

# Merge 3 - Linear Suspension

1.0



MERGE

**GENERAL PRODUCT INFORMATION:**  
This product is suitable for dry locations.

Maximum run length per branch circuit power feed is 80ft.

Maximum run length for low-voltage busbar is 40ft; Multiple 40ft runs may be combined using multiple transformers.

Maximum loading of the low-voltage busbar is 240W (20 AMPS).

This instruction shows a typical installation.



**CAUTION - RISK OF FIRE**

This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

**Use minimum 90°C supply conductors.**

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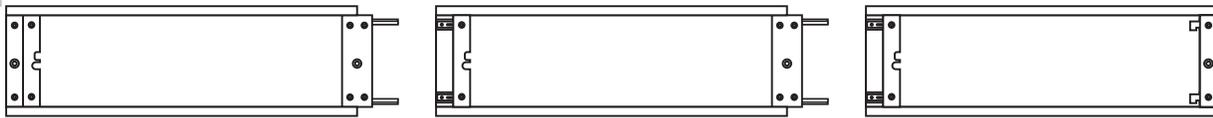
**NOTE: Due to the complexity of this fixture, assistance is recommended for installation.**

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**SAVE THESE INSTRUCTIONS!**

## Identify the Fixtures and Configuration (Continuous run installations only)

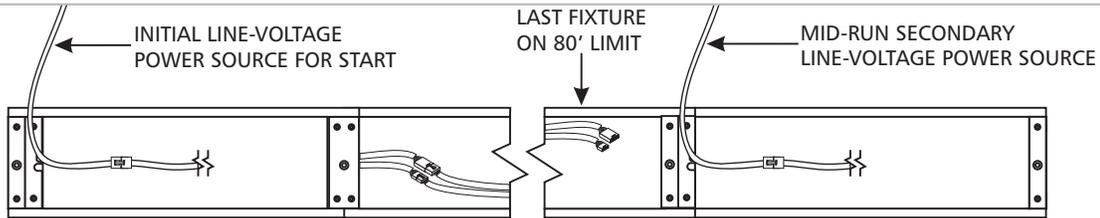
**1A** The Merge Suspension housing will be modified to 3 different elements for a continuous run...See Section 2 for Details.



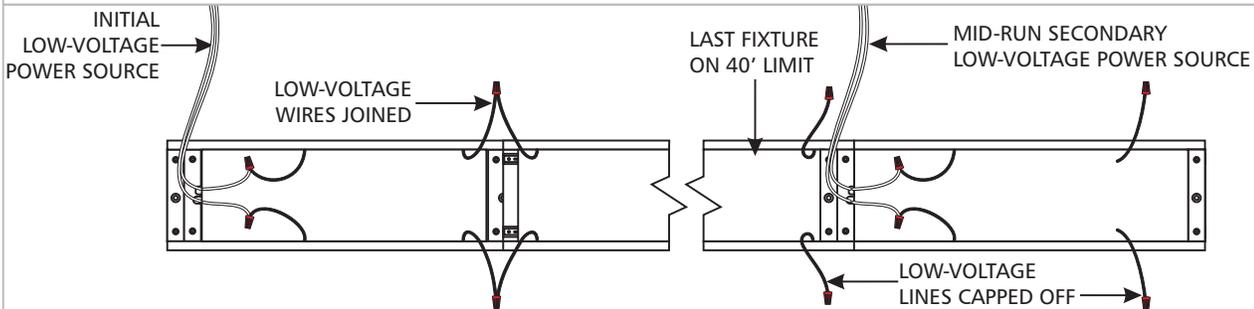
**Start**  
The housing will have an end hanger plate installed in the beginning end and a joining hanger plate and joiner angles on the joining end.

**Middle**  
All housings between the start and end will have joining hanger plates and joiner angles on the joining end.

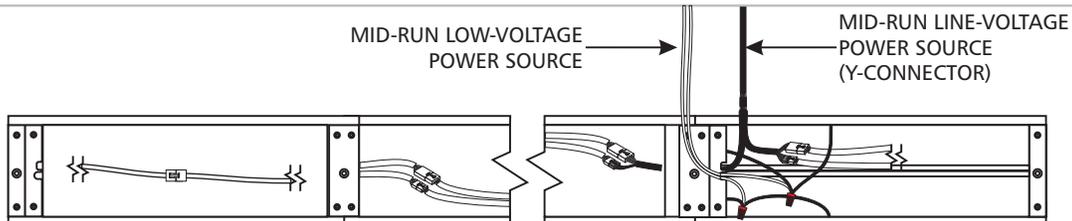
**End**  
The end housing will have no joiner angles and an end hanger plate on the finishing end.



The line-voltage section of the fixture run will be likely powered at the start of the run, then interconnected to a maximum of 80'. For a longer run, sections may be isolated by simply not connecting the wire harnesses together. The secondary power source must be spliced to the wiring harness in the fixture using one of the provided notched locations.

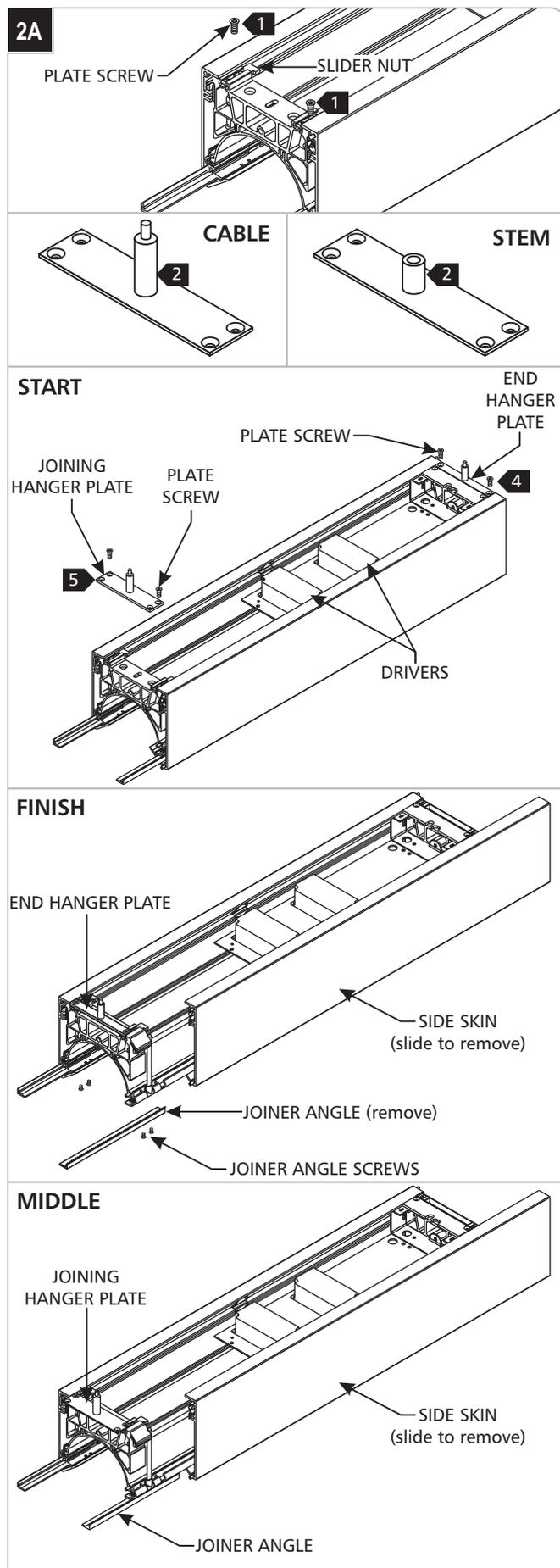


The low-voltage section of the fixture run will also likely be powered at the start of the run, then interconnected to a maximum of 40'. Sections of the run may be isolated by simply not connecting the low-voltage lines and the run may be powered by multiple transformers at different units to power longer runs.



The line-voltage power can be delivered mid-run by using the Y-connector to connect the line-voltage and dimming controls. The low-voltage power can be delivered mid-run by connecting the low-voltage wires from the 2 adjacent units to the wire from the drop.

## Prepare the Fixtures

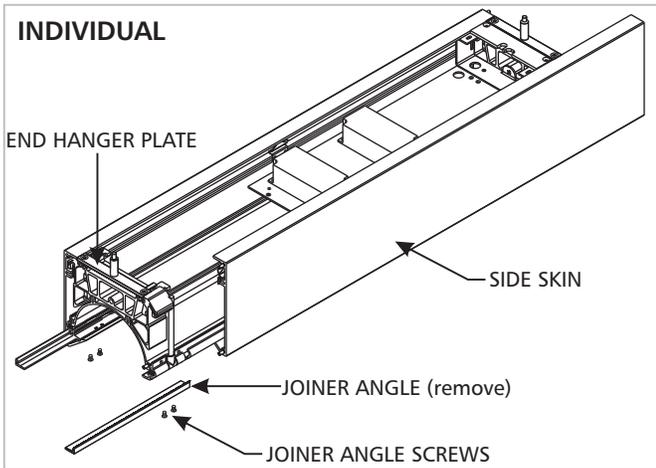


- 1 Note the plate screws mounted at each end of the fixture. These will be used to mount the hanging plates to the slider nuts.
- 2 Prepare the hanger plates by mounting the cable grips or stem posts using the screws and lock washers provided.
- 3 Designate which fixture will be the start fixture. The beginning end of the start fixture will be the side which contains the drivers. The start fixture is where the power will likely be connected.
- 4 Install the end hanger plate (found in finishing kit) to the beginning end of the start fixture by using the plate screws; the beginning end is the end with the drivers.
- 5 Install the joining hanger plate on joining end of the start fixture by using the plate screws without fully tightening them.

**NOTE:** Remove the side skins from the middle and finish fixtures by sliding them back to disengage the plates inside. Set the side skins aside in a safe place.

- 6 Designate which fixture will be the finish fixture. Install the end hanger plate (found in finishing kit) to the finishing end of the finish fixture by using the plate screws without fully tightening them; the finishing end is the end with the joiner angles.
- 7 Remove the joiner angles by removing the screws on the bottom of the fixture.
- 8 Designate which fixtures will be the middle fixtures. Install the joining hanger plate (found in finishing kit) to the joining end of each middle fixture by using the plate screws without fully tightening them; the joining end is the end with the joiner angles.
- 9 Repeat for all middle fixtures.

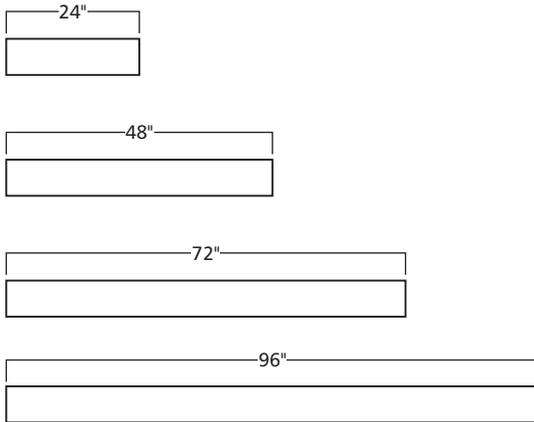
**NOTE:** Further preparation is needed when using corner fixtures. Refer to the corner instructions before proceeding.



- 10 For individual fixture installations, remove the joiner angles and install end hanger plates at both ends.

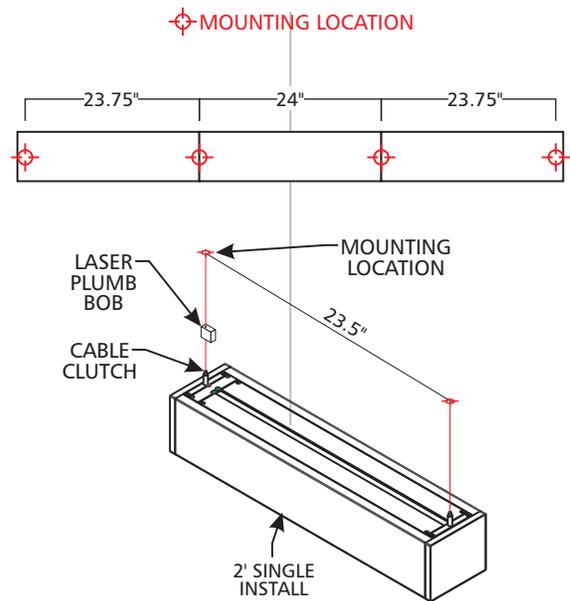
## Prepare for Installation

3A



For corners, see instructions included with corner fixture

## 2' Example Configuration



- 1 The mounting cable/stem locations on the fixture are centered at the seam between adjoining fixtures. The mounting location for the start and end fixtures are 1/4" in from the end. If installing a single fixture, mounting locations will be a 1/4" in from both ends. Using the provided diagram, mark the post/T-Bar location on the ceiling/grids for each model in the configuration. See example configuration.

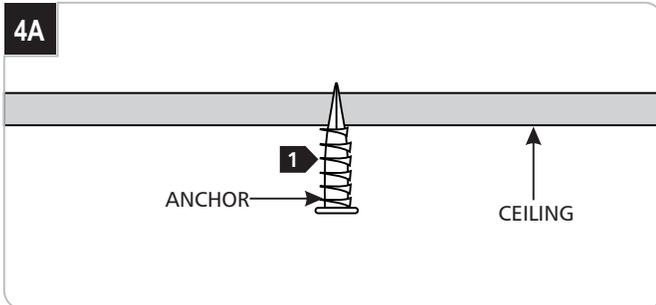
**Note:** If using a canopy with a cable post, the post located in the center of the canopy will be one of the reference points.

**Alternate Marking:** Lay the fixture configuration on the floor underneath the installation location, and use a laser plumb bob to project the location of the cable clutch or stem post onto the ceiling/grid. Mark the locations.

See the appropriate section for post mounting.  
**Cable/Stem Post for Ceiling: Section 2**  
**Cable/Stem Post for Grid: Section 3**

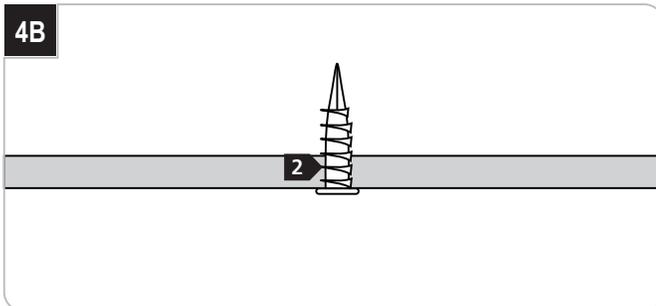
## Install the Cable/Stem Posts (Ceiling)

**4A**



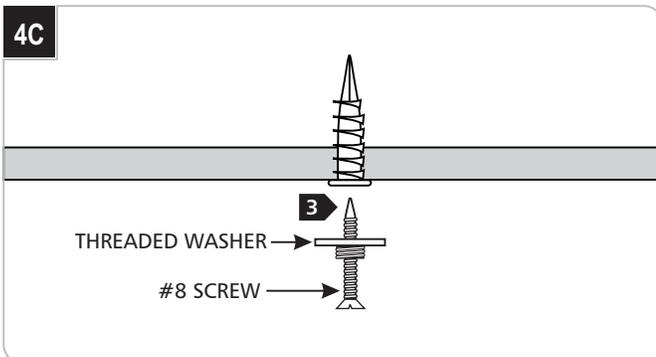
- 1** At the mark point, tap the anchor into the ceiling up to the threaded portion with a hammer.

**4B**



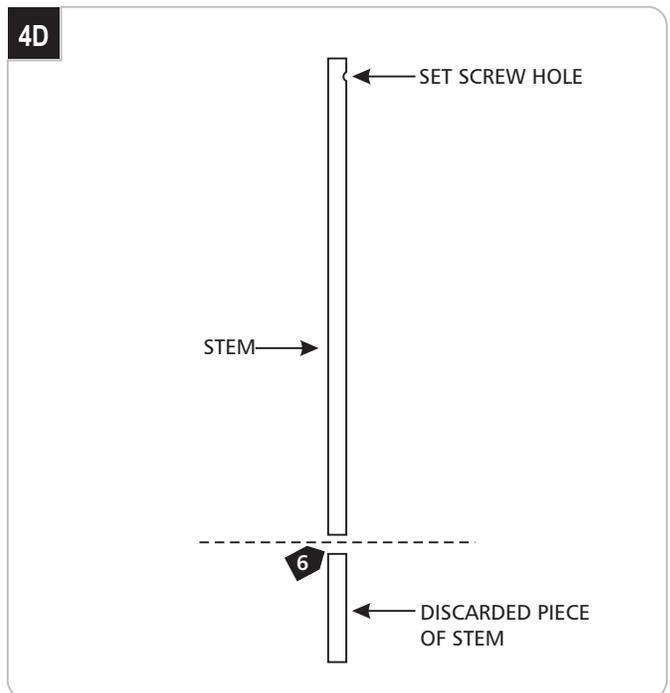
- 2** Screw the anchor in the rest of the way with a Phillips screwdriver.

**4C**



- 3** Mount the threaded washer to the anchor with the #8 screw.
- 4** Repeat the steps 1 through 3 for the remaining marked points.

**4D**

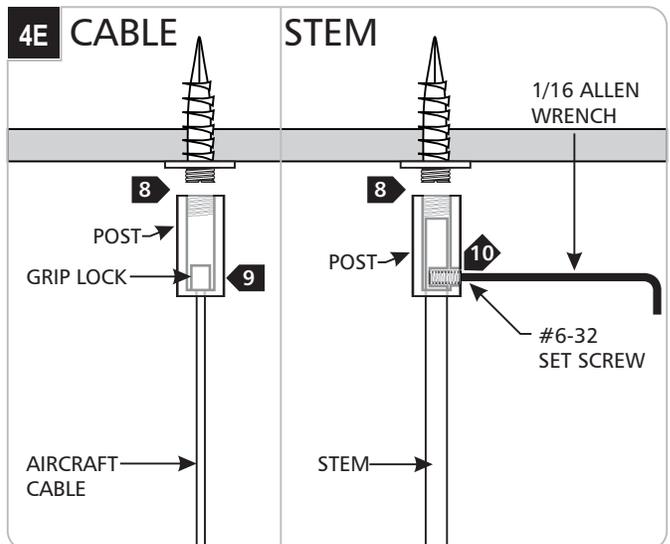


- 5** If shortening the stems: starting from the end with the set screw hole, measure then mark the desired length of the stem.

- 6** Cut the stem at the mark with a hacksaw.

- 7** Clean the burrs off the cut section.

**4E**



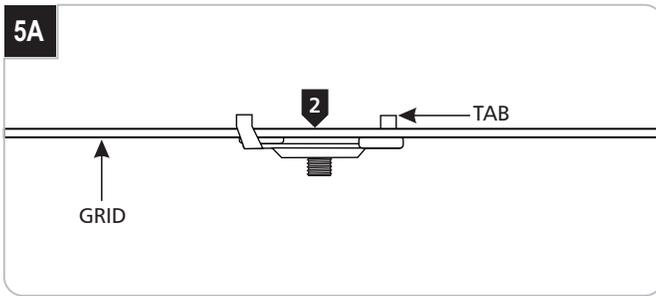
- 8** Screw the posts onto the threaded washers.

- 9** For cable: feed the aircraft cables through the post so that the grip lock is secured inside.

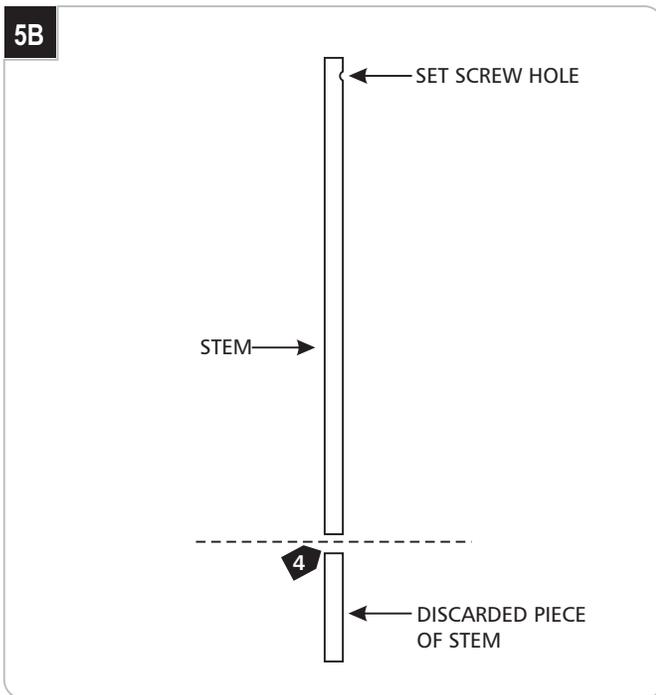
- 10** For stem: insert the stems into the posts, align the stem hole with the post hole, and install the #6-32 set screw with the 1/16 Allen wrench. Make sure that the set screw is installed completely and tightly into the stem.

- 11** For cable, skip to section 6. For stem, skip to section 7.

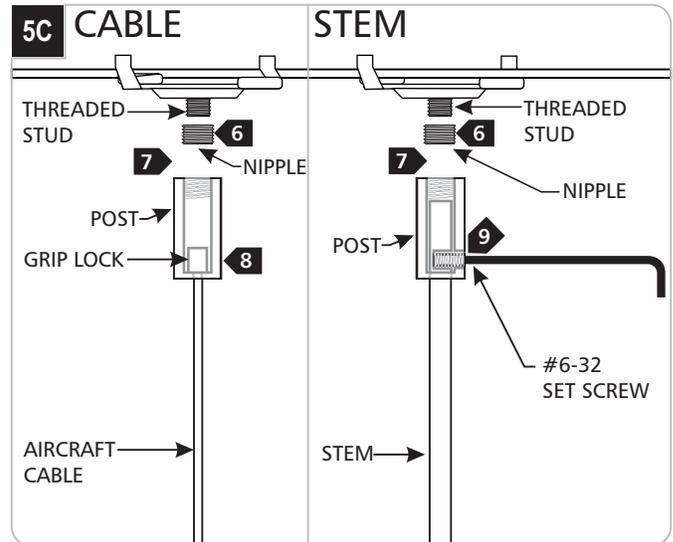
## Install the Cable/Stem Posts (Grid)



- 1 Select the locations on the grids where the standoffs will be mounted.
- 2 Push the T-bar connector flat section against the grid. Rotate the T-bar connector until the tabs on the T-bar connector snap behind the grid.



- 3 If shortening the stems: starting from the end with the set screw hole, measure then mark the desired length of the stem.
- 4 Cut the stem at the mark with a hacksaw.
- 5 Clean the burrs off the cut section.

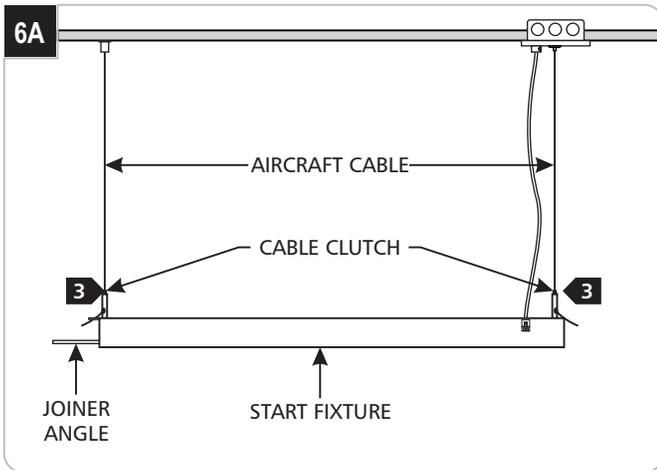


- 6 Screw the nipple to the threaded stud.
- 7 Screw the post completely to the nipple.
- 8 **For Cable:** Feed the aircraft cables through the post so that the grip lock is secured inside.
- 9 **For Stem:** Insert the stems into the posts, align the stem hole with the post hole, and install the #6-32 set screw with the 1/16 Allen wrench. Make sure that the set screw is installed completely and tightly into the stem.

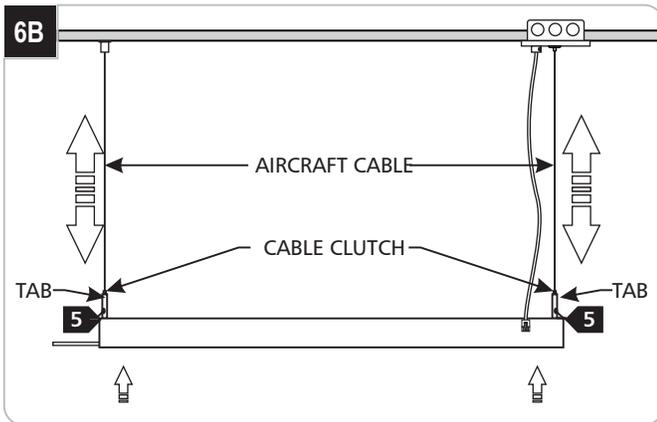


**Continue installation using instructions provided with the canopy.**

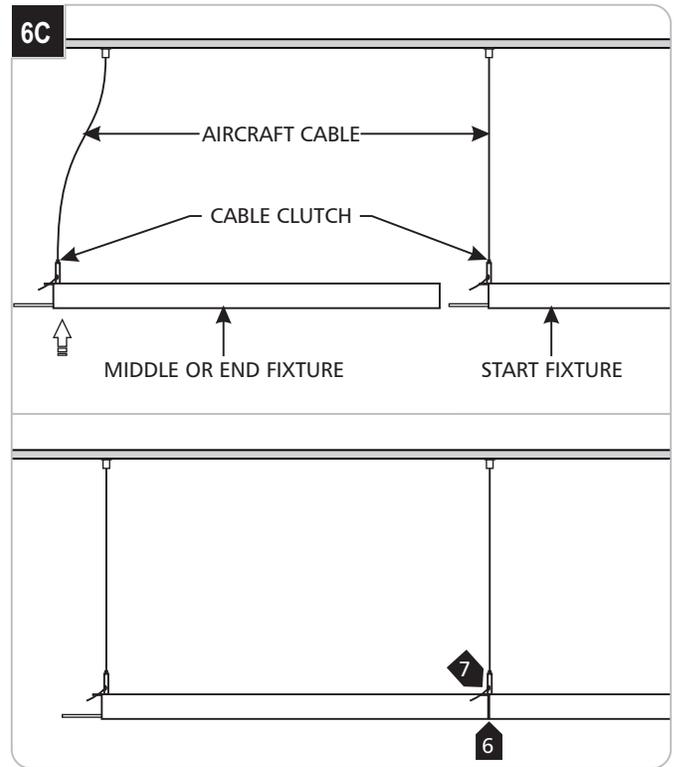
# Install Fixture (Cable)



- 1 Feed the aircraft cable completely through the cable clutches on the start fixture until the desired height is achieved. Make sure the joiner angles are facing the next fixture.

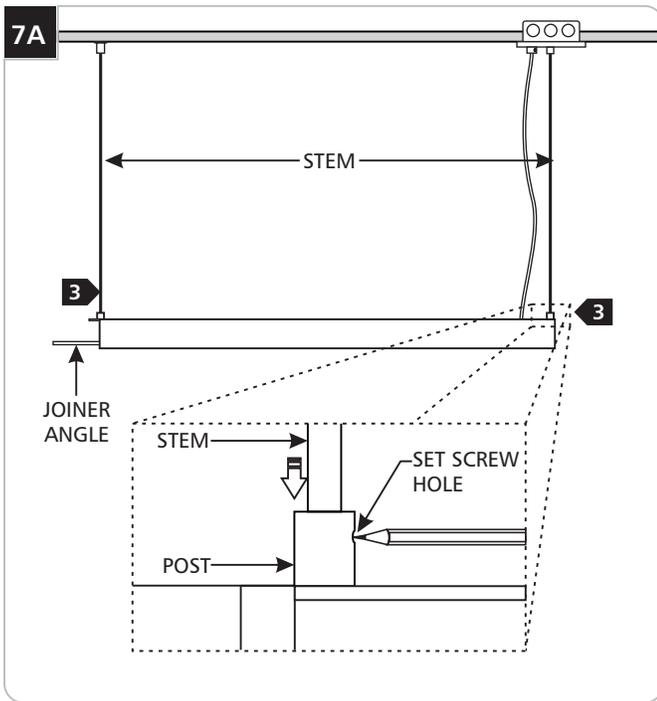


- 2 To level the fixture, push the tab on the cable clutch and feed more or less of the support cable into the cable clutch. Make fine adjustments to each cable until the fixture is level.
- 3 Do not cut off the excess aircraft cable until installation is complete.
- 4 If installing single fixture, skip to section 8.

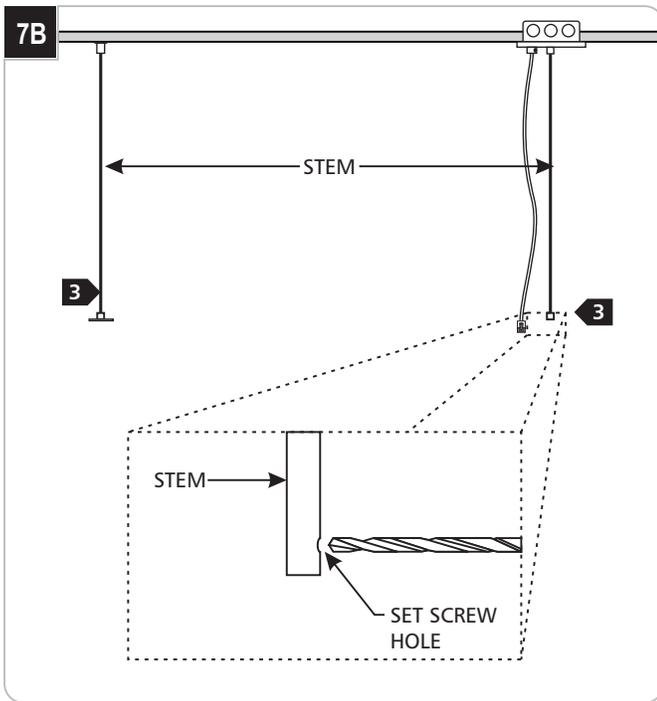


- 5 Feed the aircraft cable completely through the cable clutch of next (middle or end) fixture while supporting the free end.
- 6 Set the free end of the new fixture onto the previous fixture's joiner angles. Push the fixtures together so that they are aligned and the reflectors are touching. Be careful not to dislodge the light leak gaskets or pinch them between the reflectors.
- 7 Install the hanger plate screws without fully tightening them.

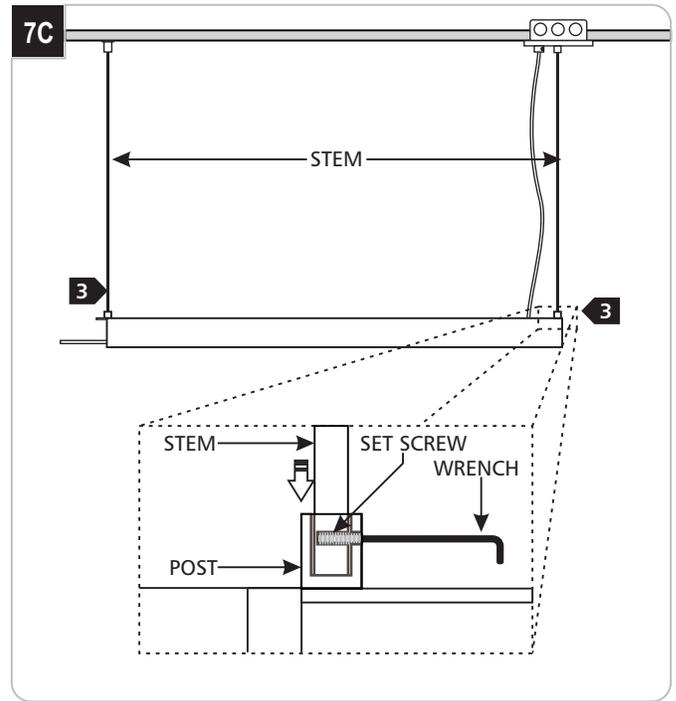
## Install the Fixture (Stem)



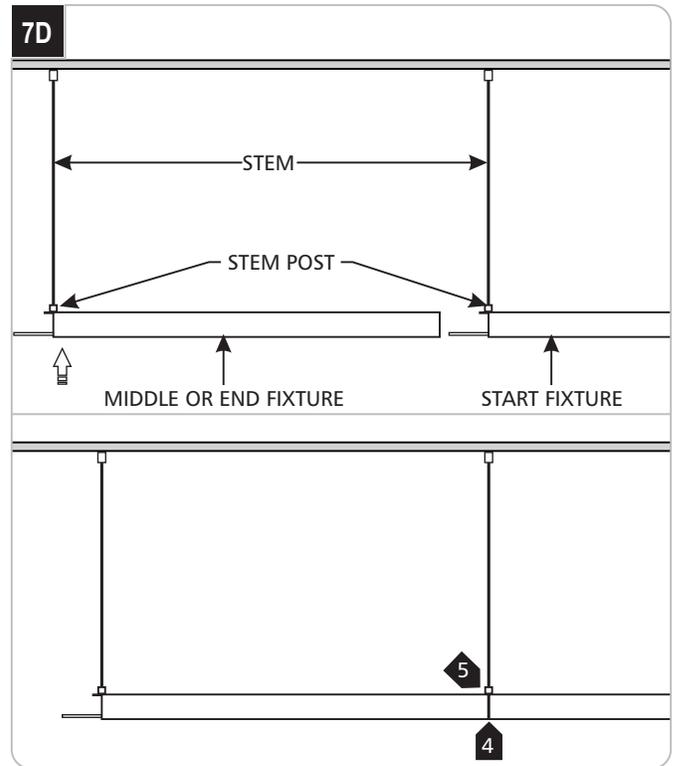
- 1 Temporarily install the fixture by pushing the stems completely into the posts and mark the location of the set screw hole. Make sure the joiner angles are facing the next connecting end.



- 2 Remove the fixture and drill a hole using a #29 (0.136") drill bit at the marked location in each stem.

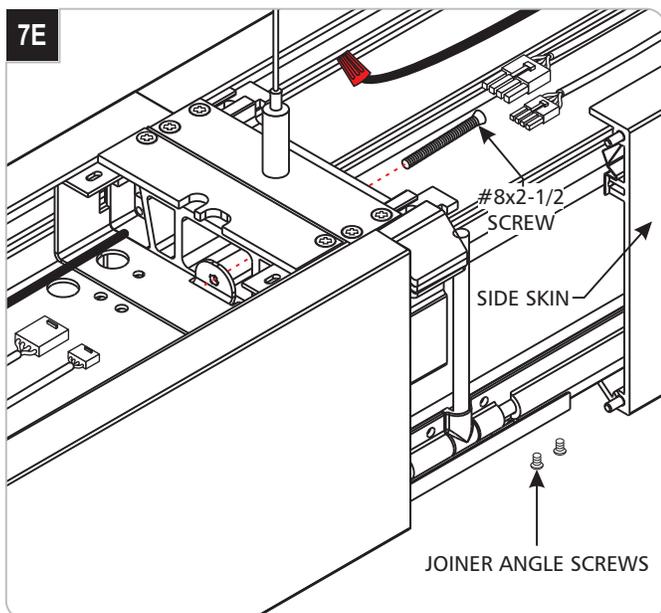


- 3 Reinstall the fixture by inserting the stems into the posts and install the #6-32 set screw with the 1/16 Allen wrench. Make sure that the set screw is installed completely and tightly into the stem.



- 4 Set the free end of the new fixture onto the previous fixture's joiner angles. Push the fixtures together so that they are aligned and the reflectors are touching. Be careful not to dislodge the light leak gaskets or pinch them between the reflectors.
- 5 Install the plate screws without fully tightening them.

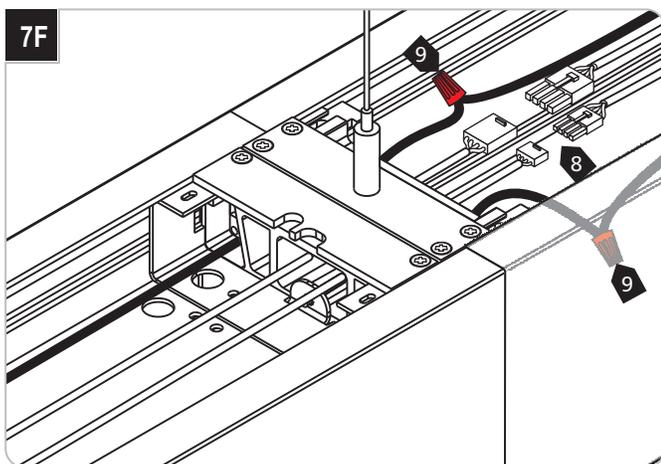
7E



- 6 Install a 2-1/2" screw at each fixture joint. Use the hex wrench provided to tighten the screw and pull the fixtures together and minimize the seam between the reflectors when seen from below. Raise or lower the ends of the fixtures as needed to align them.
- 7 When all the fixtures have been hung, leveled, and aligned, lock them together by installing screws into the bottom of the fixtures through the joiner angles. The fixtures can be realigned by slightly loosening the joiner angle screws and re-tightening them after adjustment.

**SIDE SKIN NOTE:** Install the side skins by pivoting them into place an inch or two away from their final location and sliding into place.

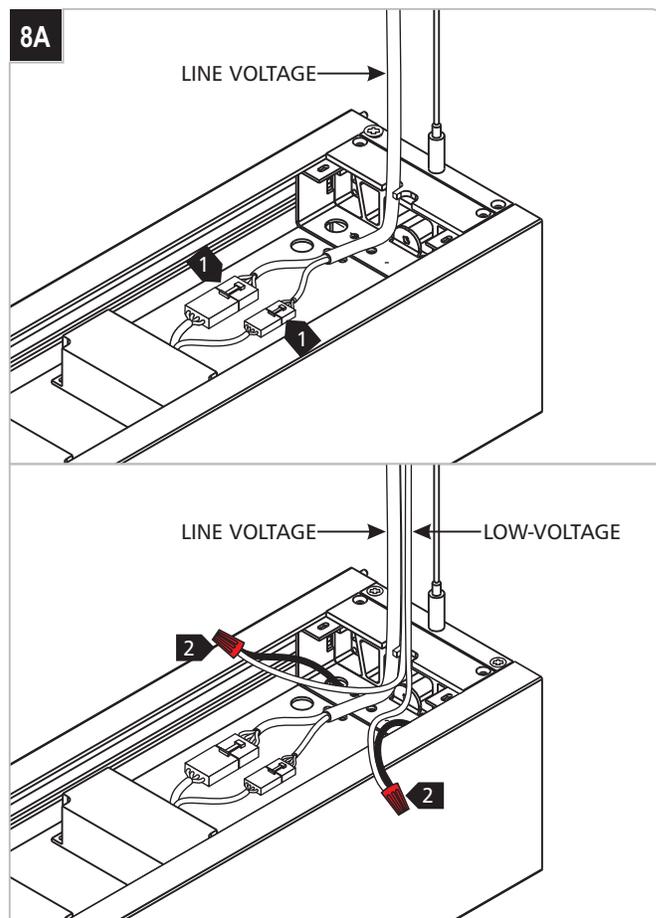
7F



- 8 Feed the female power and control connectors into the adjacent fixture and connect them to the male connectors.
- 9 Feed the low-voltage wires also into the adjacent fixture and connect them using the provided wire nuts.
- 10 Repeat steps 8-9 for the rest of the connecting fixtures.

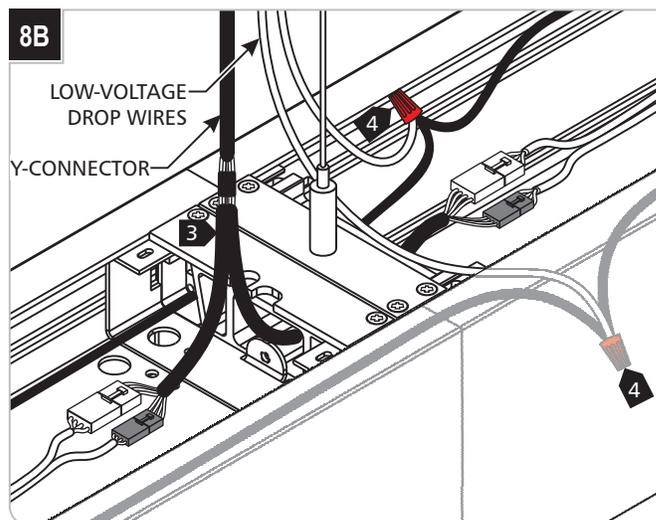
## Connect the Power Feed

8A



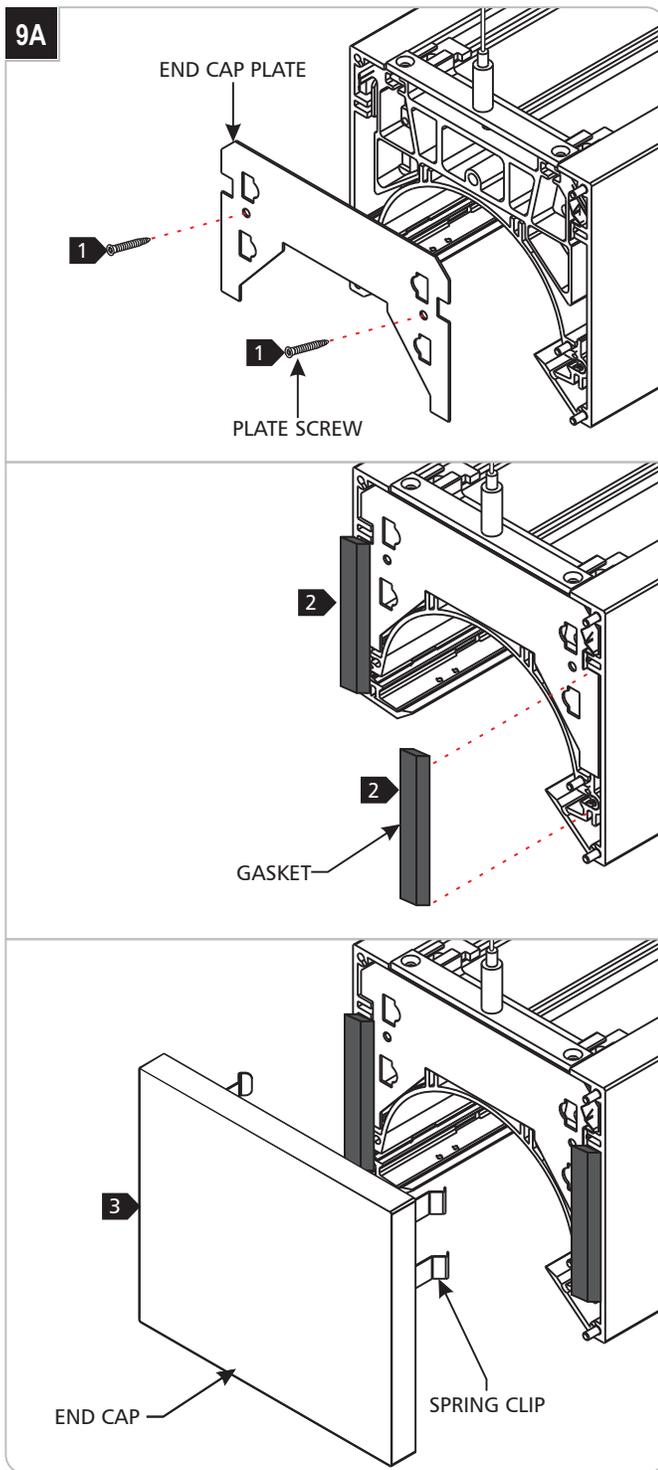
- 1 Connect the power and control wire connectors from the power feed to the connectors on the fixture.
- 2 If utilizing the low-voltage bus bar, connect the low-voltage remote transformer wires to the low-voltage wires in the fixture with the provided wire nuts.

8B



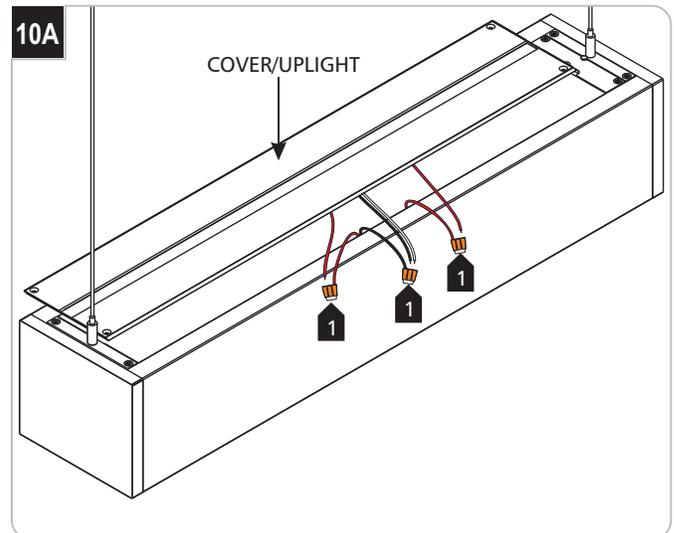
- 3 If dropping power to a middle fixture, use the provided Y-connector to power the 2 adjacent fixtures.
- 4 Connect the corresponding low-voltage wires in the adjacent fixtures to the low-voltage drop wires.

## Install the End Caps



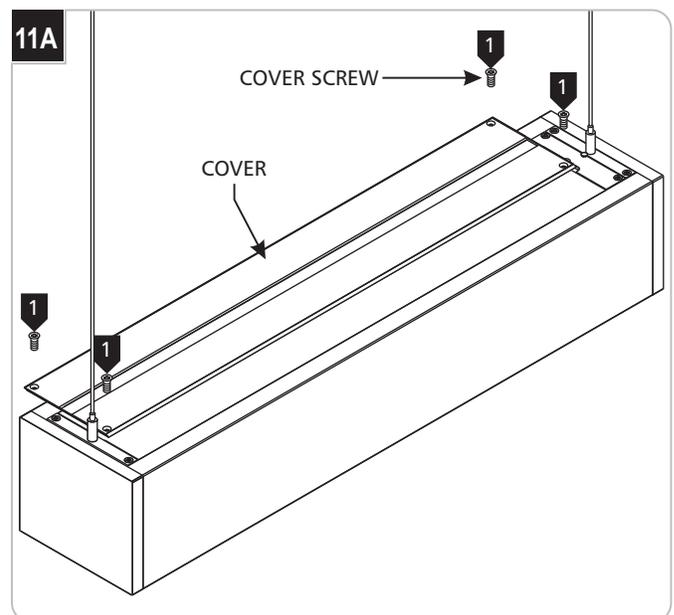
- 1 Remove the black gaskets from the end where present. Secure the end cap plate to both fixture ends using the provided plate screws.
- 2 Install new light gaskets as shown on both ends.
- 3 Install the end caps by aligning the spring clips to the fixture and pushing them in until they snap in place.

## Wire the Uplight (Optional)



- 1 Connect the wires in the top cover to the corresponding wires inside the fixture using the push-in connectors provided.

## Install the Cover (Uplight and Non Uplight Versions)



- 1 Neatly tuck in any wiring and secure the cover to the top of the fixture using the provided cover screws.

# Notes

# Notes



7400 Linder Ave., Skokie, IL 60077

T 847.410.4400 | F 847.410.4500

[www.techlighting.com](http://www.techlighting.com)