



by Signify

Linear

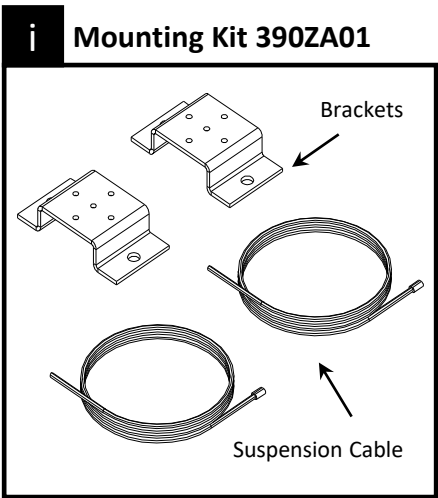
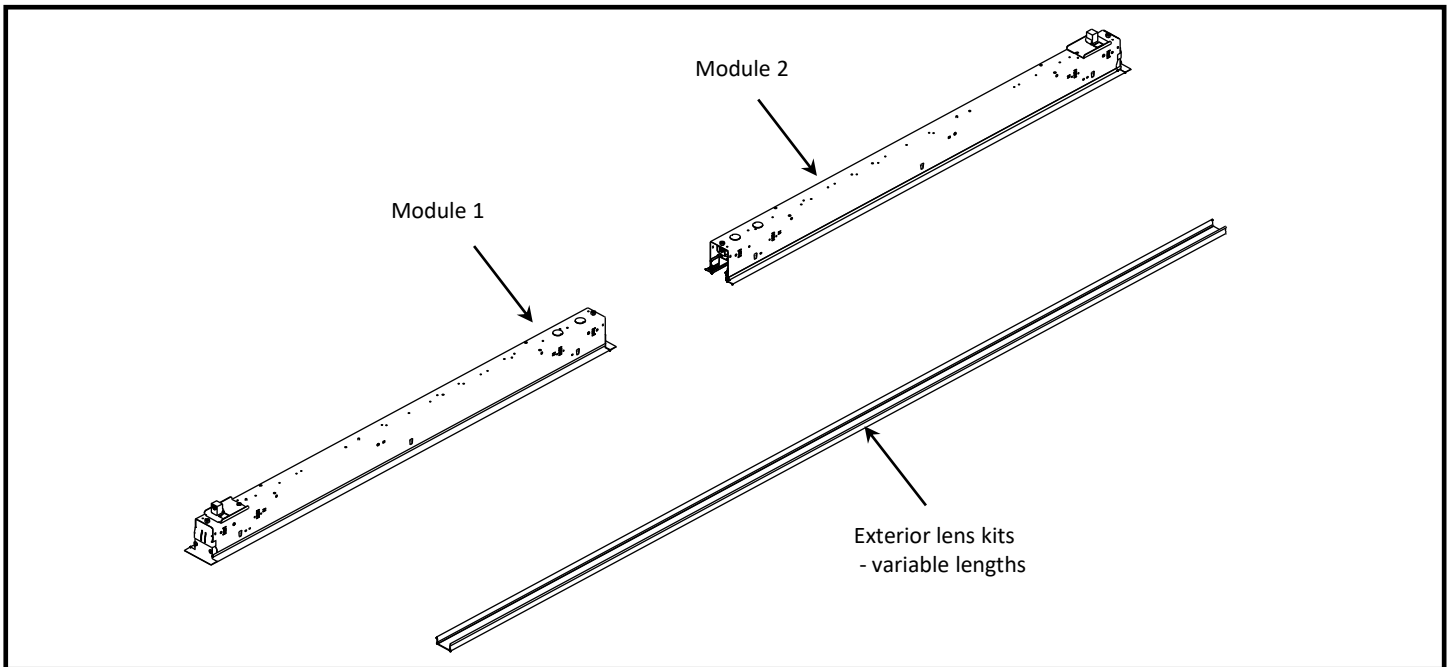
TruGroove Recessed Micro

ID-23 Drywall Trim PoE

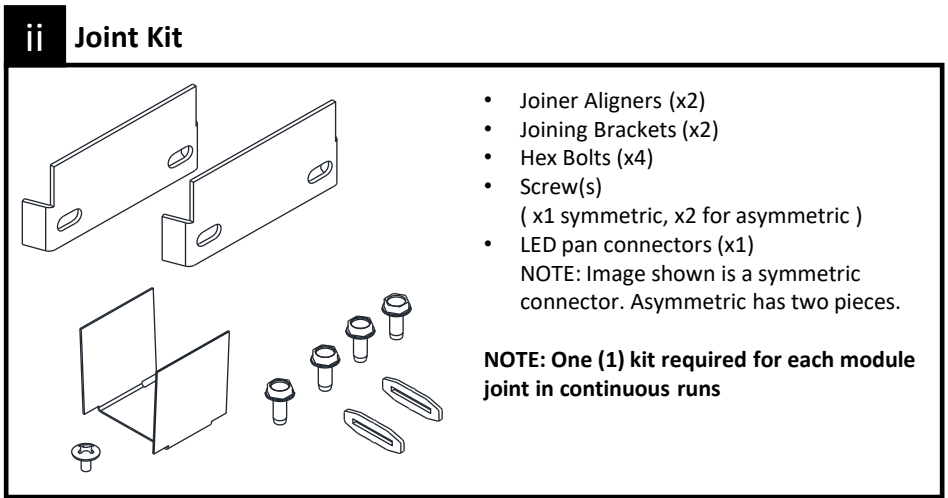


### System Overview

These instructions review how to install drywall trim versions of TruGroove recessed micro fixtures for power over ethernet application. Please refer to layout drawings supplied by Philips Ledalite in conjunction with these installation instructions. The graphic below shows the components required to install a run of TruGroove recessed micro fixtures in drywall ceilings.



Tools: Phillips screwdriver, 5/16" Nut Driver



- Joiner Aligners (x2)
  - Joining Brackets (x2)
  - Hex Bolts (x4)
  - Screw(s)  
( x1 symmetric, x2 for asymmetric )
  - LED pan connectors (x1)  
NOTE: Image shown is a symmetric connector. Asymmetric has two pieces.
- NOTE: One (1) kit required for each module joint in continuous runs**

**!** 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.*

## Important Notes


**i Installation Notes**

- ‘C’ Channels (or equivalent) must be properly braced to ensure accuracy of cut-out in drywall.
- Use appropriate tools to outline specified dimensions of ceiling cut-out to ensure straightness of cutting.
- Lens will not insert properly if fixture trim has mud or paint build-up.

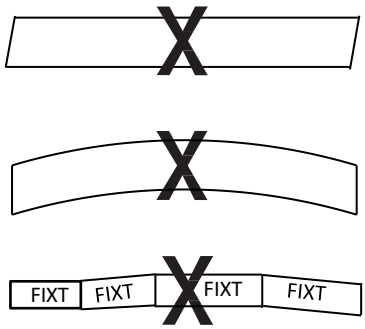
**⚡ Warning, Shock Hazard**

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

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



**! Avoid**



FIXT = FIXTURE MODULE

The straightness and accuracy of the cut-out in the drywall is crucial in ensuring proper fit for the fixture.

**NOTE:** TruGroove recessed micro modules are designed for installation after ceiling construction.

## Prepare Ceiling: Standalone Units


**1 Determine Locations**

- Determine fixture location and fixture type. Refer to figure A for cut-out length and mount locations. Install mount brackets and suspension cables as shown on page 3.
- Determine power feed location(s) - refer to figure A. Install power feeds as required and drop below installed ceiling height.
- Build ceiling frame around fixture cutout to 2-5/8" to 2-3/4" width as shown in figure A.

**A Ceiling Cut-out Details**

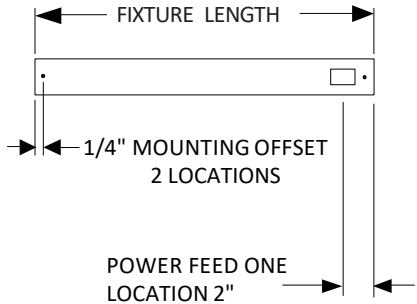
**Cut-out Length:**

<b>2ft</b>	23 - 7/8" + 1/4"	<b>3ft</b>	35 - 7/8" + 1/4"
<b>4ft</b>	47 - 3/4" + 1/4"	<b>5ft</b>	59 - 7/8" + 1/4"
<b>6ft</b>	71 - 5/8" + 1/4"	<b>8ft</b>	95 - 5/8" + 1/4"



**Cutout Width:**

**MIN 2-5/8"**  
**MAX 2-3/4"**



**Important:** The cut-out **MUST** fall within the specified tolerances.

**Important:** For 2ft standalone fixtures, end framing members must be installed 1" beyond ceiling cut-out.

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

Prepare Ceiling: Continuous Runs

**2 Determine Locations**

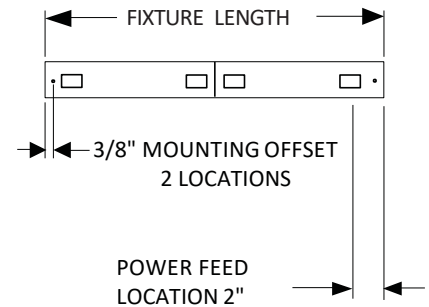
- Determine fixture location and fixture type. Refer to figure B for mount locations and cut-out length. Install mount brackets and suspension cables as shown below.
- Determine power feed location(s) - refer to layout drawings. Install power feeds as required and drop below installed ceiling height.
- Build ceiling frame around fixture cut-out to 2-5/8" to 2-3/4" width as shown in figure B. Refer to layout drawings for ceiling frame length.

**B Ceiling Cut-out Details**



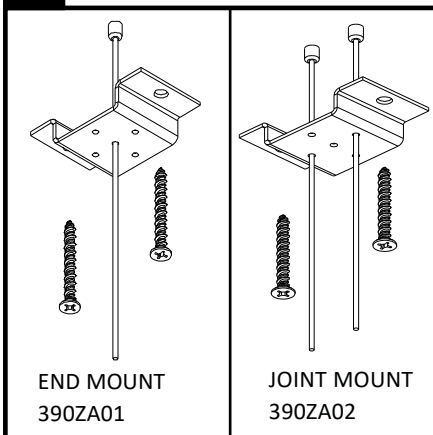
Cutout Width: **MIN 2-5/8"**  
**MAX 2-3/4"**

For continuous run fixtures, the cut-out in the drywall ceiling should be the same size as the overall fixture run length indicated on the layout drawings +1/4".



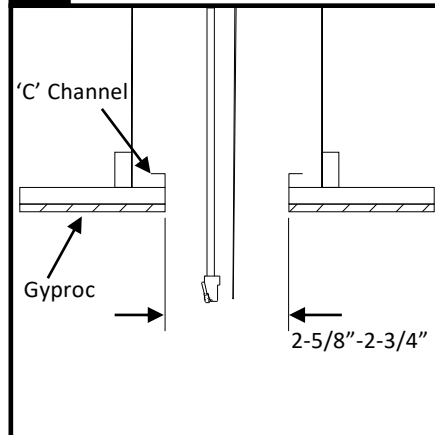
Installation Preparation

**3 Mount Kit**



Install mounting brackets, suspension cables and power feed(s) at required locations. Mounting hardware (screws/ fasteners) are supplied by others. Maximum screw size # 10 (.190").

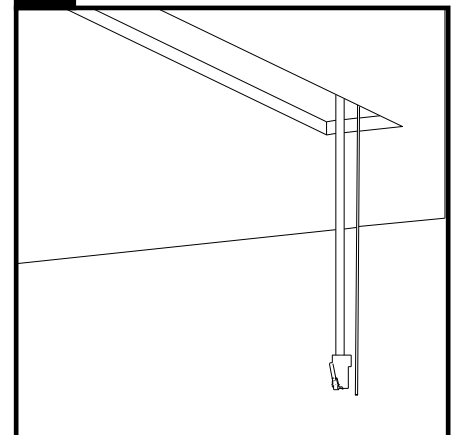
**4 Install Mounts and Power Cables**



Install a 'C' channel perimeter around the ceiling cutout.

**Important: See ceiling cut-out details on page 2 & 3.**

**5 Install Drywall Ceiling**



Install drywall ceiling and cut required opening as shown in **figure A** on page 2 or **figure B** on page 3.

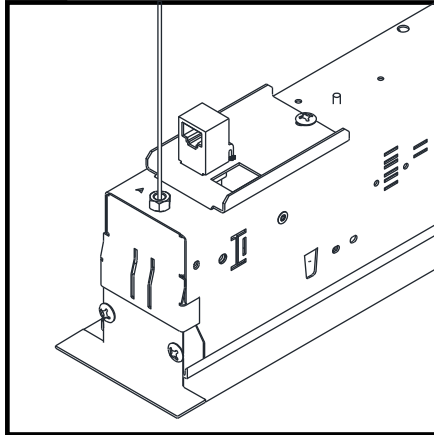
**! ATTENTION: Install in accordance with local and national building and electric codes.**

Install fixtures

**6 Prepare Fixtures**

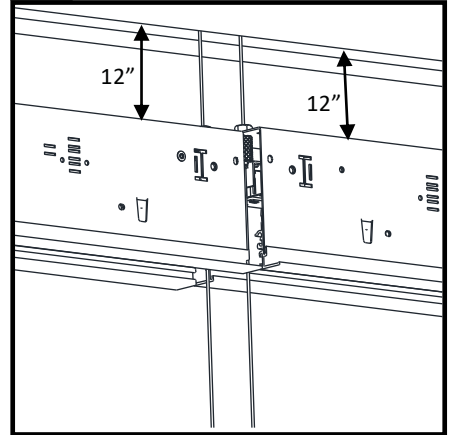
Arrange boxed fixtures on floor in specified mounting locations, based on supplied layout drawings. Match up each fixture based on the spec tag and ID number labelled on each fixture box for the specified run.

**7 Insert Aircraft Cable**



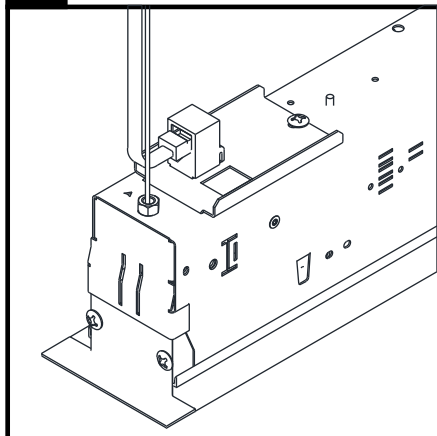
Suspend each module by inserting the aircraft cables through the grippers on top of the housing.

**8 Raise Fixture**



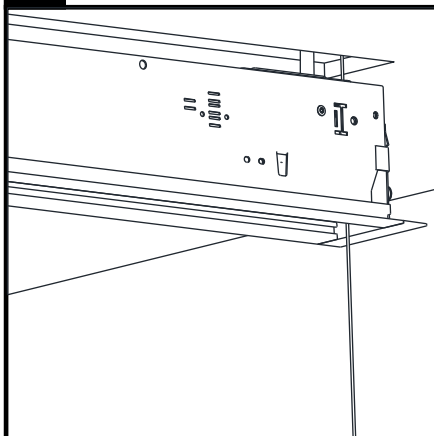
Gradually lift each module to approximately 12 inches below the ceiling.

**9 Install CAT6 Cable**



Insert CAT6 Cable at desired location.

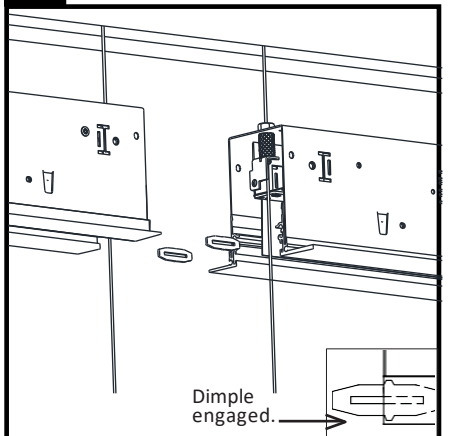
**10 Raise and Level Fixtures**



Once the power connections are complete, pull the aircraft cable to raise all modules to just below the ceiling.

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

**11 Install Joiner Aligners**



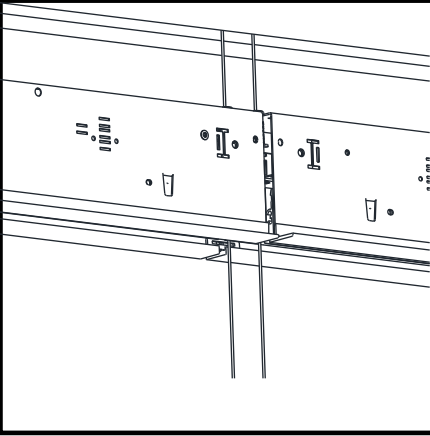
At joint location(s), gently tap provided joiner aligners inside one module only. Two joiner aligners are required for each joint. **Important:** To insert aligners, tap gently with a hammer until half is inserted into the joiner channel. Be sure to engage the dimple.



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

NOTE: For Standalone fixtures skip to step 15

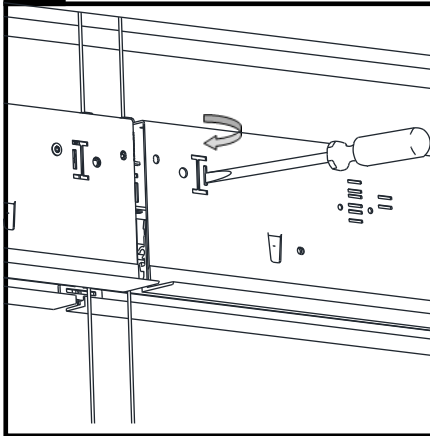
## 12 Join Individual Modules



Gently slide housing modules together, ensuring joiner aligners are engaged inside the trim in the adjacent module.

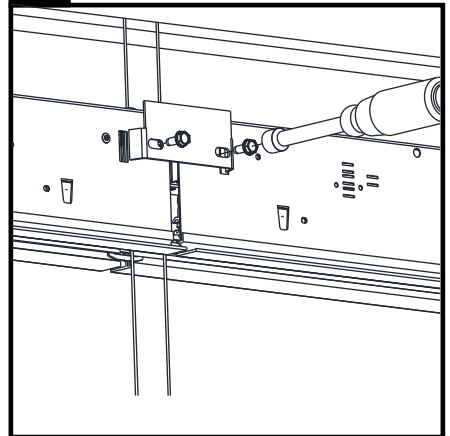
**Important: Joiner aligners must be fully inserted to provide proper section alignment.**

## 13 Open Slots for Joiner Bracket



Snap off the safety cover on joiner bracket slots with a flat head screwdriver. This only needs to be done on ends that require joining.

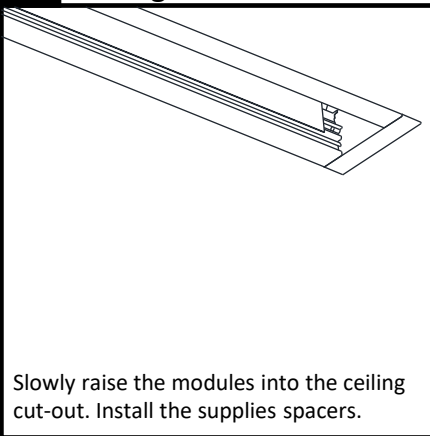
## 14 Install Joiner Brackets



Install joiner brackets on each side of the housing using supplied hardware.

**Important: Hand tighten bracket screws while supporting the housing on the opposite side. Gradually alternate sides while tightening. Do not over tighten.**

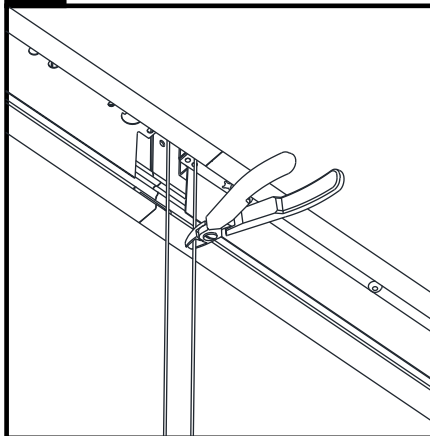
## 15 Raise Fixture(s) into Ceiling Cut-out



Slowly raise the modules into the ceiling cut-out. Install the supplies spacers.

**Important:** For continuous row modules, start at one end and gradually raise each module up one inch at a time. Repeat process until housing is fully recessed and housing trim touches drywall ceiling. Do not stress the joint connection by tilting the module, as damage can occur.

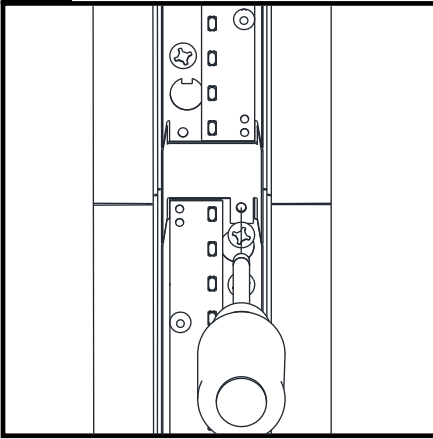
## 16 Trim Excess Cable



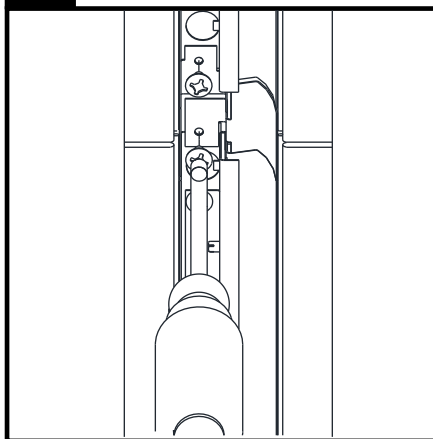
Trim suspension cable approximately 8 inches below the ceiling level. Tuck all excess cable inside the upper wiring cavity.



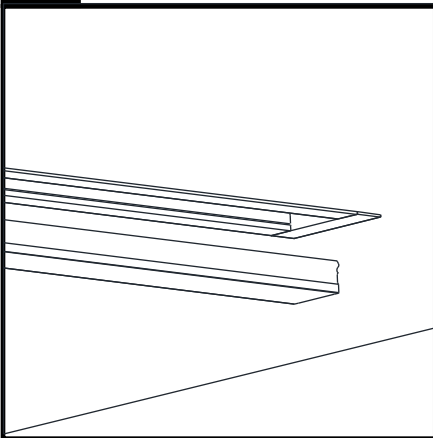
**ATTENTION: Install in accordance with local and national building and electric codes.**

**17a** Led Pan Joiner - Symmetric

Mount the LED pan connector with the supplied screw in the joiner kit.

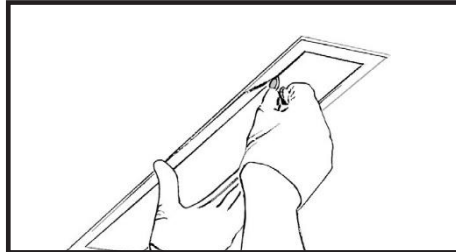
**17b** Led Pan Joiner - Asymmetric

Mount the LED pan connector with the supplied screw in the joiner kit.  
There are two pieces for the asymmetric fixture

**18** Install Lens

Snap in lens to insert into fixture.

**Note:** Please refer to layout drawing and match up each lens based on the ID number.

**Lens Removal for maintenance:**

To remove snap-in lens for maintenance purposes, insert a flat, smooth edged object between lens and housing. Twist to release pressure and remove lens.

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

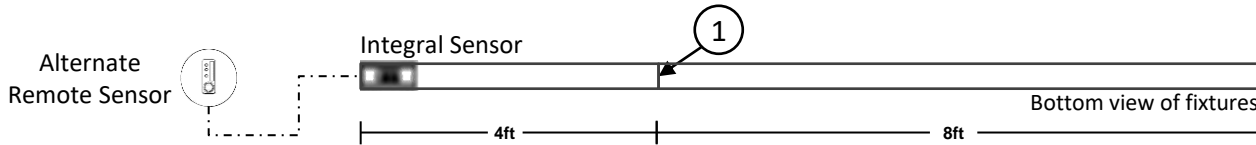
## Sensors in Rows

### 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.

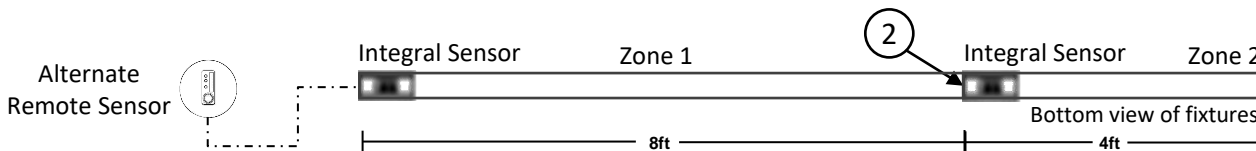


### Multiple Sensors Controlling Separate Zones in a Row

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

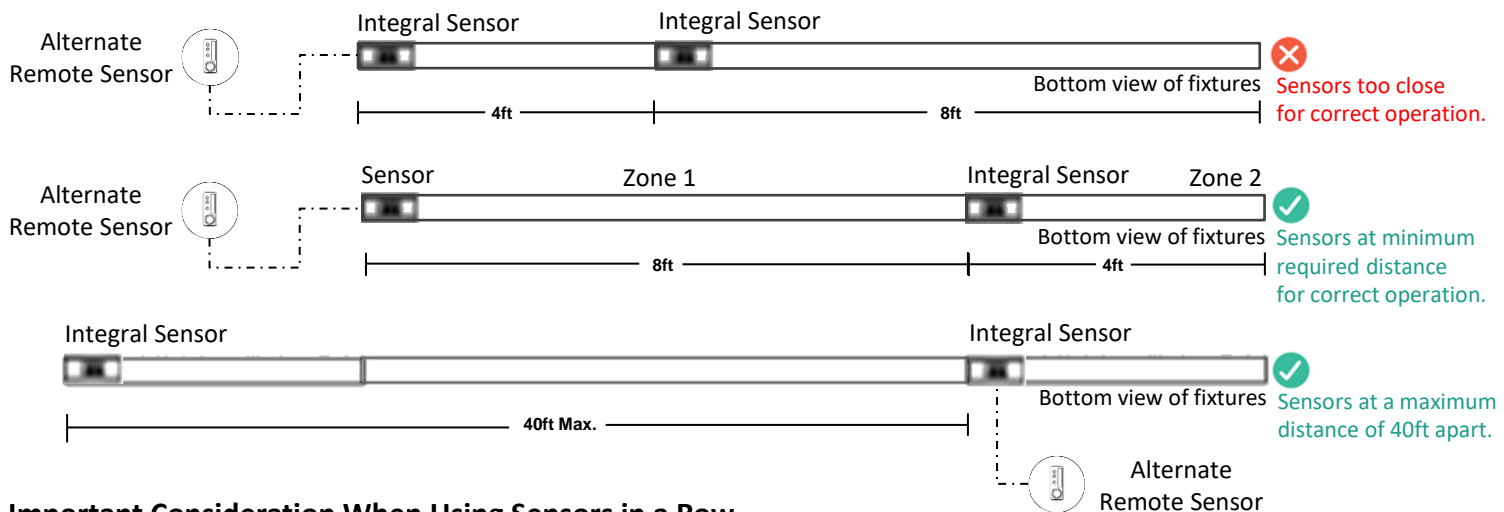
Notes:

- 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.



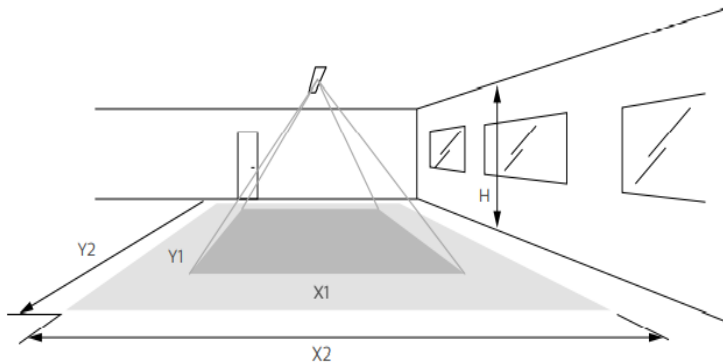
### Important Consideration When Using Sensors in a Row

- 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.



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

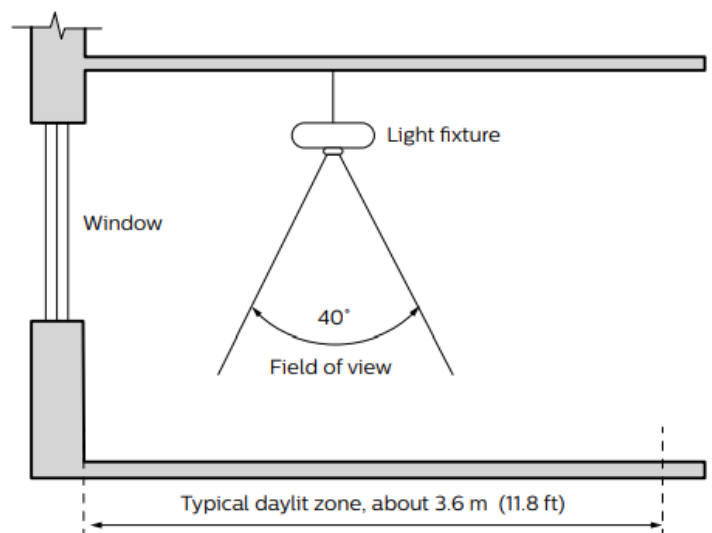
### Daylight sensor

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  $\geq 2\text{ft}$  (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.

### Photosensor spatial response



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



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