

Certification Exhibit

FCC ID: 2ADCB-RMODIT

FCC Rule Part: 47 CFR Part 2.1091

ACS Project Number: 16-3027

Manufacturer: Acuity Brands Lighting, Inc.
Model: RMODIT

RF Exposure

General Information:

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

The EUT contains a 2.4 GHz radio and 900 MHz radio; both of which can operate simultaneously.

Technical Information:**Table 1: Technical Information**

	<i>Device 1 Details (Acuity Brands Lighting, Inc., N-Light Wireless RF Module, RMODIT, FCCID: 2ADCB-RMODIT, IC: 6715C-RMODIT)</i>	<i>Device 1 Details (Acuity Brands Lighting, Inc., N-Light Wireless RF Module, RMODIT, FCCID: 2ADCB-RMODIT, IC: 6715C-RMODIT)</i>	
Frequency Band(s) (MHz)	2402 - 2480	904 - 926	
Antenna Type(s)	SMD 2.4GHz Chip Antenna	Chip	
		Dipole	
		Monopole	
Antenna Gain (dBi)	3	1	
		0	
		0	
Conducted Power (dBm)	9.55	19.14	
Conducted Power (mW)	9.02	82.04	
Maximum Peak EIRP (mW)	17.99	103.28	
Maximum Peak ERP (mW)	10.96	62.95	

MPE Calculation:

The Power Density (mW/cm²) 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/Cm ²)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm ²)	Radio
2402	9.55	1.00	9.02	3	1.995	20	0.004	A
904	19.14	0.60	82.04	1	1.259	20	0.021	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	Scenario 2
Radio A (2.4 GHz)	x	
Radio B (900MHz)	x	
Radio A MPE Ratio	0.00357874	
Radio B MPE Ratio	0.034092039	
MPE Ratio Summation:	0.037670779	