



Certification Exhibit

FCC ID: 2AKCY-0580000038

FCC Rule Part: 47 CFR Part 2.1091

Project Number: 72179470

Manufacturer: COOPER LIGHTING LLC
Model Name / Number: Insights Ceiling Sensor / ECS-Z-M05-LV

RF Exposure

General Information:

Applicant: Cooper Lighting LLC
Device Category: Mobile
Environment: General Population/Uncontrolled Exposure

Technical Information (BLE) – “Device 1”:

Frequency Range (MHz): 2402 - 2480
Antenna Type: Isolated Magnetic Dipole (IMD)
Antenna Gains: 2.6 dBi
Maximum Transmitter Conducted Power: 3.1dBm, 2.04mW
Maximum System EIRP: 5.7dBm, 3.72mW
Exposure Conditions: 20 centimeters

Technical Information (Zigbee) – “Device 2”:

Frequency Range (MHz): 2405 - 2480
Antenna Type: Isolated Magnetic Dipole (IMD)
Antenna Gains: 2.6 dBi
Maximum Transmitter Conducted Power: 12.3dBm, 16.98mW
Maximum System EIRP: 14.9dBm, 30.90mW
Exposure Conditions: 20 centimeters

Note: The device does not support simultaneous transmissions

RF Exposure Calculation

Table 1: Device Characteristics (BLE & Zigbee)

Technical Parameters	Device 1	Device 2
Frequency (GHz)	2.402	2.405
Frequency (MHz)	2402	2405
Separation Distance (cm)	20.00	20.0
Separation Distance (m)	0.2000	0.200
Antenna Gain (dBi)	2.60	2.60
ERP Easily Determined	YES	YES
Conducted Power (dBm)	3.10	12.30
Conducted Power (mW)	2.04	16.98
Duty Factor (Source-Based) %	100.0	100.0
Maximum (Source-Based) Time-Averaged Conducted Power (mW)	2.04	16.98
Maximum (Source-Based) Time-Averaged ERP (mW)	2.27	18.84
Maximum (Source-Based) Time-Averaged EIRP (mW)	3.72	30.90
Maximum Output (mW)	2.27	18.84

Table 2: 47 CFR 1.1307(b)(3)(i)(c) MPE-Based Exemption ERP (W) – (BLE & Zigbee)

Technical Parameters	Device 1	Device 2
$\lambda / 2\pi$ (m)	0.020	0.020
$R \geq \lambda / 2\pi$	YES	YES
Maximum (Source-Based) Time-Averaged ERP (W)	0.0023	0.0188
ERP Threshold (W)	0.7680	0.7680
Exemption	YES	YES
Contribution Ratio (ERP / ERP _{th})	0.003	0.025
Distance to Limit (cm)	1.99	3.13