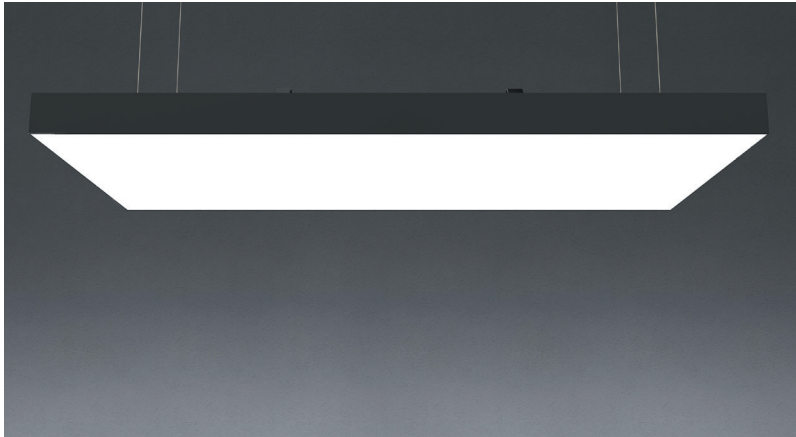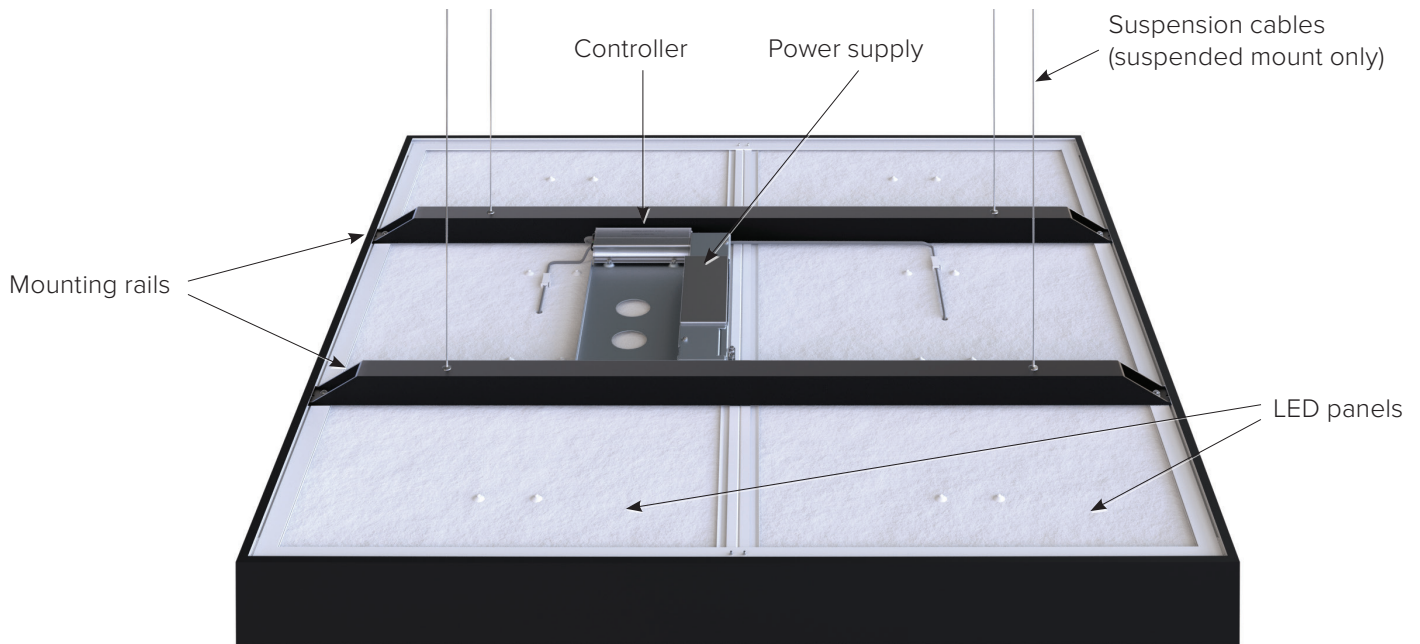# FABRILUM RSB 4X4

INSTALLATION GUIDE

Cooledge FABRILum delivers immersive illumination and meaningful acoustic performance in a single solution. These large-scale architectural luminaires bring the feeling of the outdoors inside by providing a canopy of light that is available in a variety of sizes with removable fabric diffusers, high sound absorption values, and the exceptional quality of illumination Cooledge is known for.

1. COMPONENTS

Controller

Power supply
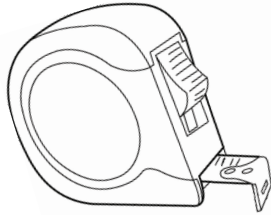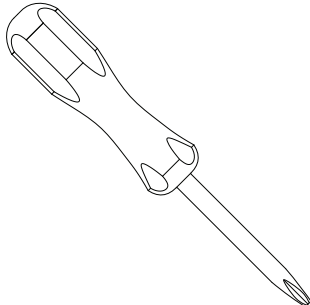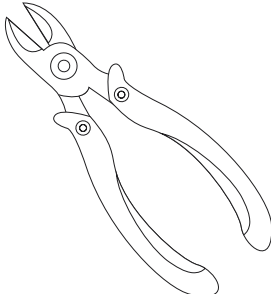
Suspension cables (suspended mount only)

Mounting rails

LED panels

CE

c UL us LISTED

RoHS

ENERG
THIS PRODUCT CONTAINS A LIGHT SOURCE OF ENERGY EFFICIENCY CLASS E

5 YEAR SYSTEM WARRANTY
5
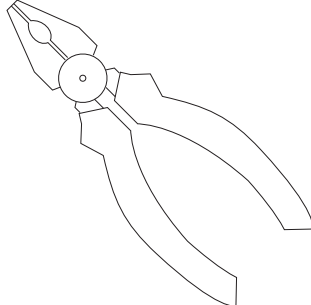
5 Year Limited Warranty: Parts and workmanship

CAUTION: 2 people min. recommended for install

2. TOOLS

⚠ **WARNING:** Wear clean cotton or latex gloves when handling FABRILum Luminaires.

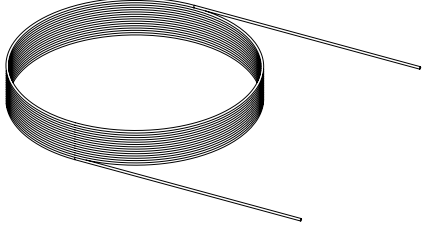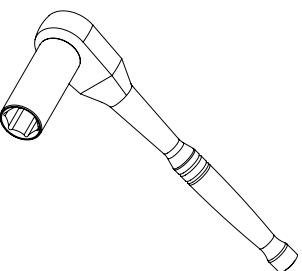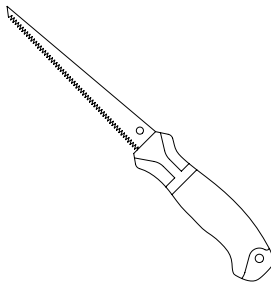| Gloves	Measuring Tape	#2 Phillips Screwdriver
Cable Cutters	Pliers	Solid hanger wire (not required for suspended mount)
17mm socket and ratchet (suspended mount only)	Drywall saw (recessed mount only)	

⚠ **CAUTION:** Observe precautions for handling electrostatic sensitive devices.

⚠ **CAUTION:** Use appropriate Personal Protective Equipment (PPE) to ensure safety at work.

3. MOUNTING TYPES

• Direct ceiling (surface) mount – go to section 4

• Suspended mount – go to section 5

• Grid mount – go to section 6

• Recessed mount – go to section 7

4. DIRECT CEILING (SURFACE) MOUNT

4.1 REMOVE POWER AND CONTROL ASSEMBLY FROM FRAME

Remove the four screws holding the power and control assembly to the frame.
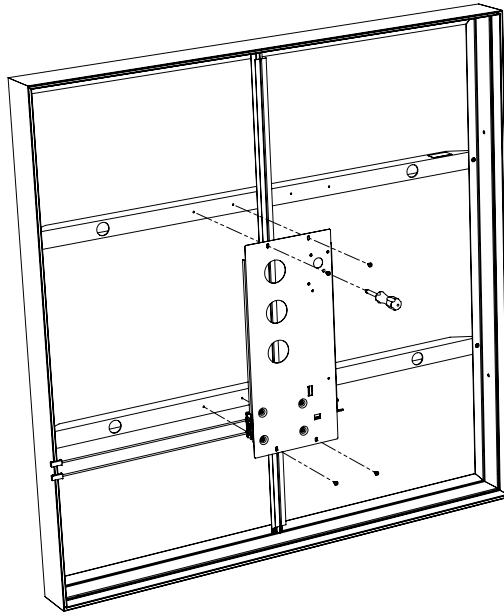
4.2 MARK THE CEILING

Use the included mounting template to mark the position on the ceiling.

Luminaire outline 1192.5mm / 47" square

Suspension cable or surface mount screw location (4 places)

Mounting rail

460mm
18 1/8"

Mounting area for power plate
(Surface mount only)

Mounting rail

800mm
31 1/2"
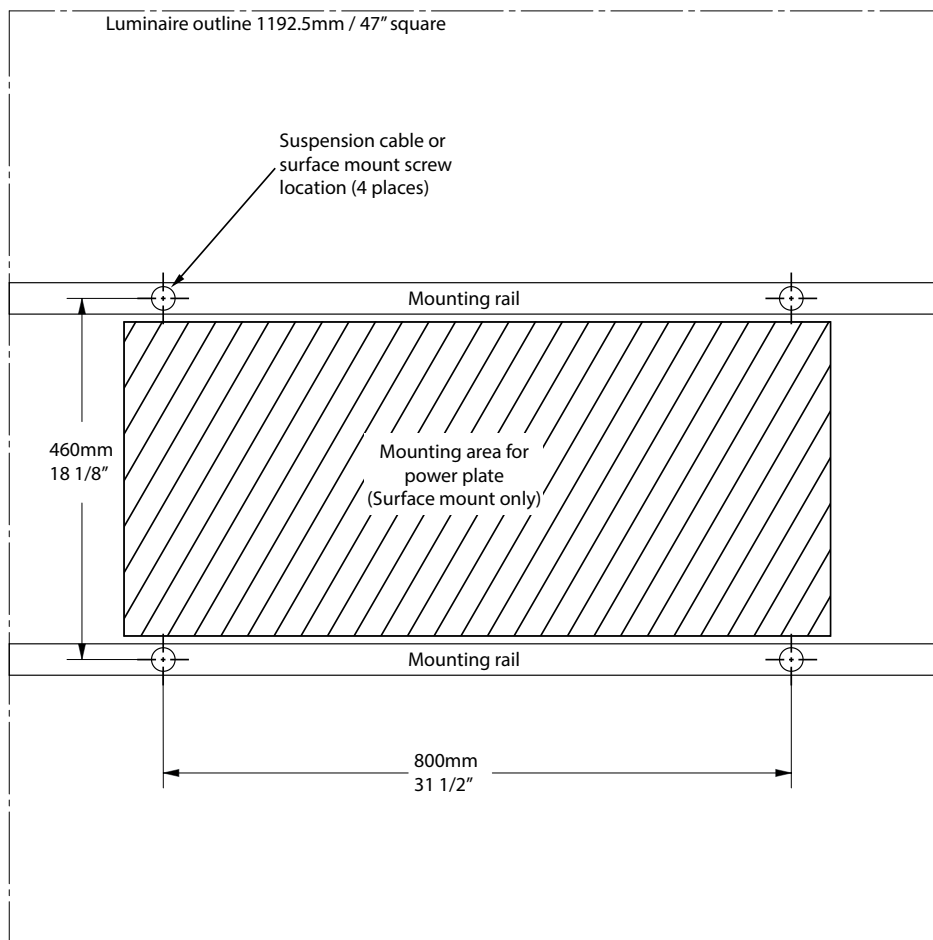
4.3 MOUNT THE FRAME TO THE CEILING

CAUTION: 2 people min. recommended for install

⚠️ **CAUTION:** The luminaire weight is 14kg/31lbs. Ceiling fasteners are not provided by Cooledge. Ensure the mounting can withstand the load including any safety margin required by national or local building codes.

It is recommended to mount the luminaire directly to structure. If mounting to drywall use suitably rated toggle style anchors.

Toggle anchor

Marked location on ceiling

Screws not supplied
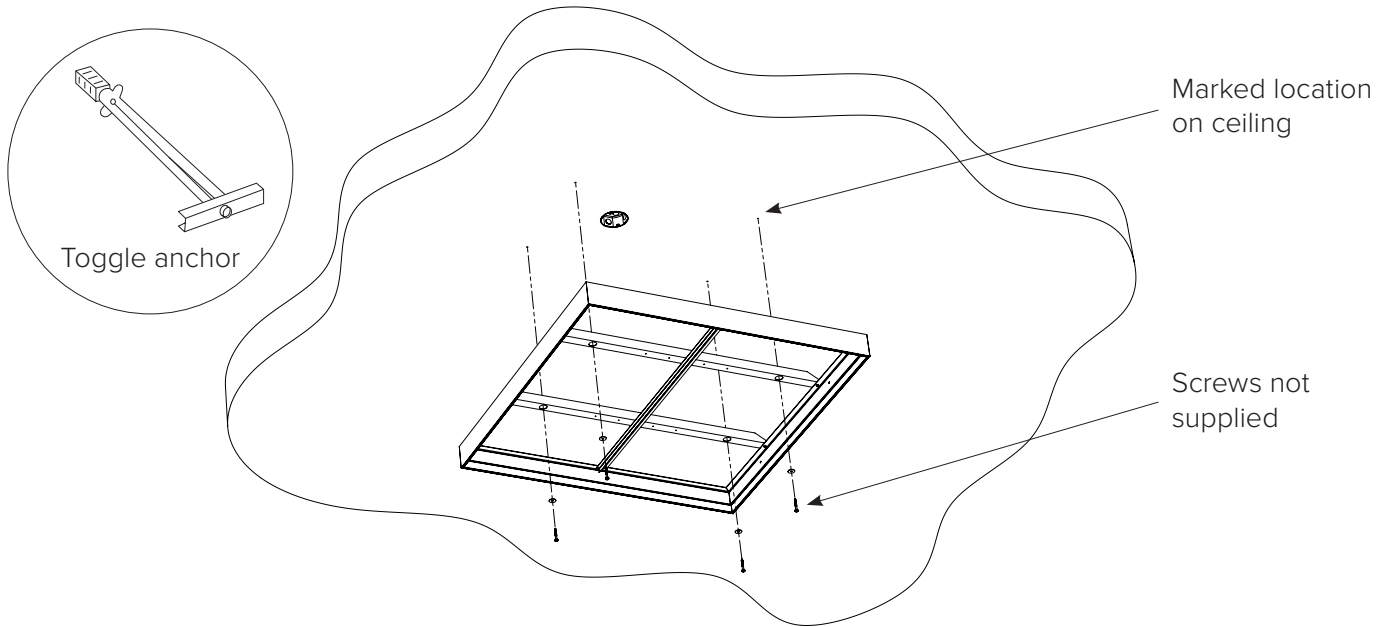
4.4 MOUNT THE POWER AND CONTROL ASSEMBLY

NOTE: the power and control assembly must be mounted between the frame mounting rails as indicated on the mounting template. Do not mount remotely.

Mount the power and control assembly to the ceiling using four fasteners (not included) appropriate to the ceiling material. The weight of the power and control assembly is 2.2kg/4.9lbs. Ensure the fasteners can safely support this load.
If the power and control assembly is to be mounted over a ceiling junction box, punch out the knockout in the plate before mounting. Align the hole to the AC cable in the ceiling junction box.

Ceiling junction box

Hardware not supplied
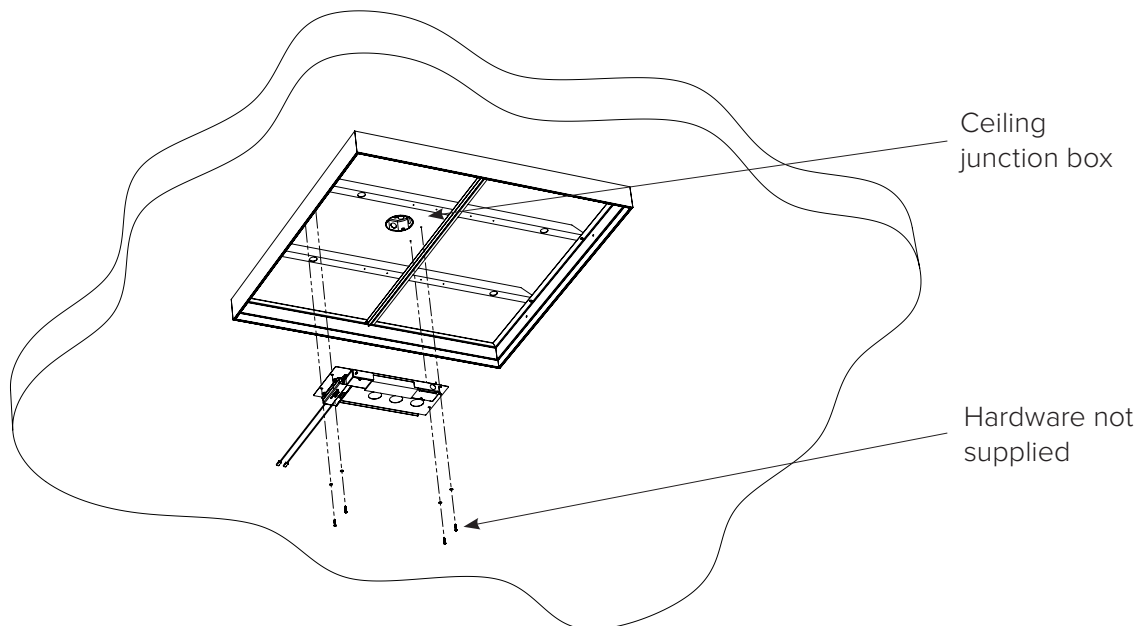
4.5 CONNECT AC POWER

The electrical power connections should be made by a qualified electrician in accordance with all national and local electrical and construction codes.

⚠ CAUTION: Ensure electrical power is disconnected!
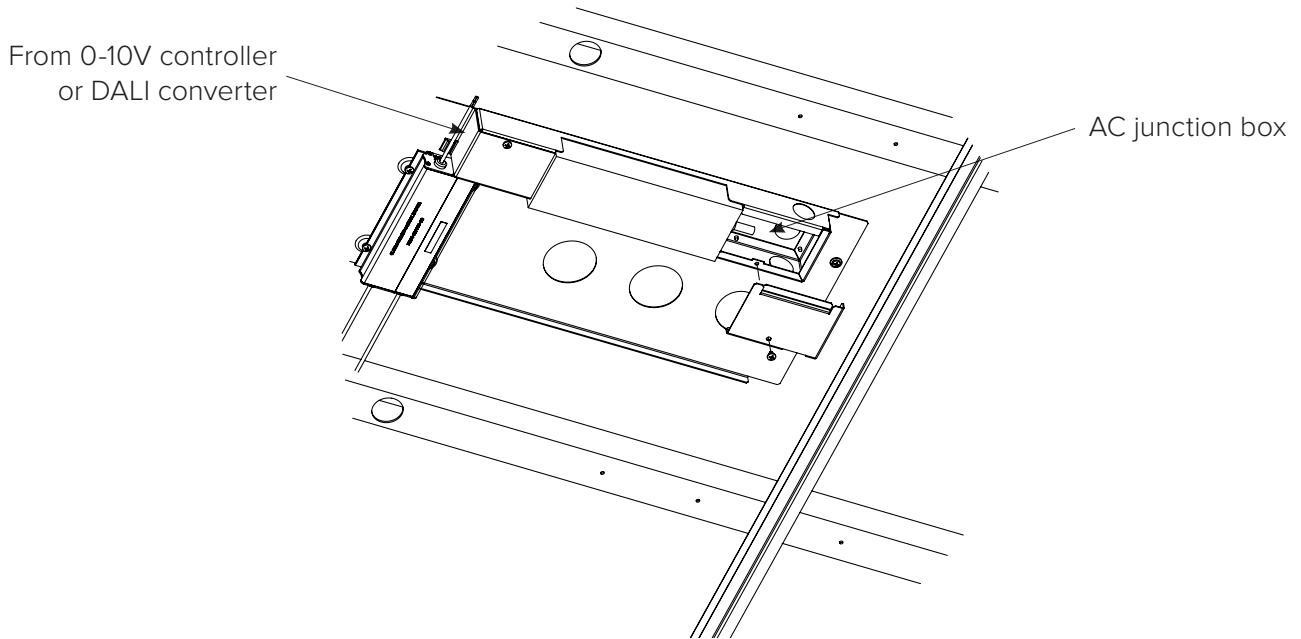
From 0-10V controller or DALI converter

AC junction box

4.6 INSTALL THE LED PANELS

⚠ CAUTION: Observe precautions for handling electrostatic sensitive devices.

👥 CAUTION: 2 people min. recommended for install

2. Connect DC power

1. Support panel on stiffener

3. Lift

Handle panel using edge rail
Do not touch LEDs

Insert support brackets
Push fastener in until securely latched
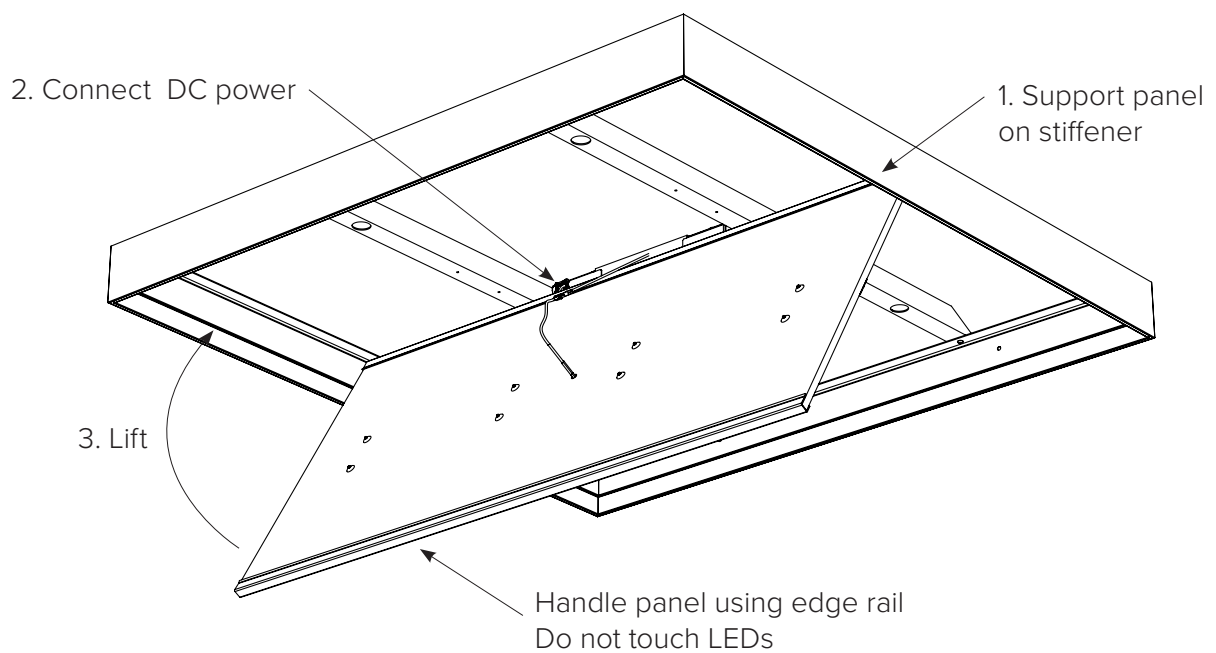
Repeat both steps for second panel

4.7 TEST LIGHTING

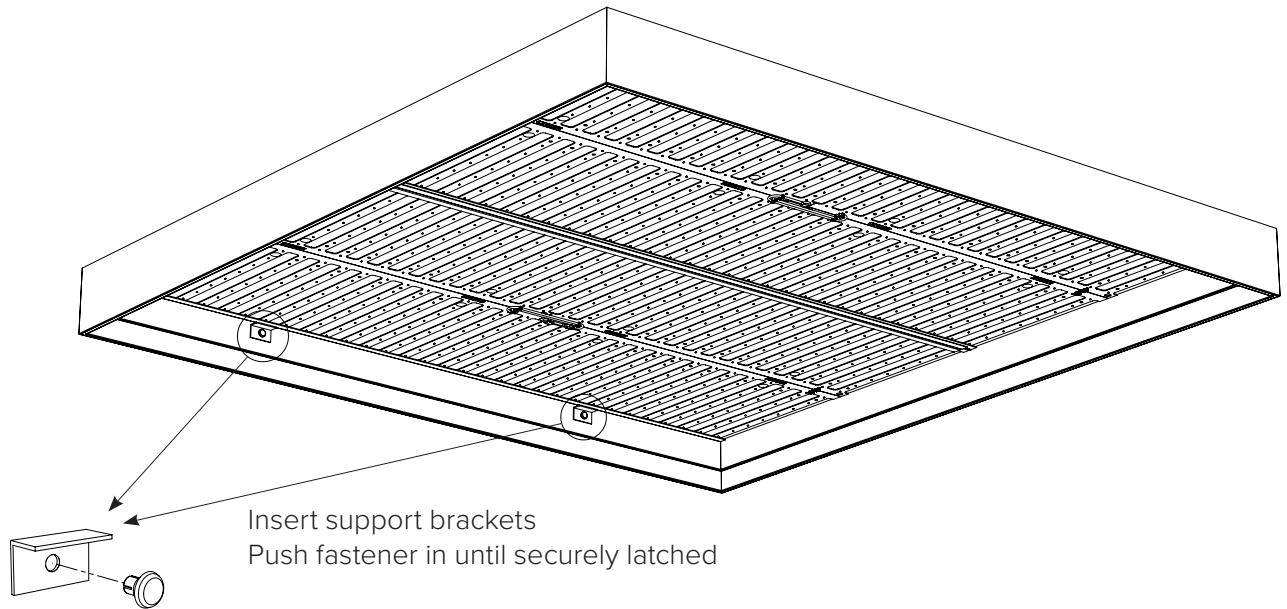Turn on the luminaire and verify that all LEDs are lit. Test that the dimming is functioning correctly. (if connected).
Refer to section 8 for additional controller details.

4.8 INSTALL FABRIC

Slot in frame

Silicone bead

Smooth shiny side facing LED's

Fabric wraps outside of Silicone bead

Textured woven side facing out

Push 75-100mm (3"-4") bead into slot at each corner

Tuck bead into slot working towards center of each side
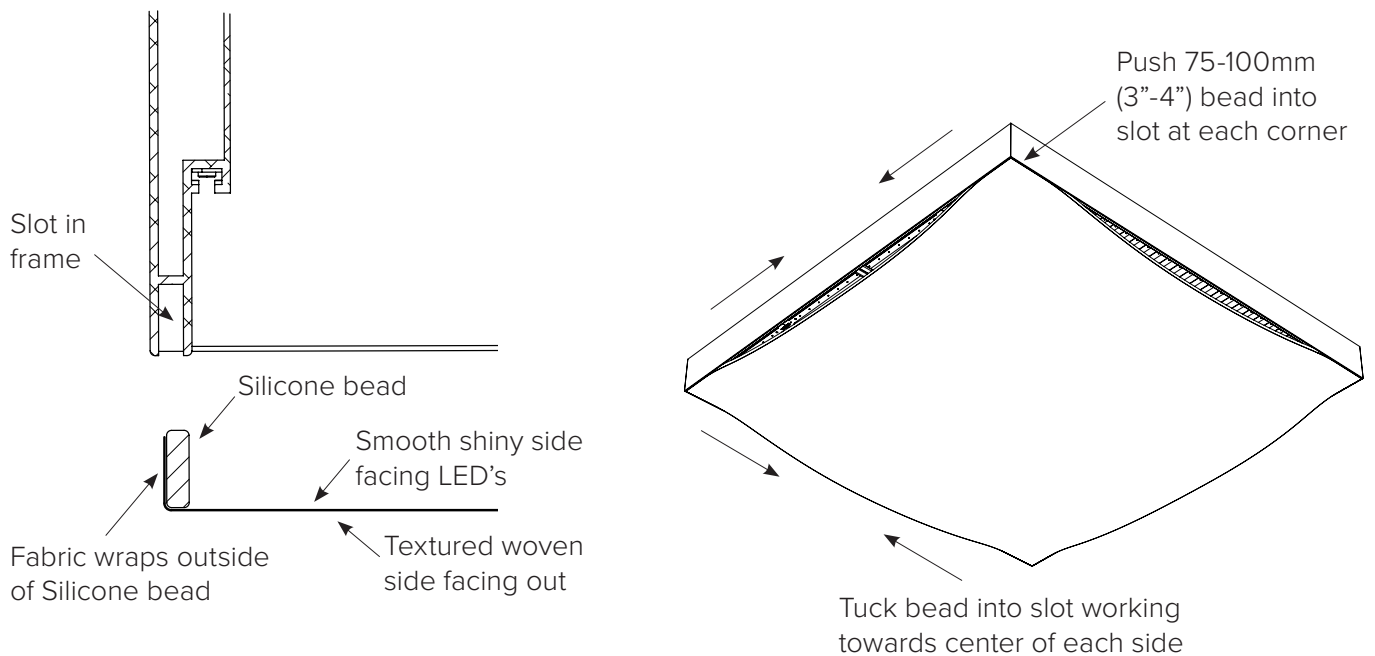
To create a luminous ceiling, luminaires should be mounted directly adjacent to each other (butted together).
The mounting procedure 4.0-4.8 applies for each individual "core" luminaire.

5. SUSPENDED MOUNT

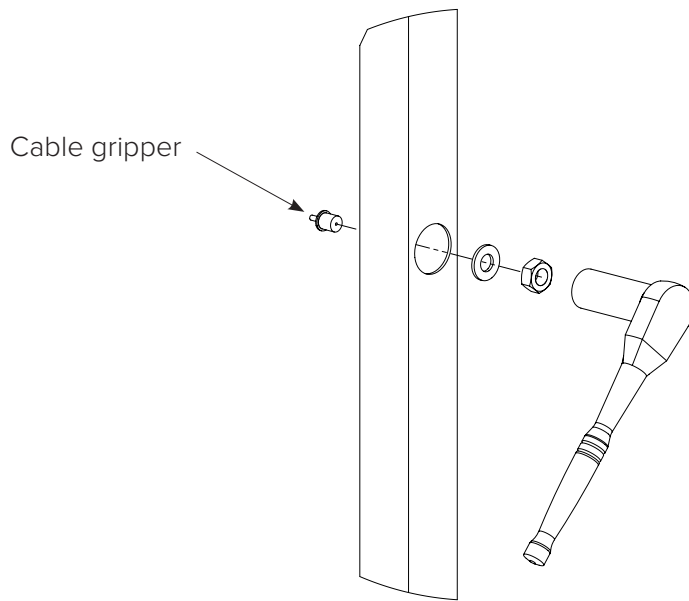## 5.1 ATTACH 4X CABLE GRIPPERS TO MOUNTING RAILS

Cable gripper

5.2 MARK THE CEILNG USING MOUNTING TEMPLATE

Luminaire outline 1192.5mm / 47" square

Suspension cable or
surface mount screw
location (4 places)

Mounting rail

460mm
18 1/8"

Mounting area for
power plate
(Surface mount only)

Mounting rail

800mm
31 1/2"
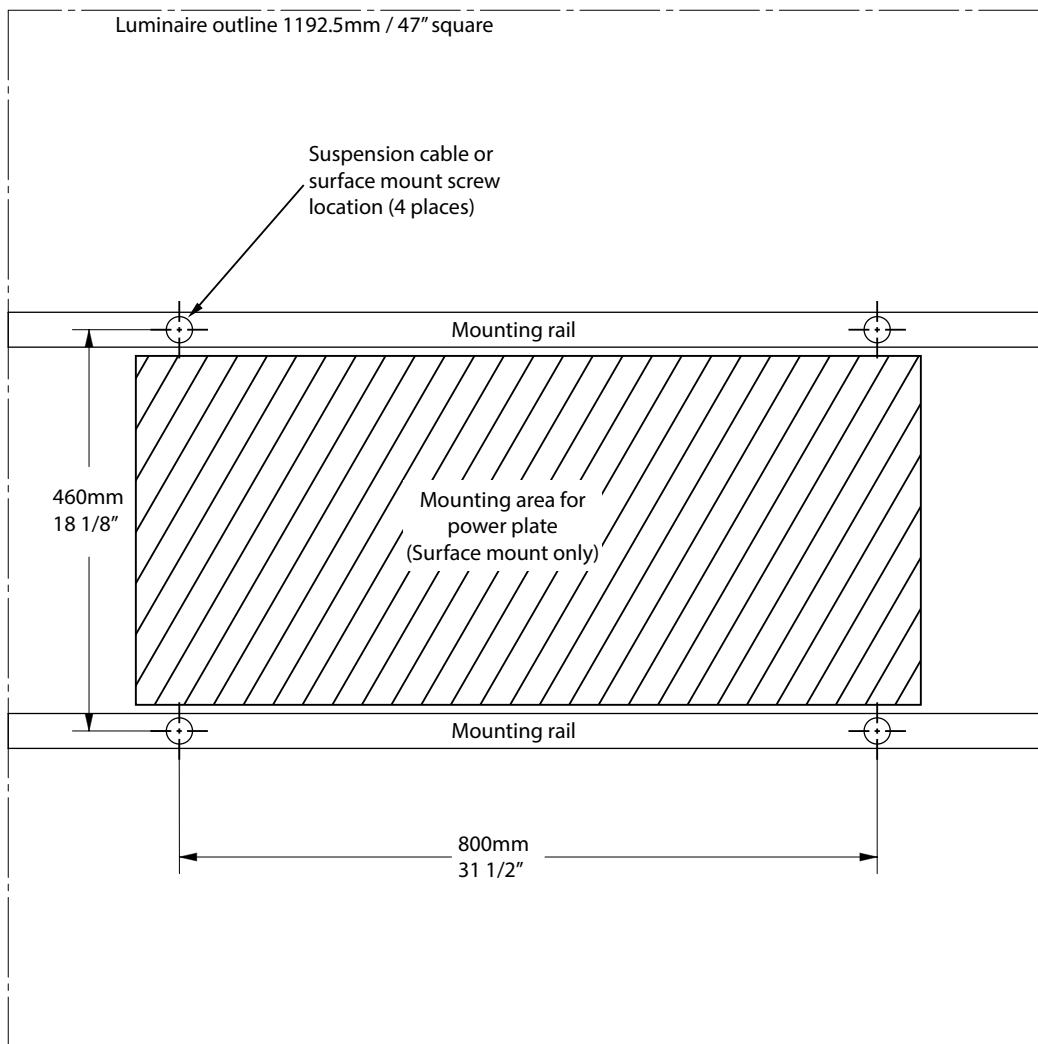
5.3 ATTACH 4X CEILING GRIPPERS TO CEILNG

⚠ NOTE: when possible mount to studs or solid surface. Use drywall plugs only when necessary. Each cable gripper must be able to support 15kg.

Drywall plugs if required
(not supplied)
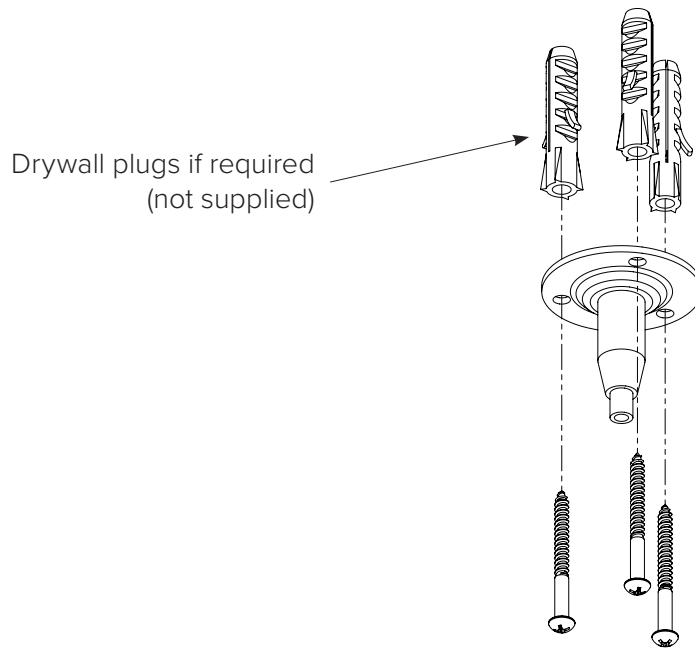
5.4 HANG CABLES FROM GRIPPERS

Push cable
into gripper

800mm
31 ½"

460mm
18 ⅛"
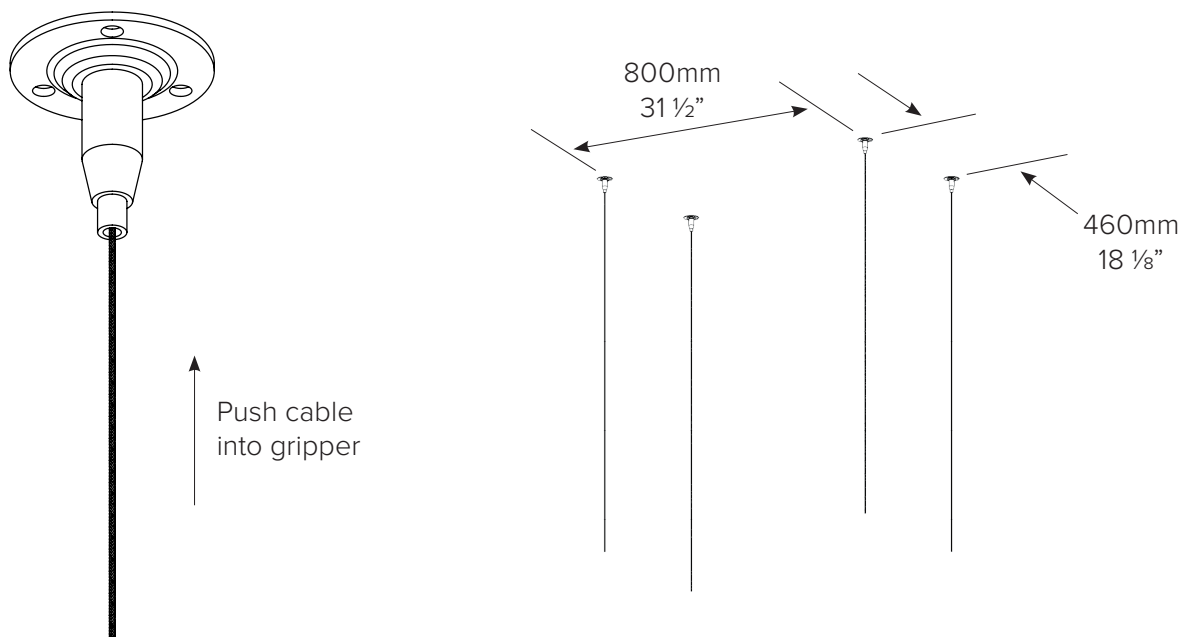
5.5 HANG LUMINAIRE FRAME

CAUTION: 2 people min. recommended for install

Push cable into gripper

Pull
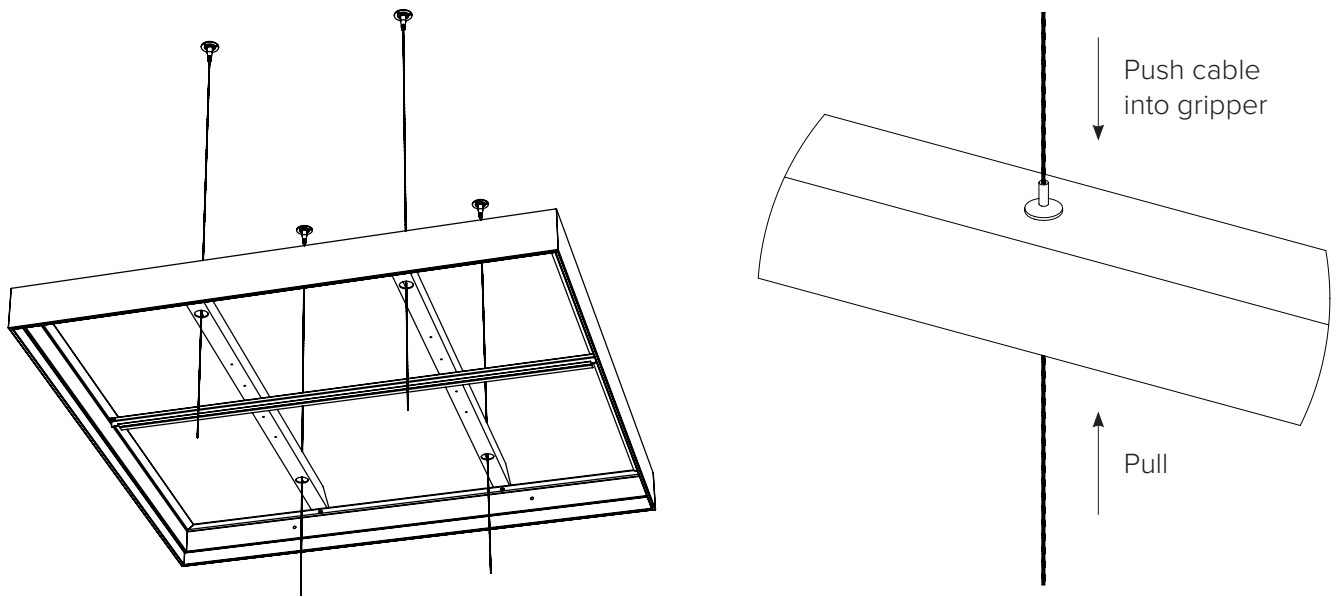
5.6 SET HEIGHT AND LEVEL

Mounting height

Level

5.7 CONNECT AC POWER

⚠️ **WARNING:** The electrical power connections must be made by a qualified electrician in accordance with all national and local electrical and construction codes
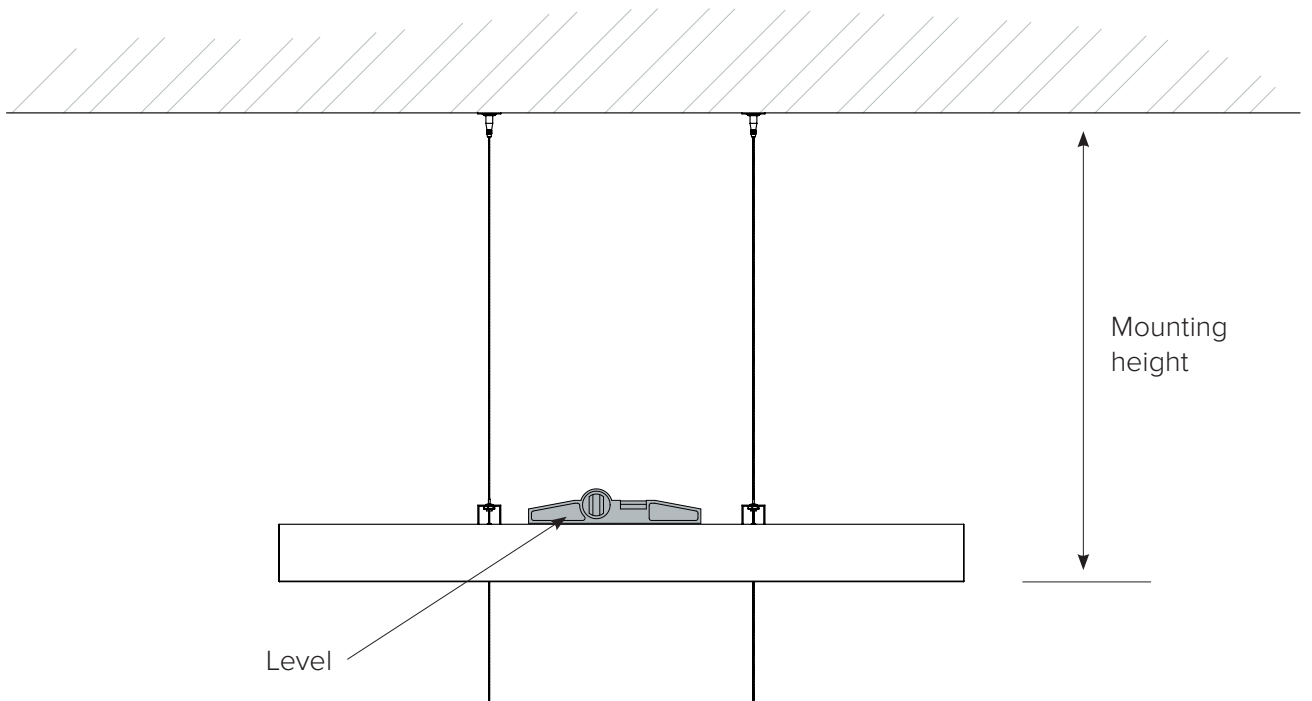
From 0-10V controller or DALI converter

Connect AC inside junction box

Strain relief or conduit fitting
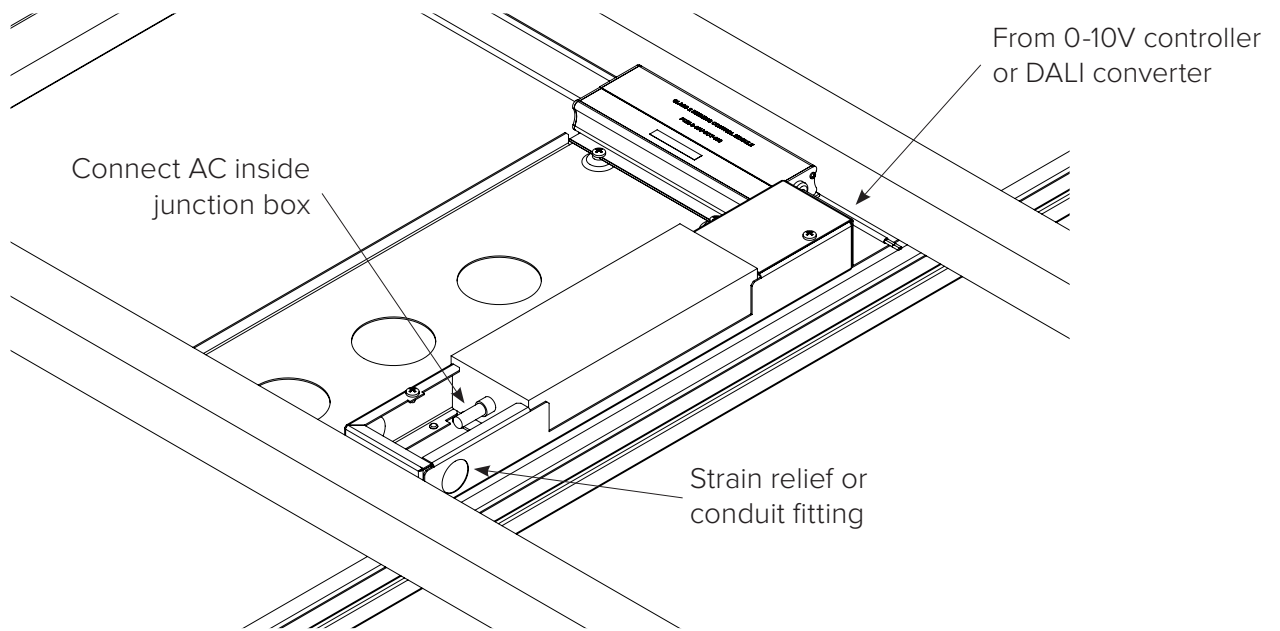
5.8 INSTALL LED PANELS

⚠️ **CAUTION:** Observe precautions for handling electrostatic sensitive devices.

👥 **CAUTION:** 2 people min. recommended for install

2. Connect DC power

1. Support panel on stiffener

3. Lift

Handle panel using edge rail
Do not touch LEDs

Insert support brackets
Push fastener in until securely latched
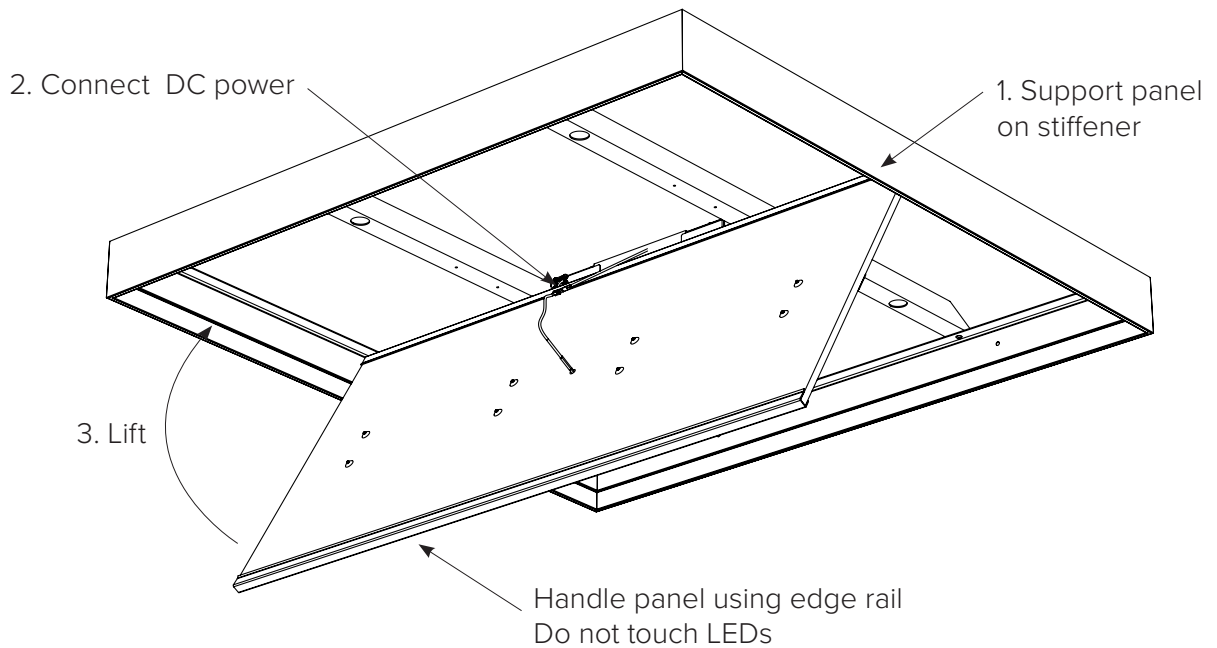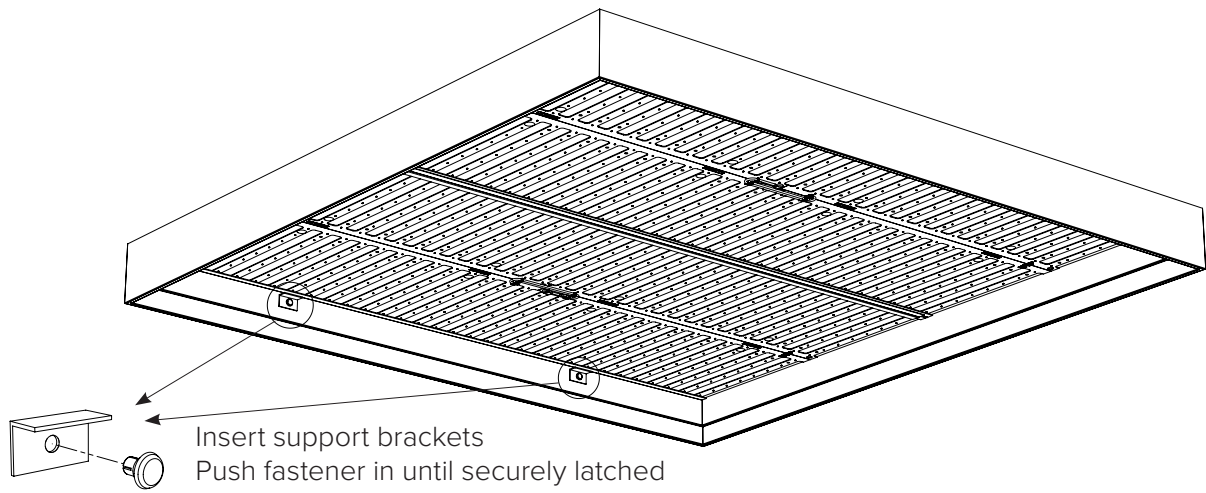
Repeat both steps for second panel

5.9 TEST LIGHTING

Turn on the luminaire and verify that all LEDs are lit. Test that the dimming is functioning correctly (if connected). Refer to section 8 for additional controller details.

5.10 INSTALL FABRIC

⚠ WARNING: Wear clean cotton or Latex gloves when handling fabric.

Slot in frame

Silicone bead

Smooth shiny side facing LED's

Fabric wraps outside of Silicone bead

Textured woven side facing out

Push 75-100mm (3"-4") bead into slot at each corner

Tuck bead into slot working towards center of each side
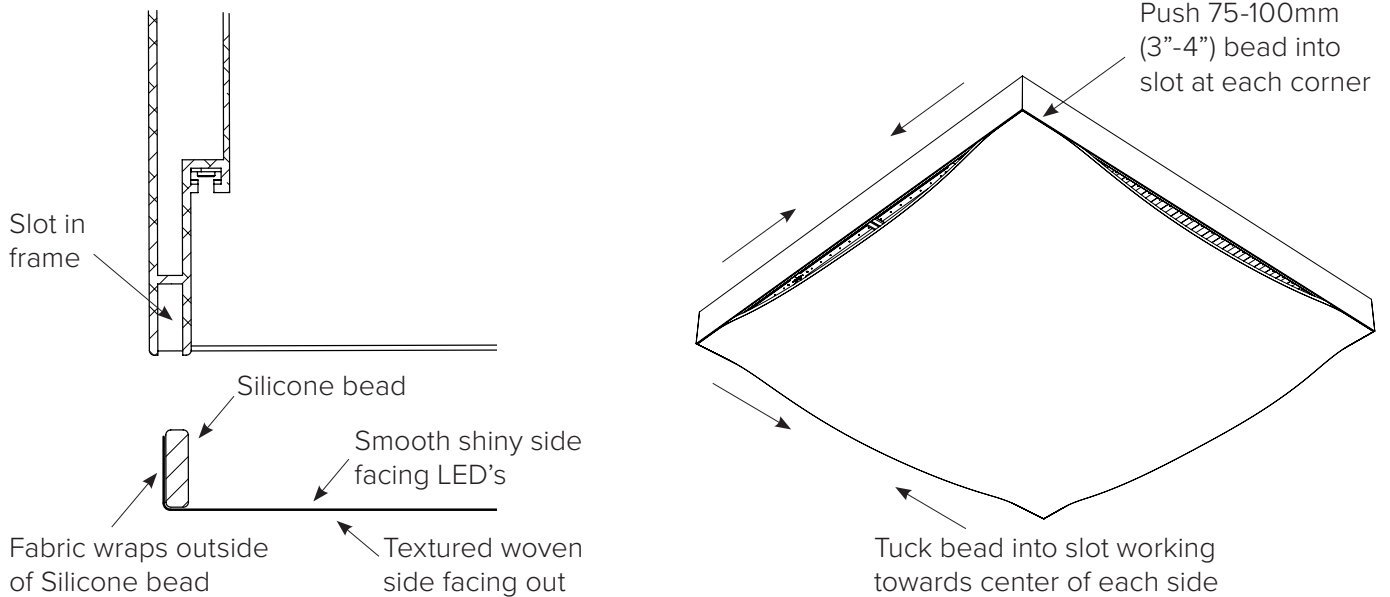
To create luminous ceiling clouds, the FABRILum luminaires are to be connected together using the clips provided. Alignment of the mounting points prior to installation (5.2) will allow connections to be made more easily.
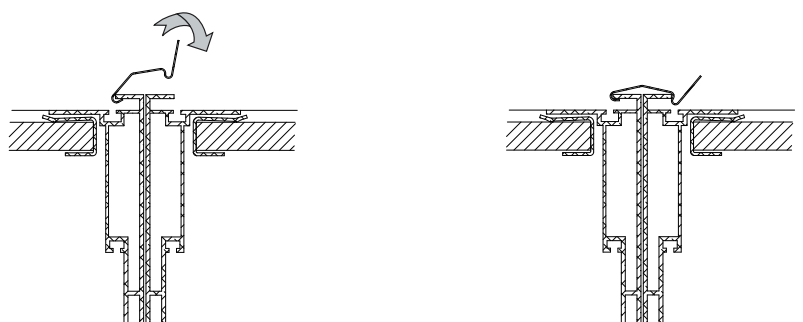
6. GRID MOUNT

NOTE: The LED panels and fabric must be installed **before** mounting in the ceiling. Follow the steps below.

NOTE: No insulation material is to be placed on top of the luminaire.

6.1 PREPARE THE CEILING GRID

FABRILum luminaire fit into a 1200mmx1200mm T-bar ceiling without an adapter, for 48"x48" T-bar openings an Imperial Grid Adapter is required (LACC-G-K) - ordered and shipped separately.
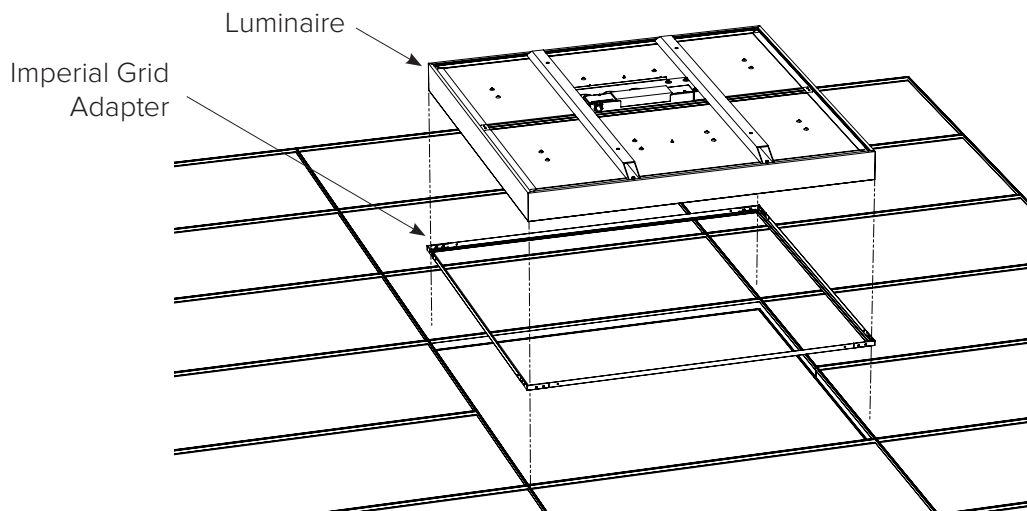The luminaire should be supported on two edges by main beams and the other two edges by cross tees.

CAUTION: Weight of one FABRILum luminaire is 14kg/31 lbs. The Imperial Grid Adapter required for inch-sized (imperial) ceiling grid weighs an additional 0.8kg/1.75lbs.

Consult your ceiling grid supplier or manufacturer for allowable loading. Do not install FABRILum luminaire in ASTM C-635 light duty grids or EN 13964:2014 Class 1 grids.

6.2 INSTALL THE LED PANELS

CAUTION: 2 people min. recommended for install

2. Connect DC power

1. Support panel on stiffener

3. Lift

Handle panel using edge rail
Do not touch LEDs

Insert support brackets
Push fastener in until securely latched
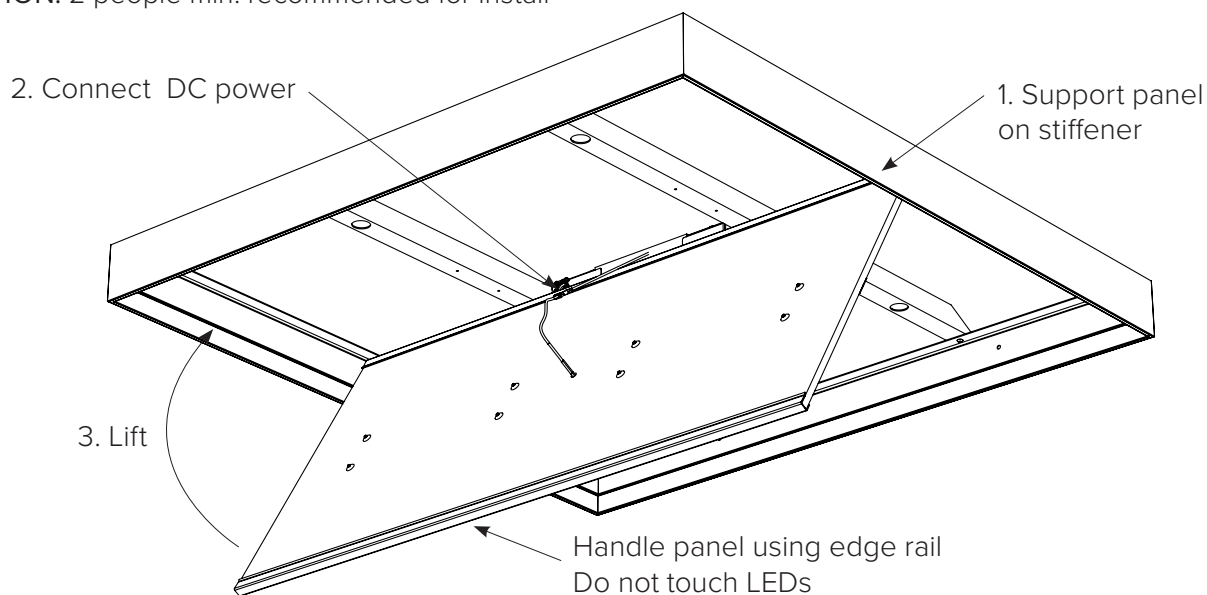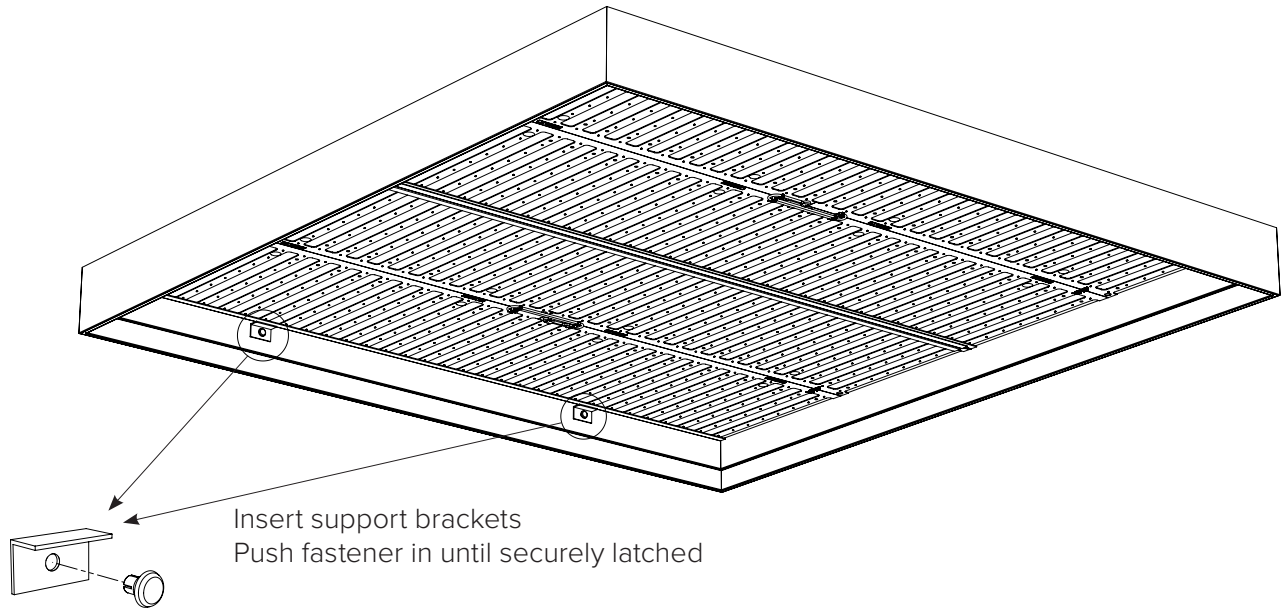
Repeat both steps for second panel

6.3 INSTALL FABRIC

Slot in frame

Silicone bead

Smooth shiny side facing LED's

Fabric wraps outside of Silicone bead

Textured woven side facing out

Push 75-100mm (3"-4") bead into slot at each corner

Tuck bead into slot working towards center of each side

Rail with square cutouts to INSIDE

Lift Grid Adapter through opening in the grid

Place Grid Adapter onto the T-Bar

Solid hanger wire (not supplied)

Sheet metal screw (not supplied)
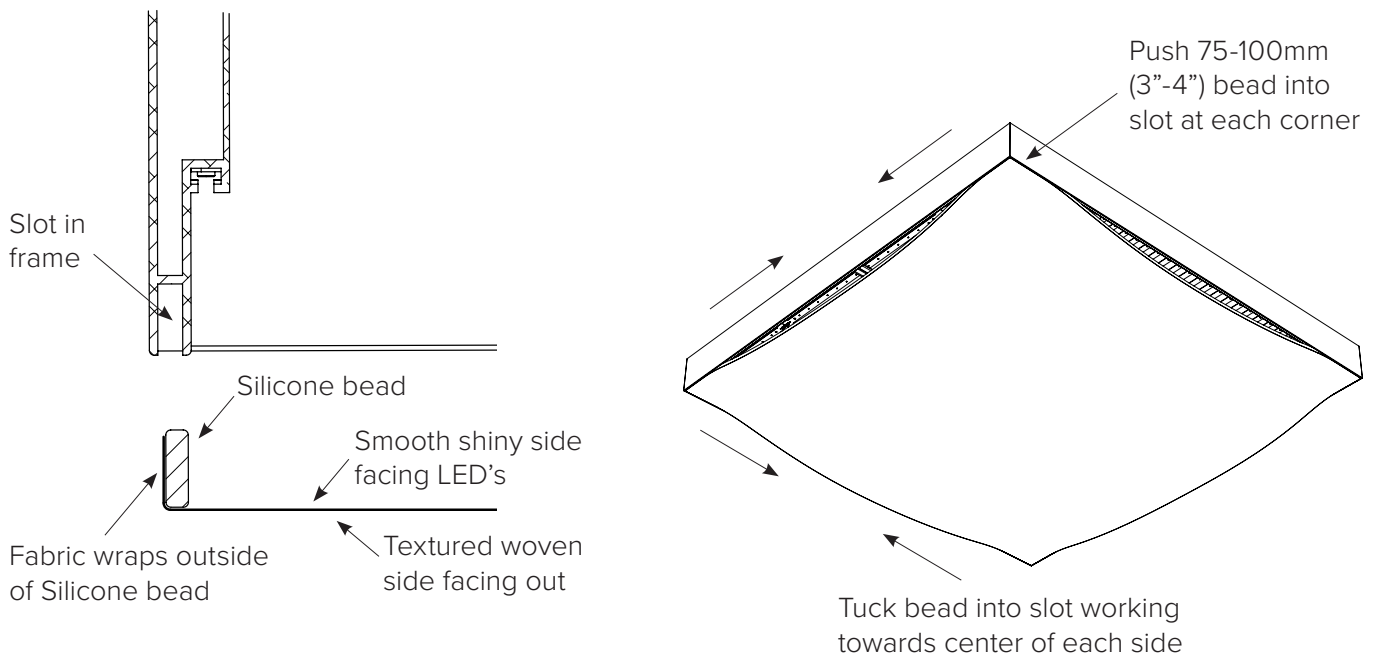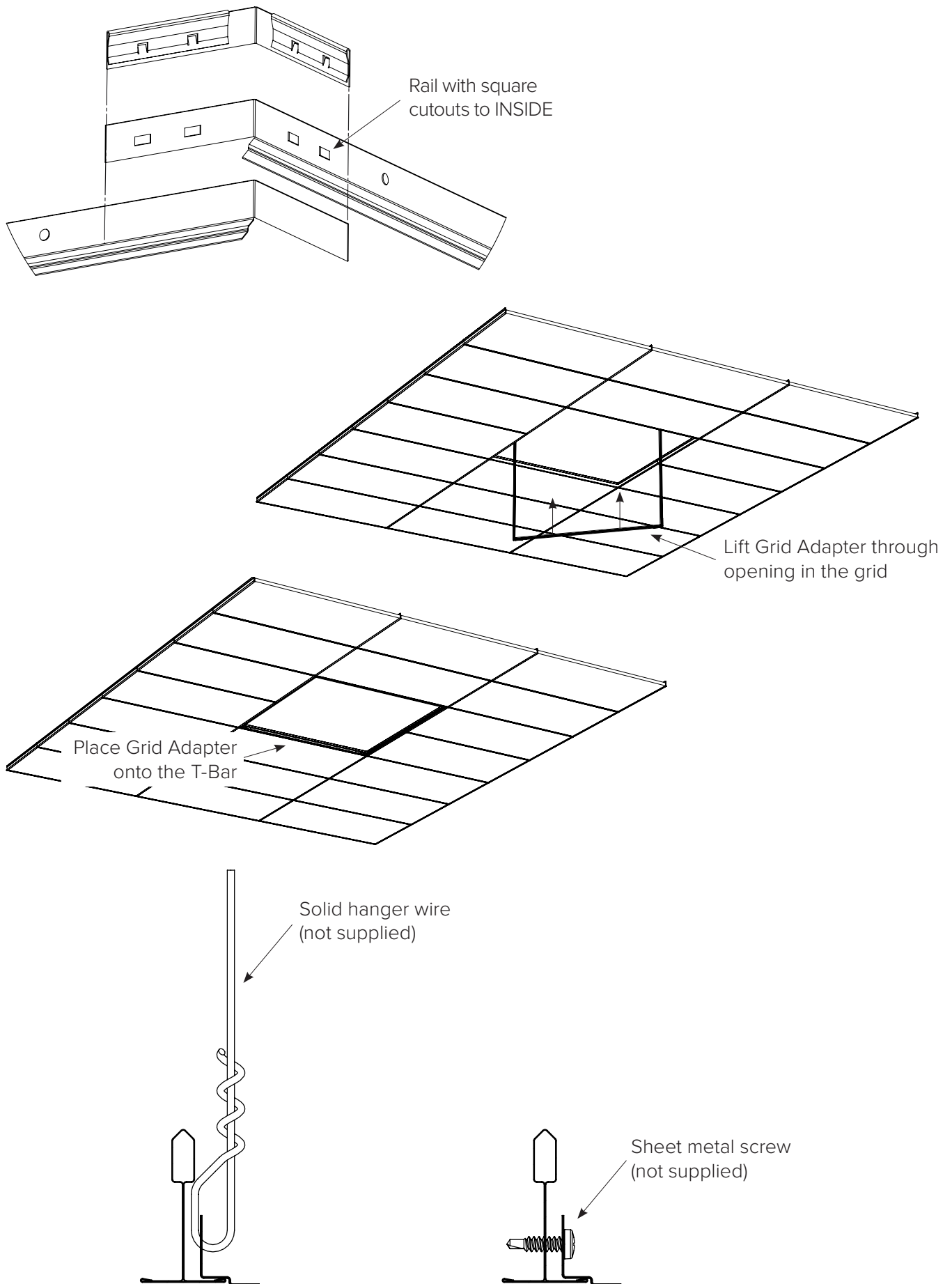
6.5 MOUNT THE FRAME IN THE GRID OPENING

CAUTION: 2 people min. recommended for install

CAUTION: Wear clean cotton or latex gloves; handle the unit only by the edges, do not press on the fabric!

CAUTION: Remove an adjacent ceiling for access when lifting through grid.

Lift luminaire
through opening

Lay luminaire on grid

6.6 CONNECT AC POWER

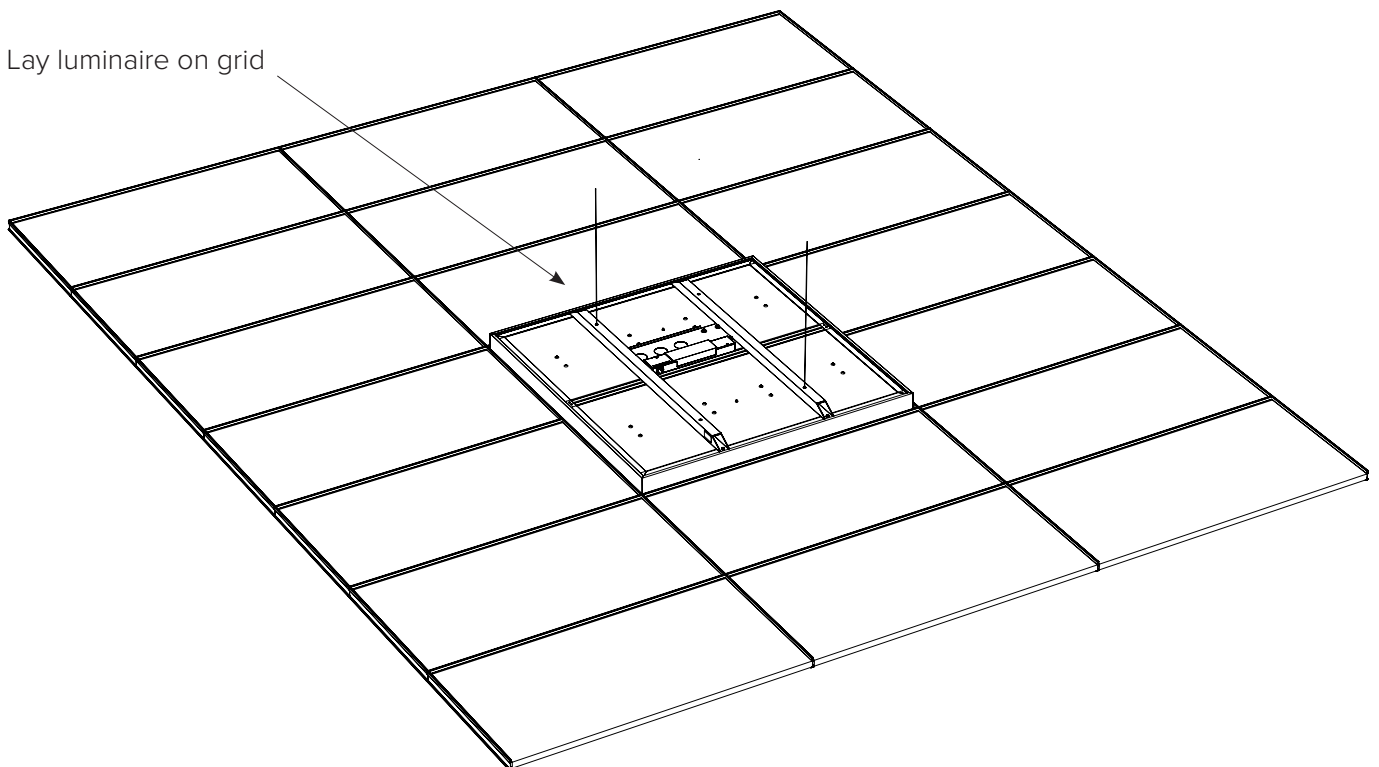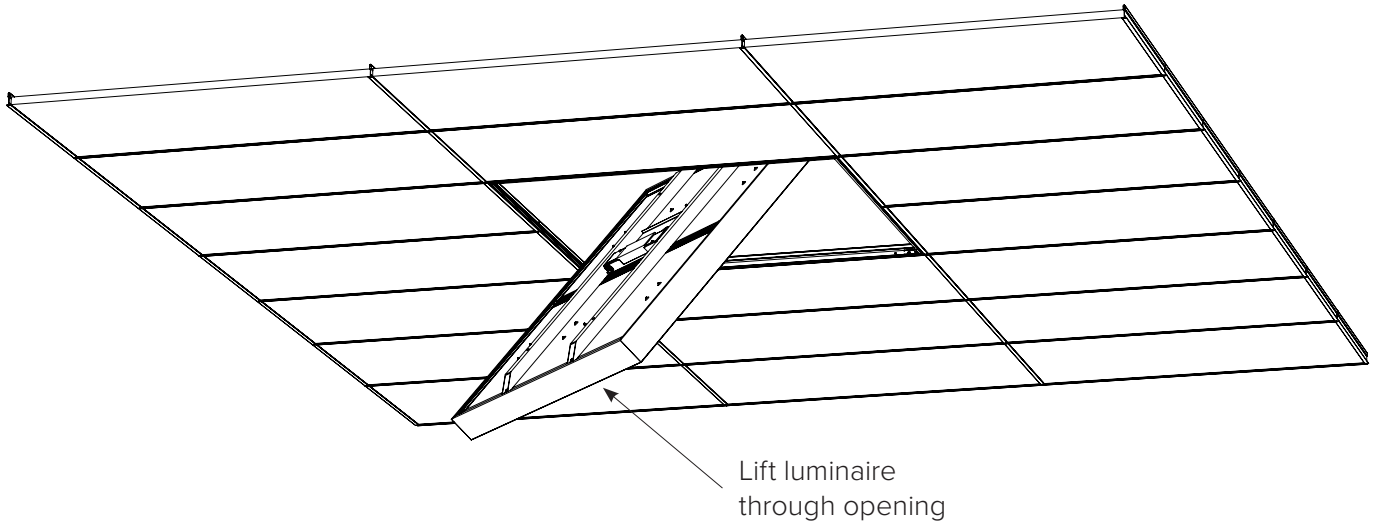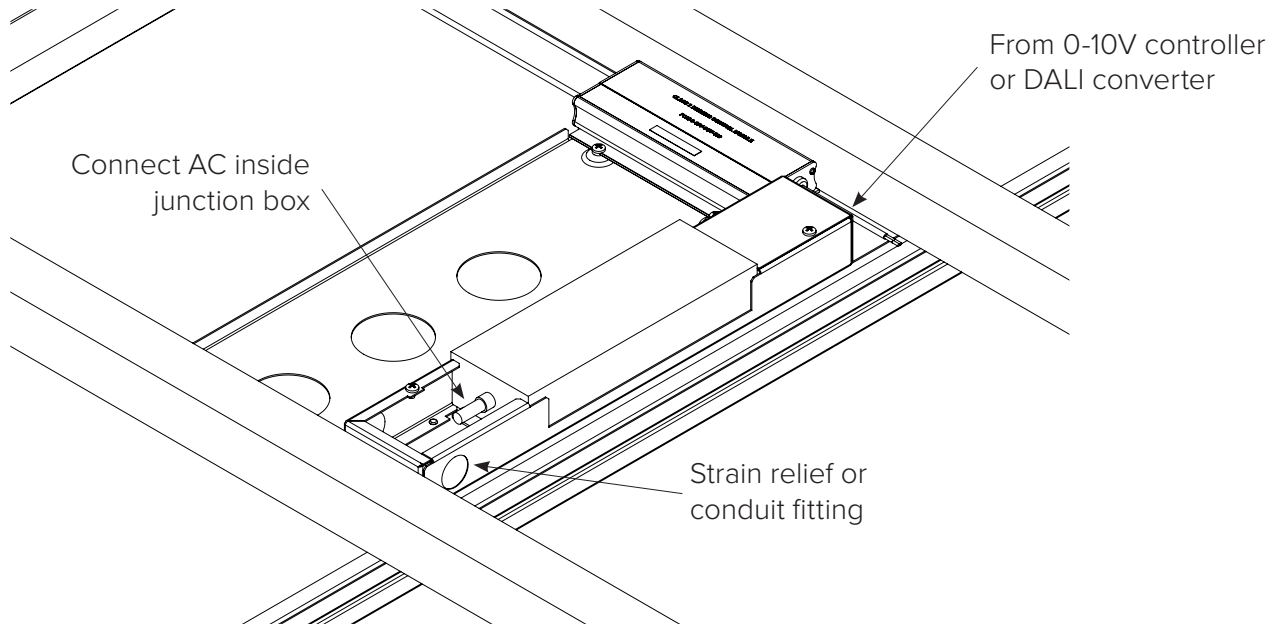⚠️ **CAUTION:** Ensure electrical power is disconnected!

The electrical power connections should be made by a qualified electrician in accordance with all national and local electrical and construction codes.
Remove an adjacent ceiling tile provide access to the top of the luminaire

From 0-10V controller or DALI converter

Connect AC inside junction box

Strain relief or conduit fitting

6.7 TEST LIGHTING

Turn on the luminaire and verify that all LEDs are lit. Test that the dimming is functioning correctly (if connected). Refer to section 8 for additional controller details.
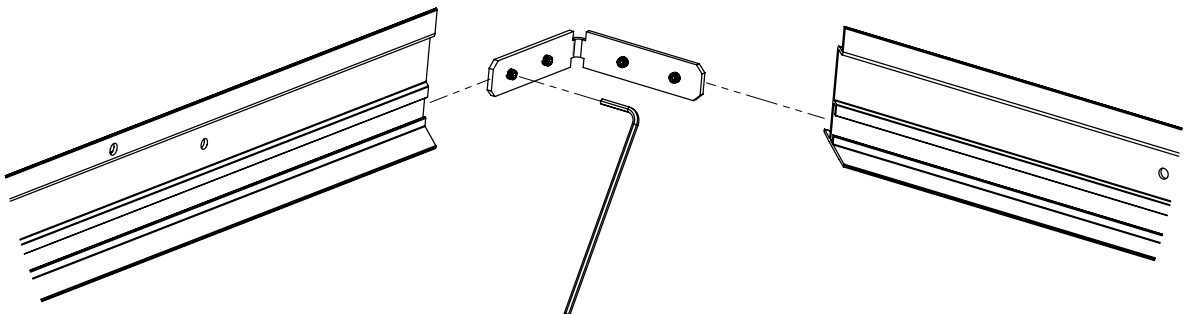
7. RECESSED MOUNT

NOTE: The LED panels and fabric must be installed **before** mounting in the ceiling. Follow the steps below.

NOTE: No insulation material is to be placed on top of the luminaire.

7.1 ASSEMBLE THE RECESSED MOUNT ADAPTER LACC-R-K W

A Recessed Mounting Adapter (LACC-R-K) is required. This adapter is ordered and shipped separately.
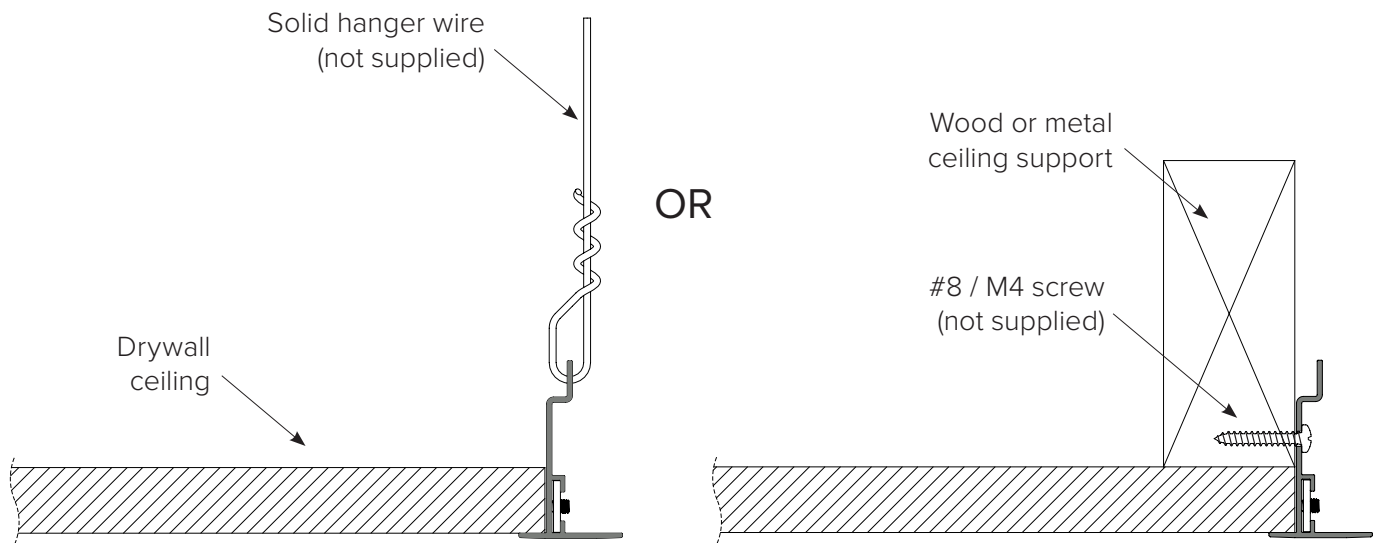
7.2 PREPARE THE CEILING OPENING

Cut the ceiling opening to 1220x1220mm / 48"x48".
Install the recessed mount adapter kit LACC-R-K (sold separately).
Install support wires or screws (not supplied) as required by national and local building codes.

Solid hanger wire
(not supplied)

OR

Wood or metal
ceiling support

#8 / M4 screw
(not supplied)

Drywall
ceiling

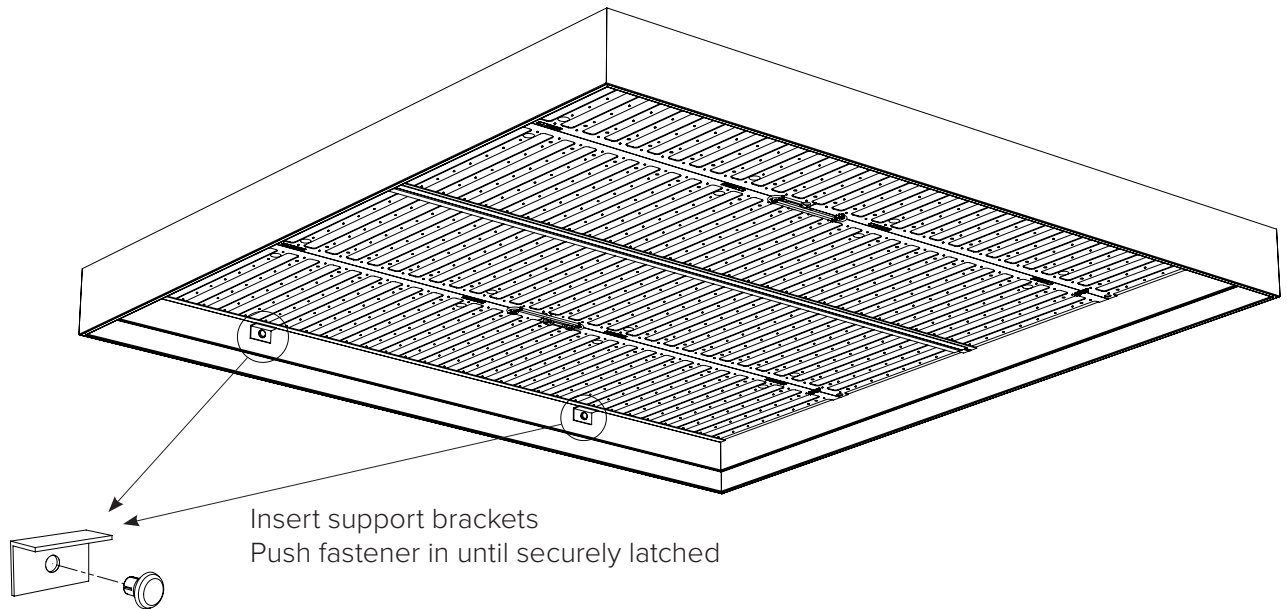## 7.3 INSTALL THE LED PANELS

CAUTION: 2 people min. recommended for install

2. Connect DC power

1. Support panel
on stiffener

3. Lift

Handle panel using edge rail
Do not touch LEDs

Insert support brackets
Push fastener in until securely latched

7.4 INSTALL FABRIC

Slot in frame

Silicone bead

Smooth shiny side facing LED's

Fabric wraps outside of Silicone bead

Textured woven side facing out

Push 75-100mm (3"-4") bead into slot at each corner

Tuck bead into slot working towards center of each side

7.5 CONNECT AC POWER

⚠ CAUTION: Wear clean cotton or latex gloves; handle the unit only by the edges, do not press on the fabric!

⚠ CAUTION: Ensure electrical power is disconnected!

The electrical power connections should be made by a qualified electrician in accordance with all national and local electrical and construction codes.

**CAUTION:** 2 people min. recommended for install

Lift the luminaire close to the ceiling and support on a scaffold/lift or hang temporarily from 18Ga min solid steel hanger wires (not supplied). Connect the AC power to the junction box. Where required by national or local electrical codes the AC cable may need to be in flexible conduit or of minimum rated jacket type.

Power cable

From 0-10V controller or DALI converter.
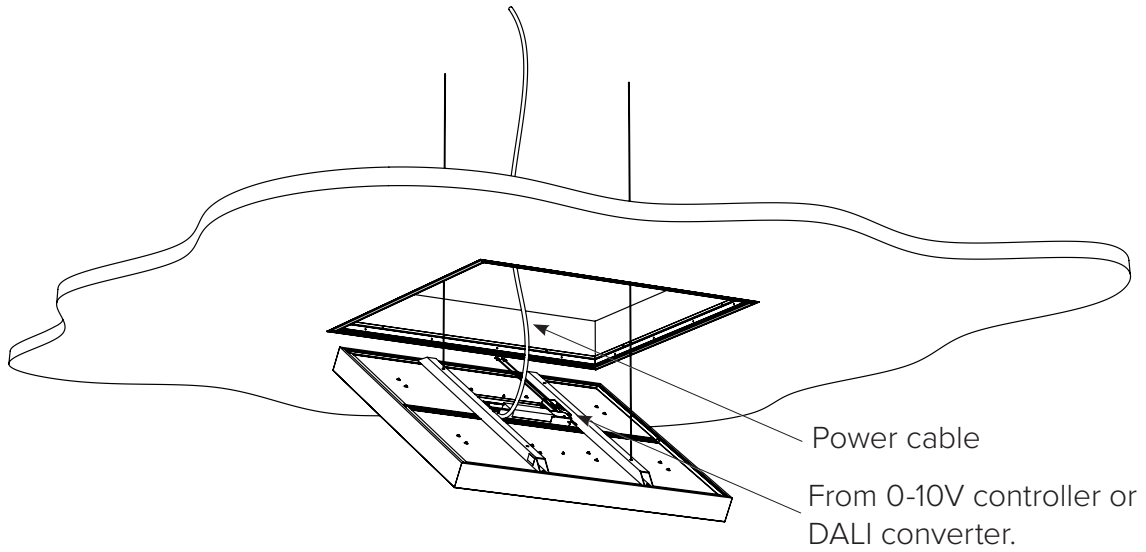
7.6 MOUNT THE LUMINAIRE IN THE CEILING OPENING
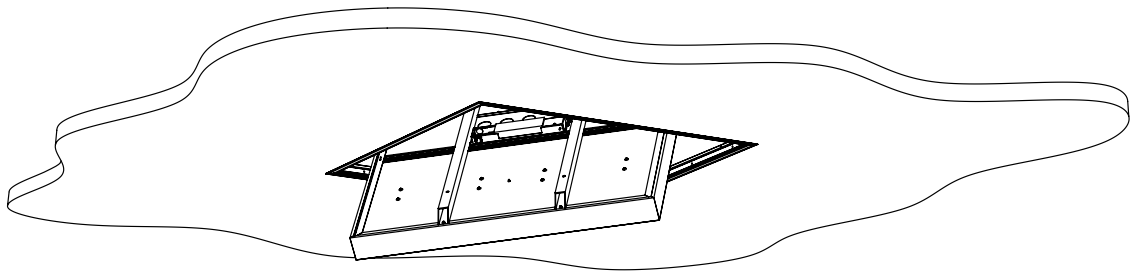
CAUTION: Install support wires must be installed in accordance with national and local building codes
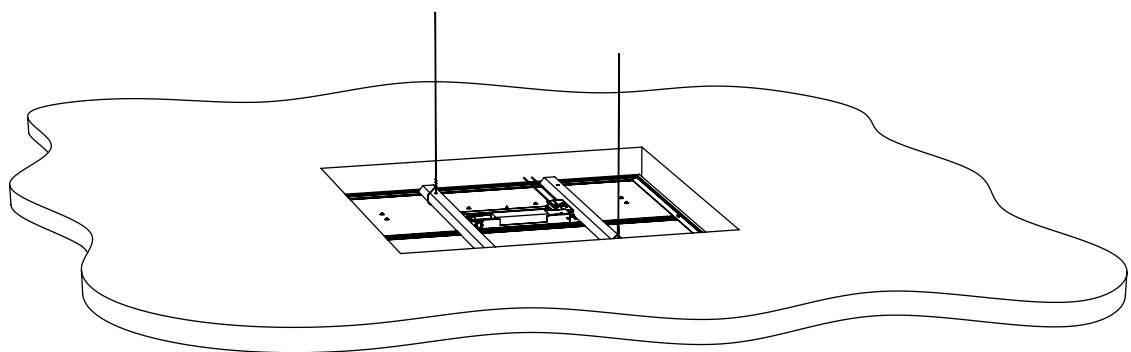
7.7 TEST LIGHTING

Turn on the luminaire and verify that all LEDs are lit. Test that the dimming is functioning correctly (if connected). Refer to section 8 for additional controller details.

8. POWER AND CONTROL

8.0 POWER AND CONTROL

⚠ Control Module is suitable for use in dry locations only (IP20).

⚠ Luminaire must be installed by a qualified electrician.

⚡ All devices should always be disconneced from mains power
supply and verify its absence prior to installation/maintenance.

⚠ Damage to Control Module and/or lighting elements may occur if wired incorrectly.

FCC STATEMENT:
This device complies with part 15 of the FCC rules. Operation is subject to the
following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may
cause undesired operation.

8.1 CONTROL OPTIONS

Each Cooledge luminaire is supplied with one or more control modules mounted adjacent to the power supply. The model of control module varies with luminaire type as shown below:

Static Color Temperature (SCT) Luminaires:

Power Supply

Controller

Tunable White (TNW) Luminaires:

Power Supply

Controller
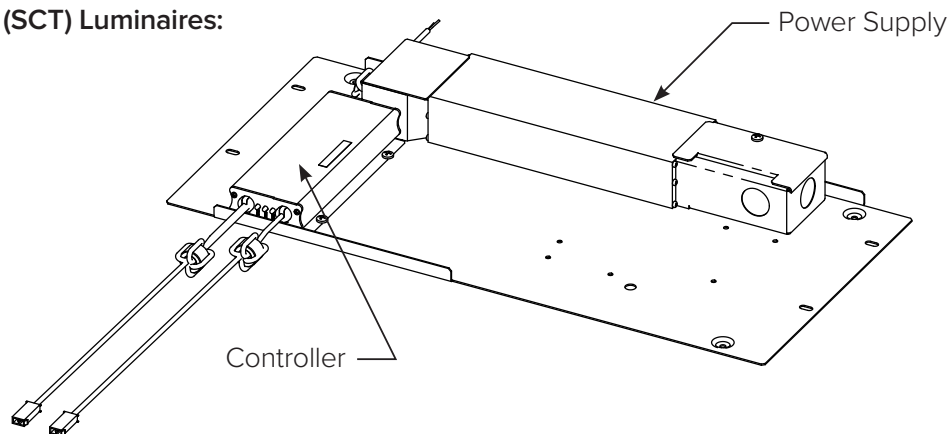
8.2 CONTROL WIRING INPUTS

Both types of control module accept 0-10V control inputs. Other control inputs can be used with the addition of an optional control protocol adapter kit. Refer to the manual supplied with the adapter kit for correct installation of control adapters.
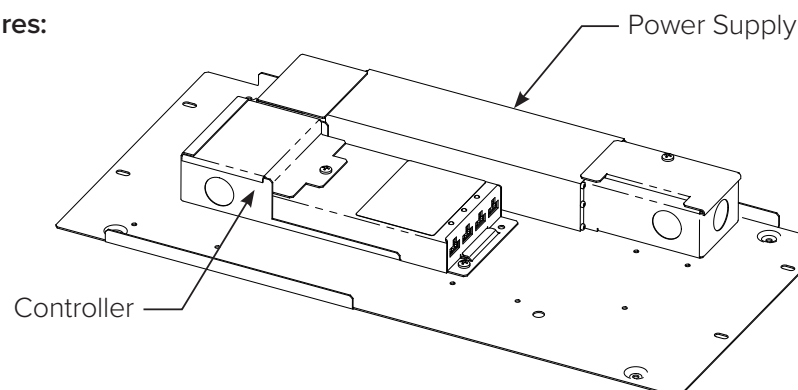
Static Color Temperature (SCT) Luminaires:

Red of Purple Wire (DIM+)

Black or Pink Wire (DIM-)
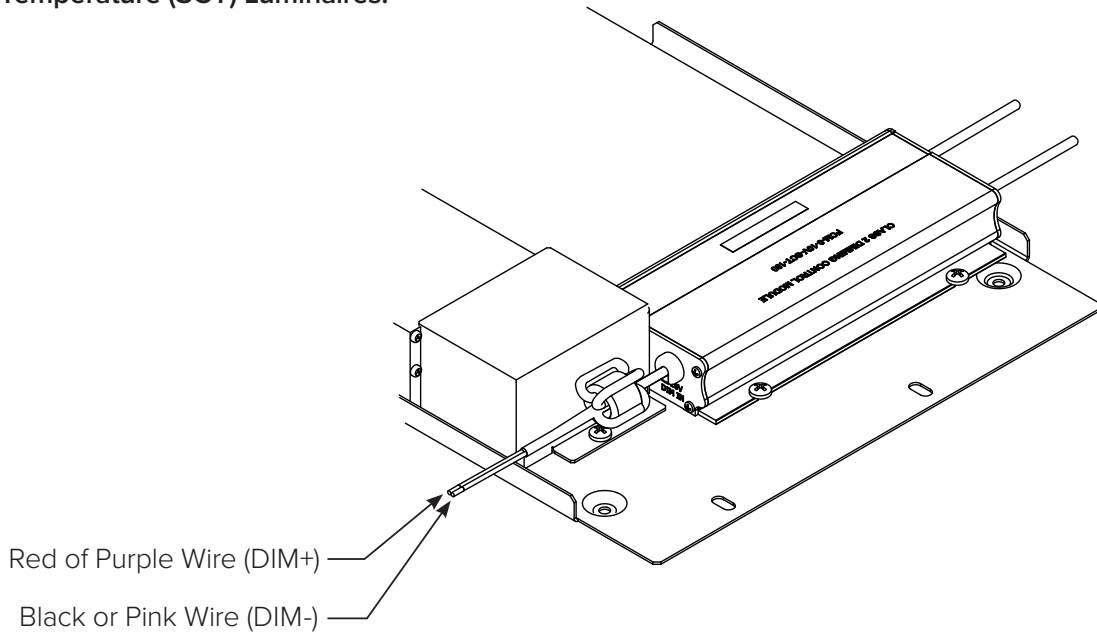
Tunable White (TNW) Luminaires:

Remove the controller junction box cover to access control module inputs and DIP switches. DIP switches are used to determine user configurable settings.

ORANGE WIRE (CCT+)

YELLOW WIRE (CCT-)

PURPLE WIRE (DIM+)

PINK WIRE (DIM-)

DC INPUT FROM POWER SUPPLY

DIP Switches
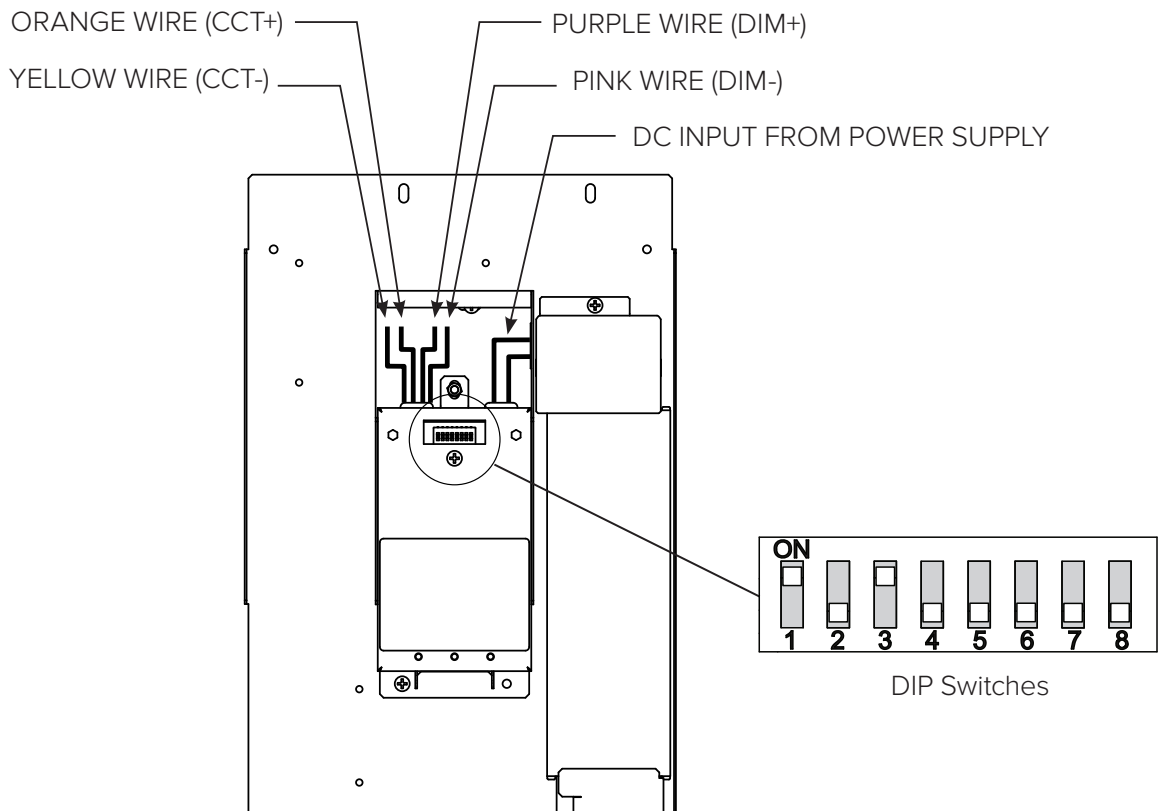
8.3 OUTPUT CONNECTIONS

The LED panels can be connected to the controller outputs as shown below:

Static Color Temperature (SCT) Luminaires: LED Panel cables plug into controller output cables.

Controller output cables
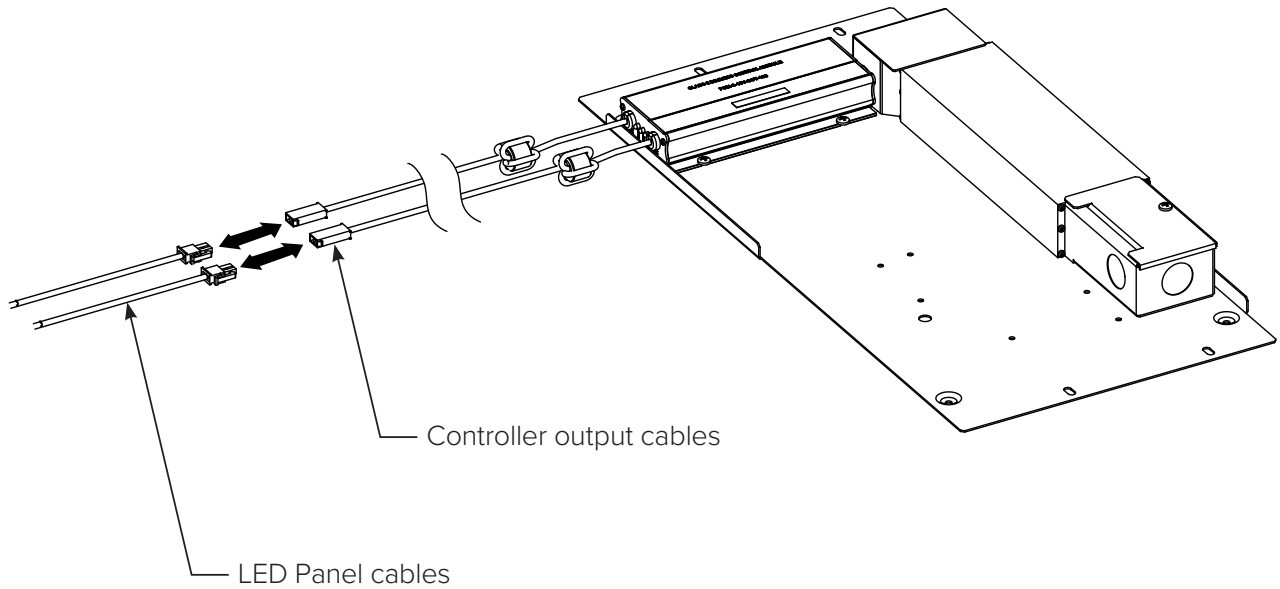
LED Panel cables

Tunable White (TNW) Luminaires: LED Panel cables plug directly into controller. Use controller outputs 1 and 3 for TNW luminaires.

8.4 STANDALONE MODES

Standalone modes gives a pre-defined user-selectable fixed dimming and/or color output. No external control input is required. When one of the operational modes (Standalone or Dynamic Test) is selected through the DIP Switch setting, the module will ignore 0-10V commands and operate according to the settings in either LOG or LINEAR MODE.
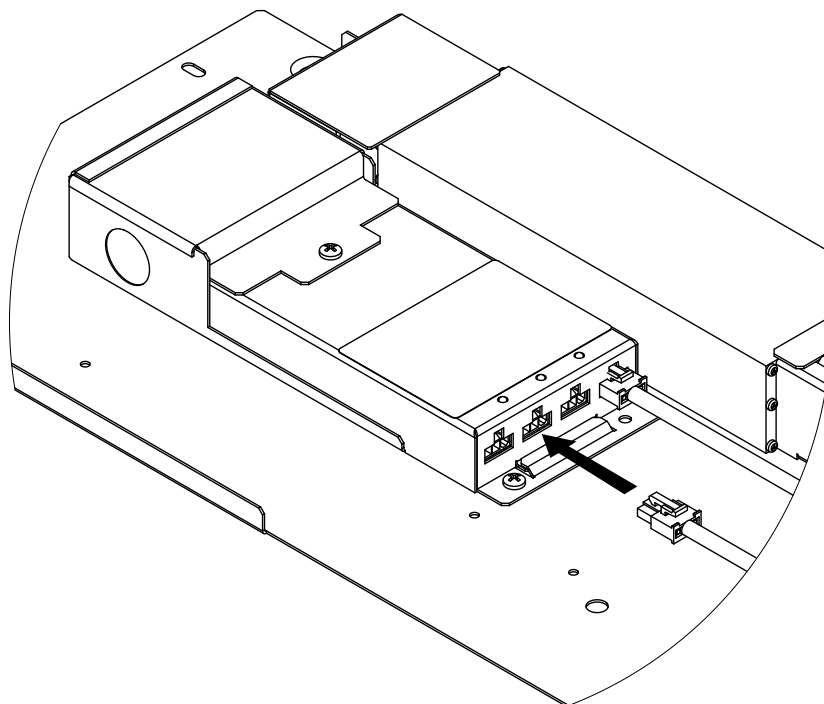
8.5 STANDALONE TNW MODE

Standalone TNW mode allows the user to select a fixed setting for dimming and color output.

Switches 1-4 (Mode)	Switches 5-8 (Intensity)
0-0-1-1	X-X-X-X

DIP Switches 5-8	Output Level (%)	Output Color Temp (K)
0-0-0-0	25%	2700K
1-0-0-0	100%	2700K
0-1-0-0	5%	3000K
1-1-0-0	25%	3000K
0-0-1-0	50%	3000K
1-0-1-0	100%	3000K
0-1-1-0	5%	3500K
1-1-1-0	25%	3500K
0-1-1-1	50%	3500K
1-0-0-1	100%	3500K
0-1-0-1	5%	4000K
1-1-0-1	25%	4000K
0-0-1-1	50%	4000K
1-0-1-1	100%	4000K
0-1-1-1	25%	5700K
1-1-1-1	100%	5700K

8.6 STANDALONE TNW DYNAMIC MODE

Dynamic test mode is used to check the system functionality. This mode will ignore control inputs and cycle through the output range. This mode is only applicable to TNW luminaires.
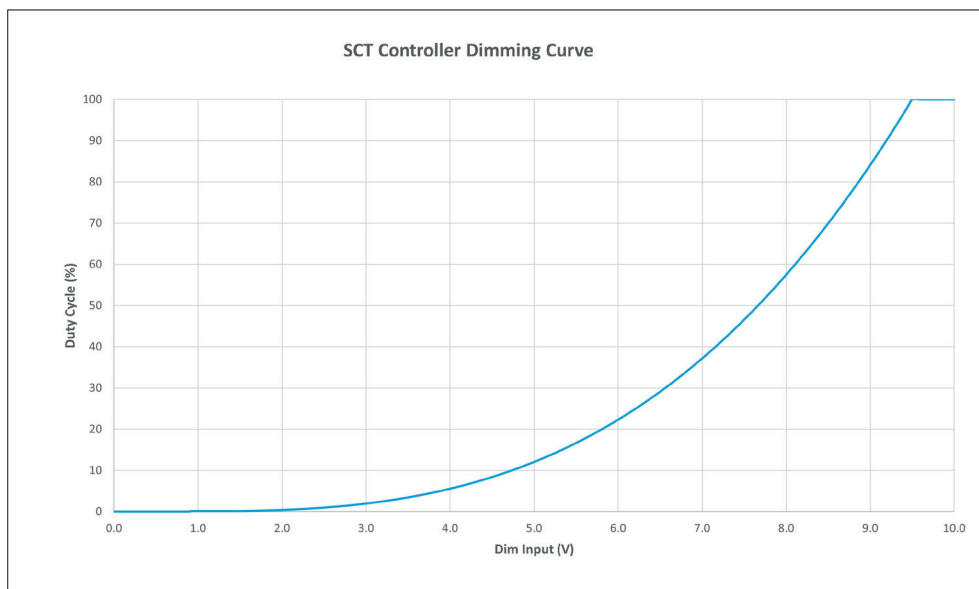
Standalone TNW	Mode Switches 1-8
Dynamic Colour Tune Test (TNW)	1-1-1-1-1-1-1-1

Output duty cycle starts with the WARM LEDs (TNW=2700K) raising their intensity from 0% to 100% then decreasing to 0%. Next the COOL LEDs (TNW=5700K) raise intensity from 0% to 100% then decrease to 0%. This cycle repeats indefinitely with a period of 7.5 seconds.
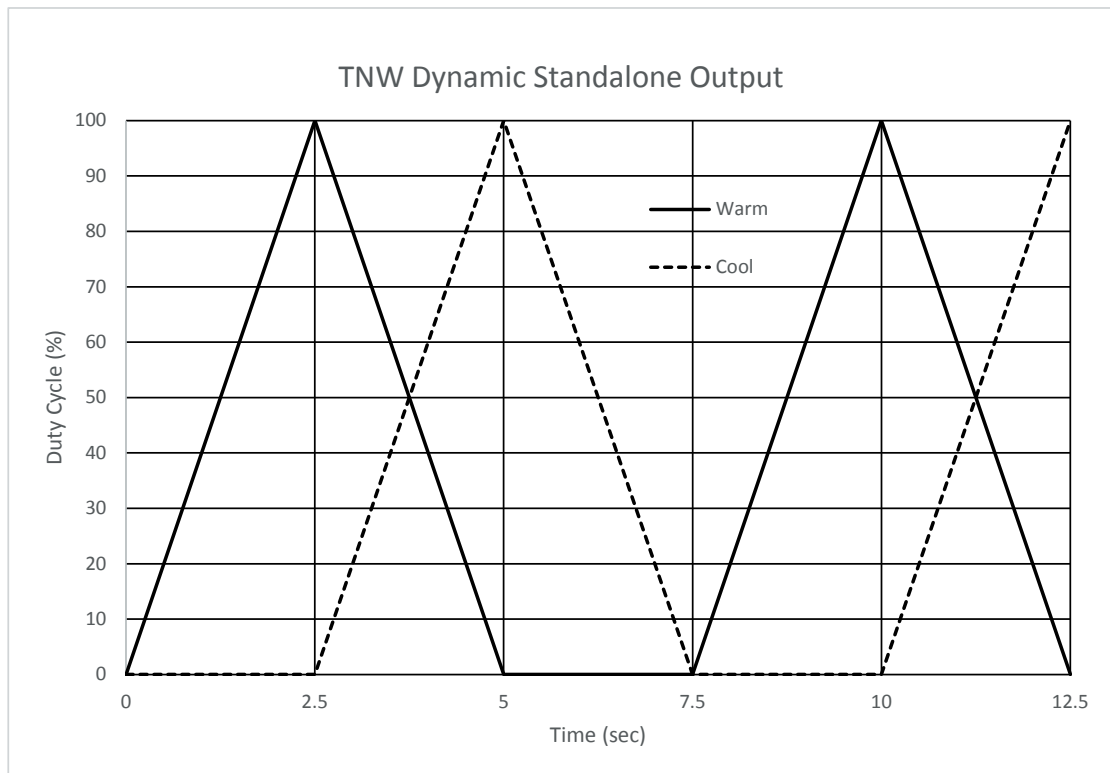
# APPENDIX A: SCT CONTROLLER DIMMING RESPONSE

APPENDIX B: TNW CONTROLLER DIMMING RESPONSE

There are three 0-10V operating modes which can be used to select the desired dimming curve: Linear, LOG-A and LOG-B.   The corresponding DIP switch settings are:
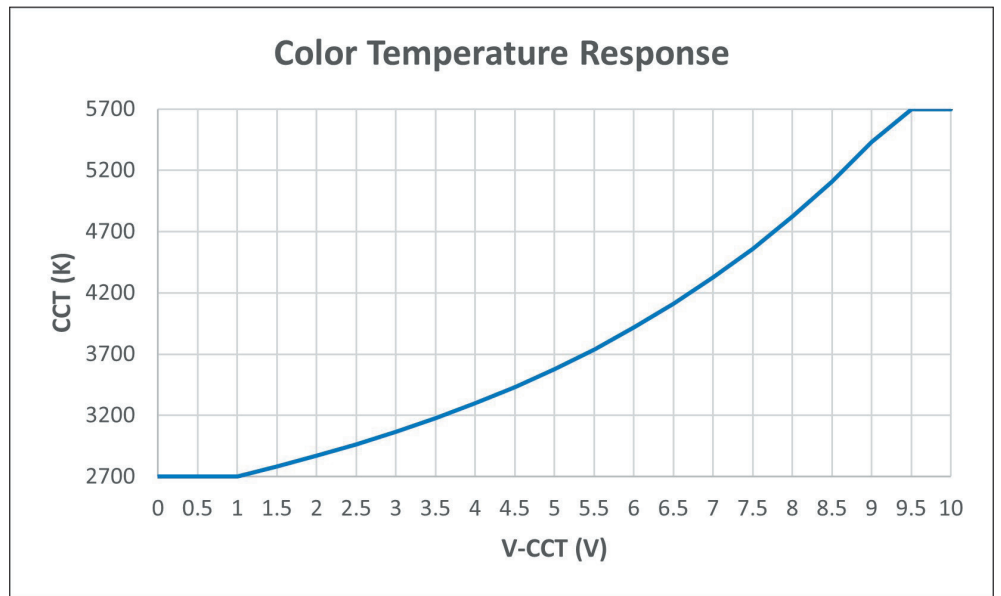
DIP Switch Setting	Operation
1000xxxx	TNW, 2 Channel Output, Linear
1010xxxx	TNW, 2 Channel Output, LOG-A
1001xxxx	TNW, 2 Channel Output, LOG-B

These settings produce a dimming output as shown below:
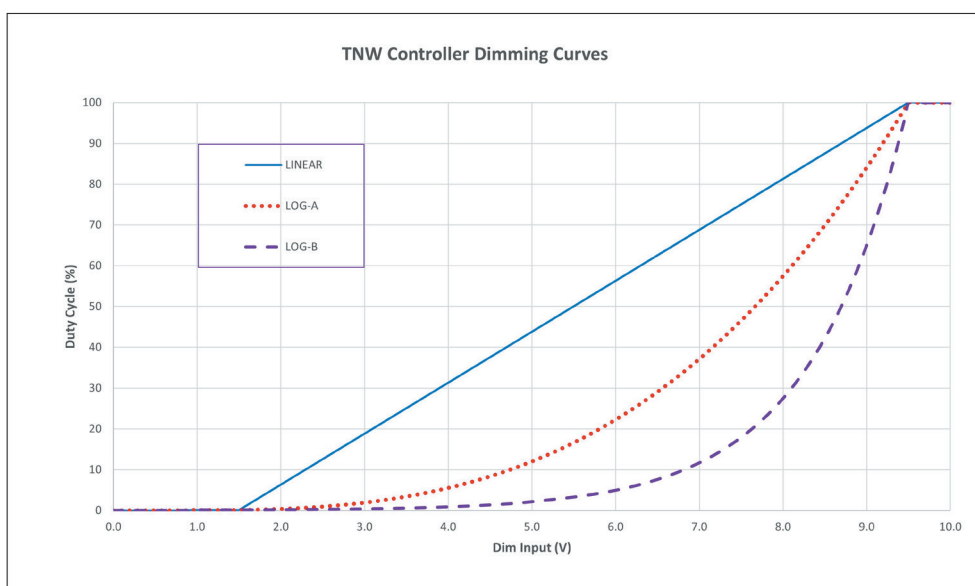
V-CCT	CCT
0	2700
1	2700
1.5	2783
2.0	2870
2.5	2963
3.0	3065
3.5	3176
4.0	3298
4.5	3431
5.0	3578
5.5	3738
6.0	3915
6.5	4110
7.0	4325
7.5	4561
8.0	4822
8.5	5110
9.0	5429
9.5	5700
10	5700

Color Temperature Response

CE

c(UL)us LISTED

RoHS

ENERG
THIS PRODUCT CONTAINS
A LIGHT SOURCE OF ENERGY
EFFICIENCY CLASS E

5
5 Year Limited Warranty:
Parts and workmanship

Cooledge Lighting reserves the right to change
materials or modify the design of its product
without notification as part of the company's
continuing product improvement program.