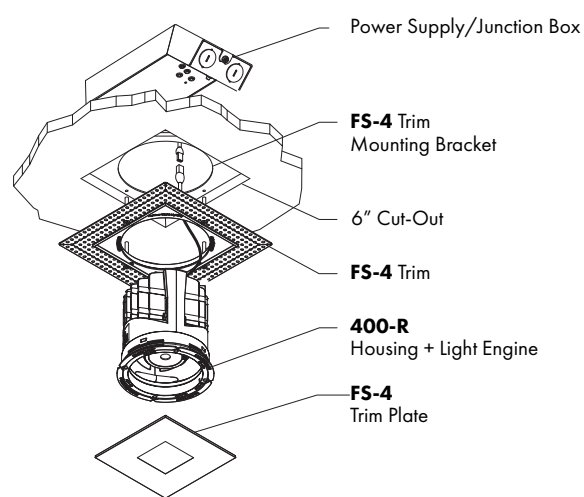


**CEILING TYPES:** Sheetrock

**CEILING THICKNESS:** ½" Min – 5 ½" Max \*

**CUT-OUT:** Ø 6"

\*For ceiling thicknesses over 1 ¼" use longer FHMS 8-32 screws (not supplied)



**CEILING TYPES:** Sheetrock

**CEILING THICKNESS:** ½" Min – 5 ½" Max \*

**CUT-OUT:** 6" x 6"

\*For ceiling thicknesses over 1 ¼" use longer FHMS 8-32 screws (not supplied)

**Caution:** For use with sheet rock material only. Cut out must be within +/- 1/16".

### STEP 1 – ROUGH WIRING

**1a.** Disconnect power at circuit breaker.

**1b.** Review wiring diagram on pages 10 & 11, wire accordingly.

**1c.** Install wiring to fixture location leaving a 12-18" flexible whip to facilitate installation/servicing.

**Note:** 0-10v or EcoSystem power supplies (if specified) require additional dimming control wiring.

### STEP 2 – CEILING CUT-OUT AND INSTALLATION

**2a.** Ensure location of fixture will be a minimum of ½" from edge of cut-out to nearest framing member and there will be sufficient space for installation of power supply assembly.

**2b.** (Skip this step if installing into existing ceiling)

Install ceiling material over rough wiring.

**Note:** Rough wiring will be accessible after making ceiling cut-out. Certain local electrical codes may require rough wiring to be installed in temporary junction box (not supplied) prior to installing ceiling.

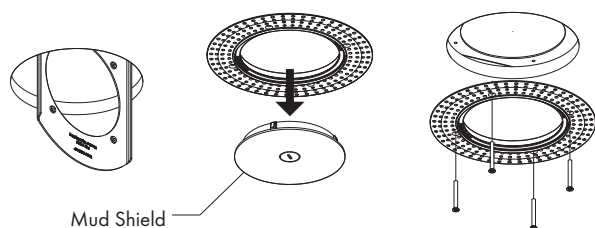
**2c.** Make Ø 6" cut-out for **FR-4** trim or 6" x 6" cut-out for **FS-4** trim.

**Note:** For FS-4 trim, align cut-out with adjacent walls and fixtures.

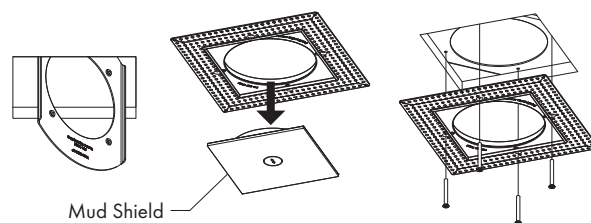
### STEP 3 – FLANGELESS TRIM INSTALLATION

**3a.** Install ceiling bracket through cut-out. Remove mud shield and save. Install trim using four screws. **Note:** do not tighten screws until Step 3b.

#### FR-4 FLANGELESS TRIM



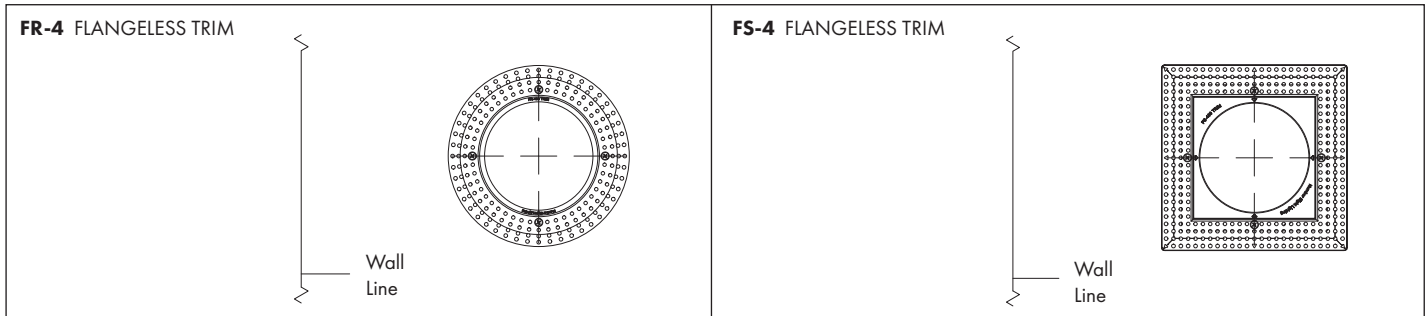
#### FS-4 FLANGELESS TRIM



## REMODEL INSTALLATION – FLANGELESS TRIMS

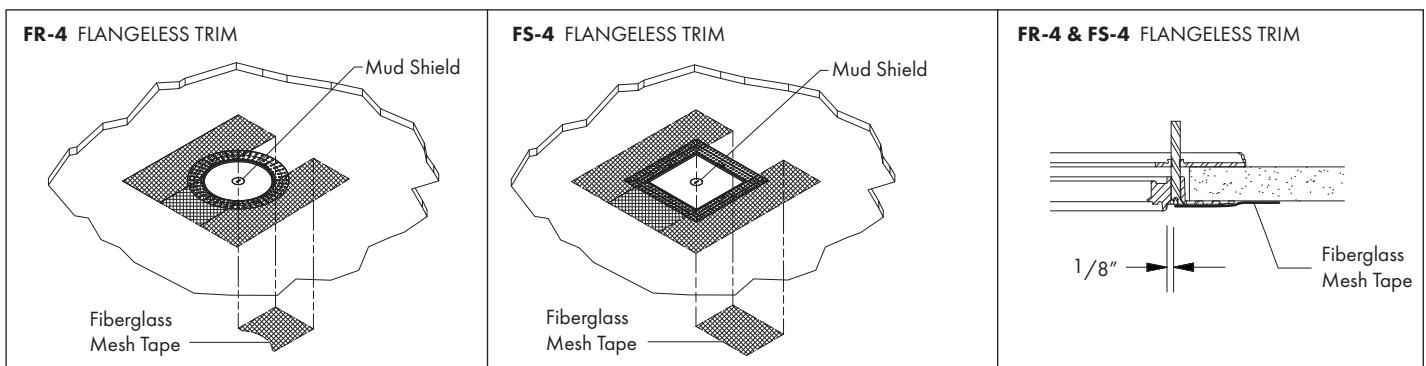
### STEP 3 – FLANGELESS TRIM INSTALLATION (CONTINUED)

**3b.** Rotate trim so screws are aligned with adjacent wall or fixtures. **CAUTION:** Hand tighten trim screws. Power driver is not recommended.



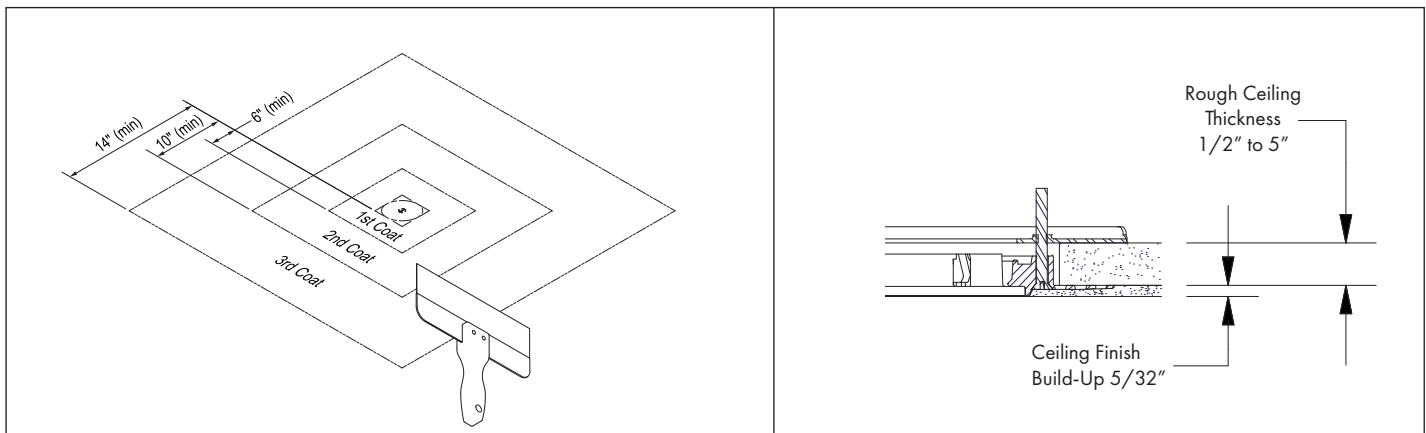
**3c.** Re-install mud shield.

**3d.** Apply 6" wide fiberglass mesh tape over perforated metal trim flange leaving 1/8" cut-out around the outside edge of the raised trim lip and extending over ceiling board.



**3e.** Apply ceiling finish **FR-4 & FS-4 FLANGELESS TRIM**.

**Note:** Minimum Level 4 or 5 finishes are recommended for optimum appearance.



**3f.** First Coat - Apply USG "Durabond" setting-type joint compound for embedding the perforated flange and fiberglass mesh tape following the manufacturer's instructions and warnings for outside corners and trim. The compound should extend a minimum of 6" from the trim edge. Allow first coat to dry completely and remove any high spots by lightly sanding before applying the second coat.

**3g.** Second Coat - Apply USG general purpose ready-mixed joint compound flush to finished edge of trim, floating outward following the manufacturer's instructions and warnings. The compound should extend a minimum of 10" from the trim edge. Allow second coat to dry completely and remove any high spots by lightly sanding before applying the third coat.

**3h.** Third Coat - Apply USG ready-mixed finishing joint compound flush to finished edge of trim, floating outward following the manufacturer's instructions and warnings. The compound should extend a minimum of 14" from the trim edge. Allow third coat to dry completely before sanding.

**3i.** Sand third coat with fine grit sandpaper until mud shield and finished metal edge of trim lip are barely exposed.

**3j.** Remove mud shield knock-out and remove mud-shield by pulling outward.

**3k.** Remove excess material from inside edges of trim.

**3l.** Apply primer (USG Sheetrock or equivalent) and paint following the paint manufacturer's instructions and warnings.

**Caution:** Do not paint inside of **FR-4** or **FS-4** trim surface.

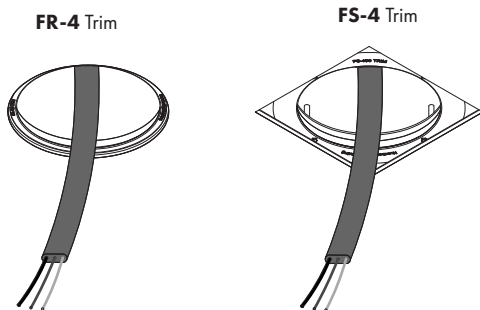


## REMODEL INSTALLATION – FLANGELESS TRIMS

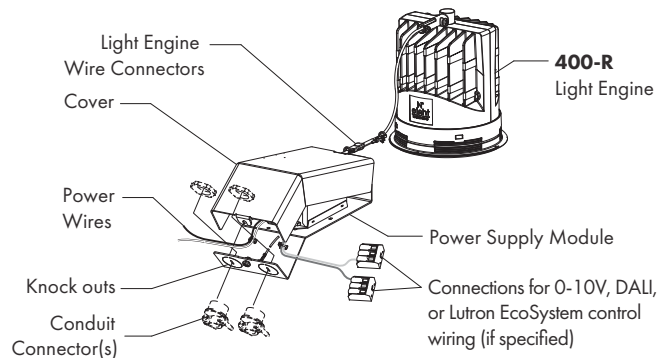
### STEP 4 – FIXTURE WIRING

**IMPORTANT:** Review wiring diagrams on Page 10 & 11, wire fixture accordingly. Place all wiring and connectors back in power supply box and replace cover.

**4a.** Locate rough wiring and pull through trim opening ensuring a minimum of 6" of wire extends below ceiling.

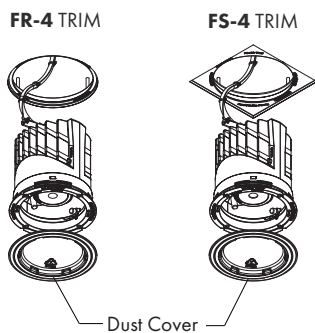


**4b.** Remove box cover on power supply assembly and install appropriate conduit connector (not supplied).

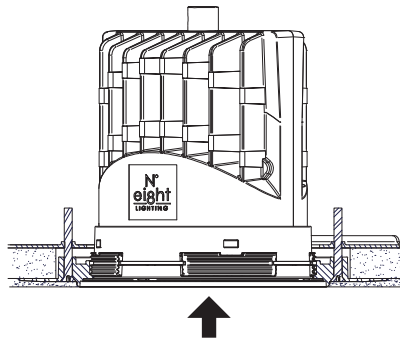


### STEP 5 – HOUSING + LIGHT ENGINE INSTALLATION

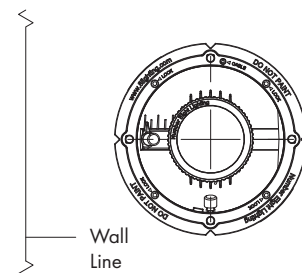
**5a.** Support light engine and install power supply assembly through trim cut-out. Remove temporary dust cover and save.



**5b.** Install light engine into trim cut-out.

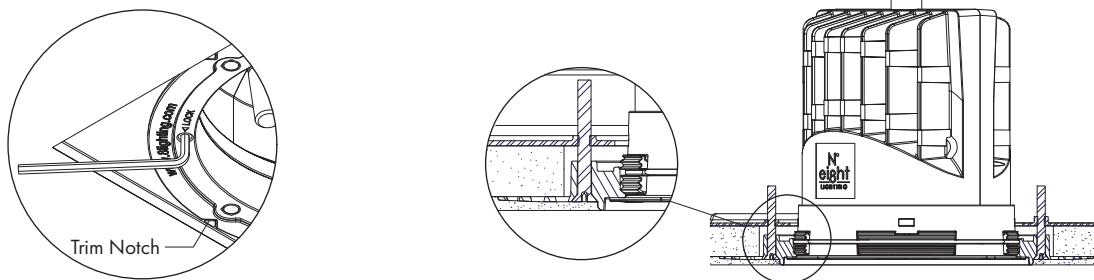


**5c.** For **FR-4** trim, Rotate light engine flange so notches are aligned with adjacent walls or fixtures. For **FS-4** trim, rotate light engine flange until notches in flanges mate with notches in trim.



**5d.** Locate (4) four locking screws. While applying upward pressure on light engine flange, hand tighten using supplied 3/32" hex-key. Ensure light engine flange is tight against trim and aligned with trim notches.

**CAUTION:** Ceiling finish must not extend into trim or above backside of light engine flange.

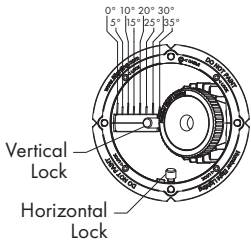
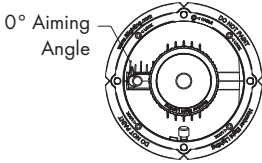
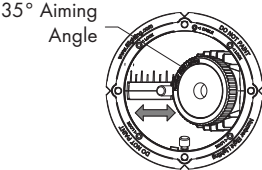
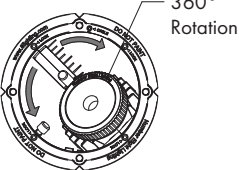


**5e.** Re-install temporary dust cover until after ceiling has been completely finished.

# AIMING & ADJUSTING

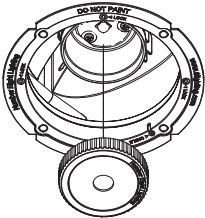
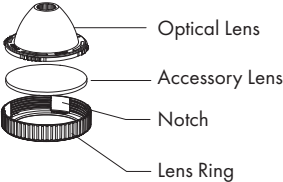
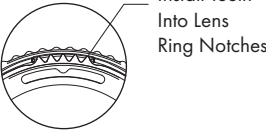
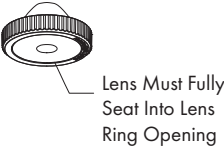
## STEP 1 – VERTICAL AND HORIZONTAL AIMING AND ADJUSTMENT

- 1a. After ceiling is finished, remove temporary dust cover and discard.
- 1b. Loosen vertical and horizontal adjustment locks.
- 1c. Adjust vertical aiming by sliding the lamp holder to desired angle (0-35°).
- 1d. Adjust the horizontal aiming by rotating the lamp holder & housing assembly to desired angle (0-360°).
- 1e. Tighten vertical and horizontal adjustment screws.

Vertical Aiming Angle Adjustment			Horizontal Aiming Angle Adjustment
			

## STEP 2 – LENS AND ACCESSORY REMOVAL AND REPLACEMENT

- 2a. Remove lens ring from lamp holder by unscrewing counter-clockwise.
- 2b. Remove optic lens (and accessory lens if installed) by gently pressing upward on the center while holding the lens ring.
- 2c. Install desired optic (and accessory lens if used) by aligning the optic lens teeth with notches in lens ring.
- 2d. Re-install lens ring on to lamp holder by turning clockwise.

			
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# WW-4 Wall Wash Trim Adjustment and Installation

**Important:** For optimal performance use 40° optic with HI, HI-3, WD, WD-2, WD-4, or TW LED. Use 10° optic and FL lens with HI-2 LED.

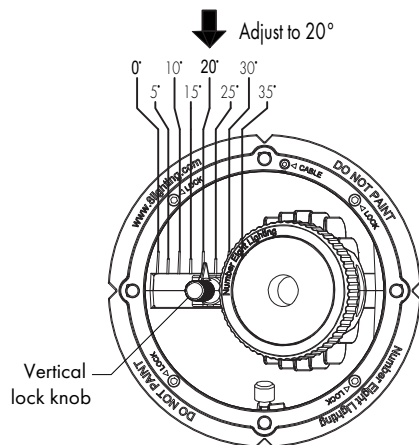
**1a.** Unlock & adjust vertical aiming angle to 20°.

**1b.** Unlock & adjust horizontal position to aim light towards wall surface to be illuminated.

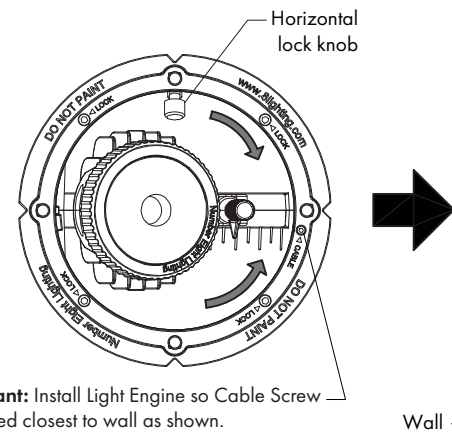
**1c.** Orient & install Wall Wash Trim Plate into Trim as shown.

**Note:** Magnets will permit Trim Plates to only be installed in 4 horizontal orientations.

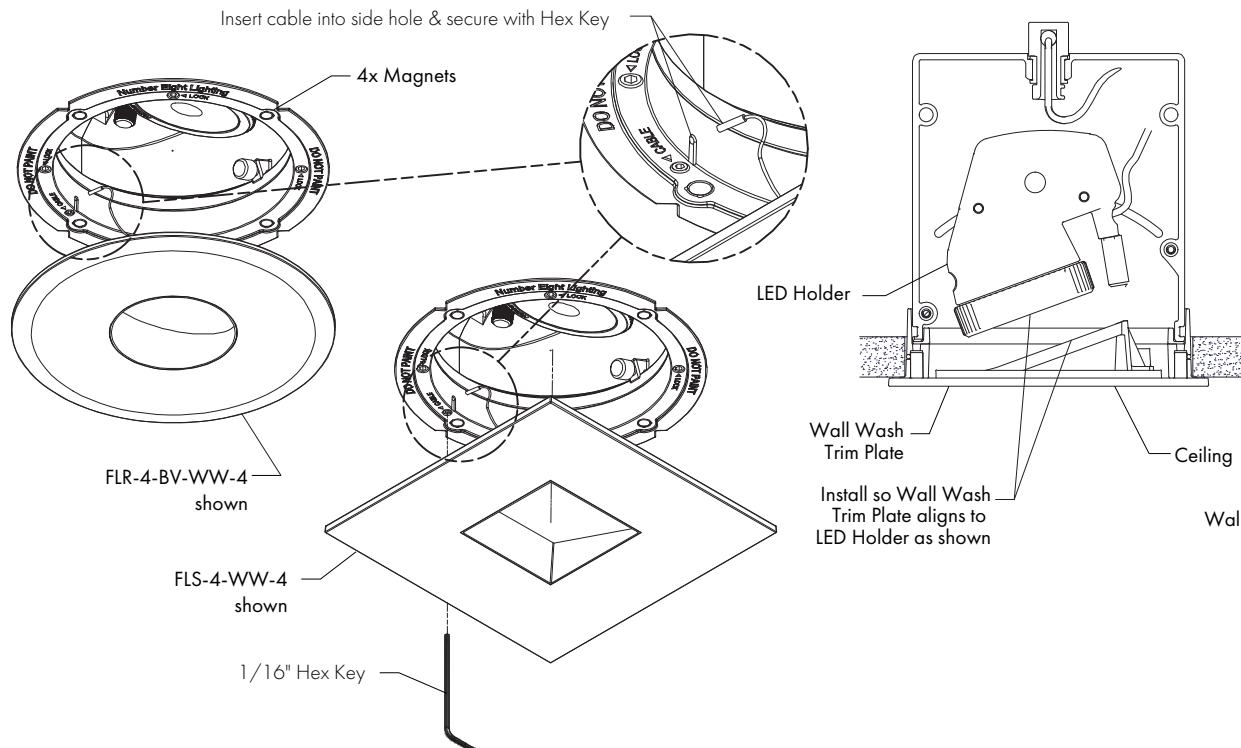
## 1a. Adjust Vertical Aiming Angle



## 1b. Adjust Horizontal Aiming Angle



## 1c. Install onto Light Engine Flange



# TRIM PLATE FINISHING & INSTALLATION

## STEP 1 (OPTIONAL) – PAINT TRIM PLATE

**1a.** Remove the trim plate from packaging.

**1b.** Clean and prepare exposed surfaces for painting following the paint manufacturer's instructions and warnings.

**1c.** Paint as desired using a "dry roller" or light spray application.

**Note:** If applying paint by spray method, mask trim plate lens (if installed).

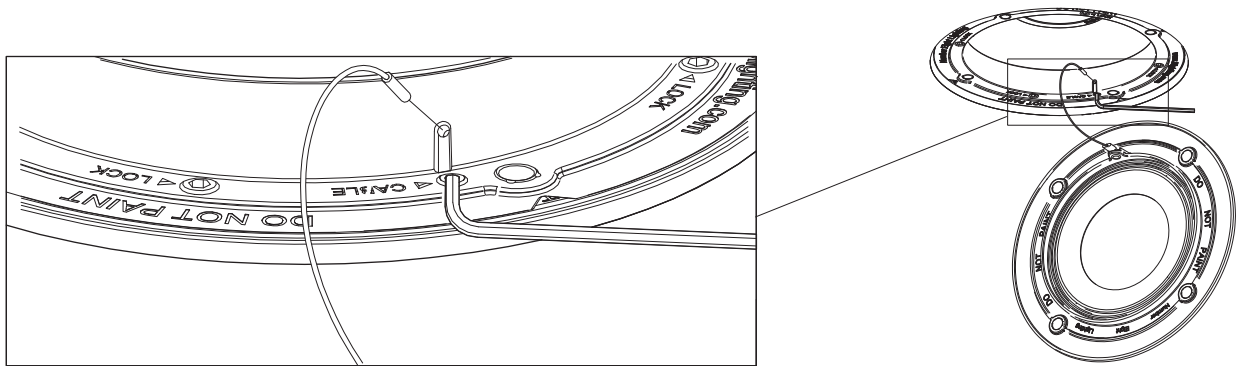
**Caution:** Paint must be rated for minimum 90°C (150°F). Do not paint trim plate while installed in fixture. Do not paint backside of trim plate or trim safety cable. Do not paint edges of **FR-4** / **FS-4** trim plate.

**1d.** Allow trim plate to dry completely before installing.

## STEP 2 – INSTALL TRIM PLATE

**2a.** Remove temporary dust cover and discard.

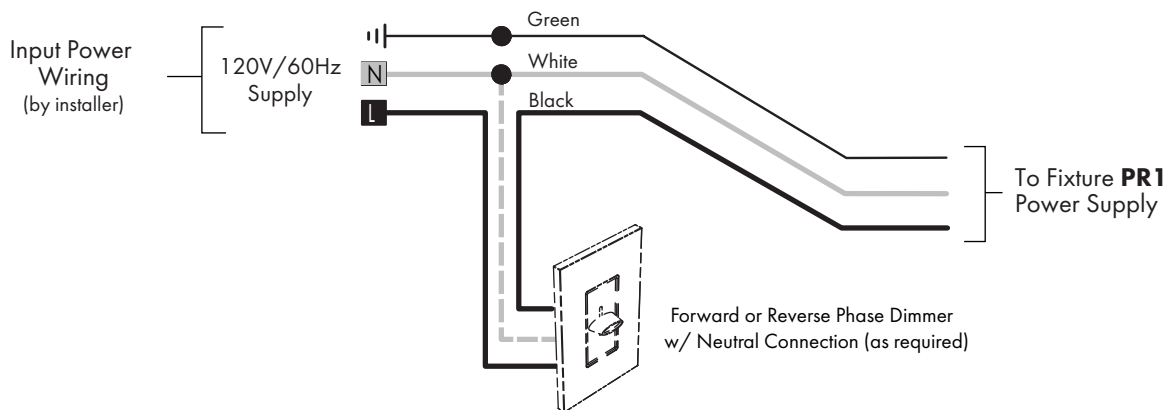
**2b.** Install trim safety cable into attachment hole on housing marked "CABLE" and secure by hand tightening set screw using supplied 1/16" hex key.



**2c.** Align trim plate with magnets and install.

# WIRING DIAGRAMS

## PR1 - PHASE CONTROL

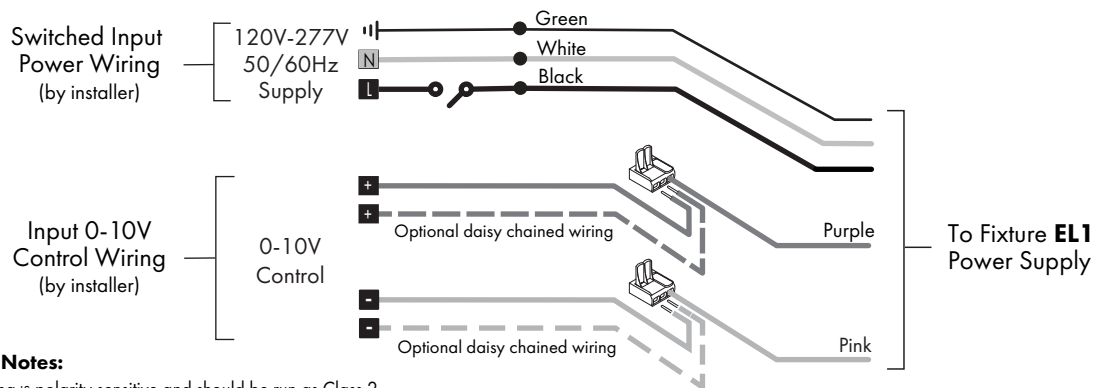


### Phase Control Notes:

**PR1** drivers are Forward or Reverse Phase dimmable.

For compatible dimmers for use with **PR1** drivers see: [www.8lighting.com/resources-downloads](http://www.8lighting.com/resources-downloads)

## EL1 - 0-10V CONTROL



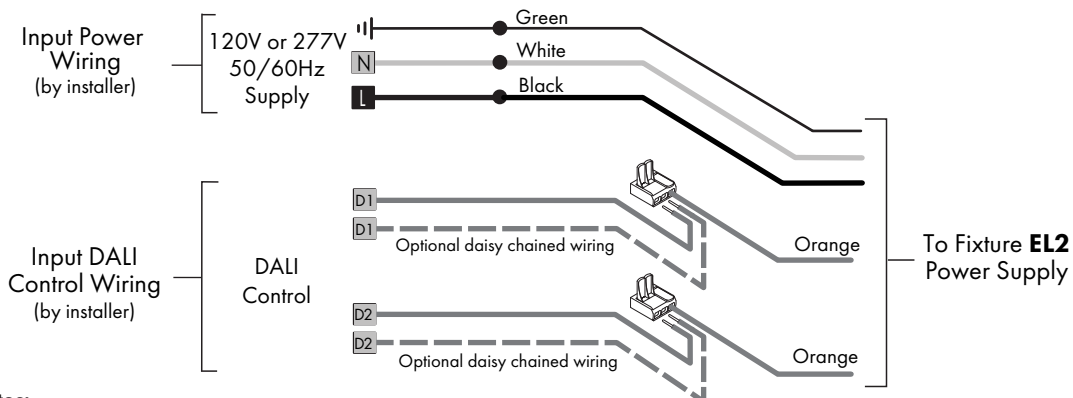
### 0-10V Control Notes:

0-10V control wiring is polarity sensitive and should be run as Class 2.

300' is the maximum control wiring run length to reduce EMI susceptibility and voltage drop. Voltage drop should be no greater than 0.3V.

For compatible dimmers for use with **EL1** drivers see: [www.8lighting.com/resources-downloads](http://www.8lighting.com/resources-downloads).

## EL2 - DALI CONTROL



### DALI Control Notes:

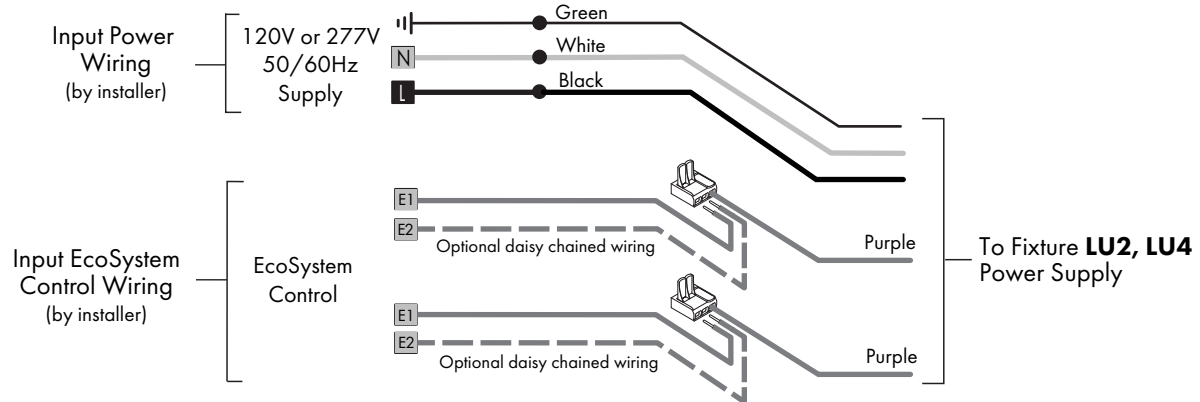
DALI control wiring is not polarity sensitive and can be run as Class 1 or 2. Up to 64 **EL2** power supplies can be daisy chained per DALI control loop.

Maximum control wiring run length is 1000'.

For compatible dimmers for use with **EL2** drivers see: [www.8lighting.com/resources-downloads](http://www.8lighting.com/resources-downloads).

## WIRING DIAGRAMS

### LU2 / LU4 - LUTRON ECOSYSTEM CONTROL



#### Lutron EcoSystem Control Notes:

Up to 64 power supplies can be daisy chained per EcoSystem control loop.

Maximum control wiring run length is 1000'.

For additional information contact LED Center of Excellence at 1.877.346.5338 or LEDs@lutron.com.



**[www.8lighting.com](http://www.8lighting.com)**

**Number Eight Lighting Company**

526 Portal Street, Cotati, CA 94931

Phone (707) 794-0888 • Email [customerservice@8lighting.com](mailto:customerservice@8lighting.com)