



General Installation Procedures

Caution: De-energize the light circuit power and wear proper safety gear before beginning work.

Required Tools:

**Power Drill w/ appropriate bit sizes
Pop Rivet Gun w/ steel brads
Digital Multi-Meter**

**Phillips Head Screwdriver
Slot-Head Screwdriver
Pen or Pencil**



1). Detach and remove the T-8 lens assembly by squeezing either side of the lens cover and pulling it away from the mullion.



2). Remove the T-8 lamps by rotating the lamp in the tombstone sockets 45-degrees and placing the lamp pins in an open position, then removing the lamp by pulling it away from the mullion and disengaging the lamp from the socket.



3). Remove the center vinyl mullion cap, detaching it first from the top and snapping it out.



4). Remove both the top and bottom socket brackets by removing the #4 size phillips head screw, then detach the tombstone socket from the bracket cutting the conductors with enough remaining length for termination of the replacement Crossfire fixture.



5). Using a phillips driver, remove the side-mounted mullion ballast cover, then remove the screws securing the ballast bracket. Remove the ballast and attached bracket.



6). Cut the hot and neutral legs feeding the ballast and cap.



7). Cut the 8 output legs coming from the ballast and feeding the lamp.

8). Terminate the mullion power leads to the applicable wires previously marked for power inside the mullion.



9). Isolate the two original wires from the ballast and trace them to where they exit the side of the mullion.

*Note: generally isolating the conductors at the top of the frame is preferable for package application.

10). Identify continuity of both wires and mark as such in order to maintain polarity when terminating the fixture to power.

11). Lay the Crossfire fixture on top of the vinyl mullion cap then measure and mark for mounting holes at both ends and also for fixture cord entry.



12). Drill holes using the appropriately sized drill bit(s).

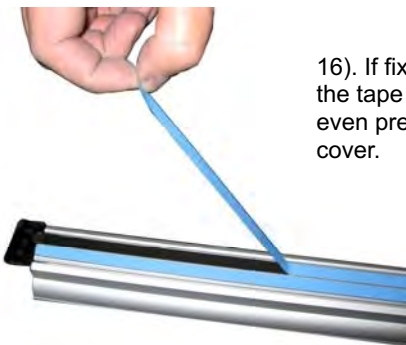


13). Thread the Crossfire fixture cord through the vinyl mullion cap and identify the marked conductors to supply power.

14). Terminate the fixture cord to marked conductors for power. *Note: Insure that you are terminating conductors in order to maintain line voltage polarity.



15). Tuck any extra fixture cord into the mullion cavity and re-secure the mullion cover cap back onto the mullion by snapping it into place by starting at the top and work down to the bottom of the mullion.



16). If fixture has double sided tape mounted to the back, prepare the tape and position the fixture over the pre-drilled holes. Apply firm, even pressure to insure positive contact onto the vinyl mullion cap cover.



17). Using the applicable sized pop rivets mechanically connect the fixture onto the mullion cap cover and thread the fixture cord through the drilled hole.

18). Re-energize the circuit and confirm that the fixture energizes properly.



- 1). 90 degree cordless drill
- 2). Drill Index
- 3). $\frac{3}{8}$ " and 1" sheet metal screws or self tapping screws
- 4). Self-stripping 3M connectors
- 5). Inline Self stripping 3M connectors
- 6). Phillips and standard screwdrivers
- 7). General Purpose Hand Pliers
- 8). Safety Glasses



Step 1: Shut-off power; detach lens clips and remove ELS lens.



Step 2: Remove T-8 lamp from fixture.



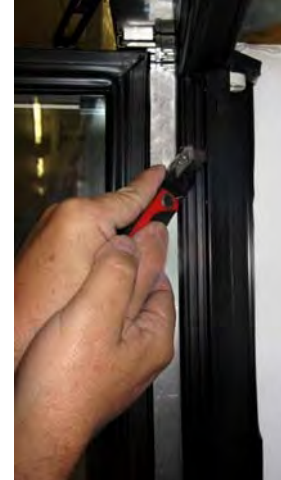
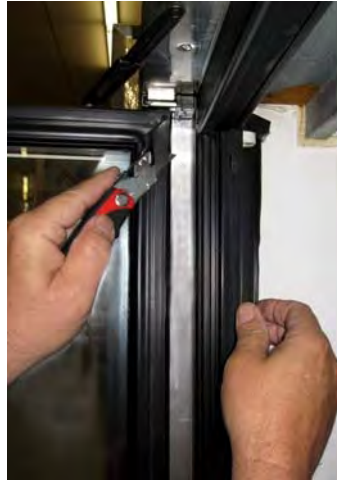
Step 3: Remove reflector plate.



Step 4: Carefully remove both the top and bottom ELS sockets.

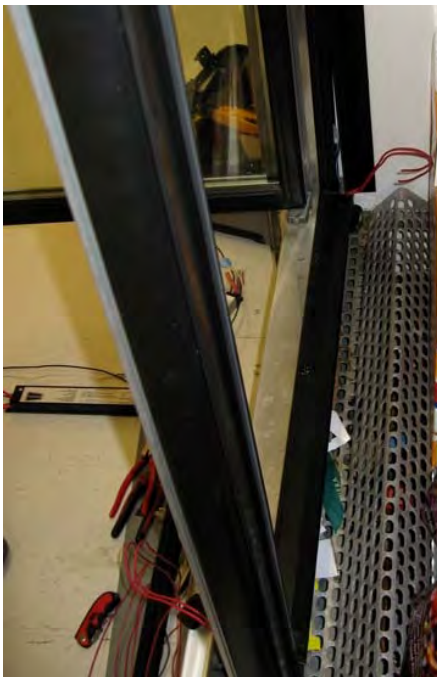


Step 5: Using a razor-knife, cut and remove any unnecessary back vinyl material.

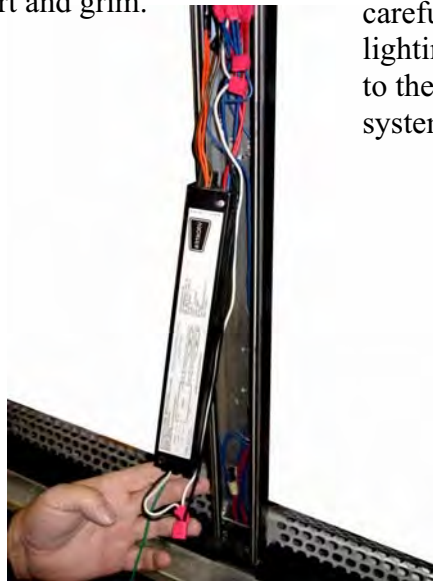


Step 6: Subsequently cut and remove any unnecessary front vinyl material.

Step 7: Insure all ELS fixture components have been removed and mullion surfaces are free from any exposed screws or ice as well as dirt and grim.



Step 8: Once again verify that power has been removed and carefully remove all ballast and lighting harness wiring related to the pre-existing ELS lighting system, as shown below.





tape. Two pieces of pre-installed tape are located on the mullion luminary and the end-jamb luminary.

Note: Adhesive tape is for preliminary positioning and mounting only.



Step 10: Thread fixture cord through the mullion, then position and mount the luminary to the frame as shown below.



Step 11: Gently remove the lens protective tape.



Step 12: Position and then seat the fixtures into place.



Step 13: Permanently mount the fixture using either sheet metal or self-tapping screws at both the top and the bottom of the fixture.

Step 14: Terminate the Crossfire fixture power leads inside of the mullion and attach the ground lead.



Step 15: Replace and re-install the contact plate and the door.

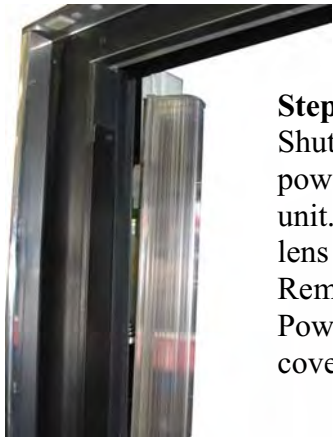
Step 16: Re-energize the lighting circuit and inspect Crossfire luminary for proper LED operation.





Required Tools:

- 1). 90 degree cordless drill
- 2). Drill Index
- 3). #10 x 1" Pan-head Phillips screws
- 4). Side Cutters
- 5). Self-stripping 3M connectors
- 6). Inline Self stripping 3M connectors
- 7). Phillips and standard screwdrivers
- 8). General Purpose Hand Pliers
- 9). Safety Glasses



Step 1:
Shut-off power to the unit. Detach lens clips and Remove the Power-lens cover.



Step 2:
Remove T-8 lamp by turning the lamp either clockwise or counter-clockwise to an open-socket position.

Step 3: Drill-out the socket plate rivets.



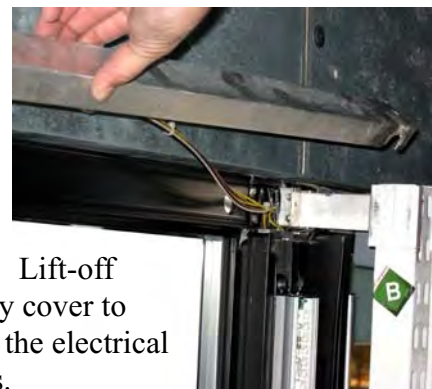
Step 4: Cut the socket power conductors.

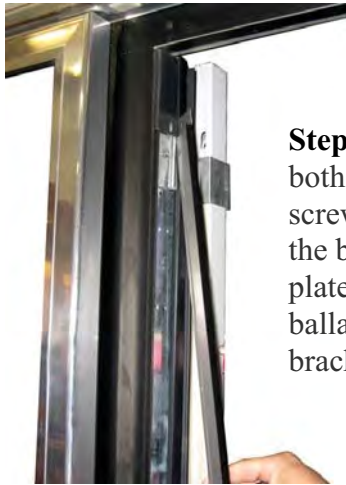


Step 5: Remove top raceway box nuts for the full length of the frame section.



Step 6: Lift-off raceway cover to expose the electrical harness.





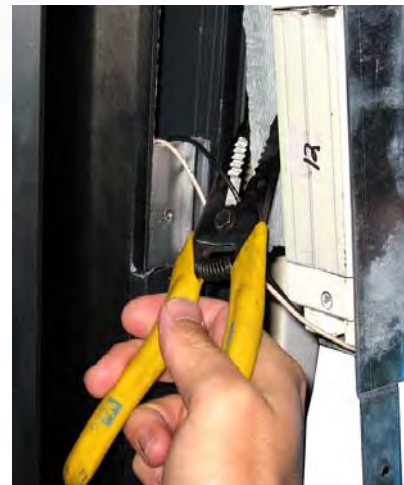
Step 7: Unscrew both mounting screws and lift-off the ballast trim cover plate to expose the ballast's mounting bracket.



Step 8: Remove mullion trim piece.



Step 9: Unscrew the ballast bracket and remove the ballast from the mullion.



Step 10: Cut the ballast power feed as shown here.



Step 11: Cut the output conductors of the ballast that feed the sockets and discard the ballast.



Step 12: Prepare the fixture mounting-tape. Two pieces of pre-installed tape should be located on the mullion luminaire and one piece should be located on the end jamb luminaire.



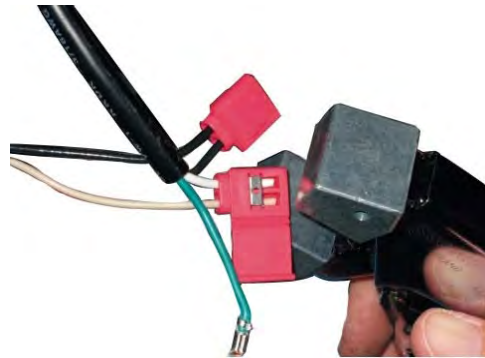
Step 13: Thread the Crossfire fixture whip into the mullion through the pre-existing mullion penetration, leaving the foam insulator in place.



Step 14: Position and seat the fixture into place, permanently mounting the fixture using pan head screws.

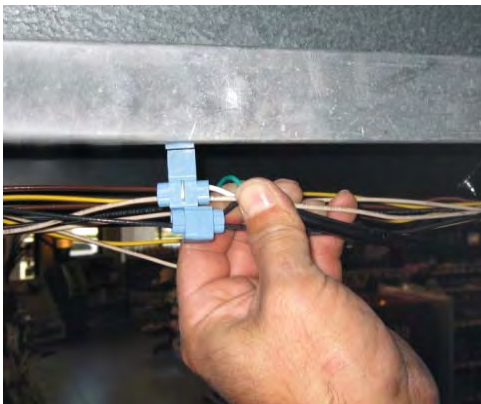


Step 15: Fixtures mounted on the mullions with no side ballast access (and all end jamb fixtures should be terminated in the upper raceway. Thereafter the upper frame raceway cover may be re-installed.



Step 16: Terminate the fixture to power.

*Please note that mullions that have ballast access will have terminations made at that access point. Thereafter mullion trim and ballast cover plates may be re-installed.



Step 17: Fixtures mounted on mullions with no ballast access and all end jamba fixtures should be terminated in the upper raceway on a lighting circuit power-neutral leg. Thereafter the upper frame raceway cover may be re-installed



Step 18: Re-energize the lighting circuit and inspect the Crossfire Luminaries for proper operation.

*Note: Tie-strapping harness bundle will be helpful when re-installing the aluminum raceway cover.

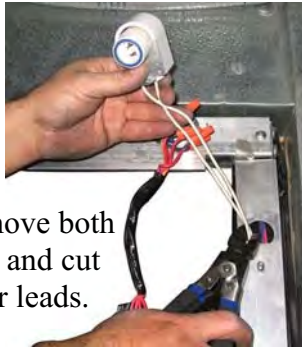


- 1). Cordless drill
- 2). Drill Index
- 3). #10 x 1" Pan-head Phillips screws
- 4). Self-stripping 3M connectors
- 5). Side cutters

- 6). Inline Self stripping 3M connectors
- 7). Phillips and standard screwdrivers
- 8). General Purpose Hand Pliers
- 9). Safety Glasses



Step 1: Remove the lamp from the upper and lower sockets.



Step 2: Remove both lamp sockets and cut the conductor leads.



Step 3: Feed the fixture whip into the horizontal raceway.



Step 4: Prepare backing tape, pre-drill, mount and screw the fixture onto the aluminum raceway.

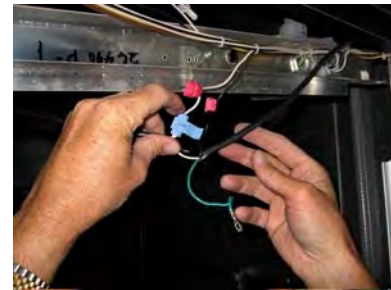


Step 5: Remove the pre-existing lighting system ballast and cut out the exposed lighting system harness.



Step 6: Remove top raceway isolating both the hot and neutral lighting circuit legs.

Step 7: Terminate fixture to power conductor leads then tie-strap the fixture whip to the remaining electrical harness and remount the top raceway cover.



Step 8: Cover/seal the socket punch with commercial grade tape, sealing where the fixture whip enters the raceway.

Step 9: Re-energize the lighting circuit and confirm proper operation of the Crossfire luminaries.

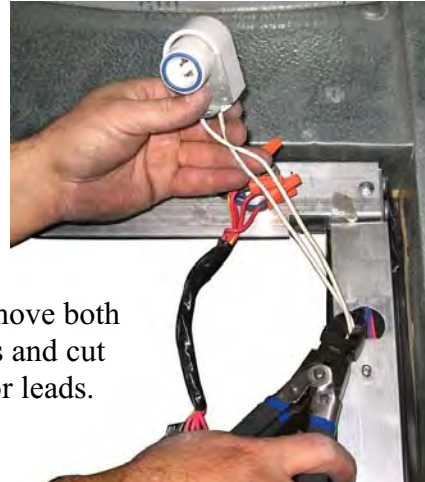


Required Tools:

- 1). Cordless drill
- 2). Drill Index
- 3). #10 x 1" Pan-head Phillips screws
- 4). Self-stripping 3M connectors
- 5). Side cutters
- 6). Inline Self stripping 3M connectors
- 7). Phillips and standard screwdrivers
- 8). General Purpose Hand Pliers
- 9). Safety Glasses



Step 1:
Remove
the lamp
from the
fixture.



Step 2: Remove both
lamp sockets and cut
the conductor leads.



Step 3: Remove the pre-existing lighting
system ballast and cut out the exposed
lighting system harness.



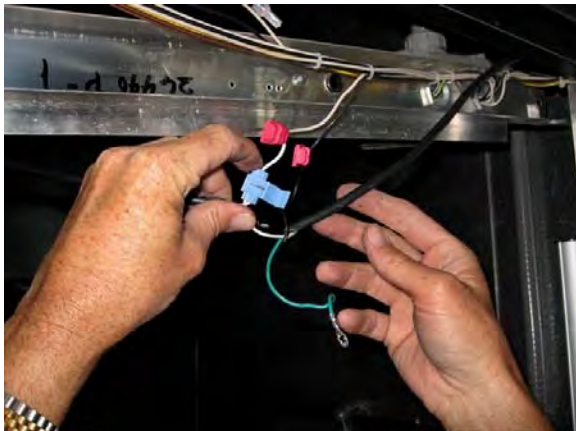
Step 4: Prepare backing tape, pre-drill,
mount and screw the fixture onto the
aluminum raceway.



Step 5: Feed the fixture whip into the horizontal raceway.



Step 6: Remove the top raceway cover and isolate the hot and neutral legs of the lighting circuit.



Step 7: Terminate fixture to power conductor leads then tie-strap the fixture whip to the remaining electrical harness and remount the top raceway cover.

Step 9: Re-energize the lighting circuit and confirm proper operation of the Crossfire luminaries.



Step 8: Cover/seal the socket punch with commercial grade tape, sealing where the fixture whip enters the raceway.