

# SQUILINDER SURFACE MOUNT

## SQUILINDER LED LUMINAIRE SQ / SP SERIES

### INSTALLATION

Before beginning any installation, disconnect electrical power at main switch or circuit breaker.

#### A. CAUTION

To reduce the risk of fire, electric shock, and potential damage to recessed housing assembly when electrical power is re-connected, DO NOT ATTEMPT TO CONNECT the following on branch circuit serving recessed downlight assembly:

- Motors
- Power tools
- Extension cords
- Appliances or similar electronics

Fixtures to be mounted in conditions where ambient temperatures do not exceed 40°C.

Ensure AC input voltage is protected against surges & load shifts prior to power supply input.

#### B. SAFETY INSTRUCTIONS

1. Read installation instructions completely before attempting installation.
2. Failure to follow instructions may result in improper installation and void warranty.
3. Contact Lucifer Lighting Company with any questions or concerns before beginning any installation.
4. Ensure qualified electrician will perform all electrical procedures.
5. Disconnect electrical power circuit before attempting to install Squilinder, or if adding to or changing configuration of Squilinder assembly.
6. CAUTION: When fixture is on for long periods the Squilinder surface will be hot. Take care when making adjustments.

This product must be installed in accordance with applicable electrical and installation codes by a person familiar with the construction and operation of the product and the hazards involved. "CAUTION- RISK OF FIRE"

#### C. DESCRIPTION

Surface mounted Squilinder with dimmable LED module and optional integral driver. SQ2-AD has standard 90° tilt and 357° rotation; fixed unibody Squilinders also available. Pendant Squilinders feature field cuttable cable (section E, page 3).

#### D. MOUNTING

SQ2-AD adjustable Squilinders may be wall mounted in Dry / Damp locations only. Pendant Squilinders accommodate flat or sloped ceiling conditions.

Wallwash Unibody SQ2-WW: recommended spacing is 48" (1213mm) on center with 36" (914mm) setback from wall plane.

#### **SQ2-JBMP:**

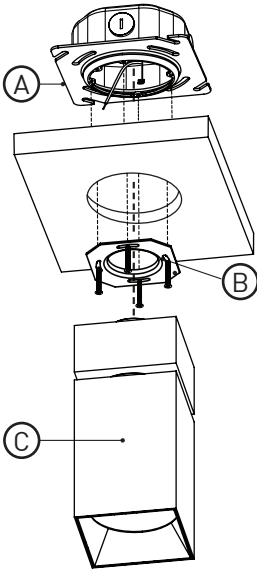
Specified to mount flush with minimalist transition to standard j-box installed behind substrate (section D.1, page 2).

#### **SQ2-SMK:**

Includes concealer plate to conceal mounting hardware between fixture and j-box for existing installations (section D.2, page 3).

#### **SQ2-CMJB:**

Lucifer designed ceiling mount j-box for 1/2" and 3/4" direct conduit feed and provides minimalist transition from Squilinder to j-box (section D.3, page 4).



## D.1 SQ2-JBMP

For flush standard mount featuring a minimalist transition from standard 4/0 or 4" square j-boxes installed behind substrate. Specify SQ2-JBMP.

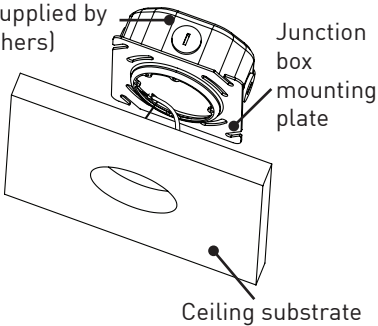
NOTE: The J-box mounting plate (SQ2-JBMP) must be installed prior to substrate.

### PARTS IDENTIFICATION

Qty.	Description	Part ID
1	J-box mounting plate	A
1	Mounting adaptor plate	B
1	Squilinder assembly	C

NOTE: Mounting adaptor plate ships with Squilinder assembly.

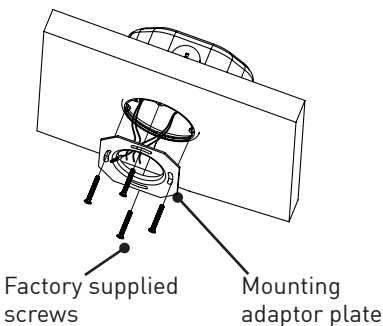
Junction Box  
(supplied by  
others)



### STEP 1

Universal junction box mounting plate attaches to standard 4" octagon or 4" square junction box before ceiling substrate is installed.

SQ2-JBMP: 2.875"(73mm) cutout.



### STEP 2

With substrate installed and appropriate cutout made, attach mounting adaptor plate with screws provided; ensuring plate is seated firmly to finished ceiling plane.

NOTE: Skip step 2 for drop kit installations

Please refer to section G, page 11 of this install guide for Squilinder wiring and mounting instructions.

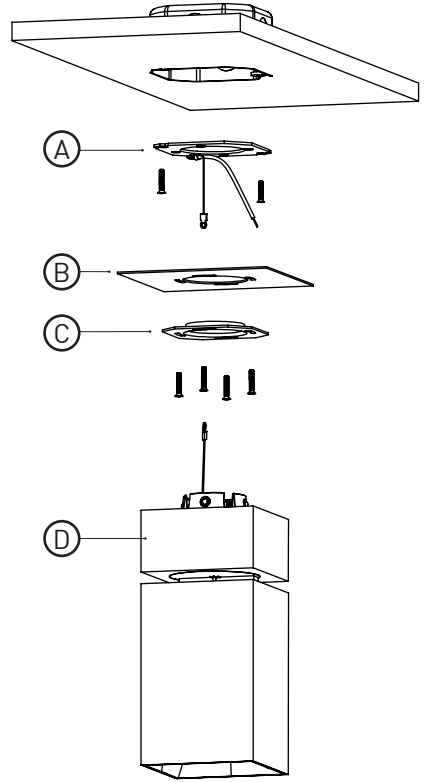
## D.2 SQ2-SMK

The SMK kit is specified for mounting to either 3" or 4" octagon junction box. Remove existing fixture and mounting hardware, ensuring the ceiling area is level and free from debris.

### PARTS IDENTIFICATION

<u>Part ID</u>	<u>Description</u>	<u>Qty.</u>
A	Mounting plate	1
B	Concealer plate	1
C	Mounting adaptor plate	1
D	Squilinder assembly	1

NOTE: Mounting adaptor plate ships with Squilinder assembly.

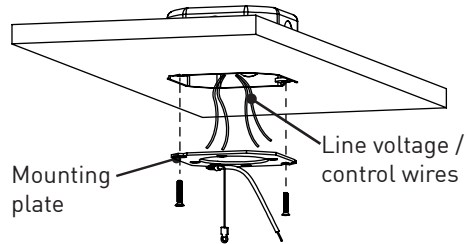


## STEP 1

Attach mounting plate to junction box with screws supplied, routing line/mains supply and control wires through opening.

NOTE: The mounting plate must not extend below the finished ceiling plane.

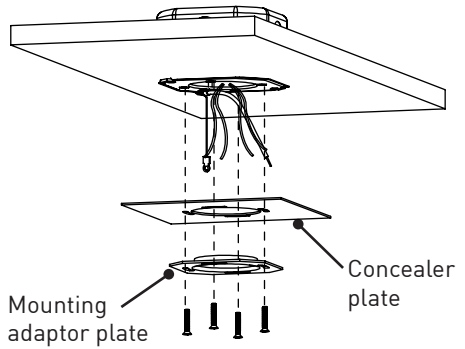
NOTE: Thicker ceiling substrates may require longer screws. Use 8-32 machine screws with an 82° countersink angle.



## STEP 2

Attach concealer plate and mounting adaptor plate with screws provided, ensuring the plates seat firmly to the finished ceiling plane by tightening screws as required. Ensure plates are aligned. Do not over tighten.

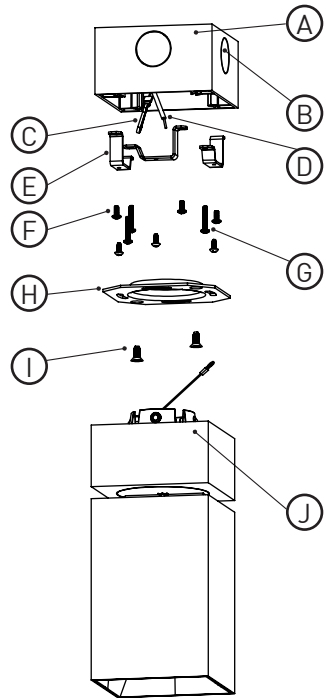
Please refer to section G, page 11 of this install guide for Squilinder wiring and mounting instructions.



## D.2 SQ2-CMJB

### PARTS IDENTIFICATION

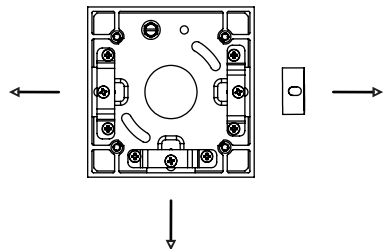
Part ID	Description	Qty.
A	SQ2-CMJB-	1
B	Blank-off plug	3
C	Safety lanyard	1
D	Ground	1
E	Clamp	3
F	Clamp screws	6
G	Conduit locking screws	3
H	Mounting adaptor plate	1
I	Mounting plate screws	2
J	Squilinder assembly	1



### STEP 1A - 3/4" CONDUIT

For 3/4" conduit, remove mounting plate, loosen clamps and conduit locking screw, discard applicable blank-off plug(s).

NOTE: Maximum 3/4" conduit throat diameter is 0.819" (20.8 mm), per UL code.

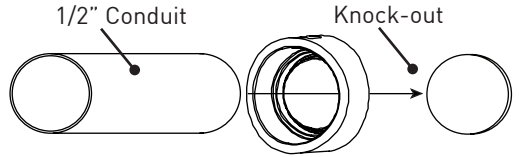
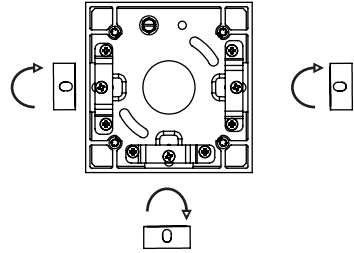


### STEP 1B - 1/2" CONDUIT

Scan QR code and reference knock-out removal video. Loosen clamp and locking screw to remove plug(s). On a protected concrete surface, remove knock-out from plug using 1/2" conduit and reinstall in reverse orientation.

NOTE: Maximum 1/2" conduit throat diameter is 0.622" (15.8 mm), per UL code.

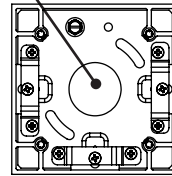
#### Knock-out Removal



### STEP 1C - TOP FEED

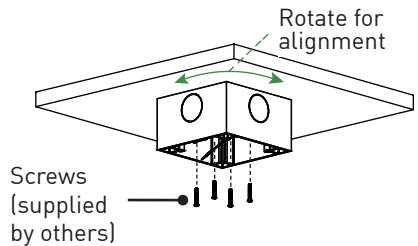
Remove the mounting plate, place CMJB on a soft surface and remove top knock-out.

#### Knock-out



### STEP 2

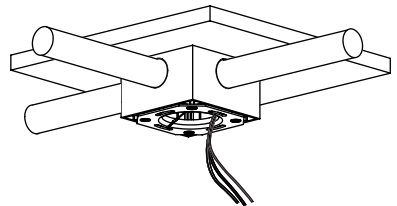
Loosely secure CMJB to ceiling plane. CMJB requires final alignment of multiple fixtures and in relation to parallel planes, rotates up to 30°. Firmly secure CMJB after alignment.



### STEP 3

Run conduit and / or wiring to the CMJB. On applications using conduit, tighten clamp screws and conduit locking screw. Install mounting plate.

NOTE: Skip step 3 for drop kit installations.



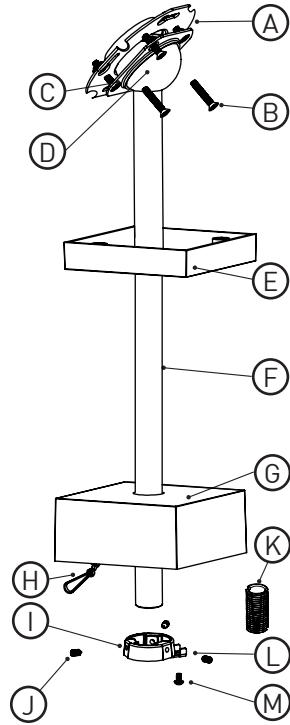
Please refer to section G, page 11 of this install guide for Squilinder wiring and mounting instructions.

## E. SQ2-DK (DROP KIT)

For suspending cylinder at varying heights and on sloped ceilings up to 45°.

NOTE: The SQ2-JBMP must be installed prior to substrate.

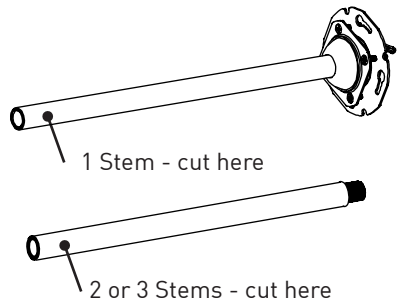
PARTS IDENTIFICATION		
Part ID	Description	Qty.
A	Mounting plate	1
B	Mounting plate screws	2
C	Pressure plate	1
D	Ball swivel	1
E	Magnetic concealer plate	1
F	Stem	1-3
G	Lower canopy	1
H	Safety lanyard	1
I	Retaining collar	1
J	Set screws	3
K	Threaded nipple	0-2
L	Clamping bracket	1
M	Clamping bracket screw	1



### STEP 1

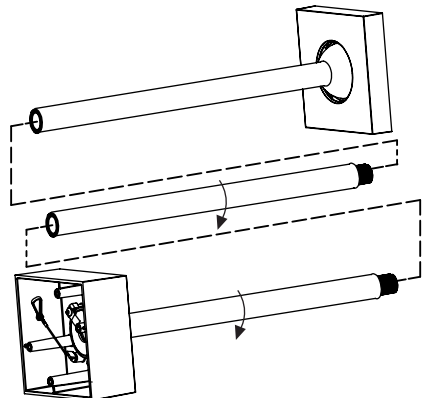
Cut stem to length as required at 90° angle from end where the lower canopy will be connected.

Installer Tip: Stem is recessed into lower canopy 3/8", add 3/8" to total length prior to cutting stem.



### STEP 2

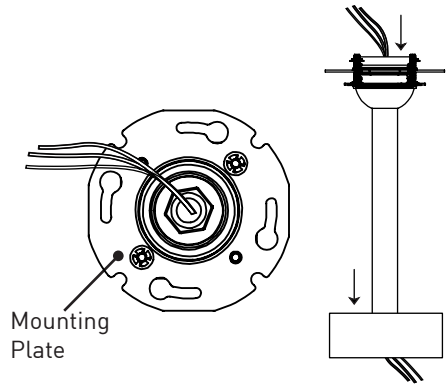
Connect stems as required by threading stems together.



### STEP 3

Feed line and control wiring (if required) through stem(s) from the mounting plate to the lower canopy; wiring supplied by others. See wiring requirements in Section L.

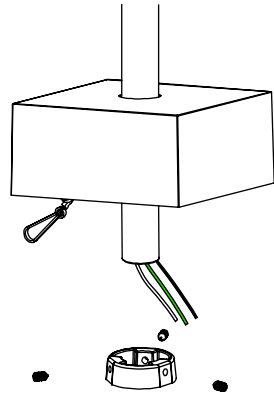
Installer Tip: Recommend using solid 12 AWG THHN and 18/2 for line voltage and control wiring. Wrap wiring tight with electrical tape and push through stems.



### STEP 4

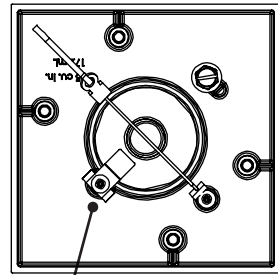
Ensure magnetic concealer plate is in place and feed lower canopy onto stem, install retaining collar on end of stem and secure with three factory supplied set screws. Ensure bushing is secured to stem.

**WARNING:** Failure to ensure set screws are adequately tightened may result in failure of bushing.



### STEP 5

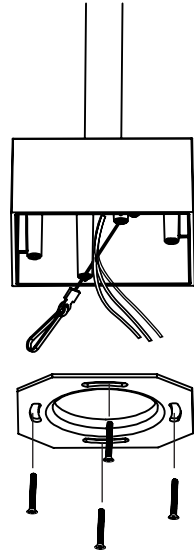
Install clamping bracket to lower canopy by starting supplied screw, rotate bracket over retaining collar and tighten screw.



## STEP 6

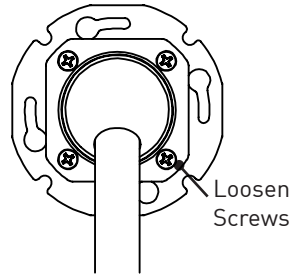
Install mounting adaptor plate to lower canopy using supplied screws, ensuring it is square with the canopy.

NOTE: Mounting adaptor plate and screws ship with Squilinder assembly.



## STEP 7

Loosen pressure plate screws slightly prior to installation.



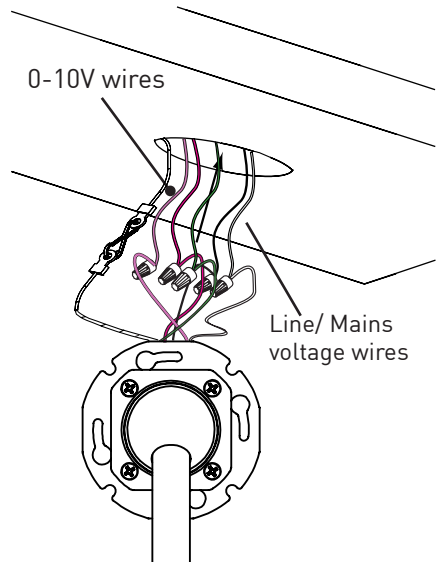
## STEP 8

Attach safety lanyard and wiring from line / mains source or low voltage source as indicated with suitable wire-nuts or similar connectors. For 0-10V dimming option, use gray and purple wires as shown. Push connections, excess wiring, and lanyard into junction box.

NOTE: CMJB application not shown.

Line /Mains	
Black Wire	- Line
White	- Neutral
Green	- Ground
Purple	- Dim +
Pink	- Dim -

LVS and Remote Driver	
Red Wire	- Positive (+)
Black Wire	- Negative (-)



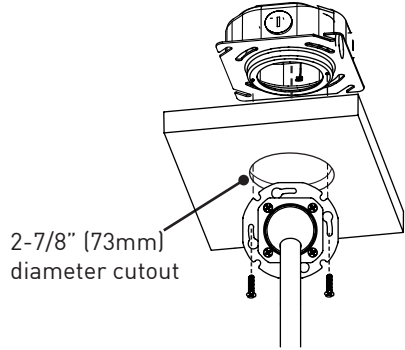


## STEP 9

Attach drop kit mounting plate to applicable mounting option using supplied screws.

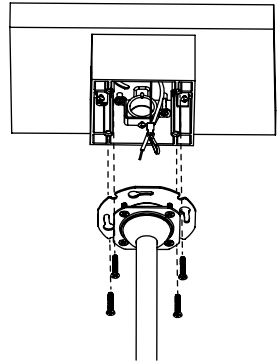
### 9.1 SQ2-JBMP

Reference section D.1 for complete JBMP installation instructions. Position drop kit mounting plate below ceiling cutout and attach to J-box mounting plate with supplied screws.



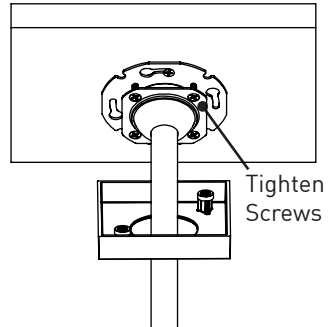
### 9.2 SQ2-CMJB

Reference section D.3 for complete CMJB installation instructions. Attach drop kit mounting plate with supplied screws.



## STEP 10

With drop kit installed and stem positioned vertically, UNIFORMLY tighten pressure plate screws and raise magnetic concealer plate.

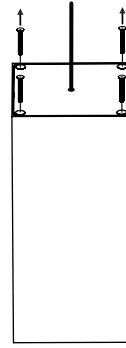


## F. PENDANT CABLE ADJUSTMENT

For Pendant Squilinder installations where field adjustment of cable length is required, refer to following instructions.

### STEP 1

Remove 4 screws located on top of Squilinder body using 0.050" Allen key.



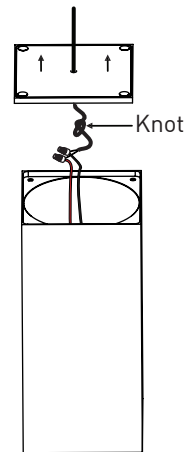
### STEP 2

Remove lid from top of Squilinder body exposing wire nuts and cable knot.

### STEP 3

Remove the 2 wire nuts connecting the cable wires and the LED wires. Make desired cut on pendant cable and tie a knot below lid to act as strain relief, ensure adequate amount of slack is allowed for wire connections. Strip orange and white wires located inside pendant cable and re-connect to LED wires using wire nuts. Orange to black and white to red.

**Note:** Leave white and orange wires 1" longer than cable to allow for connection to LED wires.



### STEP 4

Reverse steps 1-2 to secure Squilinder body lid.

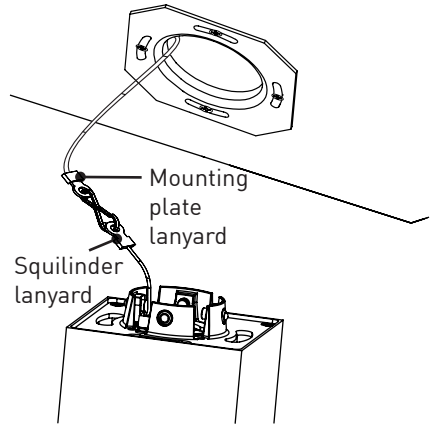
## G. SQUILINDER WIRING AND MOUNTING

**Note:** If using remote power supply, see page 13.

### STEP 1

Connect Squilinder and mounting plate safety lanyards together.

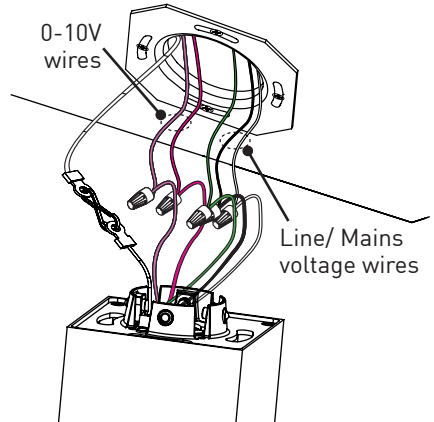
**WARNING:** Failure to attach safety lanyard may result in an unsafe condition.



### STEP 2A - UL1598 INSTALLATIONS

Attach wiring from line / mains source as indicated with suitable wire-nuts or similar connectors. For 0-10V dimming option, use gray and purple wires as shown. Push connections, excess wiring, and lanyard into junction box.

Black Wire	- Line
White	- Neutral
Green	- Ground
Purple	- Dim +
Pink	- Dim -

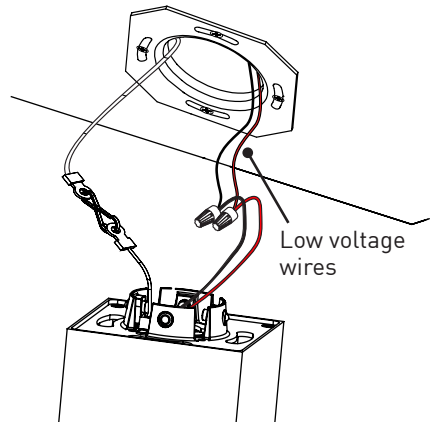


### STEP 2B - UL2108 INSTALLATIONS

Attach wiring from low voltage source as indicated with suitable wire-nuts or similar connectors.

Reference Section M for drive current and node compatibility information.

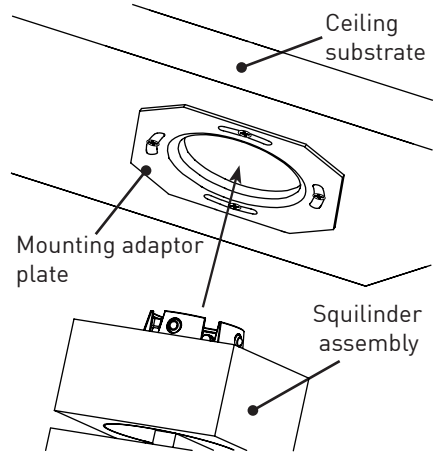
Red Wire	- Positive (+)
Black Wire	- Negative (-)



### STEP 3

With safety lanyard and wiring completed, push Squilinder assembly into mounting adaptor plate until ball plungers engage.

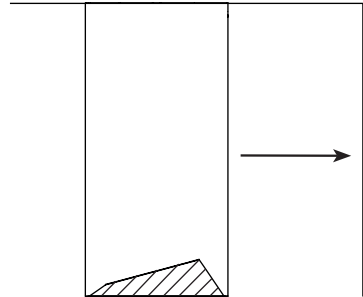
**Note:** Audible snap may be heard when ball plungers engage.



### STEP 4

**Note:** For Wallwash Unibody installations only

Install fixture with baffle facing the desired wallwash surface as shown in image.



## H. REMOTE POWER SUPPLY - UL1598 INSTALLATIONS ONLY

Determine preferred mounting location, verifying fixture falls within maximum allowed wiring distance (Fig. 1).

Run adequately sized two-pair wire between remote driver and housing, following installation guidelines for terminating as needed.

**Note:** Secondary wiring is polarized (+/-) and must be terminated correctly at both ends for proper operation. It is recommended to use Red (+) and Black (-) wires to avoid confusion. No ground wire necessary on secondary side.

*Ensure proper polarity is observed as reversed polarity may damage the unit and may void the warranty.*

Access splice compartment by removing retaining screws, then tilting cover slightly back and away from base (Fig.2).

Mount power supply back plate assembly to suitable substrate using customer-supplied screws (Fig.3).

Insert line voltage wiring/conduit into line side of splice compartment and secondary voltage wiring/conduit into secondary side of splice compartment, utilizing appropriate strain relief or connector.

**Note:** Consult wiring diagrams on page 11 for applicable driver type.

Join structured building wires to corresponding driver wires with suitable customer-supplied wire connecting device.

Push all wires and wire connections into splice compartment and reinstall splice compartment cover by aligning tab and slot, ensuring no wires are pinched by cover. Install retaining screws (Fig.3).

### Lutron Drivers: "L23" & "LH1"

AWG Value	18	16	14	12
Distance (m)	4.5	7.5	12	18
Distance (ft)	15	25	40	60

### Philips Drivers: "TR2" & "AN4"

AWG Value	20	18	16	14	12
Distance (m)	14	22	34	55	87
Distance (ft)	45	71	113	180	285

### eldoLED Drivers: "ED1", "LD1", "LA2", "EA2"

AWG Value	20	19	18	17	16
Distance (m)	14	18	22	28	36
Distance (ft)	46	59	72	92	118

Fig. 1

Min. 8" feed wires in splice compartment

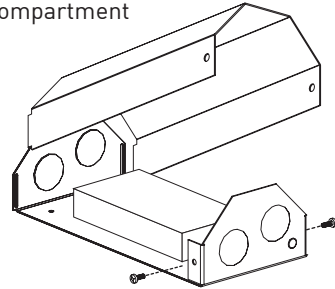


Fig.2

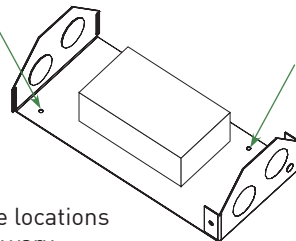


Fig.3

## I. OPTIC AND BAFFLE / LENS REPLACEMENT

Optics and baffle / lens assemblies are interchangeable in the field.

### STEP 1

Remove baffle assembly from Squilinder by securing suction tool (provided) to lens and gently pulling down to release (Fig 4.).

### STEP 2

Carefully grab optic and twist counter-clockwise to remove.

### STEP 3

Replace optic and baffle assembly. Ensure both locking tabs of optic engage with LED base and twist clockwise to secure. Apply even pressure to baffle assembly to secure into Squilinder body (Fig 5.).

## J. DRIVER REPLACEMENT

The following instructions describe how to remove and replace integral driver.

### STEP 1

Remove 4 screws located on mounting plate of Squilinder canopy using Philips screw driver (Fig 6.).

### STEP 2

Remove mounting plate to expose integral driver (Fig 7.). Lift driver out of Squilinder canopy and disconnect plastic connector by pressing on locking tab and pulling apart (Fig 8.).

### STEP 3

Connect plastic socket of replacement driver and lower unit into Squilinder enclosure with red and white wires facing downward.

### STEP 4

Replace mounting plate, feeding wires through center opening of mounting plate.

### STEP 5

Secure mounting plate with four screws to complete driver replacement.

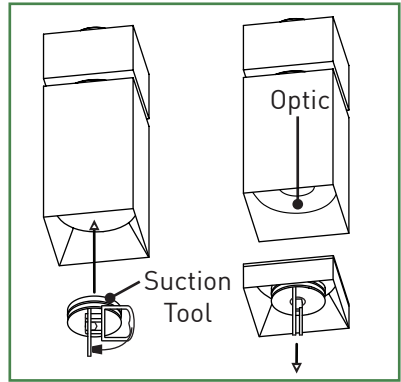


Fig.4

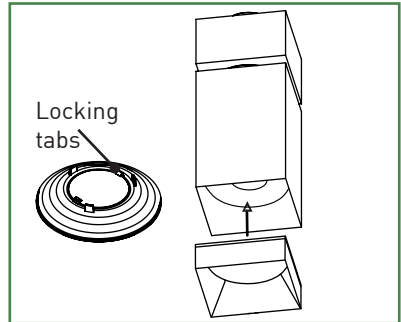


Fig.5

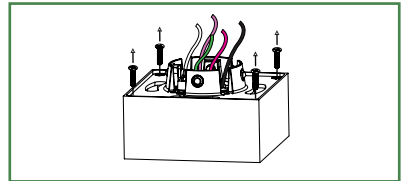


Fig.6

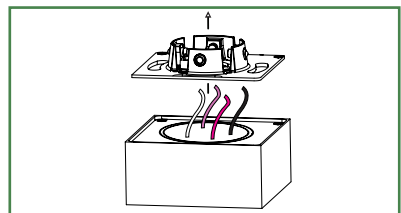


Fig.7

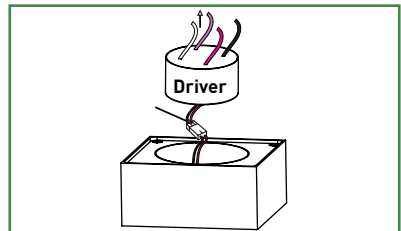


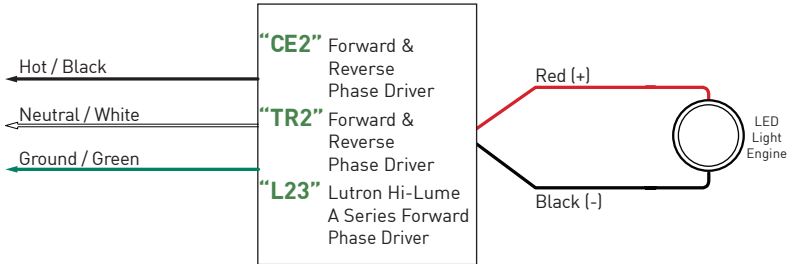
Fig.8

# K. DRIVER WIRING DETAIL

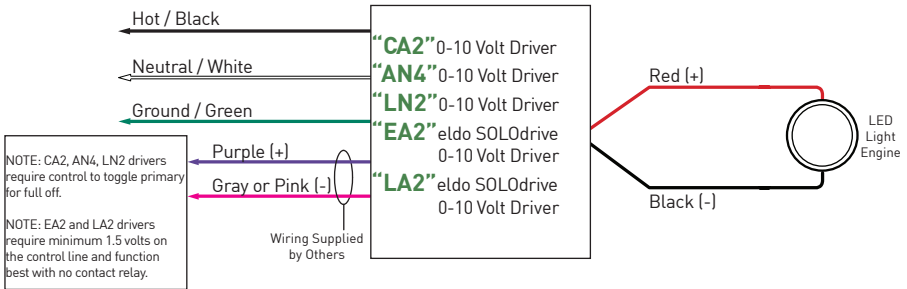
## GENERAL WIRING NOTES

1. Consult approved dimmer list to ensure compatibility.
2. Install in accordance with manufacturer’s dimmer installation guidelines.
3. Secondary and 0-10V connections are polarity sensitive.

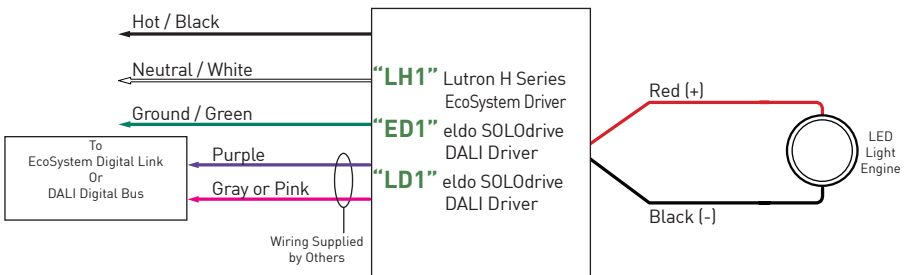
## WIRING DIAGRAM FOR LINE DIMMING



## WIRING DIAGRAM FOR ANALOG CONTROL



## WIRING DIAGRAM FOR ECOSYSTEM AND DIGITAL CONTROL



## L. STEM WIRING REQUIREMENTS

INTEGRAL DRIVER	LINE VOLTAGE / CONTROL WIRING
CE2	QTY. 3 #14-#12 BLACK, WHITE & GROUND
CA2	QTY. 3 #14-#12 BLACK, WHITE & GROUND QTY. 2 #18 GRAY (-) & PURPLE (+)

REMOTE / LVS / POE	CLASS 2 WIRING
TR2	QTY. 2 #14-#12 BLACK (-) & RED (+)
L23	QTY. 2 #14-#12 BLACK (-) & RED (+)
AN4	QTY. 2 #14-#12 BLACK (-) & RED (+)
LN2	QTY. 2 #14-#12 BLACK (-) & RED (+)
EA2	QTY. 2 #14-#12 BLACK (-) & RED (+)
LA2	QTY. 2 #14-#12 BLACK (-) & RED (+)
LH1	QTY. 2 #14-#12 BLACK (-) & RED (+)
ED1	QTY. 2 #14-#12 BLACK (-) & RED (+)
LD1	QTY. 2 #14-#12 BLACK (-) & RED (+)
LVS / POE	QTY. 2 #14-#12 BLACK (-) & RED (+)






## M. UL2108 INSTALLATION INFORMATION

### Drive Current Information:

	80S			90S			97S			90W
	11A	17A	23A	11A	17A	23A	11A	17A	23A	18A
Minimum Vf	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5
Maximum Vf	39	39	39	39	39	39	39	39	39	39
Current mA	250	400	550	250	350	500	250	350	500	350
Wattage W	8.4	14.0	19.8	8.4	14.0	19.8	8.4	14.0	19.8	13.8

### Node Compatibility:

Manufacturer	Model Number
 Enabling Smart Buildings™	NP50-60-C-F-5
	180996-5107 180996-5101 180996-5102 180996-5103
	1 Channel Node, POE-LN2-1U-E 2 Channel Node, POE-LN2-2U-E 4 Channel Node, POE-LN2-4U-E

Please consult website for full warranty terms and conditions:

[www.luciferlighting.com/warranty](http://www.luciferlighting.com/warranty)

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LIGHTING COMPANY

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