



BEC INCORPORATED

CERTIFICATION APPLICATION TEST REPORT

TEST STANDARDS:

**FCC Part 15 Subpart C, ISED RSS-Gen, ISED RSS-247
DTS Intentional Radiator**

Equipment Under Test (EUT):

**Lutron Models HWL-RD4WH-TW, HWL-RD6WH-TW,
HWL-CD4WH-TW and HWL-CD6WH-TW LED Downlights
with 802.15.4 Radio**

FCC ID: JPZ0157

ISED ID: 2851A-JPZ0157

REPORT#: BEC-2412-01 REV1

REPORT DATE: 03/20/2026

CUSTOMER:

**Lutron Electronics Company Incorporated
7200 Suter Road
Coopersburg, PA 18036**

PREPARED BY:

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REVIEWED and APPROVED BY:

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The results described in this report relate only to the item(s) tested. This document shall not be reproduced except in full without prior written permission of BEC Incorporated





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Notice to Customer

This report and any recommendations it contain represent the result of BEC's testing and assessment on behalf of your company. Testing has been conducted according to accepted engineering standards and practices. This report reflects testing and assessment of product samples provided by your company and may not reflect the characteristics of other samples, especially those produced at different times. This report and its findings and recommendations, if implemented, should not be construed as an assurance or implied warranty for the continuing electromagnetic compatibility (EMC) of the product. **BEC shall not be liable for incidental or consequential damages, even if advised of the possibility thereof.**

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The BEC Decision Rule: Measurement Uncertainty is not applied to any testing measurements or test results provided to the customer by BEC Incorporated at this time.

Revision History

Revision #	Description of Changes	Date of Changes	Date Released
0	Test Report Initial Release	N/A	03/06/2026
1	Edited Section 3.1.3 Basic Test Methods and Test Procedures to Update ANSI C63.10-2020 version to ANSI C63.10-2020+Cor.1-2023+A1-2024	03/20/2026	03/20/2026



1.0 Administrative Information

1.1 Project Details

Project Number	BEC-2412				
EUT Manufacturer	Lutron Electronics				
EUT Model Numbers	HWL-RD4WH-TW / HWL-RD6WH-TW / HWL-CD4WH-TW / HWL-CD6WH-TW				
EUT Description	HWL Series LED Downlight with 802.15.4 Radio				
EUT Sample Types	Antenna Conducted Test Sample				
EUT Sample Numbers	2412-05				
EUT Serial Numbers	09C52326				
EUT Sample Types	Radiated & Conducted Emissions Samples				
EUT Sample Numbers	2412-01	2412-02	2412-03	2412-04	2412-06
EUT Serial Numbers	09C5382C	09C52327	09C523D5	09C523C9	09C5382E
FCC ID	JPZ0157				
ISED ID	2851A-JPZ0157				
HVIN	RD46-2				
PMNs (Qty 24)	HWL-RD4WH-TW, HWL-RD4BL-TW, RRL-RD4WH-TW, RRL-RD4BL-TW, CM-RD4WH-TW, CM-RD4BL-TW, HWL-RD6WH-TW, HWL-RD6BL-TW, RRL-RD6WH-TW, RRL-RD6BL-TW, CM-RD6WH-TW, CM-RD6BL-TW, HWL-CD4WH-TW, HWL-CD4BL-TW, RRL-CD4WH-TW, RRL-CD4BL-TW, CM-CD4WH-TW, CM-CD4BL-TW, HWL-CD6WH-TW, HWL-CD6BL-TW, RRL-CD6WH-TW, RRL-CD6BL-TW, CM-CD6WH-TW, CM-CD6BL-TW				
FVIN	3.14.9				
Radio Type	802.15.4				
Frequency of Operation	2400 – 2480 MHz				
Frequencies Tested	Low (2405 MHz), Middle (2440 MHz), High (2480 MHz)				
Antenna Gain	+ 1.14 dBi / - 1.36 dBd				
Antenna Type	Monopole				
Modulation	O-QPSK				



FCC Classification	Digital Transmission System (DTS)
Date Samples Received	11/26/2025
Test Dates	12/01/2025 – 01/23/2026
EUT Test Firmware	3.14.9
Sample Types	Production Units Suitable for Test
Applicable FCC Rules	FCC Rules Part 15.247: Operation within the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz Direct Sequence System
Applicable ISED Rules	RSS-Gen: General Requirements for Compliance of Radio Apparatus & RSS-247: Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Network (LE-LAN) Devices

1.2 Preface

This report documents product testing conducted to verify compliance of the specified EUT with applicable standards and requirements as identified herein. EUT, test instrument configurations, test procedures, and recorded data are generally described in this report. The reader is referred to the applicable test standards for detailed procedures. The following table summarizes the test results obtained during this evaluation.

1.3 Laboratory and Customer Information

Test Laboratory Location	BEC Incorporated 970 East High Street Pottstown, PA 19464
BEC Test Personnel	JR Fanella / Steve Fanella
BEC Laboratory Number FCC Registration	US1118
BEC Laboratory Number ISED Registration	7342A-1
Test Performed For	Lutron Electronics Company Incorporated 7200 Suter Road Coopersburg, PA 18036
Customer Technical Contacts	Alina Shirley
Customer Reference Number	PO # 5360693



1.4 Measurement Uncertainty

Measurement	Measurement Distance	Frequency Range	Measurement Limit	Expanded Uncertainty (dB)
Radiated Disturbance	3 Meter	30 MHz – 1 GHz	Class B	4.78
Conducted Disturbance AC Mains	N/A	150 kHz – 30 MHz	Class A or B	2.69

No adjustments to measured data presented in this report are required because all values of uncertainty are less than the CISPR 16-4-2:2018 recommendations. These uncertainties have a coverage factor of $k = 2$, which yields approximately a 95% level of confidence for the near-normal distribution typical of most measurement results.

FCC Registered Test Site Number: US1118
ISED Registered Test Site Number: 7342A-1

Test Measurement	ETSI TR 100 028 and CISPR 16-4-2 Limits	BEC Value
Radio Frequency	± 0.5 ppm	± 0.027 ppm
RF Power, Conducted	± 1.5 dB	± 1.45 dB
Conducted Spurious Emission of Transmitter, Valid up to 6 GHz	± 3 dB	± 0.9 dB
Radiated Emission of Transmitter, Valid up to 6 GHz	± 5.2 dB	± 4.87 dB
Radiated Emission of Receiver, Valid up to 6 GHz	± 5.2 dB	± 4.87 dB
Radiated Emission of Transmitter, Valid up to 18 GHz	± 5.5 dB	± 4.90 dB
Radiated Emission of Receiver, Valid up to 18 GHz	± 5.5 dB	± 4.90 dB
Occupied Bandwidth	± 5 %	± 2 %
Temperature	± 2.5 ° C	± 0.5 ° C
Humidity	± 10 %	± 2.5 %

These uncertainties have a coverage factor of $k = 1.96$ or $k = 2$, (which provide confidence levels of respectively 95 % and 95.45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)). Principles for the calculation of measurement uncertainty are contained in ETSI TR 100 028 [i.3], in particular in annex D of ETSI TR 100 028-2 [i.3].



1.5 Test Result Summary Table

The Lutron HWL Series LED Downlights with 802.15.4 radios were tested and found to be compliant to the sections of the FCC Part 15 Subpart C and ISSED standards listed below:

Report Section	FCC Part 15, Subpart C	RSS-Gen	RSS-247	Test Description	Result
4.1	15.203	Annex A 10(g)		Antenna Requirement	PASS
4.2	15.204	8.3		External RF power amplifiers and antenna modifications	PASS
4.3	ANSI C63.10, Section 11.6			Duty Cycle	Measured
4.4	15.247(d)		6.1	DTS Emissions in non-restricted frequency Bands 30 MHz to 25 GHz Conducted Spurious Emission	PASS
4.5	15.205, 15.209 15.35(b)	8.9, 8.10	6.3	DTS Emissions in restricted frequency Bands 30 MHz to 25 GHz Radiated Spurious Emission	PASS
4.6	15.247(a)(2)		6.3.1	6 dB Occupied Bandwidth	PASS
4.7	2.1049(h)	6.7		99% Occupied Bandwidth	PASS
4.8	15.247(b)(3)		6.3.2	Maximum Conducted Output Power and EIRP	PASS
4.9	15.247(e)		6.3.1	Antenna Port, Power Spectral Density	PASS
4.10	15.247(d)			Band Edge Measurement	PASS
4.11	15.207	8.8		AC Mains Conducted Emissions	PASS

Note: This report is for the Lutron HWL Series LED Downlights which represents Models HWL-RD4WH-TW, HWL-RD6WH-TW, HWL-CD4WH-TW and HWL-CD6WH-TW.

This Report also covers the following Models which are identical to the models tested but are only change in model numbers for marketing purposes:

HWL-RD4BL-TW, RRL-RD4WH-TW, RRL-RD4BL-TW, CM-RD4WH-TW, CM-RD4BL-TW
 HWL-RD6BL-TW, RRL-RD6WH-TW, RRL-RD6BL-TW, CM-RD6WH-TW, CM-RD6BL-TW
 HWL-CD4BL-TW, RRL-CD4WH-TW, RRL-CD4BL-TW, CM-CD4WH-TW, CM-CD4BL-TW
 HWL-CD6BL-TW, RRL-CD6WH-TW, RRL-CD6BL-TW, CM-CD6WH-TW, CM-CD6BL-TW



1.6 Condition of Received Sample

An evaluation of the EUT was conducted in order to verify test subject identity and condition and to ensure suitability for testing. No evidence of physical damage was noted. The test item condition was deemed acceptable for the performance of the requested test services.

1.7 Climatic Environment

The following were the general environmental conditions inside the laboratory during testing:

Temperature: $22^{\circ}\text{C} \pm 5^{\circ}\text{C}$

Humidity: $50\% \pm 20\%$

Barometric Pressure: $1010 - 1050\text{ mb} \pm 20\%$

1.8 Test Equipment

All test equipment is checked to manufacturer's specifications and, when applicable, have current N.I.S.T. traceable, ISO 9002 conforming certificates of calibration. Test equipment used for the tests described herein is listed in Appendix A.



2.0 Equipment Under Test

Unless otherwise noted in the individual test results sections, testing was performed on the EUT as follows.

2.1 EUT Description

The Lutron Model HWL, RRL & CM Series are a family of LED Downlights. The LED Downlights are powered at 120 VAC / 60 Hz.

2.2 Product Category

FCC Part 15, Subpart C (Section 15.247), ISSED RSS-Gen, ISSED RSS-247

2.3 Product Classification

Intentional Radiator Testing Requirements, DTS Operation within the band of 2400 – 2483.5 MHz.

2.4 Test Configuration

The Lutron Model HWL, RRL & CM Series are powered at 120 VAC / 60 Hz. The Lutron Model HWL-RD4WH-TW LED Downlight Sample # 2412-05 was tested for all antenna conducted measurements. The Lutron Model HWL Series LED Downlights Samples # 2412-02, 2412-03, 2412-04 & 2412-06 were tested for all conducted emission tests. The Lutron Model HWL Series LED Downlights Samples # 2412-01, 2412-02, 2412-03, 2412-04 & 2412-06 were tested for all radiated emissions tests. The radio test software allowed the tester to choose the 802.15.4 transmissions of low Channel 11 (2405 MHz), middle Channel 18 (2440 MHz) or high Channel 26 (2480 MHz). The transmission was tested in maximum output power with the choice of transmitting with O-QPSK Modulation or without Modulation.

The Following Models were tested: HWL-RD4WH-TW, HWL-RD6WH-TW, HWL-CD4WH-TW and HWL-CD6WH-TW.

This Report also covers the following Models which are identical to the models tested but are only change in model numbers for marketing purposes:

HWL-RD4BL-TW, RRL-RD4WH-TW, RRL-RD4BL-TW, CM-RD4WH-TW, CM-RD4BL-TW
HWL-RD6BL-TW, RRL-RD6WH-TW, RRL-RD6BL-TW, CM-RD6WH-TW, CM-RD6BL-TW
HWL-CD4BL-TW, RRL-CD4WH-TW, RRL-CD4BL-TW, CM-CD4WH-TW, CM-CD4BL-TW
HWL-CD6BL-TW, RRL-CD6WH-TW, RRL-CD6BL-TW, CM-CD6WH-TW, CM-CD6BL-TW

2.5 Test Configuration Rationale

The mode of operation provides the worst case for all EMC; all devices on board are active and functioning normally

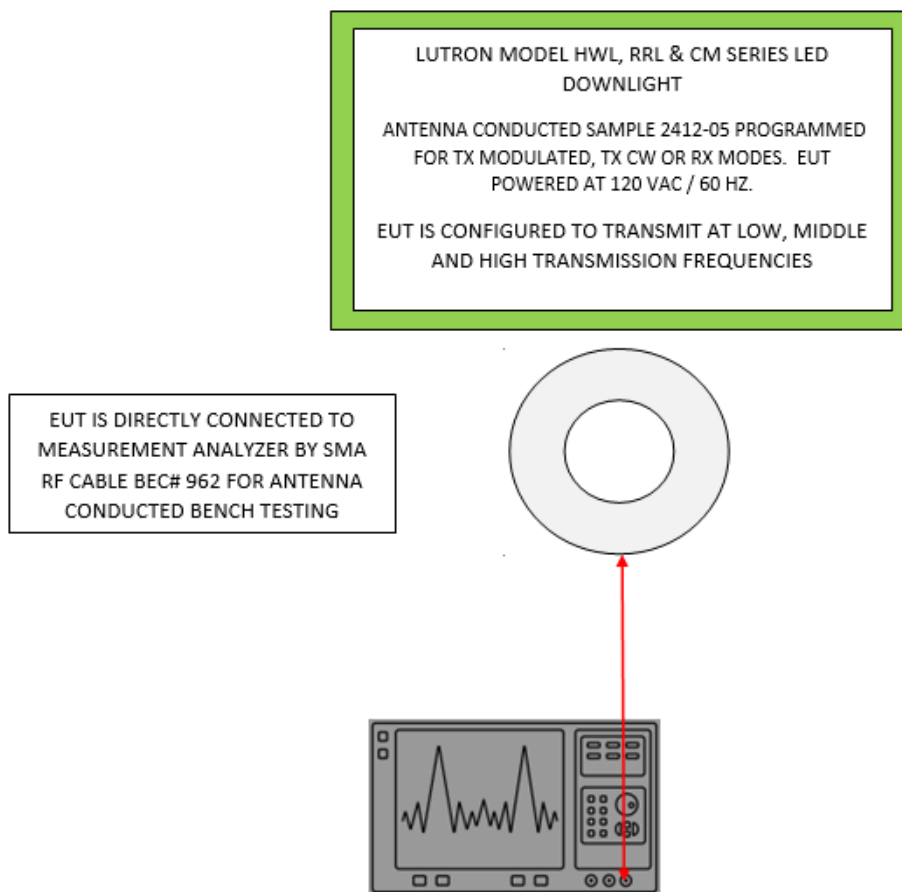


2.6 Test Configuration Diagrams

Block diagrams of the EUT configuration showing interconnection cables are illustrated below. The drawing shows the physical hardware layout used for the tests along with I/O cables and AC power distribution.

Antenna Conducted Test Configuration
(EUT modified with SMA connector in place of antenna)

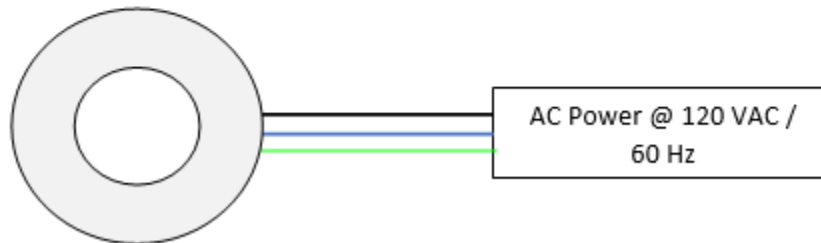
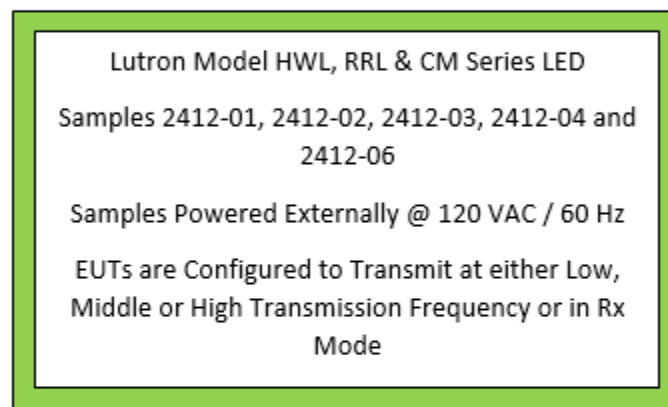
LUTRON MODEL HWL, RRL & CM SERIES ANTENNA CONDUCTED TEST SETUP DIAGRAM





Radiated Emission & AC Mains Conducted Emission Test Configuration

LUTRON MODEL HWL, RRL & CM SERIES RADIATED EMISSIONS OR AC MAINS CONDUCTED EMISSIONS TEST SETUP





2.7 EUT Information, Interconnection Cabling and Support Equipment

EUT Hardware

Description	Manufacturer	Model	Sample Number	Serial Number
4 Inch LED Downlight with Metal Housing Radiated Sample	Lutron Electronics	HWL-RD4WH-TW	2412-01	09C5382C
6 Inch LED Downlight with Metal Housing Radiated Sample	Lutron Electronics	HWL-RD6WH-TW	2412-02	09C52327
4 Inch LED Downlight Radiated Sample	Lutron Electronics	HWL-CD4WH-TW	2412-03	09C523D5
6 Inch LED Downlight Radiated Sample	Lutron Electronics	HWL-CD6WH-TW	2412-04	09C523C9
LED Downlight Antenna Conducted Sample	Lutron Electronics	HWL-RD4WH-TW	2412-05	09C52326
4 Inch LED Downlight with Metal Housing Radiated Sample	Lutron Electronics	HWL-RD4WH-TW	2412-06	09C5382E

Interconnection Cable List

Part Number	Shielding	Length	Description
Unknown	None	2 Feet	Power Cord from EUT to AC Mains
Suhner S04272B	Double Braid	1 Meter	High Frequency RF Measurement Cable from the Antenna SMA Connector of the Sample 2412-05 Under Test to the R&S ESIB26 Receiver. Asset # BEC-962

Support Equipment

Description	Manufacturer	Model/Part #	Serial #
Laptop Computer- Programming the EUT Radio Transmitter Software	Dell	Inspiron 15-3567	E4B4B16C-F475-4A3F-9795-A06C5CB4AB43



2.8 Test Signals and Test Modulation

By design this product does not have an external Modulation input connector, therefore, normal operating modulation was used for all testing reported herein. The only test where modulation was not active was during testing of the Maximum Peak Power Output FCC Section 15.247(b) (3) (Section 4.6 of this report) to ensure that the un-modulated carrier was not higher than the modulated carrier.

The control unit in this product is a digital frequency transmitter. The EUT transmits to a discrete frequency on a specific channel. The Lutron HWL Series LED Downlight has 16 Channels available. The 16 Channels and frequencies that can be transmitted by the EUT are as follows:

Zigbee Channel	Frequency (MHz)		Zigbee Channel	Frequency (MHz)
11	2405		19	2445
12	2410		20	2450
13	2415		21	2455
14	2420		22	2460
15	2425		23	2465
16	2430		24	2470
17	2435		25	2475
18	2440		26	2480

For the required testing, the EUT was configured to transmit at low Channel 11 (2405 MHz), middle Channel 18 (2440 MHz) and high Channel 26 (2480 MHz). The EUT operates with a 2.3 MHz Operational Channel Bandwidth. The EUT has the option to be programmed to operate with maximum output power with O-QPSK modulation or with Constant Wave (CW) signal.

2.9 Antenna Gain

The antenna gain was documented by Lutron at + 1.14 dBi

2.10 Grounding

The EUT ground is provide by the ground connection from the AC Power Cord.

2.11 EUT Modifications

An SMA connector was added to replace the antenna on the PCB of the Lutron Model HWL-RD4WH-TW LED Downlight Antenna Conducted Test Sample 2421-05. No other modifications were done on any of the other samples.



3.0 Applicable Requirements, Methods, and Procedures

3.1 Applicable Requirements

The results of the measurement of the radio disturbance characteristics of the EUT described herein may be applied and where appropriate, provide a presumption of compliance to one or more of the following requirements or to other requirements at the discretion of the customer, regulatory agencies, or other entities.

3.1.1 FCC Requirements

Code of Federal Regulations: Title 47 – Telecommunication
Chapter I - Federal Communications Commission
Sub-chapter A – General
Part 15 – Radio Frequency Devices
Subpart C - Intentional Radiators
15.247 Operation within the bands 902-928 MHz,
2400-2483.5 MHz, and 5725-5850 MHz.

3.1.2 Innovation, Science and Economic Development Canada (ISED)

RSS-Gen Issue 5 Feb 2021 Amendment 1: General Requirements for Compliance of Radio Apparatus

RSS-247 Issue 4 July 2025: Digital Transmission Systems, Frequency Hopping Systems and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands.

3.1.3 Basic Test Methods and Test Procedures

KDB Document 558074 D01 15.247 Meas Guidance v05r02, Guidance for Performing Compliance Measurements on Digital Transmission Systems, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating under Section 15.247 of the FCC Rules.

ANSI C63.10-2020+Cor.1-2023+A1-2024, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

3.1.4 Deviations or Exclusions from the Requirements

No deviations or exclusions were made.



4.0 Test Results

4.1 Antenna Requirement (47 CFR 15.203)(RSS-GEN ANNEX A (10)(g))

The antenna used by the Lutron HWL, RRL & CM Series LED Downlight is a monopole soldered onto the PCB. The antenna is a stamped metal piece made of stainless steel. The antenna connection points are permanently attached to the DUT and cannot be modified or replaced by the user as they are behind the reflector inside the plastic enclosure.

4.2 External RF power amps/antenna modifications (47 CFR 15.204)(RSS-GEN 8.3)

There are no RF power amplifier kits available to be used with the Lutron Model HWL Series LED Downlights. There are no detachable parts of the antenna. The antenna is not replaceable, nor changeable, and therefore complies with the requirements of this section.

4.3 Duty Cycle of the DTS Fundamental Transmission

The duty cycle of the DTS transmission shall be greater than or equal to 98%. This ensures that the various emissions measured for this certification test will be made with the transmitter fully active. Duty cycles less than 98% can be used and a duty cycle correction factor can be calculated to reduce the peak level of the emission for radiated emission tests. The procedure of ANSI C63.10, Section 11.6 can be used to evaluate the duty cycle of this device.

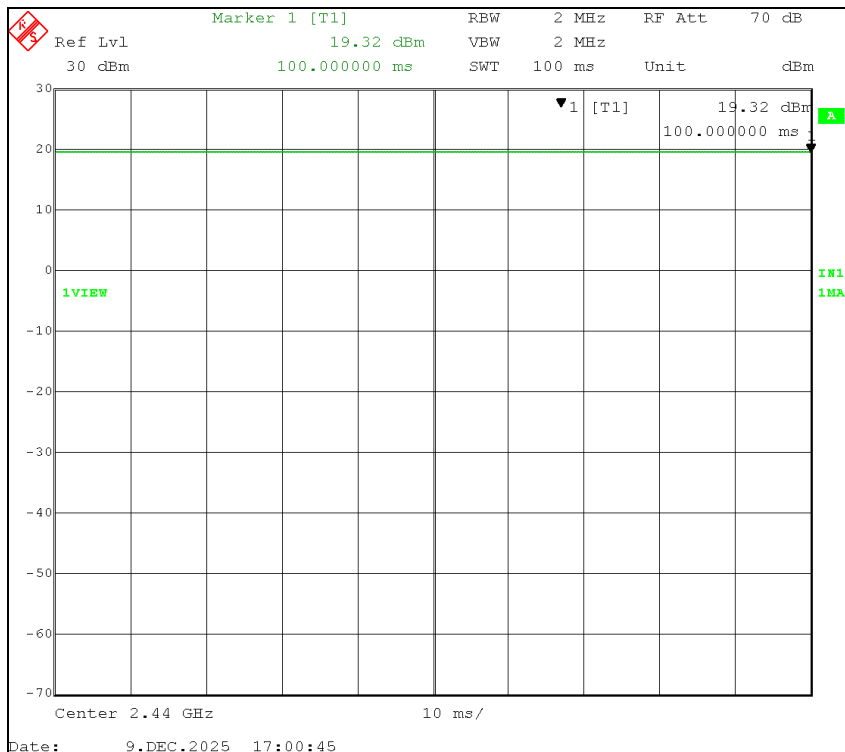
Spectrum Analyzer Settings

OBW	1.8	MHz
RBW	2	MHz
VBW	2	MHz
Span	Zero	MHz
Sweep Time	100	ms
Attenuation	60	dB
Reference Level	30	dBm



4.3.1 Duty Cycle Measurement Results (12/09/2025)

BEC Incorporated tested the duty cycle of the 802.15.4 Radio from the Lutron Model HWL-RD4WH-TW LED Downlight. Transmission was set to maximum output at middle channel of 2440 MHz with O-QPSK modulation using the radio control test software. The Duty Cycle of the transmitter was measured to be 100%





4.4 Antenna Conducted Spurious Emissions in Non-restricted Frequency Bands (FCC Section 15.247(d), RSS-247 Clause 6.1)

4.4.1 Antenna Conducted Spurious Emissions in Non-restricted Frequency Bands Test Procedure

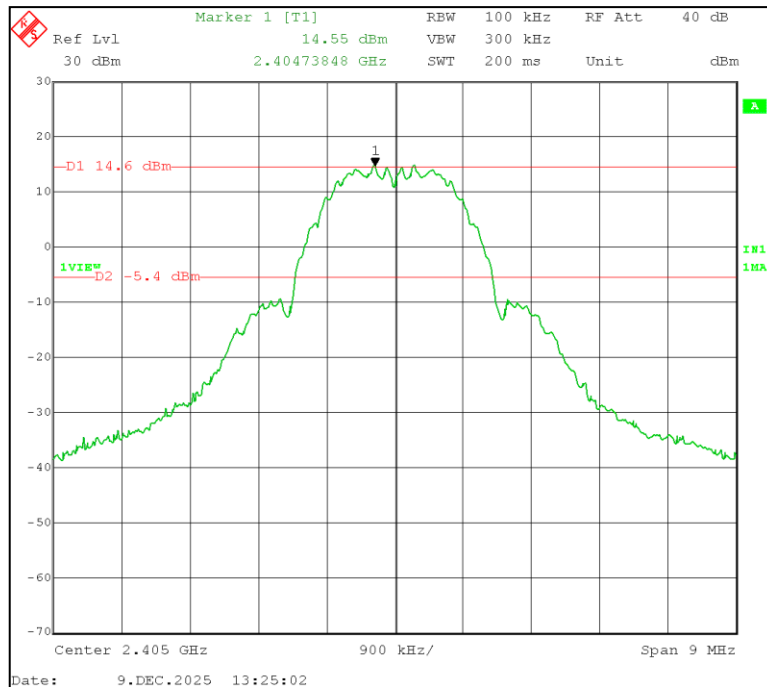
A measurement of the emissions in non-restricted frequency bands was made at the low Frequency 2405.0 MHz (Channel 11), middle Frequency 2440.0 MHz (Channel 18) and high Frequency 2480.0 MHz (Channel 26). The EUT was set to transmit a signal at maximum output power with O-QPSK modulation. The procedure for the test is ANSI C63.10, Section 11.11. The frequency spectrum from 30 MHz to 25 GHz was divided into separate bands: 30 - 500 MHz, 500 - 1000 MHz, 1 – 10 GHz and 10 - 15 GHz, 15- 20 GHz and 20 - 25 GHz. Each of the three fundamental test frequencies was measured for the reference value to determine the -20 dBc value.

Spectrum Analyzer Settings

Spurious Emission Level: Zigbee Radio, O-QPSK modulation			
Spec Analyzer Settings			ANSI C63.10 requirement
Span	Varies	-	Encompass spectrum divided into bands
RBW	100 kHz		47 CFR Part 15.247 (d)
VBW	300 kHz		$\geq 3 \times \text{RBW}$
Sweep	Varies		Auto



4.4.2 Antenna Conducted Spurious Emissions in Non-restricted Frequency Bands Reference Measurement Channel 11 (12/09/2025)

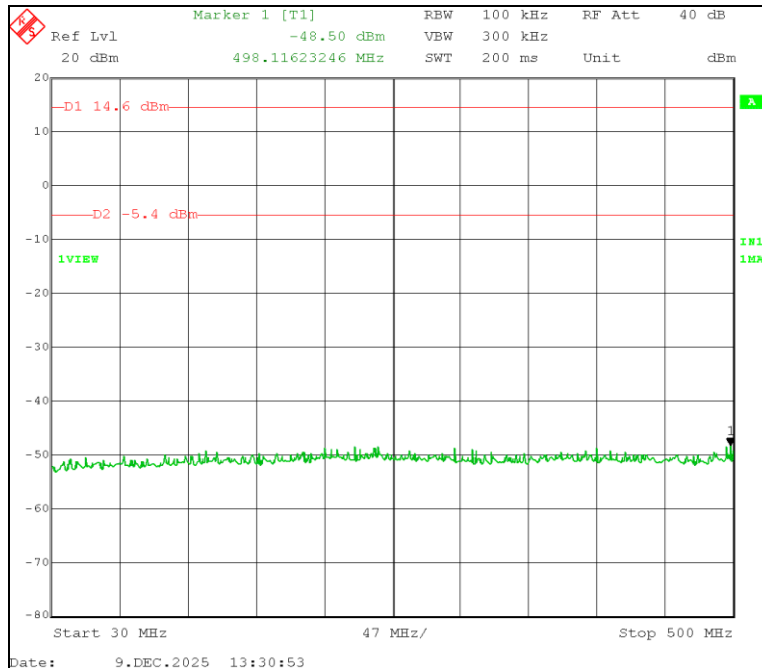


The peak level of 14.6 dBm is the maximum peak output of the Lutron Model HWL-RD4WH-TW LED Downlight. The conducted spurious emissions from the antenna port must be 20 dB down from this peak. The resultant limit is therefore -5.4 dBm and is displayed on the plots in this section for Channel 11.

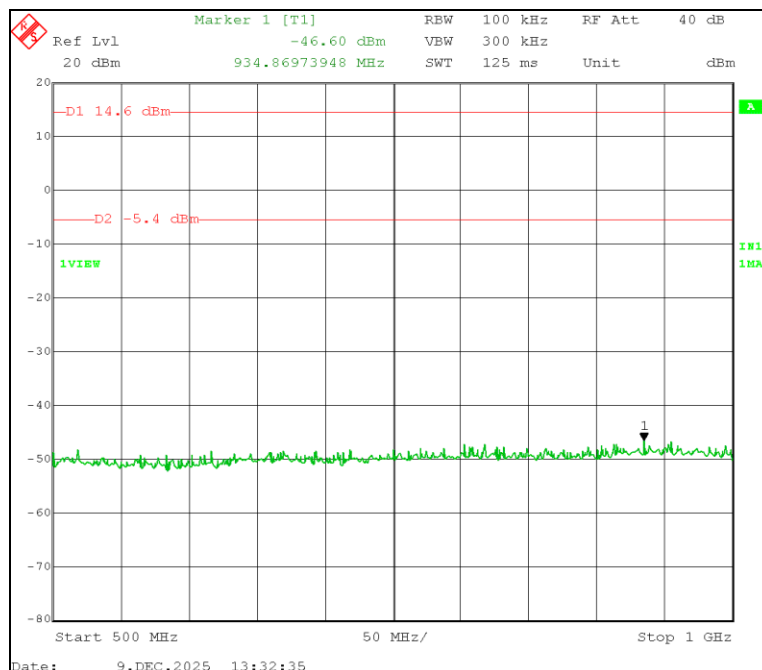


4.4.3 Antenna Conducted Spurious Emissions in Non-restricted Frequency Bands Channel 11 Test Results (12/09/2025)

30 MHz – 500 MHz

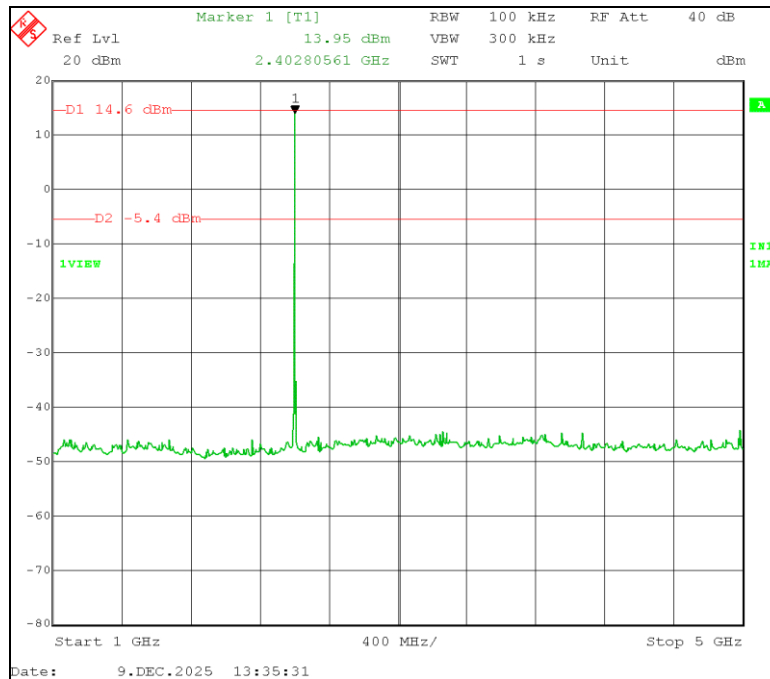


500 MHz – 1000 MHz

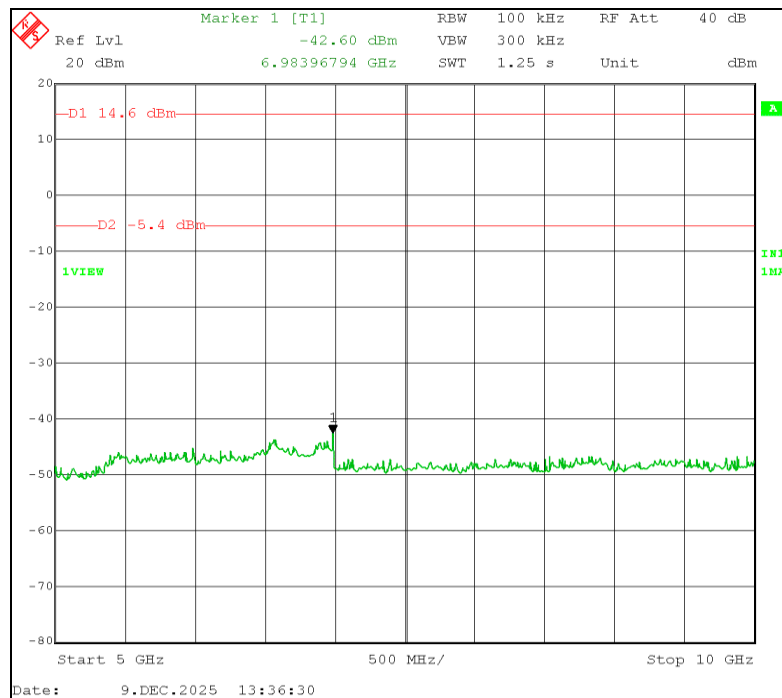




1 GHz – 5 GHz

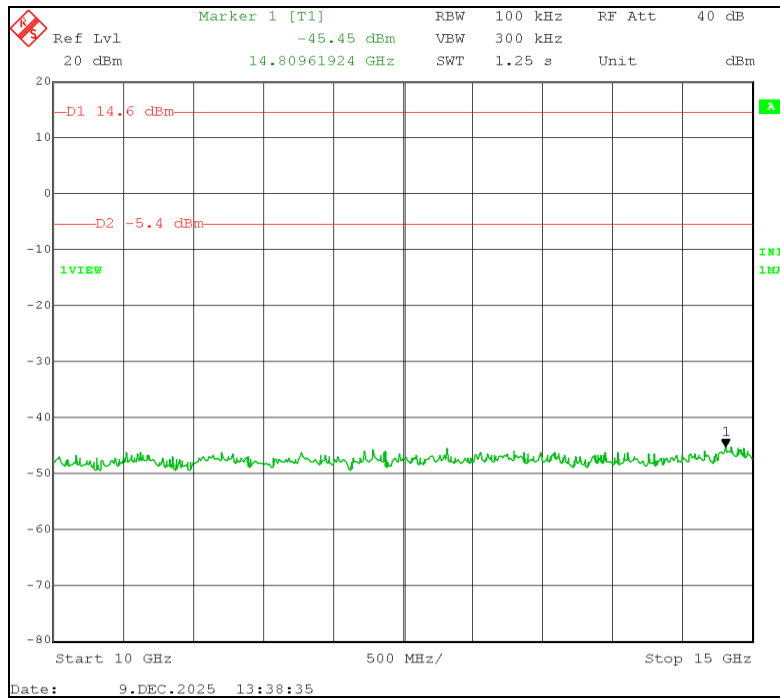


5 GHz – 10 GHz

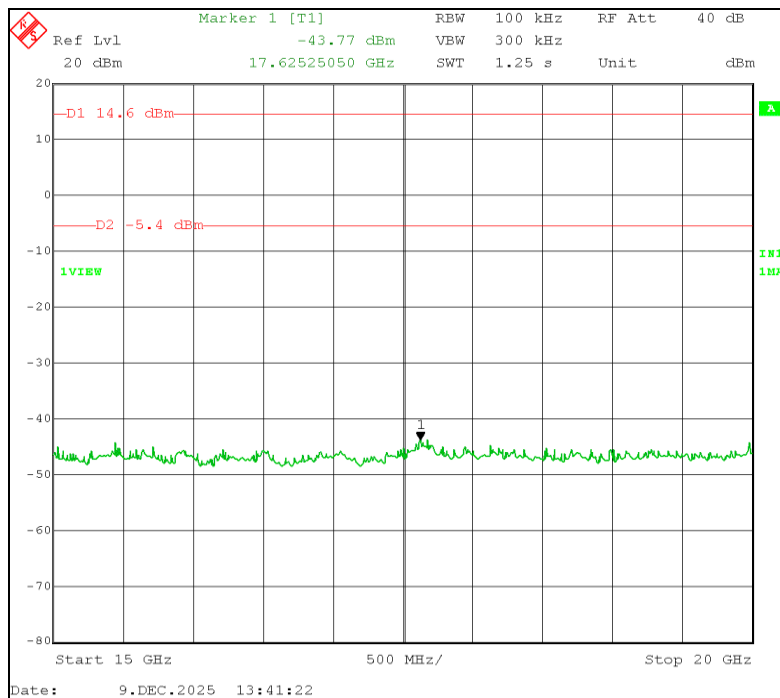




10 GHz – 15 GHz

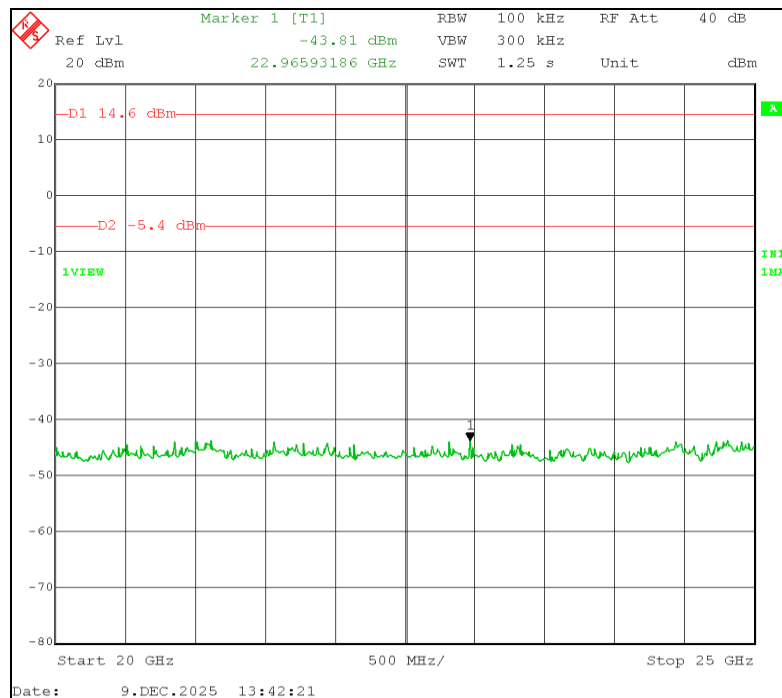


15 GHz – 20 GHz





20 GHz – 25 GHz

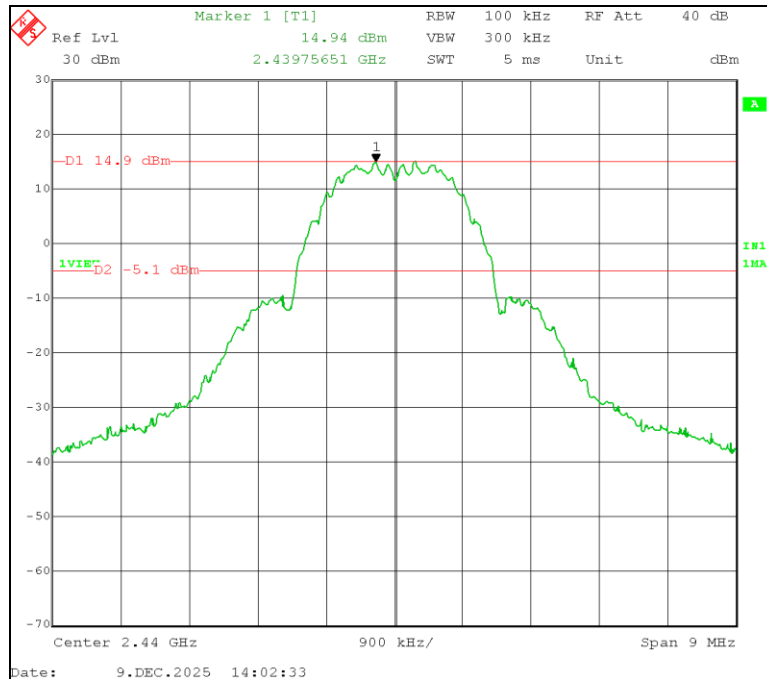


Test Results of Highest Emissions: Channel 11 (Frequency 2405.0 MHz)

Frequency	Peak	20 dB below Max Peak Reference	Margin	Result
MHz	dBm	dBc	dB	
6983.968	-42.60	-5.40	-37.20	PASS
14809.619	-45.54	-5.40	-40.14	PASS
17625.251	-43.77	-5.40	-38.37	PASS



4.4.4 Antenna Conducted Spurious Emissions in Non-restricted Frequency Bands Reference Measurement Channel 18 (12/09/2025)

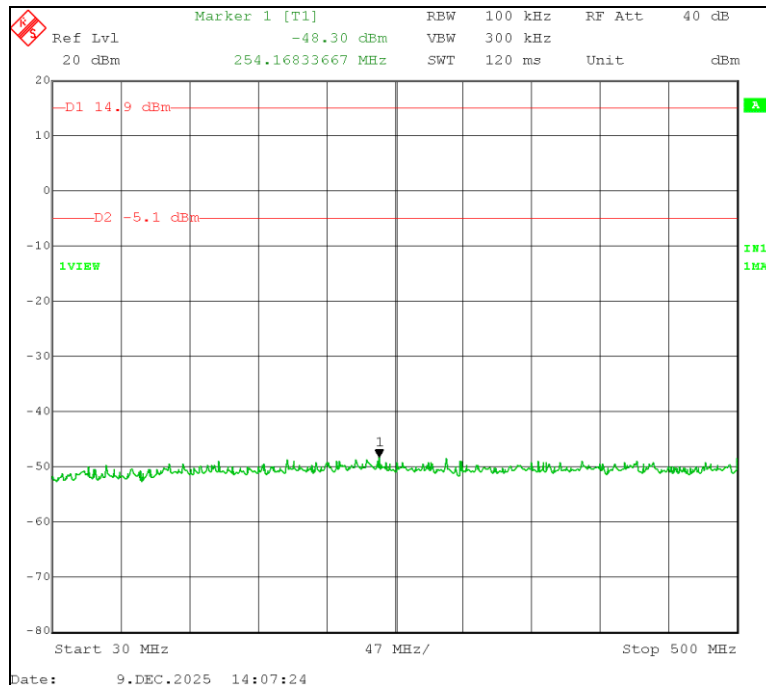


The peak level of 14.9 dBm is the maximum peak output of the Lutron Model HWL-RD4WH-TW LED Downlight. The conducted spurious emissions from the antenna port must be 20 dB down from this peak. The resultant limit is therefore -5.1 dBm and is displayed on the plots below.

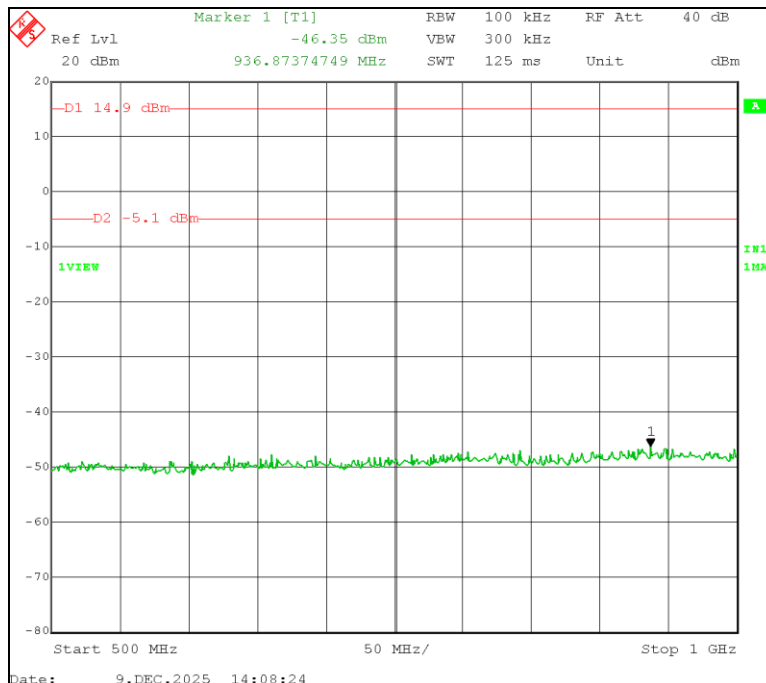


4.4.5 Antenna Conducted Spurious Emissions in Non-restricted Frequency Bands Channel 18 Test Results (12/09/2025)

30 MHz – 500 MHz

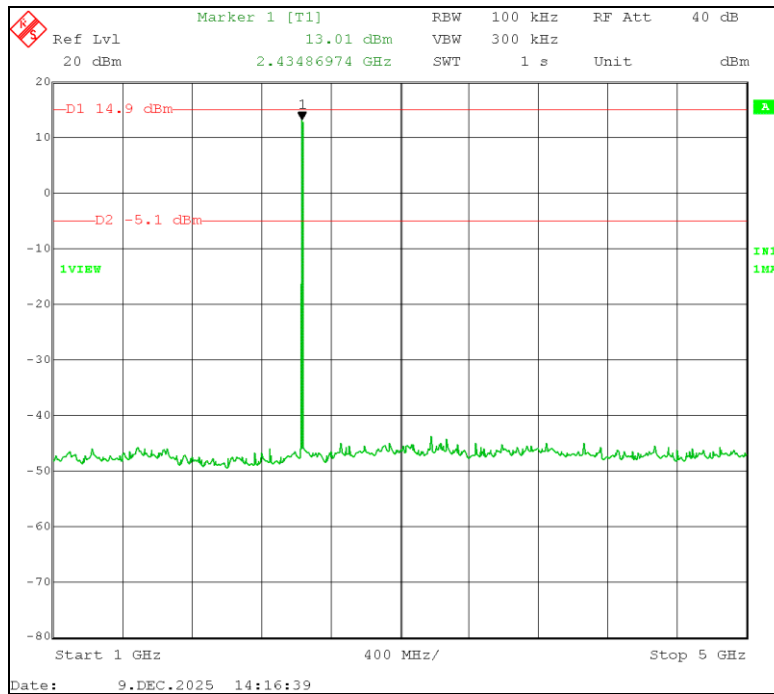


500 MHz – 1000 MHz

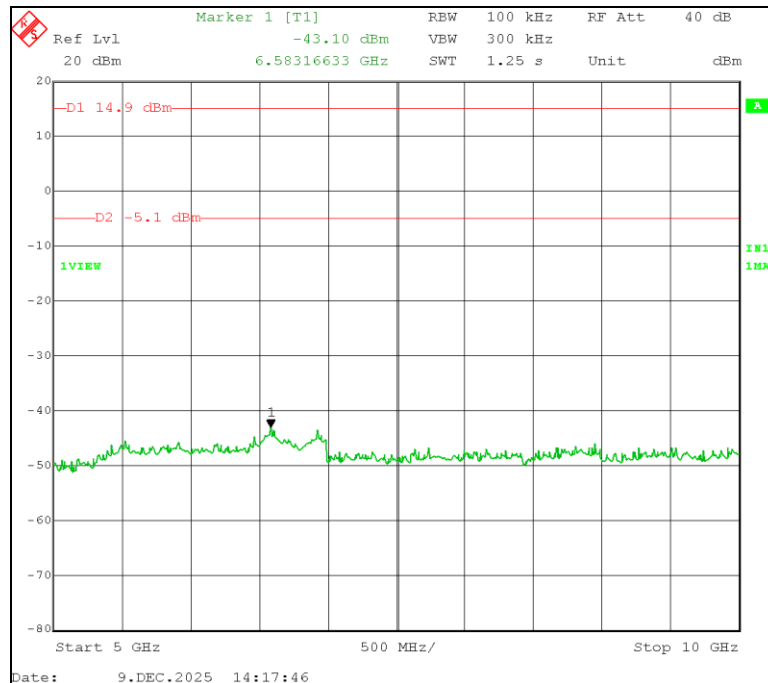




1 GHz – 5 GHz

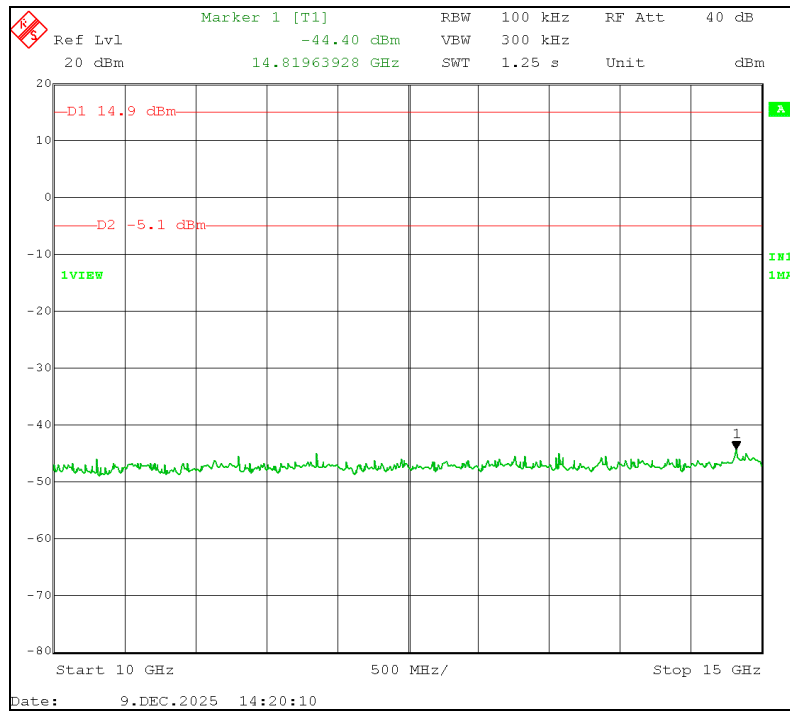


5 GHz – 10 GHz

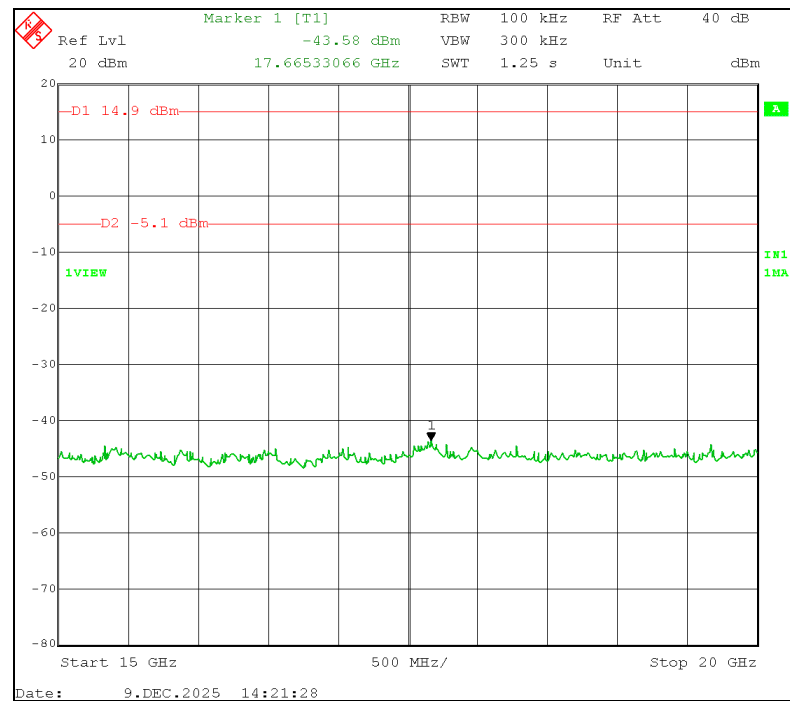




10 GHz – 15 GHz

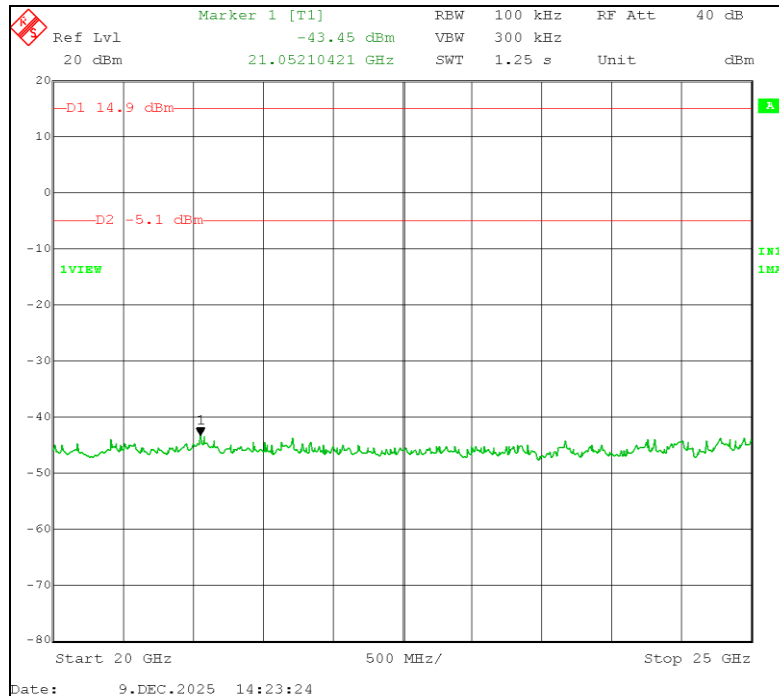


15 GHz – 20 GHz





20 GHz – 25 GHz

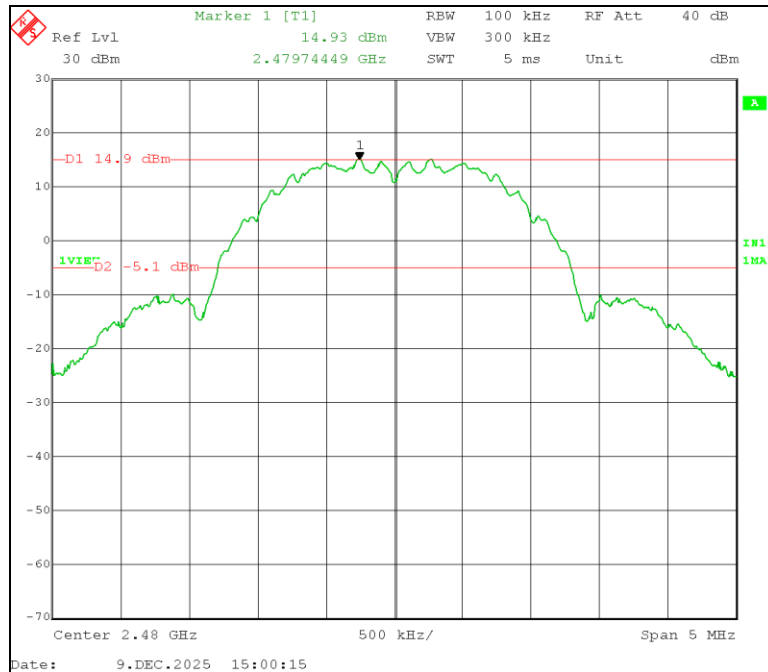


Test Results Table Highest Emissions: Channel 18 (2440.0 MHz)

Frequency	Peak	20 dB below Max Peak Reference	Margin	Result
MHz	dBm	dBc	dB	
6583.166	-43.10	-5.10	-38.00	PASS
17665.331	-43.58	-5.10	-38.48	PASS
21052.104	-43.45	-5.10	-38.35	PASS



4.4.6 Antenna Conducted Spurious Emissions in Non-restricted Frequency Bands Reference Measurement Channel 26 (12/09/2025)

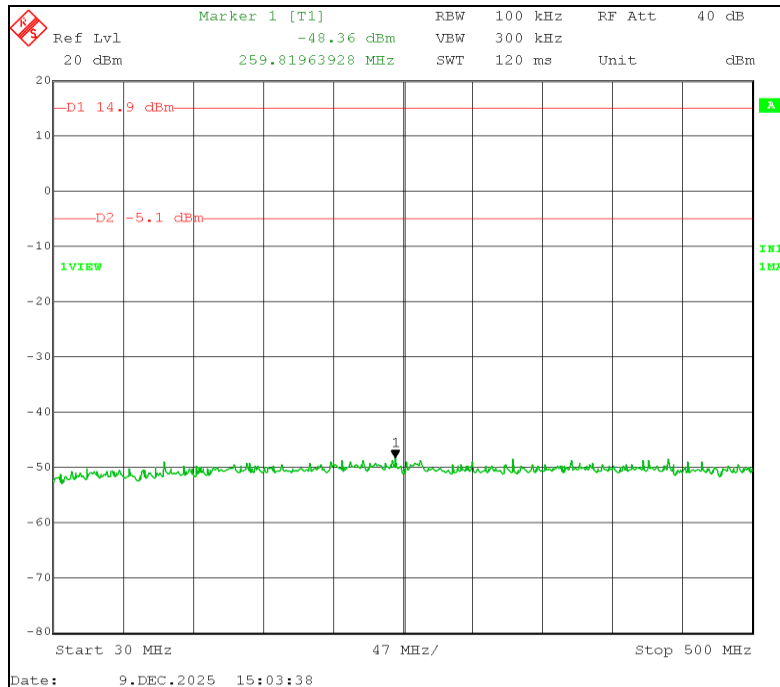


The peak level of 14.9 dBm is the maximum peak output of the Lutron Model HWL-RD4WH-TW LED Downlight. The conducted spurious emissions from the antenna port must be 20 dB down from this peak. The resultant limit is therefore -5.1 dBm and is displayed on the plots below.

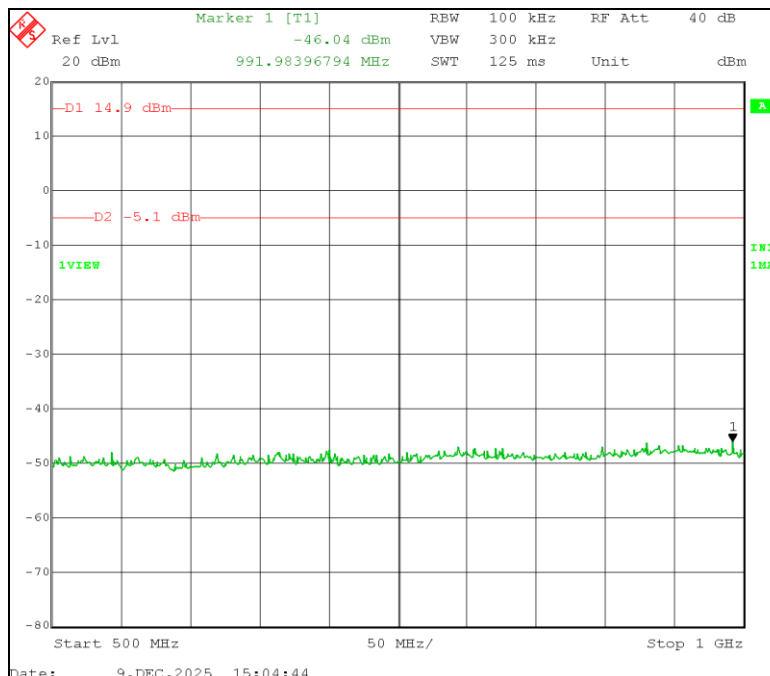


4.4.7 Antenna Conducted Spurious Emissions in Non-restricted Frequency Bands Channel 26 Test Results (12/09/2025)

30 MHz – 500 MHz

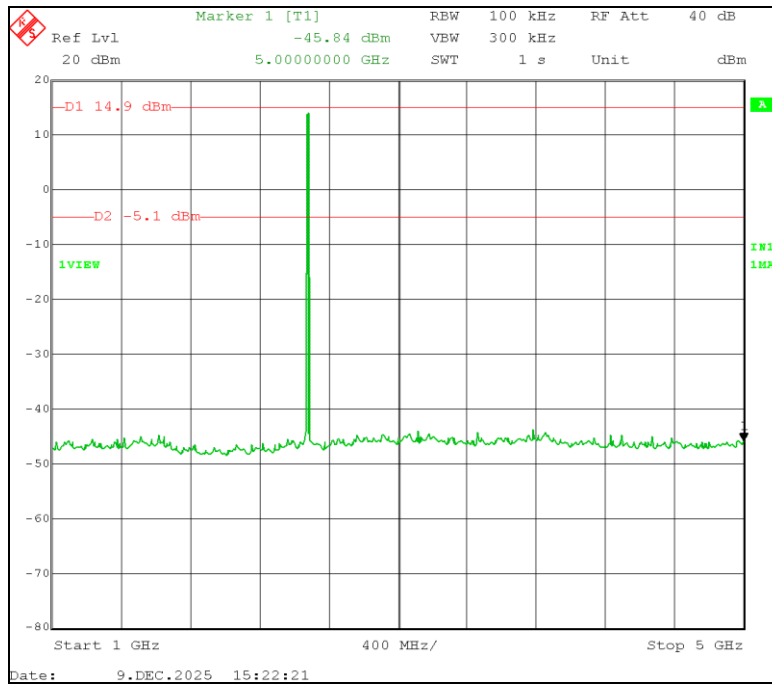


500 MHz – 1000 MHz

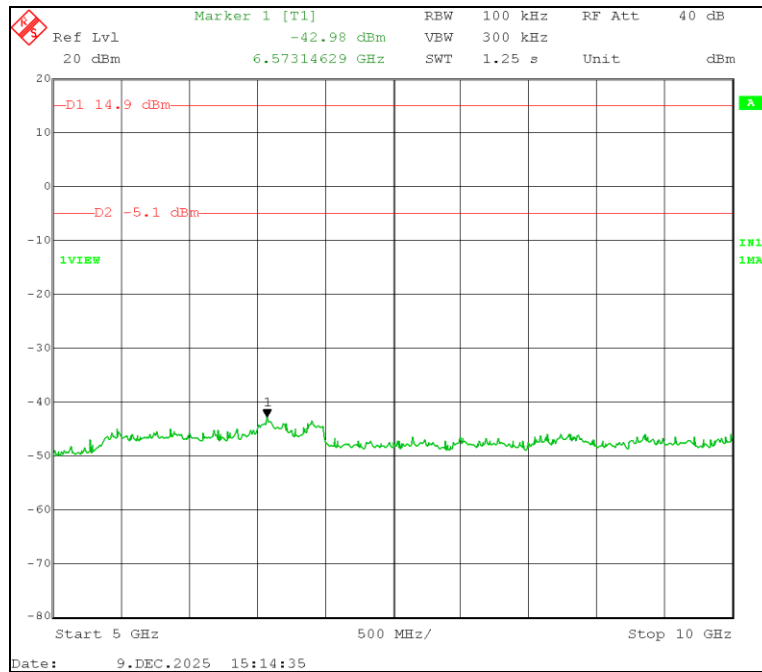




1 GHz – 5 GHz

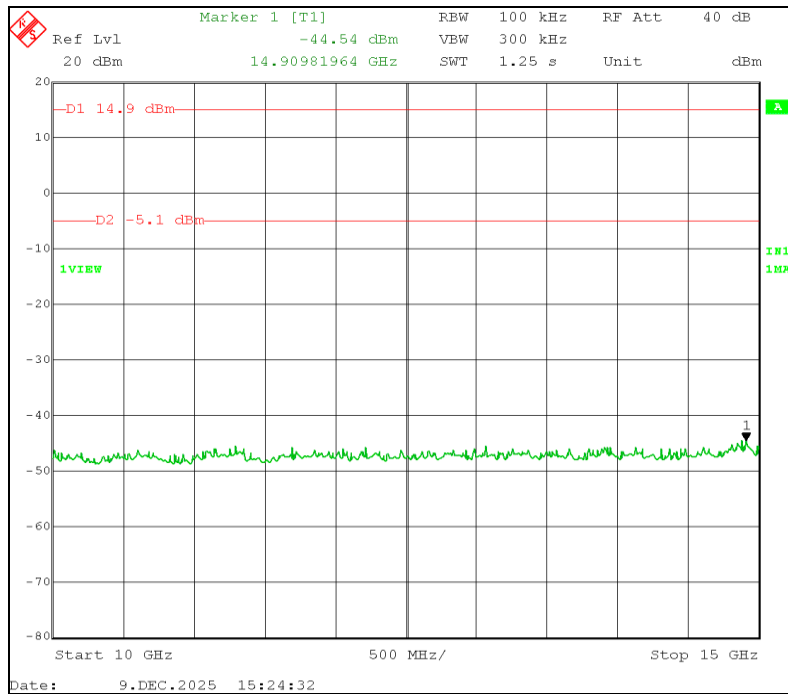


5 GHz – 10 GHz

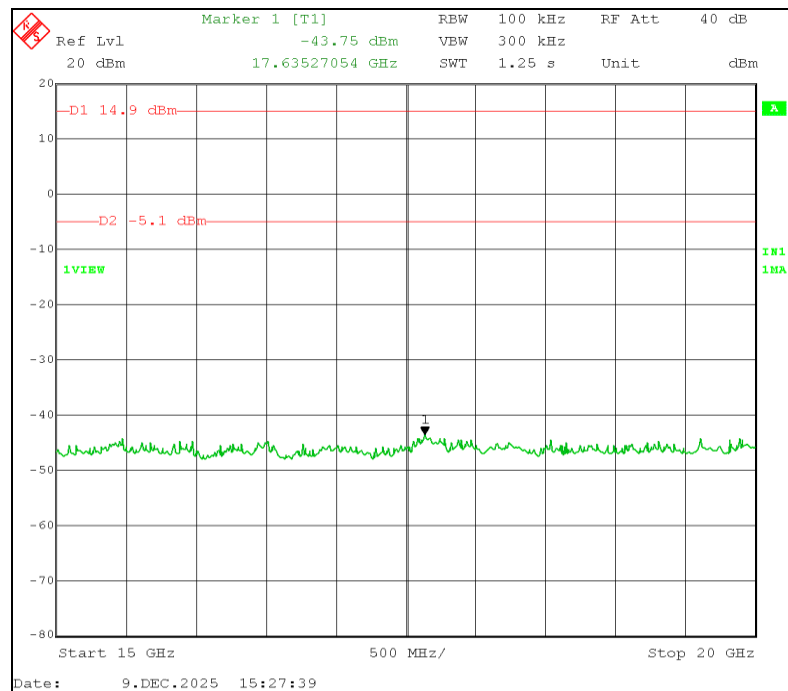




10 GHz – 15 GHz

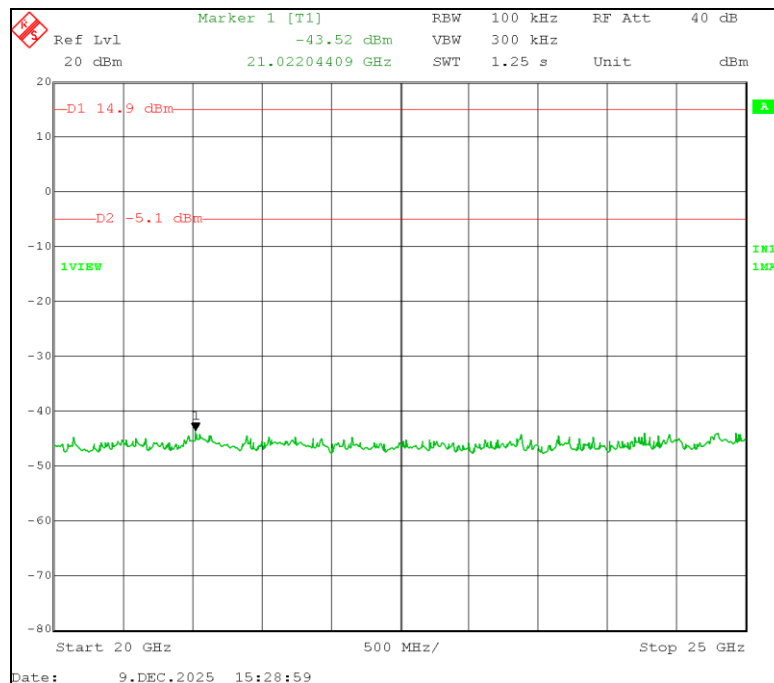


15 GHz – 20 GHz





20 GHz – 25 GHz



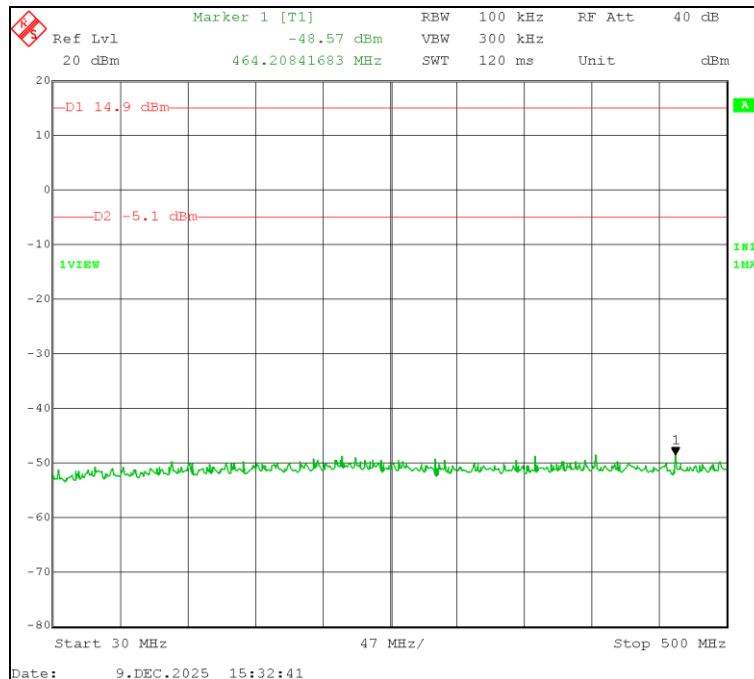
Test Results of Highest Emissions: Channel 26 (Frequency 2480.0 MHz)

Frequency	Peak	20 dB below Max Peak Reference	Margin	Result
MHz	dBm	dBc	dB	
6573.146	-42.98	-5.10	-37.88	PASS
17635.271	-43.75	-5.10	-38.65	PASS
21022.044	-43.52	-5.10	-38.42	PASS

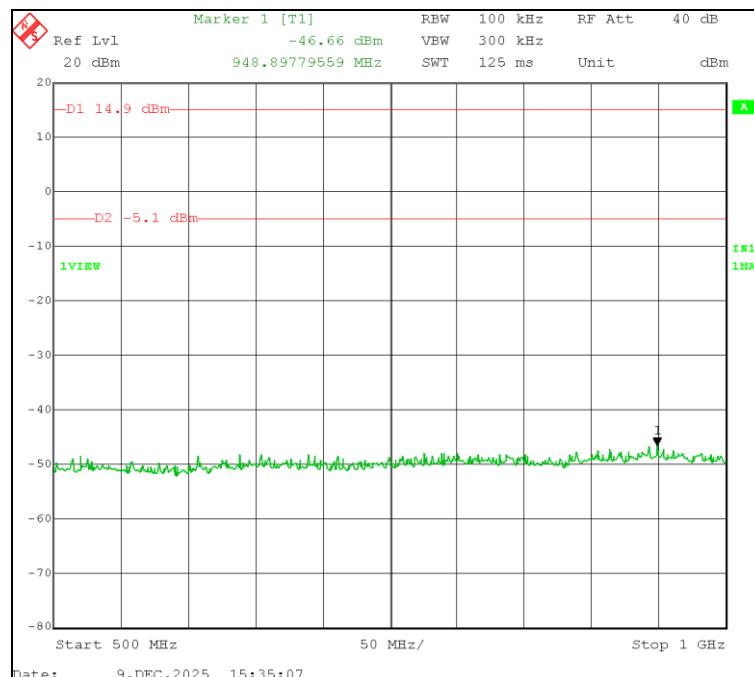


4.4.8 Antenna Conducted Spurious Emissions in Non-restricted Frequency Bands Rx Mode Test Results (12/09/2025)

30 MHz – 500 MHz

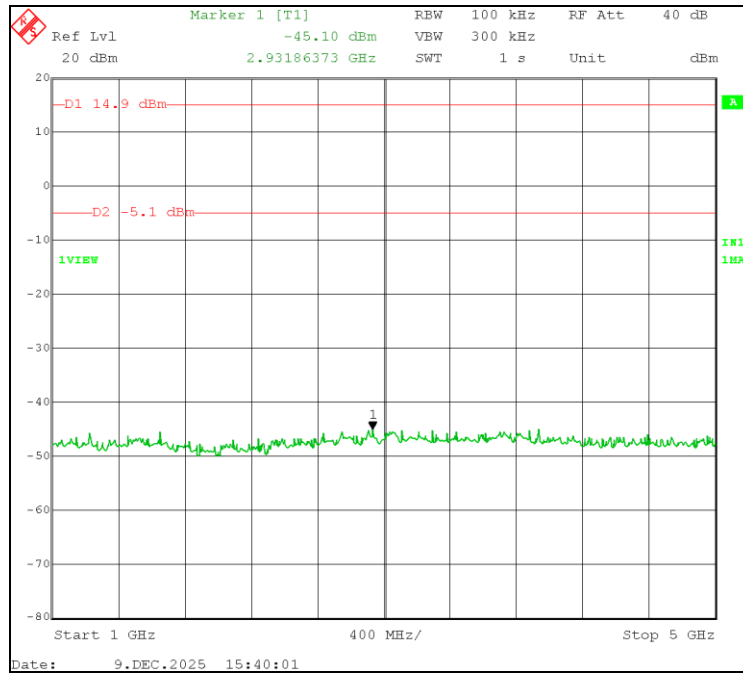


500 MHz – 1000 MHz

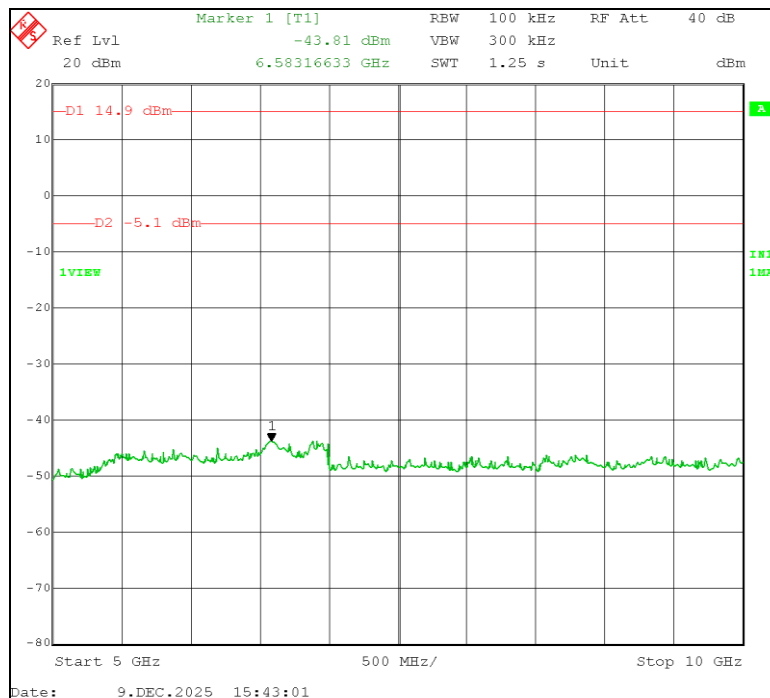




1 GHz – 5 GHz

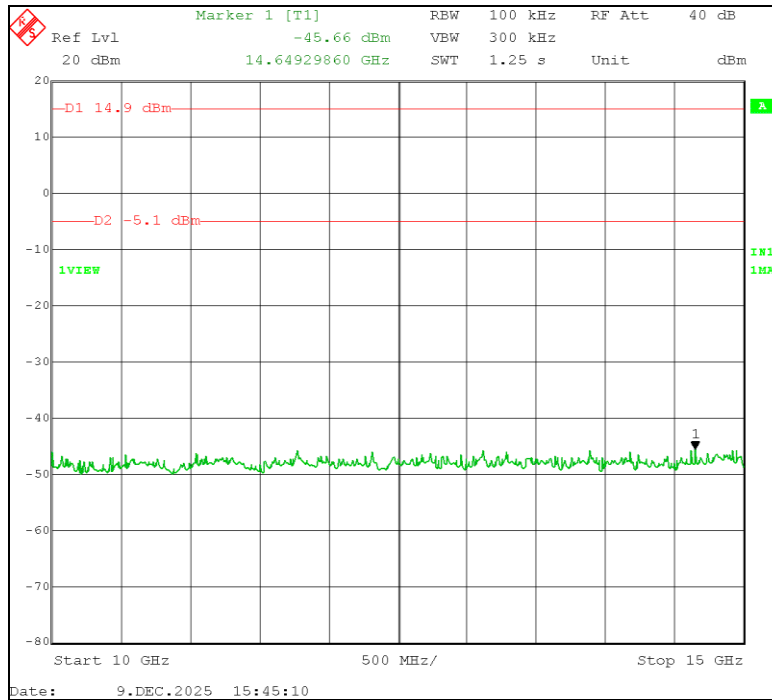


5 GHz – 10 GHz

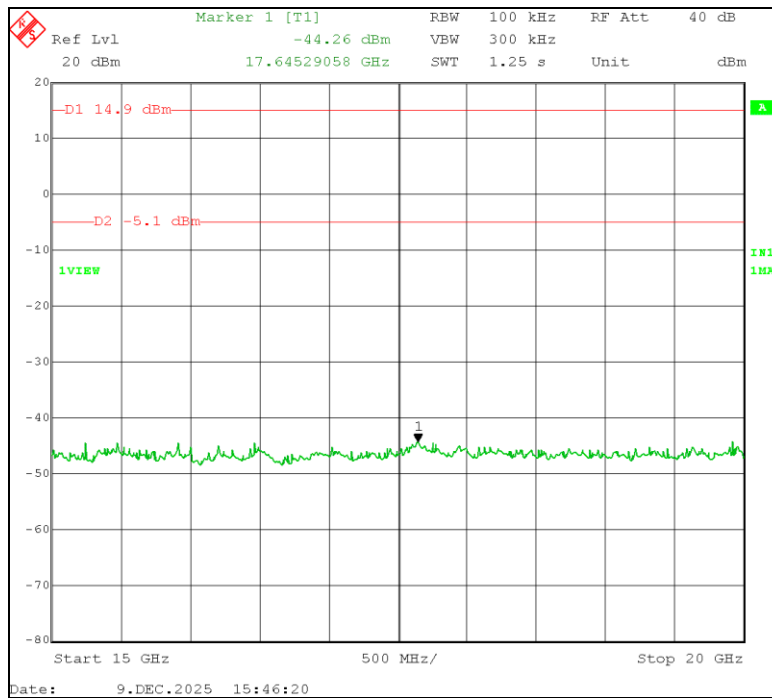




10 GHz – 15 GHz

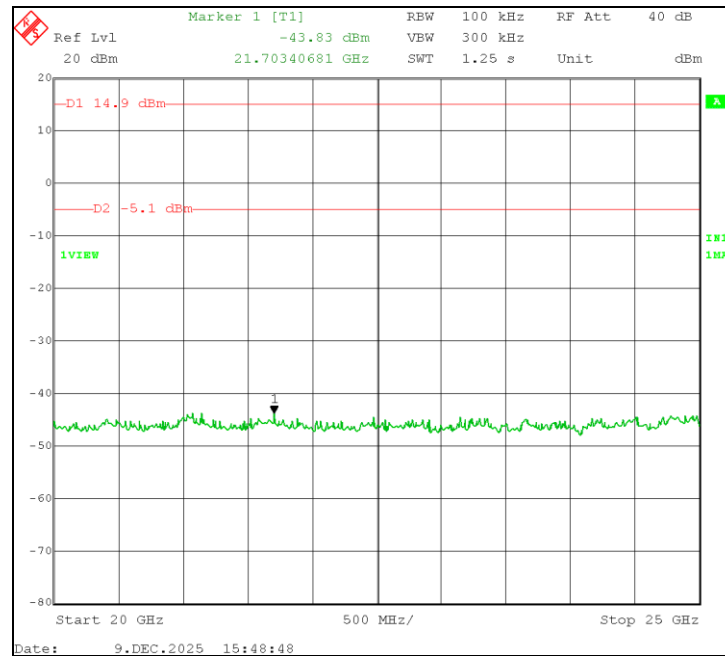


15 GHz – 20 GHz





20 GHz – 25 GHz



Test Results: The Antenna Conducted Spurious Emissions of the Lutron Model HWL-RD4WH-TW LED Downlight, at Low, Middle and High Frequencies, are below the carrier 20 dBc limit and therefore compliant with the limits specified in FCC Section 15.247(d).



4.5 Radiated Spurious Emissions in Non-restricted and Restricted Frequency Bands, 30 MHz – 25 GHz (47 CFR 15.205 & 15.209)(RSS-GEN Clause 8.9 & 8.10)

The emissions from the Lutron HWL Series LED Downlights, which fall in the restricted bands of operation and unrestricted bands of operation, detailed in this section, comply with the limits of 15.209. The Lutron HWL Series LED Downlights were tested at three frequencies: low Frequency 2405 MHz (Channel 11), middle Frequency 2440 MHz (Channel 18) and high Frequency 2480 MHz (Channel 26).

Measurement of the signals was performed with the EUT on a turntable and a variable height antenna mast at 3 meters distance. The signals residing in restricted bands of operation are indicated in the tables below.

4.5.1 Non-Restricted and Restricted Bands Test Facility

OATS

The Open Area Test Site (OATS) is an all-weather facility with a wooden enclosure that contains a ground level 4-foot diameter turntable capable of rotating equipment 360 degrees. The enclosure is free of reflective metallic objects and extraneous electromagnetic signals. This non-metallic enclosure and the 3 meter and 10 meter test range existing outside the enclosure rest upon a protective insulating material, which in turn covers a flat, metal, continuous ground plane.

Instrumentation for remote control of the antenna mast, turntable, and other equipment are controlled by personnel indoors. The EUT and support peripherals required for EUT operation were placed on a table 80 cm high for tabletop equipment or directly on the turntable surface for floor standing equipment. The test site complies with the requirements of ANSI C63.4 and ANSI C63.10.

SR#1

The Semi-Anechoic Shielded Room (SR#1) is a ferrite and absorber lined chamber which houses a 5-foot diameter turntable capable of rotating equipment 360 degrees and antenna mast for Horizontal and Vertical polarity measurements. The enclosure is free of reflective metallic objects and extraneous electromagnetic signals. The 3 meter shielded enclosure has a raised computer floor with metal tile bottoms providing a continuous ground plane.

Instrumentation for remote control of the antenna mast, turntable, and other equipment are controlled by personnel outside the chamber. The EUT and support peripherals required for EUT operation were placed on a table 80 cm high for tabletop equipment or directly on the turntable surface for floor standing equipment.

The chamber complies with the requirements of ANSI C63.4 and ANSI C63.10.



4.5.2 Non-restricted and Restricted Bands Radiated Spurious Emissions Test Procedure

Radiated Emissions 30 MHz – 40 GHz

The EMI receiver was set to quasi-peak mode for frequencies from 30 MHz to 1 GHz and the appropriate CISPR bandwidths were employed. The receiver was set to average mode for frequencies above 1 GHz with the appropriate CISPR bandwidths were employed.

Three orthogonal positions of each representative model of the EUTs were evaluated for maximum emissions. The position of the EUTs with the lit side of the LED lamps facing the Antenna placed on their sides was determined to be the axis that produced the highest emissions (Y Axis), therefore all of the radiated emissions testing was performed with the EUTs in this position.

Measurements were taken using the Lutron Models HWL-RD4WH-TW, HWL-RD6WH-TW, HWL-CD4WH-TW and HWL-CD6WH-TW LED Downlights. Each model was tested transmitting at the low Frequency 2405 MHz (Channel 11), middle Frequency 2440 MHz (Channel 18) and high Frequency 2480 MHz (Channel 26) along with Rx Mode. The EUTs were configured to transmit a signal at its maximum output power in the Constant Stream mode. Significant emissions found during the preliminary scans were maximized by rotating the turntable and varying the antenna height. Both horizontal and vertical antenna polarities were also investigated for suspect emissions. The signals are maximized and measured using the in house generated RADE or off the shelf TILE software.

Field strengths were calculated as follows:

Field Strength (dBμV/m) = Meter Reading (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB) – Amplifier Gain (dB)

The following tables are the highest emissions recorded and summarized. Restricted band signals are marked with an asterisk. Other spurious emissions are shown to demonstrate compliance of the EUT to 15.209 limits.

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			



4.5.3 Radiated Spurious Emissions in Non-restricted and Restricted Bands of Operation, 30 MHz – 1000 MHz Test Results Lutron Model HWL-RD4WH-TW LED Downlight Sample 2412-01 (01/07/2026)

Low Channel 11 (2405 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS- GEN/247		FCC Part15.205/209 RSS- GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
44.126	11.91	21.41	V	219	111	-9.93	60.00	-48.09	40.00	-18.59	Pass
154.905	34.61	33.19	H	351	183	-7.20	63.52	-28.91	43.52	-10.33	Pass
156.493	29.96	27.43	V	215	120	-7.20	63.52	-33.56	43.52	-16.09	Pass
* 172.675	26.80	22.32	V	317	119	-7.93	63.52	-36.72	43.52	-21.20	Pass
210.189	17.55	15.73	V	114	181	-8.90	63.52	-45.97	43.52	-27.79	Pass
* 251.796	24.54	29.10	H	025	126	-7.36	66.02	-41.48	46.02	-16.92	Pass
* 257.38	21.72	28.87	H	035	131	-6.99	66.02	-44.30	46.02	-17.15	Pass
* 326.836	28.03	26.66	H	222	101	-4.80	66.02	-37.99	46.02	-19.36	Pass
385.082	27.56	25.61	H	063	100	-4.03	66.02	-38.46	46.02	-20.41	Pass
* Restricted Band Signal											

Middle Channel 18 (2440 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS- GEN/247		FCC Part15.205/209 RSS- GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
41.487	16.89	17.94	V	238	185	-8.14	60.00	-43.11	40.00	-22.06	Pass
104.552	14.94	12.19	V	053	108	-8.67	63.52	-48.58	43.52	-31.33	Pass
156.461	30.36	27.49	V	225	141	-7.20	63.52	-33.16	43.52	-16.03	Pass
157.159	37.94	33.86	H	356	189	-7.19	63.52	-25.58	43.52	-9.66	Pass
160.430	35.13	33.59	H	359	174	-7.20	63.52	-28.39	43.52	-9.93	Pass
177.084	23.32	19.25	V	227	109	-8.29	63.52	-40.20	43.52	-24.27	Pass
236.216	29.34	26.73	H	151	177	-7.56	66.02	-36.68	46.02	-19.29	Pass
* 254.298	25.38	28.28	H	142	140	-7.31	66.02	-40.64	46.02	-17.74	Pass
* 256.287	29.02	29.85	H	129	131	-7.10	66.02	-37.00	46.02	-16.17	Pass
*Restricted Band Signal											



High Channel 26 (2480 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
35.468	21.81	19.15	V	184	111	-3.83	60.00	-38.19	40.00	-20.85	Pass
150.803	24.42	23.40	V	202	115	-7.14	63.52	-39.10	43.52	-20.12	Pass
154.341	29.70	25.29	V	198	120	-7.15	63.52	-33.82	43.52	-18.23	Pass
155.930	34.16	30.72	H	341	178	-7.20	63.52	-29.36	43.52	-12.80	Pass
190.572	16.87	17.57	H	018	141	-8.21	63.52	-46.65	43.52	-25.95	Pass
202.459	23.80	24.63	V	246	104	-7.47	63.52	-39.72	43.52	-18.89	Pass
* 251.146	23.82	29.69	H	136	120	-7.36	66.02	-42.20	46.02	-16.33	Pass
* 278.114	33.16	28.90	H	299	116	-5.43	66.02	-32.86	46.02	-17.12	Pass
* 327.452	23.53	22.73	H	222	129	-4.80	66.02	-42.49	46.02	-23.29	Pass
*Restricted Band Signal											

Receive Mode

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
94.448	15.16	22.51	V	104	105	-11.37	63.52	-48.36	43.52	-21.01	Pass
157.292	29.01	26.37	V	200	105	-7.19	63.52	-34.51	43.52	-17.15	Pass
157.770	37.93	34.71	H	169	177	-7.18	63.52	-25.59	43.52	-8.81	Pass
208.824	24.95	23.09	V	247	124	-8.90	63.52	-38.57	43.52	-20.43	Pass
210.741	29.02	27.43	H	030	161	-8.89	63.52	-34.50	43.52	-16.09	Pass
* 255.552	27.13	29.88	H	134	101	-7.18	66.02	-38.89	46.02	-16.14	Pass
* 258.841	13.70	17.37	V	157	167	-6.76	66.02	-52.32	46.02	-28.65	Pass
288.462	27.96	26.54	H	220	153	-5.30	66.02	-38.06	46.02	-19.48	Pass
390.595	23.59	21.38	V	155	116	-3.85	66.02	-42.43	46.02	-24.64	Pass
391.642	25.71	24.72	H	090	101	-3.86	66.02	-40.31	46.02	-21.30	Pass
*Restricted Band Signal											

Test Results: The Lutron Model HWL-RD4WH-TW LED Downlight Sample 2412-01, operating in DTS mode and receive mode, comply with the requirements of 47 CFR Part 15.205 and RSS-Gen Section 8.10 for restricted bands of operation with a margin of 8.81 dB.



4.5.4 Radiated Spurious Emissions in Non-restricted and Restricted Bands of Operation, 30 MHz – 1000 MHz Test Results Lutron Model HWL-RD6WH-TW LED Downlight Sample 2412-02 (12/08/2025 & 12/09/2025)

Low Channel 11 (2405 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
35.691	22.05	22.08	H	155	105	-4.01	60.00	-37.95	40.00	-17.92	Pass
40.066	30.50	27.07	V	216	173	-7.17	60.00	-29.50	40.00	-12.93	Pass
* 121.121	24.51	25.22	V	360	140	-6.54	63.52	-39.01	43.52	-18.30	Pass
* 125.026	26.45	25.18	V	355	173	-6.49	63.52	-37.07	43.52	-18.34	Pass
178.767	22.35	20.86	V	302	136	-8.36	63.52	-41.17	43.52	-22.66	Pass
203.987	24.43	23.86	H	134	163	-8.07	63.52	-39.09	43.52	-19.66	Pass
237.173	23.39	25.20	H	153	125	-7.55	66.02	-42.63	46.02	-20.82	Pass
* 241.602	30.92	28.29	H	155	111	-7.42	66.02	-35.10	46.02	-17.73	Pass
* 243.625	22.59	24.83	V	315	120	-7.30	66.02	-43.43	46.02	-21.19	Pass
* 246.145	21.06	25.75	H	053	115	-7.39	66.02	-44.96	46.02	-20.27	Pass
*Restricted Band Signal											

Middle Channel 18 (2440 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
35.501	25.16	21.29	H	158	105	-3.86	60.00	-34.84	40.00	-18.71	Pass
40.062	15.85	26.98	V	158	157	-7.16	60.00	-44.15	40.00	-13.02	Pass
* 119.931	25.43	24.32	V	000	184	-6.56	63.52	-38.09	43.52	-19.20	Pass
* 125.782	26.48	24.83	V	025	161	-6.48	63.52	-37.04	43.52	-18.69	Pass
142.321	26.13	23.46	H	256	105	-7.14	63.52	-37.39	43.52	-20.06	Pass
151.725	26.26	23.79	V	107	145	-7.14	63.52	-37.26	43.52	-19.73	Pass
175.796	23.88	22.02	V	174	156	-8.18	63.52	-39.64	43.52	-21.50	Pass
204.072	28.49	25.79	H	127	161	-8.10	63.52	-35.03	43.52	-17.73	Pass
* 256.112	25.19	22.11	H	032	204	-7.12	66.02	-40.83	46.02	-23.91	Pass
364.327	26.58	24.74	H	274	235	-4.27	66.02	-39.44	46.02	-21.28	Pass
*Restricted Band Signal											



High Channel 26 (2480 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
35.575	16.30	21.37	H	132	101	-3.91	60.00	-43.70	40.00	-18.63	Pass
39.720	12.77	30.36	V	174	105	-6.93	60.00	-47.23	40.00	-9.64	Pass
* 121.272	22.64	21.44	V	025	147	-6.53	63.52	-40.88	43.52	-22.08	Pass
* 127.501	24.97	22.80	V	355	130	-6.52	63.52	-38.55	43.52	-20.72	Pass
143.972	23.83	21.99	H	082	120	-7.13	63.52	-39.69	43.52	-21.53	Pass
204.242	25.50	23.09	H	222	151	-8.15	63.52	-38.02	43.52	-20.43	Pass
208.571	20.88	20.12	H	122	130	-8.88	63.52	-42.64	43.52	-23.40	Pass
* 244.641	23.38	22.79	V	303	101	-7.36	66.02	-42.64	46.02	-23.23	Pass
* 247.066	24.67	26.16	H	038	125	-7.38	66.02	-41.35	46.02	-19.86	Pass
* 247.568	21.21	22.83	V	313	132	-7.38	66.02	-44.81	46.02	-23.19	Pass
*Restricted Band Signal											

Receive Mode

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
35.487	17.81	17.95	H	131	193	-3.84	60.00	-42.19	40.00	-22.05	Pass
36.418	30.45	26.48	V	181	136	-4.50	60.00	-29.55	40.00	-13.52	Pass
40.962	14.05	28.49	V	237	109	-7.77	60.00	-45.95	40.00	-11.51	Pass
* 121.577	26.67	26.46	V	352	144	-6.53	63.52	-36.85	43.52	-17.06	Pass
139.589	23.94	23.48	H	084	131	-7.06	63.52	-39.58	43.52	-20.04	Pass
149.216	25.22	24.40	V	117	145	-7.16	63.52	-38.30	43.52	-19.12	Pass
158.055	29.56	27.80	H	259	178	-7.18	63.52	-33.96	43.52	-15.72	Pass
200.873	28.53	26.18	V	048	101	-6.99	63.52	-34.99	43.52	-17.34	Pass
202.769	31.53	29.15	H	226	130	-7.60	63.52	-31.99	43.52	-14.37	Pass
205.087	30.78	29.01	H	228	156	-8.39	63.52	-32.74	43.52	-14.51	Pass
*Restricted Band Signal											

Test Results: The Lutron Model HWL-RD6WH-TW LED Downlight Sample 2412-02, operating in DTS mode and receive mode, comply with the requirements of 47 CFR Part 15.205 and RSS-Gen Section 8.10 for restricted bands of operation with a margin of 9.64 dB.



4.5.5 Radiated Spurious Emissions in Non-restricted and Restricted Bands of Operation, 30 MHz – 1000 MHz Test Results Lutron Model HWL-CD4WH-TW LED Downlight Sample 2412-03 (12/05/2025)

Low Channel 11 (2405 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
36.493	16.88	17.34	V	275	157	-4.54	60.00	-43.12	40.00	-22.66	Pass
183.252	25.46	24.81	V	072	101	-8.54	63.52	-38.06	43.52	-18.71	Pass
205.326	29.25	26.73	V	054	112	-8.46	63.52	-34.27	43.52	-16.79	Pass
205.971	27.48	26.49	H	136	116	-8.65	63.52	-36.04	43.52	-17.03	Pass
* 243.736	28.58	32.68	V	355	101	-7.30	66.02	-37.44	46.02	-13.34	Pass
* 250.602	24.47	33.18	H	113	151	-7.37	66.02	-41.55	46.02	-12.84	Pass
* 272.027	35.92	30.25	H	243	130	-5.55	66.02	-30.10	46.02	-15.77	Pass
* 279.184	23.78	23.73	V	008	119	-5.42	66.02	-42.24	46.02	-22.29	Pass
288.890	27.57	28.41	H	127	102	-5.30	66.02	-38.45	46.02	-17.61	Pass
309.869	29.47	30.36	H	230	110	-4.95	66.02	-36.55	46.02	-15.66	Pass
*Restricted Band Signal											

Middle Channel 18 (2440 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
50.339	19.02	18.41	V	136	168	-12.79	60.00	-40.98	40.00	-21.59	Pass
184.358	30.18	26.73	H	272	188	-8.54	63.52	-33.34	43.52	-16.79	Pass
185.408	24.83	20.69	V	158	120	-8.53	63.52	-38.69	43.52	-22.83	Pass
206.642	27.56	27.24	H	232	111	-8.71	63.52	-35.96	43.52	-16.28	Pass
206.898	25.22	25.32	V	296	116	-8.73	63.52	-38.30	43.52	-18.20	Pass
* 242.081	26.73	31.24	V	016	120	-7.41	66.02	-39.29	46.02	-14.78	Pass
* 248.082	31.57	32.63	H	112	120	-7.38	66.02	-34.45	46.02	-13.39	Pass
* 264.16	24.69	26.15	V	221	168	-5.97	66.02	-41.33	46.02	-19.87	Pass
* 264.412	28.47	27.62	H	118	125	-5.95	66.02	-37.55	46.02	-18.40	Pass
309.659	28.16	24.68	H	249	127	-4.97	66.02	-37.86	46.02	-21.34	Pass
*Restricted Band Signal											



High Channel 26 (2480 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
34.203	18.62	15.19	H	099	131	-2.99	60.00	-41.38	40.00	-24.81	Pass
56.229	23.21	21.52	V	211	136	-13.38	60.00	-36.79	40.00	-18.48	Pass
180.907	27.38	25.45	H	083	182	-8.46	63.52	-36.14	43.52	-18.07	Pass
182.549	24.22	22.71	V	307	132	-8.50	63.52	-39.30	43.52	-20.81	Pass
205.267	31.31	28.81	H	240	132	-8.45	63.52	-32.21	43.52	-14.71	Pass
205.378	27.10	27.02	V	312	105	-8.48	63.52	-36.42	43.52	-16.50	Pass
* 245.383	27.38	31.94	V	346	102	-7.39	66.02	-38.64	46.02	-14.08	Pass
* 253.058	28.34	33.58	H	114	210	-7.35	66.02	-37.68	46.02	-12.44	Pass
* 265.298	23.84	24.65	V	181	168	-5.85	66.02	-42.18	46.02	-21.37	Pass
* 270.28	29.02	31.96	H	291	105	-5.56	66.02	-37.00	46.02	-14.06	Pass
*Restricted Band Signal											

Receive Mode

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
41.994	10.96	22.68	V	211	115	-8.49	60.00	-49.04	40.00	-17.32	Pass
184.534	27.22	25.73	H	288	209	-8.53	63.52	-36.30	43.52	-17.79	Pass
200.113	28.21	25.89	V	062	112	-6.92	63.52	-35.31	43.52	-17.63	Pass
204.750	31.03	28.35	H	237	127	-8.30	63.52	-32.49	43.52	-15.17	Pass
207.322	29.58	26.96	V	323	101	-8.77	63.52	-33.94	43.52	-16.56	Pass
* 243.428	33.99	33.25	V	011	102	-7.31	66.02	-32.03	46.02	-12.77	Pass
* 243.624	38.24	33.57	H	234	111	-7.30	66.02	-27.78	46.02	-12.45	Pass
* 247.674	36.45	31.75	V	352	106	-7.38	66.02	-29.57	46.02	-14.27	Pass
288.528	24.48	25.56	H	130	151	-5.30	66.02	-41.54	46.02	-20.46	Pass
308.569	30.74	25.57	H	230	111	-5.03	66.02	-35.28	46.02	-20.45	Pass
*Restricted Band Signal											

Test Results: The Lutron Model HWL-CD4WH-TW LED Downlight Sample 2412-03, operating in DTS mode and receive mode, comply with the requirements of 47 CFR Part 15.205 and RSS-Gen Section 8.10 for restricted bands of operation with a margin of 12.44 dB.



4.5.6 Radiated Spurious Emissions in Non-restricted and Restricted Bands of Operation, 30 MHz – 1000 MHz Test Results Lutron Model HWL-CD6WH-TW LED Downlight Sample 2412-04 (12/04/2025)

Low Channel 11 (2405 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
34.172	17.68	17.27	H	222	148	-2.97	60.00	-42.32	40.00	-22.73	Pass
42.791	28.08	25.65	V	145	131	-9.03	60.00	-31.92	40.00	-14.35	Pass
104.471	24.55	26.12	V	001	120	-8.69	63.52	-38.97	43.52	-17.40	Pass
185.258	31.37	30.71	V	190	126	-8.53	63.52	-32.15	43.52	-12.81	Pass
195.196	33.04	32.25	H	287	235	-7.71	63.52	-30.48	43.52	-11.27	Pass
198.390	30.23	29.41	V	058	105	-7.08	63.52	-33.29	43.52	-14.11	Pass
239.673	31.93	36.84	H	112	135	-7.43	66.02	-34.09	46.02	-9.18	Pass
* 244.128	36.55	37.33	V	013	104	-7.31	66.02	-29.47	46.02	-8.69	Pass
* 249.453	40.33	37.22	H	234	110	-7.37	66.02	-25.69	46.02	-8.80	Pass
307.384	28.63	27.52	H	125	104	-5.03	66.02	-37.39	46.02	-18.50	Pass
*Restricted Band Signal											

Middle Channel 18 (2440 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS-GEN/247		FCC Part15.205/209 RSS-GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
42.662	28.00	25.39	V	187	111	-8.94	60.00	-32.00	40.00	-14.61	Pass
181.393	31.90	28.31	H	094	184	-8.46	63.52	-31.62	43.52	-15.21	Pass
204.001	31.07	31.75	H	236	120	-8.08	63.52	-32.45	43.52	-11.77	Pass
208.833	33.51	30.51	V	058	104	-8.90	63.52	-30.01	43.52	-13.01	Pass
235.508	34.39	38.76	H	237	168	-7.62	66.02	-31.63	46.02	-7.26	Pass
* 244.036	32.47	37.26	V	335	103	-7.31	66.02	-33.55	46.02	-8.76	Pass
* 244.795	36.70	38.19	H	256	115	-7.38	66.02	-29.32	46.02	-7.83	Pass
306.255	28.33	27.20	H	138	105	-5.02	66.02	-37.69	46.02	-18.82	Pass
379.845	25.44	23.11	V	172	119	-4.08	66.02	-40.58	46.02	-22.91	Pass
523.177	25.00	24.55	V	275	103	-1.51	66.02	-41.02	46.02	-21.47	Pass
*Restricted Band Signal											



High Channel 26 (2480 MHz)

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS- GEN/247		FCC Part15.205/209 RSS- GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
40.135	22.36	24.26	V	171	105	-7.21	60.00	-37.64	40.00	-15.74	Pass
205.524	32.98	31.15	H	251	141	-8.52	63.52	-30.54	43.52	-12.37	Pass
206.464	29.07	27.33	V	292	145	-8.70	63.52	-34.45	43.52	-16.19	Pass
237.705	35.55	37.13	H	133	136	-7.55	66.02	-30.47	46.02	-8.89	Pass
* 240.694	36.29	37.97	V	360	100	-7.43	66.02	-29.73	46.02	-8.05	Pass
* 244.164	32.24	36.47	V	008	112	-7.32	66.02	-33.78	46.02	-9.55	Pass
* 247.758	42.85	38.69	H	113	136	-7.38	66.02	-23.17	46.02	-7.33	Pass
* 268.617	30.31	27.90	H	084	120	-5.61	66.02	-35.71	46.02	-18.12	Pass
314.440	24.91	21.16	H	209	101	-4.96	66.02	-41.11	46.02	-24.86	Pass
514.966	21.27	19.17	V	294	241	-1.64	66.02	-44.75	46.02	-26.85	Pass
*Restricted Band Signal											

Receive Mode

Frequency	Corrected		Antenna Polarity	Turntable Angle	Antenna Height	Correction Factor	FCC Part15.205/209 RSS- GEN/247		FCC Part15.205/209 RSS- GEN/247		Result
	Peak Level	QP Level					Peak Limit	Peak Margin	QP Limit	QP Margin	
MHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
42.131	12.05	24.31	V	158	131	-8.58	60.00	-47.95	40.00	-15.69	Pass
180.453	25.09	25.30	V	166	112	-8.47	63.52	-38.43	43.52	-18.22	Pass
191.405	25.35	26.06	V	283	136	-8.16	63.52	-38.17	43.52	-17.46	Pass
199.540	32.23	29.01	H	235	135	-6.96	63.52	-31.29	43.52	-14.51	Pass
206.390	27.73	28.57	H	120	119	-8.69	63.52	-35.79	43.52	-14.95	Pass
232.826	40.83	37.88	V	181	157	-7.79	66.02	-25.19	46.02	-8.14	Pass
* 241.318	31.04	37.85	V	359	101	-7.42	66.02	-34.98	46.02	-8.17	Pass
* 244.218	38.54	39.52	H	247	100	-7.32	66.02	-27.48	46.02	-6.50	Pass
* 272.022	27.62	24.43	H	306	100	-5.55	66.02	-38.40	46.02	-21.59	Pass
310.529	28.47	28.22	H	123	111	-4.94	66.02	-37.55	46.02	-17.80	Pass
*Restricted Band Signal											

Test Results: The Lutron Model HWL-CD6WH-TW LED Downlight Sample 2412-04, operating in DTS mode and receive mode, comply with the requirements of 47 CFR Part 15.205 and RSS-Gen Section 8.10 for restricted bands of operation with a margin of 6.50 dB.



4.5.7 Radiated Spurious Emissions in Non-Restricted and Restricted Bands of Operation, 1 GHz – 18 GHz Peak and Average Detector Test Results Lutron Model HWL-RD4WH-TW LED Downlight Sample 2412-01 (01/05/2026)

Low Channel 11 (2405 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
* 4.811	43.50	32.18	H	338	102	1.81	53.98	-21.80	73.98	-30.48	PASS
* 4.811	41.22	30.40	V	045	102	1.81	53.98	-23.58	73.98	-32.76	PASS
7.214	50.78	44.16	H	038	209	4.31	53.98	-9.82	73.98	-23.20	PASS
7.217	49.05	40.22	V	006	243	4.33	53.98	-13.76	73.98	-24.93	PASS
* 12.028	56.19	46.69	H	004	109	7.85	53.98	-7.29	73.98	-17.79	PASS
* 12.028	55.68	44.55	V	317	100	7.85	53.98	-9.43	73.98	-18.31	PASS
*Restricted Band Signal											

Middle Channel 18 (2440 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
* 4.871	38.75	29.54	H	293	214	2.01	53.98	-24.44	73.98	-35.23	PASS
* 4.878	40.60	31.06	V	036	243	2.04	53.98	-22.92	73.98	-33.38	PASS
* 7.318	49.25	41.58	H	355	208	4.76	53.98	-12.40	73.98	-24.73	PASS
* 7.322	52.56	43.55	V	004	235	4.76	53.98	-10.43	73.98	-21.42	PASS
* 12.197	57.75	48.59	V	330	243	7.91	53.98	-5.39	73.98	-16.23	PASS
* 12.202	58.34	49.41	H	006	119	7.91	53.98	-4.57	73.98	-15.64	PASS
*Restricted Band Signal											



High Channel 26 (2480 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
* 4.949	37.78	28.57	H	199	145	2.02	53.98	-25.41	73.98	-36.20	PASS
* 4.953	37.68	28.41	V	033	156	2.02	53.98	-25.57	73.98	-36.30	PASS
* 7.442	52.87	44.13	H	317	115	4.82	53.98	-9.85	73.98	-21.11	PASS
* 7.442	55.79	47.63	V	001	218	4.82	53.98	-6.35	73.98	-18.19	PASS
9.919	46.94	38.12	H	110	139	6.49	53.98	-15.86	73.98	-27.04	PASS
9.928	48.45	37.65	V	001	228	6.50	53.98	-16.33	73.98	-25.54	PASS
* 12.397	57.90	49.72	V	335	101	7.75	53.98	-4.26	73.98	-16.08	PASS
* 12.403	56.06	47.27	H	317	108	7.76	53.98	-6.71	73.98	-17.92	PASS
*Restricted Band Signal											

Receive Mode

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
7.626	45.17	35.88	H	143	160	4.78	53.98	-18.10	73.98	-28.81	PASS
* 8.183	46.98	37.57	H	335	101	5.49	53.98	-16.41	73.98	-27.00	PASS
* 8.279	46.72	37.64	V	078	184	5.57	53.98	-16.34	73.98	-27.26	PASS
9.515	46.53	37.96	V	109	129	6.69	53.98	-16.02	73.98	-27.45	PASS
* 11.094	48.63	39.36	H	090	102	6.64	53.98	-14.62	73.98	-25.35	PASS
13.125	53.50	44.71	V	304	236	9.41	53.98	-9.28	73.98	-20.49	PASS
*Restricted Band Signal											

Test Results: The Lutron Model HWL-RD4WH-TW LED Downlight, operating in DTS and receive modes, comply with the requirements of 47 CFR Part 15.205 and RSS-Gen Section 8.10 with a margin of 4.26 dB.



4.5.8 Radiated Spurious Emissions in Non-Restricted and Restricted Bands of Operation, 1 GHz – 18 GHz Peak and Average Detector Test Results Lutron Model HWL-RD6WH-TW LED Downlight Sample 2412-02 (01/05/2026)

Low Channel 11 (2405 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.808	43.55	34.41	H	359	188	1.80	53.98	-19.57	73.98	-30.43	PASS
*4.811	43.15	34.63	V	342	100	1.81	53.98	-19.35	73.98	-30.83	PASS
7.213	52.70	44.61	V	020	131	4.31	53.98	-9.37	73.98	-21.28	PASS
7.216	56.93	49.48	H	025	114	4.33	53.98	-4.50	73.98	-17.05	PASS
*12.022	58.09	48.78	H	306	101	7.85	53.98	-5.20	73.98	-15.89	PASS
*12.027	55.64	47.10	V	023	229	7.85	53.98	-6.88	73.98	-18.35	PASS
*Restricted Band Signal											

Middle Channel 18 (2440 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.878	46.16	39.01	H	026	168	2.04	53.98	-14.97	73.98	-27.82	PASS
*4.878	43.57	35.57	V	346	101	2.04	53.98	-18.42	73.98	-30.41	PASS
*7.318	51.56	42.42	V	034	110	4.76	53.98	-11.56	73.98	-22.42	PASS
*7.318	56.34	48.26	H	033	103	4.76	53.98	-5.72	73.98	-17.64	PASS
*12.196	55.97	48.01	V	006	103	7.91	53.98	-5.97	73.98	-18.01	PASS
*12.202	60.37	52.42	H	018	123	7.91	53.98	-1.56	73.98	-13.61	PASS
*Restricted Band Signal											



High Channel 26 (2480 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.961	44.97	35.86	H	343	134	2.03	53.98	-18.12	73.98	-29.01	PASS
*4.961	45.58	37.96	V	026	129	2.03	53.98	-16.02	73.98	-28.40	PASS
*7.438	52.10	43.66	V	026	119	4.82	53.98	-10.32	73.98	-21.88	PASS
*7.441	56.87	48.60	H	046	213	4.82	53.98	-5.38	73.98	-17.11	PASS
*12.397	59.48	50.50	V	008	223	7.75	53.98	-3.48	73.98	-14.50	PASS
*12.402	59.77	50.41	H	357	101	7.76	53.98	-3.57	73.98	-14.21	PASS
*Restricted Band Signal											

Receive Mode

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.818	37.70	28.61	V	047	135	1.84	53.98	-25.37	73.98	-36.28	PASS
*4.886	38.59	28.87	H	086	101	2.06	53.98	-25.11	73.98	-35.39	PASS
*7.255	43.67	35.00	V	093	161	4.52	53.98	-18.98	73.98	-30.31	PASS
*7.276	44.25	35.35	H	211	243	4.62	53.98	-18.63	73.98	-29.73	PASS
9.610	46.96	37.85	H	360	127	6.52	53.98	-16.13	73.98	-27.02	PASS
9.618	45.72	37.90	V	001	141	6.52	53.98	-16.08	73.98	-28.26	PASS
*Restricted Band Signal											

Test Results: The Lutron Model HWL-RD6WH-TW LED Downlight, operating in DTS and receive modes, comply with the requirements of 47 CFR Part 15.205 and RSS-Gen Section 8.10 with a margin of 1.56 dB.



4.5.9 Radiated Spurious Emissions in Non-Restricted and Restricted Bands of Operation, 1 GHz – 18 GHz Peak and Average Detector Test Results Lutron Model HWL-CD4WH-TW LED Downlight Sample 2412-03 (01/05/2026)

Low Channel 11 (2405 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.808	42.91	30.56	H	043	222	1.80	53.98	-23.42	73.98	-31.07	PASS
*4.808	40.04	30.93	V	017	101	1.80	53.98	-23.05	73.98	-33.94	PASS
7.214	50.88	41.67	V	316	140	4.31	53.98	-12.31	73.98	-23.10	PASS
7.217	49.68	40.81	H	023	121	4.33	53.98	-13.17	73.98	-24.30	PASS
*12.022	52.02	42.26	H	018	136	7.85	53.98	-11.72	73.98	-21.96	PASS
*12.036	48.49	39.82	V	138	235	7.83	53.98	-14.16	73.98	-25.49	PASS
*Restricted Band Signal											

Middle Channel 18 (2440 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.882	39.84	29.39	V	330	105	2.05	53.98	-24.59	73.98	-34.14	PASS
*4.884	39.03	29.67	H	160	186	2.05	53.98	-24.31	73.98	-34.95	PASS
*7.312	45.27	35.10	H	053	167	4.75	53.98	-18.88	73.98	-28.71	PASS
*7.321	51.93	43.60	V	315	124	4.76	53.98	-10.38	73.98	-22.05	PASS
*12.202	54.92	45.10	H	338	155	7.91	53.98	-8.88	73.98	-19.06	PASS
*12.221	53.79	44.13	V	033	169	7.91	53.98	-9.85	73.98	-20.19	PASS
*Restricted Band Signal											



High Channel 26 (2480 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*7.438	50.50	41.27	H	020	101	4.82	53.98	-12.71	73.98	-23.48	PASS
*7.442	44.52	35.59	V	298	174	4.82	53.98	-18.39	73.98	-29.46	PASS
9.925	47.78	38.30	V	095	224	6.49	53.98	-15.68	73.98	-26.20	PASS
9.928	46.83	38.25	H	067	110	6.50	53.98	-15.74	73.98	-27.16	PASS
*12.398	52.32	42.26	V	157	130	7.75	53.98	-11.72	73.98	-21.66	PASS
*12.402	53.18	43.81	H	357	226	7.76	53.98	-10.17	73.98	-20.80	PASS
*Restricted Band Signal											

Receive Mode

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.809	37.69	28.54	V	052	205	1.80	53.98	-25.44	73.98	-36.29	PASS
*4.813	37.99	28.58	H	341	100	1.82	53.98	-25.40	73.98	-35.99	PASS
7.213	43.00	34.78	H	194	130	4.31	53.98	-19.20	73.98	-30.98	PASS
7.218	43.78	35.02	V	356	100	4.34	53.98	-18.96	73.98	-30.20	PASS
*12.017	50.81	40.56	H	276	102	7.86	53.98	-13.42	73.98	-23.17	PASS
*12.032	49.39	40.27	V	098	150	7.84	53.98	-13.71	73.98	-24.59	PASS
*Restricted Band Signal											

Test Results: The Lutron Model HWL-CD4WH-TW LED Downlight, operating in DTS and receive modes, comply with the requirements of 47 CFR Part 15.205 and RSS-Gen Section 8.10 with a margin of 8.88 dB.



4.5.10 Radiated Spurious Emissions in Non-Restricted and Restricted Bands of Operation, 1 GHz – 18 GHz Peak and Average Detector Test Results Lutron Model HWL-CD6WH-TW LED Downlight Sample 2412-04 (01/05/2026)

Low Channel 11 (2405 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.808	41.17	31.68	H	201	146	1.80	53.98	-22.30	73.98	-32.81	PASS
*4.821	37.88	28.57	V	081	105	1.85	53.98	-25.41	73.98	-36.10	PASS
7.206	44.39	35.04	H	360	209	4.28	53.98	-18.94	73.98	-29.59	PASS
7.217	47.10	37.74	V	342	101	4.33	53.98	-16.24	73.98	-26.88	PASS
*12.020	49.26	40.58	V	251	126	7.86	53.98	-13.40	73.98	-24.72	PASS
*12.021	53.03	42.03	H	313	110	7.86	53.98	-11.95	73.98	-20.96	PASS
*Restricted Band Signal											

Middle Channel 18 (2440 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.813	38.78	28.96	H	351	230	1.82	53.98	-25.02	73.98	-35.20	PASS
*4.879	40.09	30.92	V	188	102	2.04	53.98	-23.06	73.98	-33.89	PASS
7.227	44.21	34.85	H	222	192	4.38	53.98	-19.13	73.98	-29.77	PASS
9.749	47.31	37.68	V	018	147	6.39	53.98	-16.30	73.98	-26.67	PASS
*12.024	49.27	40.55	H	245	129	7.85	53.98	-13.43	73.98	-24.71	PASS
*12.197	56.63	47.16	V	001	108	7.91	53.98	-6.82	73.98	-17.35	PASS
*Restricted Band Signal											



High Channel 26 (248 MHz)

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.958	43.09	34.18	V	180	177	2.03	53.98	-19.80	73.98	-30.90	PASS
*7.438	47.62	38.12	V	034	124	4.82	53.98	-15.86	73.98	-26.36	PASS
*7.438	52.40	44.13	H	035	116	4.82	53.98	-9.85	73.98	-21.58	PASS
9.922	48.07	37.93	V	173	101	6.49	53.98	-16.05	73.98	-25.91	PASS
9.922	49.62	38.69	H	322	120	6.49	53.98	-15.29	73.98	-24.36	PASS
*12.397	56.82	47.48	H	089	172	7.75	53.98	-6.50	73.98	-17.16	PASS
*Restricted Band Signal											

Receive Mode

Frequency	Peak Corrected	Average Corrected	Antenna Polarity	Turntable Angle	Antenna Height	Antenna/Cable/ Amplifier CF	FCC 15.205/209: RSS-GEN/RSS-247 Average Limit	FCC 15.205/209: RSS-GEN/RSS-247 Average Margin	FCC 15.205/209: RSS-GEN/RSS-247 Peak Limit	FCC 15.205/209: RSS-GEN/RSS-247 Peak Margin	Result
GHz	dBuV/m	dBuV/m	H/V	degrees	cm	dB	dBuV/m	dB	dBuV/m	dB	
*4.805	38.25	28.63	V	094	109	1.79	53.98	-25.35	73.98	-35.73	PASS
*4.818	39.59	28.75	H	035	115	1.84	53.98	-25.23	73.98	-34.39	PASS
7.210	43.67	34.53	H	198	130	4.29	53.98	-19.45	73.98	-30.31	PASS
7.213	44.55	34.55	V	171	209	4.31	53.98	-19.43	73.98	-29.43	PASS
*12.026	49.07	40.56	V	316	121	7.85	53.98	-13.42	73.98	-24.91	PASS
*12.032	50.18	40.53	H	312	105	7.84	53.98	-13.45	73.98	-23.80	PASS
*Restricted Band Signal											

Test Results: The Lutron Model HWL-CD6WH-TW LED Downlight, operating in DTS and receive modes, comply with the requirements of 47 CFR Part 15.205 and RSS-Gen Section 8.10 with a margin of 6.50 dB.



4.5.11 Radiated Spurious Emissions in Non-Restricted and Restricted Bands of Operation, 18 GHz – 25 GHz Test Results (12/12/2025)

Measurements were made in the frequency range of 18 GHz to 25 GHz for the Lutron HWL Series LED Downlights Samples 2412-01, 2412-02, 2412-03 and 2412-04. The samples were programmed to transmit at the low Frequency 2405 MHz (Channel 11), middle Frequency 2440 MHz (Channel 18) and high Frequency 2480 MHz (Channel 26) and in the Rx Mode. There were no significant signals found when testing the EUTs in this frequency range. Test results for all configurations tested are available upon request.



4.6 DTS 6 dB Bandwidth (FCC Section 15.247(a)(2) RSS-247 Clause 6.3.1)

4.6.1 DTS 6 dB Bandwidth – Test Procedure

The minimum DTS (6 dB) bandwidth, specified in FCC Section 15.247(a) (2) was measured using a Spectrum Analyzer with 100 kHz resolution bandwidth and 300 kHz video bandwidth. Transmission frequencies at low (Channel 11, Frequency 2405 MHz), middle (Channel 18, Frequency 2440 MHz) and high (Channel 26, Frequency 2480 MHz) were measured while using maximum output and O-QPSK modulation. The test procedure of ANSI C63.10, Section 11.8, Option 1, was used.

Spectrum Analyzer Settings:

RBW	100	kHz
VBW	300	kHz
Span	5	MHz
Sweep Time (Auto)	5	ms

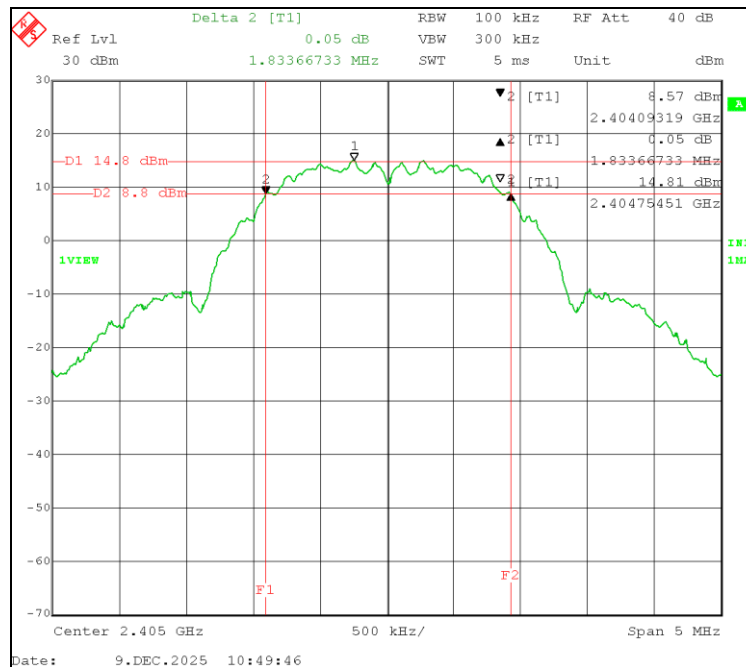
4.6.2 DTS 6 dB Bandwidth Lutron Model Series HWL LED Downlight Antenna Conducted Sample 2412-05 Test Results (12/09/2025)

Channel	Frequency	Measured 6 dB BW	47 CFR 15.247(a)(2) & RSS-247 5.2 Minimum Limit	Margin	Result
	MHz	kHz	kHz	kHz	
11	2405.0	1834	500.00	1334.00	PASS
18	2440.0	1844	500.00	1344.00	PASS
26	2480.0	1834	500.00	1334.00	PASS

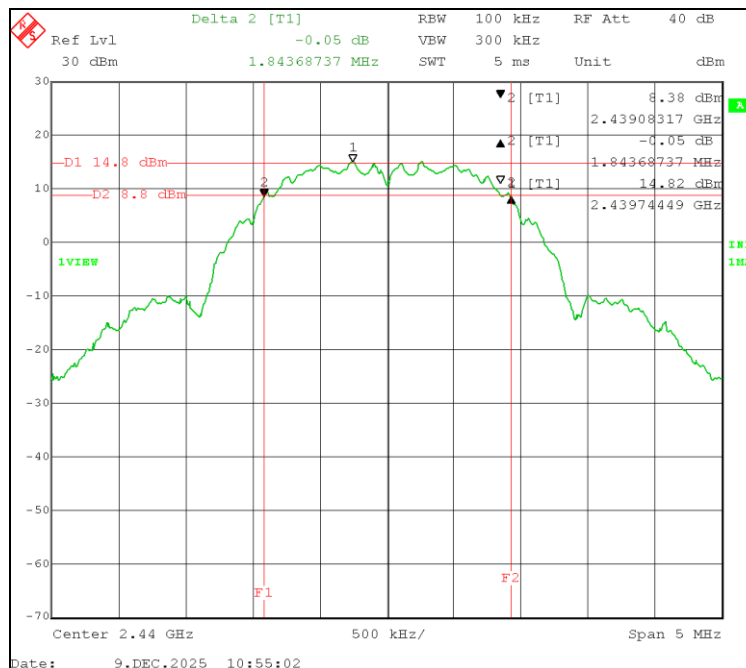


4.6.3 DTS 6 dB Bandwidth Analyzer Screen Captures

Channel 11: 2405 MHz

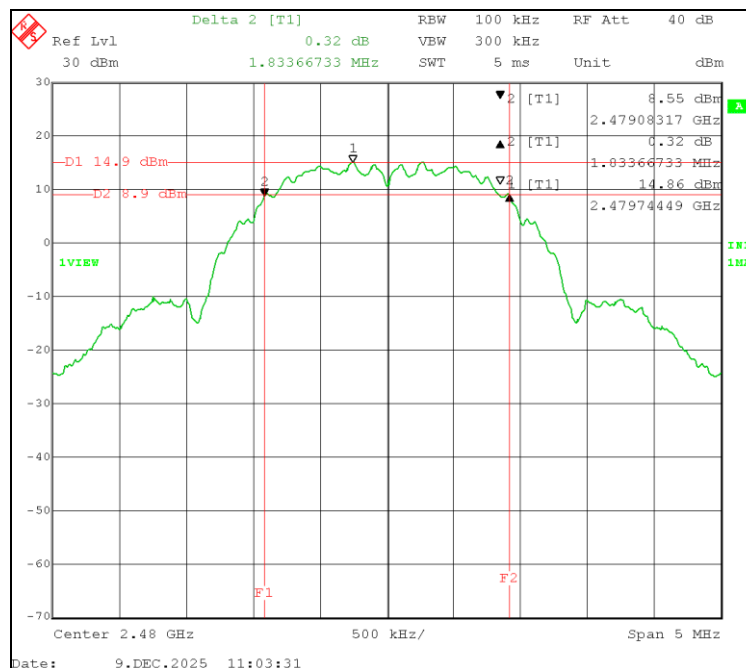


Channel 18: 2440 MHz





Channel 26: 2480 MHz



Test Results: The DTS 6 dB Bandwidth measurements for the Lutron Model Series HWL LED Downlight Antenna Conducted Sample 2412-05 were measured and are compliant to FCC and ISED requirements.



4.7 99% Occupied Bandwidth RSS-Gen Clause 6.7

4.7.1 99% Occupied Bandwidth – Test Procedure

The 99% Occupied Bandwidth measurement per RSS-Gen Section 6.7 was measured using a Spectrum Analyzer with 100 kHz resolution bandwidth and 300 kHz video bandwidth. Transmission frequencies at low (Channel 11, Frequency 2405 MHz), middle (Channel 18, Frequency 2440 MHz) and high (Channel 26, Frequency 2480 MHz) were measured while using maximum output and O-QPSK modulation. The test procedure of ANSI C63.10, Section 6.9.3 was used.

Spectrum Analyzer Settings:

SA Settings		ANSI C63.10 requirement
Span	10 MHz	(1.5 to 5 times OBW)
RBW	100 kHz	(1 to 5% of OBW)
VBW	300 kHz	$\geq(3 \times \text{RBW})$
Sweep Time	5 ms	Auto
OBW	1.8 MHz	

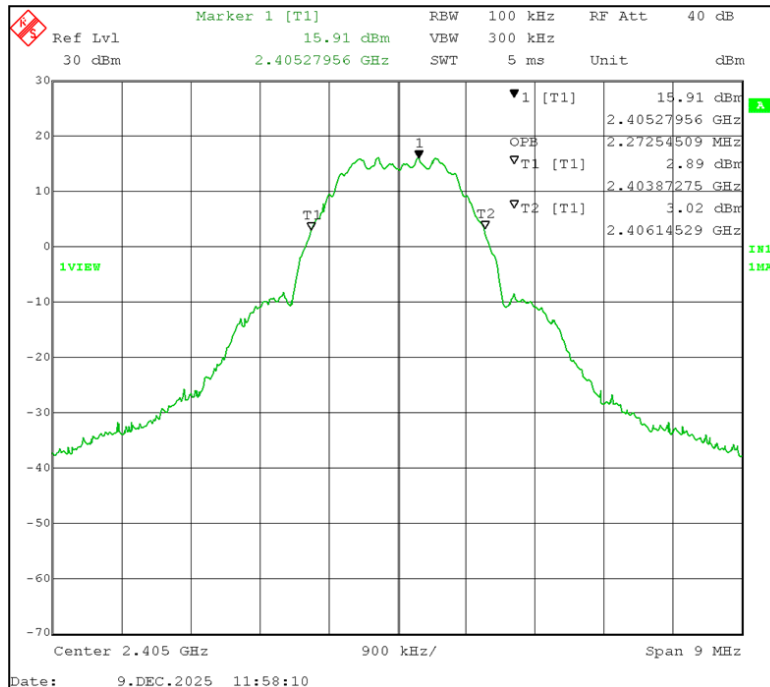
4.7.2 99% Occupied Bandwidth Lutron Model Series HWL LED Downlight Antenna Conducted Sample 2412-05 Test Results (12/09/2025)

Channel	Frequency (MHz)	99% Occupied BW (MHz)
11	2405.0	2.273
18	2440.0	2.273
26	2480.0	2.273

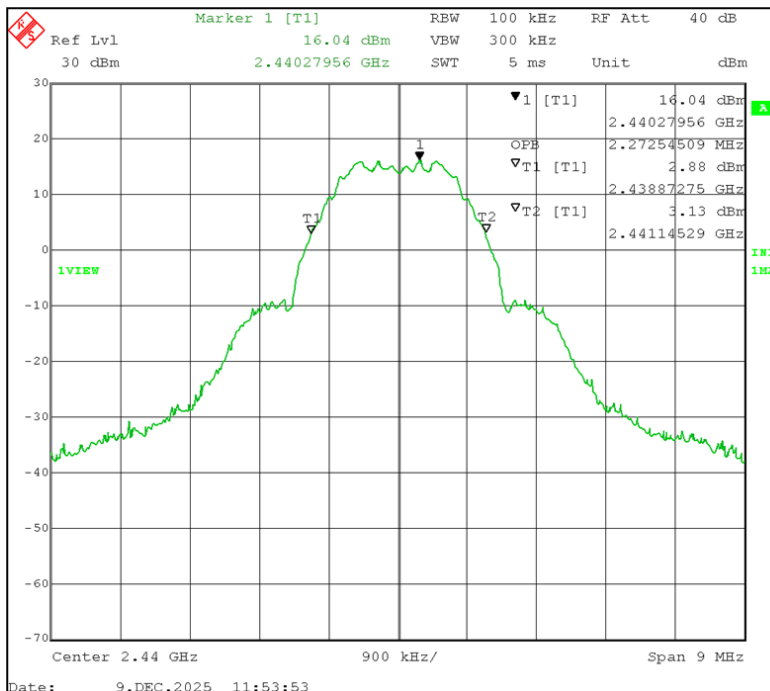


4.7.3 99% Occupied Bandwidth Analyzer Screen Captures

Channel 11: 2405 MHz

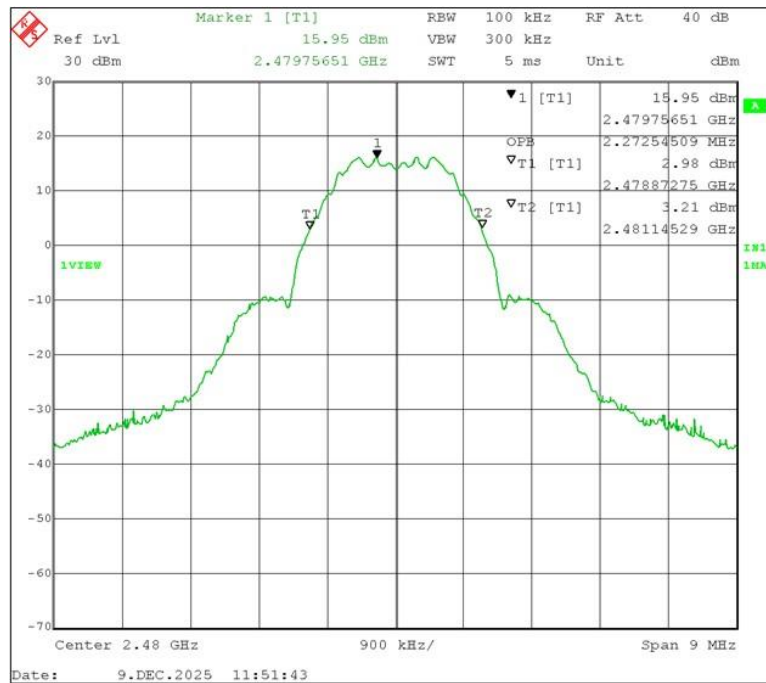


Channel 18: 2440 MHz





Channel 26: 2480 MHz



Test Results: The 99% Occupied Bandwidth measurements for the Lutron Model Series HWL LED Downlight Antenna Conducted Sample 2412-05 were measured for RSS-Gen Section 6.7 requirement.



4.8 Maximum Conducted Output Power and EIRP (FCC Part 15.247(b)(3), RSS-247 Clause 6.3.2)

4.8.1 Maximum Conducted Output Power Test Procedure

A conducted power measurement of the output frequency was measured according to ANSI C63.10, Section 11.9.1.1. Spectrum Analyzer Resolution Bandwidth and Frequency Span were based upon the Operating Bandwidth (OBW) measured in the previous section. Transmission frequencies at low (Channel 11, Frequency 2405 MHz), middle (Channel 18, Frequency 2440 MHz) and high (Channel 26, Frequency 2480 MHz) were measured with no modulation and with O-QPSK modulation.

Spectrum Analyzer Settings:

Measurement Analyzer Settings	
Span	10 MHz
RBW	3 MHz
VBW	10 MHz
Sweep Time	5 ms
Attenuation	40 dB
Ref Level	30 dBm

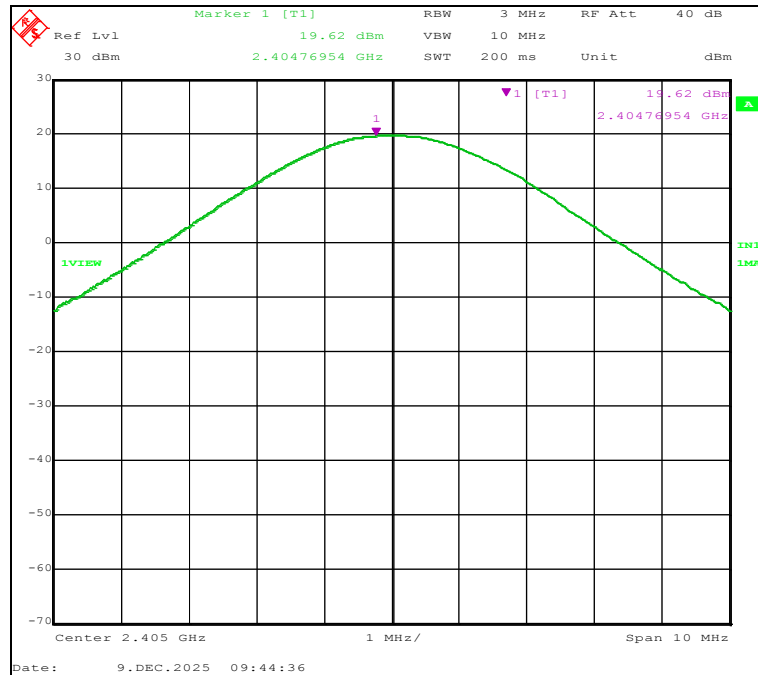
4.8.2 Maximum Conducted Output Power Lutron Model Series HWL LED Downlight Antenna Conducted Sample 2412-05 Test Results (12/09/2025)

802.15.4 Tx Channel	Modulation	Frequency (MHz)	Measured Peak Level (dBm)	Cable # 962 Loss (dB)	Corrected Peak Level		Limit		Margin	
					dBm	Watts	dBm	Watts	dBm	Watts
11	None	2405.0	19.62	0.377	20.00	0.100	30.00	1.000	-10.00	-0.900
18		2440.0	19.78	0.375	20.16	0.104	30.00	1.000	-9.85	-0.896
26		2480.0	19.78	0.377	20.16	0.104	30.00	1.000	-9.84	-0.896
11	O-QPSK	2405.0	19.29	0.377	19.67	0.093	30.00	1.000	-10.33	-0.907
18		2440.0	19.78	0.375	20.16	0.104	30.00	1.000	-9.85	-0.896
26		2480.0	19.91	0.377	20.29	0.107	30.00	1.000	-9.71	-0.893

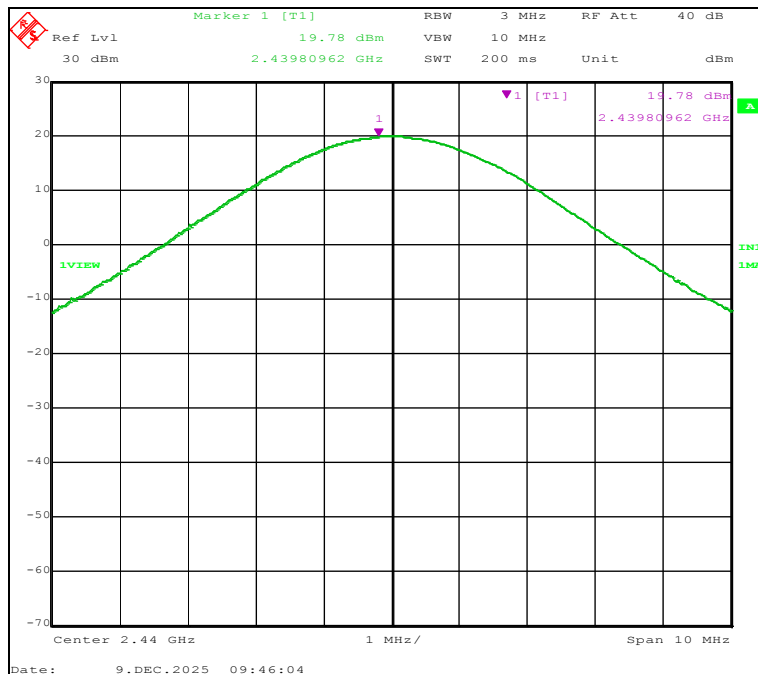


4.8.3 Maximum Conducted Output Power Analyzer Screen Captures

Channel 11: 2405 MHz No Modulation

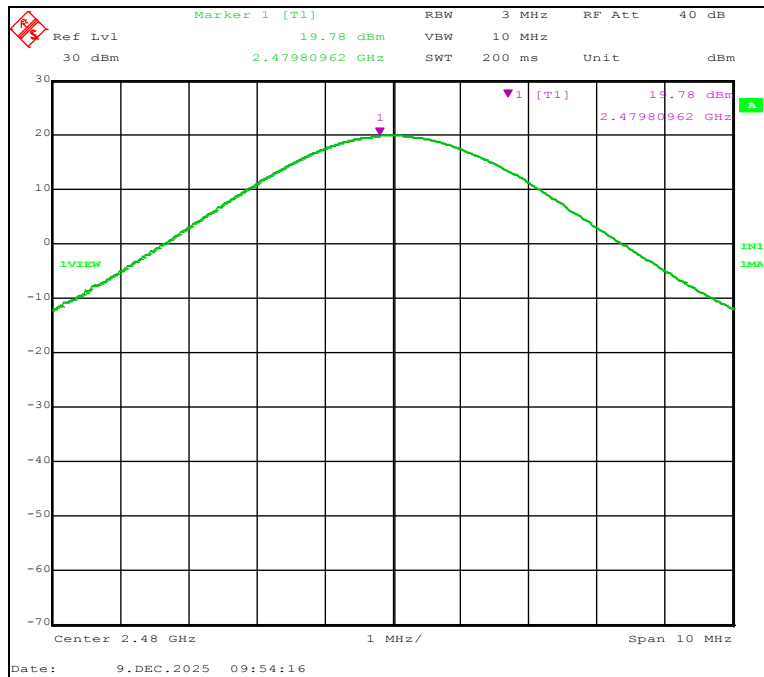


Channel 18: 2440 MHz No Modulation

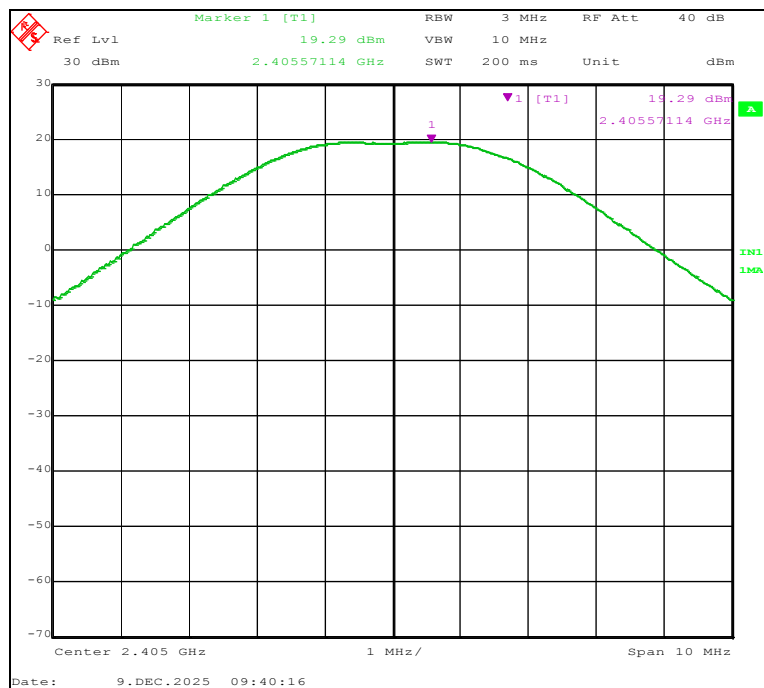




Channel 26: 2480 MHz No Modulation

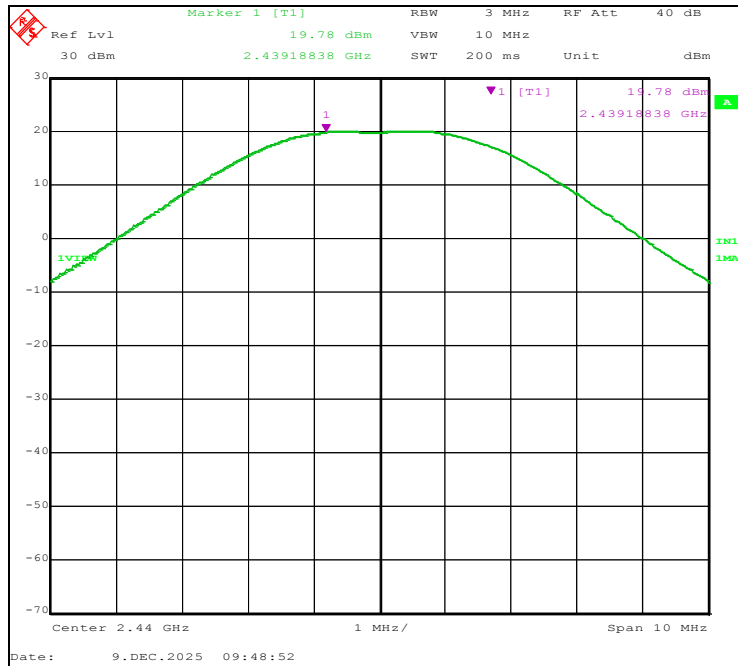


Channel 11: 2405 MHz O-QPSK Modulation

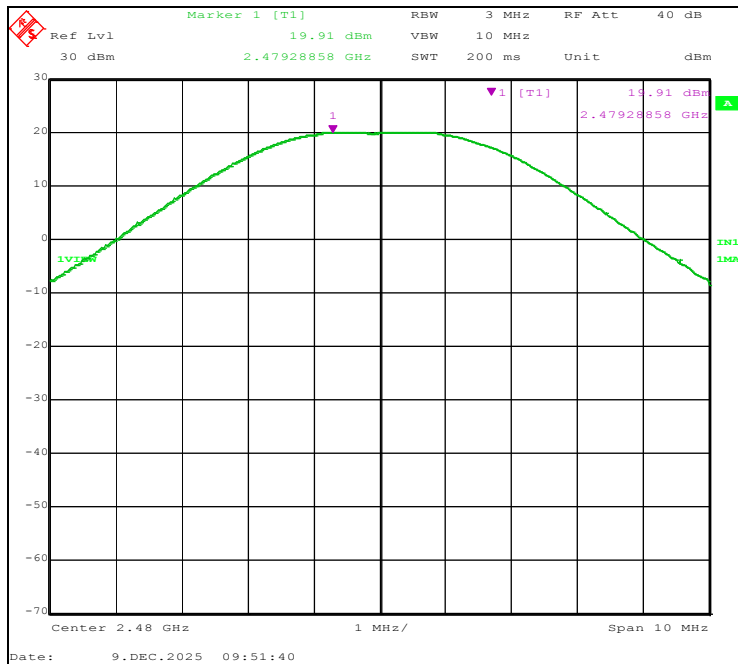




Channel 18: 2440 MHz O-QPSK Modulation



Channel 26: 2480 MHz O-QPSK Modulation



Test Results: The Maximum Conducted Output Power peak measurements for the Lutron Model Series HWL LED Downlight Antenna Conducted Sample 2412-05 with and without modulation are compliant with the limits specified in FCC Section 15.247(b)(3).



4.8.4 EIRP Calculation RSS-247 (12/09/2025)

The gain of the antenna used in the Lutron Model Series HWL LED Downlight Antenna is + 1.14 dBi. Applying the antenna gain to the maximum peak transmitter output produces the following values of EIRP.

802.15.4 Tx Channel	Modulation	Frequency (MHz)	Corrected Measured Level		Antenna Gain		EIRP				Result
							Total		Limit	Margin	
			dBm	Watts	Isotropic (dBi)	Numeric	dBm	Watts	Watts	Watts	
11	None	2405.0	20.00	0.0999	1.14	1.300	21.14	0.130	4.00	-3.870	Pass
18		2440.0	20.16	0.1036			21.30	0.135		-3.865	Pass
26		2480.0	20.16	0.1037			21.30	0.135		-3.865	Pass
11	O-QPSK	2405.0	19.67	0.0926			20.81	0.120		-3.880	Pass
18		2440.0	20.16	0.1036			21.30	0.135		-3.865	Pass
26		2480.0	20.29	0.1068			21.43	0.139		-3.861	Pass

Test Results: The results in the above table show compliance to the ISED requirements for EIRP limits of RSS-247.



4.9 Power Spectral Density (FCC Section 15.247(e), RSS-247 Clause 6.3.1)

4.9.1 Power Spectral Density Test Procedure

A conducted power measurement of the output frequency was measured using a peak detector for the Lutron Series HWL LED Downlight for each of the low (Channel 11, Frequency 2405 MHz), middle (Channel 18, Frequency 2440 MHz) and high (Channel 26, Frequency 2480 MHz) channel frequencies. The EUT was set to transmit a signal at maximum output power with O-QPSK modulation. The test procedure of ANSI C63.10, Section 11.10.2 (PKPSD) was used.

Spectrum Analyzer Settings:

Measurement Analyzer Settings		
OBW (6 dB)	1.8	MHz
RBW (Between 3 kHz and 100 kHz)	3	kHz
VBW (3 X RBW)	10	kHz
Span (1.5 X the OCW Bandwidth)	9	MHz
Sweep (Auto)	1.15	seconds
Attenuation	40	dB
Ref Level	10	dBm

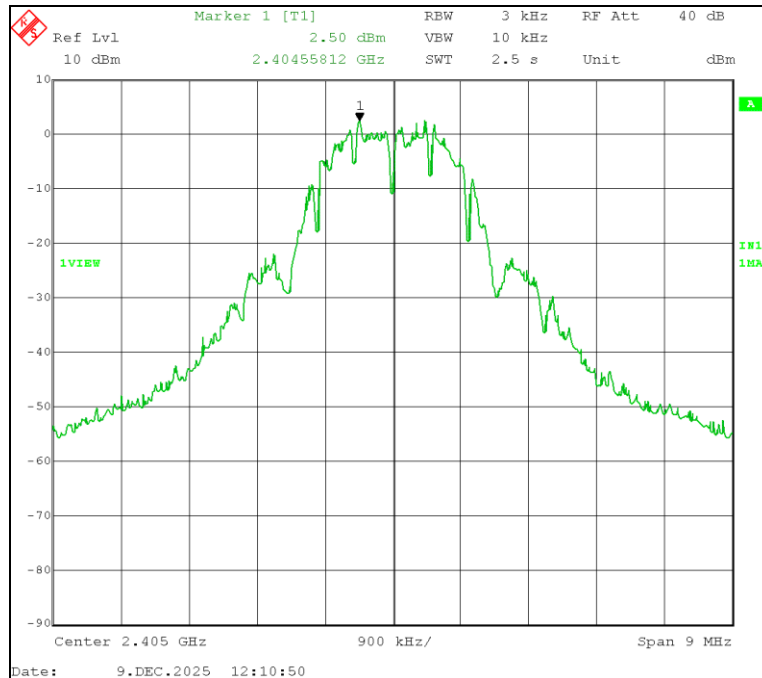
4.9.2 Power Spectral Density Lutron Model Series HWL LED Downlight Antenna Conducted Sample 2412-05 Test Results (12/09/2025)

Channel	Modulation	Frequency (MHz)	Peak Level Measured	Cable #BEC-962 Correction Factor	Peak Measurement Corrected	Limit	Margin
			dBm	dB	dBm	dBm	dBm
11	O-QPSK	2405.0	2.50	0.377	2.88	8.00	-5.12
18		2440.0	2.48	0.375	2.86	8.00	-5.15
26		2480.0	2.62	0.377	3.00	8.00	-5.00

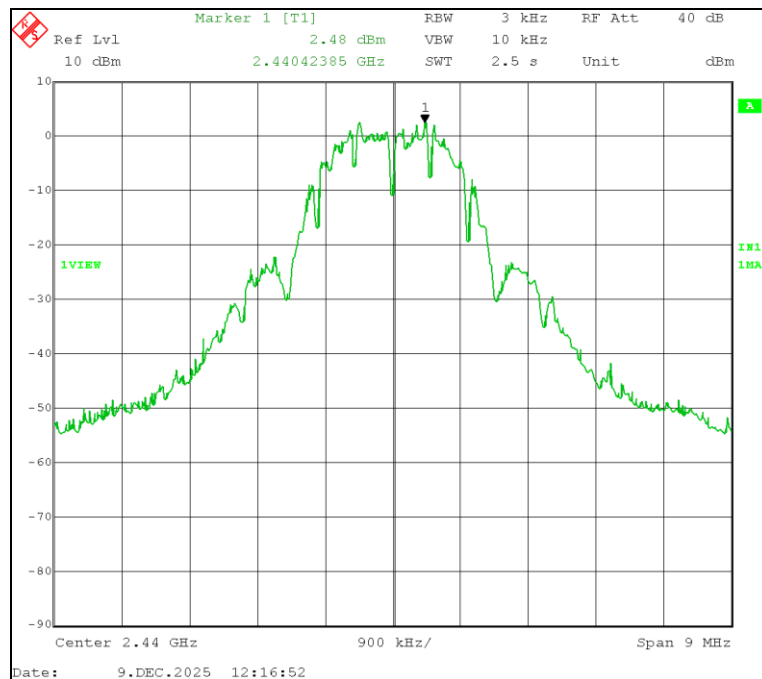


4.9.3 Power Spectral Density Analyzer Screen Captures

Channel 11, 2405 MHz, O-QPSK Modulation

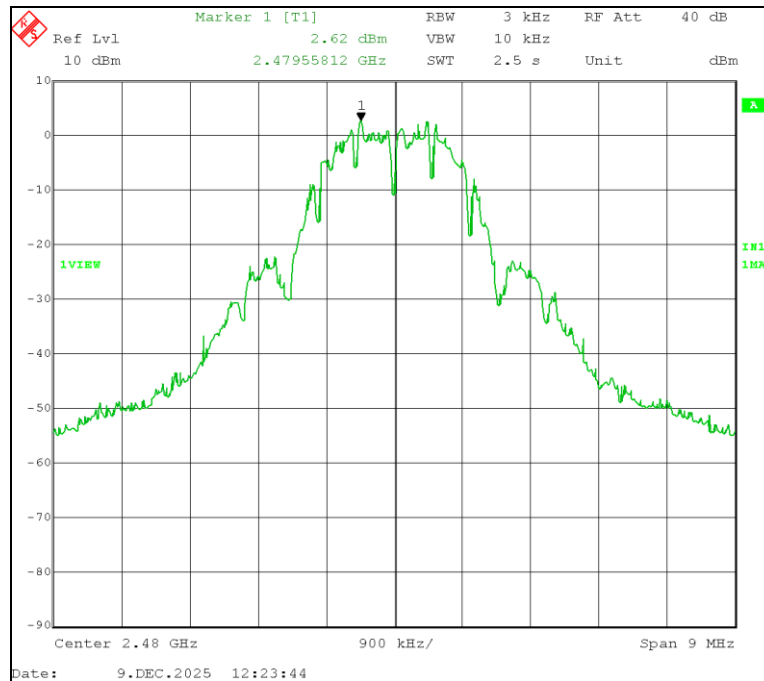


Channel 18, 2440 MHz, O-QPSK Modulation





Channel 26, 2480 MHz, O-QPSK Modulation



Test Results: The Power Spectral Density measurements of the Lutron Model Series HWL LED Downlight Antenna Conducted Sample 2412-05 are compliant with the limits specified in FCC Section 15.247(e) and RSS-247.



4.10 Band Edge Measurement (FCC Part 15.247(d))

4.10.1 Band Edge Measurement Test Procedure

Band edge measurements were recorded on the EUT while operating with a modulated carrier at 2405 MHz (Channel 11) and 2480 MHz (Channel 26). The Authorized Band Edge measurements were made using the Relative Method of Section 6.10.4 of ANSI C63.10. The Spectrum Analyzer Screens below show emissions between the modulated carrier, at low and high frequencies and the lower and upper band edges.

Spectrum Analyzer Settings:

Measurement Analyzer Settings	
RBW	100 kHz
VBW	300 kHz
Span	20 MHz (Low Band) & 15 MHz (High Band)
Sweep	5 ms

	Lower Edge	Upper Edge
Authorized Band:	2400 MHz	2483.5 MHz
Nearest Restricted Bands:	2310-2390 MHz	2483.5-2500 MHz

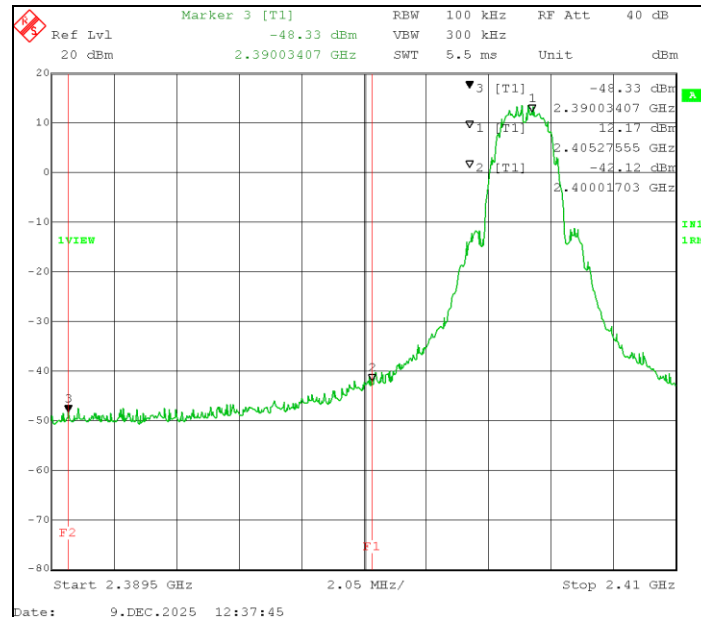
4.10.2 Band Edge Measurement Test Results (12/09/2025)

Test Mode	Frequency (MHz)	Peak Transmit	Band Edge Measurement		Margin	Result
			Peak Level @ Lower Band 2.4 GHz Lower Band & Peak Level @ 2.4835 GHz Higher Band	Limit (dB) 20 dB Below the Tx Peak Amplitude (-20 dBc)		
Tx at Maximum Output Power	2405.0	12.17	-42.12	-7.83	-34.29	PASS
Tx at Maximum Output Power	2480.0	12.84	-36.88	-7.16	-29.72	PASS

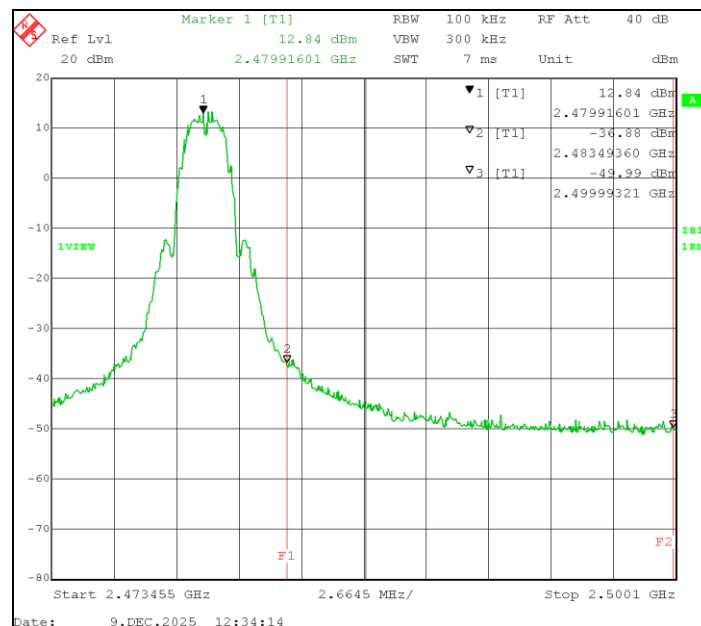


4.10.3 Band Edge Measurement Analyzer Screen Captures

Low Channel 11, 2405 MHz



High Channel 26, 2480 MHz



Test Results: The Band Edge measurements of the Lutron Model Series HWL LED Downlight Antenna Conducted Sample 2412-05 show that emissions at the band edges of the Operating Frequency Bandwidth are below the Carrier Peak Level – 20 dBc required by 47 CFR Part 15.247(d) and ISSED RSS-247, Section 5.5.



4.11 Conducted Emissions

4.11.1 Conducted Emissions AC Power Port Test Procedure

AC Power Line

Conducted emissions at the power line input of the EUT were measured with an EMI receiver set to the appropriate detector and CISPR bandwidth, which was connected to the RF output of a 50 Ω , 50 μ H Line Impedance Stabilization Network (LISN) installed in each power line. Measurements were made over the frequency range of 150 kHz to 30 MHz while the EUT was operating as described in the EUT section of this report. The significant amplitudes of emissions measured on the AC power lines of the EUT were recorded as follows:

Emission (dB μ V) = Meter Reading (dB μ v) + Cable Loss (dB) + LISN Factor (dB) + Limiter Loss (dB)

The Lutron Models HWL-RD4WH-TW, HWL-RD6WH-TW, HWL-CD4WH-TW and HWL-CD6WH-TW were tested separately with each sample powered at 120 Vac / 60 Hz. Each Model was tested while programmed to transmit on the low channel of 2405 MHz, middle channel of 2440 MHz and high channel of 2480 MHz using Constant Stream Mode at Max Output With O-QPSK Modulation for Zigbee Radio and also tested while operated in Receive Mode (Rx).

Fundamental Frequencies	Tx Low, Middle and High Channels at 2405 MHz, 2440 MHz and 2480 MHz		Receive Mode (Rx)	
Test Standards / Limits	47 CFR 15.207 and RSS-Gen, 8.8			
EUT Type	Radiated Sample transmitting in Constant Stream Mode		Radiated Sample in Receive Mode	
Manufacturer	Lutron Electronics			
Model	HWL-RD6WH-TW	HWL-CD4WH-TW	HWL-CD6WH-TW	HWL-RD4WH-TW
Sample Number	2412-02	2412-03	2412-04	2412-06
EUT Power	120 Vac / 60 Hz			
Test Date	12/03/2025		01/23/2026	
Temperature / Humidity	21°C / 29% RH		21°C / 30% RH	
Test Configuration	Lutron HWL Series LED Downlight Samples 2412-02, 2412-03, 2412-04 & 2412-06 were Powered and Under Typical Load.			



4.11.2 Conducted Emissions AC Power Port Lutron Model HWL-RD6WH-TW Sample 2412-02 Test Results (12/03/2025)

Tx @ Low Channel, 2405 MHz, Neutral Line

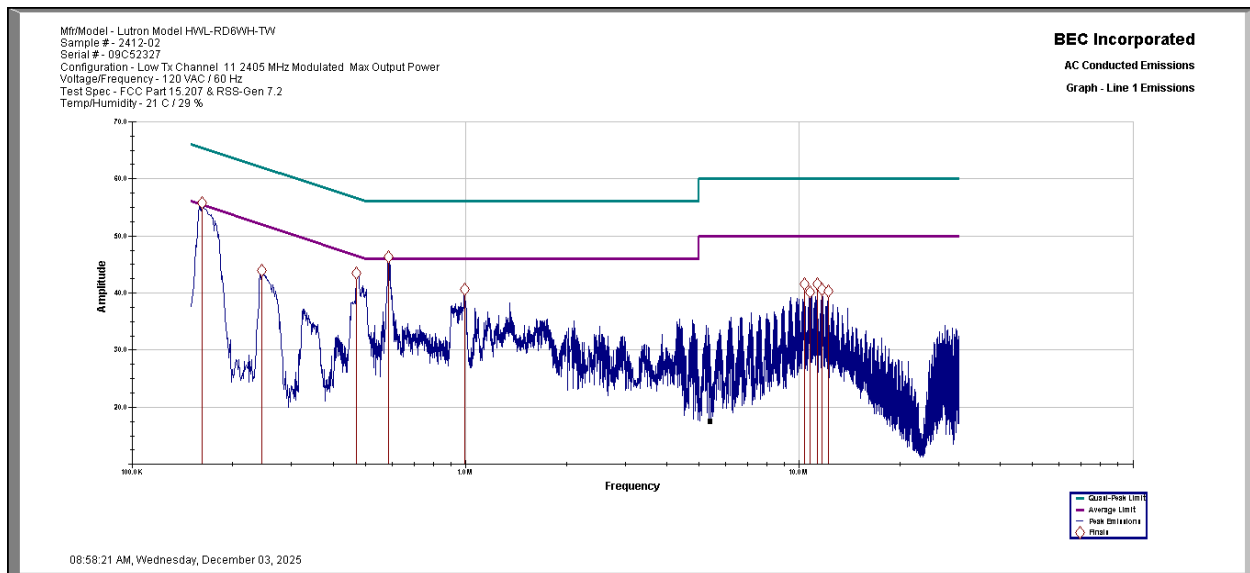
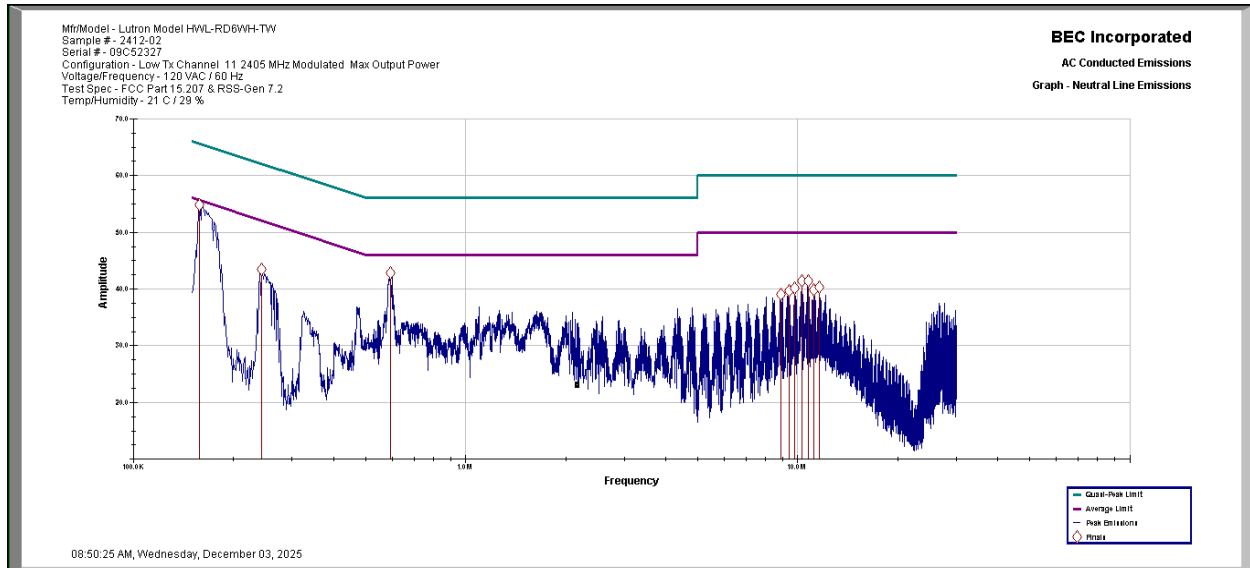
BEC Incorporated							
Neutral Line Conducted Emissions							
08:50:21 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
160.249 KHz	39.66	55.71	-16.05	53.65	65.71	-12.06	10.035
240.223 KHz	24.51	53.42	-28.91	41.90	63.42	-21.52	10.032
587.722 KHz	22.37	46.00	-23.63	36.20	56.00	-19.80	10.040
8.911 MHz	25.42	50.00	-24.58	35.38	60.00	-24.62	10.369
9.349 MHz	26.08	50.00	-23.92	35.06	60.00	-24.94	10.392
9.874 MHz	26.06	50.00	-23.94	36.14	60.00	-23.86	10.415
10.280 MHz	27.02	50.00	-22.98	35.56	60.00	-24.44	10.421
10.791 MHz	26.70	50.00	-23.30	36.39	60.00	-23.61	10.423
11.183 MHz	27.38	50.00	-22.62	36.47	60.00	-23.53	10.425
11.673 MHz	26.70	50.00	-23.30	36.38	60.00	-23.62	10.427
Mfr/Model - Lutron Model HWL-RD6WH-TW							
Sample # - 2412-02							
Serial # - 09C52327							
Configuration - Low Tx Channel 11 2405 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Tx @ Low Channel, 2405 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
08:58:18 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
161.665 KHz	41.71	55.67	-13.96	54.65	65.67	-11.02	10.056
242.313 KHz	27.80	53.36	-25.56	42.56	63.36	-20.80	10.050
474.037 KHz	25.13	46.74	-21.61	39.32	56.74	-17.42	10.050
583.140 KHz	30.40	46.00	-15.60	40.64	56.00	-15.36	10.060
984.860 KHz	22.08	46.00	-23.92	34.94	56.00	-21.06	10.070
10.292 MHz	26.78	50.00	-23.22	35.51	60.00	-24.49	10.418
10.763 MHz	27.22	50.00	-22.78	35.84	60.00	-24.16	10.415
11.212 MHz	27.26	50.00	-22.74	36.20	60.00	-23.80	10.415
11.675 MHz	26.64	50.00	-23.36	35.54	60.00	-24.46	10.417
12.120 MHz	25.80	50.00	-24.20	34.80	60.00	-25.20	10.417
Mfr/Model - Lutron Model HWL-RD6WH-TW							
Sample # - 2412-02							
Serial # - 09C52327							
Configuration - Low Tx Channel 11 2405 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Tx @ Low Channel, 2405 MHz, Neutral & Line 1





Tx @ Middle Channel, 2440 MHz, Neutral Line

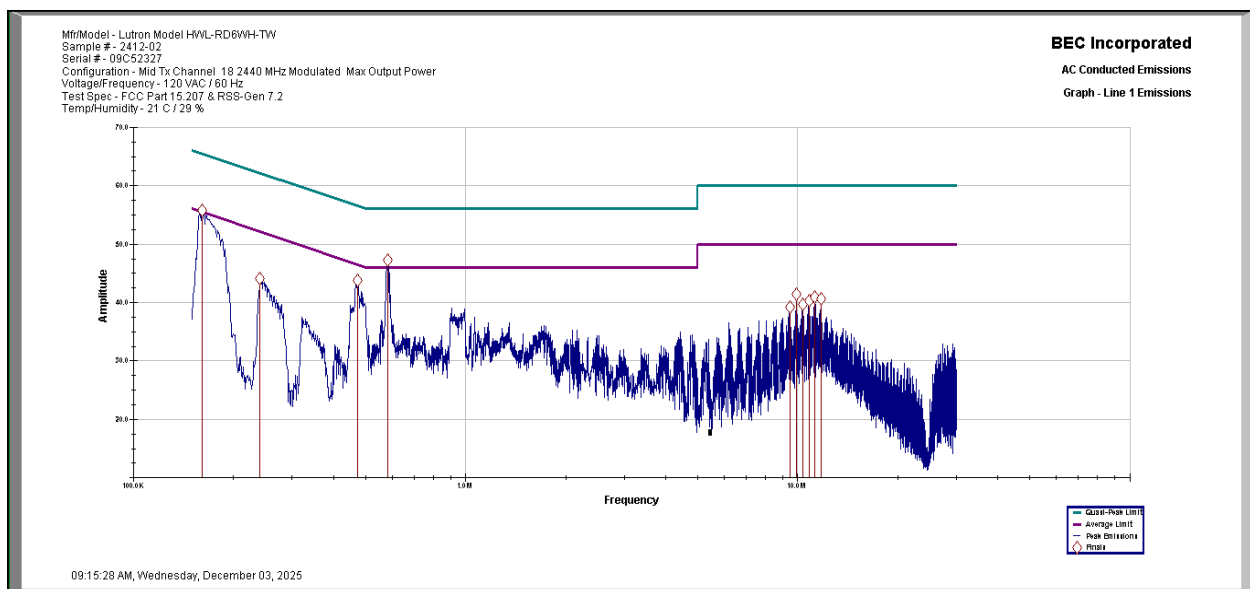
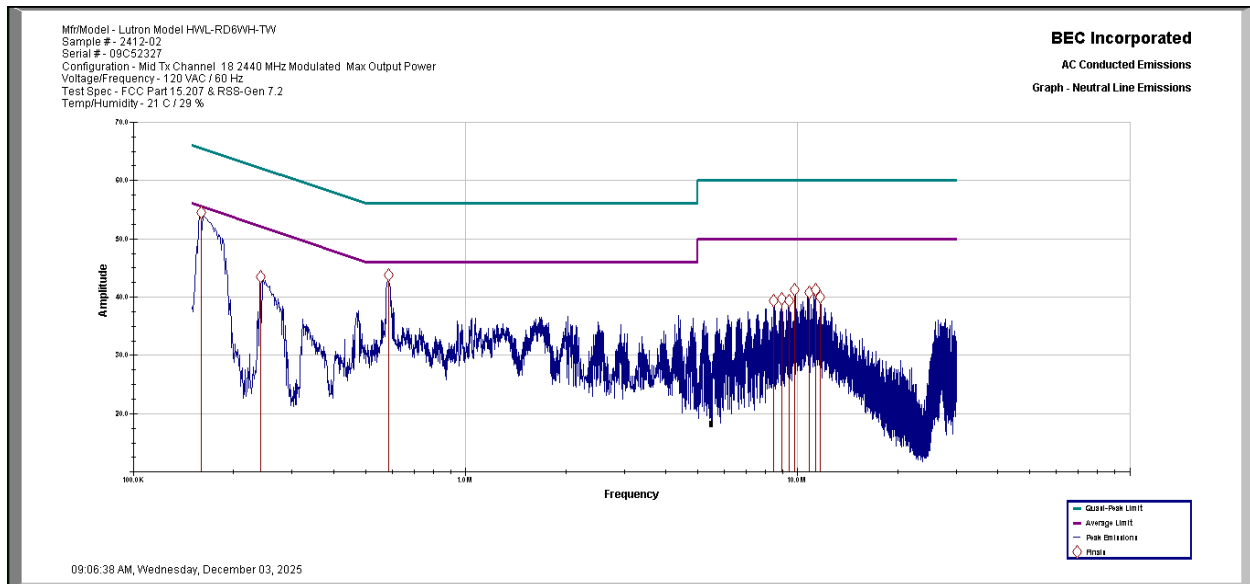
BEC Incorporated							
Neutral Line Conducted Emissions							
09:06:35 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
160.265 KHz	37.18	55.71	-18.53	53.37	65.71	-12.34	10.035
241.389 KHz	23.25	53.39	-30.14	42.15	63.39	-21.24	10.032
581.057 KHz	22.03	46.00	-23.97	38.07	56.00	-17.93	10.040
8.405 MHz	24.62	50.00	-25.38	33.92	60.00	-26.08	10.349
8.922 MHz	25.42	50.00	-24.58	35.67	60.00	-24.33	10.369
9.430 MHz	24.96	50.00	-25.04	35.47	60.00	-24.53	10.397
9.899 MHz	26.06	50.00	-23.94	35.98	60.00	-24.02	10.416
10.774 MHz	26.96	50.00	-23.04	36.87	60.00	-23.13	10.423
11.213 MHz	26.24	50.00	-23.76	35.20	60.00	-24.80	10.425
11.657 MHz	26.43	50.00	-23.57	35.23	60.00	-24.77	10.427
Mfr/Model - Lutron Model HWL-RD6WH-TW							
Sample # - 2412-02							
Serial # - 09C52327							
Configuration - Mid Tx Channel 18 2440 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Tx @ Middle Channel, 2440 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
09:15:25 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
160.513 KHz	38.90	55.70	-16.80	54.81	65.70	-10.89	10.055
241.564 KHz	26.15	53.38	-27.23	42.58	63.38	-20.80	10.050
471.223 KHz	25.34	46.82	-21.48	39.65	56.82	-17.17	10.050
578.122 KHz	30.35	46.00	-15.65	42.06	56.00	-13.94	10.060
9.429 MHz	24.24	50.00	-25.76	35.02	60.00	-24.98	10.398
9.909 MHz	25.09	50.00	-24.91	34.70	60.00	-25.30	10.417
10.341 MHz	25.64	50.00	-24.36	35.31	60.00	-24.69	10.418
10.812 MHz	26.17	50.00	-23.83	36.12	60.00	-23.88	10.415
11.300 MHz	26.03	50.00	-23.97	36.31	60.00	-23.69	10.415
11.693 MHz	26.00	50.00	-24.00	35.02	60.00	-24.98	10.417
Mfr/Model - Lutron Model HWL-RD6WH-TW							
Sample # - 2412-02							
Serial # - 09C52327							
Configuration - Mid Tx Channel 18 2440 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Tx @ Middle Channel, 2440 MHz, Neutral & Line 1





Tx @ High Channel, 2480 MHz, Neutral Line

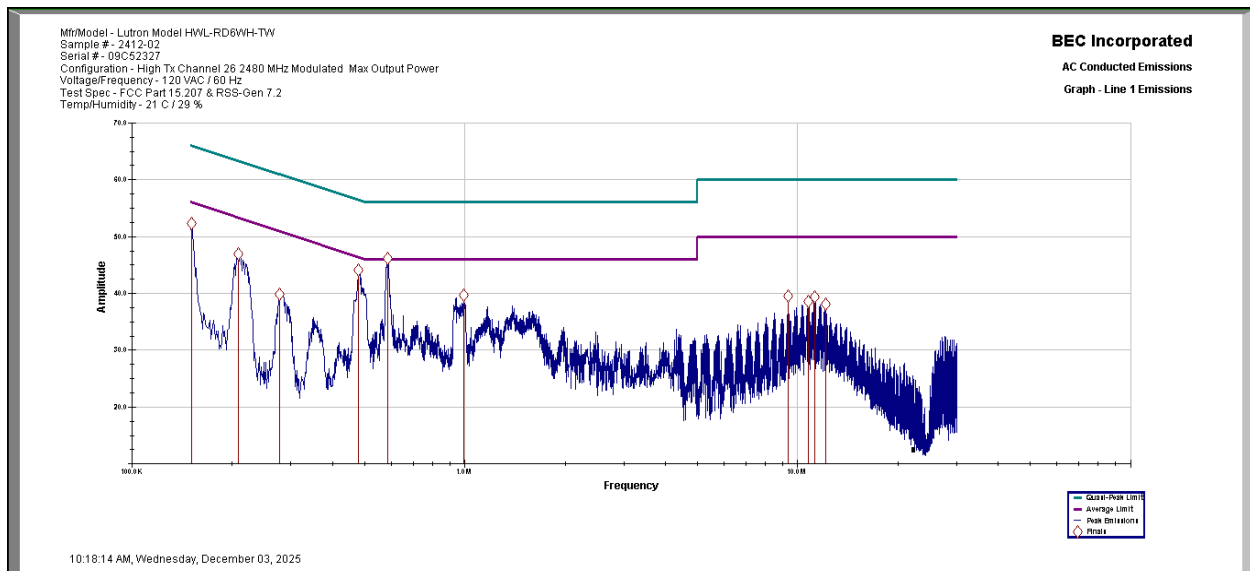
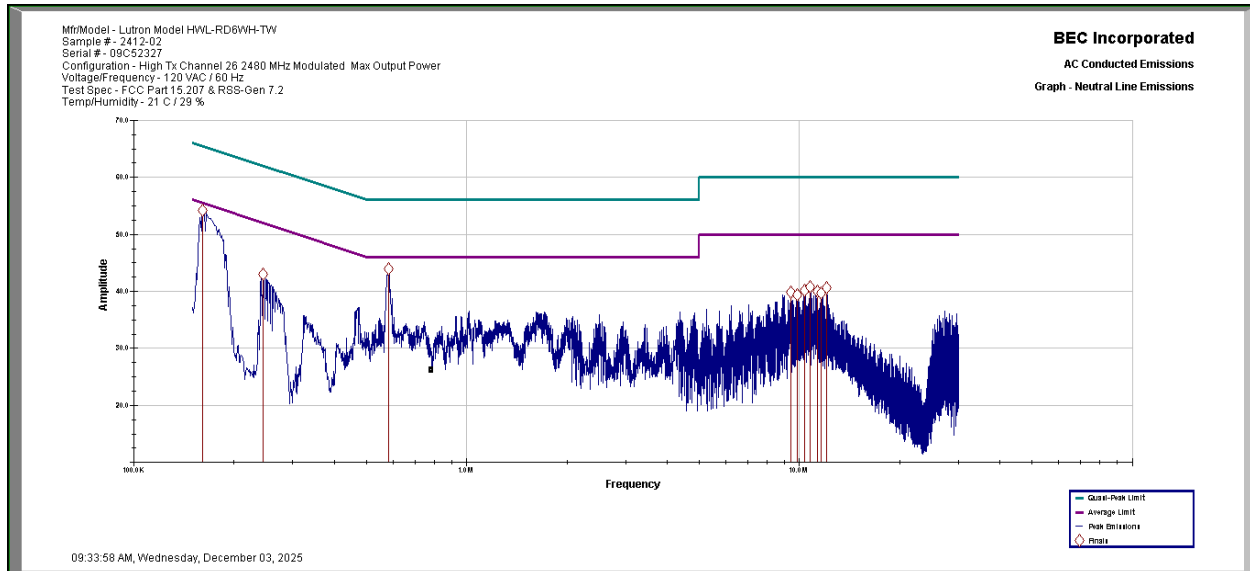
BEC Incorporated Neutral Line Conducted Emissions 09:33:55 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
161.678 KHz	38.38	55.67	-17.29	53.26	65.67	-12.41	10.036
242.214 KHz	23.15	53.37	-30.21	41.54	63.37	-21.82	10.032
576.019 KHz	23.05	46.00	-22.95	38.78	56.00	-17.22	10.040
9.468 MHz	24.75	50.00	-25.25	36.12	60.00	-23.88	10.399
9.876 MHz	26.12	50.00	-23.88	35.87	60.00	-24.13	10.415
10.354 MHz	26.12	50.00	-23.88	35.69	60.00	-24.31	10.421
10.816 MHz	26.55	50.00	-23.45	36.80	60.00	-23.20	10.423
11.265 MHz	25.76	50.00	-24.24	34.86	60.00	-25.14	10.425
11.726 MHz	25.72	50.00	-24.28	35.10	60.00	-24.90	10.427
12.104 MHz	24.83	50.00	-25.17	33.55	60.00	-26.45	10.428
Mfr/Model - Lutron Model HWL-RD6WH-TW							
Sample # - 2412-02							
Serial # - 09C52327							
Configuration - High Tx Channel 26 2480 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Tx @ High Channel, 2480 MHz, Line 1

BEC Incorporated Line 1 Conducted Emissions 10:18:10 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
150.156 KHz	41.23	56.00	-14.77	52.71	66.00	-13.29	10.050
208.397 KHz	35.30	54.33	-19.03	45.40	64.33	-18.93	10.050
277.601 KHz	26.04	52.35	-26.31	37.72	62.35	-24.63	10.044
475.807 KHz	26.55	46.69	-20.14	40.09	56.69	-16.60	10.050
580.574 KHz	30.24	46.00	-15.76	41.02	56.00	-14.98	10.060
995.510 KHz	23.26	46.00	-22.74	35.64	56.00	-20.36	10.070
9.430 MHz	24.40	50.00	-25.60	34.00	60.00	-26.00	10.398
10.731 MHz	26.36	50.00	-23.64	34.81	60.00	-25.19	10.416
11.232 MHz	26.01	50.00	-23.99	35.27	60.00	-24.73	10.415
12.125 MHz	24.91	50.00	-25.09	33.82	60.00	-26.18	10.417
Mfr/Model - Lutron Model HWL-RD6WH-TW							
Sample # - 2412-02							
Serial # - 09C52327							
Configuration - High Tx Channel 26 2480 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Tx @ High Channel, 2480 MHz, Neutral & Line 1





Rx Mode Neutral Line

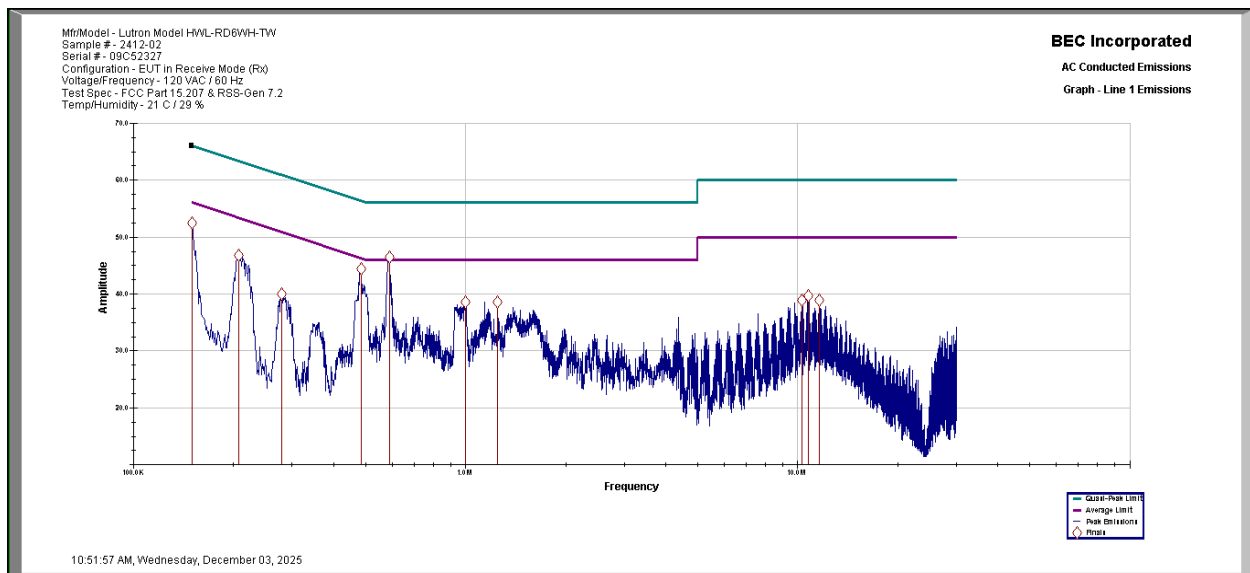
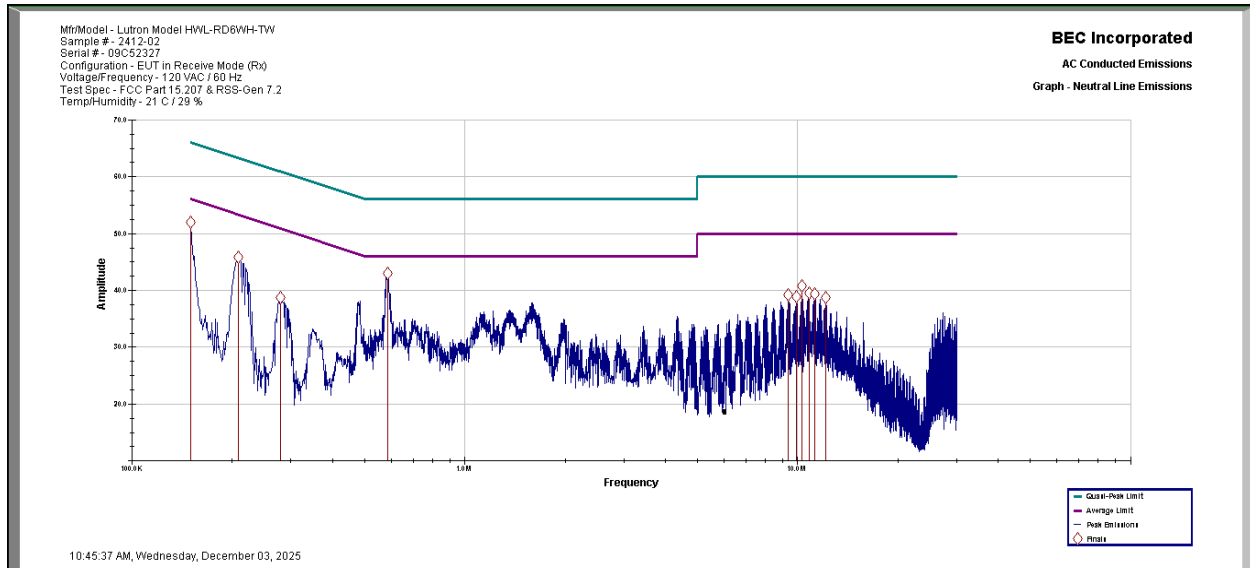
BEC Incorporated Neutral Line Conducted Emissions 10:45:33 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
150.010 KHz	40.00	56.00	-16.00	51.15	66.00	-14.85	10.030
208.899 KHz	32.51	54.32	-21.80	44.11	64.32	-20.21	10.038
278.029 KHz	23.42	52.34	-28.93	36.77	62.34	-25.57	10.024
582.354 KHz	21.58	46.00	-24.42	36.82	56.00	-19.18	10.040
9.445 MHz	24.26	50.00	-25.74	34.62	60.00	-25.38	10.398
9.853 MHz	25.59	50.00	-24.41	35.00	60.00	-25.00	10.414
10.273 MHz	26.25	50.00	-23.75	34.84	60.00	-25.16	10.421
10.729 MHz	26.76	50.00	-23.24	35.83	60.00	-24.17	10.423
11.208 MHz	26.22	50.00	-23.78	35.35	60.00	-24.65	10.425
12.128 MHz	24.45	50.00	-25.55	33.09	60.00	-26.91	10.429
Mfr/Model - Lutron Model HWL-RD6WH-TW							
Sample # - 2412-02							
Serial # - 09C52327							
Configuration - EUT in Receive Mode [Rx]							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Rx Mode Line 1

BEC Incorporated Line 1 Conducted Emissions 10:51:54 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
150.070 KHz	41.27	56.00	-14.73	52.57	66.00	-13.43	10.050
208.020 KHz	34.86	54.34	-19.48	45.31	64.34	-19.03	10.050
277.511 KHz	26.09	52.36	-26.27	37.60	62.36	-24.75	10.044
480.369 KHz	26.44	46.56	-20.12	40.36	56.56	-16.20	10.050
581.927 KHz	30.41	46.00	-15.59	40.97	56.00	-15.03	10.060
992.420 KHz	23.28	46.00	-22.72	35.40	56.00	-20.60	10.070
1.261 MHz	20.16	46.00	-25.84	30.36	56.00	-25.64	10.084
10.295 MHz	25.64	50.00	-24.36	34.46	60.00	-25.54	10.418
10.795 MHz	25.48	50.00	-24.52	34.42	60.00	-25.58	10.415
11.647 MHz	26.10	50.00	-23.90	34.68	60.00	-25.32	10.417
Mfr/Model - Lutron Model HWL-RD6WH-TW							
Sample # - 2412-02							
Serial # - 09C52327							
Configuration - EUT in Receive Mode [Rx]							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Rx Mode Neutral and Line 1



Results: The Lutron Model HWL-RD6WH-TW Sample 2412-02 complies with the requirements of FCC Part 15.207 and RSS-Gen Section 8.8. The margin is 10.89 dB @ 160.513 kHz with Sample 2412-02 transmitting Middle Channel, 2440 MHz, Phase Line.



4.11.3 Conducted Emissions AC Power Port Lutron Model HWL-CD4WH-TW Sample 2412-03 Test Results (12/03/2025)

Tx @ Low Channel, 2405 MHz, Neutral Line

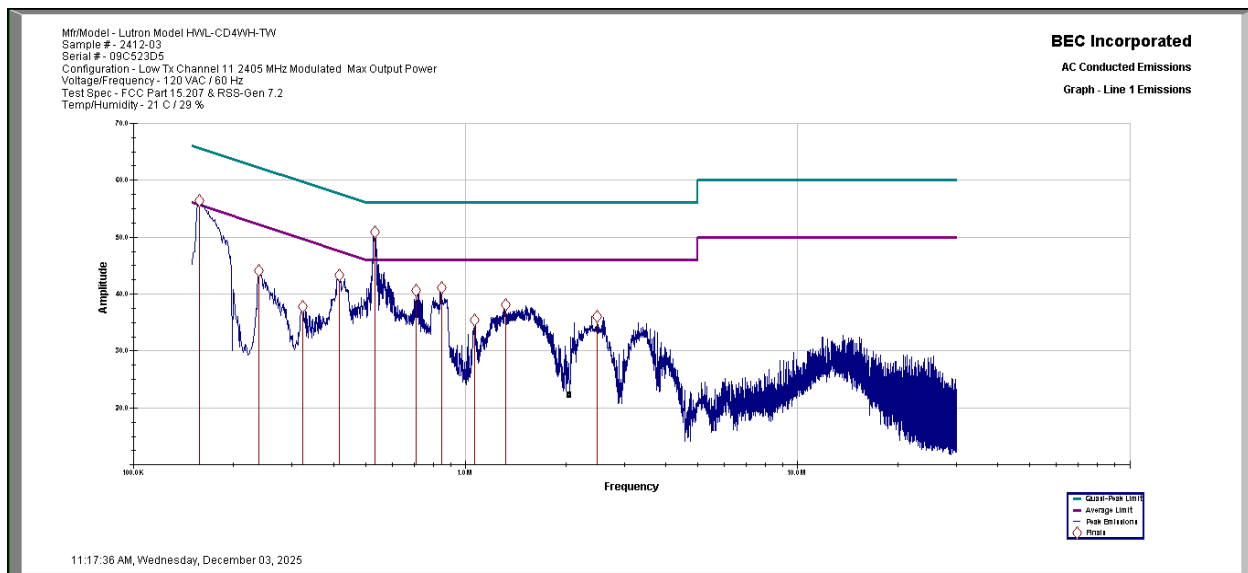
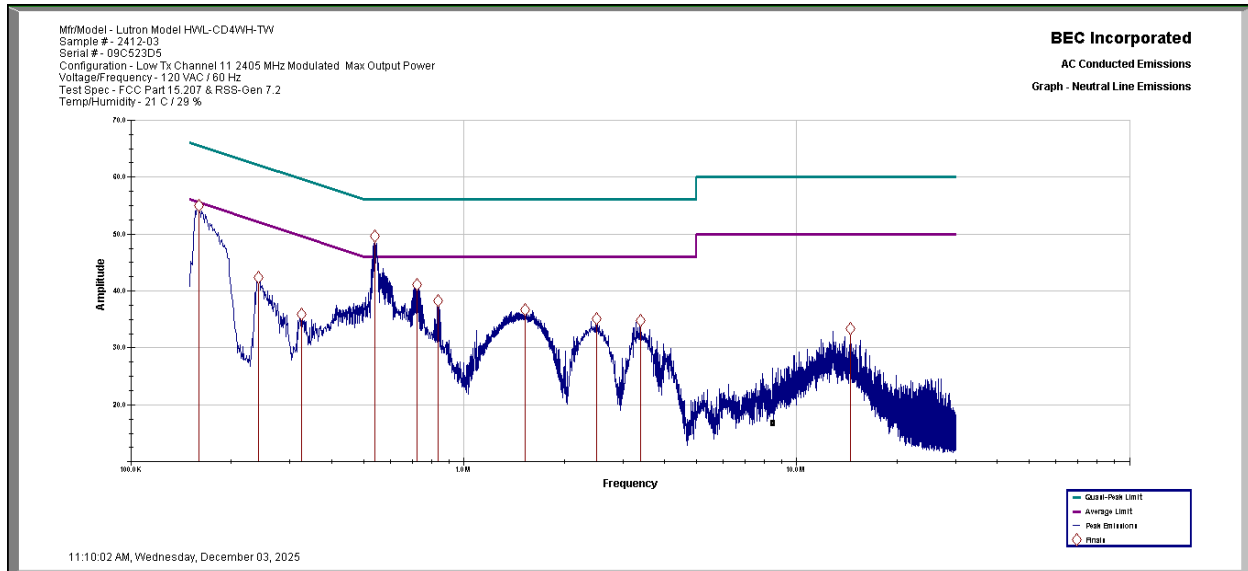
BEC Incorporated							
Neutral Line Conducted Emissions							
11:09:59 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
159.620 KHz	42.04	55.73	-13.68	53.96	65.73	-11.76	10.035
238.573 KHz	27.67	53.47	-25.80	40.52	63.47	-22.95	10.032
322.028 KHz	23.45	51.08	-27.63	32.44	61.08	-28.64	10.024
536.237 KHz	27.13	46.00	-18.88	38.92	56.00	-17.08	10.040
718.680 KHz	24.99	46.00	-21.01	33.62	56.00	-22.38	10.050
840.730 KHz	22.33	46.00	-23.67	32.65	56.00	-23.35	10.050
1.529 MHz	26.15	46.00	-19.85	34.09	56.00	-21.91	10.076
2.482 MHz	24.37	46.00	-21.63	32.08	56.00	-23.92	10.109
3.387 MHz	23.71	46.00	-22.29	31.36	56.00	-24.64	10.150
14.318 MHz	20.84	50.00	-29.16	28.67	60.00	-31.33	10.437
Mfr/Model - Lutron Model HWL-CD4WH-TW							
Sample # - 2412-03							
Serial # - 09C523D5							
Configuration - Low Tx Channel 11 2405 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Tx @ Low Channel, 2405 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
11:17:33 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
158.401 KHz	42.00	55.76	-13.76	55.15	65.76	-10.61	10.054
238.382 KHz	29.58	53.47	-23.89	42.06	63.47	-21.41	10.050
321.314 KHz	25.06	51.11	-26.05	34.23	61.11	-26.87	10.044
416.824 KHz	28.87	48.38	-19.51	39.48	58.38	-18.90	10.050
527.318 KHz	32.86	46.00	-13.14	45.31	56.00	-10.69	10.055
712.120 KHz	24.50	46.00	-21.50	33.07	56.00	-22.93	10.070
838.940 KHz	24.72	46.00	-21.28	36.67	56.00	-19.33	10.070
1.060 MHz	22.42	46.00	-23.58	31.89	56.00	-24.11	10.072
1.313 MHz	26.09	46.00	-19.91	33.75	56.00	-22.25	10.089
2.485 MHz	25.05	46.00	-20.95	32.65	56.00	-23.35	10.138
Mfr/Model - Lutron Model HWL-CD4WH-TW							
Sample # - 2412-03							
Serial # - 09C523D5							
Configuration - Low Tx Channel 11 2405 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Tx @ Low Channel, 2405 MHz, Neutral & Line 1





Tx @ Middle Channel, 2440 MHz, Neutral Line

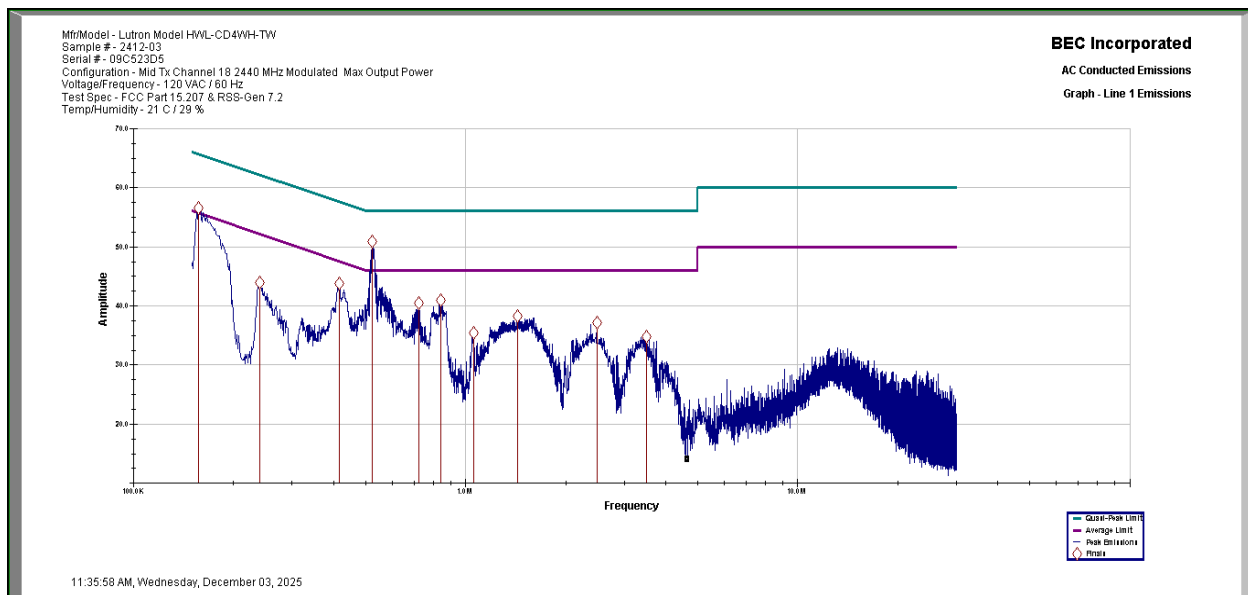
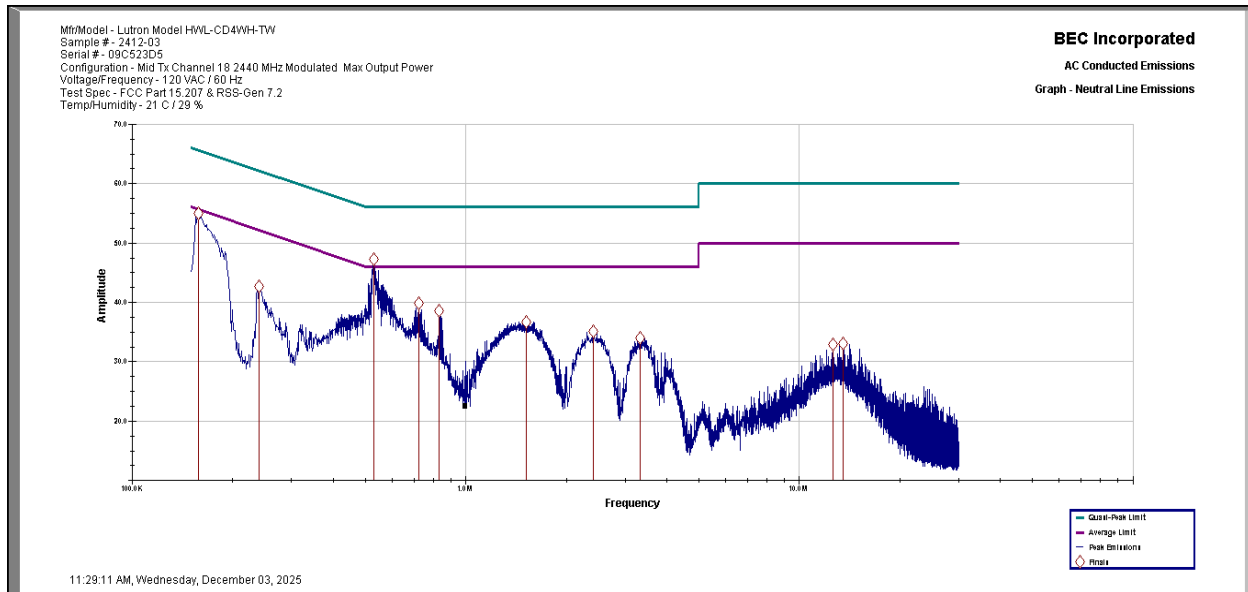
BEC Incorporated							
Neutral Line Conducted Emissions							
11:29:07 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
158.743 KHz	42.63	55.75	-13.12	54.06	65.75	-11.69	10.034
237.815 KHz	28.91	53.49	-24.58	40.81	63.49	-22.68	10.032
522.663 KHz	27.84	46.00	-18.16	40.83	56.00	-15.17	10.040
721.000 KHz	24.09	46.00	-21.91	32.48	56.00	-23.52	10.050
835.290 KHz	20.96	46.00	-25.04	32.91	56.00	-23.09	10.050
1.519 MHz	26.47	46.00	-19.53	34.36	56.00	-21.64	10.076
2.401 MHz	24.89	46.00	-21.11	32.61	56.00	-23.39	10.106
3.365 MHz	24.24	46.00	-21.76	31.79	56.00	-24.21	10.149
12.511 MHz	22.04	50.00	-27.96	28.33	60.00	-31.67	10.430
13.514 MHz	21.54	50.00	-28.46	28.93	60.00	-31.07	10.434
Mfr/Model - Lutron Model HWL-CD4WH-TW							
Sample # - 2412-03							
Serial # - 09C523D5							
Configuration - Mid Tx Channel 18 2440 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Tx @ Middle Channel, 2440 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
11:35:55 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
157.835 KHz	43.21	55.78	-12.57	55.40	65.78	-10.37	10.054
238.697 KHz	31.55	53.47	-21.91	42.41	63.47	-21.06	10.050
415.079 KHz	29.88	48.43	-18.55	40.91	58.43	-17.52	10.050
522.220 KHz	32.42	46.00	-13.58	44.83	56.00	-11.17	10.054
719.170 KHz	25.55	46.00	-20.45	33.34	56.00	-22.66	10.070
836.430 KHz	24.69	46.00	-21.31	36.99	56.00	-19.01	10.070
1.049 MHz	23.25	46.00	-22.75	32.24	56.00	-23.76	10.071
1.429 MHz	26.87	46.00	-19.13	34.71	56.00	-21.29	10.093
2.483 MHz	25.31	46.00	-20.69	32.90	56.00	-23.10	10.138
3.474 MHz	23.50	46.00	-22.50	30.95	56.00	-25.05	10.172
Mfr/Model - Lutron Model HWL-CD4WH-TW							
Sample # - 2412-03							
Serial # - 09C523D5							
Configuration - Mid Tx Channel 18 2440 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Tx @ Middle Channel, 2440 MHz, Neutral & Line 1





Tx @ High Channel, 2480 MHz, Neutral Line

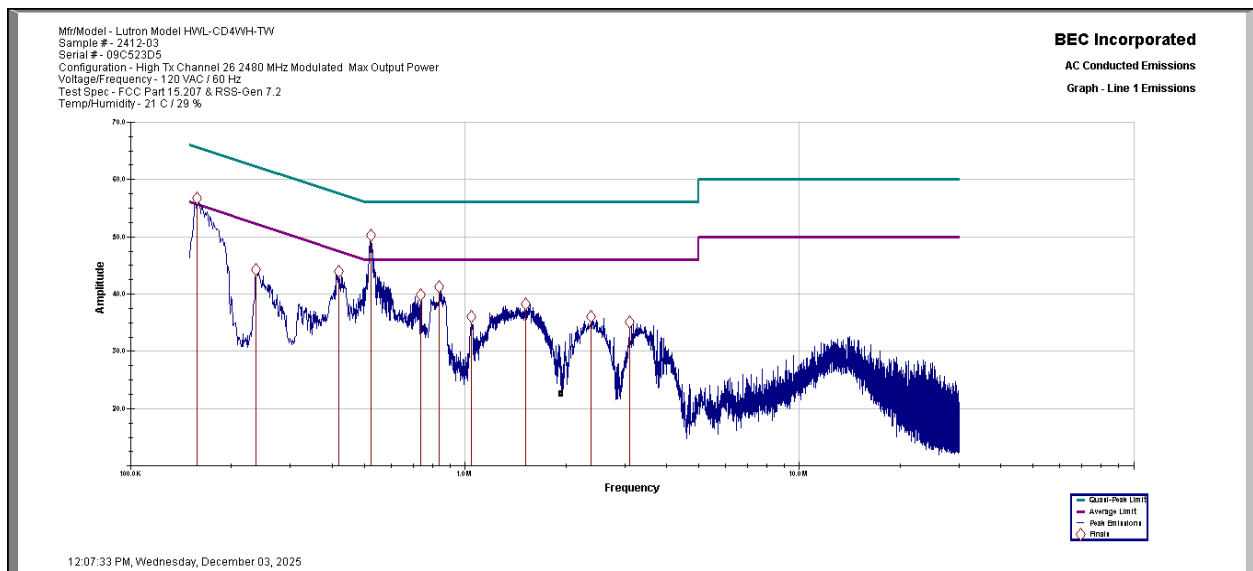
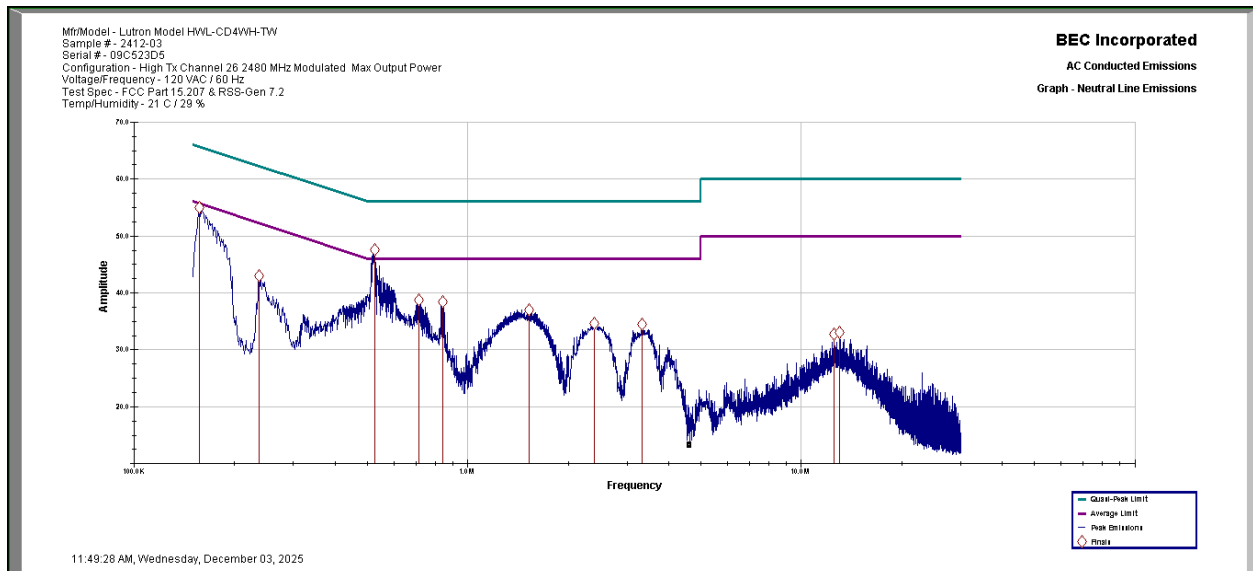
BEC Incorporated							
Neutral Line Conducted Emissions							
11:49:25 AM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
158.362 KHz	41.05	55.76	-14.71	53.98	65.76	-11.78	10.034
236.804 KHz	27.10	53.52	-26.42	40.36	63.52	-23.16	10.033
516.960 KHz	26.93	46.00	-19.07	41.45	56.00	-14.55	10.040
717.840 KHz	24.82	46.00	-21.18	32.80	56.00	-23.20	10.050
837.980 KHz	21.82	46.00	-24.18	33.54	56.00	-22.46	10.050
1.519 MHz	26.41	46.00	-19.59	34.32	56.00	-21.68	10.076
2.382 MHz	25.10	46.00	-20.90	32.78	56.00	-23.22	10.105
3.347 MHz	24.16	46.00	-21.84	31.81	56.00	-24.19	10.149
12.458 MHz	22.16	50.00	-27.84	27.91	60.00	-32.09	10.430
12.984 MHz	23.83	50.00	-26.17	29.23	60.00	-30.77	10.432
Mfr/Model - Lutron Model HWL-CD4WH-TW							
Sample # - 2412-03							
Serial # - 09C523D5							
Configuration - High Tx Channel 26 2480 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Tx @ High Channel, 2480 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
12:07:29 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
158.334 KHz	42.50	55.76	-13.26	55.46	65.76	-10.30	10.054
237.844 KHz	29.89	53.49	-23.60	42.35	63.49	-21.14	10.050
416.117 KHz	29.64	48.40	-18.76	40.72	58.40	-17.68	10.050
518.572 KHz	32.96	46.00	-13.04	45.28	56.00	-10.72	10.054
730.960 KHz	24.28	46.00	-21.72	32.06	56.00	-23.94	10.070
836.650 KHz	24.73	46.00	-21.27	37.10	56.00	-18.90	10.070
1.040 MHz	24.29	46.00	-21.71	31.94	56.00	-24.06	10.071
1.516 MHz	26.39	46.00	-19.61	34.27	56.00	-21.73	10.095
2.396 MHz	24.93	46.00	-21.07	32.65	56.00	-23.35	10.126
3.110 MHz	22.88	46.00	-23.12	30.70	56.00	-25.30	10.163
Mfr/Model - Lutron Model HWL-CD4WH-TW							
Sample # - 2412-03							
Serial # - 09C523D5							
Configuration - High Tx Channel 26 2480 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Tx @ High Channel, 2480 MHz, Neutral & Line 1





Rx Mode Neutral Line

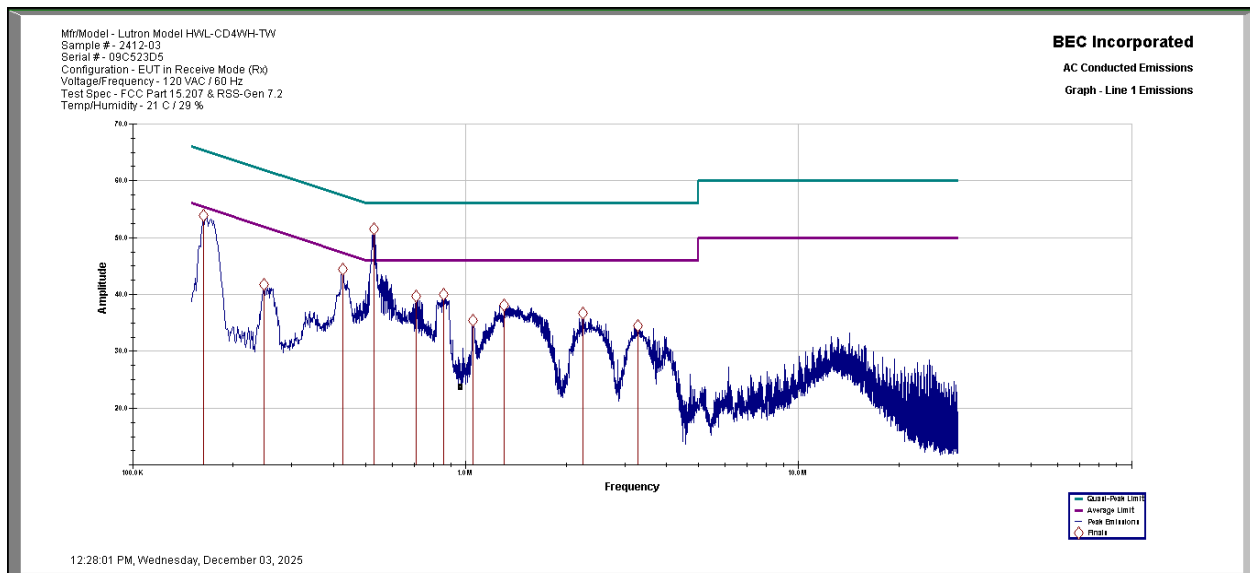
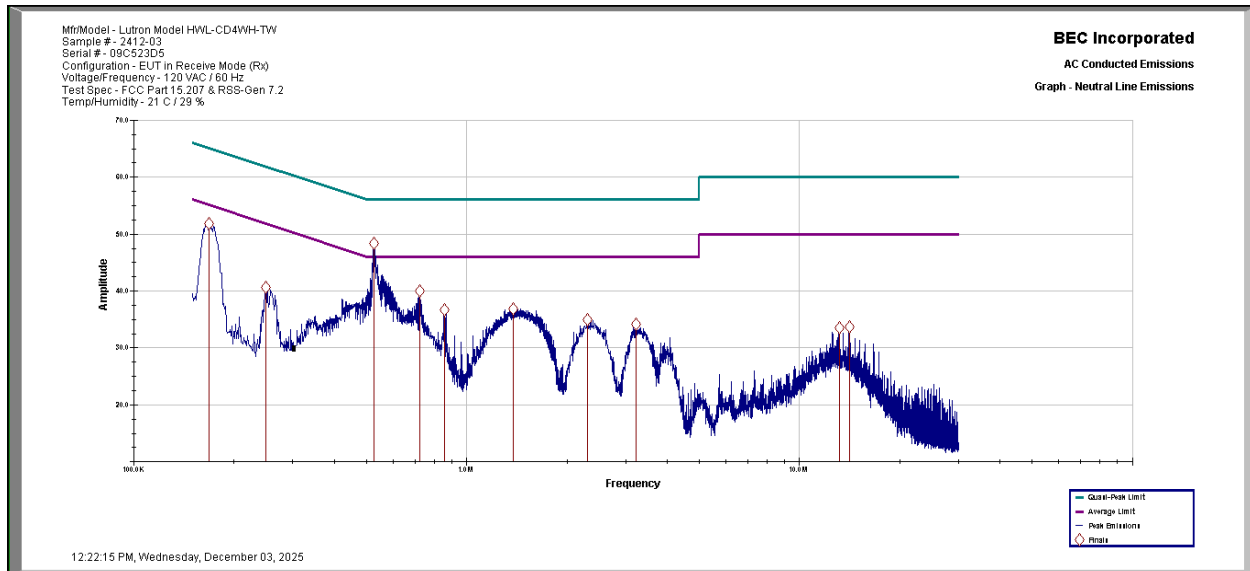
BEC Incorporated Neutral Line Conducted Emissions 12:22:11 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
166.470 KHz	40.20	55.53	-15.33	50.22	65.53	-15.31	10.038
248.411 KHz	25.95	53.19	-27.24	37.26	63.19	-25.93	10.030
525.554 KHz	27.10	46.00	-18.90	41.14	56.00	-14.86	10.040
721.020 KHz	23.45	46.00	-22.55	31.86	56.00	-24.14	10.050
853.320 KHz	20.59	46.00	-25.41	31.41	56.00	-24.59	10.050
1.359 MHz	25.61	46.00	-20.39	33.47	56.00	-22.53	10.061
2.302 MHz	24.13	46.00	-21.87	31.84	56.00	-24.16	10.102
3.212 MHz	23.72	46.00	-22.28	31.19	56.00	-24.81	10.145
13.156 MHz	21.91	50.00	-28.09	29.83	60.00	-30.17	10.433
14.198 MHz	20.38	50.00	-29.62	29.24	60.00	-30.76	10.437
Mfr/Model - Lutron Model HWL-CD4WH-TW							
Sample # - 2412-03							
Serial # - 09C523D5							
Configuration - EUT in Receive Mode (Rx)							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Rx Mode Line 1

BEC Incorporated Line 1 Conducted Emissions 12:27:58 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
163.890 KHz	40.78	55.60	-14.82	51.74	65.60	-13.87	10.057
246.985 KHz	28.15	53.23	-25.08	39.11	63.23	-24.12	10.050
425.274 KHz	30.11	48.14	-18.03	41.05	58.14	-17.09	10.050
527.358 KHz	32.98	46.00	-13.02	45.22	56.00	-10.78	10.055
711.990 KHz	24.09	46.00	-21.91	32.27	56.00	-23.73	10.070
859.260 KHz	24.74	46.00	-21.26	36.62	56.00	-19.38	10.070
1.049 MHz	24.00	46.00	-22.00	32.20	56.00	-23.80	10.071
1.307 MHz	26.23	46.00	-19.77	33.86	56.00	-22.14	10.089
2.247 MHz	24.20	46.00	-21.80	31.77	56.00	-24.23	10.120
3.280 MHz	23.17	46.00	-22.83	30.90	56.00	-25.10	10.167
Mfr/Model - Lutron Model HWL-CD4WH-TW							
Sample # - 2412-03							
Serial # - 09C523D5							
Configuration - EUT in Receive Mode (Rx)							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Rx Mode Neutral and Line 1



Results: The Lutron Model HWL-CD4WH-TW Sample 2412-03 complies with the requirements of FCC Part 15.207 and RSS-Gen Section 8.8. The margin is 10.30 dB @ 158.334 kHz with Sample 2412-03 transmitting High Channel, 2480 MHz, Phase Line.



4.11.4 Conducted Emissions AC Power Port Lutron Model HWL-CD6WH-TW Sample 2412-04 Test Results (12/03/2025)

Tx @ Low Channel, 2405 MHz, Neutral Line

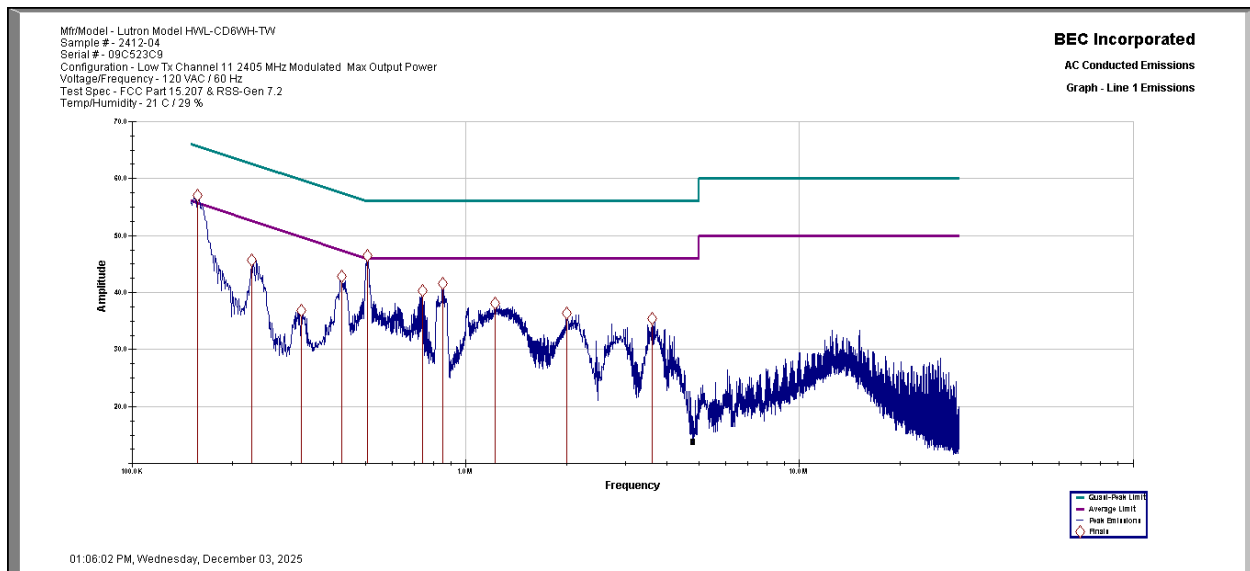
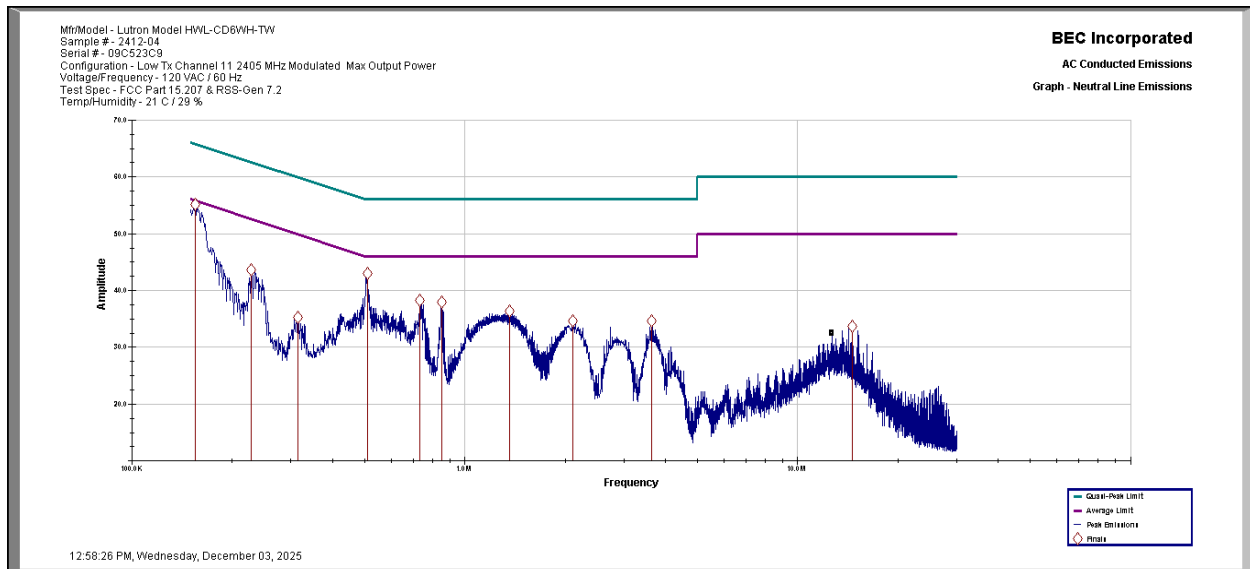
BEC Incorporated							
Neutral Line Conducted Emissions							
01:04:25 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
155.686 KHz	44.62	55.84	-11.21	53.36	65.84	-12.47	10.033
228.984 KHz	28.41	53.74	-25.34	39.35	63.74	-24.39	10.034
316.079 KHz	20.57	51.25	-30.69	30.85	61.25	-30.40	10.023
503.169 KHz	25.98	46.00	-20.02	36.98	56.00	-19.02	10.040
731.920 KHz	19.80	46.00	-26.20	30.38	56.00	-25.62	10.050
850.010 KHz	17.76	46.00	-28.24	33.26	56.00	-22.74	10.050
1.346 MHz	25.70	46.00	-20.30	33.48	56.00	-22.52	10.060
2.107 MHz	24.68	46.00	-21.32	32.34	56.00	-23.66	10.094
3.658 MHz	23.51	46.00	-22.49	31.02	56.00	-24.98	10.160
14.532 MHz	19.40	50.00	-30.60	27.53	60.00	-32.47	10.438
Mfr/Model - Lutron Model HWL-CD6WH-TW							
Sample # - 2412-04							
Serial # - 09C523C9							
Configuration - Low Tx Channel 11 2405 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Tx @ Low Channel, 2405 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
01:14:34 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
155.621 KHz	46.67	55.84	-9.17	55.66	65.84	-10.18	10.053
229.038 KHz	30.94	53.74	-22.80	41.68	63.74	-22.06	10.050
319.297 KHz	23.21	51.16	-27.96	32.23	61.16	-28.93	10.044
418.168 KHz	29.76	48.34	-18.58	40.02	58.34	-18.32	10.050
500.785 KHz	31.60	46.00	-14.40	41.43	56.00	-14.57	10.050
736.350 KHz	20.91	46.00	-25.09	29.91	56.00	-26.09	10.070
846.480 KHz	23.32	46.00	-22.68	37.33	56.00	-18.67	10.070
1.221 MHz	27.22	46.00	-18.78	34.88	56.00	-21.12	10.079
1.996 MHz	25.62	46.00	-20.38	34.00	56.00	-22.00	10.110
3.646 MHz	23.78	46.00	-22.22	31.03	56.00	-24.97	10.179
Mfr/Model - Lutron Model HWL-CD6WH-TW							
Sample # - 2412-04							
Serial # - 09C523C9							
Configuration - Low Tx Channel 11 2405 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Tx @ Low Channel, 2405 MHz, Neutral & Line 1





Tx @ Middle Channel, 2440 MHz, Neutral Line

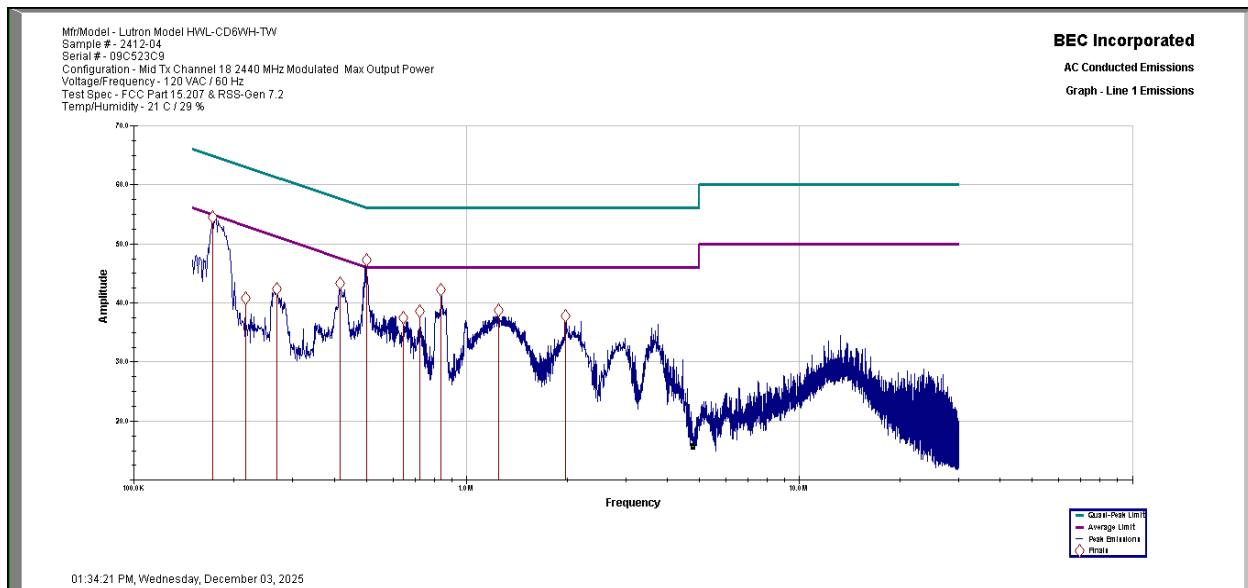
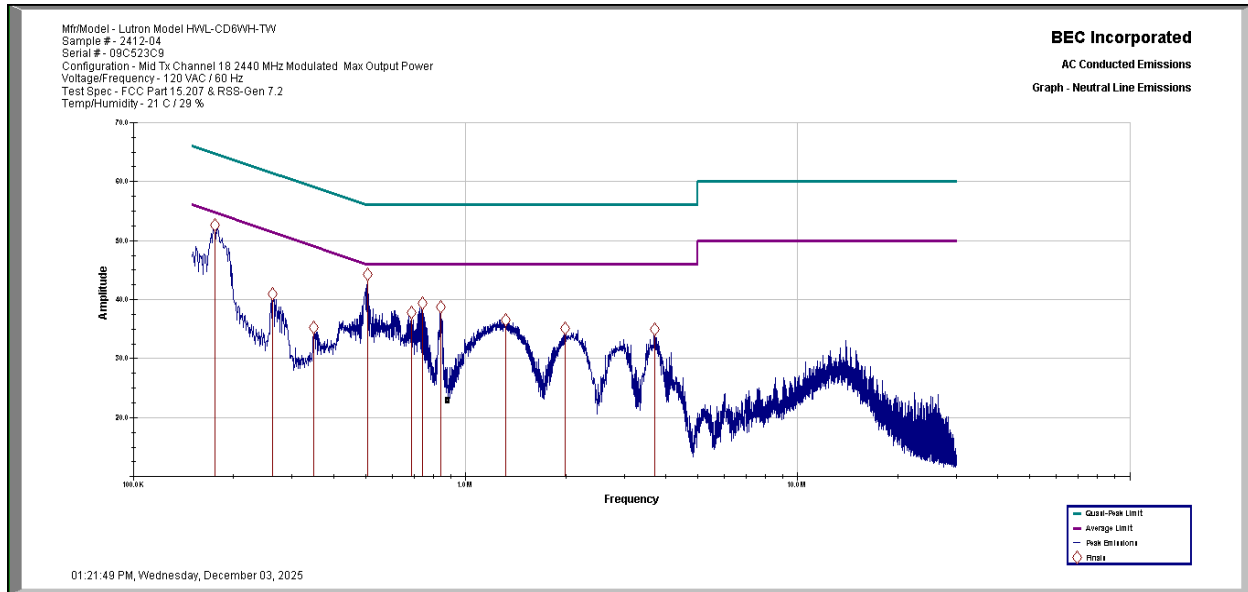
BEC Incorporated							
Neutral Line Conducted Emissions							
01:29:33 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
173.688 KHz	38.34	55.32	-16.99	51.06	65.32	-14.26	10.040
261.286 KHz	25.18	52.82	-27.64	38.24	62.82	-24.58	10.028
349.963 KHz	21.88	50.29	-28.40	30.43	60.29	-29.86	10.030
498.646 KHz	25.21	46.04	-20.83	35.56	56.04	-20.48	10.040
674.270 KHz	22.25	46.00	-23.75	30.30	56.00	-25.70	10.047
731.630 KHz	19.81	46.00	-26.19	28.32	56.00	-27.68	10.050
836.390 KHz	18.20	46.00	-27.80	33.65	56.00	-22.35	10.050
1.325 MHz	25.92	46.00	-20.08	33.87	56.00	-22.13	10.060
1.987 MHz	24.54	46.00	-21.46	32.33	56.00	-23.67	10.090
3.730 MHz	24.11	46.00	-21.89	31.31	56.00	-24.69	10.163
Mfr/Model - Lutron Model HWL-CD6WH-TW							
Sample # - 2412-04							
Serial # - 09C523C9							
Configuration - Mid Tx Channel 18 2440 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Tx @ Middle Channel, 2440 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
01:40:16 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
174.246 KHz	40.83	55.31	-14.48	53.49	65.31	-11.82	10.056
216.454 KHz	25.66	54.10	-28.44	33.08	64.10	-31.02	10.050
265.282 KHz	29.10	52.71	-23.61	39.51	62.71	-23.20	10.047
412.806 KHz	29.92	48.49	-18.57	40.47	58.49	-18.02	10.050
494.482 KHz	32.01	46.16	-14.15	41.69	56.16	-14.47	10.050
647.453 KHz	23.71	46.00	-22.29	31.20	56.00	-24.80	10.065
725.050 KHz	21.28	46.00	-24.72	29.27	56.00	-26.73	10.070
838.060 KHz	23.75	46.00	-22.25	37.83	56.00	-18.17	10.070
1.237 MHz	26.68	46.00	-19.32	34.42	56.00	-21.58	10.081
1.983 MHz	25.72	46.00	-20.28	34.15	56.00	-21.85	10.109
Mfr/Model - Lutron Model HWL-CD6WH-TW							
Sample # - 2412-04							
Serial # - 09C523C9							
Configuration - Mid Tx Channel 18 2440 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Tx @ Middle Channel, 2440 MHz, Neutral & Line 1





Tx @ High Channel, 2480 MHz, Neutral Line

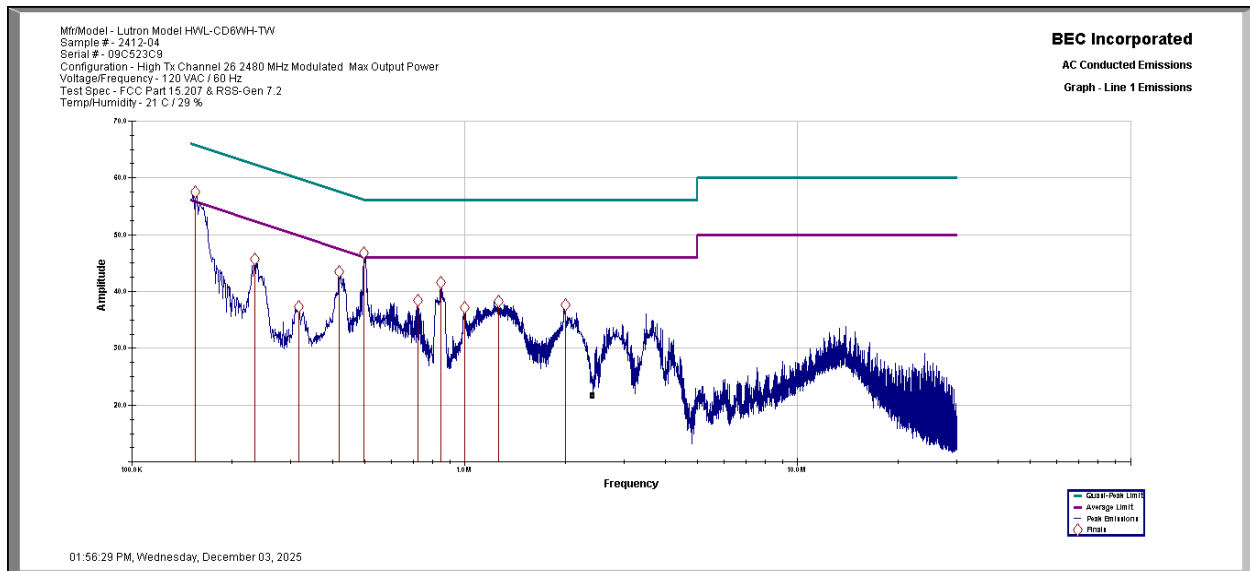
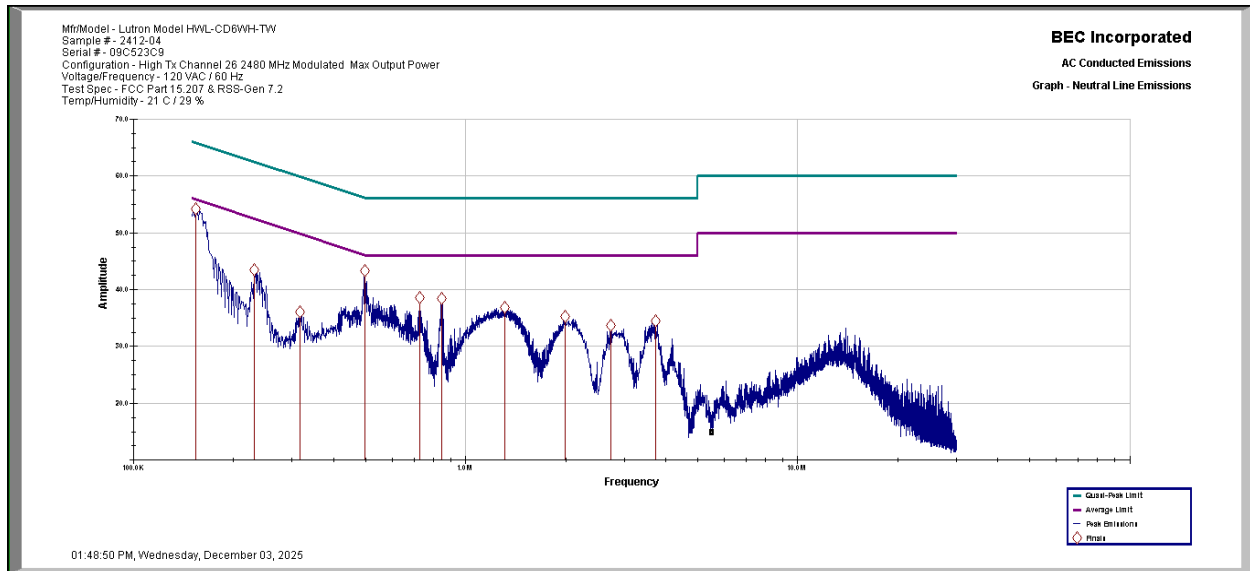
BEC Incorporated							
Neutral Line Conducted Emissions							
01:53:56 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
155.508 KHz	44.99	55.84	-10.85	53.33	65.84	-12.51	10.033
232.106 KHz	30.49	53.65	-23.17	40.71	63.65	-22.94	10.034
318.180 KHz	21.68	51.19	-29.51	30.47	61.19	-30.72	10.024
494.389 KHz	25.91	46.16	-20.25	36.85	56.16	-19.31	10.039
730.310 KHz	19.95	46.00	-26.05	28.74	56.00	-27.26	10.050
844.670 KHz	17.85	46.00	-28.15	33.78	56.00	-22.22	10.050
1.325 MHz	25.83	46.00	-20.17	33.70	56.00	-22.30	10.060
1.984 MHz	24.87	46.00	-21.13	32.68	56.00	-23.32	10.090
2.713 MHz	22.47	46.00	-23.53	29.72	56.00	-26.28	10.120
3.676 MHz	23.45	46.00	-22.55	30.55	56.00	-25.45	10.160
Mfr/Model - Lutron Model HWL-CD6WH-TW							
Sample # - 2412-04							
Serial # - 09C523C9							
Configuration - High Tx Channel 26 2480 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Tx @ High Channel, 2480 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
02:00:56 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
155.250 KHz	46.86	55.85	-8.99	55.68	65.85	-10.17	10.053
232.744 KHz	33.31	53.64	-20.33	42.96	63.64	-20.68	10.050
318.751 KHz	23.77	51.18	-27.41	32.57	61.18	-28.60	10.044
421.292 KHz	30.13	48.25	-18.12	39.69	58.25	-18.56	10.050
496.143 KHz	32.50	46.11	-13.61	41.58	56.11	-14.53	10.050
727.930 KHz	21.61	46.00	-24.39	29.50	56.00	-26.50	10.070
844.650 KHz	23.22	46.00	-22.78	37.52	56.00	-18.48	10.070
999.740 KHz	25.33	46.00	-20.67	33.69	56.00	-22.31	10.070
1.261 MHz	26.41	46.00	-19.59	34.10	56.00	-21.90	10.084
1.995 MHz	26.08	46.00	-19.92	34.43	56.00	-21.57	10.110
Mfr/Model - Lutron Model HWL-CD6WH-TW							
Sample # - 2412-04							
Serial # - 09C523C9							
Configuration - High Tx Channel 26 2480 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Tx @ High Channel, 2480 MHz, Neutral & Line 1





Rx Mode Neutral Line

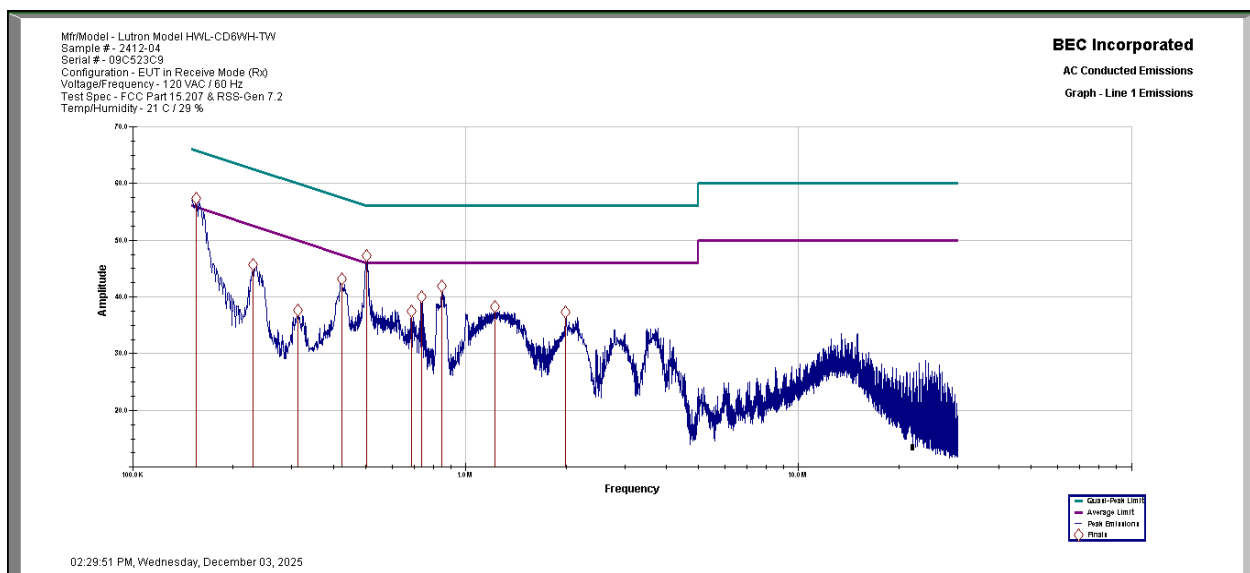
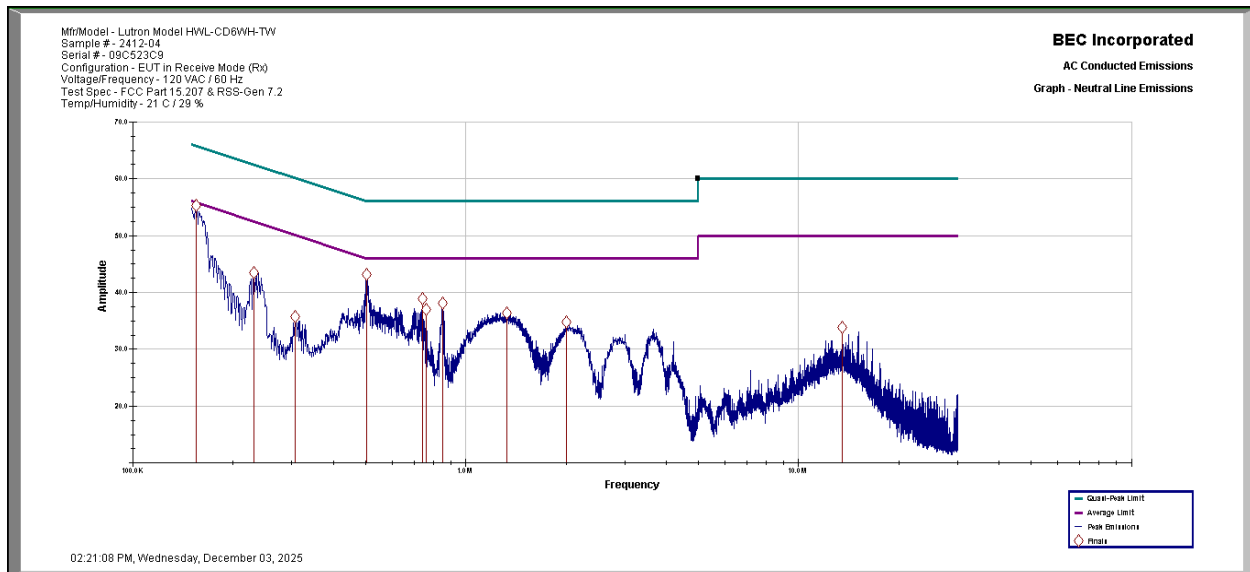
BEC Incorporated							
Neutral Line Conducted Emissions							
02:28:24 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
155.344 KHz	44.70	55.85	-11.14	53.52	65.85	-12.32	10.033
227.555 KHz	28.36	53.78	-25.42	39.82	63.78	-23.96	10.034
310.087 KHz	21.49	51.43	-29.93	31.85	61.43	-29.57	10.022
503.224 KHz	26.47	46.00	-19.53	35.72	56.00	-20.28	10.040
741.040 KHz	19.81	46.00	-26.19	29.70	56.00	-26.30	10.050
753.390 KHz	18.60	46.00	-27.40	27.53	56.00	-28.47	10.050
847.620 KHz	18.29	46.00	-27.71	33.56	56.00	-22.44	10.050
1.324 MHz	25.97	46.00	-20.03	33.75	56.00	-22.25	10.060
2.007 MHz	24.75	46.00	-21.25	32.49	56.00	-23.51	10.090
13.459 MHz	20.93	50.00	-29.07	28.64	60.00	-31.36	10.434
Mfr/Model - Lutron Model HWL-CD6WH-TW							
Sample # - 2412-04							
Serial # - 09C523C9							
Configuration - EUT in Receive Mode (Rx)							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							

Rx Mode Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
02:34:41 PM, Wednesday, December 03, 2025							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
154.802 KHz	46.51	55.86	-9.36	55.65	65.86	-10.21	10.052
228.413 KHz	31.64	53.76	-22.12	42.27	63.76	-21.49	10.050
310.617 KHz	24.20	51.41	-27.21	33.87	61.41	-27.54	10.042
417.973 KHz	30.04	48.34	-18.30	40.22	58.34	-18.12	10.050
499.779 KHz	32.30	46.01	-13.71	41.41	56.01	-14.60	10.050
686.730 KHz	22.63	46.00	-23.37	30.27	56.00	-25.73	10.069
732.980 KHz	20.15	46.00	-25.85	29.15	56.00	-26.85	10.070
847.350 KHz	23.56	46.00	-22.44	37.55	56.00	-18.45	10.070
1.225 MHz	27.50	46.00	-18.50	34.80	56.00	-21.20	10.079
1.995 MHz	25.88	46.00	-20.12	33.99	56.00	-22.01	10.110
Mfr/Model - Lutron Model HWL-CD6WH-TW							
Sample # - 2412-04							
Serial # - 09C523C9							
Configuration - EUT in Receive Mode (Rx)							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 29 %							



Graphs Rx Mode Neutral and Line 1



Results: The Lutron Model HWL-CD6WH-TW Sample 2412-04 complies with the requirements of FCC Part 15.207 and RSS-Gen Section 8.8. The margin is 9.17 dB @ 155.621 kHz with Sample 2412-04 transmitting Low Channel, 2405 MHz, Phase Line.



4.11.5 Conducted Emissions AC Power Port Lutron Model HWL-RD4WH-TW Sample 2412-06 Test Results (01/23/2026)

Tx @ Low Channel, 2405 MHz, Neutral Line

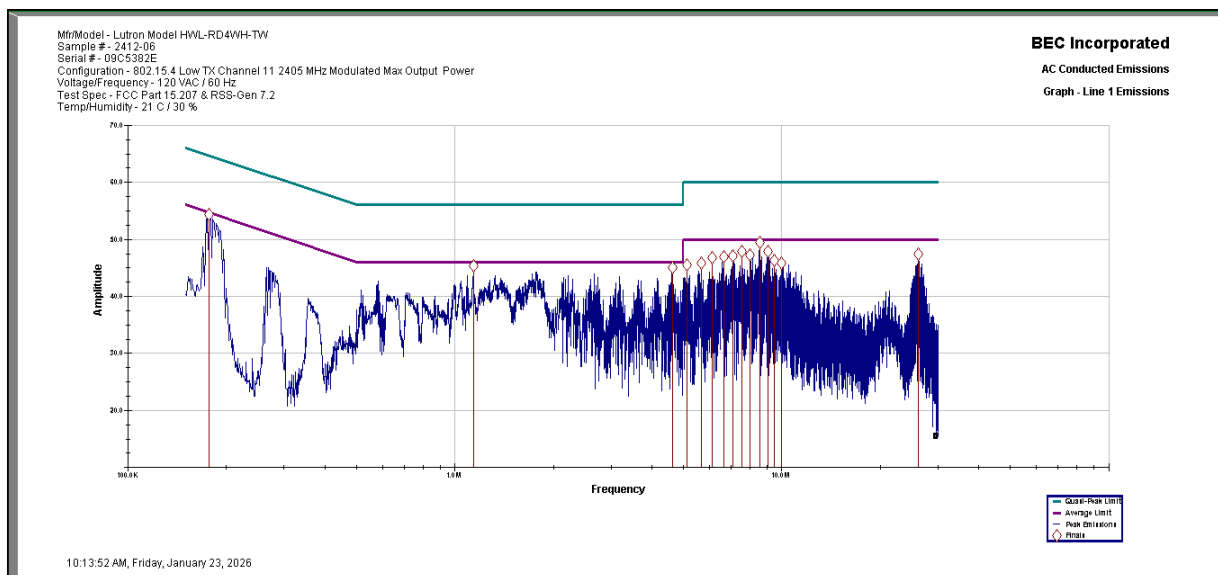
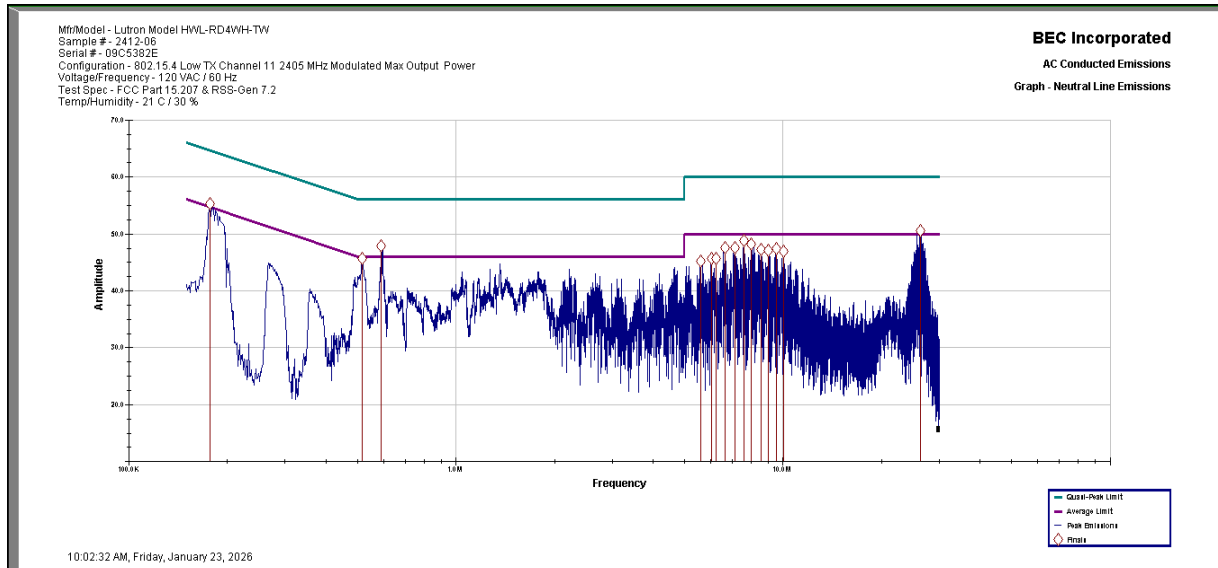
BEC Incorporated							
Neutral Line Conducted Emissions							
10:02:27 AM, Friday, January 23, 2026							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
177.173 KHz	41.88	55.22	-13.34	54.20	65.22	-11.02	10.040
509.908 KHz	28.75	46.00	-17.25	41.80	56.00	-14.20	10.040
583.794 KHz	30.17	46.00	-15.83	39.32	56.00	-16.68	10.040
5.611 MHz	28.37	50.00	-21.63	40.50	60.00	-19.50	10.233
6.053 MHz	29.38	50.00	-20.62	41.05	60.00	-18.95	10.250
6.144 MHz	29.23	50.00	-20.77	40.58	60.00	-19.42	10.253
6.640 MHz	30.43	50.00	-19.57	43.17	60.00	-16.83	10.275
7.088 MHz	31.41	50.00	-18.59	43.22	60.00	-16.78	10.299
7.609 MHz	31.09	50.00	-18.91	44.85	60.00	-15.15	10.319
8.053 MHz	31.98	50.00	-18.02	45.03	60.00	-14.97	10.336
8.572 MHz	30.88	50.00	-19.12	44.68	60.00	-15.32	10.356
9.026 MHz	31.22	50.00	-18.78	43.47	60.00	-16.53	10.374
9.557 MHz	30.15	50.00	-19.85	42.40	60.00	-17.60	10.403
10.017 MHz	29.28	50.00	-20.72	40.49	60.00	-19.51	10.420
26.178 MHz	33.62	50.00	-16.38	44.60	60.00	-15.40	10.540
Mfr/Model - Lutron Model HWL-RD4WH-TW							
Sample # - 2412-06							
Serial # - 09C5382E							
Configuration - 802.15.4 Low TX Channel 11 2405 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 30 %							

Tx @ Low Channel, 2405 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
10:13:48 AM, Friday, January 23, 2026							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
176.341 KHz	39.32	55.25	-15.93	53.51	65.25	-11.73	10.054
1.136 MHz	24.76	46.00	-21.24	41.46	56.00	-14.54	10.074
4.594 MHz	27.22	46.00	-18.78	42.37	56.00	-13.63	10.210
5.118 MHz	26.22	50.00	-23.78	37.54	60.00	-22.46	10.224
5.660 MHz	27.81	50.00	-22.19	41.19	60.00	-18.81	10.248
6.116 MHz	29.67	50.00	-20.33	42.54	60.00	-17.46	10.272
6.634 MHz	29.95	50.00	-20.05	43.46	60.00	-16.54	10.292
7.100 MHz	30.46	50.00	-19.54	42.64	60.00	-17.36	10.310
7.534 MHz	31.76	50.00	-18.24	43.18	60.00	-16.82	10.326
8.047 MHz	31.07	50.00	-18.93	44.05	60.00	-15.95	10.346
8.580 MHz	31.26	50.00	-18.74	45.01	60.00	-14.99	10.366
9.023 MHz	31.51	50.00	-18.49	45.06	60.00	-14.94	10.383
9.499 MHz	30.96	50.00	-19.04	42.19	60.00	-17.81	10.401
9.996 MHz	30.39	50.00	-19.61	43.09	60.00	-16.91	10.420
26.143 MHz	31.51	50.00	-18.49	41.59	60.00	-18.41	10.451
Mfr/Model - Lutron Model HWL-RD4WH-TW							
Sample # - 2412-06							
Serial # - 09C5382E							
Configuration - 802.15.4 Low TX Channel 11 2405 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 30 %							



Graphs Tx @ Low Channel, 2405 MHz, Neutral & Line 1





Tx @ Middle Channel, 2440 MHz, Neutral Line

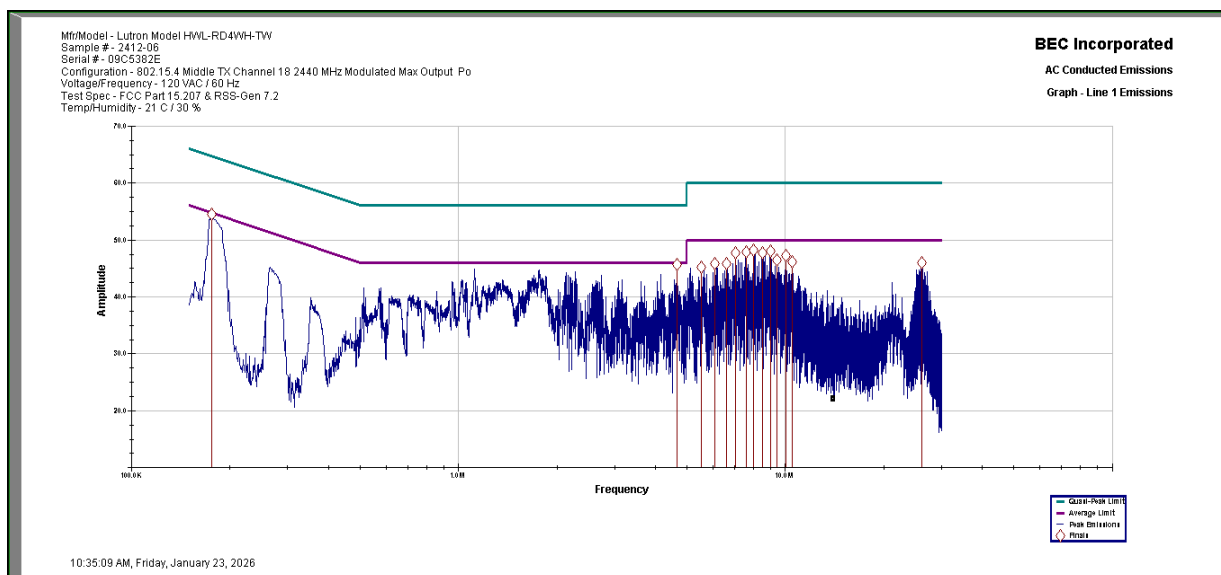
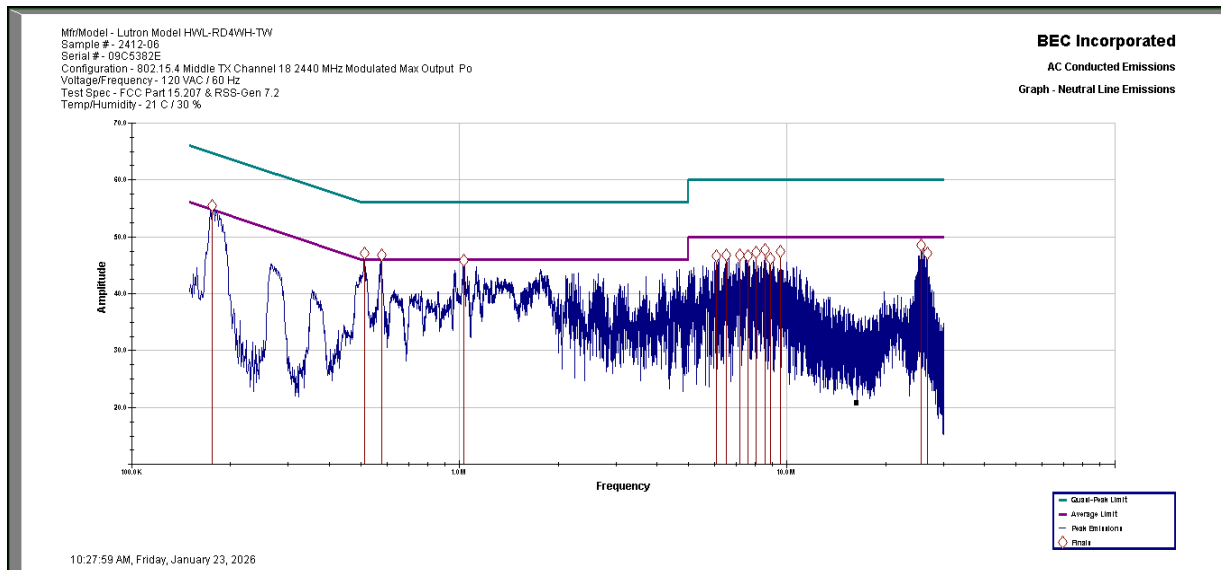
BEC Incorporated							
Neutral Line Conducted Emissions							
10:27:55 AM, Friday, January 23, 2026							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
175.561 KHz	42.18	55.27	-13.09	54.39	65.27	-10.88	10.040
509.141 KHz	29.38	46.00	-16.63	42.12	56.00	-13.88	10.040
574.959 KHz	30.76	46.00	-15.24	39.76	56.00	-16.24	10.040
1.025 MHz	26.27	46.00	-19.73	39.79	56.00	-16.21	10.051
6.075 MHz	30.76	50.00	-19.24	42.94	60.00	-17.06	10.251
6.530 MHz	30.92	50.00	-19.08	42.52	60.00	-17.48	10.269
7.134 MHz	30.38	50.00	-19.62	42.95	60.00	-17.05	10.301
7.574 MHz	31.15	50.00	-18.85	44.00	60.00	-16.00	10.318
8.000 MHz	32.14	50.00	-17.86	44.11	60.00	-15.89	10.334
8.531 MHz	31.57	50.00	-18.43	43.93	60.00	-16.07	10.354
8.911 MHz	30.68	50.00	-19.32	40.60	60.00	-19.40	10.369
9.517 MHz	30.41	50.00	-19.59	41.73	60.00	-18.27	10.402
25.704 MHz	33.07	50.00	-16.93	43.09	60.00	-16.91	10.537
26.713 MHz	30.82	50.00	-19.18	41.65	60.00	-18.35	10.540
Mfr/Model - Lutron Model HWL-RD4WH-TW							
Sample # - 2412-06							
Serial # - 09C5382E							
Configuration - 802.15.4 Middle TX Channel 18 2440 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 30 %							

Tx @ Middle Channel, 2440 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
10:35:06 AM, Friday, January 23, 2026							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
174.740 KHz	39.28	55.29	-16.02	53.46	65.29	-11.84	10.055
4.665 MHz	27.96	46.00	-18.04	41.34	56.00	-14.66	10.212
5.553 MHz	28.62	50.00	-21.38	40.15	60.00	-19.85	10.242
6.085 MHz	29.45	50.00	-20.55	40.56	60.00	-19.44	10.271
6.587 MHz	30.51	50.00	-19.49	43.93	60.00	-16.07	10.290
7.047 MHz	31.04	50.00	-18.96	42.12	60.00	-17.88	10.308
7.549 MHz	31.29	50.00	-18.71	44.28	60.00	-15.72	10.327
7.997 MHz	31.97	50.00	-18.03	43.75	60.00	-16.25	10.344
8.534 MHz	31.56	50.00	-18.44	42.84	60.00	-17.16	10.364
9.043 MHz	31.21	50.00	-18.79	44.54	60.00	-15.46	10.384
9.479 MHz	31.19	50.00	-18.81	43.43	60.00	-16.57	10.400
9.999 MHz	30.08	50.00	-19.92	42.42	60.00	-17.58	10.420
10.519 MHz	29.31	50.00	-20.69	40.98	60.00	-19.02	10.417
26.104 MHz	30.84	50.00	-19.16	40.89	60.00	-19.11	10.451
Mfr/Model - Lutron Model HWL-RD4WH-TW							
Sample # - 2412-06							
Serial # - 09C5382E							
Configuration - 802.15.4 Middle TX Channel 18 2440 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 30 %							



Graphs Tx @ Middle Channel, 2440 MHz, Neutral & Line 1





Tx @ High Channel, 2480 MHz, Neutral Line

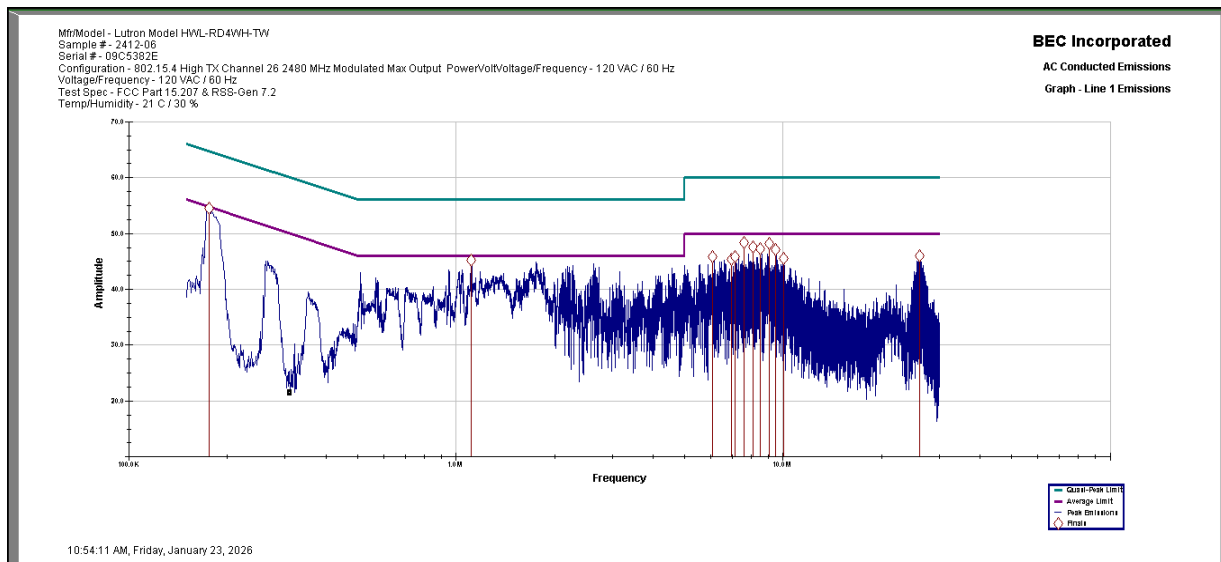
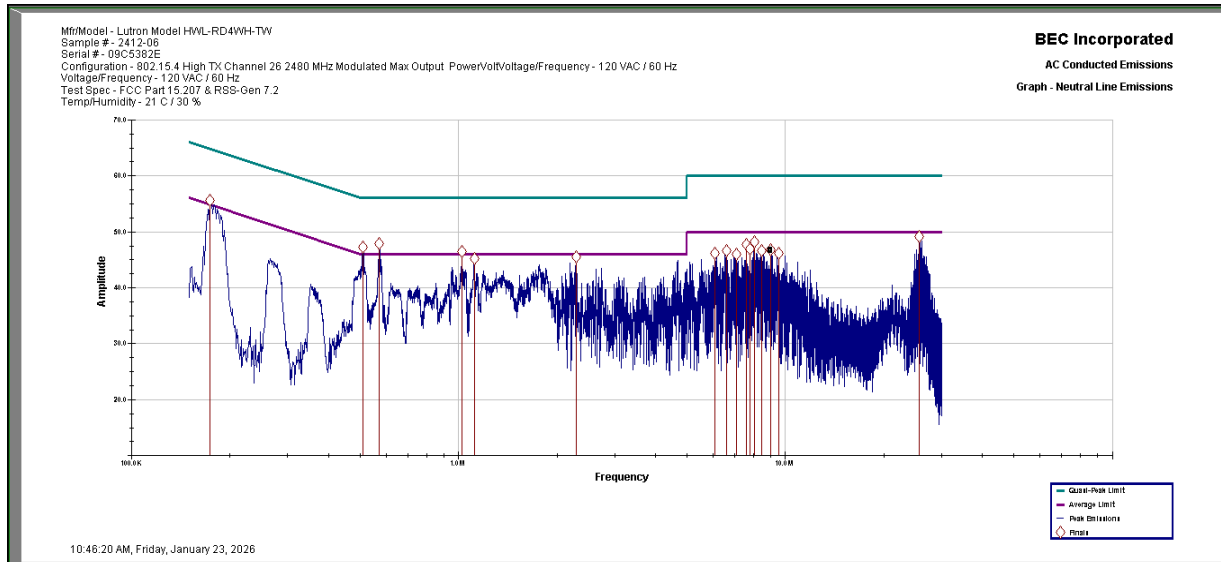
BEC Incorporated							
Neutral Line Conducted Emissions							
10:46:17 AM, Friday, January 23, 2026							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
175.114 KHz	42.57	55.28	-12.71	54.38	65.28	-10.90	10.040
507.744 KHz	29.65	46.00	-16.35	42.24	56.00	-13.76	10.040
570.801 KHz	32.35	46.00	-13.65	40.76	56.00	-15.24	10.040
1.022 MHz	26.84	46.00	-19.16	39.95	56.00	-16.05	10.051
1.115 MHz	24.65	46.00	-21.35	42.06	56.00	-13.94	10.053
2.289 MHz	30.02	46.00	-15.98	41.85	56.00	-14.15	10.102
6.079 MHz	30.19	50.00	-19.81	42.95	60.00	-17.05	10.251
6.622 MHz	28.88	50.00	-21.12	40.68	60.00	-19.32	10.274
7.037 MHz	31.24	50.00	-18.76	43.54	60.00	-16.46	10.297
7.563 MHz	30.69	50.00	-19.31	43.67	60.00	-16.33	10.317
7.771 MHz	28.25	50.00	-21.75	40.26	60.00	-19.74	10.325
8.016 MHz	30.81	50.00	-19.19	41.79	60.00	-18.21	10.335
8.426 MHz	30.82	50.00	-19.18	41.10	60.00	-18.90	10.350
8.983 MHz	31.21	50.00	-18.79	42.65	60.00	-17.35	10.371
9.514 MHz	30.86	50.00	-19.14	41.70	60.00	-18.30	10.402
25.646 MHz	32.92	50.00	-17.08	42.87	60.00	-17.13	10.536
Mfr/Model - Lutron Model HWL-RD4WH-TW							
Sample # - 2412-06							
Serial # - 09C5382E							
Configuration - 802.15.4 High TX Channel 26 2480 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 30 %							

Tx @ High Channel, 2480 MHz, Line 1

BEC Incorporated							
Line 1 Conducted Emissions							
10:54:08 AM, Friday, January 23, 2026							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
174.839 KHz	40.42	55.29	-14.87	53.61	65.29	-11.69	10.055
1.113 MHz	25.10	46.00	-20.90	42.05	56.00	-13.95	10.073
6.055 MHz	29.93	50.00	-20.07	43.29	60.00	-16.71	10.270
6.919 MHz	29.09	50.00	-20.91	39.25	60.00	-20.75	10.303
7.108 MHz	29.75	50.00	-20.25	42.80	60.00	-17.20	10.310
7.549 MHz	30.92	50.00	-19.08	44.67	60.00	-15.33	10.327
8.071 MHz	31.36	50.00	-18.64	44.25	60.00	-15.75	10.347
8.522 MHz	31.61	50.00	-18.39	43.64	60.00	-16.36	10.364
9.033 MHz	31.42	50.00	-18.58	42.80	60.00	-17.20	10.383
9.483 MHz	31.35	50.00	-18.65	43.56	60.00	-16.44	10.400
10.016 MHz	30.49	50.00	-19.51	41.63	60.00	-18.37	10.420
26.165 MHz	30.94	50.00	-19.06	41.30	60.00	-18.70	10.452
Mfr/Model - Lutron Model HWL-RD4WH-TW							
Sample # - 2412-06							
Serial # - 09C5382E							
Configuration - 802.15.4 High TX Channel 26 2480 MHz Modulated Max Output Power							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 30 %							



Graphs Tx @ High Channel, 2480 MHz, Neutral & Line 1





Rx Mode Neutral Line

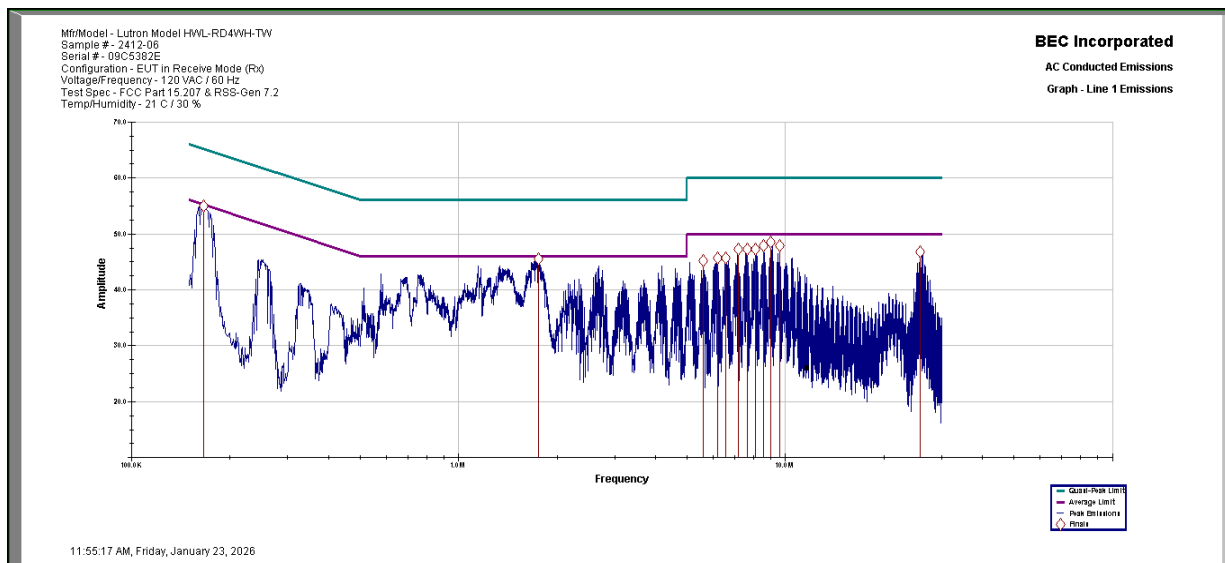
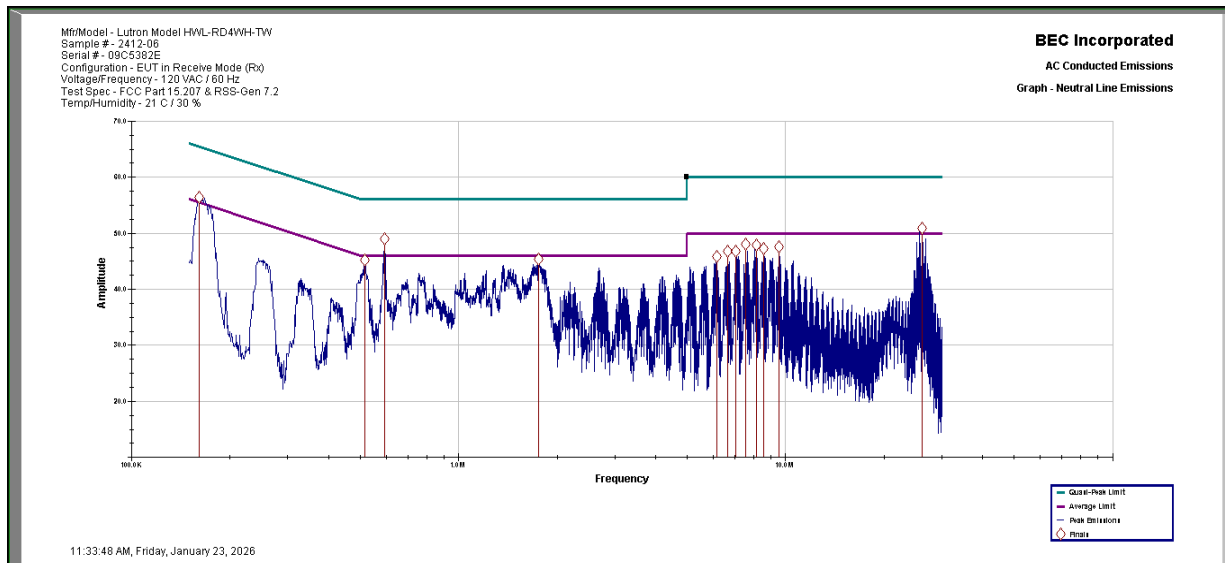
BEC Incorporated Neutral Line Conducted Emissions 11:33:44 AM, Friday, January 23, 2026							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
161.917 KHz	42.71	55.66	-12.95	54.24	65.66	-11.42	10.036
513.114 KHz	29.82	46.00	-16.18	41.71	56.00	-14.29	10.040
585.639 KHz	31.88	46.00	-14.12	40.40	56.00	-15.60	10.040
1.754 MHz	27.49	46.00	-18.51	42.71	56.00	-13.29	10.083
6.097 MHz	30.34	50.00	-19.66	42.51	60.00	-17.49	10.252
6.599 MHz	31.30	50.00	-18.70	43.43	60.00	-16.57	10.273
7.100 MHz	32.22	50.00	-17.78	44.13	60.00	-15.87	10.300
7.588 MHz	32.48	50.00	-17.52	43.62	60.00	-16.38	10.318
8.090 MHz	32.24	50.00	-17.76	43.17	60.00	-16.83	10.337
8.509 MHz	33.09	50.00	-16.91	43.58	60.00	-16.42	10.353
9.505 MHz	31.78	50.00	-18.22	42.80	60.00	-17.20	10.401
26.231 MHz	33.61	50.00	-16.39	44.08	60.00	-15.92	10.540
Mfr/Model - Lutron Model HWL-RD4WH-TW							
Sample # - 2412-06							
Serial # - 09C5382E							
Configuration - EUT in Receive Mode [Rx]							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 30 %							

Rx Mode Line 1

BEC Incorporated Line 1 Conducted Emissions 11:55:14 AM, Friday, January 23, 2026							
	1	2	3	4	5	6	7
Frequency	AVG	AVG	AVG	QP	QP	QP	Correction
MHz	dBuV	Limit	Margin	dBuV	Limit	Margin	Factor
166.954 KHz	44.06	55.52	-11.46	54.31	65.52	-11.21	10.058
1.743 MHz	27.70	46.00	-18.30	43.58	56.00	-12.42	10.102
5.648 MHz	29.23	50.00	-20.77	41.35	60.00	-18.65	10.248
6.149 MHz	30.45	50.00	-19.55	41.99	60.00	-18.01	10.274
6.556 MHz	31.49	50.00	-18.51	43.07	60.00	-16.93	10.289
7.136 MHz	31.06	50.00	-18.94	43.61	60.00	-16.39	10.311
7.597 MHz	32.04	50.00	-17.96	42.66	60.00	-17.34	10.329
8.069 MHz	32.37	50.00	-17.63	43.00	60.00	-17.00	10.347
8.536 MHz	33.10	50.00	-16.90	43.92	60.00	-16.08	10.364
9.042 MHz	32.85	50.00	-17.15	44.19	60.00	-15.81	10.384
9.537 MHz	32.38	50.00	-17.62	43.91	60.00	-16.09	10.402
25.697 MHz	31.30	50.00	-18.70	41.36	60.00	-18.64	10.450
Mfr/Model - Lutron Model HWL-RD4WH-TW							
Sample # - 2412-06							
Serial # - 09C5382E							
Configuration - EUT in Receive Mode [Rx]							
Voltage/Frequency - 120 VAC / 60 Hz							
Test Spec - FCC Part 15.207 & RSS-Gen 7.2							
Temp/Humidity - 21 C / 30 %							



Graphs Rx Mode Neutral and Line 1



Results: The Lutron Model HWL-RD4WH-TW Sample 2412-06 complies with the requirements of FCC Part 15.207 and RSS-Gen Section 8.8. The margin is 10.88 dB @ 175.561 kHz with Sample 2412-06 transmitting Middle Channel, 2440 MHz, Neutral Line.



Appendix A – Test Equipment

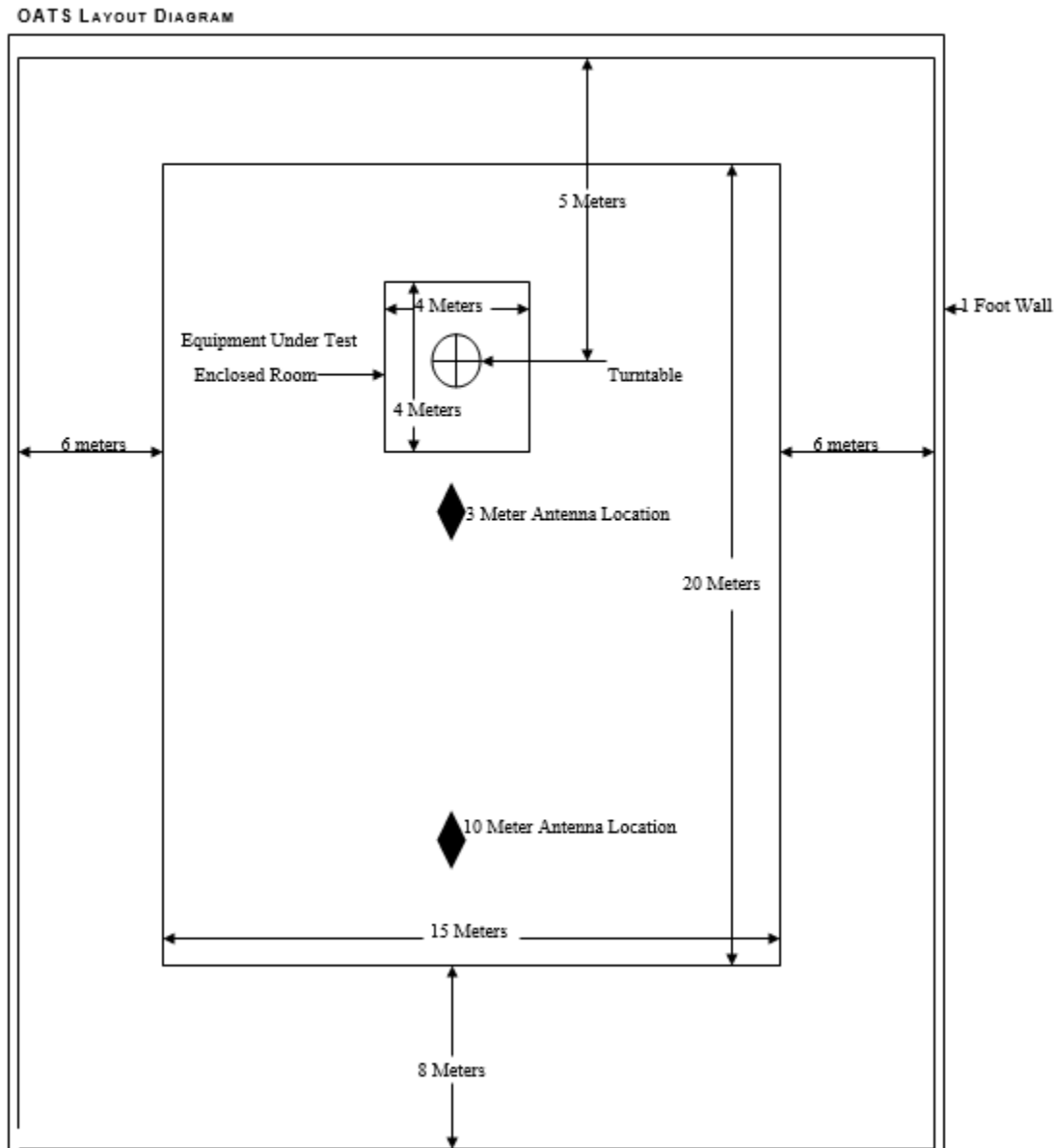
Equipment	Manufacturer	Model #	Serial #	BEC #	Calibration Date	Calibration Cycle	Calibration Due Date
EMI Receiver (20 Hz – 26.5 GHz)	Rohde & Schwarz	ESIB 26	836119/006	1010	12/09/22	3.25 Years	03/09/26
Antenna (30 MHz - 6 GHz)	Sunol Sciences	JB6	A022108	712	06/27/24	3 Years	06/27/27
9kHz-3GHz EMC Analyzer	Agilent	E7402A	US39440162	883	06/21/21	5 Years	06/21/26
Antenna (30 MHz - 6 GHz)	Sunol Sciences	JB6	A020714	882	05/16/24	3 Years	05/16/27
Amplifier (.09 – 1300 MHz)	Hewlett Packard	8447F	3313A06658	807	01/13/26	5 Years	01/13/31
EMC Analyzer (9 kHz - 26.5 GHz)	Hewlett Packard	8593EM	3710A00214	1026	04/16/25	5 Years	04/16/30
Amplifier System (0.5 – 50 GHz)	Hewlett Packard	83015A 83017A	3123A00360 & 3332A00219	1027	06/16/21	5 Years	06/16/26
Double Ridged Horn Antenna (1 - 18 GHz)	EMCO	3115	9705-5225	1028	12/05/24	3 Years	12/05/27
Antenna (18 - 26.5 GHz)	Hewlett Packard	84125- 80008	N/A	1056	01/21/25	3 Years	01/21/28
OATS Site (30 MHz – 1 GHz)	BEC	N/A	N/A	705	10/08/25	1 Year	10/08/26
Temp/Humidity Meter	Control Company	4096	250064603	780	02/04/25	2 Years	02/04/27



3.5GHz High Pass Filter	Hewlett Packard	84300-80038	005	779	09/09/25	3 Years	09/09/28
EMI Receiver (9 kHz - 6.5 GHz)	Hewlett Packard	8546A	3325A00158	761	03/15/23	3 Years	03/15/26
Four Line V-LISN	TESEQ	NNB 52	253551	950	12/08/22	5 Years	12/08/27
Software (Tile Instrument Control System)	Quantum Change/EMC Systems	Version 3	N/A	N/A	No Cal. Required	No Cal. Required	No Cal. Required
Radiated Emissions Test Software	BEC	RADE	2.2	N/A	No Cal. Required	No Cal. Required	No Cal. Required
Screen Room	ETS Lindgren	26W-2/2-0	6065	880	No Cal. Required	No Cal. Required	No Cal. Required
SMA RF Cable-Antenna Conducted Test Setup	Suhner	04272	None	962	07/14/23	3 Years	07/14/26



Appendix B – Open Area Test Site Layout Diagram





Appendix C – Emissions Shielded Room Layout Diagram

SITE DESCRIPTION

The chamber is a 3 Meter semi-anechoic chamber with the ferrite absorbers on all walls and ceiling and is re-categorized as a Fully anechoic chamber when absorbers are added in between the test area and measurement antenna. The turn-table and mast are controlled externally by the ETS Lindgren 2090 Controller. The metal computer floor provides the ground plane for the site. Inside room dimensions are 22' Long by 13' Wide by 11'5" High. Outside room dimensions are 22'8" Long by 14' Wide by 12'9" High.

