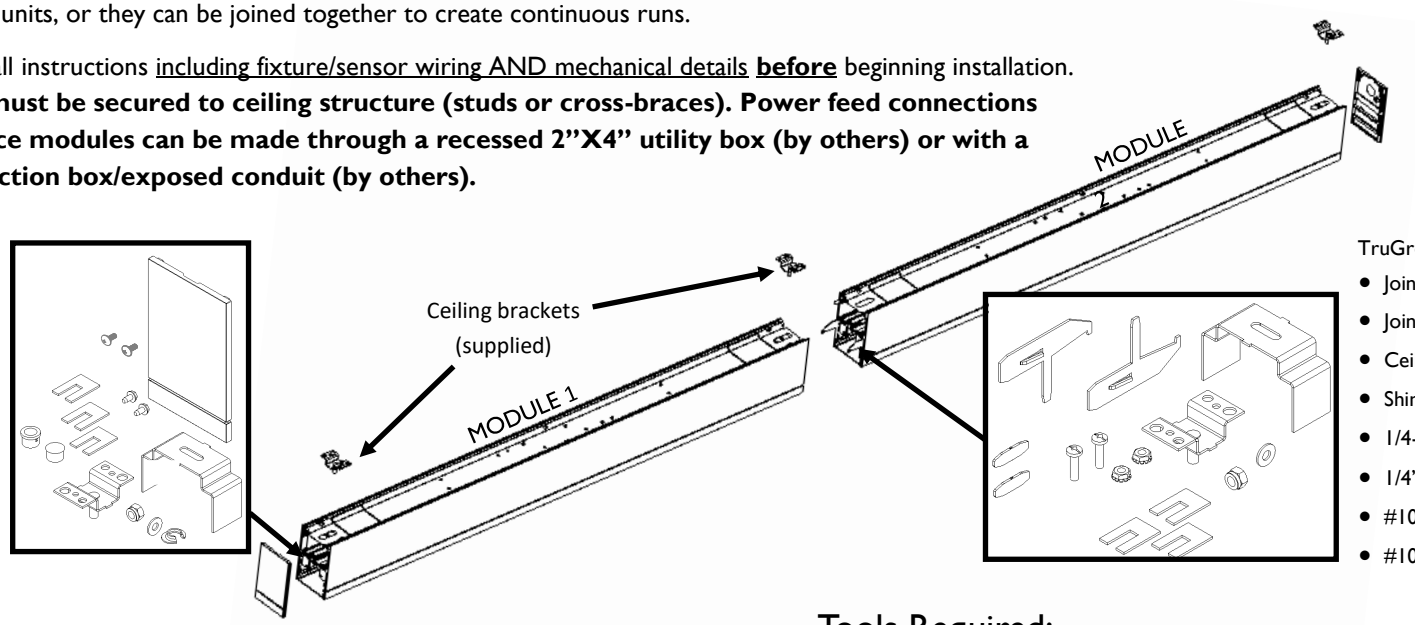
System Overview

These instructions review how to install TruGroove surface fixtures. TruGroove 4ft, 6ft and 8ft modules can be installed as individual standalone units, or they can be joined together to create continuous runs.

IMPORTANT: Read all instructions including fixture/sensor wiring AND mechanical details **before** beginning installation. **All ceiling brackets must be secured to ceiling structure (studs or cross-braces). Power feed connections for TruGroove surface modules can be made through a recessed 2"X4" utility box (by others) or with a surface mounted junction box/exposed conduit (by others).**

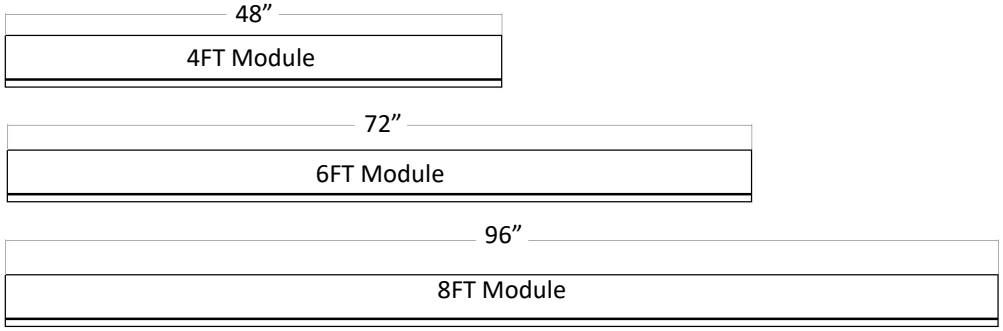
TruGroove Endcap Kit(s)
- TG D/I endcap (x1)
- Ceiling bracket (x1)
- Shims (x3)
- 1/4-20 hex lock nut (x1)
- 1/4" ID washer (x1)
- #8-32 x 3/8" screw (x2)



TruGroove Joint Kit(s)
- Joiner aligner (x2)
- Joiner biscuits (x2)
- Ceiling mount bracket (x1)
- Shims (x3)
- 1/4-20 hex lock nut (x1)
- 1/4" ID washer (x1)
- #10-32 x 3/4" (x2)
- #10-32 hex lock nut (x2)

Module Lengths

TruGroove surface fixtures come in 4ft, 6ft, and 8ft modules. Overall module lengths are shown below. Add 0.2" for each endcap for accurate run length.



Tools Required:

- 7/16" Nut Driver
- 3/8" Nut Driver
- 7/16" Open Wrench
- #2 Phillips Screwdriver
- Flat Screwdriver

Mount Spacing

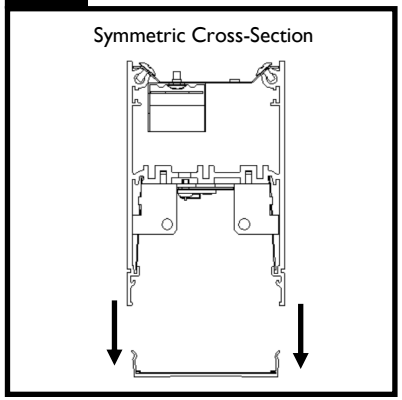
TruGroove surface fixture modules are designed to attach to supplied ceiling brackets. The table on the right provides mounting bracket spacing for each module.

Module Length	Mounting Dimensions
4FT	45-5/8"
6FT	69-5/8"
8FT	93-5/8"

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

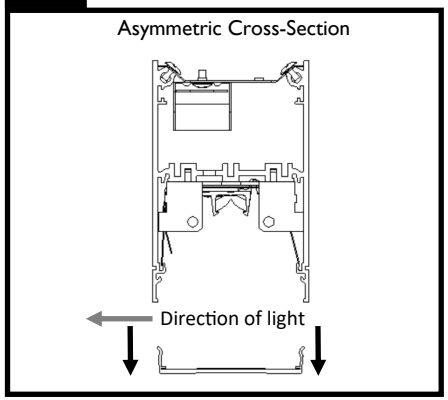
1 Arrange boxed fixture on floor in specified mounting location, remove fixtures from boxes.

2a Lens Removal

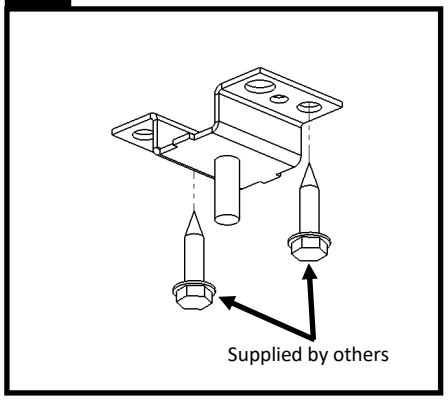


Remove lens from fixture and set aside until fixture installation is complete. Use cotton gloves to handle lenses and keep in a clean environment. **Note:** Do not mix symmetric fixture lenses with asymmetric fixture types as they are different.

2b Lens Removal

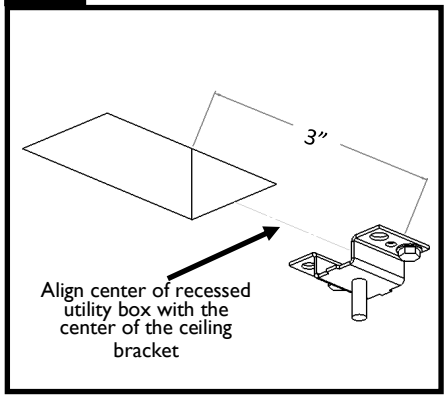


3 Ceiling Bracket Installation



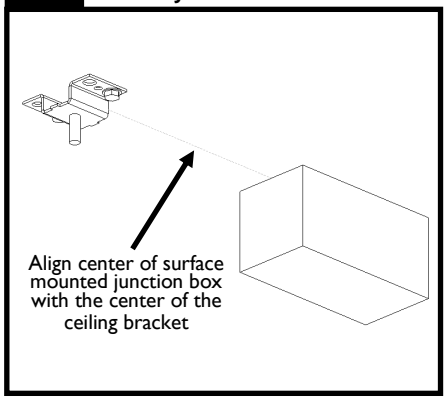
Determine location of ceiling brackets. Use table on page 1 for exact dimensions. Center and install ceiling brackets to structure (studs or cross-braces) using appropriate hardware (by others)

4a Recessed Utility Box



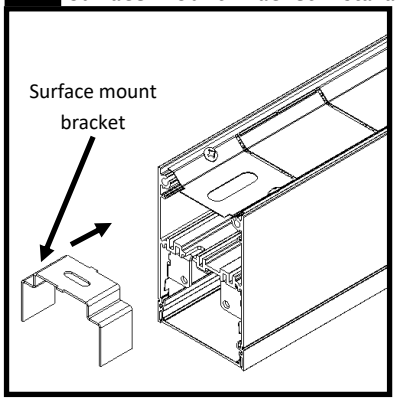
For a recessed 2"X4" utility box, align and center with ceiling brackets, and install with long edge parallel with fixture module length. Ensure utility box is positioned 3" away from ceiling bracket.

4b Surface Junction Box



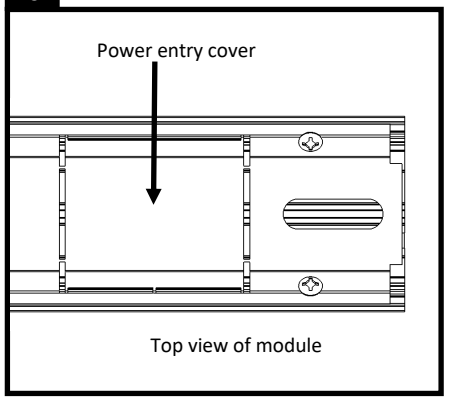
For a surface mounted junction box, install junction box as required. For a cleaner install and better alignment with installed fixture modules, center junction box and conduit exit with center line of ceiling brackets.

5 Surface Mount Bracket Installation



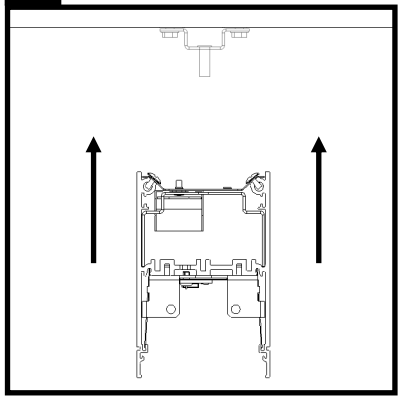
Insert surface mount brackets approximately 2 inches inside module 1. Ensure bracket engages and slides inside upper fixture module channel. Ensure slot in fixture reflector aligns with slot in surface mount bracket.

6 Recessed Power Feed Location



Determine fixture power feed method and location. For a recessed utility box installation, break off power cover tabs using a flat screwdriver at required end only.

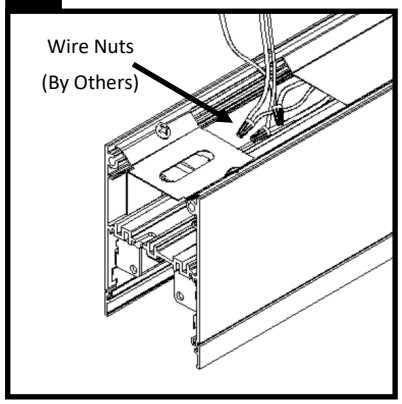
7 Fixture Installation



Raise module 1 towards ceiling, supporting both ends a few inches below ceiling level.

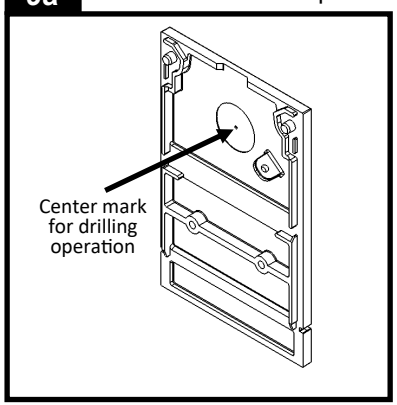
! ATTENTION: Install in accordance with national and local building and electrical codes.

8 Recessed Power Feed Connection



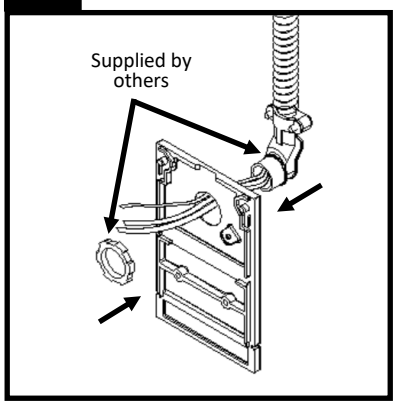
While supporting the module in the air complete power entry wiring connections. Ensure all connections are secure and all wires are neatly tucked inside fixture wiring cavity.

9a Surface Power Feed Preparation



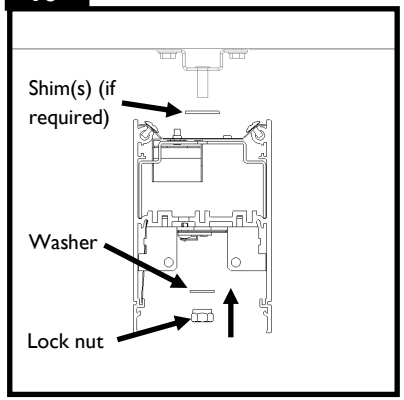
For surface junction box installation, power feed to fixture module is done through the endcap. Use masking tape on all outside surfaces, turn over and place on a wood block. Align with center mark as shown and drill a 7/8" diameter hole.

9b Surface Power Feed Connection



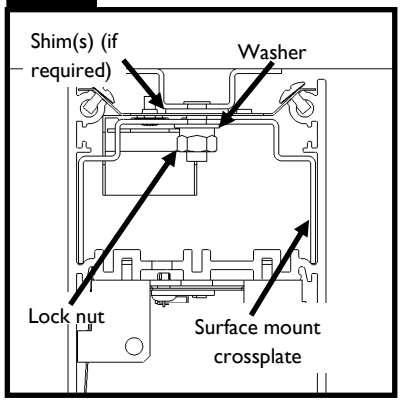
Prepare power feed by installing the conduit and the connectors (by others) to the drilled endcap. Refer to steps 13 and 14 for power connections and endcap installation.

10 Fixture Installation



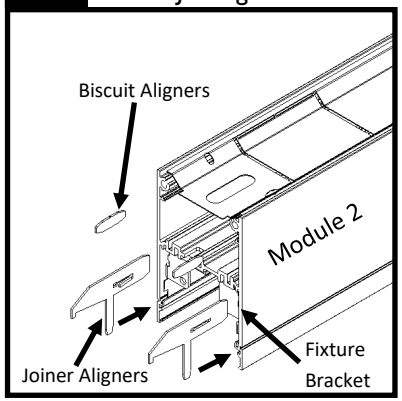
Raise module 1 to ceiling, align ceiling bracket 1/4"-20 stud with housing slot and surface bracket slot.

11 Fixture Installation



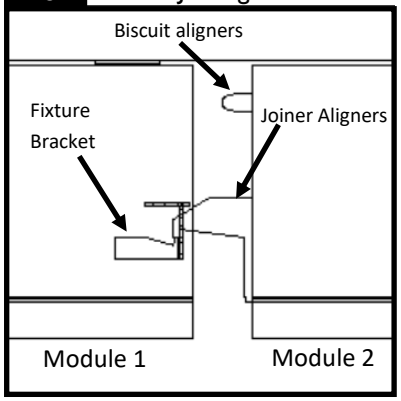
From below fixture secure 1/4" ID washer and 1/4"-20 hex nut to ceiling bracket 1/4"-20 stud. If ceiling is not level, install supplied shims as required then tighten 1/4"-20 hex nuts.

12 Fixture Joining



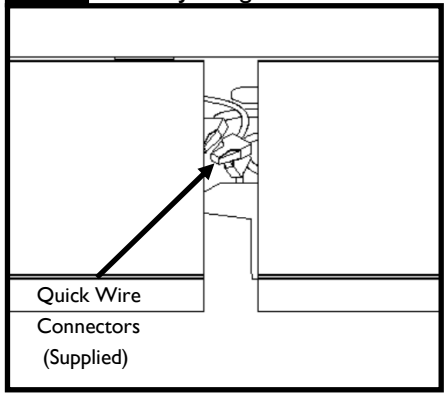
With module 2 on the ground, tap biscuit aligners inside top screw chase. Ensure biscuit aligners are inserted more than half way inside fixture housing. Insert joiner aligners inside lower screw chase as shown. Ensure orientation is correct for locking tab to engage and lock inside fixture bracket.

13 Fixture Joining



Bring modules together and engage joiner aligners in module 2 on fixture bracket in module 1. **Note: Do not secure module 2 to the ceiling at this step.**

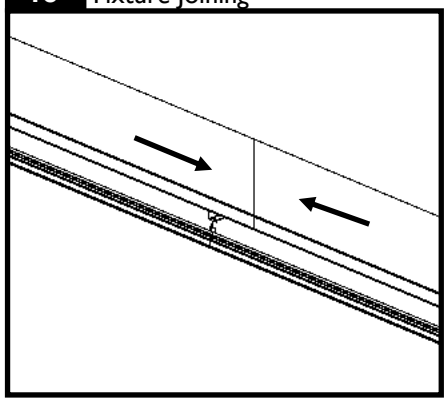
14 Fixture Joining



With module 2 supported complete wiring connection using provided quick wire connectors.

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

15 Fixture Joining

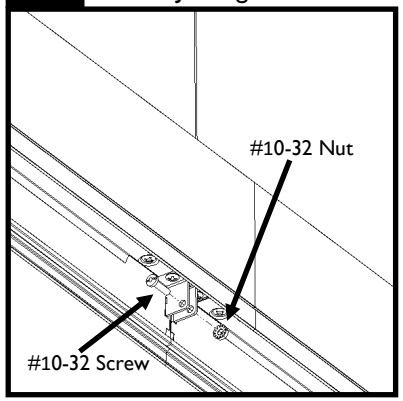


Ensure all connections are secure and all wires are neatly tucked inside fixture wiring cavity. Slide fixture modules together gently. With module 1 and module 2 butted together, secure the non joining end of module 2 to the ceiling.

16 Fixture Joining

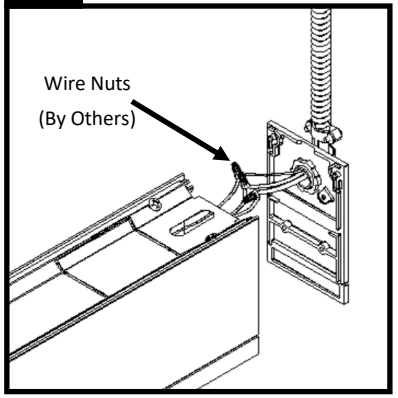
- Support open end of module 2 and secure to ceiling brackets as shown in step 11.

17 Fixture Joining



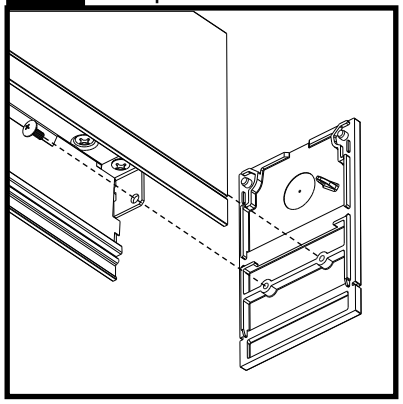
Secure fixture modules together using the two #10-32 machine screws and the two #10-32 nuts supplied. Tighten until joint seam is tight. **Note: Do not overtighten.**

18 Surface Power Feed Connection



For surface mounted junction box, connect conduit and required connectors (by others) to drilled endcap.

19 Endcap Installation



Slide endcap onto end of fixture module and secure from below using two #8-32 X 3/8" screws. Tighten screws until endcap seam is tight. **Note: Do not overtighten.**

20 Finishing

- Ensure all fixtures are level and in line with each other.
- Check that all joint or endcap screws are installed and all seams are tight.
- Power fixtures on and check all modules light up.
- Install lenses.

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 interreference 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.

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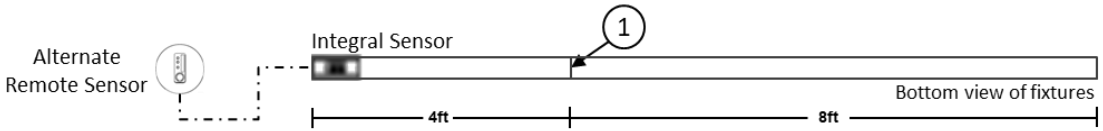
Sensor in Rows

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 8 sensors; confirm fixture driver count with factory.

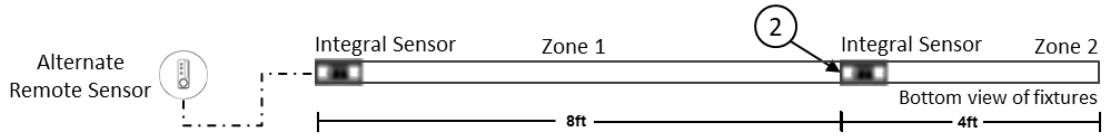


Multiple Sensors Controlling Separates Zones in a Row

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

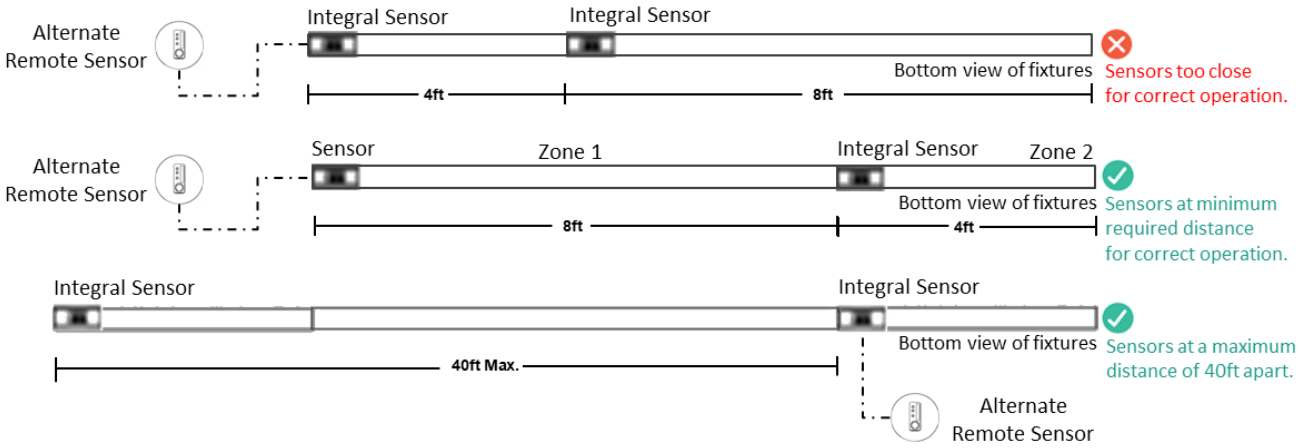
Notes :

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



Important Consideration When Using Sensor in a Row

- For fixtures with wireless sensors (CS, SB or RA options): **DO NOT** connect fixture purple and 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 sensors may be used, note the same wiring rules will apply.

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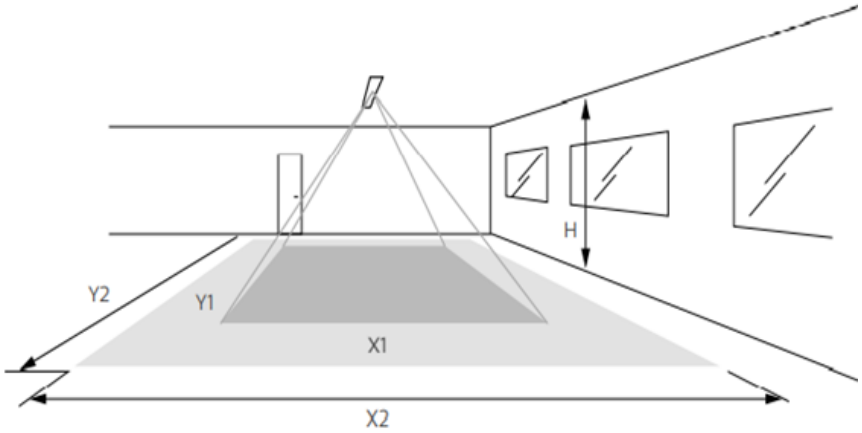
Occupancy Sensor Coverage:

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



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 movements (person moving ≤ 3ft/s or 0.9m/s).
- Major movements (person moving ≥ 3ft/s or 0.9m/s).

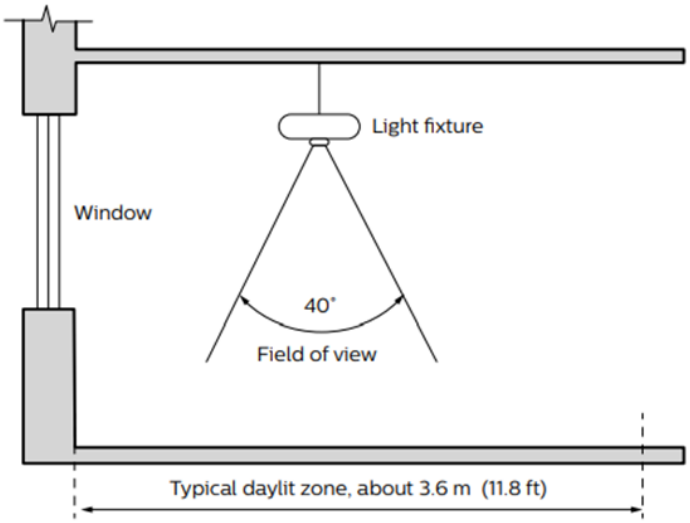
Daylight Sensor

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 ≥ 2ft (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 X 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.

Photosensor spatial response



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

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