America

Certification Exhibit

FCC ID: 2ADCB-RMODITHP

FCC Rule Part: 47 CFR Part 2.1091

Project Number: 72130604

Manufacturer: Acuity Brands Lighting, Inc.
Model: RMODITHP

RF Exposure

General Information:

Applicant: Acuity Brands Lighting, Inc.
Device Category: Mobile
Environment: General Population/Uncontrolled Exposure

The 900MHz transceiver is collocated and transmits simultaneously with the Bluetooth LE transceiver radio.

Technical Information:

Table 1: Technical Information

	900MHz Transceiver	***2.4GHz Bluetooth LE Transceiver***
Frequency Band(s) (MHz)	904 - 926	2402 - 2480
Antenna Type(s)	PCB Trace	PCB Trace
Antenna Gain (dBi)	1.0	-0.9
Conducted Power (dBm)	26.96	11.58
Conducted Power (mW)	496.59	14.39
Maximum Peak EIRP (mW)	625.17	11.69
Maximum Peak ERP (mW)	381.07	7.13

MPE Calculation:

The Power Density (mW/cm^2) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = power density (in appropriate units, e.g. mW/cm2)
P = power input to the antenna (in appropriate units, e.g., mW)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Table 2: MPE Calculation (Including Collocated Devices)

Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/Cm2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)	Radio
904	26.96	0.60	496.59	1	1.259	20	0.124	A
2402	11.58	1.00	14.39	-0.9	0.813	20	0.002	B

Summation of MPE ratios – Simultaneous Transmissions

This device contains multiple transmitters which can operate simultaneously; therefore the maximum RF exposure is determined by the summation of MPE ratios. The limit is such that the summation of MPE ratios is ≤ 1.0.

Table 3: Summation of MPE Ratios

	Scenario 1
Radio A	x
Radio B	x
Radio A MPE Ratio	0.206373046
Radio B MPE Ratio	0.002326645
MPE Ratio Summation:	0.208699691