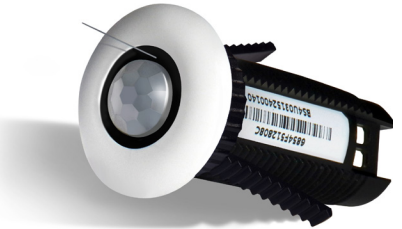


# Two-wire Compact Sensor (CS-D2)

## SPECIFICATION

The Enlighted Two-wire Compact Sensor's small form factor and flush mount design enables the sensor to blend into its surroundings while it monitors occupancy, daylight, and temperature. The sensor incorporates digital PIR occupancy, ambient light sensing, daylight harvesting, and environment monitoring. The sensor also includes a Bluetooth® 4.0 BLE radio for beaconing. Data is transmitted wirelessly to the Enlighted network management system.



### OVERVIEW

Designed for indoor lighting applications, the Enlighted Two-wire Compact Sensor features onboard intelligence. The device can be mounted inside a fixture or into the ceiling, leaving only the sensor face visible, making it an ideal choice for 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, photocell, and temperature sensing, the sensor enables autonomous fixture-level control, bringing advanced lighting controls to a whole new scale.

### FEATURES AND BENEFITS

**Localized Control:** Local microprocessor and memory in each sensor enable a sequence of operations at the fixture, eliminating dependency on any other network component once system setup is complete. The sensor works autonomously to ensure continuous operation, eliminating any single point system failure.

**Software-Driven:** Light-level schedules, preferences, and behavior profiles for each fixture are wirelessly communicated during system setup and locally stored. Profiles can be modified and updated wirelessly.

**Occupancy Sensing:** Digital Passive Infrared (PIR) detection is supplemented with data from the ambient light sensor for precise detection of changes 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 Room Control (WS-2-00), the sensor acts as a vacancy sensor providing code-compliant manual-on/auto-off capability.

**Daylight Harvesting:** Captured ambient light levels are locally interpreted into control commands to raise and lower light levels based on available daylight.

**Thermal Sensing:** Reports 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 zones.

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

**Standards-Based Networking and Security:** The Enlighted 802.15.4 wireless network with AES-128 encryption supports reliable communication that coexists with Wi-Fi networks by sensing low-traffic channels and transmitting in bursts.

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

**Lighting Technology Compatibility:** Sensor control signals are compatible with various LED drivers and two-wire devices.

### Two-wire Compact Sensor

Body	L	2.24"	56.8 mm
	Dia.	.82"	20.8 mm
Bezel	Dia.	1.26"	32.0 mm

### ENLIGHTED SPECIFICATION SUBMITTAL

Job Name:

Job Number:

Product Code:

CS-D2

# Two-wire Compact Sensor (CS-D2)

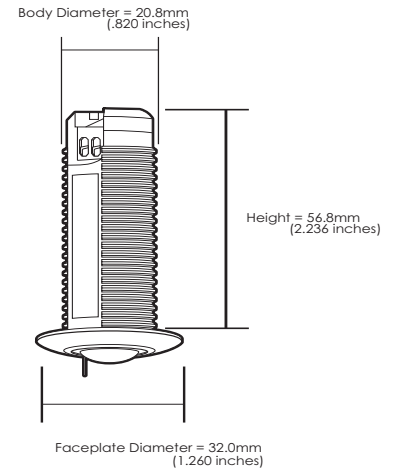
## MOUNTING

The Enlighted Two-wire Compact Sensor is designed to be easily mounted into lighting fixtures or ceiling tiles so that only the paintable white faceplate is visible.

To mount the sensor in a lighting fixture, just insert the sensor through a 1/2 inch trade size knockout or 8.75 inches (22 mm) hole. Thread the Enlighted spring arms (not pictured) around the back of the sensor to fasten it in place inside the fixture. To mount the sensor through a ceiling tile, thread the spring arms around the sensor and insert the sensor through a 15/16th inch hole in the tile. The spring arms hold the sensor in place—no access to the back of the tile is required.

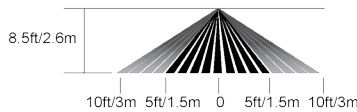
## SENSOR COVERAGE PATTERNS

The Enlighted Two-wire Compact 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 (PIR) detector. Using patented algorithms, the Enlighted Compact Sensor analyzes the PIR's output and determines if a person is present. The Enlighted Two-wire Compact Sensor produces an all-encompassing Field of View (FOV) by aggregating many repeated narrow FOVs.

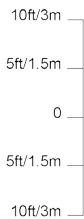


Ceiling Height	Minor Motion (Radius)	Major Motion (Radius)
8.5 feet/2.6m	5 feet/1.5m	10 feet/3m
16 feet/4.8m	9 feet/2.8m	18 feet/5.5m

### 8.5 feet Mounting Height

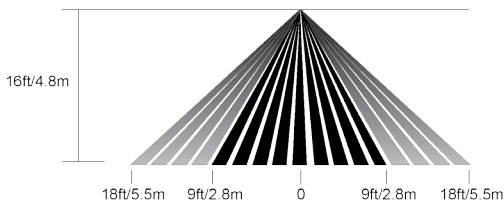


Top View

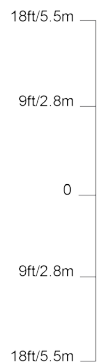


Side View

### 16 feet Mounting Height



■ Minor Motion  
■ Major Motion



## TECHNICAL SPECIFICATIONS

**Motion Sensing:** Digital Passive IR

**Photosensor:** Light Pipe/Photosensor Array

**Enclosure:** ABS/Polycarbonate blend

**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

CS-D2 Two-wire Compact Sensor

## COMPLIANCE

Europe

United States

Canada

### Warranty: 5 years

Refer to [www.enlightedinc.com/limited-warranty-terms](http://www.enlightedinc.com/limited-warranty-terms) for complete terms and conditions



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