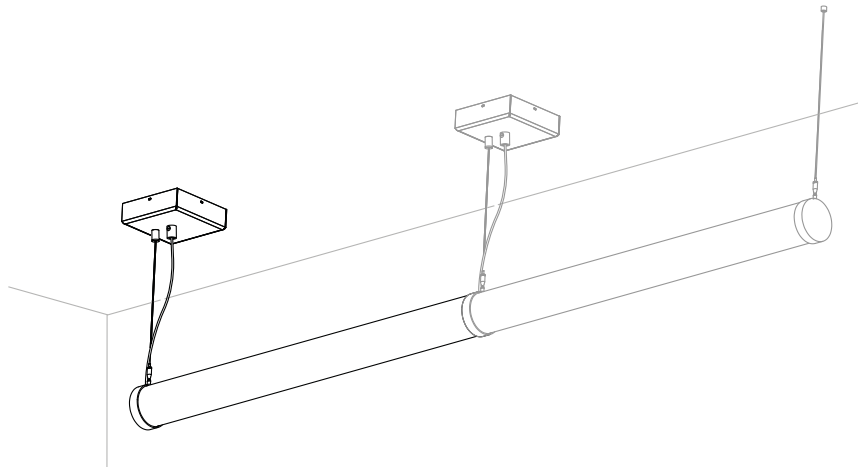


ALCON LIGHTING 12143-HR INSTALLATION INSTRUCTIONS

1. Safety & Warnings

General Electrical Safety

- Turn off power at the main circuit breaker before beginning installation. Verify the circuit is de-energized with a voltage tester before touching any wiring.
- This fixture must be installed by a qualified, licensed electrician.
- Installation requires two people to safely position and support the fixture during mounting.
- Suitable for damp locations only. Do not install in wet locations unless the fixture is specifically rated for wet-location use.
- Disconnect electrical power before adding to, modifying, or servicing the fixture or its wiring.
- Do not connect any load other than the specified LED fixture and driver to this circuit.
- Allow the driver/power supply to cool before handling if the fixture has been recently energized.



External Power Supply Installations (Class 2)

- Use only with a Class 2 power supply/driver.
- Output is 24 volts DC.

Internal Power Supply Installations (Class 1)

- Use minimum 140°F-rated supply conductors.
- Use Class 1 wiring methods only for line-voltage (120–277VAC) connections.

Mounting Clearances

- Do not mount any part of the suspension assembly less than 5 feet above the finished floor.
- Maintain a minimum of 6 inches between the fixture assembly and any curtain or combustible material.

2. Tools & Materials Required

- Gather the following before beginning installation:
- Alcon 12143-HR fixture, including canopy, backplate, crossbar assembly, standoff hubs, caps, and aircraft support cable(s)
- Power drill and 13/64" drill bit
- Wall/ceiling anchors (as supplied)
- Wood screws, mounting caps, and washers (as supplied)
- #8-32 mounting screws (2, supplied) for crossbar-to-junction-box attachment
- Strain relief bushing (supplied, pre-fitted to canopy assembly)
- Wire strippers and wire connectors (nuts) rated for the conductor size and voltage
- Non-contact voltage tester
- Tape measure, pencil, and level
- Ladder or lift adequate for the mounting height
- Junction box, installed and wired to a switched circuit (by others; not supplied with fixture)
- Compatible driver/power supply, per project specification (external or internal — see Section 4)

ALCON LIGHTING 12143-HR INSTALLATION INSTRUCTIONS

3. Step-by-Step Installation Process

Complete the steps below in order. Do not skip ahead to mounting before wiring preparation is complete — doing so can cause the internal cable and metal sleeve to tangle inside the crossbar assembly.

Preparation

Step 1: Locate and mark standoff positions

1.1 Align one standoff hub with the junction box and measure the distance to the second (and any additional) standoff hub. Transfer these measurements to the ceiling and mark each standoff location. Use the canopy detail as a template to offset the center standoff hub slightly, as shown.

NOTE: If installing a multi-section (joining) configuration, check the fixture labels to confirm which fixture ends are designed to connect to each other before marking layout. See Section 6 for joining instructions.

Step 2: Drill and set anchors

2.1 At each marked location, drill a hole using a 13/64" drill bit.

2.2 Insert the anchor into the hole and push in completely.

2.3 Insert a wood screw through the cap and washer, and tighten to secure the screw into the anchor.

Wiring

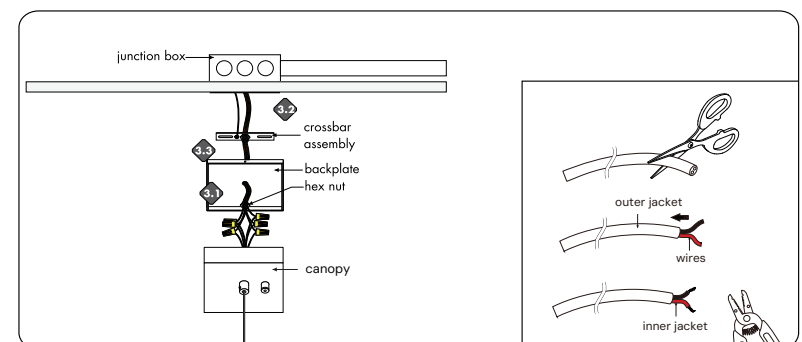
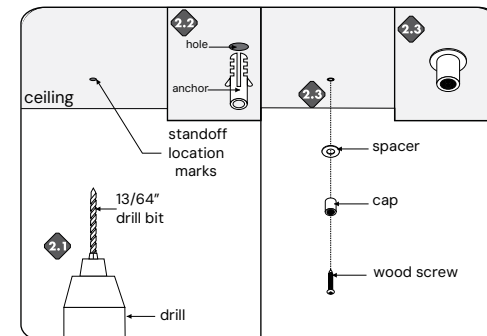
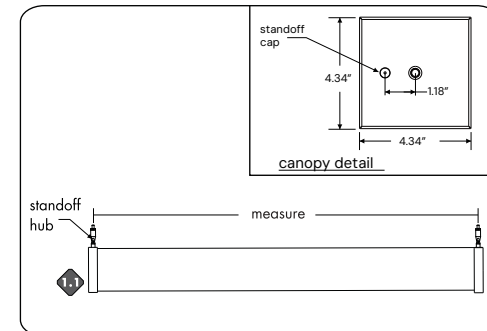
NOTE: Prepare the power feed cable before inserting it into the crossbar assembly. If this step is skipped, the internal metal sleeve can tangle inside the assembly.

Step 3: Prepare and connect the power wires

3.1 Insert the power wires through the crossbar assembly, the backplate, and the hex nut, in that order.

3.2 Refer to the Wiring Diagram (Section 4) and make all required connections between the power wires and the canopy driver wires.

3.3 Connect the ground conductor in accordance with local electrical codes.



ALCON LIGHTING 12143-HR INSTALLATION INSTRUCTIONS

Step 4: Route the power feed cable

4.1 Route the power feed cable through the strain relief bushing, the canopy cover, and the crossbar assembly.

Step 5: Connect to the branch circuit

5.1 Connect the power feed cable wires to the wires from the power supply, matching conductors as shown in the Wiring Diagram (Section 4). Insert all terminations into the junction box and confirm connections are secure before proceeding.

Mounting

Step 6: Secure the crossbar to the junction box

6.1 Align the crossbar assembly with the junction box mounting holes and secure using the two supplied #8-32 screws.

Step 7: Install the canopy cover

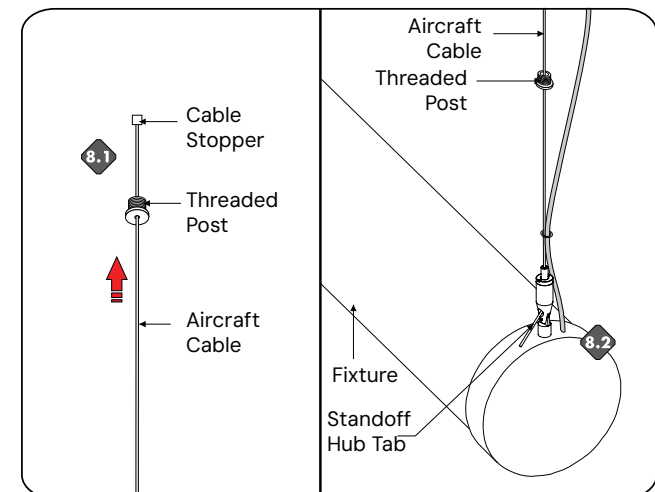
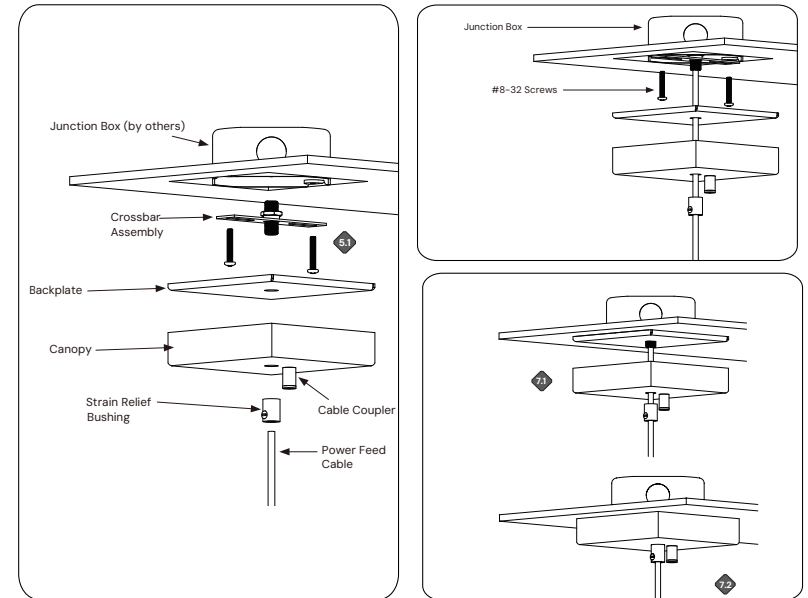
7.1 Slide the canopy cover up to the crossbar assembly and secure it by threading the strain relief bushing onto the crossbar assembly.

7.2 Tighten the set screw on the strain relief bushing to lock the position of the power cable.

Step 8: Attach the support (aircraft) cables

8.1 Untangle each aircraft support cable and insert it into the threaded post until it reaches the cable stopper.

8.2 Push the tab on the standoff hub and feed the aircraft cable into the standoff hub until it reaches the required length. Release the tab to lock the cable in place. For the cable closest to the coaxial/power cable, slide it through the o-rings on the coaxial cable first.



ALCON LIGHTING 12143-HR INSTALLATION INSTRUCTIONS

Finishing

Step 9: Level and secure the fixture

9.1 Tighten each threaded post into a cap — one at the backplate, and the other(s) at the ceiling standoffs. If the fixture is not level, adjust by pressing the standoff hub tab and either feeding in more cable or pulling cable out, then releasing the tab to re-secure.

9.2 Trim any excess aircraft cable at the standoff hub.

9.3 If installing a multi-section joining configuration (Pendant Joining System equivalent only), complete Section 6 before proceeding.

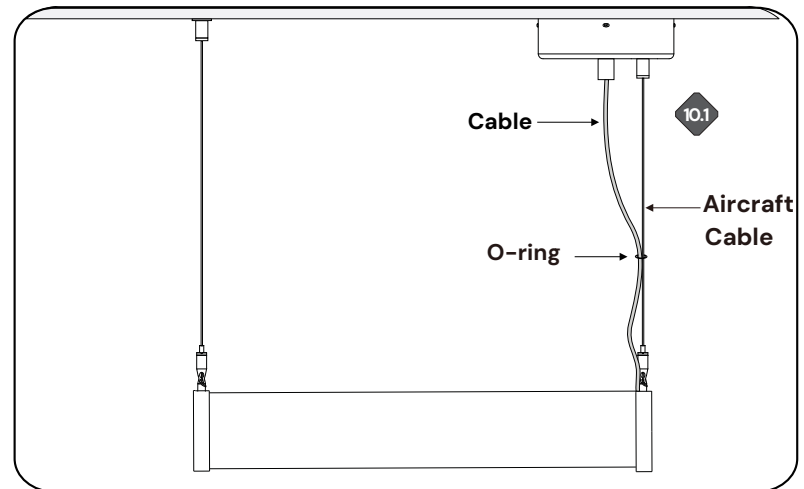
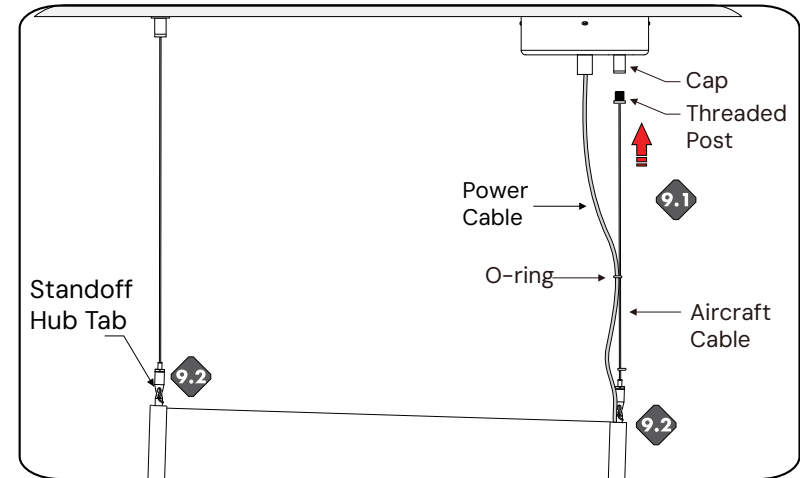
Step 10: Final adjustment and cleanup

10.1 Make any final adjustments to the support cables. Use the o-rings to dress the cables for a clean, finished appearance.

Step 11: Restore power and test

11.1 Restore power at the circuit breaker.

11.2 Confirm the fixture illuminates evenly along its full length and that dimming (if specified) responds correctly. If the fixture does not light, proceed to Section 5, Troubleshooting & Care.



ALCON LIGHTING 12143-HR INSTALLATION INSTRUCTIONS

4. Wiring Diagram / Power Connections

The 12143-HR is available with either an external driver (Class 2, low-voltage) or an internal driver (Class 1, line-voltage), per the project's ordering specification. Confirm which configuration applies to your order before wiring.

External Driver Configuration (Class 2, 24VDC)

From	To	Conductor
Line-voltage branch circuit (120–277VAC)	External driver INPUT	Load, Neutral, Ground
External driver OUTPUT (24VDC+/-)	Fixture power feed cable (through crossbar assembly)	24V DC+, 24V DC-
0–10V dimmer (if specified)	External driver DIM +/-	DIM+, DIM-
Ground	Junction box / driver chassis	Per local code

Internal Driver Configuration (Class 1, Line Voltage)

For fixtures ordered with an internal driver, line-voltage conductors (Load, Neutral, Ground) connect directly to the driver housed within the canopy assembly. Use minimum 140°F-rated supply conductors and Class 1 wiring methods for all line-voltage connections, per Section 1.

NOTE: Please see [Alcon Lighting 2520-30/60/96 Power Supply Wiring Diagram](#).

5. Troubleshooting & Care

If the fixture does not light

- Confirm power is restored at the circuit breaker and that any wall switch or dimmer controlling the circuit is on.
- Verify all wire connections at the junction box are secure and correctly matched (Line, Neutral, Ground, and 24VDC+/- as applicable).
- With power off, check that the power feed cable is fully seated through the strain relief bushing, canopy cover, and crossbar assembly, and that no conductor was pinched during assembly.
- Confirm the driver/power supply is receiving line voltage and is compatible with the specified dimming control, if used.
- If using 0–10V dimming, verify DIM+ and DIM- polarity is not reversed at the driver and at the dimmer.
- Inspect all wire connectors for a secure, complete connection with no exposed conductor.

ALCON LIGHTING 12143-HR INSTALLATION INSTRUCTIONS

Care & Maintenance

- Clean the fixture housing and lens with a soft, dry or lightly damp cloth. Do not use abrasive cleaners or solvents.
- Periodically inspect standoff hubs, threaded posts, and aircraft cables for secure attachment and proper leveling.
- Disconnect power before performing any cleaning or maintenance.

6. Multi-Section Joining (Multi-Run Installations)

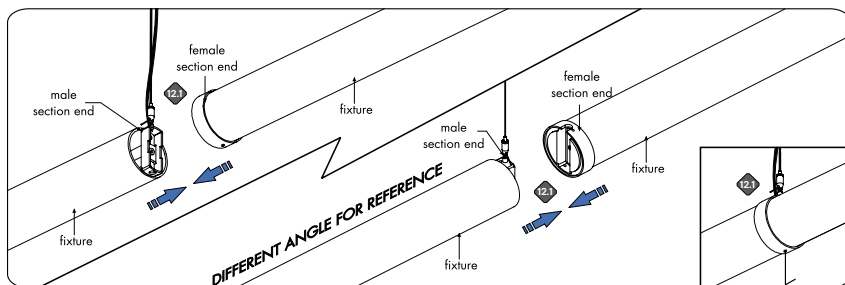
The following procedure applies only to fixtures ordered as a multi-section joining configuration, in which two or more fixture runs connect end-to-end into a single continuous assembly.

CAUTION: Steps in this section apply only to the multi-section joining configuration. Do not attempt to field-join standard, single-run fixture sections to each other — doing so voids the factory warranty.

NOTE: Before installing, reference the fixture labels to confirm the correct orientation of each section — specifically, which end of each section is the male section end and which is the female section end.

Step 12: Join fixture sections (joining-configuration orders only)

12.1 Install and level all sections at the proper hanging height from the ceiling before joining. Carefully slide the male section end into the female section end. Secure the joint by tightening the set screws on the top and bottom of the female section end. Repeat for any additional sections that need to be joined.



Standard Layout & Power Feed Placement

Power feed cord placement depends on how many sections are joined in the run. Confirm the layout below during the Preparation phase (Section 3, Step 1) so junction box and standoff locations are planned correctly before drilling.

- Two-section systems: locate the power feed cord at the ends of the system.
- Systems joining more than two fixture sections: locate a power feed cord at every joiner and at one endcap.

