

# Two-wire Fixture Mount Sensor (FS-D22)

## SPECIFICATION

The Enlighted Two-wire Fixture Mount Sensor features digital PIR occupancy, ambient light sensing, daylight harvesting, and environment monitoring, providing all the benefits of Enlighted's Smart Sensor technology. The sensor also includes a Bluetooth 4.0 BLE radio for beaconing. Simple to mount within a fixture, the sensor operates seamlessly to create a comfortable space and communicates data wirelessly to the Enlighted control network.



### OVERVIEW

The Two-wire Fixture Mount Sensor (FS-D22) is designed so the device installs into the fixture cavity, leaving only the sensor face visible, making it an ideal choice for adding intelligence while maintaining aesthetics. The 18 AWG solid copper wiring between the sensor and a compatible LED driver simplifies installation and provides plug and play capabilities. With a durable wireless antenna, digital motion, ambient light, temperature sensing, and distributed intelligence, the Two-wire Fixture Mount Sensor makes advanced lighting control a reality for any fixture manufacturer.

### FEATURES AND BENEFITS

**Localized Control:** Local microprocessor and memory in each sensor enable a sequence of operations at the fixture, eliminating dependence on any other network component once system setup is completed. Fixtures can operate without an active Gateway or Energy Manager, ensuring no single point of failure.

**Software-Driven:** Light-level schedules, preferences, and behavior settings definable for each fixture are saved in the sensor's local memory as a software profile. Profiles are wirelessly communicated to sensors during system setup and can be easily modified when desired.

**Occupancy Sensing:** Digital PIR detection is supplemented with data from the ambient light sensor for precise detection of changes in the coverage area and minimized false tripping.

**Bluetooth 4.0 Low Energy (BLE):** Incorporates a BLE radio and broadcasts beacons. Beacons can be turned on or off using the Enlighted Energy Manager.

**Manual-on/Vacancy Sensing:** When paired with the wireless Enlighted Room Control (WS-2-00), the sensor acts as a vacancy sensor providing code-compliant manual-on/auto-off capability.

**Daylight Harvesting:** An ambient light sensor captures light level data from the coverage area. The sensor then interprets this data and transmits code-compliant control commands to the LED driver to raise and lower light levels based on available daylight.

**Thermal Sensing:** Reports the ambient temperature at the sensor location.

**Zone Control:** Sensors can be grouped into zones, thereby allowing multiple fixtures to share occupancy sensing data and respond simultaneously to occupant motion patterns in specific building areas.

**Full Reporting Functions:** Local occupancy, power consumption, light levels, and temperature data collection compatible with Enlighted's control network enables deep, insightful reporting and analytics.

**Standards-Based Networking and Security:** Adhering to the 802.15.4 wireless protocol, transmitting in bursts and appropriately selecting low-traffic channels, the Enlighted wireless network reliably coexists with Wi-Fi networks. AES-128 encryption provides robust data security.

**Simple and Low-Cost Installation:** Single wiring connection in fixture only with no other above ceiling wiring required. One sensor-per-fixture approach simplifies the installation process.

**Lighting Technology Compatibility:** Sensor dimming and on/off signals are compatible with the Philips Xitanium SR LED driver (model # XI040C110V054VPT).

### The Enlighted two-wire Fixture Mount Sensor

Body	L	2.03"	51.7mm
	W	0.9"	24mm
Face	Dia.	1.06"	27mm
Weight		0.8 oz	22.6 grams

### ENLIGHTED SPECIFICATION SUBMITTAL

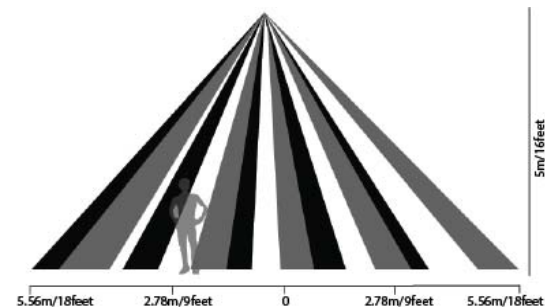
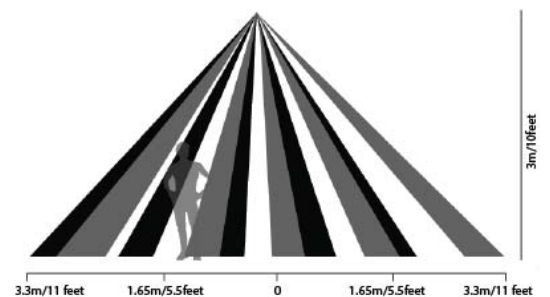
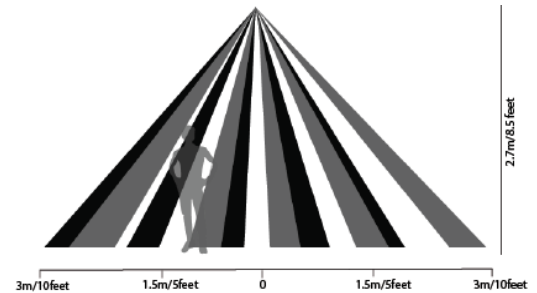
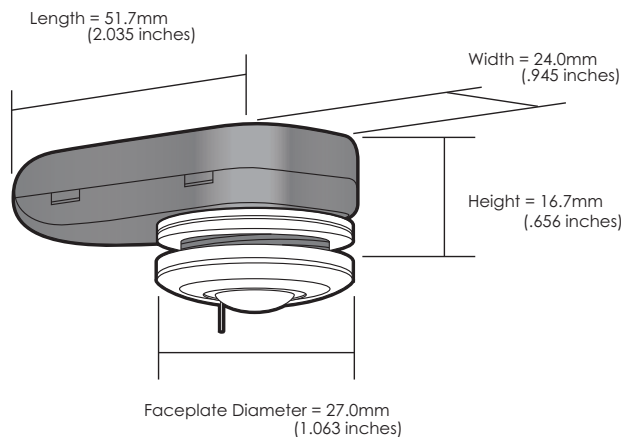
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## MOUNTING

The Enlighted two-wire Fixture Mount Sensor can be easily integrated into lighting fixtures through a 1/2 inch trade size knockout or .875 inch (22mm) hole. Just unscrew the faceplate from the sensor, insert the threaded part through the knockout, and reattach the faceplate from the outside of the fixture. A spring washer ensures that the faceplate is flush with the fixture. After the sensor has been properly mounted into a fixture, only the discrete white faceplate is visible, which is paintable.

## DIMENSIONS



## SENSOR COVERAGE PATTERNS

The Enlighted two-wire Fixture Mount Sensor uses infrared technology to detect occupancy. The human body emits heat as infrared light. The sensor incorporates a multifaceted lens to focus this light on to a passive infrared detector (PIR). Using patented algorithms, the Enlighted two-wire Fixture Mount Sensor analyzes the PIR's output and determines if a person is present.

The Enlighted two-wire Fixture Mount Sensor produces an all-encompassing Field of View (FOV) by aggregating many repeated narrow FOVs. For the typical 8.5 foot ceiling, motion can be detected at about a 10 feet radius. For a 10 foot ceiling, motion can be detected at about an 11 feet radius and for a typical 16 feet ceiling, motion can be detected at about 18 feet radius.

## TECHNICAL SPECIFICATIONS

- Motion Sensing: Digital Passive IR
- Photosensor: Light Pipe/Photosensor Array
- Type: Closed Loop Light Sensor
- Enclosure: ABS/Polycarbonate blend
- Operating: 32° to 122° F / 0° to 50° C
- Radio Frequency: 2400–2483.5 MHz
- Bluetooth 4.0 Low Energy (BLE):
  - Operating Frequency: 2400–2483.5 MHz
  - IEEE Standard: 802.15.1
  - Broadcasting Interval: Configurable
- Wireless Protocol: IEEE 802.15.4
- Wireless Range: 150 ft. (46m) radius in free space field
- Encryption: AES-128

## ORDERING INFORMATION

FS-D22 Enlighted two-wire Fixture Mount Sensor

## COMPLIANCE

- Europe RoHS
- United States
- Canada

Warranty: 3 years



Bluetooth® is a registered trademark of Bluetooth SIG, Inc.