



by Signify

Architectural Linear

TruGroove suspended micro

IS-TM05/06 Suspended Direct/Indirect

MesoOptics

AccuRender

System Overview

These instructions review how to install TruGroove suspended micro fixtures. Modules can be installed as individual 2ft, 2.5ft, 3ft, 3.5ft, 4ft, 5ft, 6ft, or 8ft standalone units, or they can be joined together to create continuous runs and patterns. The diagram below shows the components required to install a typical run of TruGroove suspended micro fixtures.

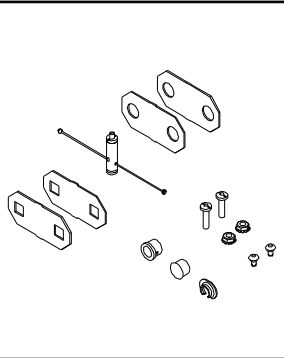


IMPORTANT: Read all instructions including fixture/sensor wiring AND mechanical details **before** beginning installation.

TM D/I Joint Kit

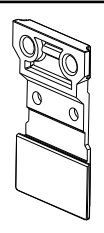
- Sling cable assembly (x1)
- Joiner aligners (x4)
- #10-24 x 9/16 screws (x2)
- #10-24 nuts (x2)
- Cable strain relief (x1)
- 1/2" Bushing (x1)
- 1/2" Plug (x1)
- Push pins (x2)

Note: 1 kit required per joint



TM Drop Lens Endcap*

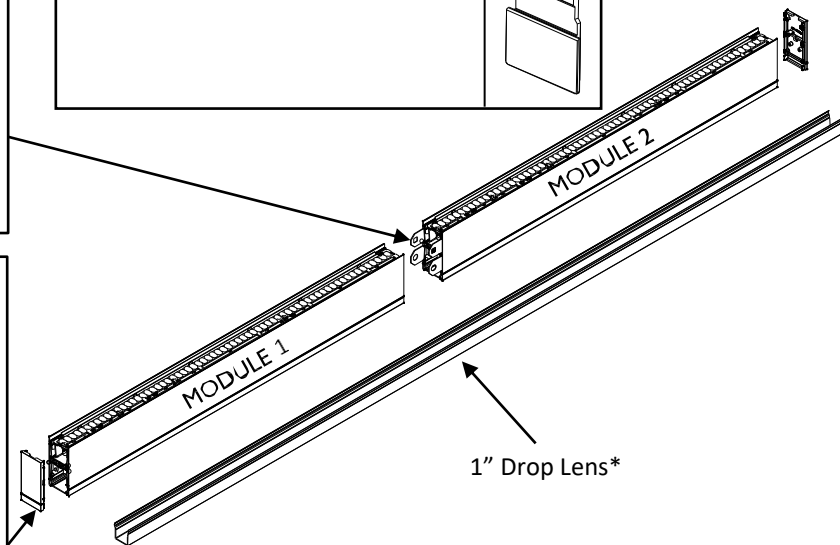
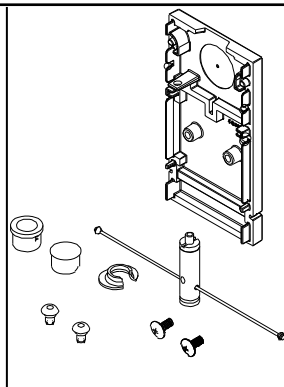
- TM drop lens endcap (x1)
- Note: 1 required for each capped end



TM D/I Endcap Kit

- TM direct/indirect endcap (x1)
- Sling cable assembly (x1)
- #8-32 x 3/8" screw (x2)
- Cable strain relief (x1) (Heyco #7418)
- 1/2" Bushing (x1)
- 1/2" Plug (x1)
- Push pins (x2)

Note: 1 kit required for each capped end



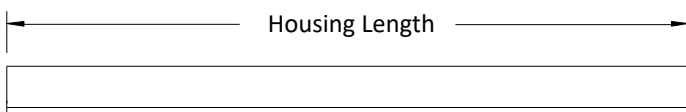
*Optional

Mount Spacing

Fixture modules are designed for exact on-grid mounting. For non-accessible ceilings or in tile installations, mounts are adjustable within 1" of each module end.

Module Lengths

TruGroove suspended micro fixtures come in the module lengths shown below. Add 0.25" for each endcap for accurate run length.



Length without endcaps	feet	2.0	2.5	3.0	3.5	4.0	5.0	6.0	8.0
	Inches	24.0	30.0	36.0	42.0	48.0	60.0	72.0	96.0
	mm	610	762	914	1067	1219	1524	1829	2438

TOOLS REQUIRED:

- #2 Phillips screwdriver
- 3/8" nut driver
- Medium flat or #2 robertson screwdriver
- Heyco PN0019(R12) crimping tool
- Small ratchet and 1/4" socket

! ATTENTION: Install in accordance with local and national building and electric codes.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**Warning! Shock Hazard!**

IMPORTANT:
Disconnect or turn off
power before
attempting any
installation, service or
maintenance.

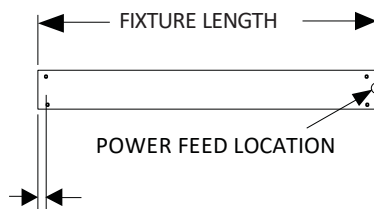
**Warning! Shock Hazard!**

Fixture must be
connected to building
ground via the
provided ground wire
before re-connecting
to main power supply.

**Power Label Location**

For D/I symmetric and asymmetric fixtures, power labels can be found on light engine pans or under end louver modules.

For Direct and Surface symmetric and asymmetric fixtures, power labels can be found on upper pan.

**Mounting & Power Location**

Caution: To ensure a safe install,
The variable aircraft cable
mounting point must be located
within 12" of the fixture end.

**Power Feed Location**

2ft, 2.5ft, 3ft and 3.5ft symmetric fixtures are provided with only one power feed location.

4ft, 5ft, 6ft and 8ft fixtures are provided with 2 power feed locations, one at each end.

For mounting flexibility on site, each fixture housing can accommodate up to 1" of variability from each end.

**Installation Notes**

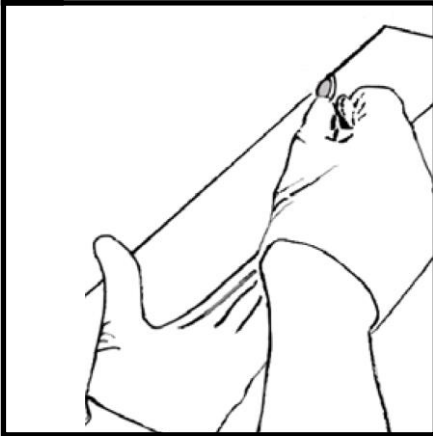
Arrange boxed fixtures on floor in specified mounting locations, based on supplied layout drawings. Remove fixtures from boxes.

Install all ceiling mounting components and vertical aircraft cables using separate installation instruction for Aircraft Cable Mounting (supplied).

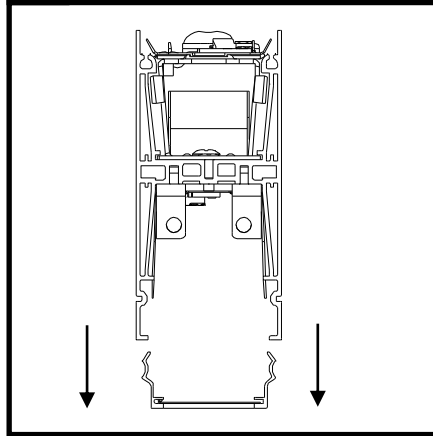


ATTENTION: Install in accordance with local and national building and electric codes.

Lens Removal

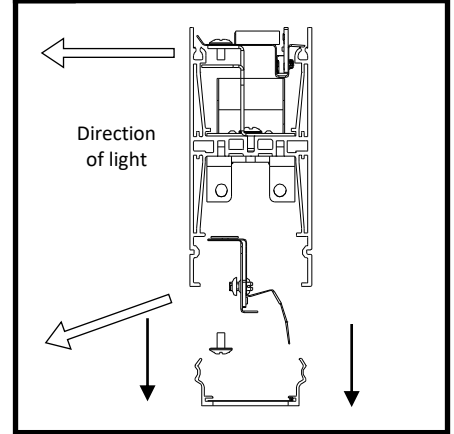
1a Lens Removal

Lens Removal: To remove snap-in lens for maintenance purposes, insert a flat, smooth edged object between lens and housing (avoid screwdrivers). Twist to release pressure and remove lens.

1b Symmetric Fixture

Remove lens from fixture and set aside until fixture installation is complete. Use cotton gloves to handle lenses and keep in a clean environment.

Note: Optional Drop Lens is shipped separately.

1c Asymmetric Fixture

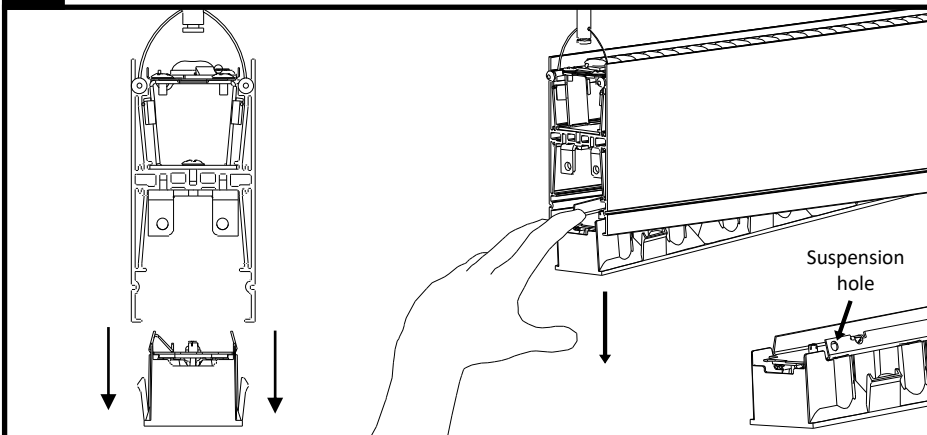
Remove lens and set aside until fixture installation is complete. Use cotton gloves to handle lenses and keep in a clean environment.

Remove the 2 screws securing the lower light engine and temporarily support light engine in position below fixture.

DO NOT ALLOW LIGHT ENGINE TO HANG FROM ELECTRICAL WIRES.

Save screws for re-installation later.

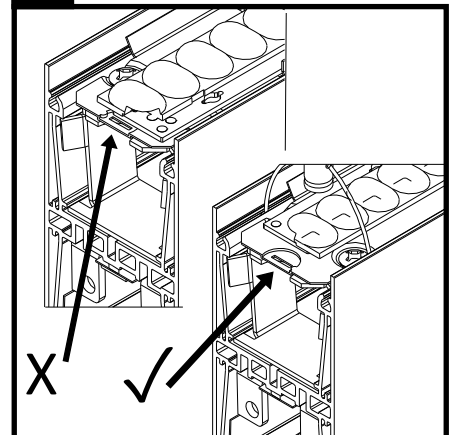
Installation Preparation

1d Fixture with Louvers

Remove one louver from end of fixture by pulling gently and temporarily suspend from available holes. Remaining louvers can be pushed to center for better access.

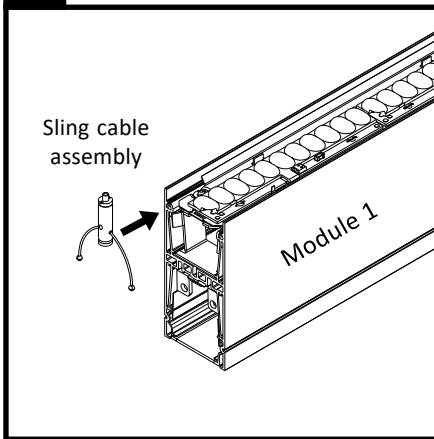
DO NOT ALLOW LOUVER TO HANG FROM ELECTRICAL WIRES.

For louver-lens combinations, remove both louver and lens. Use cotton gloves to handle lenses and keep in a clean environment.

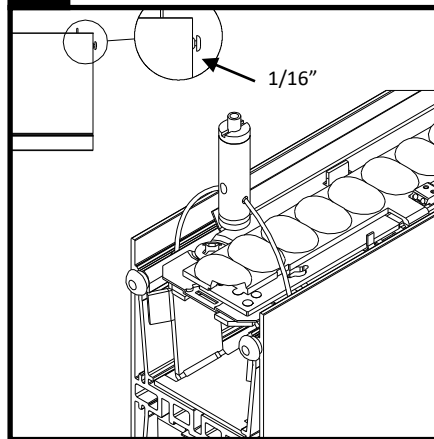
! Power Feed Location

If installing a fixture with one power feed location, ensure electrical knockout orientation matches required power feed location.

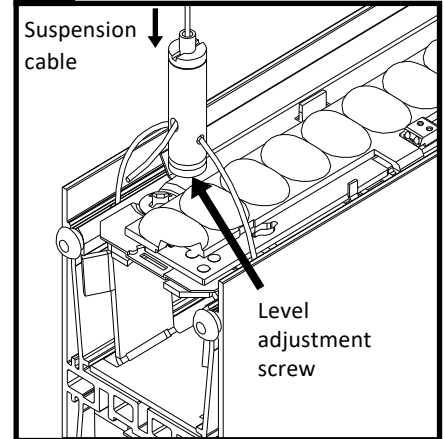
! **ATTENTION: Install in accordance with local and national building and electric codes.**

2 Sling Mount Installation

With module 1 on the ground, slide sling cable assembly into top fixture screw chase on both ends of the fixture.

3 Fixture Preparation

Attach two push pins to screw chases to secure sling cable assembly inside fixture during installation process. Gently tap each push pin into the housing leaving a 1/16" gap for easier removal later.

4 Fixture Installation

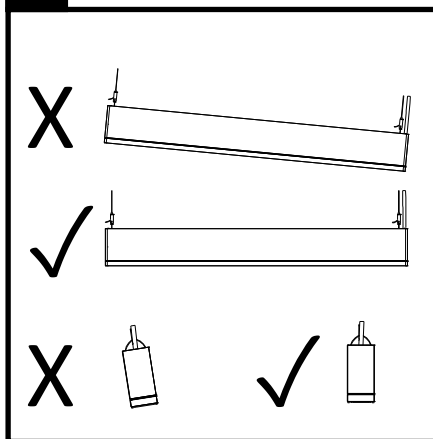
Raise fixture to installed level and insert suspension cable inside sling cable assembly. Ensure end of aircraft cable exits from side of sling cable assembly as shown.

Important: Modules must be level relative to each other when joining of sections is required

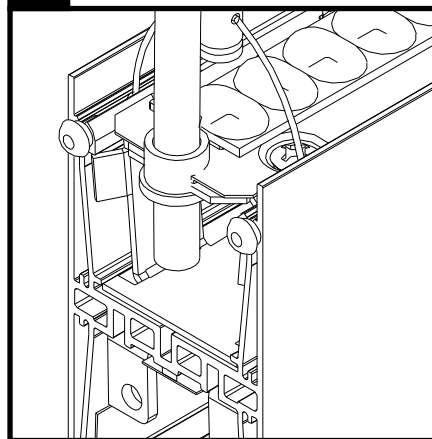
IMPORTANT: LEVELING INSTRUCTIONS

For side to side leveling, loosen adjustment screw at bottom of cable gripper and slide slowly until level. When complete, re-tighten levelling screw by hand.

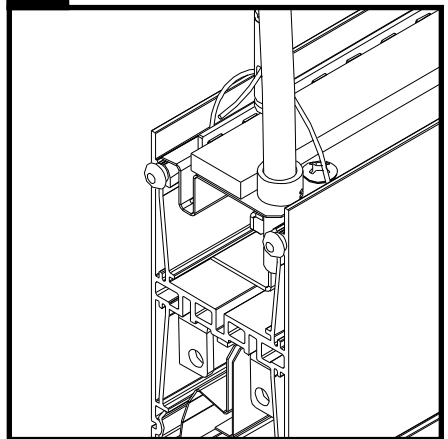
For vertical leveling, support bottom of fixture, press plunger on top of cable gripper and slowly lift/lower fixture to desired position. Release plunger when complete. Ensure fixture is secure before removing support.

5 Fixture Levelling

Ensure module 1 is installed level. Do not install at an angle.

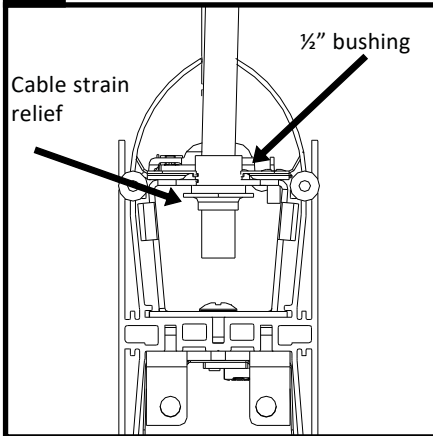
6a Power Cord - Symmetric

Determine power feed location and break 1/2" electrical knockout at required end. Install 1/2" bushing from below fixture as shown. Feed power cord from above into fixture wiring cavity.

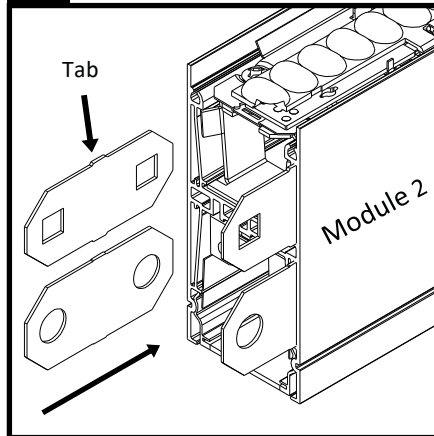
6b Power Cord - Asymmetric

Determine power feed location and break 1/2" electrical knockout at required end. Install 1/2" bushing from inside fixture as shown. Feed power cord from above into fixture wiring cavity.

! ATTENTION: Install in accordance with local and national building and electric codes.

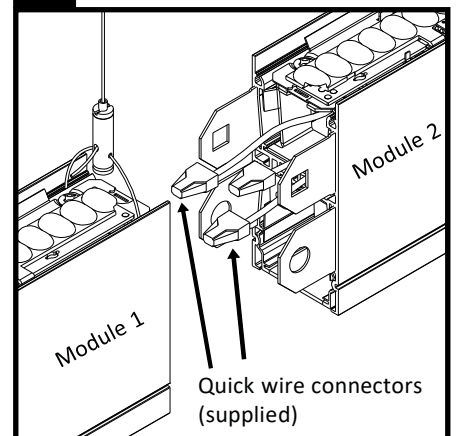
7 Power Cord Installation

Install and crimp provided cable metal strain relief bushing to secure power cord below fixture bracket. Use a Heyco PN0019(R12) crimping tool to ensure proper installation. If installing a standalone fixture, **skip to step 13.**

8 Fixture Joining - Preparation

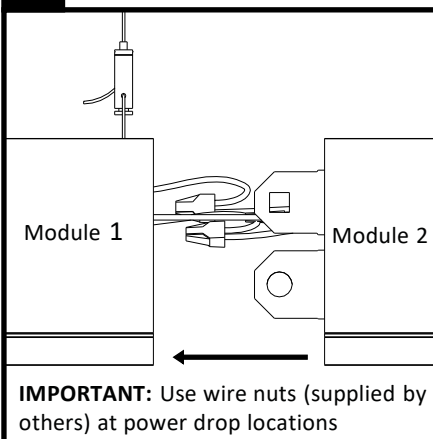
With module 2 on the ground, tap joiner aligners inside top and bottom screw chases as shown.

IMPORTANT: To allow for proper joining, ensure each center aligner tab is fully inserted inside module 2 housing, about 1/4" past the middle point.

9 Fixture Joining - Preparation

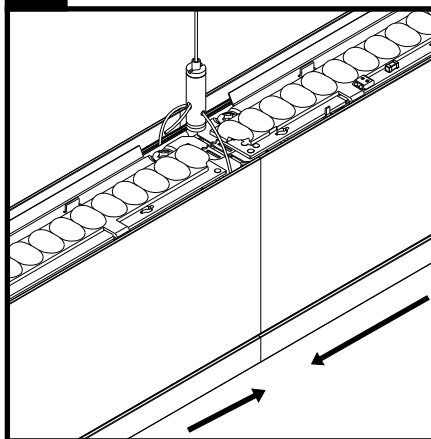
Raise module 2 to installed module 1 position. Install and secure sling cable assembly of module 2 and at opposite. Remove push pins from module 1.

IMPORTANT: WIRING INSTRUCTIONS
Quick wire connectors (supplied) are used for through wiring connections between fixtures. Wire nuts (by others) are used for connection of power drops wiring to fixture wiring.

10 Wiring Connection

IMPORTANT: Use wire nuts (supplied by others) at power drop locations

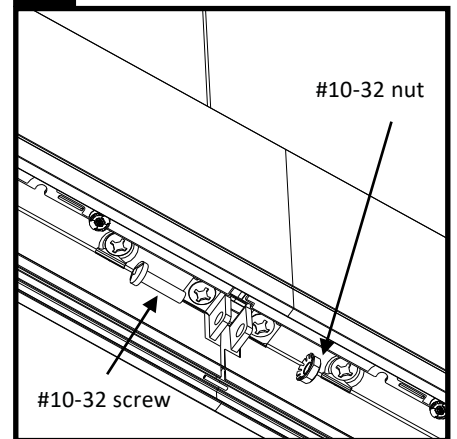
Bring modules close together, support module 2, complete wiring connections and tuck wires inside fixture wiring cavity. Engage joiner aligners from module 2 inside module 1.

11 Fixture Joining

Ensure all connections are secure and all wires are fully tucked inside fixture wiring cavity. Slide fixture modules together gently. Level fixtures.



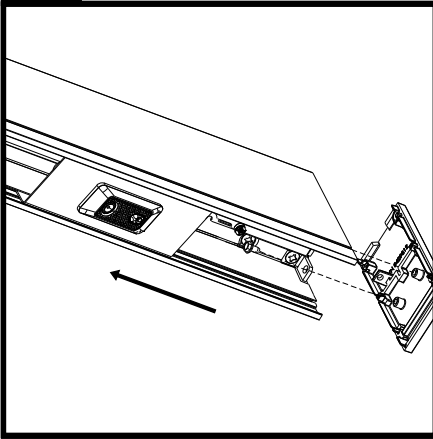
FIXT = FIXTURE MODULE

12 Fixture Joining

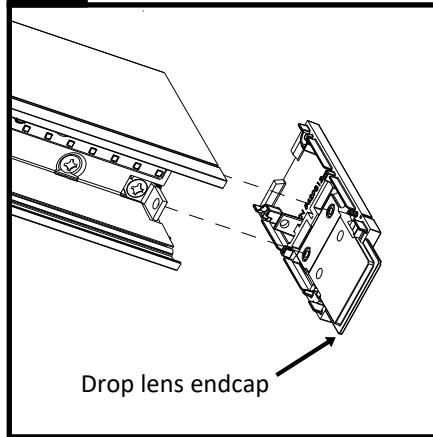
Secure fixture modules together using the two #10-32 machine screws and the two Self-locking #10-32 nuts supplied. Tighten until joint seam is tight.

IMPORTANT: Do not overtighten.

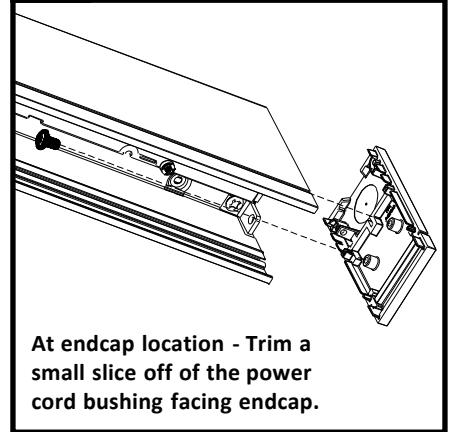
! **ATTENTION:** Install in accordance with local and national building and electric codes.

13a Endcap with Sensor

Before installing the endcap, slide the sensor towards the center of the fixture to gain access. Proceed with endcap installation for drop lens, step 13c.

13b Drop Lens Endcap Installation

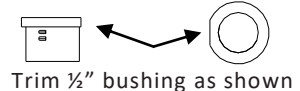
Place drop lens endcap as shown over the emboss of endcap and proceed with endcap Installation of endcap, step 13c.

13c Endcap Installation

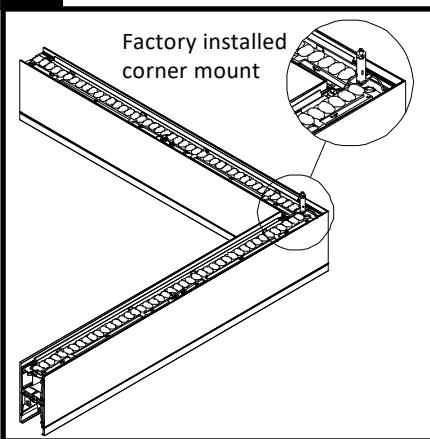
At endcap location - Trim a small slice off of the power cord bushing facing endcap.

Slide endcap onto end of fixture module and secure from below using two #8-32 X 3/8" screws. Ensure excess aircraft cable does not interfere with endcap attachment. Use ratchet or angle driver to tighten screws until endcap seam is tight.

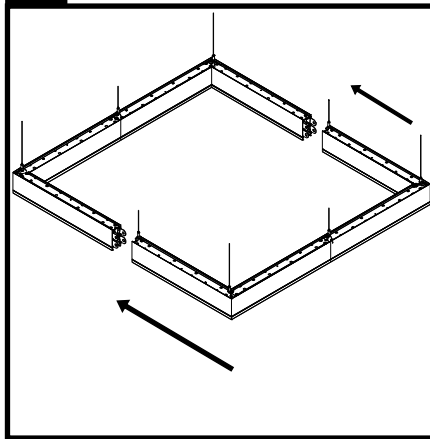
IMPORTANT: Do not overtighten.



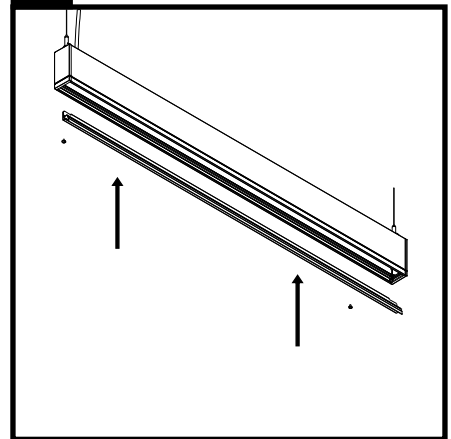
Trim 1/2" bushing as shown

14 Corner installation

If a corner is required, it is recommended the corner module be installed first. All corners come with a factory installed cable sling assembly in the middle.

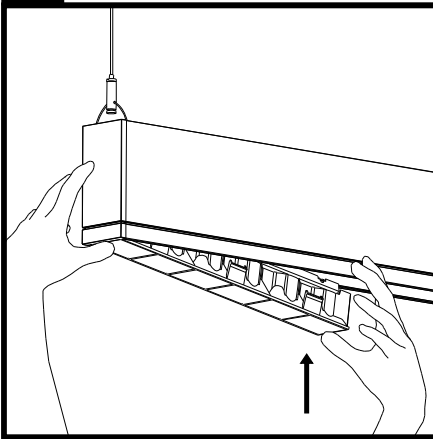
15 Closed Pattern Installation

If installing a square or rectangular closed pattern, it is recommended to install opposite U-shaped fixture/corner patterns first and complete the installation by bringing U-shaped sections together as shown.

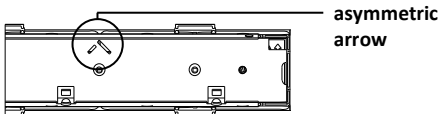
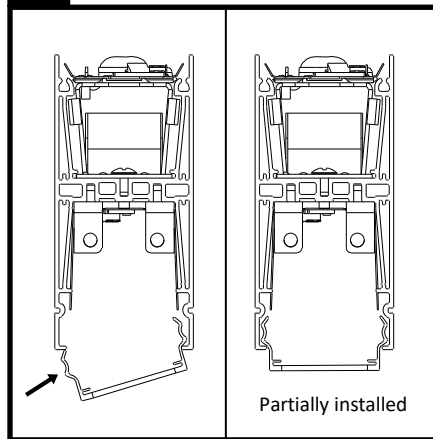
16 Asymmetric Fixtures

Reinstall the lower led pans with the screws provided. Ensure direction of light is as shown on layout drawings.

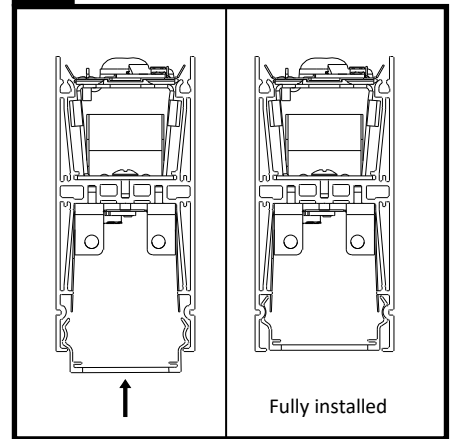
! ATTENTION: Install in accordance with local and national building and electric codes.

17 Louver Installation

Installation Tip: For easier installation, start on one end of the louver pressing gently on side tabs. **IMPORTANT:** For asymmetric louver fixtures, orient the arrows on the louver pan to point at the label on the outside of the housing.

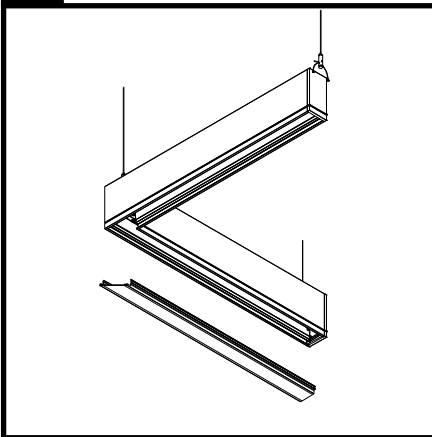
**18 Fixture Lens Installation**

Install lenses removed in step 1.
Installation Tip: For easier installation, start at a housing end or a joint by placing lens at an angle and squeezing in slightly from the other side to guide inside housing.

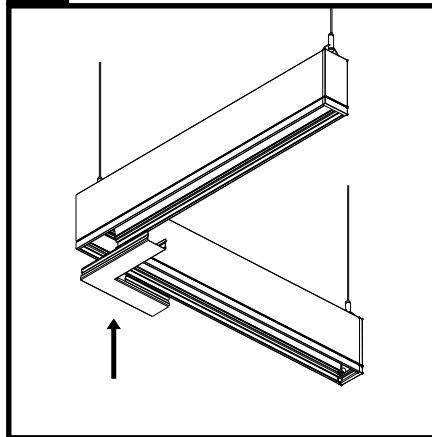
19 Fixture Lens Installation

Once lens is positioned inside housing, starting on one end or joint, push upwards gently and work outward to complete the run.

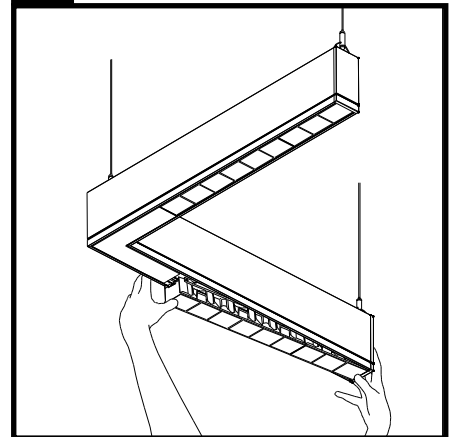
Note: Flush lens and drop lens are installed the same way. Flush lens is shown for reference.

20 Corner Lens Installation

Installation Tip: For easier installation of corner lenses, start at the corner and work outward to complete the run. Follow steps 18 and 19.

21 Corner Louver Installation

Installation filler plate before installing louvers. Tip: For easier installation, start by squeezing filler plate in slightly from both sides and guiding inside housing.

22 Corner Louver Installation

Installation Tip: For easier installation, start on one end of the louver pressing gently on side tabs.

23 Finishing

- Ensure all fixtures and corners are level and in line with each other.
- Trim excess vertical aircraft cable installed in step 4.
- If horizontal leveling is required, loosen adjustment screw shown in step 4, level fixture and re-tighten screw.
- Check that all joint or endcap screws are installed, and all seams are tight.
- Use spare 1/2" plug(s) provided to close any open 1/2" electrical knockout location(s) in top reflector.

! ATTENTION: Install in accordance with local and national building and electric codes.

PRF/PRA Interact Pro Foundation/Advance Install & Setup

**not for Enterprise or Signify Commissioned projects*

To configure a lighting system with Interact sensors or RF nodes;

- Ensure the luminaires are installed and powered on.
- Download the Interact Pro app from either Apple's App Store (for iOS) or Google's Play Store.

Download the
Interact Pro app



- Register by tapping **Request access** on the login screen in the app.
- **Click** or **scan** the QR codes below to view instructions for setup.

**Interact Pro Foundation
Quick Start Guide****Interact Pro Advanced
Quick Start Guide****Interact Pro
Documentation****Interact Pro
Setup Video****Contact Us
1-800-555-0050**

ATTENTION: Install in accordance with local and national building and electric codes.

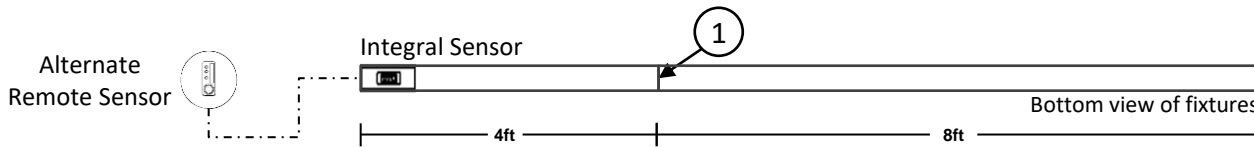
Sensors in Rows

Single Sensor Controlling Whole Row

1. Purple & brown (or purple & grey/pink) control wires **MUST** be connected between fixtures.

Note:

- A maximum of 8 drivers can be wired to one sensor; confirm fixture driver count with factory.

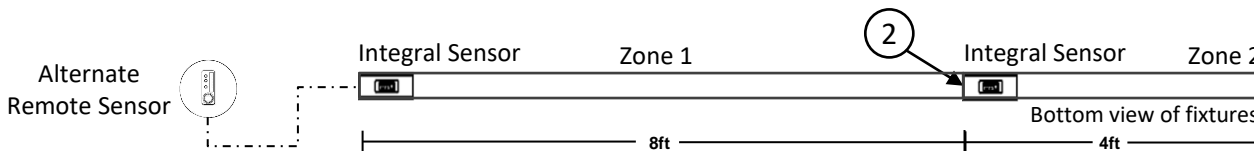


Multiple Sensors Controlling Separate Zones in a Row

2. Purple & brown (or purple & grey/pink) control wires **MUST NOT** be connected between zones.

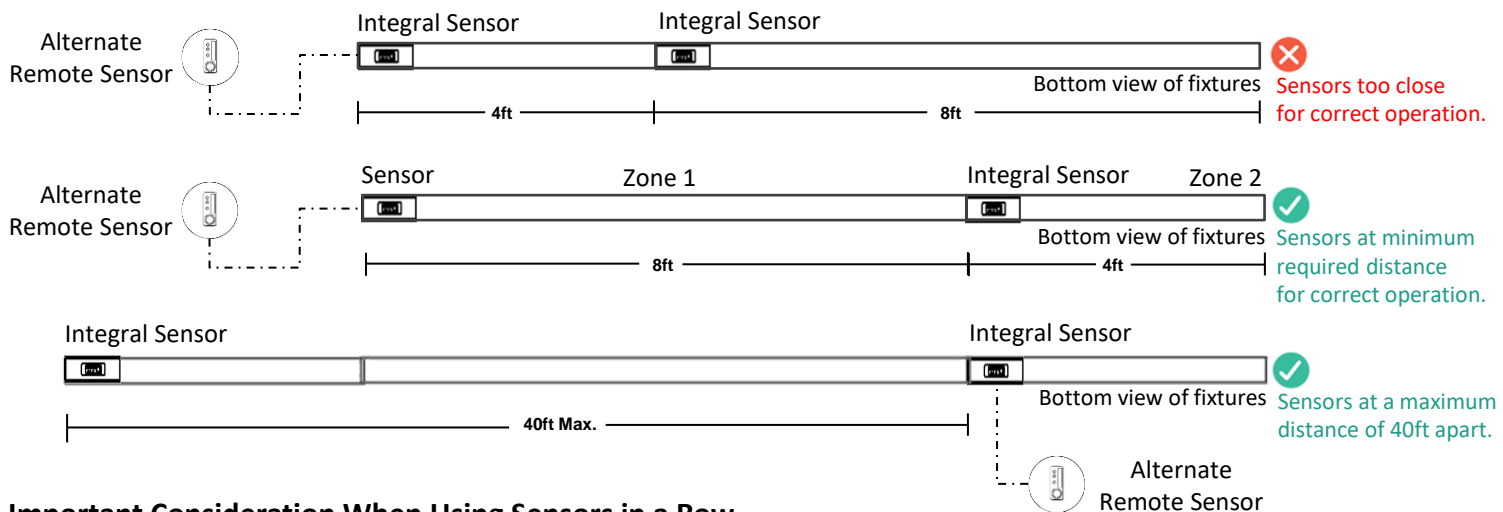
Notes:

- A maximum of 8 drivers can be wired to one sensor; confirm fixture driver count with factory.
- Only one sensor is allowed on a wired zone. (Sensors can be paired together wirelessly via a mobile app).



Sensor Spacing

- For correct operation, sensors should be placed a minimum distance of 8ft apart.
- Wireless sensors should be placed no further than 40ft apart for good wireless signal connection.



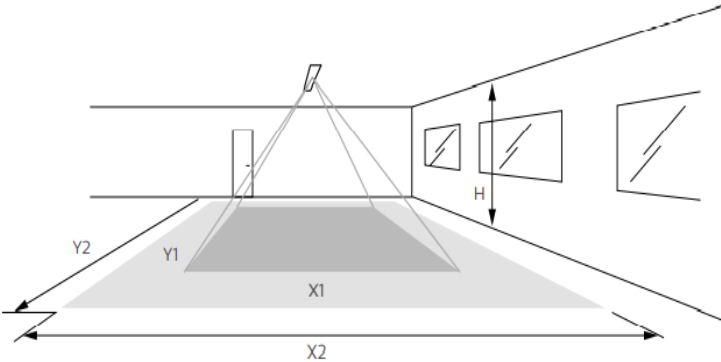
Important Consideration When Using Sensors in a Row

- For fixtures with wireless sensors (CS, SB or RA options):
DO NOT connect fixture purple & brown (or purple & grey/pink) control wires to an external dimming switch. Fixture mains wiring should not be connected to a circuit with an external on/off switch.
- For best aesthetic condition, place sensors at ends of row only so as not to break the continuous lens.
- For better occupancy coverage in longer rows, sensors may be placed mid run, but keep in mind this will break the continuous lens into discrete sections. Alternatively, remote sensor may be used, note the same wiring rules will apply.

! ATTENTION: Install in accordance with national and local building and electrical codes.

Occupancy Sensor Coverage:

Note: Longer dimension of detection area (Y1, Y2) is parallel to longer dimension of the luminaire.



Daylight sensor

The light sensor measures the total amount of light in a circular field of approximately 80% of the PIR detection area. The following aspects should be observed during installation:

- Minimum distance from the window $\geq 2\text{ft}$ (0.6m).
- Prevent light reflections from outside entering the sensor (for example sunlight reflection on a car hood) as this will lead to incorrect light regulation.

As a guideline the formula $0.72 \times H$ can be used to calculate the minimum distance between the window and sensor whereby H is the height from the bottom of the window to the sensor.

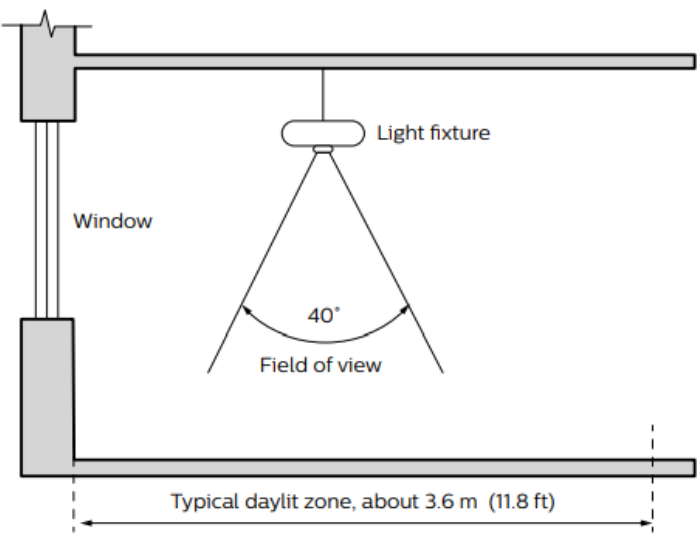


Height	Minor movement		Major movement	
h	X1	Y1	X2	Y2
2.4 m (7.9 ft)	1.9 m (6.2 ft)	2.9 m (9.5 ft)	2.9 m (9.5 ft)	4.3 m (14.1 ft)
3 m (9.8 ft)	2.4 m (7.9 ft)	3.6 m (11.8 ft)	3.6 m (11.8 ft)	5.4 m (17.7 ft)

The detection area for the movement sensor can be roughly divided into two parts:

- Minor movement (person moving $\leq 3\text{ft/s}$ or 0.9m/s).
- Major movement (person moving $\geq 3\text{ft/s}$ or 0.9m/s).

Photosensor spatial response



!

ATTENTION: Install in accordance with local and national building and electric codes.

