# Certification Exhibit

**FCC ID: 2AKCY-OCS-L-P-D**

**FCC Rule Part: 47 CFR Part 2.1091**

**Project Number: 72198945**

Manufacturer: COOPER LIGHTING Solutions
Model Name / Number: Acoustic Ceiling Sensor / OCS-X-D-YY

# RF Exposure

**General Information:**
Applicant: Cooper Lighting Solutions
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: 7.8dBm, 6.03mW
Maximum System EIRP: 10.1dBm, 10.23mW
Exposure Conditions: 20 centimeters

**Technical Information (Zigbee) – "Device 2":**
Frequency Range (MHz): 2405 – 2483.5
Antenna Type: Isolated Magnetic Dipole (IMD)
Antenna Gains: 2.6 dBi
Maximum Transmitter Conducted Power: 7.8dBm, 6.03mW
Maximum System EIRP: 10.1dBm, 10.23mW
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) | 2.30 | 2.30 |
| ERP Easily Determined | YES | YES |
| Conducted Power (dBm) | 7.80 | 7.80 |
| Conducted Power (mW) | 6.03 | 6.03 |
| Duty Factor (Source-Based) % | 100.0 | 100.0 |
| Maximum (Source-Based) Time-Averaged Conducted Power (mW) | 6.03 | 6.03 |
| Maximum (Source-Based) Time-Averaged ERP (mW) | 6.24 | 6.24 |
| Maximum (Source-Based) Time-Averaged EIRP (mW) | 10.23 | 10.23 |
| Maximum Output (mW) | 6.24 | 6.24 |

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

| Technical Parameters | Device 1 | Device 2 |
|---|---|---|
| λ / 2π (m) | 0.020 | 0.020 |
| R≥ λ / 2π | YES | YES |
| Maximum (Source-Based) Time-Averaged ERP (W) | 0.0062 | 0.0062 |
| ERP Threshold (W) | 0.7680 | 0.7680 |
| Exemption | **YES** | **YES** |
| Contribution Ratio (ERP / $ERP_{th}$) | 0.008 | 0.008 |