# Wireless Light Sensor

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### Light Sensor

#### The Light sensor shall be the Echoflex TAP-21U Series Photo Sensor by Echoflex Solutions, Inc., or equal.

#### Mechanical

##### The Sensor shall mount to a ceiling using screws or peel-and-stick attachment

##### The Sensor shall support optional mounting to an electrical box or low voltage trim

##### The Sensor shall be available in white

##### The Sensor shall use a frosted cover over the photovoltaic panels

##### The Sensor shall have a button for linking the sensor to a wireless controller

###### The button shall be accessible when the Sensor is mounted

##### The Sensor shall be constructed of ABS injection molded plastic that fully encloses all components

##### The Sensor shall support a start-assist battery option

#### Electrical

##### The Sensor shall utilize photovoltaic energy harvesting for power. Sensors that require low voltage power input or batteries for normal operation shall not be acceptable

###### The Sensor shall be capable of storing sufficient energy to provide normal operation for at least eighty hours without light when charged in 1000 lux (93 FC) for a minimum of 7.5 hours

###### The Sensor shall begin operation within 5 minutes from a discharged state when charged at minimum 50 lux (5 FC)

###### The photovoltaic solar cells shall produce energy from natural or artificial light sources

##### The Sensor shall use a 902 MHz EnOcean radio. Systems that use other frequencies radios shall not be acceptable

##### The Sensor shall have a range of at least 80 feet laterally through walls and up to 300 feet in open space

##### The Sensor shall comply with FCC Part 15.231, IC RSS-210, and CEC Title 24

#### Functional

##### The Sensor shall wirelessly transmit the measured ambient light level and stored voltage level when there is sufficient stored energy or sufficient solar energy for operation

###### The Sensor shall transmit at minimum every 130 seconds

###### When the measured ambient light level drops by 20% or greater of the selected light range, the sensor shall transmit at minimum every 11 seconds for 10 cycles

##### The Sensor shall support two ranges of light value selectable by slide switch: 0-510 lux (0-50 FC) or 0-1020 (0-100 FC) lux

##### The Sensor shall support Simple Tap programming for configuration of compatible wireless lighting controllers

##### The Sensor shall support a radio-range confirmation test mode

###### The Sensor shall provide visual indication of the communication signal strength with compatible lighting controllers

##### The Sensor shall support a light-level evaluation test mode

###### The Sensor shall provide visual indication of the ambient light level where the sensor is mounted

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