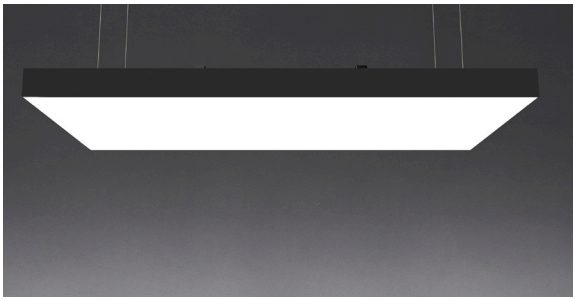
COOLEDGE™

COOLEDGE LUMINOUS CEILINGS

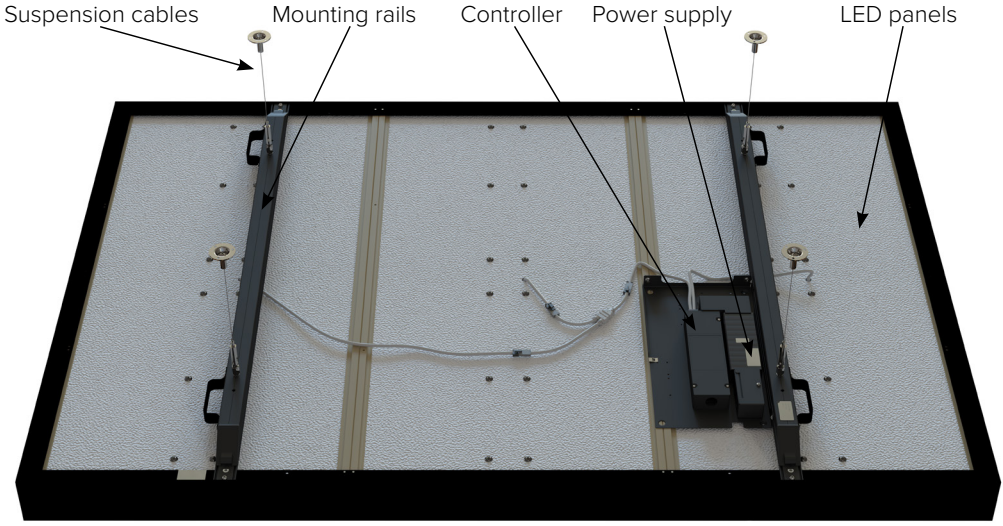
FABRILUM

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



CE

c UL us LISTED

RoHS

ENERG

THIS PRODUCT CONTAINS A LIGHT SOURCE OF ENERGY EFFICIENCY CLASS D OR E

5 Year Limited Warranty:
Parts and workmanship

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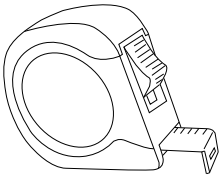
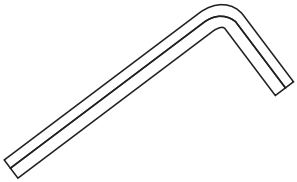
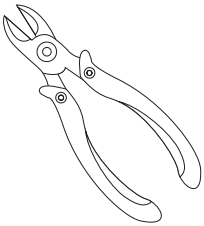
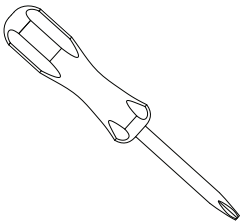
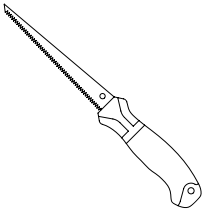
Cooledge Lighting reserves the right to change materials or modify the design of its product without notification as part of the company's continuing product improvement program.

2. TOOLS

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

Gloves 	Measuring Tape 	4mm hex key 
Cable Cutters 	#2 Phillips Screwdriver 	Drywall saw (recessed mount only) 

CAUTION: 2 people min. recommended for install

CAUTION: Observe precautions for handling electrostatic sensitive devices.

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

3. MOUNTING TYPES

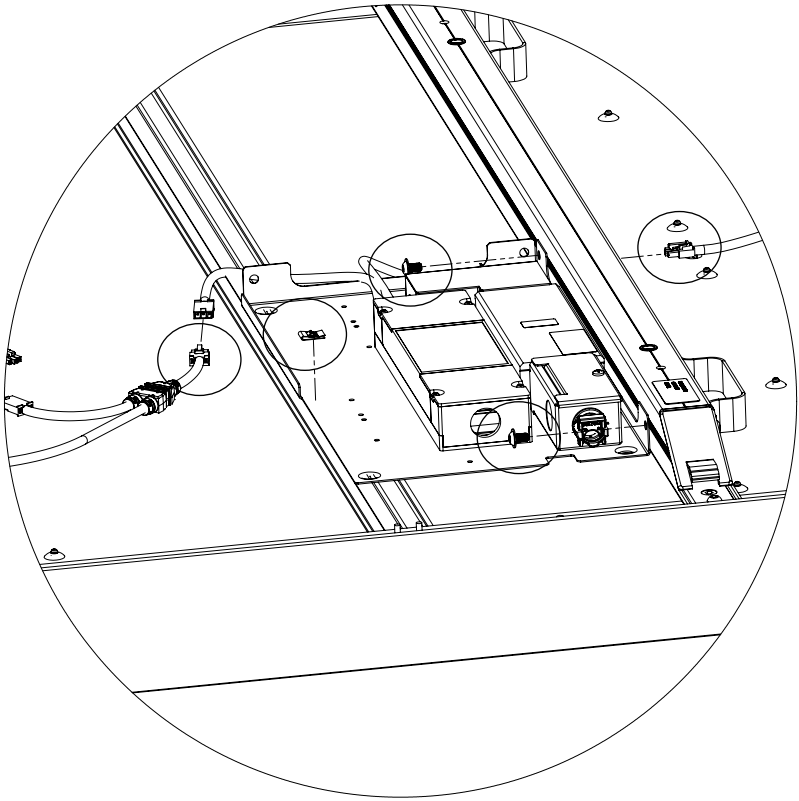
- Direct ceiling (surface) mount – go to section 4
- Suspended mount – go to section 5
- Recessed mount – go to section 6
- Grid mount – go to section 7

NOTE: This document covers all FABRILum models including Rectangles, Circles, and Bullnose shapes. Diagrams show only Rectangles, however the installation process is the same for each model depending on the Mounting Type chosen.

4. DIRECT CEILING (SURFACE) MOUNT (RECTANGLE, CIRCLE, BULLNOSE)

4.1 REMOVE POWER AND CONTROL ASSEMBLY FROM FRAME

Unplug the DC cables from the Control Module, remove the screws and clip holding the power and control assembly to the frame.



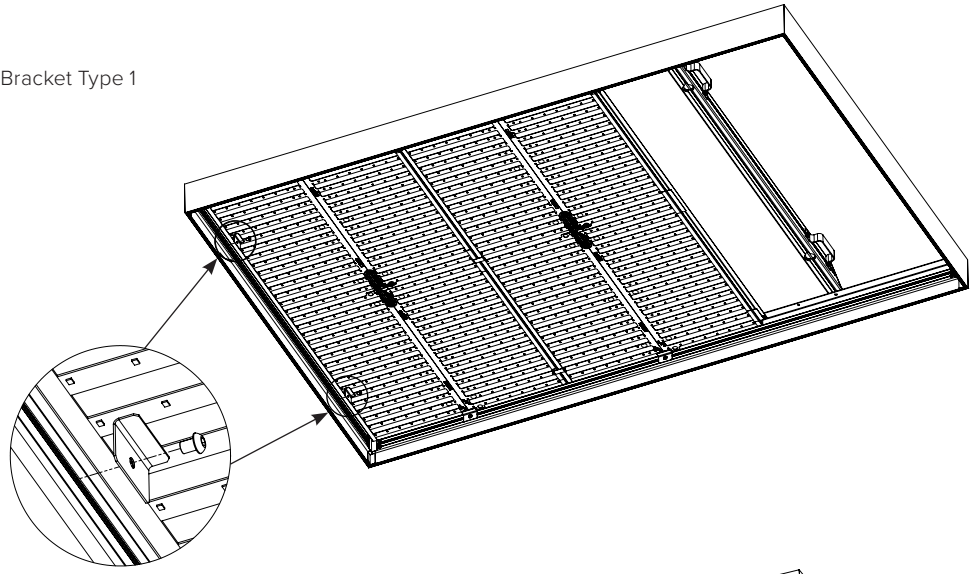
4.2 REMOVE FABRIC AND PANELS OBSTRUCTING MOUNTING RAILS

*Mounting point location dimensions shown in Section 8.

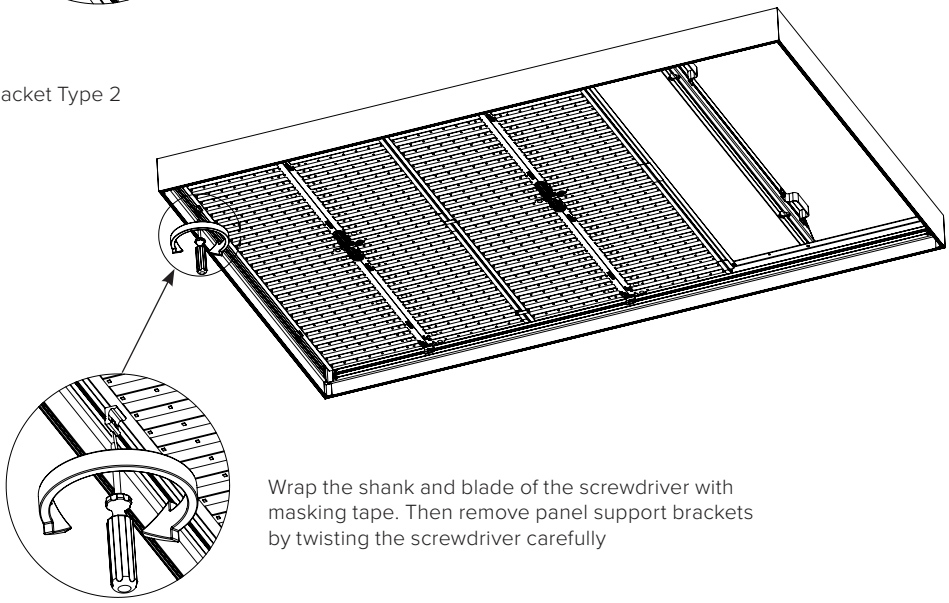
⚠ CAUTION: Wear clean gloves when handling the fabric
Remove the fabric by pulling the tab. Lay flat on a clean surface, do not fold or crease the fabric
Remove the two outermost panels by removing the L-brackets at the outer edges

⚠ CAUTION: Take care not to damage LEDs with tools when removing brackets

Bracket Type 1



Bracket Type 2



Wrap the shank and blade of the screwdriver with masking tape. Then remove panel support brackets by twisting the screwdriver carefully

4.3 MARK THE MOUNTING POINTS ON THE CEILING

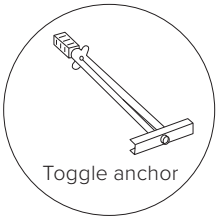
Mark the position of the mounting points on the ceiling. See Appendix for mounting position dimensions.

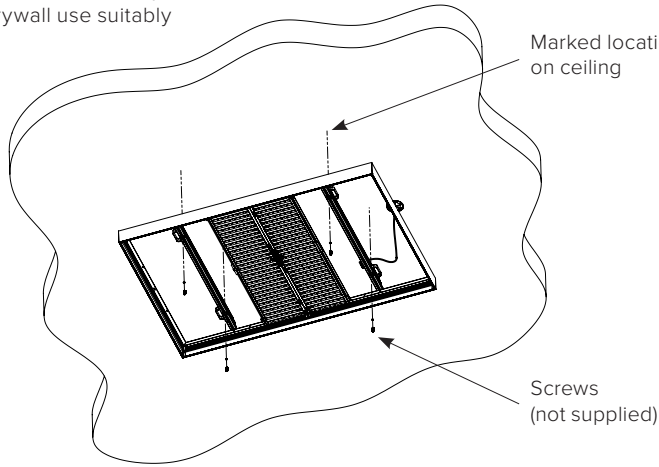
4.4 MOUNT THE FRAME TO THE CEILING

CAUTION: 2 people min. recommended for install

CAUTION: The luminaire weight is given in section 7. 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 the structure. If mounting to drywall use suitably rated toggle style anchors.

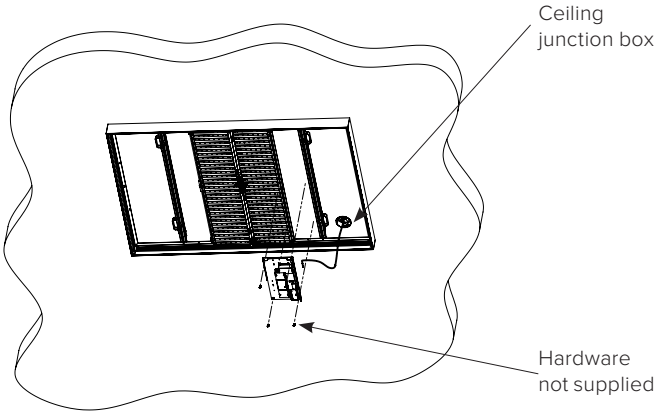




4.5 MOUNT THE POWER AND CONTROL ASSEMBLY

NOTE: the power and control assembly must be mounted to the ceiling, within the frame and behind the panels. Do not mount remotely.

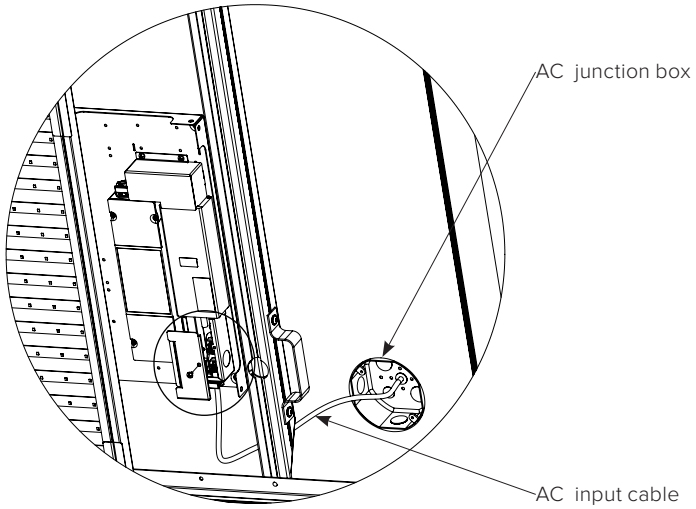
Mount the power and control assembly to the ceiling using four fasteners (not included) appropriate to the ceiling material. The weight of the power and control assembly can be up to 3.2Kg/7lbs. Ensure the fasteners can safely support this load.
If the power and control assembly is to be mounted over 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.



4.6 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.

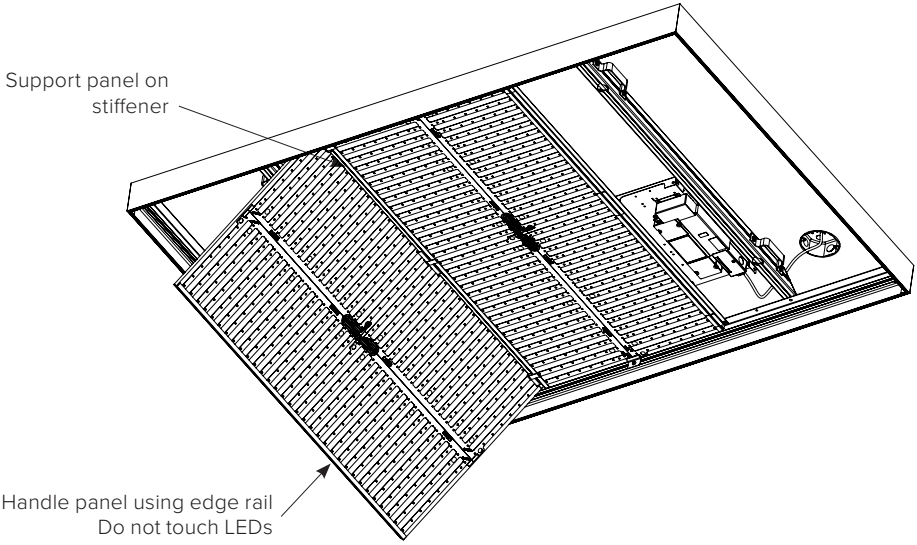
CAUTION: Ensure electrical power is disconnected!



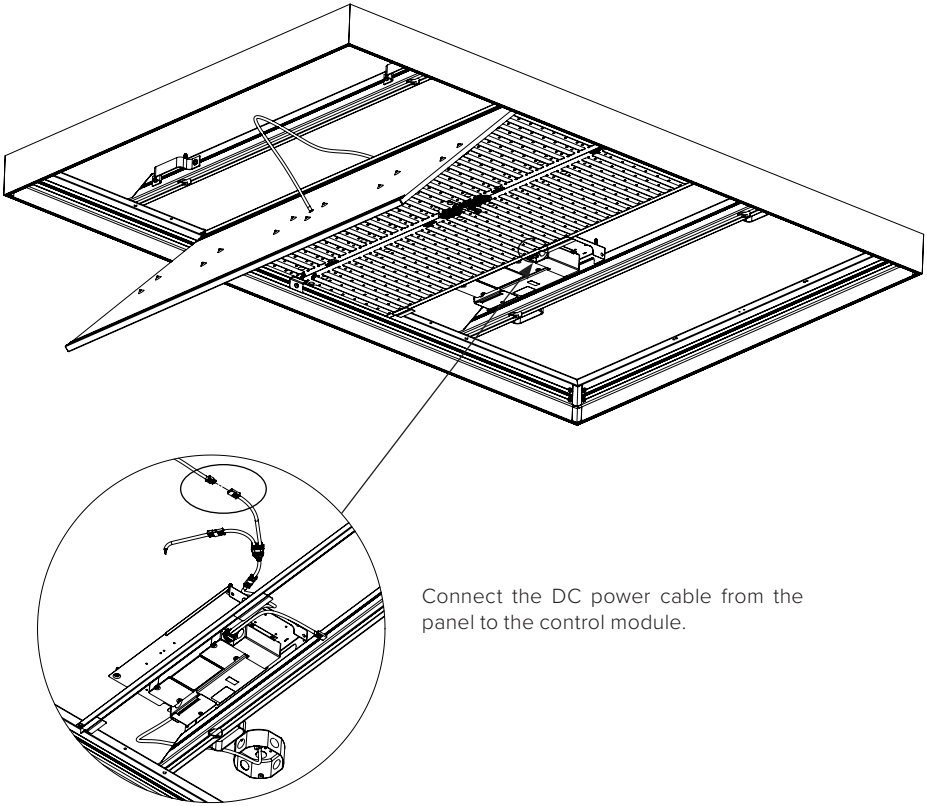
4.7 RE-INSTALL FIRST LED PANEL

CAUTION: Observe precautions for handling electrostatic sensitive devices.

CAUTION: 2 people min. recommended for install



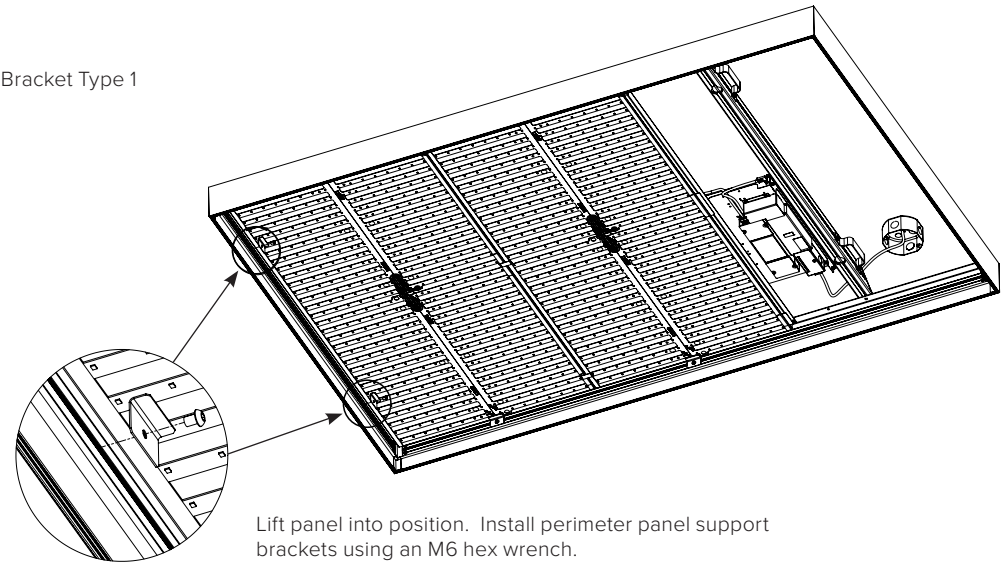
4.8 CONNECT PANEL DC POWER CABLE



Connect the DC power cable from the panel to the control module.

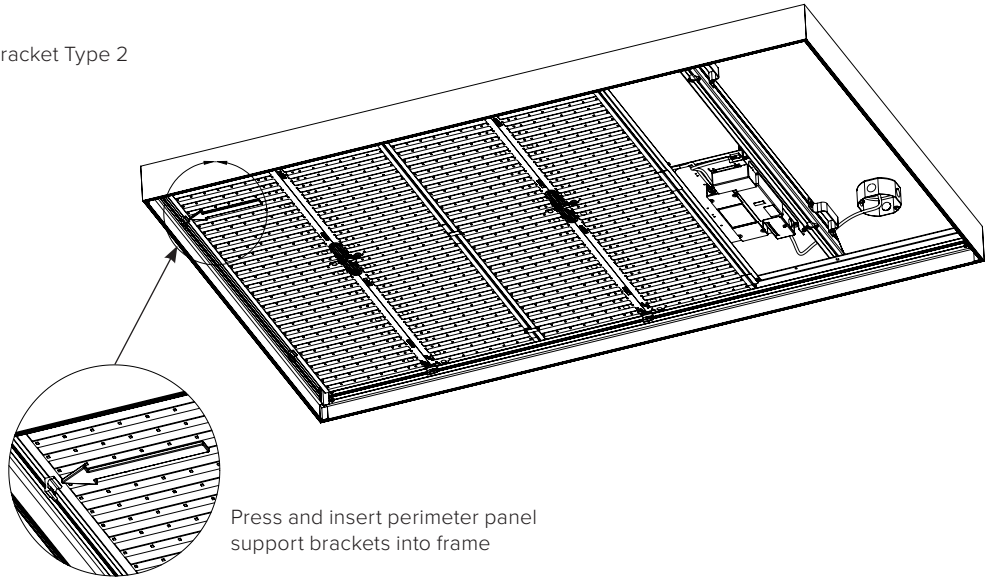
4.9 INSTALL PERIMETER PANEL SUPPORT BRACKETS

Bracket Type 1



Lift panel into position. Install perimeter panel support brackets using an M6 hex wrench.
Take care not to damage LEDs when installing brackets.

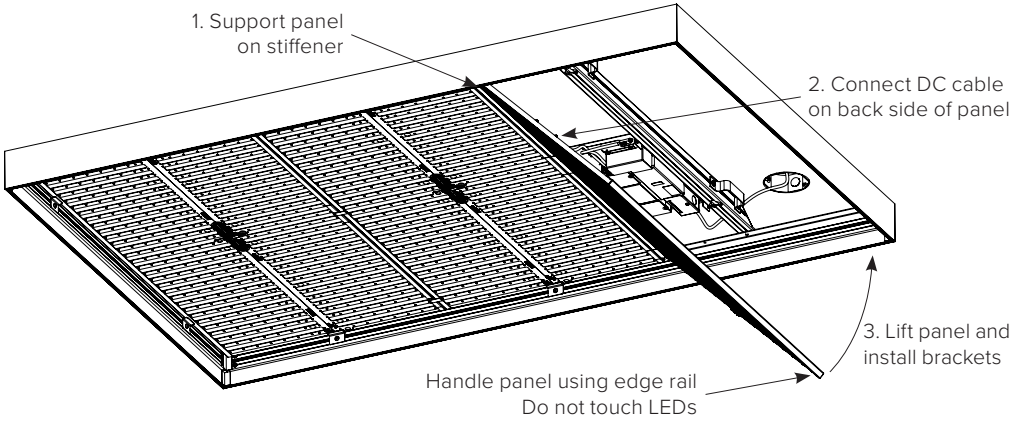
Bracket Type 2



Press and insert perimeter panel support brackets into frame

4.10 INSTALL REMAINING PANELS WITH SUPPORT BRACKETS

Support panel on stiffener and lift into position as done with the first panel.

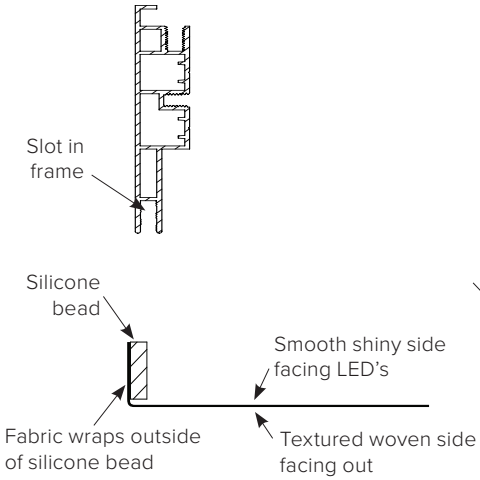


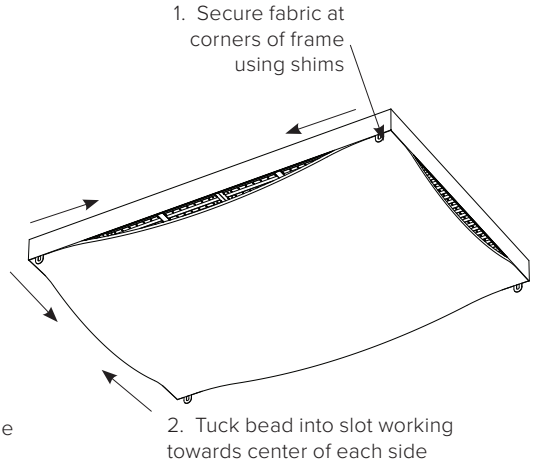
4.11 TEST LIGHTING

Turn on the luminaire and verify that all LEDs are lit. Test that the dimming is functioning correctly. Refer to section 10 of this document for additional control information.

4.12 INSTALL FABRIC

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





5. SUSPENDED MOUNT (RECTANGLE, CIRCLE, BULLNOSE)

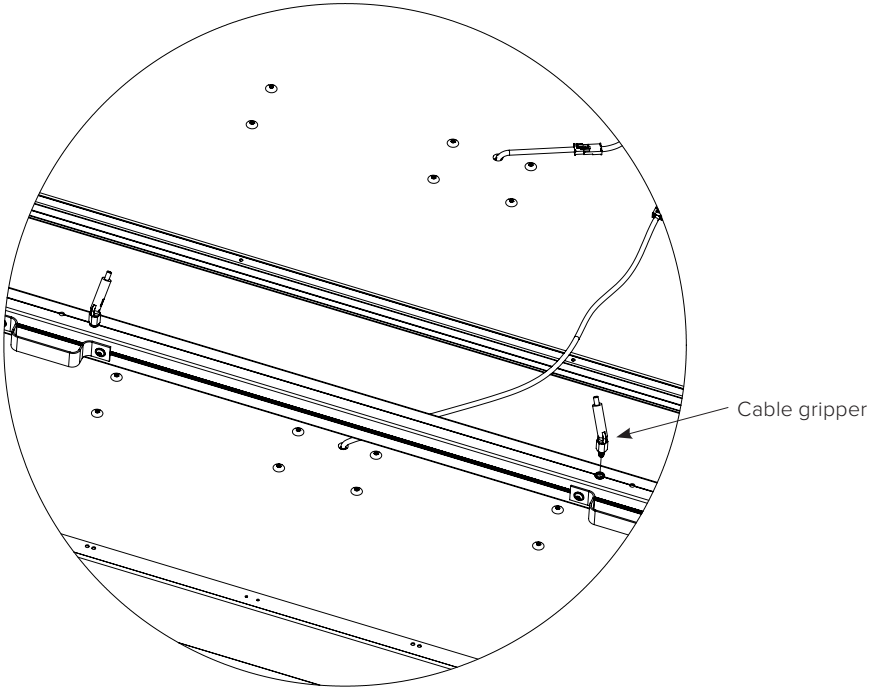
⚠ Handle the unit with clean white gloves to prevent damage to the fabric

5.1 MARK THE MOUNTING POINTS ON THE CEILING

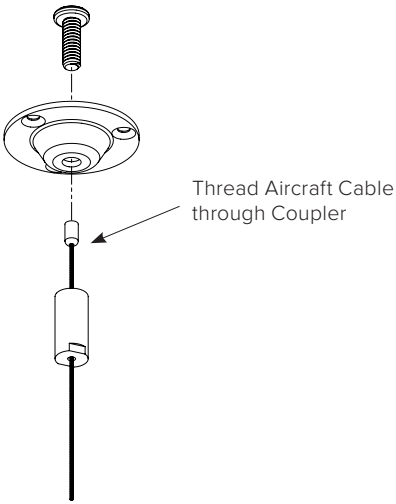
Mark the position of the mounting cables on the ceiling. See appendix for mounting position dimensions.

5.2 ATTACH 4X CABLE GRIPPERS TO MOUNTING RAILS

Cable grippers are included with the lumnaire. Mount grippers to each of the threaded inserts in the top of the mounting rails.



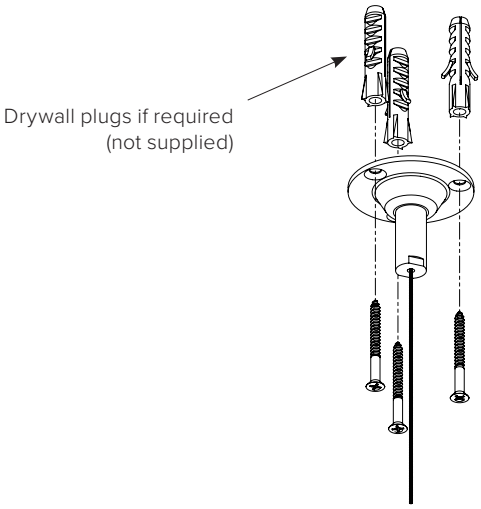
5.3 ASSEMBLE UPPER GRIPPERS AND AIRCRAFT CABLES



5.4 ATTACH 4X CEILING GRIPPERS TO CEILING

CAUTION: 2 people min. recommended for install

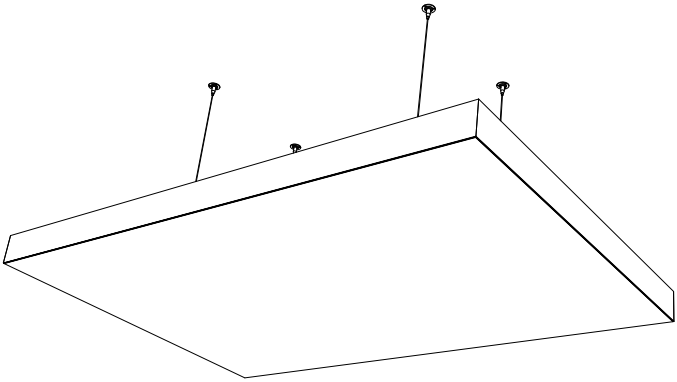
CAUTION: The luminaire weight is given in the appendix. Ceiling fasteners are not provided by Cooledge. Ensure the mounting can withstand the load including any safety margin required by national or local building codes.

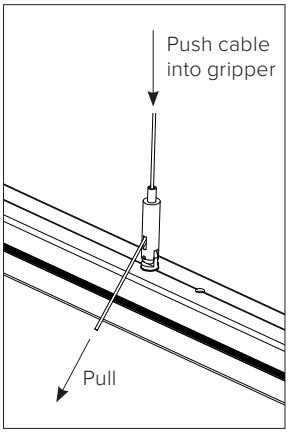


NOTE: When possible mount to studs or solid surface. Use drywall plugs only when necessary. Each cable gripper must be able to support 15kg.

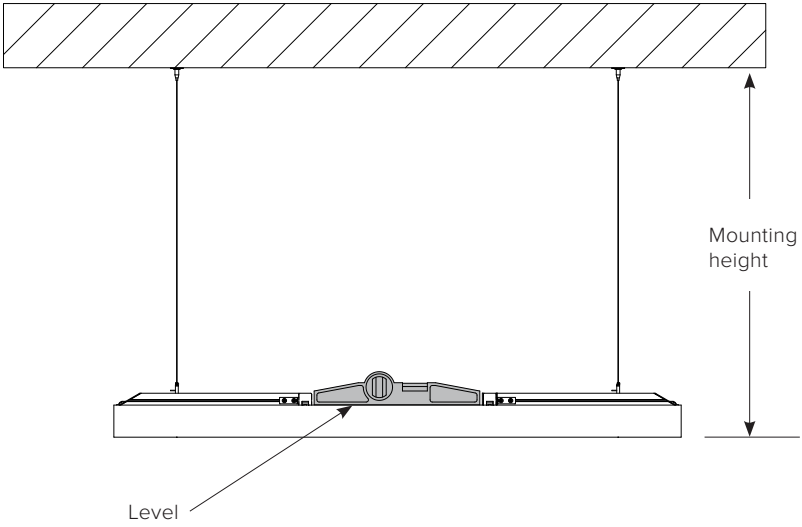
5.5 HANG LUMINAIRE

CAUTION: 2 people min. recommended for install





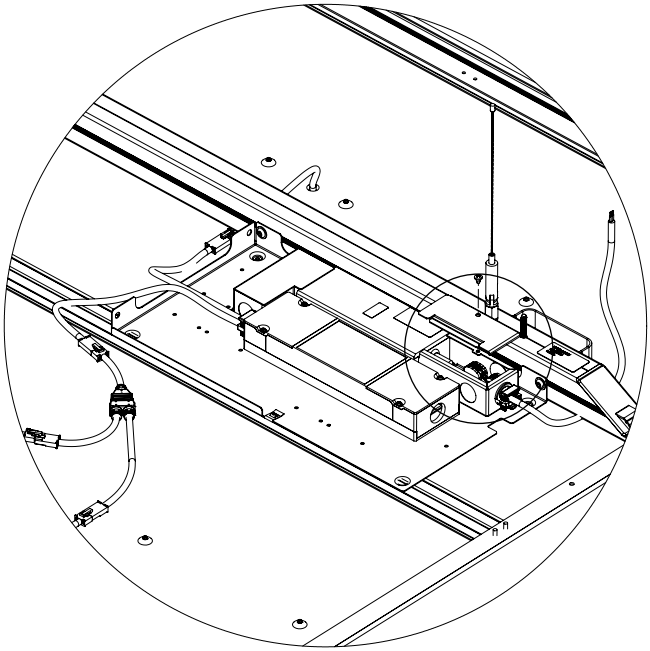
5.6 SET HEIGHT AND LEVEL



5.7 CONNECT AC POWER CABLE

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!



5.8 TEST LIGHTING

Turn on the luminaire and verify that all LEDs are lit. Test that the dimming is functioning correctly. Refer to section 10 of this document for additional control information.

6. RECESSED MOUNT (RECTANGLE ONLY)

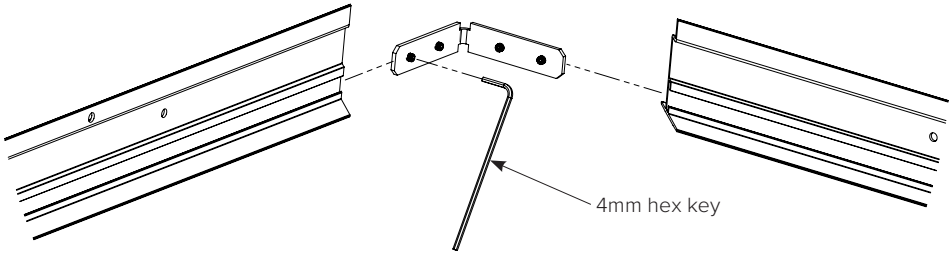
NOTE: Only available for RS (4' x 4' / 1.2m x 1.2m) and RM (4' x 6' / 1.2m x 1.8m) rectangular luminaires.

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

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

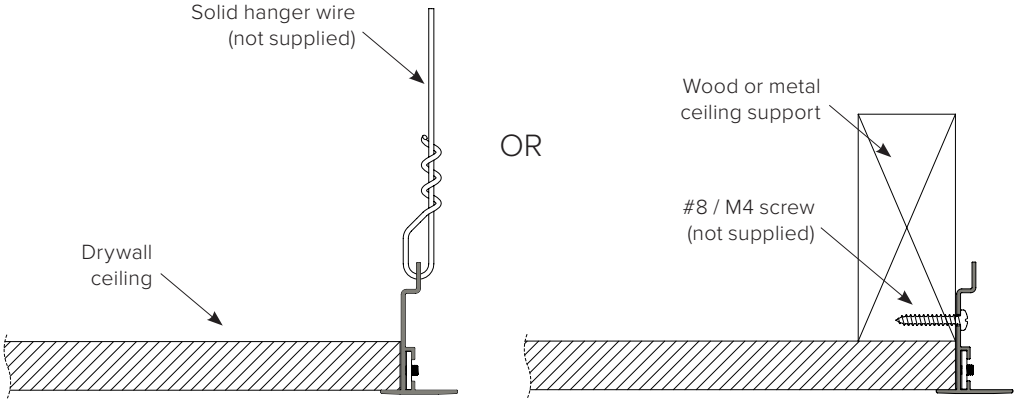
6.1 ASSEMBLE THE RECESSED MOUNT ADAPTER

A Recessed Mounting Adapter is required. This adapter is ordered and shipped separately.



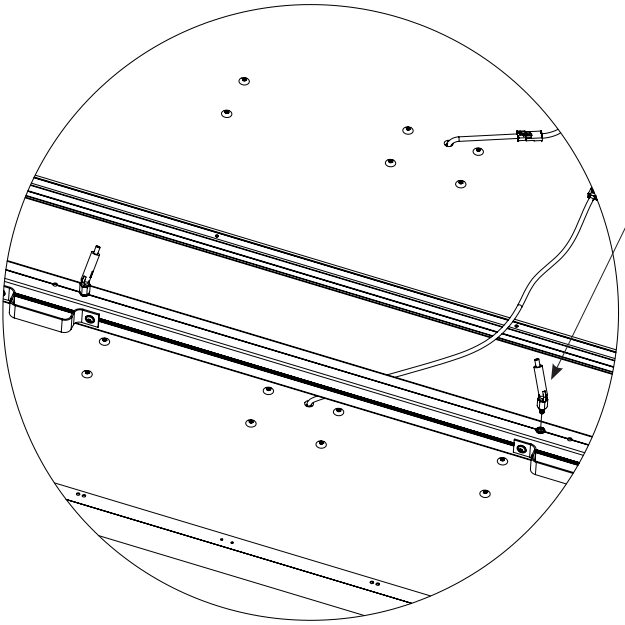
6.2 PREPARE THE CEILING OPENING

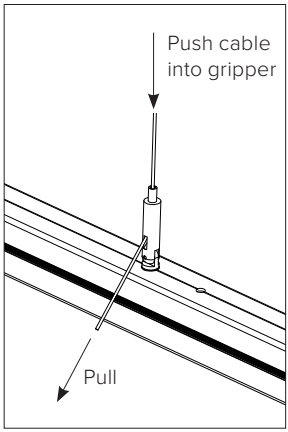
Cut the ceiling opening to 1220x1220mm / 48"x48" or 1220x1795mm / 48"x70" 5/8, depending on the size of frame.
Install the recessed mount adapter kit (sold separately).
Install support wires or screws (not supplied) as required by national and local building codes.



6.3 ATTACH 4X CABLE GRIPPERS TO CROSS STIFFENERS

Attach cables to easily raise luminaire to 300mm[12in] below the ceiling height. To finish the install, lift the luminaire through the opening in the ceiling, angling the luminaire as needed to lay the luminaire on the previously installed frames. Note the cables used to raise the luminaire into position can double as safety cables once the luminaire is installed in its final location.

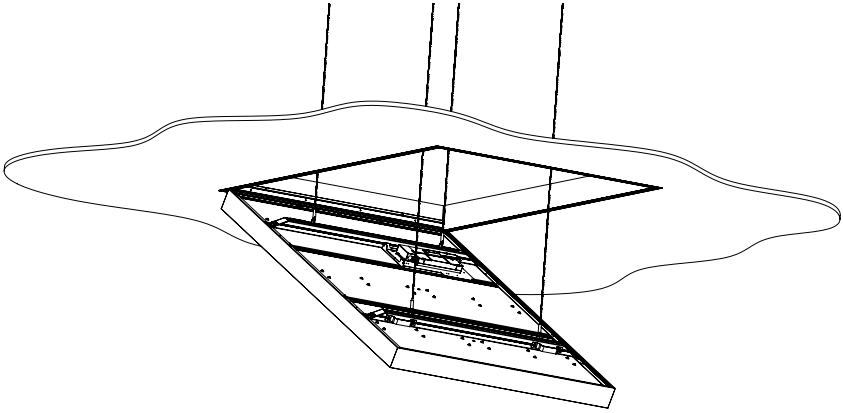




6.4 RAISE LUMINAIRE TO JUST BELOW CEILING

CAUTION: 2 people min. recommended for install

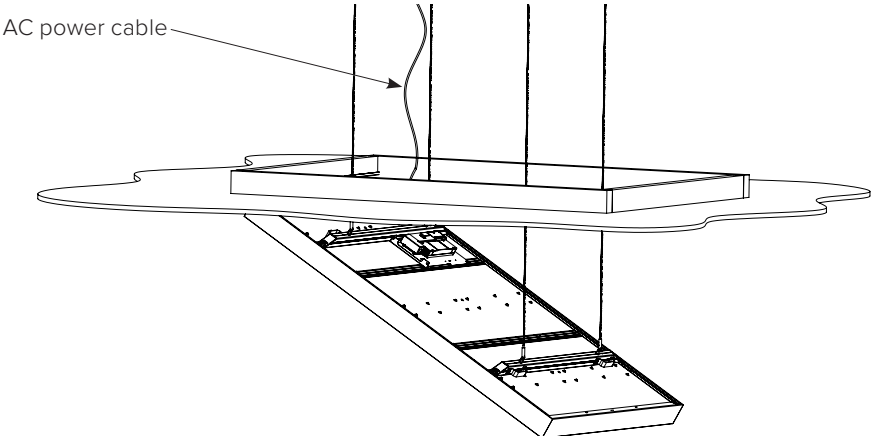
Use the cables to lift the luminaire close to the ceiling.



6.5 CONNECT AC POWER CABLE

CAUTION: Ensure electrical power is disconnected!

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

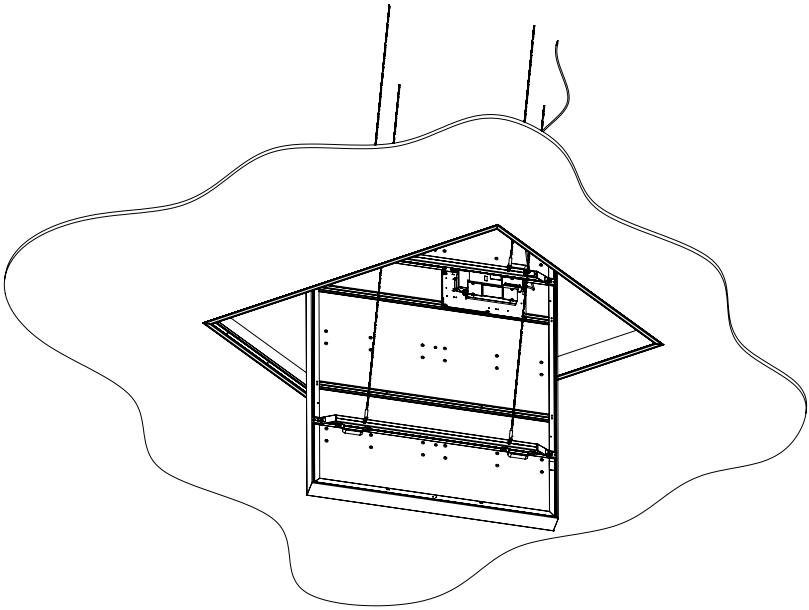


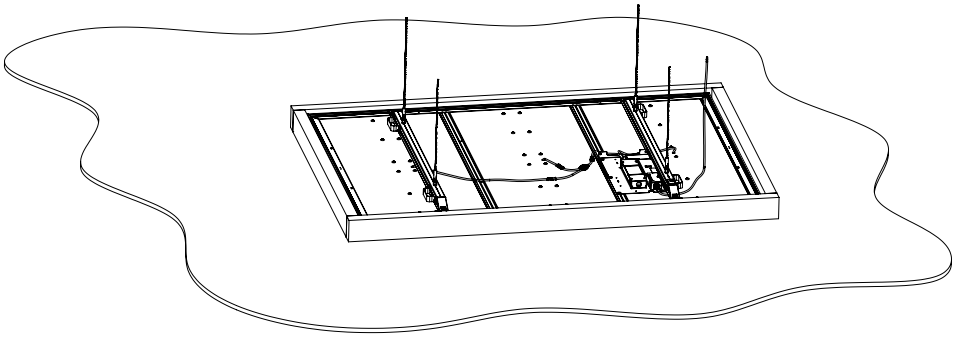
6.6 TEST LIGHTING

Turn on the luminaire and verify that all LEDs are lit. Test that the dimming is functioning correctly. (if connected) Refer to Section 11 of this document for additional control information (available at cooledgelighting.com)

6.7 MOUNT THE LUMINAIRE IN THE CEILING OPENING

Raise the luminaire through the ceiling opening and rest it on the recessed mount adapter.





7. GRID MOUNT (RECTANGLE ONLY)

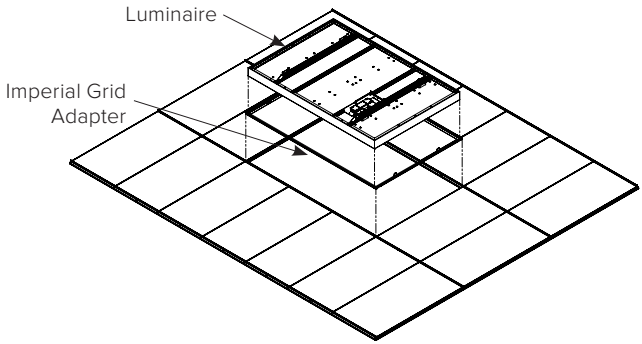
NOTE: Only available for RS (4' x 4' / 1.2m x 1.2m) and RM (4' x 6' / 1.2m x 1.8m) rectangular luminaires.

⚠ WARNING: Wear clean cotton or Latex gloves when handling fabric.
WARNING: Do not press on the fabric during handling and install of luminaire to avoid fabric damage.

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

7.1 PREPARE THE CEILING GRID

FABRILum luminaire fits into a 1200mmx1200mm (RS) or 1200mmx1800mm (RM) T-bar ceiling without an adapter. For 48"x48" (RS) or 48"x72" (RM) T-bar openings an Imperial Grid Adapter is required - ordered and shipped separately. The luminaire should be supported on two edges by main beams and the other two edges by cross tees.

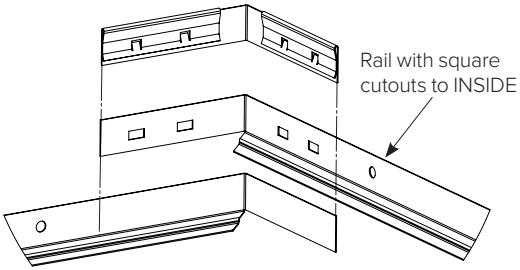


⚠ CAUTION: Weight of one FABRILum Grid Mount luminaire is 14kg/31lbs for RS and 22kg/48lbs for RM. The Imperial Grid Adapter required for inch-sized (imperial) ceiling grid weighs an additional 0.8kg/1.75lbs.

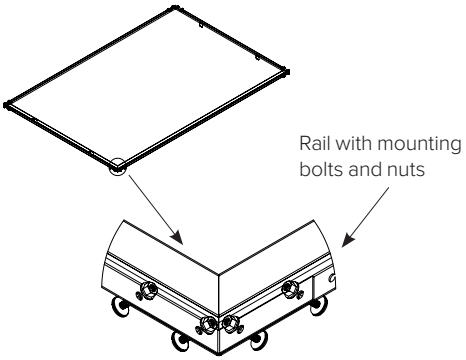
Consult your ceiling grid supplier or manufacturer for allowable loading. Do not install FABRILum luminaire in ASTM C-635 light duty grids or EN 13964:2014 Class 1 grids.

7.2 INCH-SIZE GRIDS (IMPERIAL) ONLY – INSTALL IMPERIAL GRID ADAPTOR INTO CEILING GRID SYSTEM

1. Assemble grid adaptor on floor

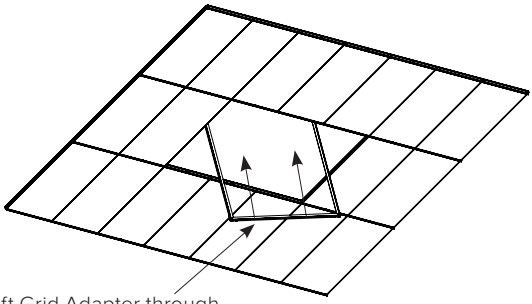


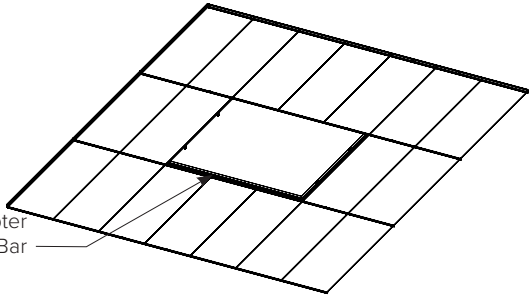
(4X4 Rectangle)



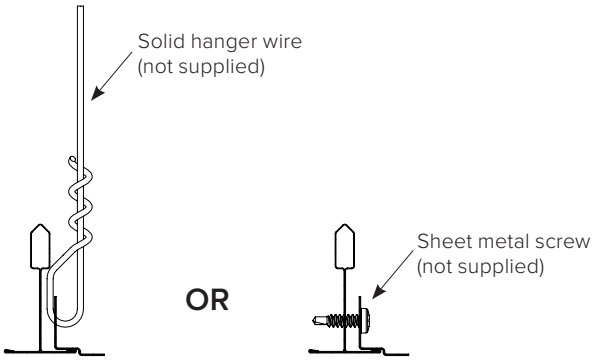
(4X6 Rectangle)

2. Lift grid adaptor into grid opening, resting the adaptor on T-bar



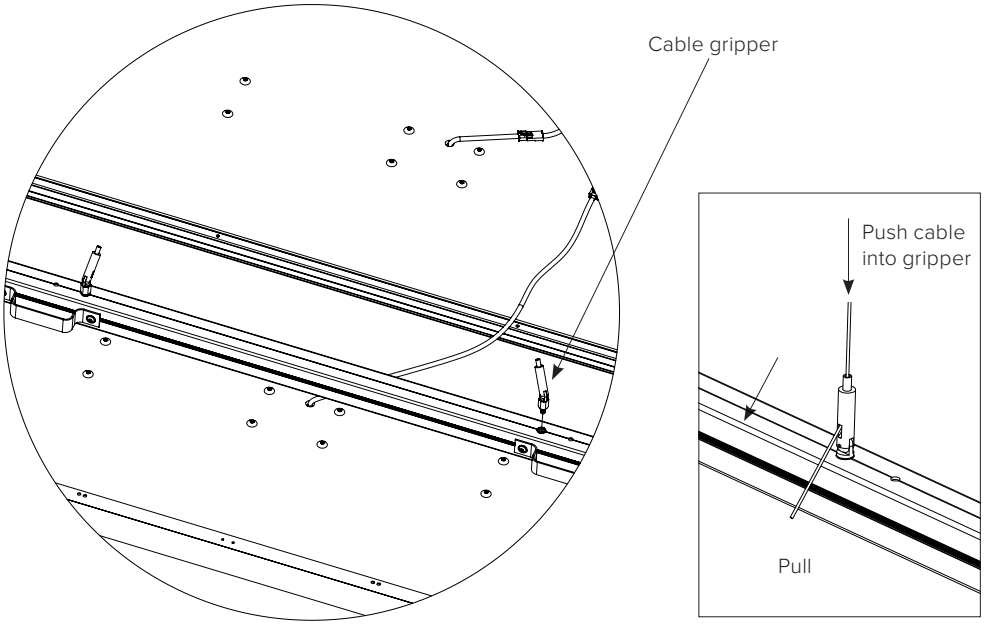


3. Securely attach adaptor frame to ceiling structure either with hanger wire or by screwing it into the T-bar



7.3 ATTACH 4X CABLE GRIPPERS TO CROSS STIFFENERS

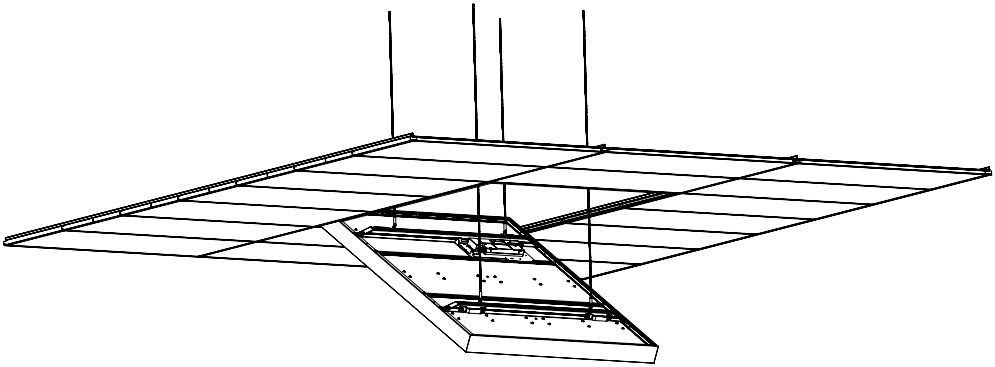
Four cable grippers are included with the lumnaire. Mount grippers in each of the openings in the frame cross stiffeners and insert the corresponding cables into the grippers. Cables supplied to be attached as noted in prior section. Note the cables used to raise the luminaire into position can double as safety cables once the luminaire is installed in its final location.



7.4 RAISE LUMINAIRE TO JUST BELOW CEILING

CAUTION: 2 people min. recommended for install

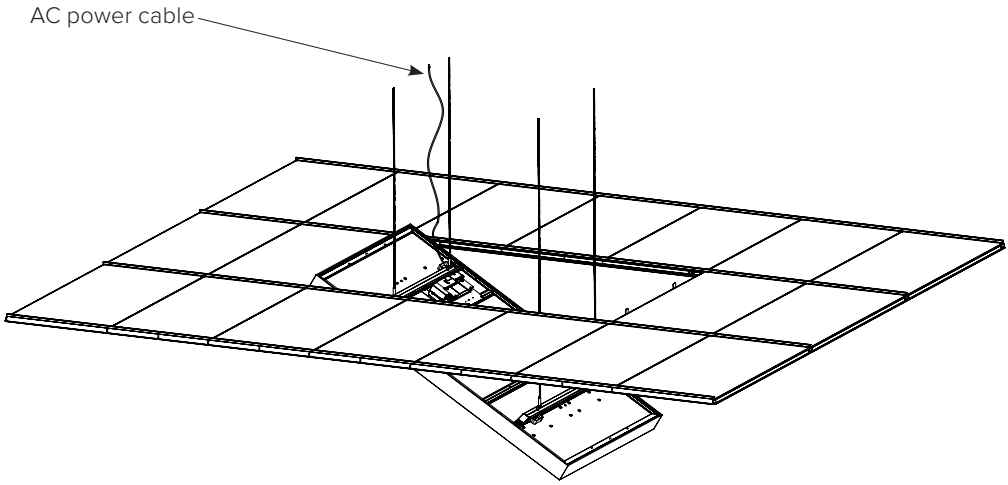
Use the cables to lift the luminaire close to the ceiling.



7.5 CONNECT AC POWER CABLE

CAUTION: Ensure electrical power is disconnected!

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

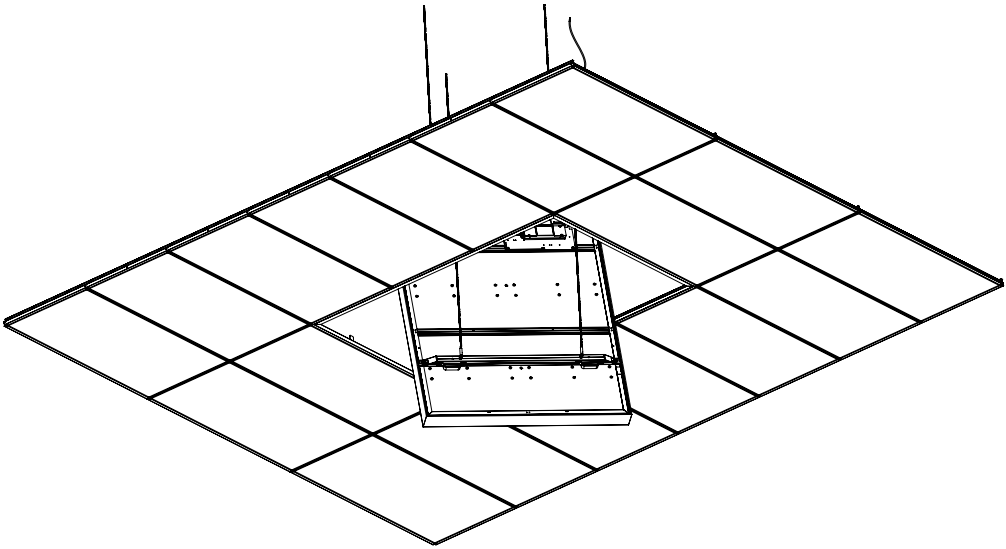


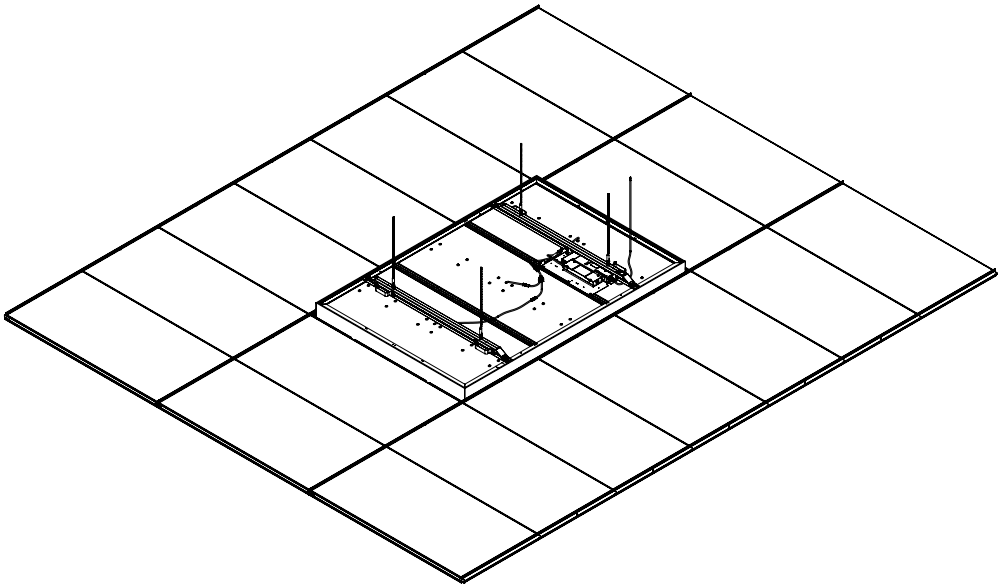
7.6 TEST LIGHTING

Turn on the luminaire and verify that all LEDs are lit. Test that the dimming is functioning correctly. (if connected) Refer to Section 11 of this document for additional control information (available at cooledgelighting.com)

7.7 MOUNT THE LUMINAIRE IN THE CEILING OPENING

Raise the luminaire through the ceiling opening and rest it on the recessed mount adapter.

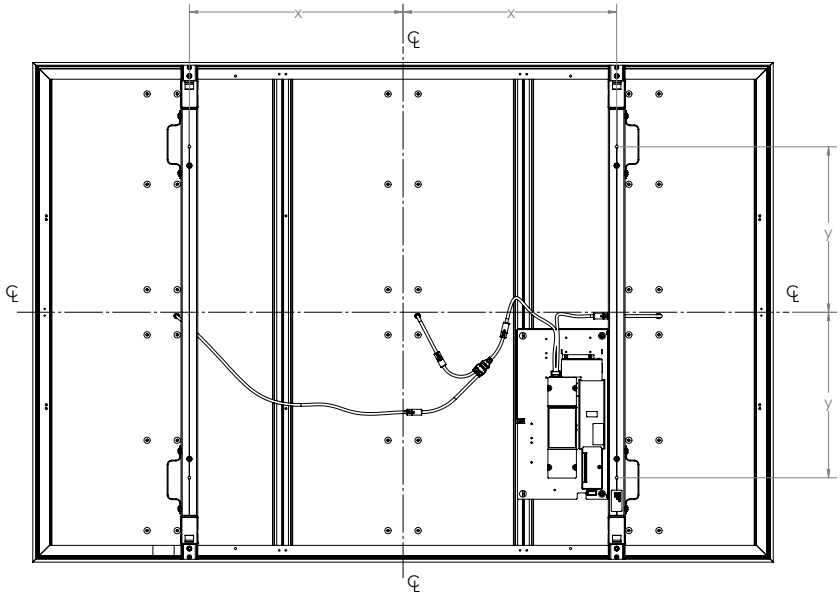




⚠ Follow local building codes for quantity and if safety cables need to be attached to the luminaire

8. LOCATION OF MOUNTING POINTS

CABLE ATTACHMENT POINTS AND UNIT WEIGHTS



In the following charts, suspension points are taken from the geometric center of the frame.

RECTANGULAR FRAMES		Suspended		Surface Mount	
NOMINAL SIZE	UNIT WEIGHT	DIM "x"	DIM "y"	DIM "x"	DIM "y"
4' X 4' (1200mm X 1200mm)	31 lbs [13.9kg]	8 ¾" [221mm]	13 ¾" [350mm]	8 ¾" [221mm]	15 ½" [395mm]
4' X 6' (1200mm X 1800mm)	48 lbs [22.0kg]	20" [510mm]	13 ¾" [350mm]	20" [510mm]	15 ½" [395mm]
4' X 8' (1200mm X 2400mm)	61 lbs [27.8kg]	31 ½" [798mm]	13 ¾" [350mm]	31 ½" [798mm]	15 ½" [395mm]
6' X 6' (1800mm X 1800mm)	68 lbs [30.7kg]	20" [510mm]	19" [480mm]	20" [510mm]	17" [430mm]
6' X 8' (1800mm X 2400mm)	87 lbs [39.5kg]	31 ½" [798mm]	19" [480mm]	31 ½" [798mm]	17" [430mm]

*Recessed mount attaches to ceiling by resting on recess mount adapter kit, so it has no mounting points. However, its lifting cables attach at the Suspended mount attachment points.

BULLNOSE FRAMES

		Suspended		Surface Mount	
NOMINAL SIZE	**UNIT WEIGHT**	**DIM "x"**	**DIM "y"**	**DIM "x"**	**DIM "y"**
4' x 8' (1200mm x 2400mm)	70 lbs (31.8 kg)	29.5" (750mm)	9" (230mm)	31.5" (800mm)	9" (230mm)
4' x 10' (1200mm x 3000mm)	85 lbs (38.6 kg)	37.5" (950mm)	9" (230mm)	39.5" (1000mm)	9" (230mm)

CIRCULAR FRAMES

		Suspended		Surface Mount	
NOMINAL SIZE	**UNIT WEIGHT**	**DIM "x"**	**DIM "y"**	**DIM "x"**	**DIM "y"**
4’ (1200mm)	33 lbs [15.0kg]	10” [255mm]	9” [230mm]	11 13/16” [300mm]	9” [230mm]

9. CALCULATING REMOTE POWER & CONTROL DISTANCE

There are some circumstances when it is beneficial to mount the power tray (power supply and control module) remotely from the luminaire. Due to a voltage drop caused by the resistance of the cable carrying power between the Power Supply/Control Module and the luminaire, there is a maximum distance at which the power tray may be mounted. The maximum remote distance possible is dependent upon the size of the conductors used and the light output (High or Standard) and color temperature (CCT) of the luminaire. For the tables below, Tunable White luminaires should use the values for 2700K.

MAXIMUM REMOTE DISTANCE

HIGH FLUX					
CCT	2700K	3000K	3500K	4000K	5700K
Extension Cable (AWG)	Remote Distance (ft)	Remote Distance (ft)	Remote Distance (ft)	Remote Distance (ft)	Remote Distance (ft)
20	21.0	21.0	21.0	21.0	24.0
18	33.5	33.5	33.5	33.5	38.0
16	53.5	53.5	53.5	53.5	61.0
14	85.5	85.5	85.5	85.5	97.0

CCT	2700K	3000K	3500K	4000K	5700K
Extension Cable (mm^2)	Remote Distance (m)	Remote Distance (m)	Remote Distance (m)	Remote Distance (m)	Remote Distance (m)
0.25	6.4	6.4	6.4	6.4	7.3
0.75	10.2	10.2	10.2	10.2	11.6
1.5	16.3	16.3	16.3	16.3	18.6
2.5	26.1	26.1	26.1	26.1	29.6

STANDARD FLUX					
CCT	2700K	3000K	3500K	4000K	5700K
Extension Cable (AWG)	Remote Distance (ft)	Remote Distance (ft)	Remote Distance (ft)	Remote Distance (ft)	Remote Distance (ft)
20	42.0	44.0	45.0	46.0	47.0
18	66.5	70.0	71.5	73.0	75.5
16	106.0	111.5	114.0	116.5	120.0
14	169.0	177.5	181.5	185.5	190.5

CCT	2700K	3000K	3500K	4000K	5700K
Extension Cable (mm^2)	Remote Distance (m)	Remote Distance (m)	Remote Distance (m)	Remote Distance (m)	Remote Distance (m)
0.25	12.8	13.4	13.7	14.0	14.3
0.75	20.3	21.3	21.8	22.3	23.0
1.5	32.3	34.0	34.7	35.5	36.6
2.5	51.5	54.1	55.3	56.5	58.1

10. HANDLING AND MAINTENANCE

In general, Cooledge FABRILum Luminaires require little or no maintenance; however, if there is a need to handle or clean the luminaires, Cooledge recommends the following procedures.

Handling:

- Always handle the luminaire from the sides and avoid touching the diffuser to prevent fingerprints, oil, or dirt from marking the fabric.
- Always use cloth gloves if handling the fabric diffuser.

Cleaning:

Fabric Diffuser
Over time there may be some accumulation of dust from the environment. To remove dust there are several methods available including:

- Brush gently with a clean, micro fiber cloth or “magic eraser” (if available in your region)
- Vacuum with a clean brush-tip vacuum nozzle
- Blow with compressed air (ensure there is no oil or grease)
- Use an adhesive lint-roller (recommended to test a small area in case the specific type of roller leaves a residue)

For minor stains, spots or streaks, Cooledge recommends gently wiping the fabric with isopropyl alcohol, “IPA”, (99% or higher) applied to a clean, soft cloth and allow to dry.

Note: use of liquids other than IPA to clean the fabric diffuser may result in permanent stains. FABRILum Luminaires are rated for dry locations only and should not be exposed to moisture or direct contact with water.

Trim/Fascia

- Wipe trim with a clean, soft cloth

11. 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.

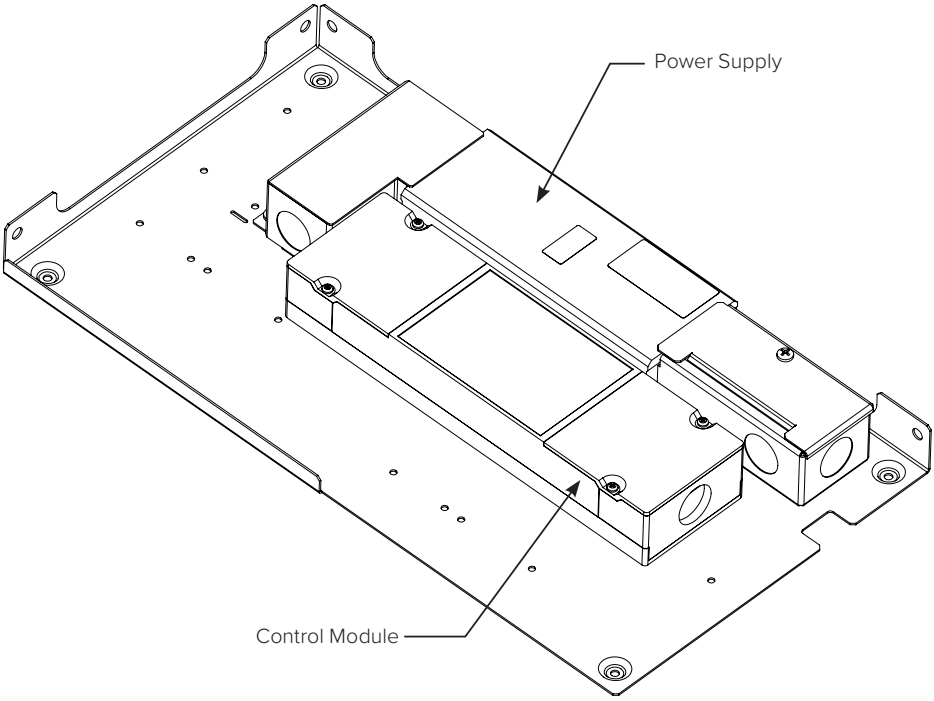
Damage to Control Module and/or lighting elements may occur if wired incorrectly.

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.

11.1 CONTROL MODULE

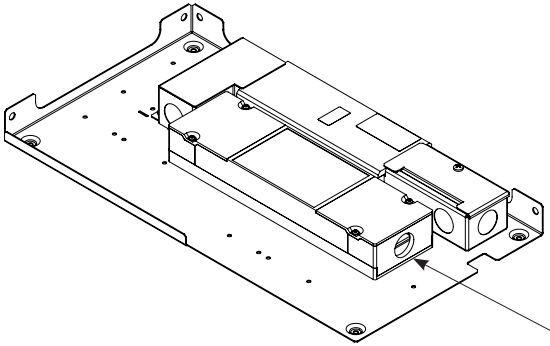
Each Cooledge luminaire is supplied with one or more power trays, each with a control module mounted adjacent to the power supply, as shown below:

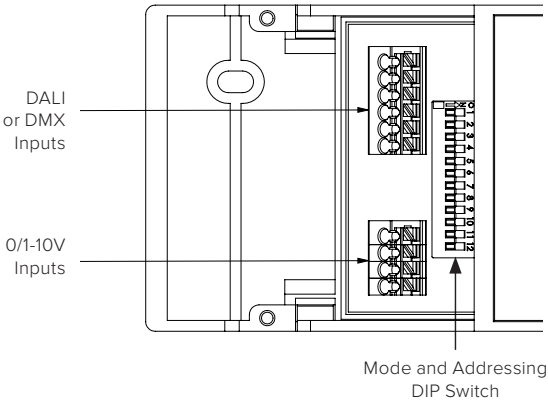
Static Color Temperature (SCT), Tunable White (TNW) Luminaires:



11.2 CONTROL SETUP

The Cooledge Control Module receives input signals from 3rd party control interfaces to control dimming. The control protocol required to interface with the controller determines which Control Module product model is required: DALI (0/1-10V), DMX, or Wireless (Casambi).

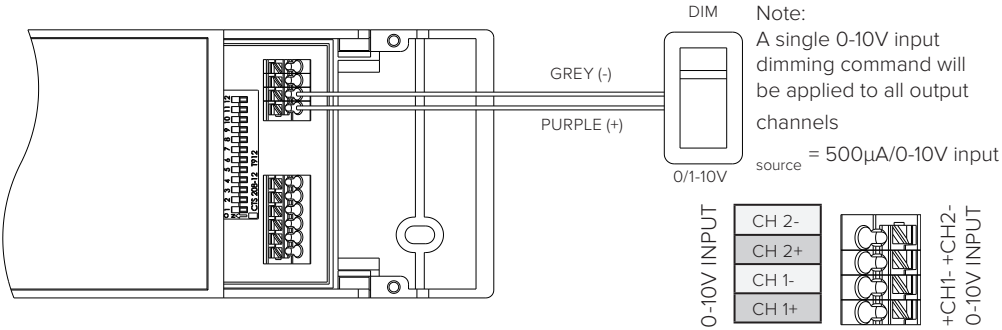




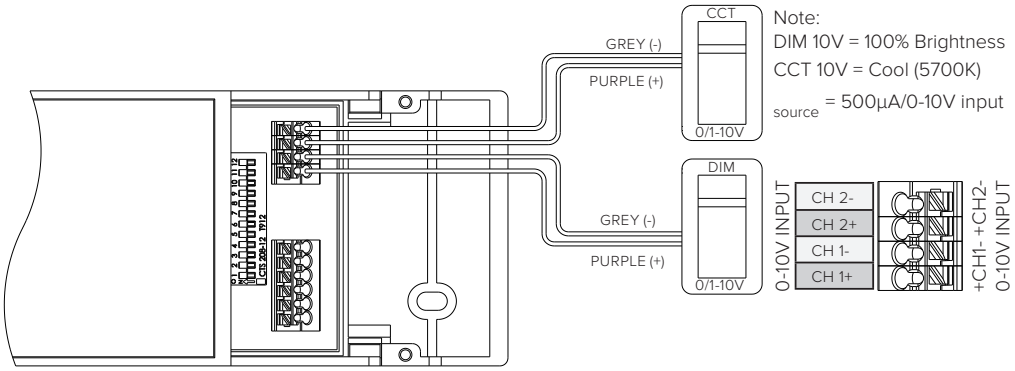
Warning! Changing DIP Switch Setting must be performed only after unit is powered down

11.2.1 0/1-10V CONTROL

Control Input - SCT

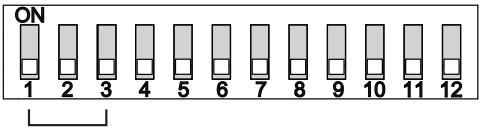


Control Input - TNW

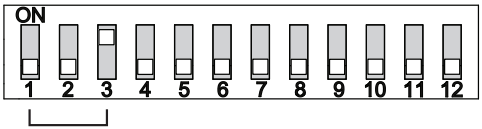


DIP Switch Settings - SCT

LOG MODE

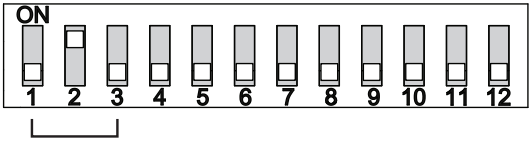


LIN MODE



Switches 1 - 3: Control Module MODE

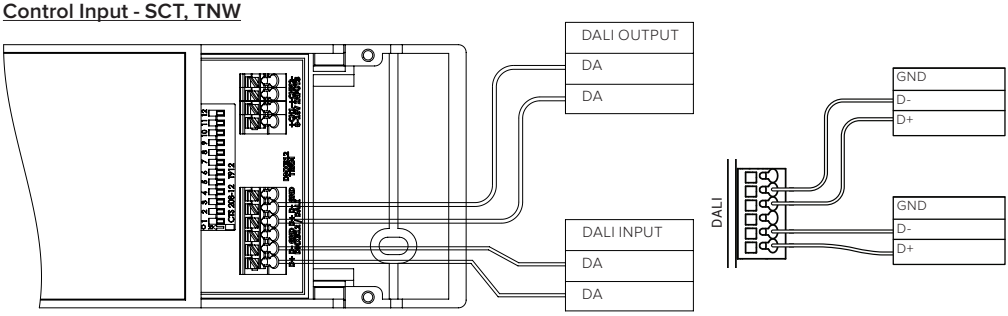
DIP Switch Settings - TNW



Switches 1 - 3: Control Module MODE

11.2.2 DALI

Control Input - SCT, TNW

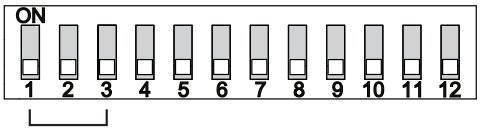


DIP Switch Settings - SCT

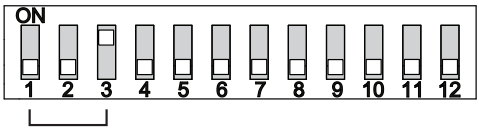
In this mode, unit commissions with 1 random DALI address.

In this MODE unit responds to DALI DT6 commands.

LIN MODE



LOG MODE



Switches 1 - 3: Control Module MODE

DIP Switch Settings - TNW 2

Synchronized 2 90W TNW channels.

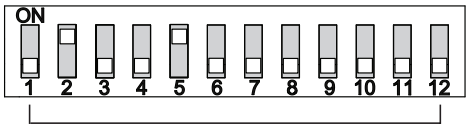
Unit commissions with 2 random DALI addresses

2 DALI addresses control synchronized both output channels: CH1 and CH2

1 address controls synchronized intensity of CH1 and CH2

1 address controls synchronized CCT of CH1 and CH2

In this MODE unit responds to DALI DT6 commands



Switches 1 - 3: Control Module MODE

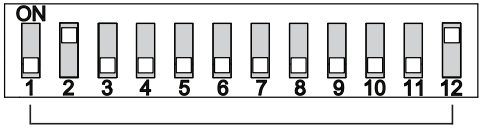
DIP Switch Settings - DT8 TNW 1

Unit commissions with 1 random DALI address

1 address controls intensity and color synchronized for both TNW 90W output channels: CH1 and CH2

Unit performs Cooledge LOG dimming curve.

Unit responds to DALI DT8 commands



Switches 1 - 3: Control Module MODE

DALI Addressing - SCT, TNW

The DALI Controller is compatible with IEC 62386 Part 101(Ed 2), Part 102(Ed 2), Part 207 and Part 209 and is able to report back through a DALI compliant master supporting either DT6 or DT8 devices.

A DALI unit can be powered at any time, independent of whether the DALI master is powered or not.

SCT 1 ADDRESSES MODE

Channel	Function	Address
1D	DIM Channel 1	RANDOM ADDRESS 1
2D	DIM Channel 2	RANDOM ADDRESS 1
3D	DIM Channel 3	RANDOM ADDRESS 1
4D	DIM Channel 4	RANDOM ADDRESS 1

TNW 2 ADDRESSES MODE

Channel	Function	Address
1D	DIM System 1	RANDOM ADDRESS 1
1CCT	CCT System 1	RANDOM ADDRESS 2
2D	DIM System 2	RANDOM ADDRESS 1
2CCT	CCT System 2	RANDOM ADDRESS 2

DT8 TNW 1 ADDRESSES MODE

Channel	Function	Address
1D	DIM System 1	RANDOM ADDRESS 1
1CCT	CCT System 1	RANDOM ADDRESS 1
2D	DIM System 2	RANDOM ADDRESS 1
2CCT	CCT System 2	RANDOM ADDRESS 1

EXAMPLES:

A Control Module in SCT 4 ADDRESSES Mode when commissioned with random addresses 4, 12, 20, and 17 could have this control structure:

Address 4 - DIM CH1
Address 20 - DIM CH2
Address 12 - DIM CH3
Address 17 - DIM CH4

A Control Module in SCT 1 ADDRESS Mode when commissioned with random address 5:

Address 5 - DIM CH1
Address 5 - DIM CH2
Address 5 - DIM CH3
Address 5 - DIM CH4

A Control Module in TNW 4 ADDRRESSES Mode when commissioned with random addresses 4, 9, 16, and 27 could have this control structure:

Address 16 - DIM TNW CH1
Address 27 - CCT TNW CH1
Address 9 - DIM TNW CH2
Address 4 - CCT TNW CH2

A Control Module in TNW 2 ADDRRESSES Mode when commissioned with random addresses 30, and 17 could have this control structure:

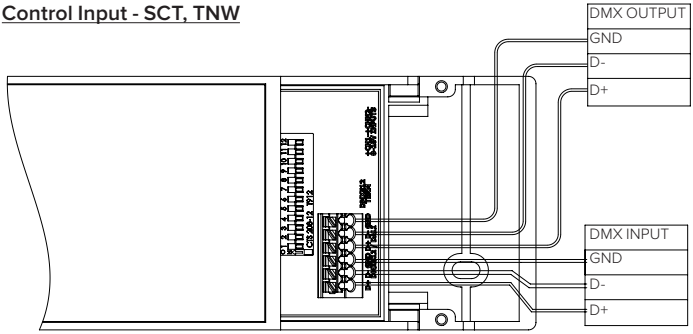
Address 30 - DIM TNW CH1 + DIM TNW CH2
Address 17 - CCT TNW CH1 + CCT TNW CH2

A Control Module in DT8 TNW 1 ADDRRESS Mode when commissioned with random address 21:

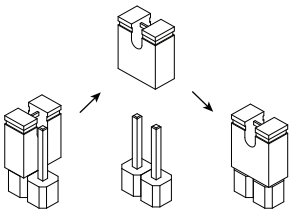
Address 21 - DIM TNW CH1 + DIM TNW CH2 + CCT TNW CH1 + CCT TNW CH2

11.2.3 DMX

Control Input - SCT, TNW



When installing the final controller (termination point) in a DMX network use the provided jumper on the indicated header.



DIP Switch Settings - SCT

LOG SCT - 16-bit

LOG SCT - 8-bit

Switches 1 - 3: Control Module MODE

For LOG SCT 16-bit Mode each Output Channel uses 2 DMX Channels:

1 for DIM Coarse

1 for DIM Fine

In total, each controller occupies 8 DMX channels, assigned as below:

DMX CH1 – DIM Coarse Output CH1; DMX CH2 – DIM Fine Output CH1

DMX CH3 – DIM Coarse Output CH2; DMX CH4 – DIM Fine Output CH2

DMX CH5 – DIM Coarse Output CH3; DMX CH6 – DIM Fine Output CH3

DMX CH7 – DIM Coarse Output CH4; DMX CH8 – DIM Fine Output CH4

Example of addressing units for LOG SCT 8-bit Mode on DMX bus:

Unit 1 takes DMX Address = 1 and unit occupies DMX Channels # 1-8 with DIP settings 000 000000001

Unit 2 takes DMX Address = 9 and unit occupies DMX Channels # 9-16 with DIP settings 000 000001001

Unit 3 takes DMX Address = 17 and unit occupies DMX Channels # 17-24 with DIP settings 000 000010001

For LOG SCT 8-bit Mode each Output Channel uses 1 DMX Channels:

In total, each controller occupies 4 DMX channels, assigned as in the example below:

DMX CH1 – DIM Output CH1

DMX CH2 – DIM Output CH2

DMX CH3 – DIM Output CH3

DMX CH4 – DIM Output CH4

Example of addressing units for LOG SCT 8-bit Mode on DMX bus:

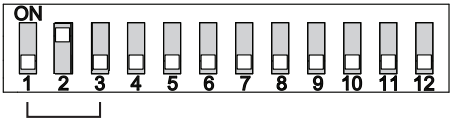
Unit 1 takes DMX Address = 1 and unit occupies DMX Channels # 1-4 with DIP settings 100 000000001

Unit 2 takes DMX Address = 5 and unit occupies DMX Channels # 5-8 with DIP settings 100 000000101

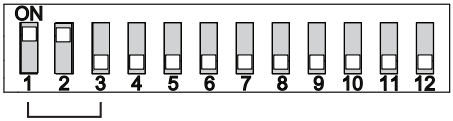
Unit 3 takes DMX Address = 9 and unit occupies DMX Channels # 9-12 with DIP settings 100 000001001

DIP Switch Settings - TNW

TNW - 16-bit



TNW - 8-bit



Switches 1 - 3: Control Module MODE

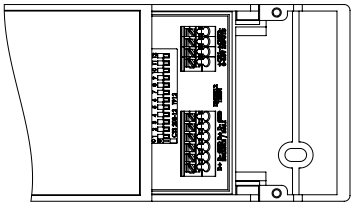
For TNW 16-bit Mode each Tunable Output Channel uses 4 DMX Channels:
1 for DIM Coarse
1 for DIM Fine
1 for CCT Coarse
1 for CCT Fine
In total, each controller occupies 8 DMX channels, assigned as below:
DMX CH1 – DIM Coarse TNW Output CH 1 & 2
DMX CH2 – DIM Fine TNW Output CH 1 & 2
DMX CH3 – CCT Coarse TNW Output CH 1 & 2
DMX CH4 – CCT Fine TNW Output CH 1 & 2
DMX CH5 – DIM Coarse TNW Output CH 3 & 4
DMX CH6 – DIM Fine TNW Output CH 3 & 4
DMX CH7 – CCT Coarse TNW Output CH 3 & 4
DMX CH8 – CCT Fine TNW Output CH 3 & 4

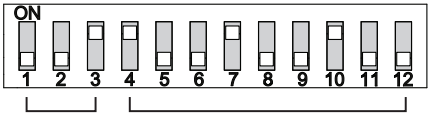
Example of addressing units for TNW Mode on DMX bus:
Unit 1 takes DMX Address = 1 and unit occupies DMX Channels # 1-8 with DIP settings 010 000000001
Unit 2 takes DMX Address = 9 and unit occupies DMX Channels # 9-16 with DIP settings 010 000001001
Unit 3 takes DMX Address = 17 and unit occupies DMX Channels # 17-24 with DIP settings 010 000010001

For TNW 8-bit Mode each Tunable Output Channel uses 2 DMX Channels:
1 for DIM
1 for CCT
In total, each controller occupies 4 DMX channels, assigned as below:
DMX CH1 – DIM Output CH 1 & 2
DMX CH2 – CCT Output CH 1 & 2
DMX CH3 – DIM Output CH 3 & 4
DMX CH4 – CCT Output CH 3 & 4

Example of addressing units for TNW 8-bit Mode on DMX bus:
Unit 1 takes DMX Address = 1 and unit occupies DMX Channels # 1-4 with DIP settings 110 000000001
Unit 2 takes DMX Address = 5 and unit occupies DMX Channels # 5-8 with DIP settings 110 000000101
Unit 3 takes DMX Address = 9 and unit occupies DMX Channels # 9-12 with DIP settings 110 000001001

DMX Addressing - SCT, TNW





Switches 1 - 3: Control Module MODE

Switches 4 - 12: Addressing switches.

- To access the dip switch for selecting addresses for DMX controls, unfasten the screws for the Controls Input and DIP Switch Cover.

DMX Controllers are factory set to address 1

- Each of the 9 switches (4-12) represents a bit in binary representation for the address. For example, when switch 12 is 'ON' address 1 is set, if switch 12 & 11 are 'ON' then address 3 is set. The address is set by the sum of the values of each 'ON' switch. Addresses 1 through 511 are possible.

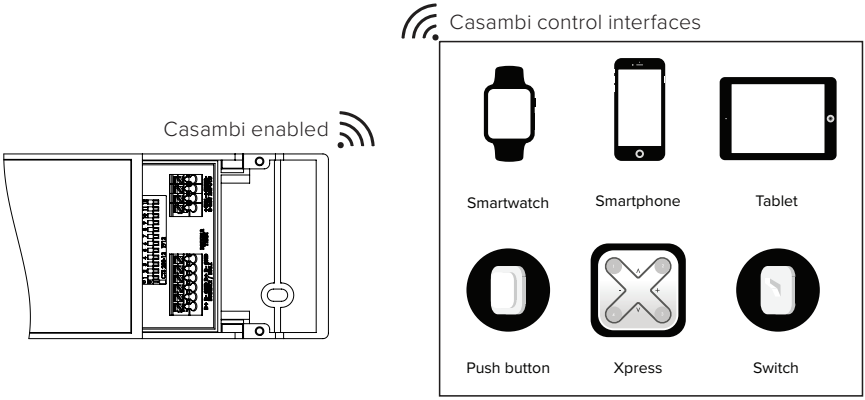
Switch:	4	5	6	7	8	9	10	11	12
Address:	256	128	64	32	16	8	4	2	1

11.2.4 CASAMBI

Control Input - SCT, TNW

Wireless models of the Control Module are shipped with a factory-installed card that enables the Casambi functionality.

The Control Module is capable of wireless control through the Casambi app (free on IOS and Android Devices). To download the Casambi App and access other relevant documentation please visit:
www.casambi.com/downloads.html



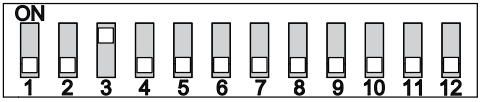
Consult the "Short User Guide to the Casambi App" at:

https://support.casambi.com/support/solutions/articles/12000021612-first-time-casambi-app-use
for additional information related to setting up and using Casambi

DIP Switch Settings - SCT

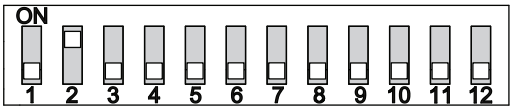
LOG MODE

LIN MODE



Switches 1 - 3: Control Module MODE

DIP Switch Settings - TNW



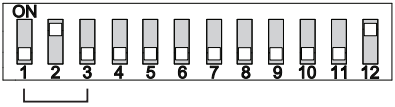
Switches 1 - 3: Control Module MODE

TNW Synchronized Outputs Mode

If this custom Casambi profile is activated the two TNW channels of a Smart Controller will be synchronized. This custom profile has only one Dimmer and one CCT slider and adjusting either one of these sliders will cause the corresponding change in Dim Level or CCT to both TNW outputs of the Smart Controller.

Furthermore, when more than one Smart Controller is grouped within the Casambi App and a user performs a press and hold of the group icon in the App, only one Dimmer and one CCT slider will appear, allowing all channels of all grouped Smart Controllers to be adjusted in a synchronized fashion. Additionally, when a user touches the Group icon and swipes horizontally a single horizontal Dim adjustment slider shall appear to allow synchronized control of the Dim level of all units in the Group. When swiping vertically over the Group icon a single CCT slider shall appear to allow synchronized control of the CCT of all units in the Group.

DIP SWITCH SETTING FOR TNW SYNCHRONIZED MODE



Switches 1 - 3: Control Module MODE

11.3 DYNAMIC TEST MODE - 0/1-10V, DALI, CASAMBI

Dynamic test mode is used to check the system functionality. This mode will ignore control inputs and cycle through the output range.

Standalone SCT	Mode Switches 1-3	Switches 4-12
Dynamic Dimming Level Test (SCT)	1-0-1	IGNORED
Dynamic Color Tune Test (TNW)	1-1-1	IGNORED

Dynamic test SCT mode:
Outputs operate in standard configuration with the output duty cycle of all 4 channels matching. Output duty cycle starts from 0% and ramps linearly up to 100% output, then ramps back down to 0% and repeats indefinitely with a period of 5 seconds.

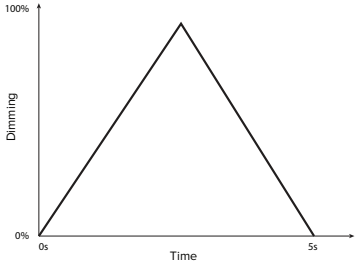


Figure 2: SCT Dynamic test mode output range

Dynamic test TNW mode:
This test mode is only applicable for FABRILum TNW. Output duty cycle starts with the WARM LEDs (2700K) raising their intensity from 0% to 100% then decreasing to 0%. Next the COOL LEDs (5700K) raise intensity from 0% to 100% then decrease to 0%. This cycle repeats indefinitely with a period of 10 seconds.

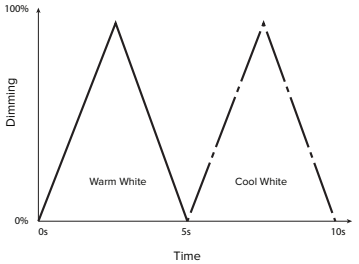


Figure 3: TNW Dynamic test mode output graph

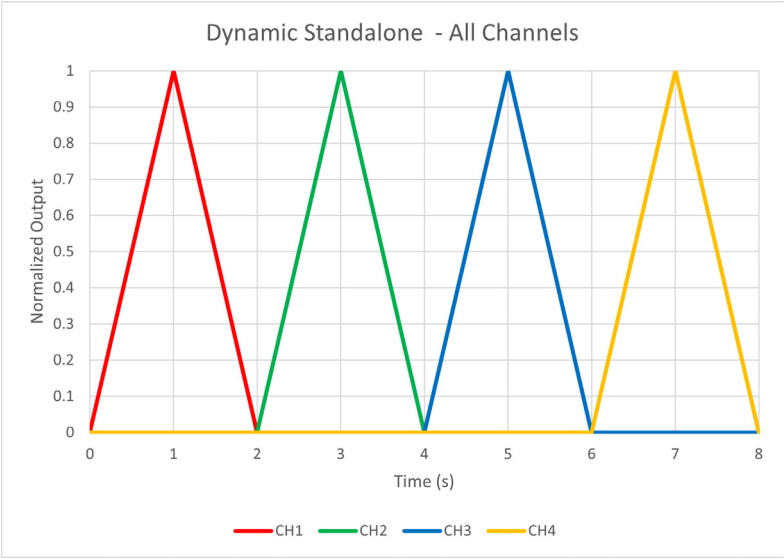
11.4 DYNAMIC TEST MODE - DMX

Dynamic test mode is used to check the system functionality. This mode will ignore control inputs and cycle through the output range.

Mode Switches 1-3	Switches 4-12
X-0-1	IGNORED

X = IGNORED
1 = ON
0 = OFF

Outputs operate in standard configuration with the output duty cycle of all 4 channels ramping up and down sequentially. Output duty cycle starts from 0% and ramps linearly up to 100% output, then ramps back down to 0% and repeats indefinitely with a period of 8 seconds.



11.5 TROUBLESHOOTING GUIDE

Status, All Controller Types:

CONTROLLER STATUS	MODE	LED STATUS	LOAD BEHAVIOR
OFF (No Input Power)	All	OFF	OFF
Standalone Recognized	Standalone	Alternate Amber/Green Slow (1 Hz)	Responsive only to DIP switch setting
No Control Input	All	Amber On Steady State	Full ON
Input Over Voltage	All	Amber Flashing Slow (1 Hz)	OFF
Input Under Voltage	All	Amber Flashing Fast (8 Hz)	OFF
Output Short Circuit V+ to V-	All	Red Flashing with Intermittent Green or Amber	Load is OFF on shorted Channel All loads of the unit, except the shorted one, are flashing The rest of units in the installation remain responsive to DALI, DMX, 0/1-10V, or CASAMBI commands (depending on controller)
Output Overload	All	Red Flashing	Overloaded channel dimmed and flashing at 1s constant rate All other loads of the unit remain responsive to DALI, DMX, 0/1-10V, or CASAMBI commands (depending on controller)
Control Input Shorted (DALI, DMX, 0/1-10V)	All	LED status OK in correspondence to each Mode, not affected	Loads FULL ON (DALI), OFF (DMX, 0/1-10V)

Status By Controller Type:

CONTROLLER STATUS	MODE	LED STATUS	LOAD BEHAVIOR
0/1-10V Control Input Recognized	All except Standalone	Green On Solid for V = 0 - 9.5V; Amber On Solid for V > 9.5V	Responsive to 0-10V Dimmer commands
DALI Control Input Recognized	All except Standalone	Green Flashing Slow (1 Hz)	Responsive to DALI commands
CASAMBI Control Input Recognized	All except Standalone	Green Flashing Fast (8 Hz)	Responsive to CASAMBI commands

WARNING:

Each module treats the input controls available with the following priority:

1. Dynamic Test Mode: If DIP Switch setting for this mode is selected, the module will ignore any other control input (Casambi, 0-10V, DALI) and operate according to the settings of the operational mode selected
2. Wireless (Casambi): When the wireless chip is installed in the Control Module all other inputs (0-10V and DALI) are ignored even they are wired
3. DALI: If the control module receives a DALI input and no Casambi card is installed, it will operate according to the DALI commands it receives, and 0-10V input will be ignored even it is wired
4. 0-10V: If the module has no Casambi card installed and no DALI control wired, it will operate according to the 0-10V commands.

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THIS PRODUCT CONTAINS A LIGHT SOURCE OF ENERGY EFFICIENCY CLASS D OR E

5 Year Limited Warranty: Parts and workmanship

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