



CERTIFICATION TEST REPORT

Report Number. : 12361331A

Applicant : Philips Lighting North America Corporation
10275 W. Higgins Rd.
Rosemont, IL 60018

Model : SNS200

FCC ID : 2AF2N-SNS400

ISED ID : 20659-SNS400

EUT Description : ceiling luminaire mounted light sensor with 2.4GHz radio

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 2

Date Of Issue:
2018-07-23

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
1.0	2018-07-23	Original	BM

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Philips Lighting North America

EUT DESCRIPTION: ceiling luminaire mounted light sensor with 2.4GHz radio

MODEL: SNS200

SERIAL NUMBER: see section 5.6

DATE TESTED: 2018-06-07 TO 2018-07-23

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Compliant
ISED RSS-247 Issue 2	Compliant
ISED RSS-GEN Issue 5	Compliant

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL LLC based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. government.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013, RSS-GEN Issue 5, and RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 333 Pfingsten Road, Northbrook, Illinois, USA.

333 Pfingsten Road	
<input checked="" type="checkbox"/>	Chamber 10m (ISED:2180A-1)

UL LLC is accredited by NVLAP, Laboratory Code 1004141-0. The full scope of accreditation can be viewed at <https://www.nist.gov/nvlap>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + *Path Factor (dB)

Example: 28.9dBuV/m = 36.5 dBuV + 18.7 dB/m + (– 27.5) dB

*Path factor may include cable, preamp and attenuators. Positive path factor indicates losses only and negative path factor indicates gain (preamp).

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.45 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a ceiling luminaire mounted light sensor with 2.4GHz ZigBee type radio.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range	Mode	Output Power (dBm)	Output Power (mW)
2405 - 2475	TX	2.323	1.71

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an Inverted F PCB antenna, with a maximum gain of 0.7dBi.

5.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was: FCC Mode V0.30

The test utility software used during testing was: none

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated Spurious Emissions between 30MHz to 25GHz were performed with the EUT set to transmit at the intended power setting on low, middle and high channels.

Radiated Emissions between 9kHz-30MHz were conducted with random channel selected.

Line Conducted Emissions between 150kHz to 30MHz were performed with the EUT set to transmit at the intended power setting on low, middle and high channels.

The EUT is Luminaire mounted only therefore all radiated spurious emissions were conducted in single orientation.

For testing purposes the EUT was set to 100% duty cycle, however in normal use the worst case pulse train will be approximately 10mS over 100mS period.

5.6. DESCRIPTION OF TEST SETUP

EUT and SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
EUT - Antenna Port	Philips	SNS200	3709590518	2AF2N-SNS400
EUT - Radiated Sample	Philips	SNS200	3709590474	2AF2N-SNS400
*LED Driver	Philips	XI040C110V054VPT1	443579000431	-
Variable Power Supply	Generic	-	-	-

Support Equipment List

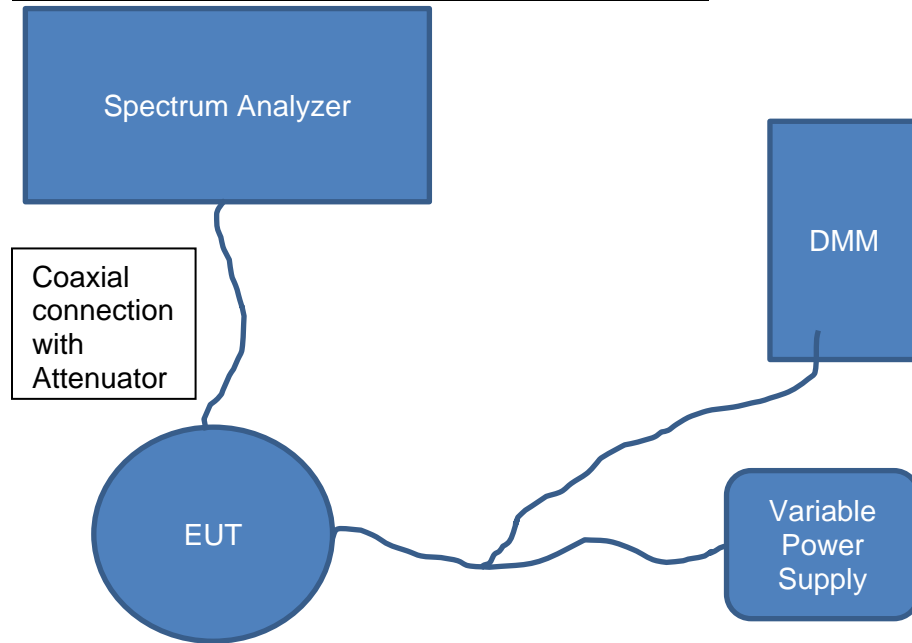
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Input	1	Wire	solid	30cm	-

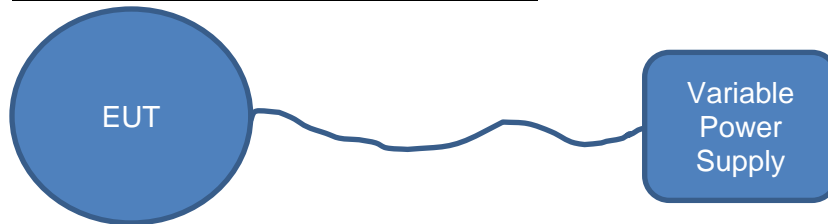
TEST SETUP

Frequencies and modes of operation are varied by setting the initial input voltage to pre-defined level. Once mode is set the voltage is raised to 20VDC.

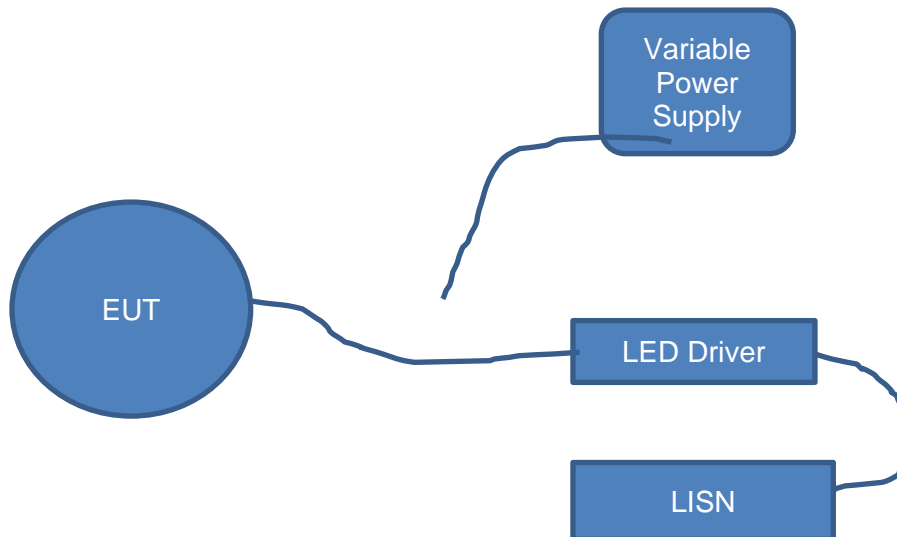
SETUP DIAGRAM FOR ANTENNA CONDUCTED TESTS



SETUP DIAGRAM FOR RADIATED TESTS



SETUP DIAGRAM FOR AC LINE CONDUCTED TEST



* note: variable power supply is only used to program the mode and frequency and its removed during conducted emissions testing.

6. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10, section 11.6, b

6 dB BW: ANSI C63.10, section 11.8.1 (option 2)

99% Occupied Bandwidth: RSS-Gen, Issue 5, Section 6.6

Output Power: ANSI C63.10, section 11.9.1.1

Power Spectral Density: ANSI C63.10, section 11.10.2 (peak PSD)

Out-of-band emissions in non-restricted bands: ANSI C63.10, section 11.11

Out-of-band emissions in restricted bands: ANSI C63.10, section 7.5 and 11.12.1

Band-edge: ANSI C63.10, section 11.12.1

AC Power Line Conducted Emissions: ANSI C63.10-2013, Section 6.2.

7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC4328	2017-12-21	2018-12-31
BiCon Antenna	Chase	VBA6106A	EMC4078	2018-03-28	2019-03-31
Log-P Antenna	Chase	UPA6109	EMC4313	2018-04-09	2019-04-30
Loop Antenna	EMCO	6502/1	EMC4026	2018-01-10	2019-01-31
Antenna Array	UL	BOMS	EMC4276	2017-06-02	2018-06-30
Antenna Array	UL	BOMS	EMC4276	2018-06-19	2019-06-30
EMI Test Receiver	Rohde & Schwarz	ESU	EMC4323	2017-12-20	2018-12-31
Spectrum Analyzer	Agilent	N9030A (PXA)	EMC4360	2017-12-28	2018-12-31
EMI Test Receiver	Rohde & Schwarz	ESR	EMC4377	2017-12-23	2018-12-31
Transient Limiter	Electro-Metrics	EM7600-2	EMC4224	N/A	N/A
High-Pass Filter	Solar Electronics	2803-150	EMC4327	N/A	N/A
Attenuator	HP	8494B	2831A00838	N/A	N/A
LISN - L1	Solar Electronics	8602-50-TS-50-N	EMC4066	2017-12-29	2018-12-31
LISN - L2	Solar Electronics	8602-50-TS-50-N	EMC4064	2017-12-29	2018-12-31

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

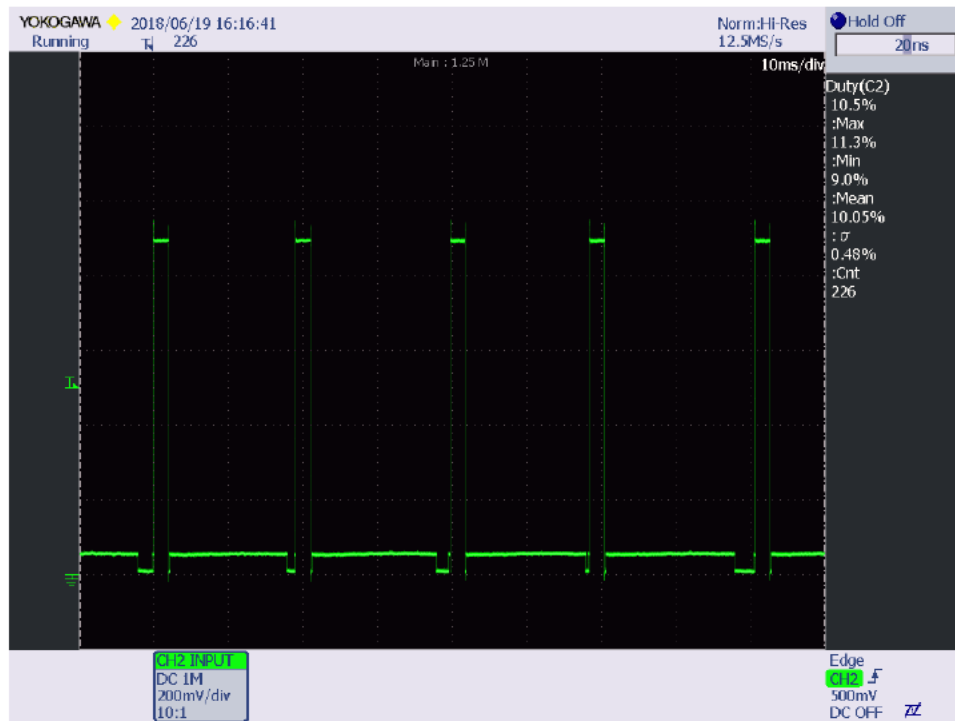
PROCEDURE

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
*TX Mode	100.000	100.000	1.000	100.00%	0.00	0.010

* For testing purposes the device was set to transmit with 100% duty cycle, however in normal operation the transmit duration is very short and total pulse transmit time is about 11.3%. Per 15.35 duty cycle is used for harmonic measurements above 1GHz.

Measurement:



Over 226 randomly picket events of 100ms long the duty-cycle is average 10.05% (with a stdev=0.48). Max measured duty-cycle is 11.3% (over 100ms period).

Above data is provided by the manufacturer. The samples used for testing in the lab were programmed with special software which only allowed continuous modulated TX with 100% duty cycle.

8.2. 99% BANDWIDTH

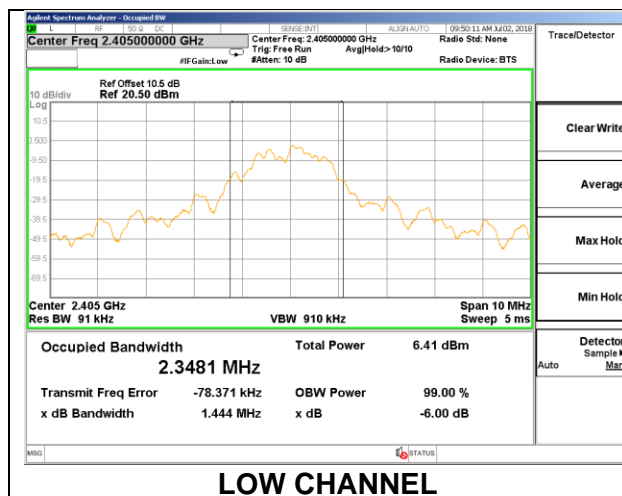
LIMITS

None; for reporting purposes only.

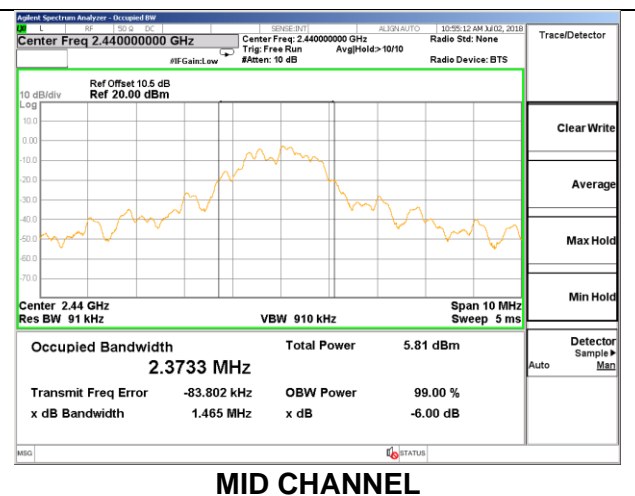
RESULTS

8.2.1. TX Mode

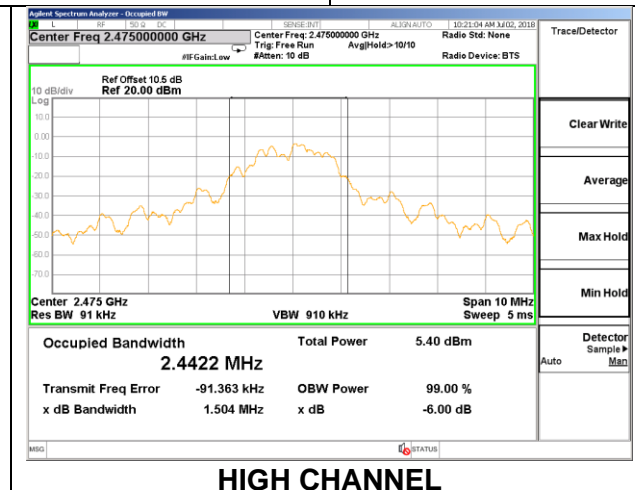
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2405	2.3481
Middle	2440	2.3733
High	2475	2.4422



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

8.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

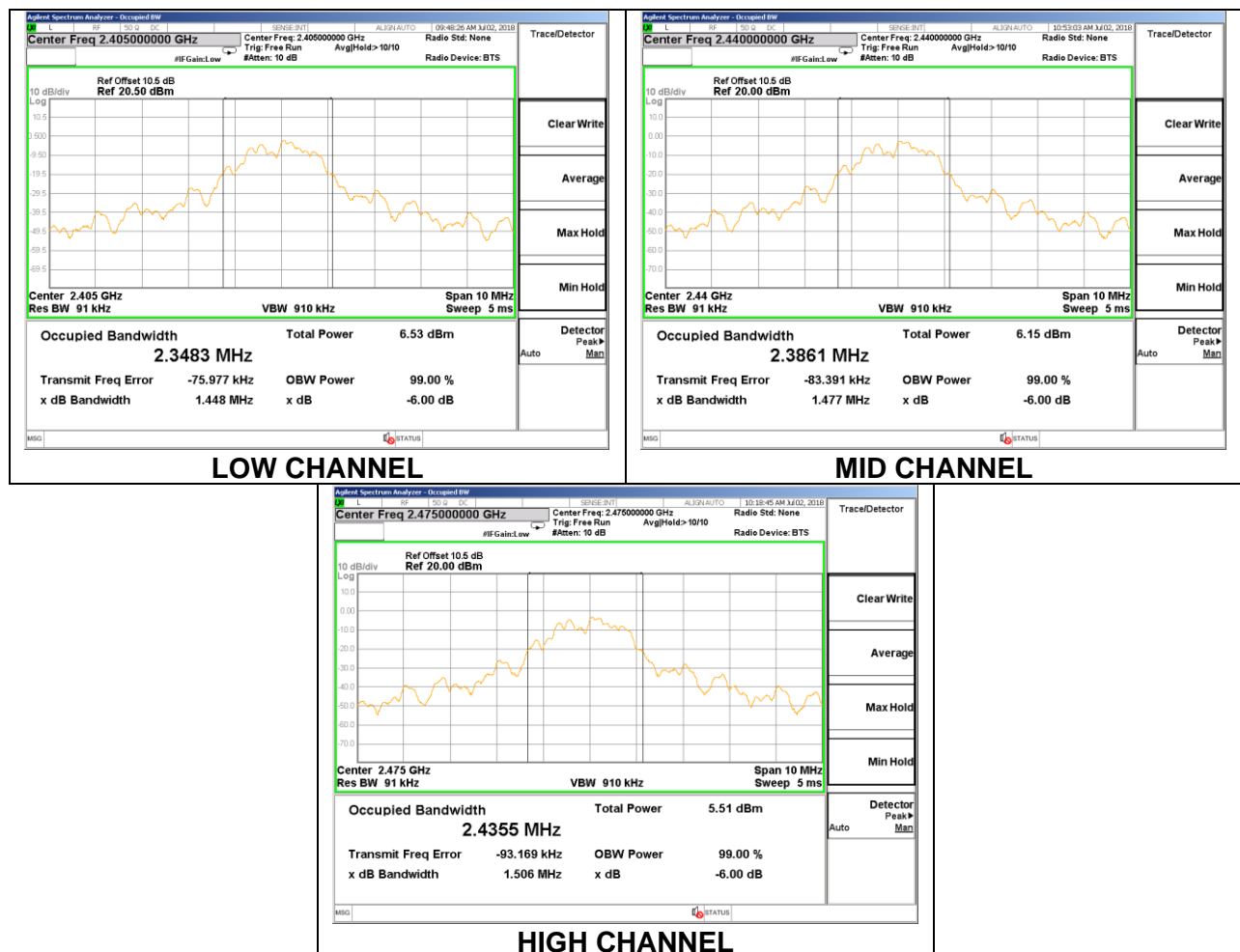
RSS-247 5.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

8.3.1. TX Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2405	1.4480	0.5
Middle	2440	1.4770	0.5
High	2475	1.5060	0.5



8.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

RSS-247 5.4 (d)

The maximum antenna gain is less than 6dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

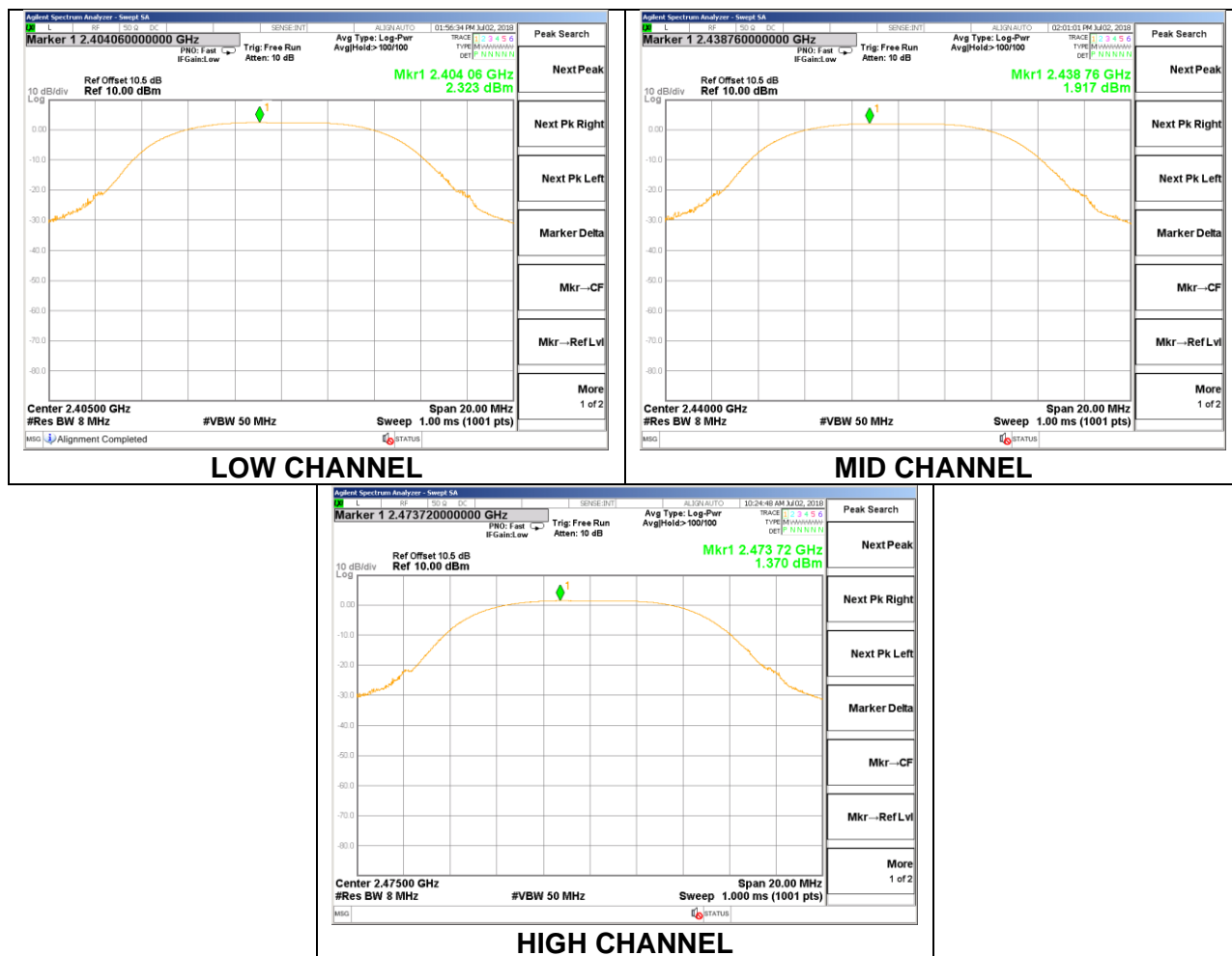
ANSI C63.10, section 11.9.1.1

The cable assembly insertion loss of 10.5 dB (including cable and attenuator) was entered as reference offset in the spectrum analyzer.

RESULTS

8.4.1. TX Mode

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2405	2.323	30	-27.677
Middle	2440	1.917	30	-28.083
High	2475	1.370	30	-28.630



8.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

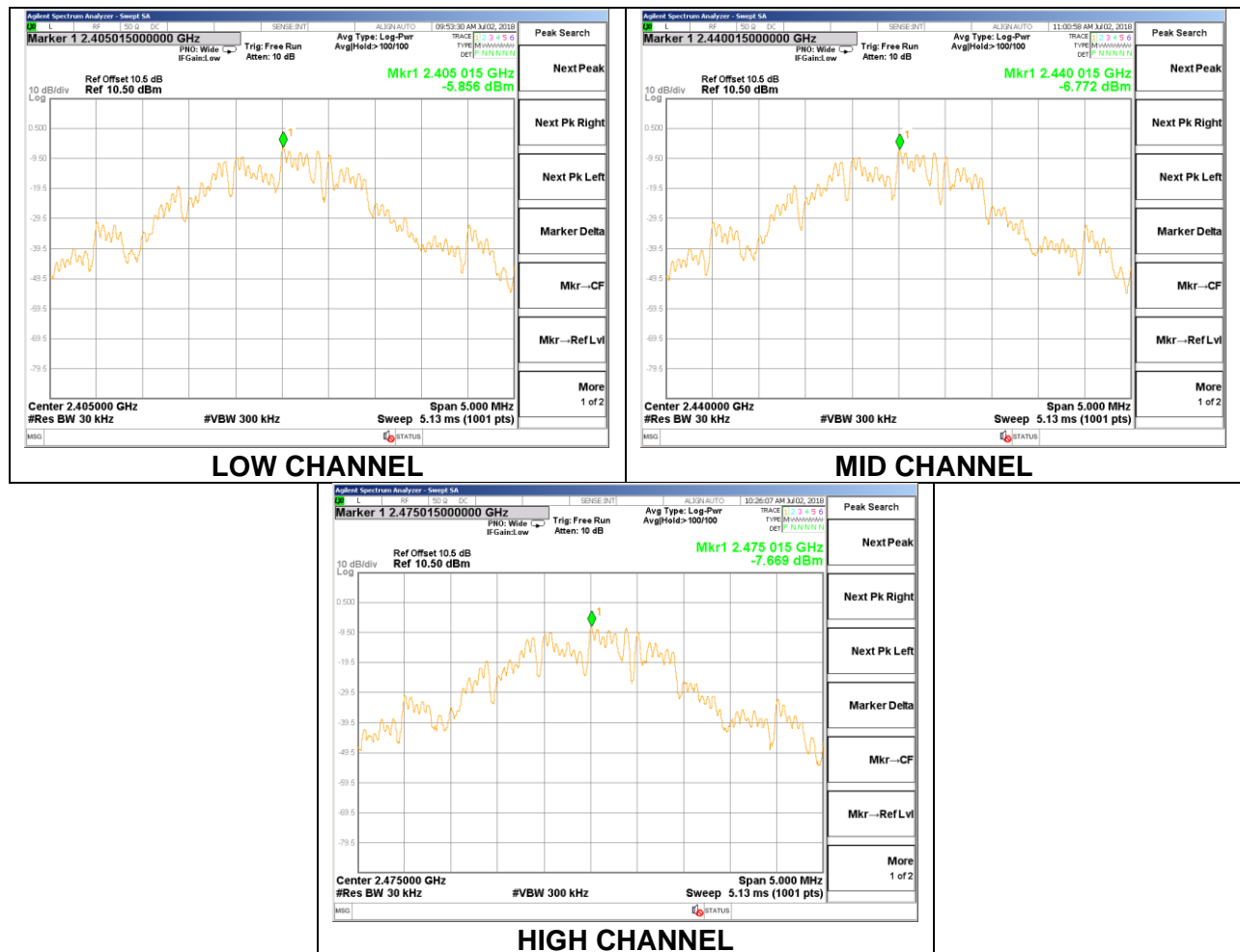
RSS-247 (5.2) (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

8.5.1. TX Mode

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2405	-5.86	8	-13.86
Middle	2440	-6.77	8	-14.77
High	2475	-7.67	8	-15.67



8.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

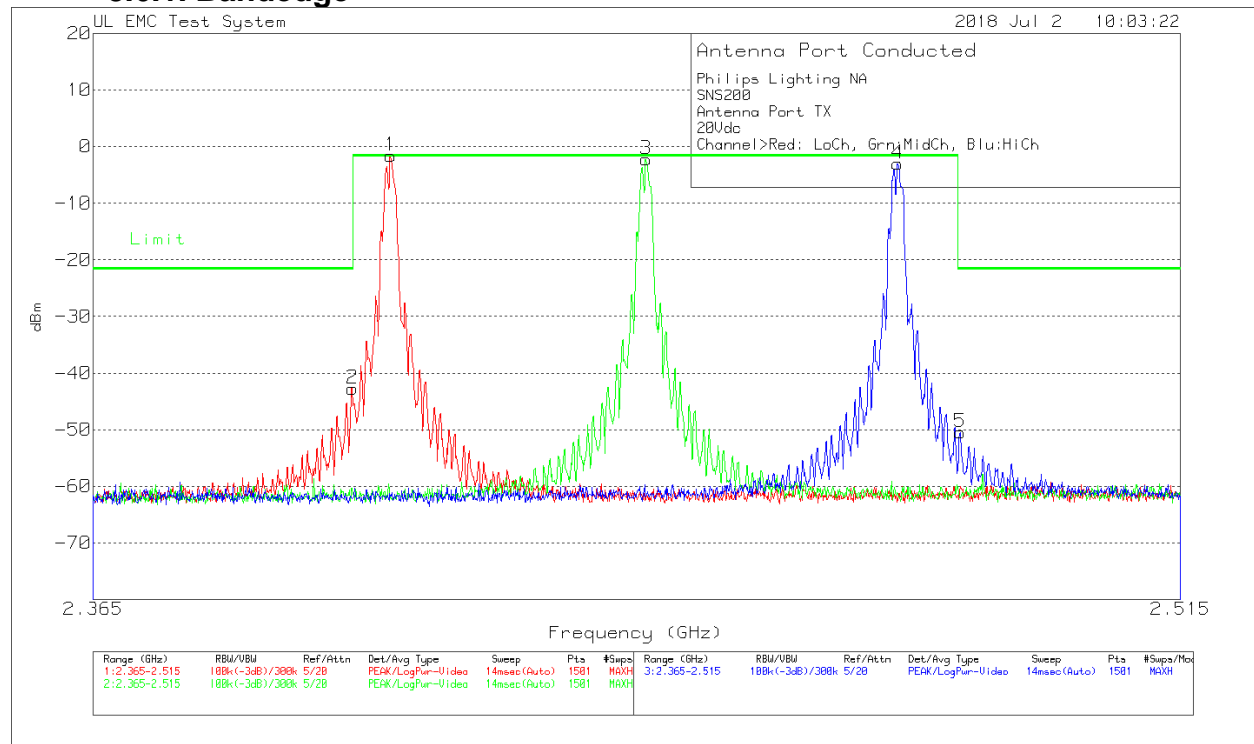
FCC §15.247 (d)

RSS-247 5.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

RESULTS

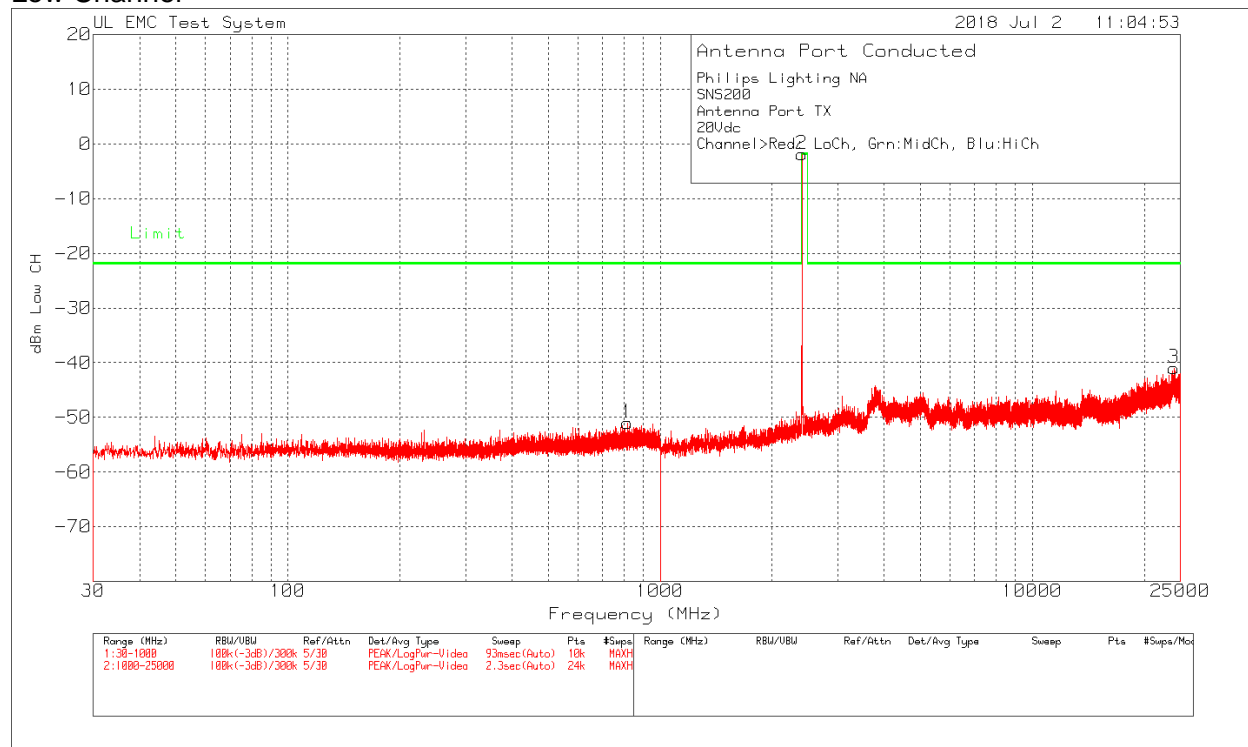
8.6.1. Bandedge



Philips Lighting NA							
SNS200							
Antenna Port TX							
20Vdc							
Channel>Red: LoCh, Grn:MidCh, Blu:HiCh							
Trace MArkers							
Marker No.	Test Frequency (GHz)	Meter Reading (dBm)	Detector	Path Factor dB	Level dBm	Limit	Margin (dB)
Low Channel							
1	2.4051	-12.1	Pk	10.5	-1.6	-1.6	0
2	2.3999	-53.24	Pk	10.5	-42.74	-21.6	-21.14
High Channel							
4	2.4751	-13.52	Pk	10.5	-3.02	-1.6	-1.42
5	2.4839	-60.95	Pk	10.5	-50.45	-21.6	-28.85
Pk - Peak detector							

8.6.1. 30MHz-26GHz

Low Channel



Philips Lighting NA

SNS200

Antenna Port TX

20Vdc

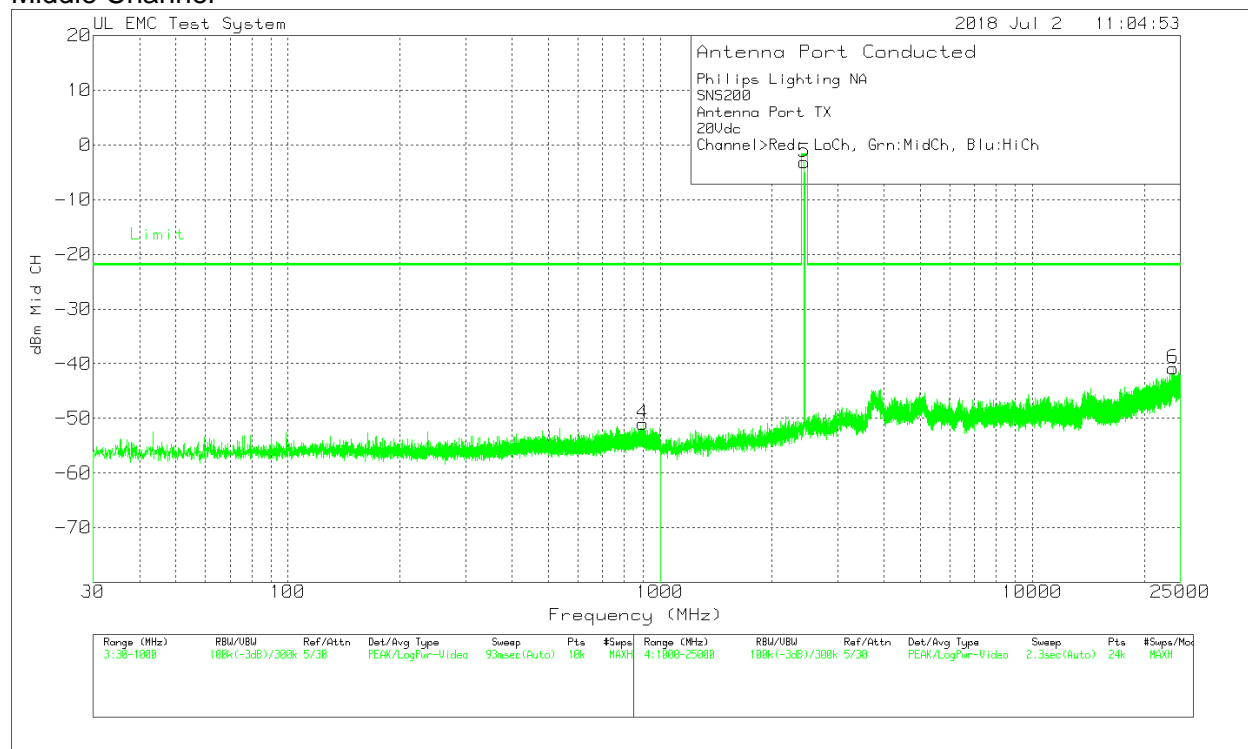
Channel>Red: LoCh, Grn:MidCh, Blu:HiCh

Trace MARKers

Marker No.	Test Frequency (GHz)	Meter Reading (dBm)	Detector	Path Factor dB	Level dBm	Limit	Margin (dB)
1	817.8182	-61.2	Pk	10.2	-51	-21.9	-29.11
2	2405	-12.39	Pk	10.5	-1.89	-1.89	0
3	24000	-52.68	Pk	11.7	-40.98	-21.9	-19.09

Pk - Peak detector

Middle Channel



Philips Lighting NA

SNS200

Antenna Port TX

20Vdc

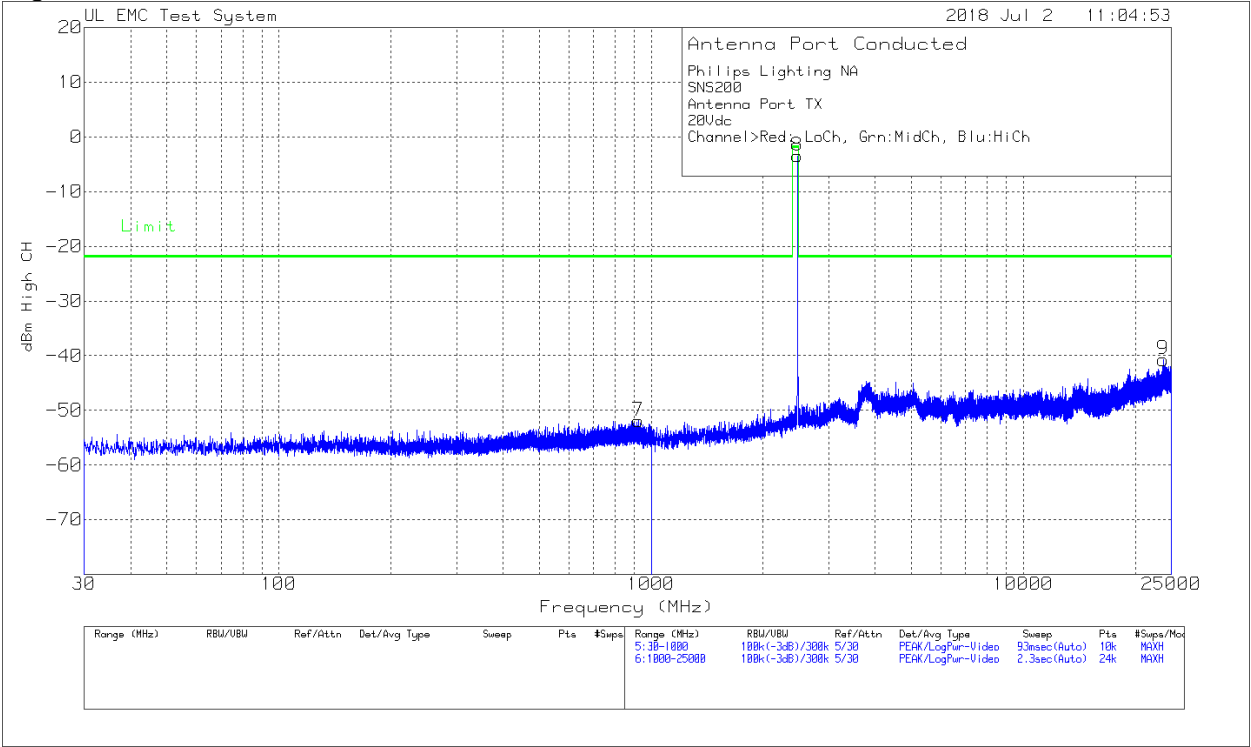
Channel>Red: LoCh, Grn:MidCh, Blu:HiCh

Trace MArkers

Marker No.	Test Frequency (GHz)	Meter Reading (dBm)	Detector	Path Factor dB	Level dBm	Limit	Margin (dB)
5	2440	-13.66	Pk	10.5	-3.16	-1.89	-1.27
6	23919	-52.53	Pk	11.7	-40.83	-21.9	-18.94

Pk - Peak detector

High Channel



Philips Lighting NA							
SNS200							
Antenna Port TX							
20Vdc							
Channel>Red: LoCh, Grn:MidCh, Blu:HiCh							
Trace MArkers							
Marker No.	Test Frequency (GHz)	Meter Reading (dBm)	Detector	Path Factor dB	Level dBm	Limit	Margin (dB)
7	925.1113	-62.1	Pk	10.2	-51.9	-21.9	-30.01
8	2475	-13.95	Pk	10.5	-3.45	-1.89	-1.56
9	23740	-52.53	Pk	11.8	-40.73	-21.9	-18.84
Pk - Peak detector							

9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209 & RSS-GEN, Section 8.9 and 8.10.

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters for frequencies 9kHz-30MHz and 1GHz-25GHz. For frequencies 9kHz-30MHz the limit was extrapolated to 3m distance using the $40 \cdot \log(d1/d2)$. For frequencies 30MHz-1GHz the antenna distance is 10m and the levels are extrapolated to distance of 3m using the $20 \cdot \log(d1/d2)$. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

Although for 9kHz-30MHz tests were performed at a test site other than an open area test site, adequate comparison measurements were confirmed against an open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788. See data in section 9.2.1.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements. For harmonics in restricted bands duty cycle correction per FCC 15.35 was used.

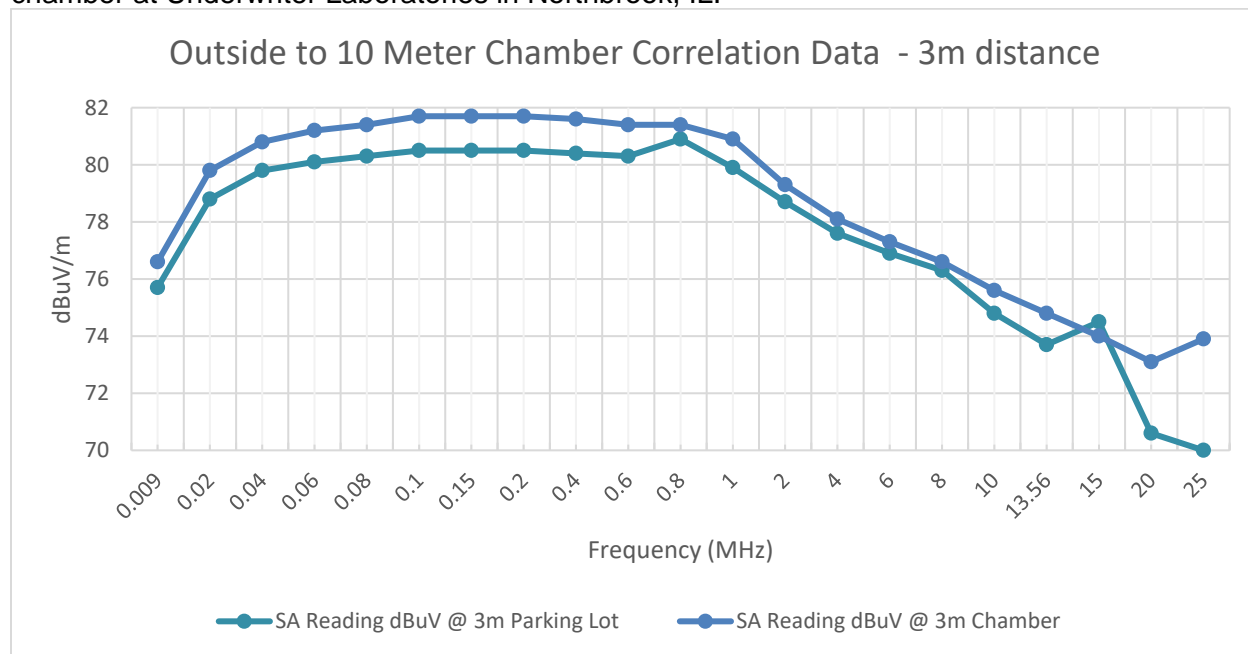
The spectrum from 30MHz to 25 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. For frequencies 9kHz-30MHz random channels was used.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions. For frequencies 9kHz-30MHz no height scan was conducted.

9.2. TRANSMITTER 9kHz – 30MHz

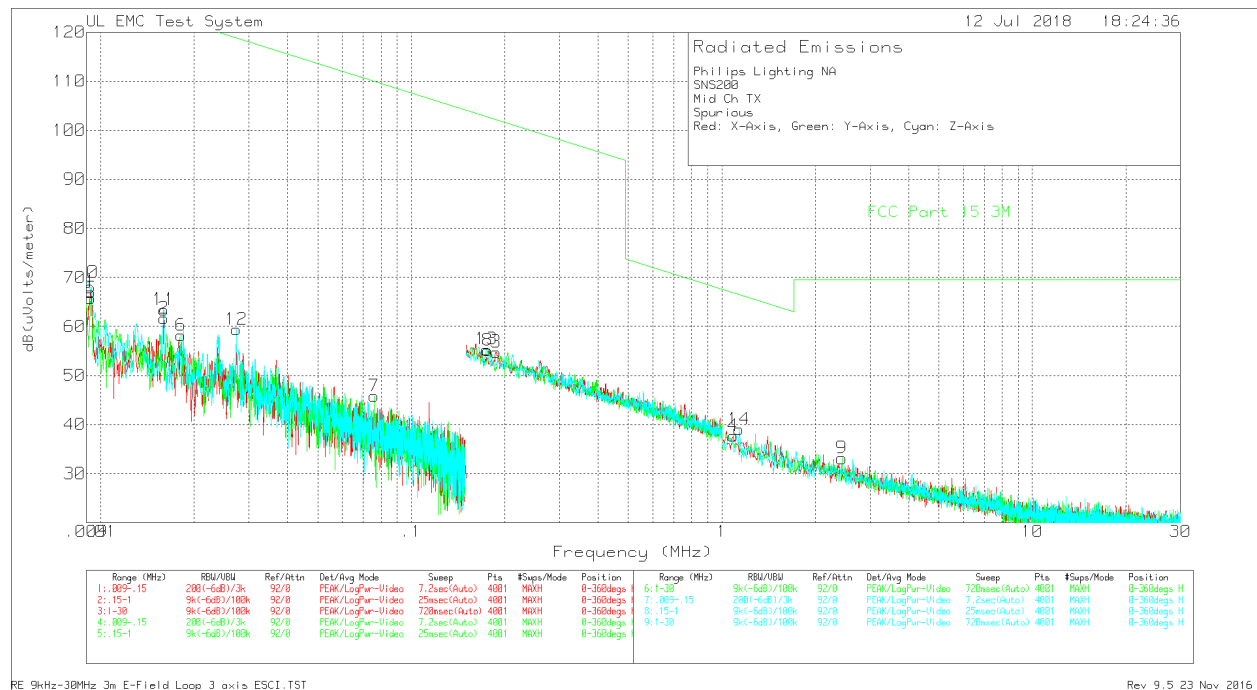
9.2.1. Outdoor to 10m SAC Correlation Data

Correlation Data for measurements 9kHz-30MHz between Outside and 10m semi-anechoic chamber at Underwriter Laboratories in Northbrook, IL.



Correlation measurements were conducted using a signal source with an antenna outside in open area (parking lot). Immediately following the measurements the same setup was moved inside the 10 meter semi-anechoic chamber and the measurements were repeated. The above plot shows the difference in levels measured between outside and the 10 meter semi anechoic chamber.

9.2.2. Radiated Emissions 9kHz-30MHz

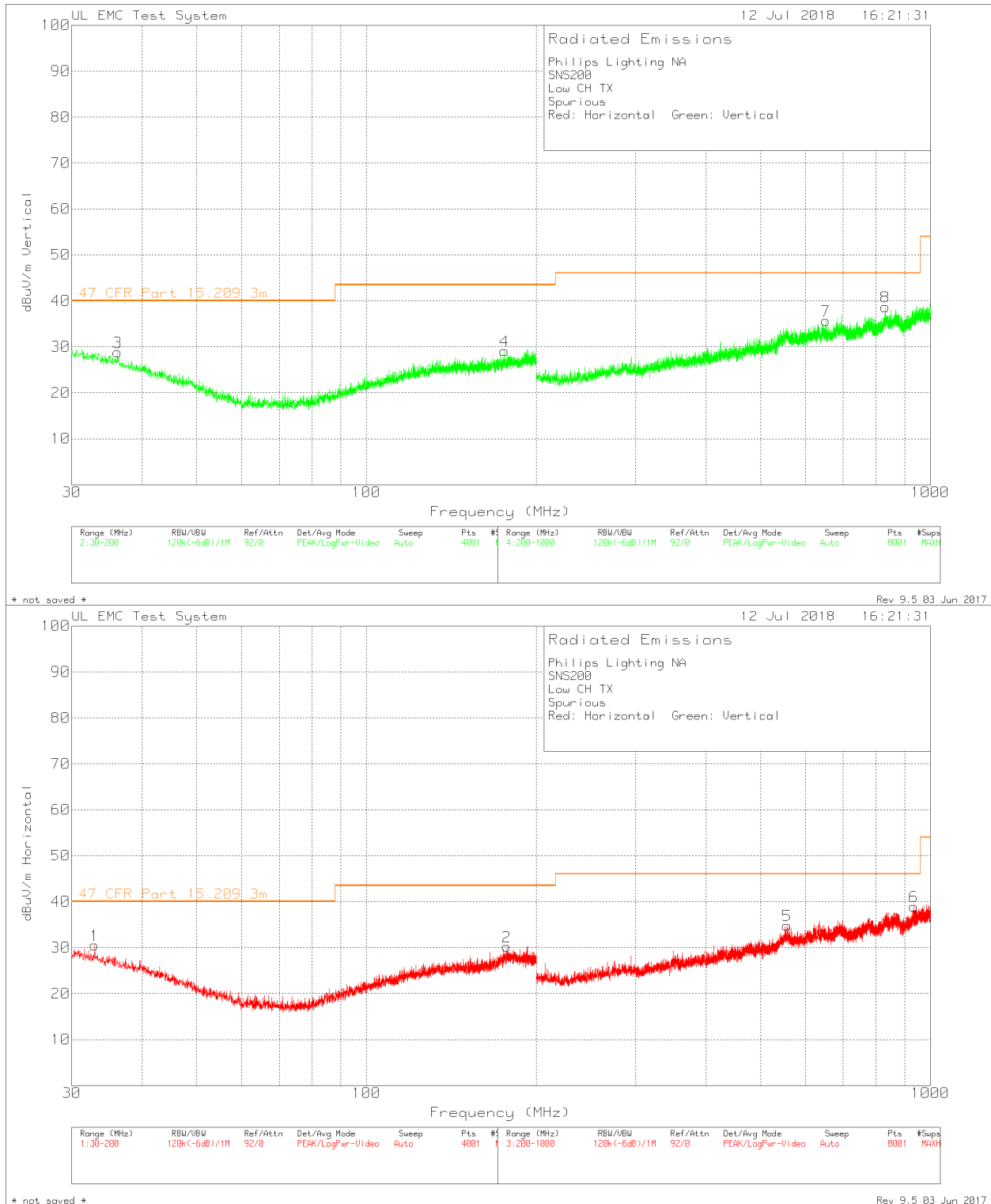


Philips Lighting NA											
SNS200											
Mid Ch TX											
Spurious											
Red: X-Axis, Green: Y-Axis, Cyan: Z-Axis											
Trace Markers											
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	47 CFR Part 15.209	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
Parallel to EUT											
1	0.00928	43.92	Pk	23.1	0	67.02	128.23	-61.21	0-360	101	H
2	0.015965	41.75	Pk	19.9	0	61.65	123.52	-61.87	0-360	101	H
3	0.18749	42.86	Pk	11.8	0.1	54.76	102.14	-47.38	0-360	101	H
4	1.087	25.25	Pk	12.3	0.1	37.65	66.88	-29.23	0-360	101	H
Perpendicular to EUT											
5	0.00928	42.64	Pk	23.1	0	65.74	128.23	-62.49	0-360	101	H
6	0.018135	39.37	Pk	18.8	0	58.17	122.42	-64.25	0-360	101	H
7	0.07599	33.12	Pk	12.7	0	45.82	109.98	-64.16	0-360	101	H
8	0.17663	43.11	Pk	11.9	0.1	55.11	102.66	-47.55	0-360	101	H
Parallel to Groud											
9	2.4355	20.71	Pk	12.2	0.2	33.11	69.54	-36.43	0-360	101	H
10	0.00905	45.85	Pk	23.1	0	68.95	128.45	-59.5	0-360	101	H
11	0.015965	43.51	Pk	19.9	0	63.41	123.52	-60.11	0-360	101	H
12	0.02734	42.56	Pk	16.8	0	59.36	118.85	-59.49	0-360	101	H
13	0.17471	43.32	Pk	11.9	0.1	55.32	102.75	-47.43	0-360	101	H
14	1.13775	26.61	Pk	12.3	0.1	39.01	66.48	-27.47	0-360	101	H
Pk - Peak detector											

* The limit shown is average limit. By showing compliance when using peak detector the device automatically complies with Average and Quasi-Peak limits.

9.3. TRANSMITTER 30MHz – 1GHz

9.3.1. Low Channel



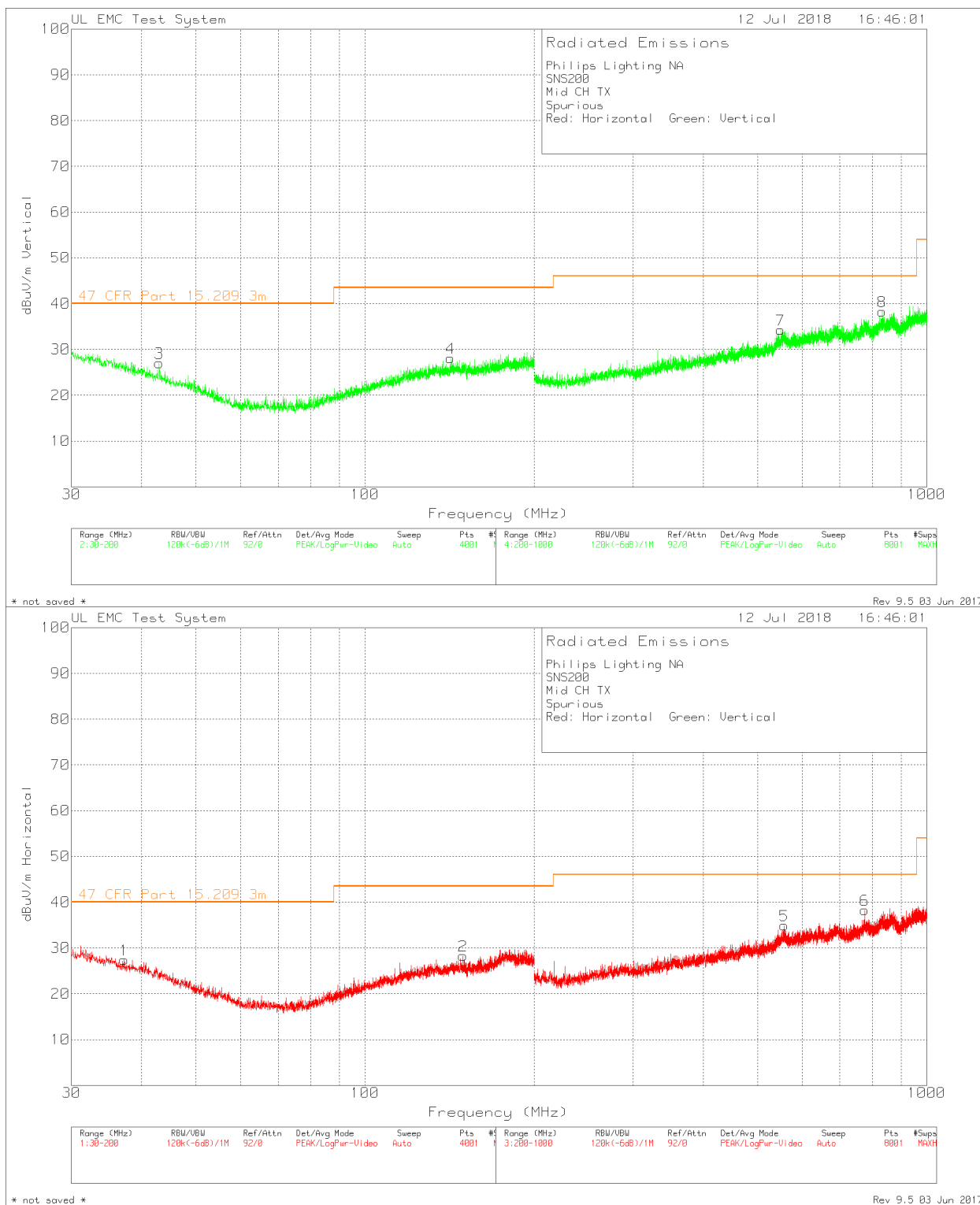
Philips Lighting NA
SNS200
Low CH TX
Spurious
Red: Horizontal Green: Vertical

Trace Markers

Test No. Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m dBuV/m	Limit:1
1 32.9325	33.02dBuV Pk	17	-19.5	30.52	40
	Azimuth:0-360	Height:101		Margin (dB)	-9.48
2 177.3475	33.1dBuV Pk	15.5	-18.4	30.2	43.52
	Azimuth:0-360	Height:398		Margin (dB)	-13.32
3 36.1625	32.73dBuV Pk	15.7	-19.6	28.83	40
	Azimuth:0-360	Height:102		Margin (dB)	-11.17
4 175.6475	32.31dBuV Pk	15.5	-18.7	29.11	43.52
	Azimuth:0-360	Height:398		Margin (dB)	-14.41
5 556.8	31.31dBuV Pk	20.1	-16.6	34.81	46.02
	Azimuth:0-360	Height:199		Margin (dB)	-11.21
6 934.9	32.79dBuV Pk	23.5	-17.3	38.99	46.02
	Azimuth:0-360	Height:399		Margin (dB)	-7.03
7 652.3	31.57dBuV Pk	20.4	-16.3	35.67	46.02
	Azimuth:0-360	Height:99		Margin (dB)	-10.35
8 832.1	32.71dBuV Pk	23.2	-17.2	38.71	46.02
	Azimuth:0-360	Height:399		Margin (dB)	-7.31

LIMIT 1: 47 CFR Part 15.209 3m
Pk - Peak detector

9.3.2. Middle Channel



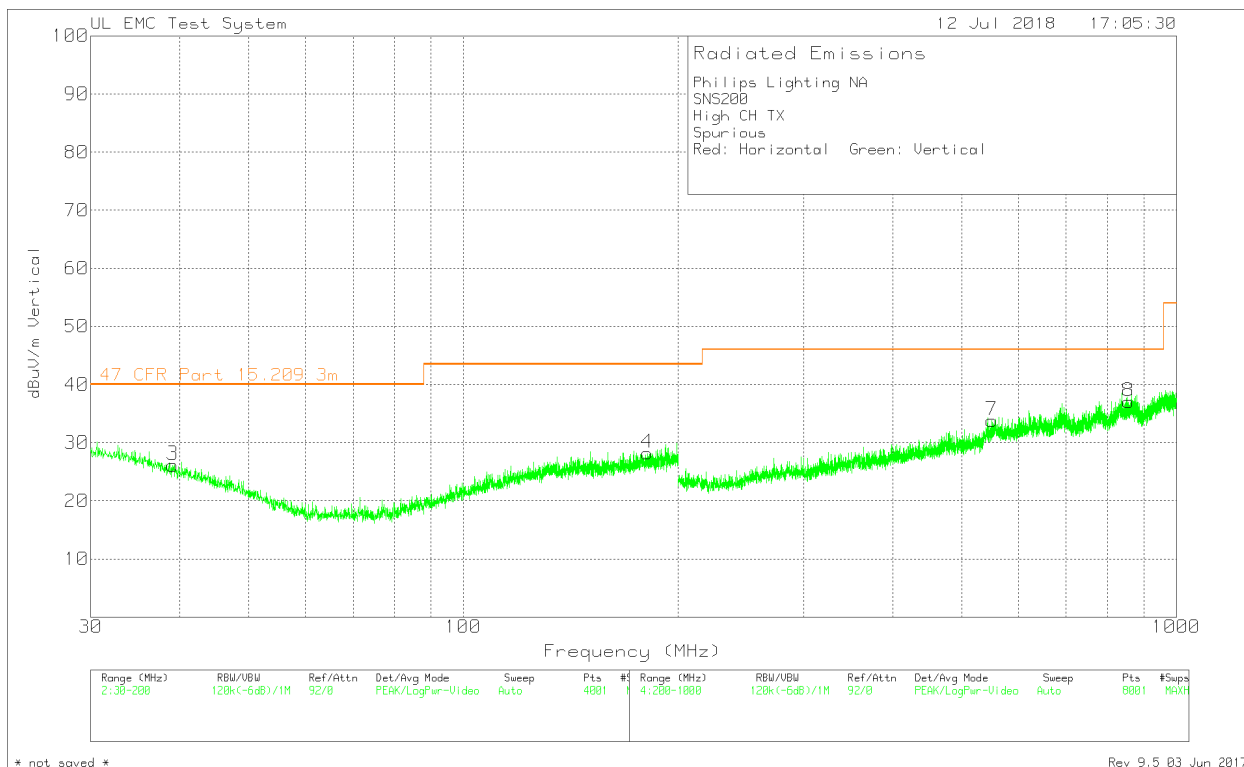
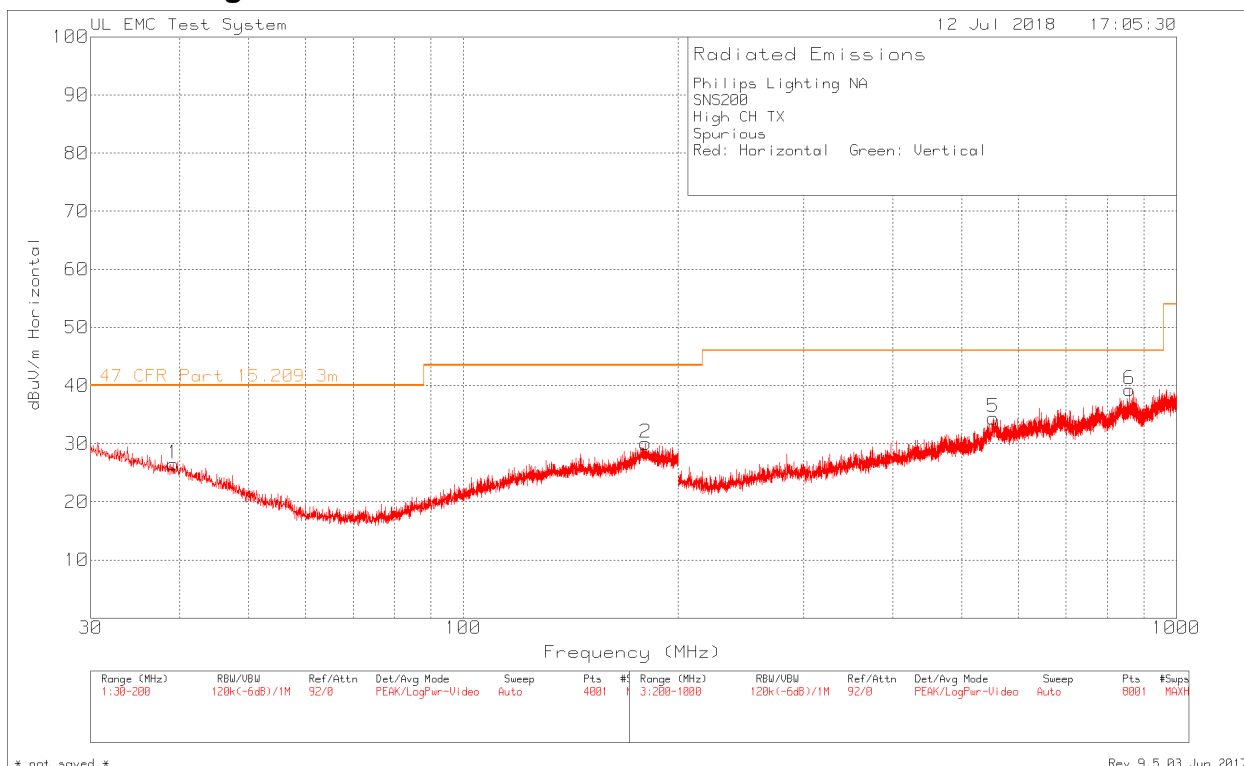
Philips Lighting NA
SNS200
Mid CH TX
Spurious
Red: Horizontal Green: Vertical

Trace Markers

Test No. Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1
1 37.225	31.84dBuV Pk	15.3	-19.7	27.44	40
	Azimuth:0-360	Height:102		Margin (dB)	-12.56
2 149.3825	33.01dBuV Pk	14.8	-19.5	28.31	43.52
	Azimuth:0-360	Height:102		Margin (dB)	-15.21
3 42.9625	33.63dBuV Pk	13	-19.6	27.03	40
	Azimuth:0-360	Height:101		Margin (dB)	-12.97
4 141.945	32.87dBuV Pk	14.7	-19.5	28.07	43.52
	Azimuth:0-360	Height:398		Margin (dB)	-15.45
5 557.3	31.53dBuV Pk	20.1	-16.7	34.93	46.02
	Azimuth:0-360	Height:199		Margin (dB)	-11.09
6 775.2	32.41dBuV Pk	22.2	-16.3	38.31	46.02
	Azimuth:0-360	Height:299		Margin (dB)	-7.71
7 549.3	31.67dBuV Pk	19.7	-17.1	34.27	46.02
	Azimuth:0-360	Height:202		Margin (dB)	-11.75
8 832.9	31.93dBuV Pk	23.2	-16.8	38.33	46.02
	Azimuth:0-360	Height:202		Margin (dB)	-7.69

LIMIT 1: 47 CFR Part 15.209 3m
Pk - Peak detector

9.3.3. High Channel



Philips Lighting NA
SNS200
High CH TX
Spurious
Red: Horizontal Green: Vertical

Trace Markers

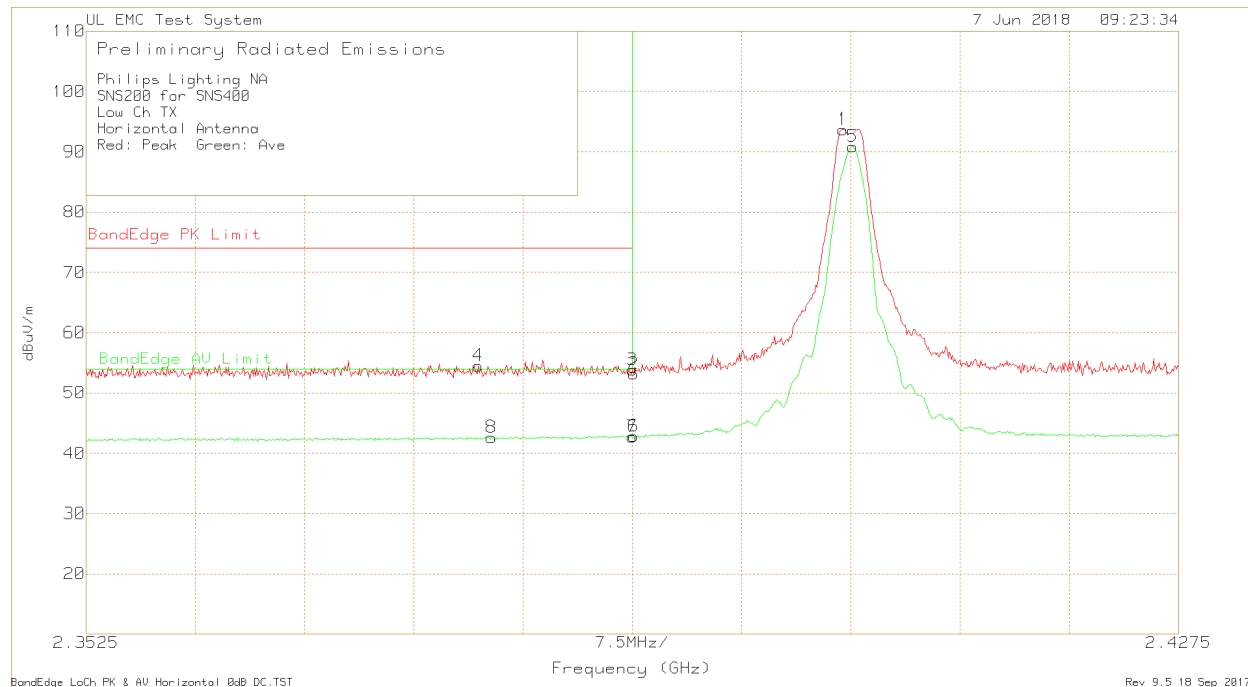
Test No. Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1
1 39.18	31.94dBuV Pk	14.5	-19.9	26.54	40
	Azimuth:0-360	Height:101		Margin (dB)	-13.46
2 180.0675	33.38dBuV Pk	15.6	-18.9	30.08	43.52
	Azimuth:0-360	Height:248		Margin (dB)	-13.44
3 39.095	31.45dBuV Pk	14.6	-19.9	26.15	40
	Azimuth:0-360	Height:252		Margin (dB)	-13.85
4 181.045	31.2dBuV Pk	15.7	-18.7	28.2	43.52
	Azimuth:0-360	Height:252		Margin (dB)	-15.32
5 553.6	31.55dBuV Pk	20.1	-17.2	34.45	46.02
	Azimuth:0-360	Height:99		Margin (dB)	-11.57
6 859.1	33.73dBuV Pk	23	-17.4	39.33	46.02
	Azimuth:0-360	Height:299		Margin (dB)	-6.69
7 551.1	30.94dBuV Pk	19.8	-16.9	33.84	46.02
	Azimuth:0-360	Height:399		Margin (dB)	-12.18
8 856.9	31.25dBuV Pk	22.9	-17.1	37.05	46.02
	Azimuth:0-360	Height:198		Margin (dB)	-8.97

LIMIT 1: 47 CFR Part 15.209 3m
Pk - Peak detector

9.4. TRANSMITTER 1GHz – 25GHz

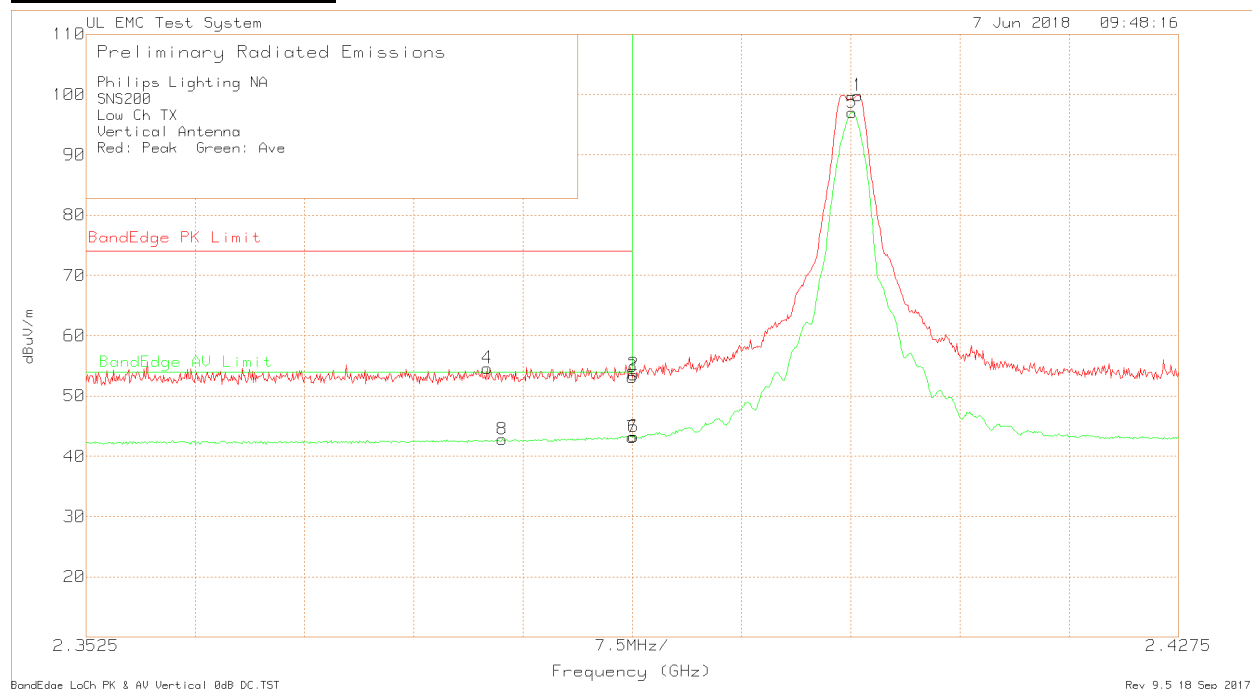
9.4.1. Low Channel

Band Edge Data – Horizontal



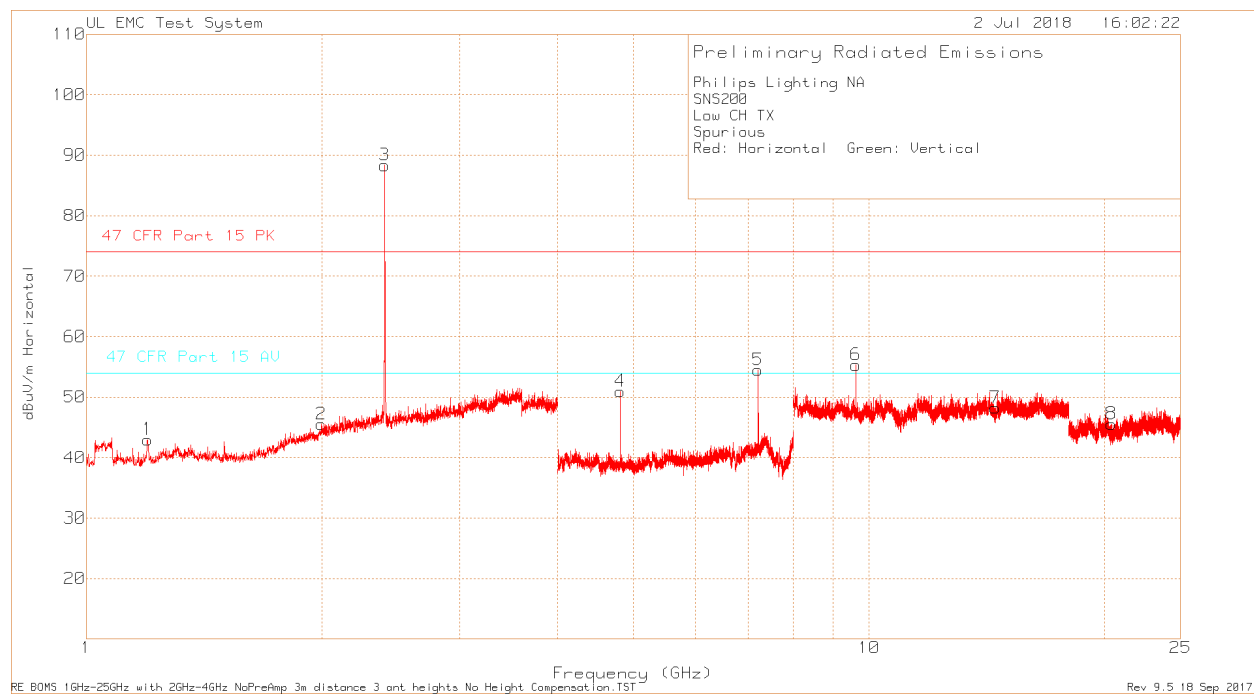
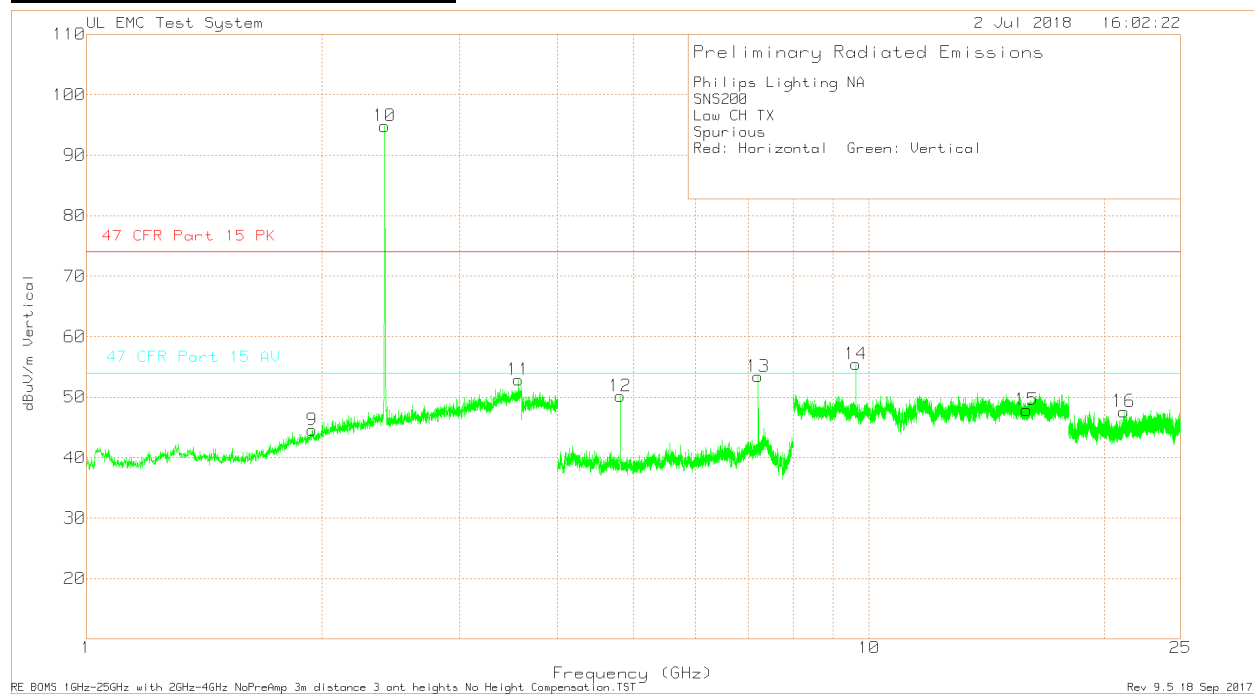
Philips Lighting NA													
SNS200 for SNS400													
Low Ch TX													
Horizontal Antenna													
Red: Peak Green: Ave													
Trace Markers													
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	BandEdge PK Limit dBuV/m	Margin (dB)	BandEdge AV Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	2.4045	67.21	Pk	21.8	4.68	93.69	-	-	-	-	352	102	H
2	2.3901	26.58	Pk	21.8	4.79	53.17	-	-	-	-	352	102	H
3	2.39	27.24	Pk	21.8	4.79	53.83	74	-20.17	-	-	352	102	H
4	2.3794	28.02	Pk	21.8	4.69	54.51	74	-19.49	-	-	352	102	H
5	2.4051	64.35	Av	21.8	4.68	90.83	-	-	-	-	352	102	H
6	2.3901	16.25	Av	21.8	4.79	42.84	-	-	-	-	352	102	H
7	2.39	16.15	Av	21.8	4.79	42.74	74	-31.26	54	-11.26	352	102	H
8	2.3803	16.15	Av	21.8	4.69	42.64	74	-31.36	54	-11.36	352	102	H
Pk - Peak detector													

Band Edge Data - Vertical



Philips Lighting NA													
SNS200													
Low Ch TX													
Vertical Antenna													
Red: Peak Green: Ave													
Trace Markers													
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	BandEdge PK Limit dBuV/m	Margin (dB)	BandEdge AV Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	2.4055	73.36	Pk	21.8	4.68	99.84	-	-	-	-	122	132	V
2	2.3901	26.97	Pk	21.8	4.79	53.56	-	-	-	-	122	132	V
3	2.39	26.55	Pk	21.8	4.79	53.14	74	-20.86	-	-	122	132	V
4	2.38	28.13	Pk	21.8	4.69	54.62	74	-19.38	-	-	122	132	V
5	2.4051	70.55	Av	21.8	4.68	97.03	-	-	-	-	122	132	V
6	2.3901	16.65	Av	21.8	4.79	43.24	-	-	-	-	122	132	V
7	2.39	16.57	Av	21.8	4.79	43.16	74	-30.84	54	-10.84	122	132	V
8	2.3811	16.31	Av	21.8	4.69	42.8	74	-31.2	54	-11.2	122	132	V
Pk - Peak detector													

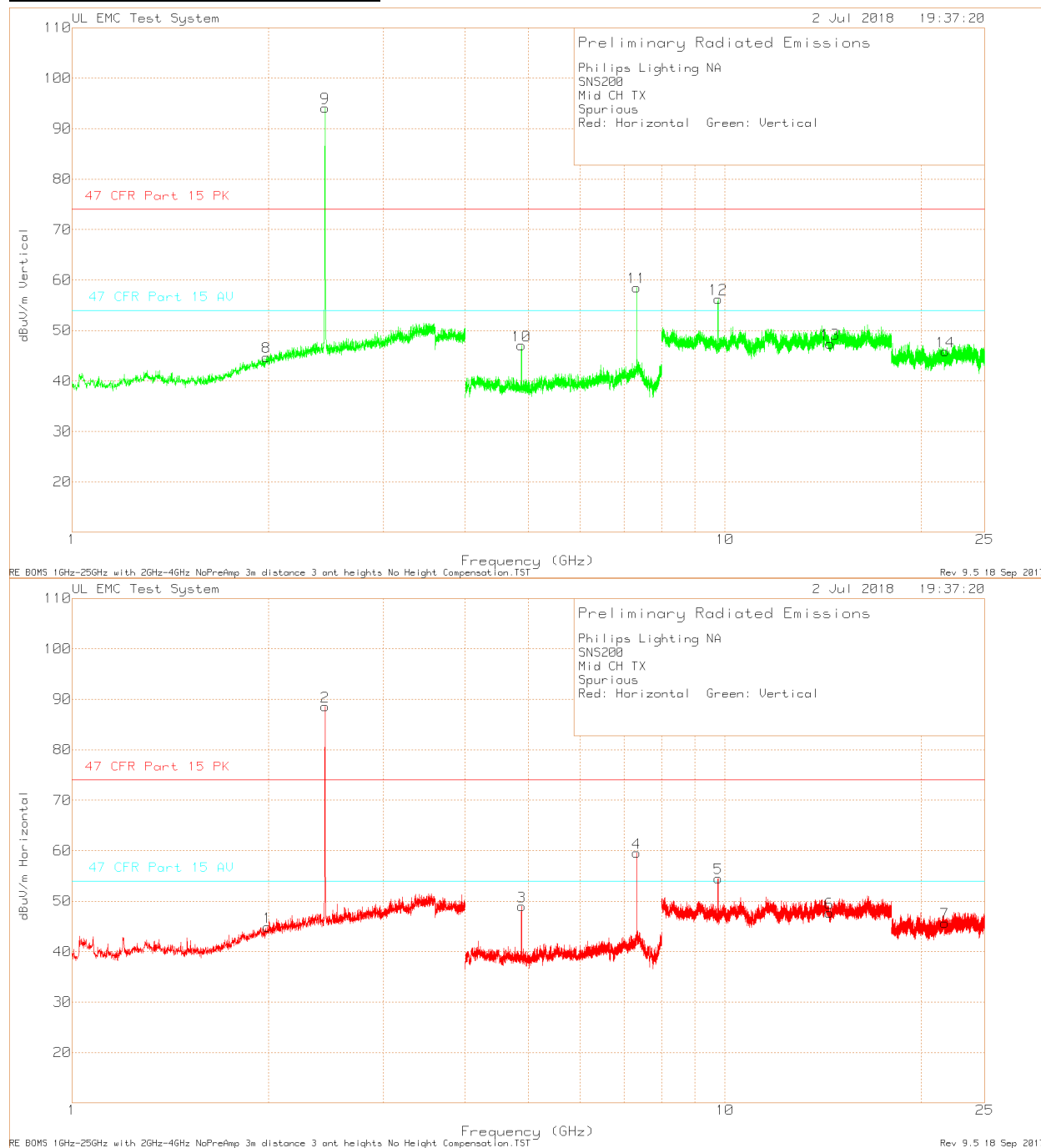
Spurious Emissions 1GHz – 25GHz



Philips Lighting NA														
SNS200														
Low CH TX														
Spurious														
Red: Horizontal Green: Vertical														
Trace Markers														
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	47 CFR Part 15.209 PK dBuV/m	Margin (dB)	47 CFR Part 15.209 AV dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity	
1	1.197	70.7	Pk	28	-55.72	42.98	74	-31.02	54	-11.02	0-360	150	H	
2	1.997	66.33	Pk	31.7	-52.53	45.5	74	-28.5	54	-8.5	0-360	199	H	
3	2.405	61.78	Pk	21.8	4.75	88.33	74	14.33	54	34.33	0-360	100	H	
4	4.811	74.14	Pk	27.7	-50.88	50.96	74	-23.04	54	-3.04	0-360	100	H	
5	7.217	69.94	Pk	29.8	-45.29	54.45	74	-19.55	54	0.45	0-360	200	H	
6	9.618	68.18	Pk	36.4	-49.28	55.3	74	-18.7	54	1.3	0-360	100	H	
7	14.495	49.16	Pk	39.8	-40.71	48.25	74	-25.75	54	-5.75	0-360	150	H	
8	20.403	54.32	Pk	40.3	-49.05	45.57	74	-28.43	54	-8.43	0-360	200	H	
9	1.942	66.12	Pk	31.5	-53.05	44.57	74	-29.43	54	-9.43	0-360	100	V	
10	2.405	68.25	Pk	21.8	4.75	94.8	74	20.8	54	40.8	0-360	150	V	
11	3.566	23.6	Pk	23.3	5.93	52.83	74	-21.17	54	-1.17	0-360	100	V	
12	4.811	73.35	Pk	27.7	-50.88	50.17	74	-23.83	54	-3.83	0-360	200	V	
13	7.217	68.89	Pk	29.8	-45.29	53.4	74	-20.6	54	-0.6	0-360	200	V	
14	9.618	68.34	Pk	36.4	-49.28	55.46	74	-18.54	54	1.46	0-360	150	V	
15	15.893	48.23	Pk	39.9	-40.27	47.86	74	-26.14	54	-6.14	0-360	100	V	
16	21.16	54.87	Pk	40.2	-47.46	47.61	74	-26.39	54	-6.39	0-360	150	V	
Radiated Emission Data														
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	DC Factor dB	Av Level with DC dB	47 CFR Part 15.209 PK dBuV/m	Margin (dB)	47 CFR Part 15.209 AV dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
4.8109	74.97	Pk	27.7	-50.88	51.79	-18.93	32.86	74	-22.21	54	-21.14	55	100	H
4.8108	74.15	Pk	27.7	-50.89	50.96	-18.93	32.03	74	-23.04	54	-21.97	12	200	V
7.2134	70.79	Pk	29.8	-45.32	55.27	-18.93	36.34	74	-18.73	54	-17.66	77	248	V
7.2164	70.6	Pk	29.8	-45.34	55.06	-18.93	36.13	74	-18.94	54	-17.87	75	194	H
9.6179	68.64	Pk	36.4	-49.28	55.76	-18.93	36.83	74	-18.24	54	-17.17	200	101	H
9.618	69.02	Pk	36.4	-49.28	56.14	-18.93	37.21	74	-17.86	54	-16.79	130	119	V
14.495	51.52	Pk	39.8	-40.71	50.61	0	-	74	-23.39	-	-	360	187	H
14.495	46.79	Av	39.8	-40.71	45.88	0	-	74	-28.12	54	-8.12	360	187	H
3.5671	28.43	Pk	23.3	5.98	57.71	0	-	74	-16.29	-	-	170	152	V
3.5663	23.22	Av	23.3	5.94	52.46	0	-	74	-21.54	54	-1.54	170	152	V
Pk - Peak detector														
Av - Average detector														

9.4.2. Middle Channel

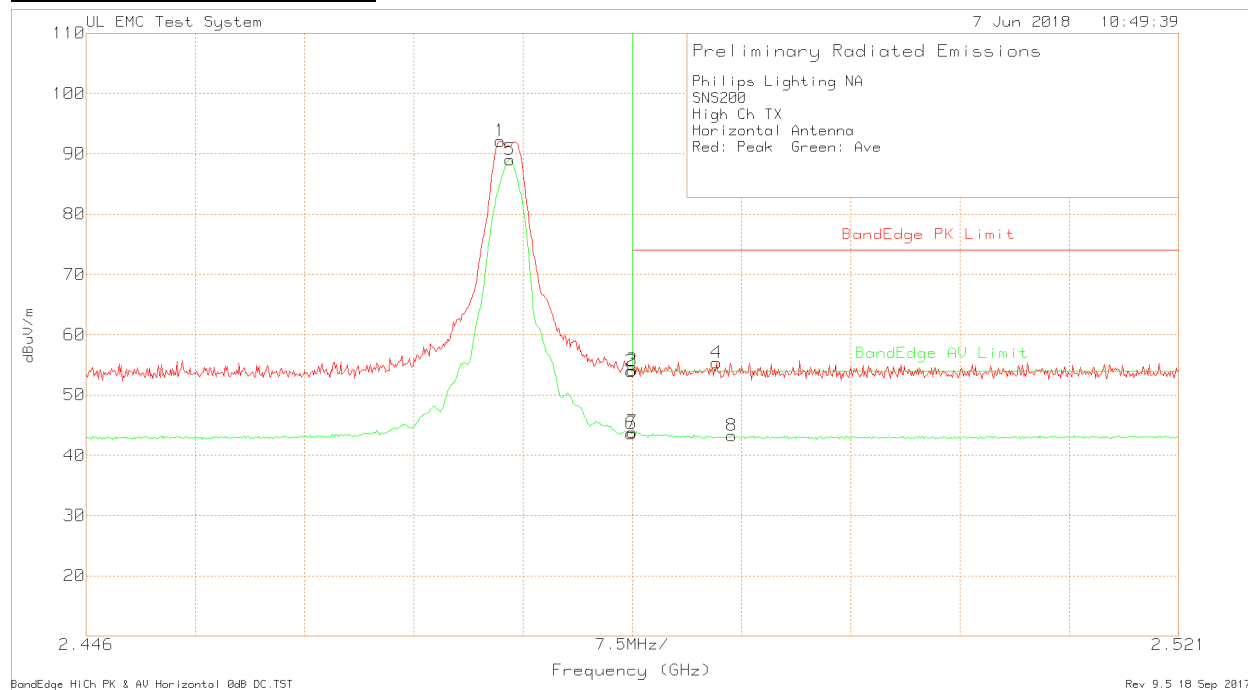
Spurious Emissions 1GHz – 25GHz



Philips Lighting NA														
SNS200														
Mid CH TX														
Spurious														
Red: Horizontal Green: Vertical														
Trace Markers														
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	47 CFR Part 15.209 PK dBuV/m	Margin (dB)	47 CFR Part 15.209 AV dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity	
1	1.993	65.71	Pk	31.7	-52.53	44.88	74	-29.12	54	-9.12	0-360	100	H	
2	2.44	62.08	Pk	21.9	4.61	88.59	74	14.59	54	34.59	0-360	150	H	
3	4.881	71.48	Pk	27.7	-50.18	49	74	-25	54	-5	0-360	100	H	
4	7.319	73.9	Pk	30.6	-44.96	59.54	74	-14.46	54	5.54	0-360	200	H	
5	9.762	67.74	Pk	36.4	-49.6	54.54	74	-19.46	54	0.54	0-360	100	H	
6	14.453	49.04	Pk	39.8	-41.12	47.72	74	-26.28	54	-6.28	0-360	200	H	
7	21.719	52.01	Pk	40.4	-46.72	45.69	74	-28.31	54	-8.31	0-360	200	H	
8	1.985	65.7	Pk	31.7	-52.68	44.72	74	-29.28	54	-9.28	0-360	200	V	
9	2.44	67.63	Pk	21.9	4.61	94.14	74	20.14	54	40.14	0-360	100	V	
10	4.879	69.51	Pk	27.7	-50.17	47.04	74	-26.96	54	-6.96	0-360	200	V	
11	7.322	72.96	Pk	30.6	-45.03	58.53	74	-15.47	54	4.53	0-360	200	V	
12	9.762	69.46	Pk	36.4	-49.6	56.26	74	-17.74	54	2.26	0-360	100	V	
13	14.495	48.3	Pk	39.8	-40.71	47.39	74	-26.61	54	-6.61	0-360	100	V	
14	21.77	52.37	Pk	40.4	-46.92	45.85	74	-28.15	54	-8.15	0-360	149	V	
Radiated Emission Data														
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	DC Factor dB	Av Level with DC dB	47 CFR Part 15.209 PK dBuV/m	Margin (dB)	47 CFR Part 15.209 AV dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
7.3214	74.43	Pk	30.6	-45.09	59.94	-18.93	41.01	74	-14.06	54	-12.99	72	185	H
4.8789	72.26	Pk	27.7	-50.16	49.8	-18.93	30.87	74	-24.2	54	-23.13	46	100	H
7.3183	73.84	Pk	30.6	-45.06	59.38	-18.93	40.45	74	-14.62	54	-13.55	87	238	V
9.7577	70.31	Pk	36.4	-49.78	56.93	-18.93	38	74	-17.07	54	-16	125	100	V
9.7578	68.72	Pk	36.4	-49.79	55.33	-18.93	36.4	74	-18.67	54	-17.6	205	100	H
Pk - Peak detector														

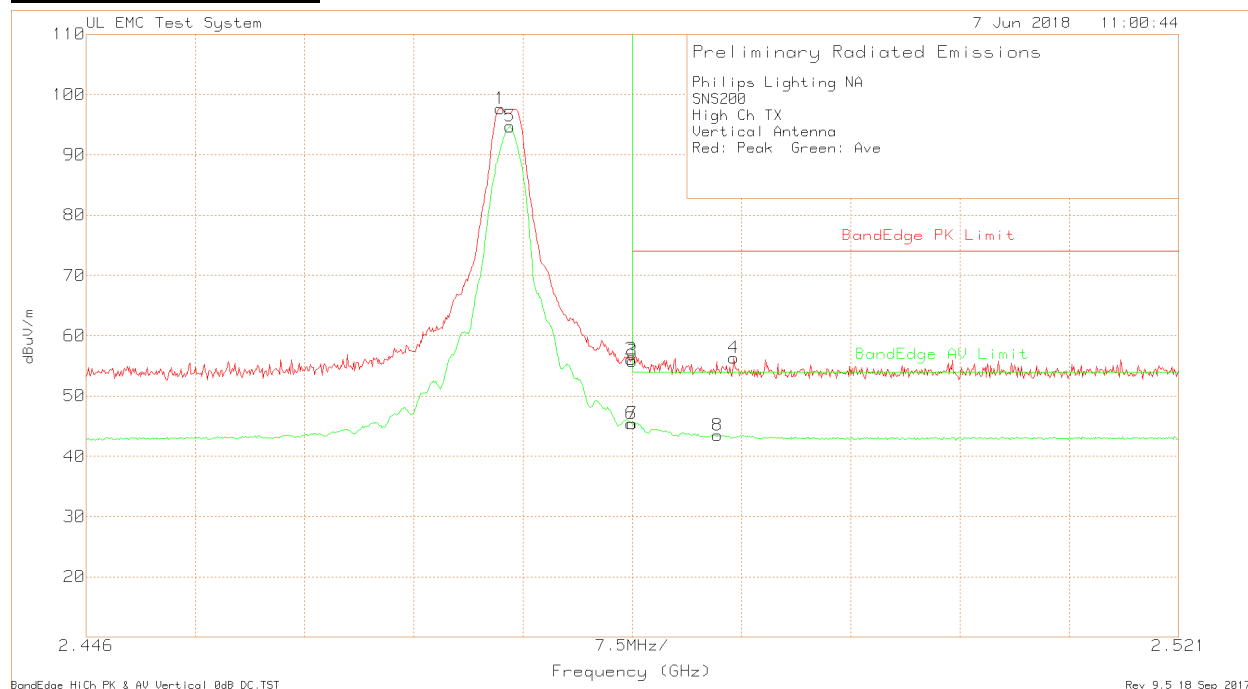
9.4.3. High Channel

Band Edge Data – Horizontal



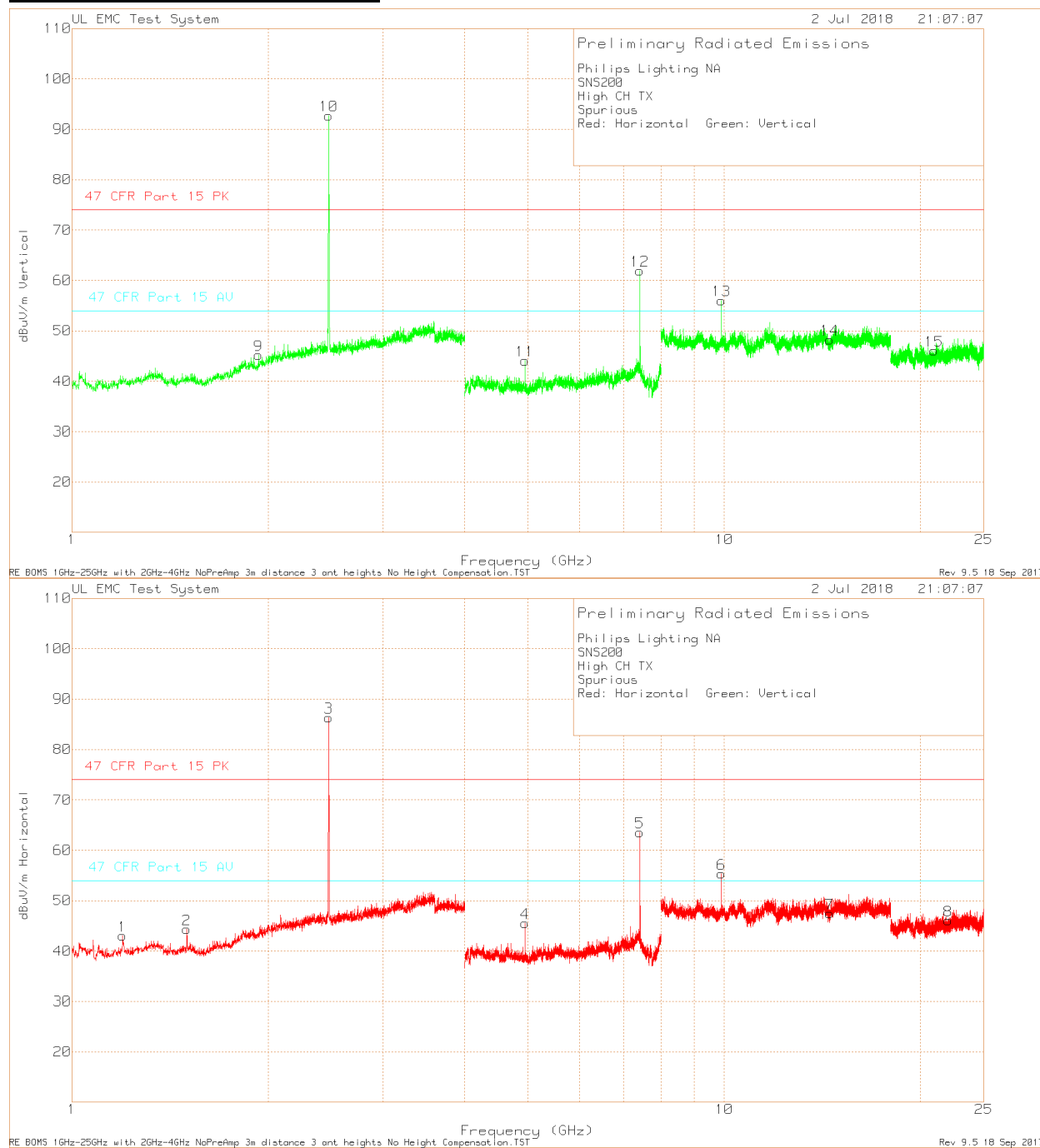
Philips Lighting NA													
SNS200													
High Ch TX													
Horizontal Antenna													
Red: Peak Green: Ave													
Trace Markers													
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	BandEdge PK Limit dBuV/m	Margin (dB)	BandEdge AV Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	2.4744	65.61	Pk	22	4.49	92.1	-	-	-	-	351	99	H
2	2.4834	27.41	Pk	22.1	4.44	53.95	-	-	-	-	351	99	H
3	2.4835	27.55	Pk	22.1	4.44	54.09	74	-19.91	-	-	351	99	H
4	2.4893	28.76	Pk	22.1	4.45	55.31	74	-18.69	-	-	351	99	H
5	2.4751	62.51	Av	22	4.48	88.99	-	-	-	-	351	99	H
6	2.4834	17.09	Av	22.1	4.44	43.63	-	-	-	-	351	99	H
7	2.4835	17.29	Av	22.1	4.44	43.83	74	-30.17	54	-10.17	351	99	H
8	2.4903	16.7	Av	22.1	4.44	43.24	74	-30.76	54	-10.76	351	99	H
Pk - Peak detector													

Band Edge Data Vertical



Philips Lighting NA													
SNS200													
High Ch TX													
Vertical Antenna													
Red: Peak Green: Ave													
Trace Markers													
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	BandEdge PK Limit dBuV/m	Margin (dB)	BandEdge AV Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	2.4744	71.15	Pk	22	4.49	97.64	-	-	-	-	128	118	V
2	2.4834	29.55	Pk	22.1	4.44	56.09	-	-	-	-	128	118	V
3	2.4835	29.21	Pk	22.1	4.44	55.75	74	-18.25	-	-	128	118	V
4	2.4905	29.8	Pk	22.1	4.44	56.34	74	-17.66	-	-	128	118	V
5	2.4751	68.22	Av	22	4.48	94.7	-	-	-	-	128	118	V
6	2.4834	18.85	Av	22.1	4.44	45.39	-	-	-	-	128	118	V
7	2.4835	18.85	Av	22.1	4.44	45.39	74	-28.61	54	-8.61	128	118	V
8	2.4894	16.93	Av	22.1	4.45	43.48	74	-30.52	54	-10.52	128	118	V
Pk - Peak detector													

Spurious Emissions 1GHz – 25GHz



Philips Lighting NA														
SNS200														
High CH TX														
Spurious														
Red: Horizontal Green: Vertical														
Trace Markers														
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	47 CFR Part 15.209 PK dBuV/m	Margin (dB)	47 CFR Part 15.209 AV dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity	
1	1.196	70.76	Pk	28	-55.74	43.02	74	-30.98	54	-10.98	0-360	150	H	
2	1.5	70.96	Pk	27.8	-54.41	44.35	74	-29.65	54	-9.65	0-360	150	H	
3	2.475	59.81	Pk	22	4.55	86.36	74	12.36	54	32.36	0-360	100	H	
4	4.949	67.27	Pk	27.8	-49.51	45.56	74	-28.44	54	-8.44	0-360	100	H	
5	7.424	79.11	Pk	30.8	-46.32	63.59	74	-10.41	54	9.59	0-360	150	H	
6	9.898	67.17	Pk	36.4	-48.24	55.33	74	-18.67	54	1.33	0-360	100	H	
7	14.511	48.45	Pk	39.8	-40.81	47.44	74	-26.56	54	-6.56	0-360	200	H	
8	22.05	52.5	Pk	40.4	-46.82	46.08	74	-27.92	54	-7.92	0-360	100	H	
9	1.933	66.77	Pk	31.4	-52.99	45.18	74	-28.82	54	-8.82	0-360	150	V	
10	2.475	66.19	Pk	22	4.55	92.74	74	18.74	54	38.74	0-360	99	V	
11	4.951	65.7	Pk	27.8	-49.42	44.08	74	-29.92	54	-9.92	0-360	200	V	
12	7.424	77.48	Pk	30.8	-46.32	61.96	74	-12.04	54	7.96	0-360	200	V	
13	9.902	67.76	Pk	36.4	-48.11	56.05	74	-17.95	54	2.05	0-360	100	V	
14	14.499	49.51	Pk	39.8	-41.05	48.26	74	-25.74	54	-5.74	0-360	150	V	
15	20.974	54.32	Pk	40.1	-48.37	46.05	74	-27.95	54	-7.95	0-360	100	V	
Radiated Emission Data														
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	DC Factor dB	Av Level with DC dB	47 CFR Part 15.209 PK dBuV/m	Margin (dB)	47 CFR Part 15.209 AV dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
7.4233	79.43	Pk	30.8	-46.45	63.78	-18.93	44.85	74	-10.22	54	-9.15	74	169	H
7.4263	78.29	Pk	30.8	-46.52	62.57	-18.93	43.64	74	-11.43	54	-10.36	100	247	V
9.8976	68.89	Pk	36.4	-48.28	57.01	-18.93	38.08	74	-16.99	54	-15.92	147	100	V
9.9018	68.32	Pk	36.4	-48.14	56.58	-18.93	37.65	74	-17.42	54	-16.35	158	100	H
Pk - Peak detector														

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

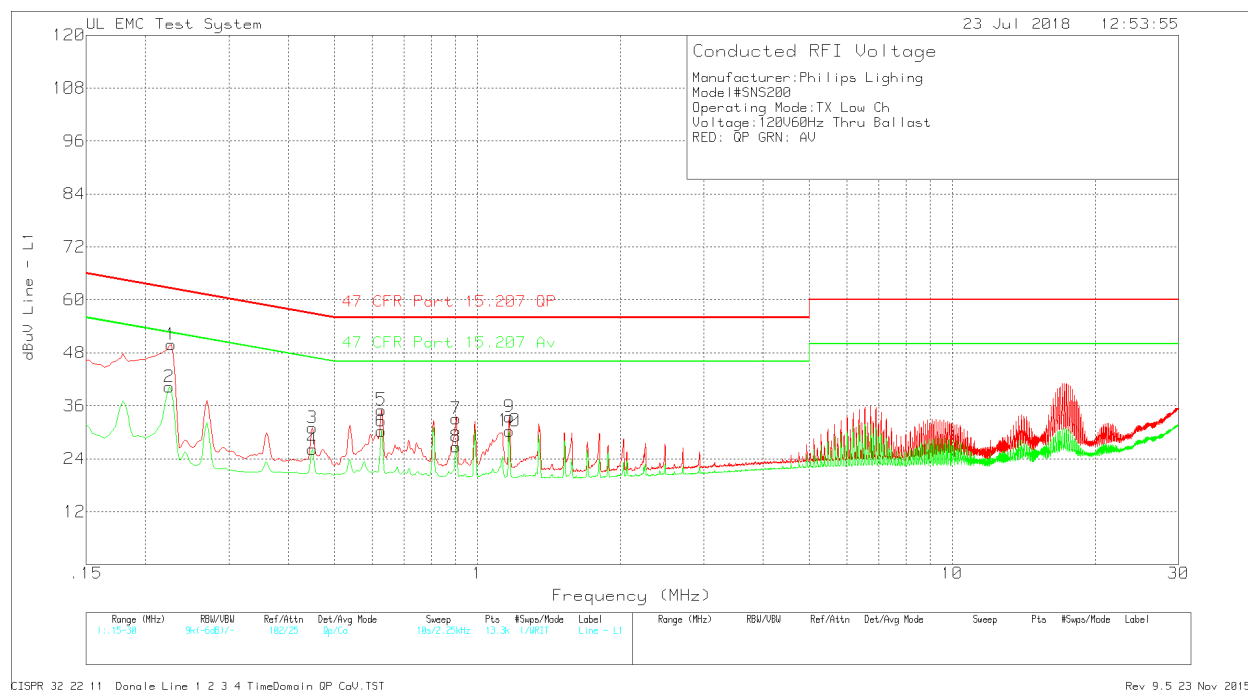
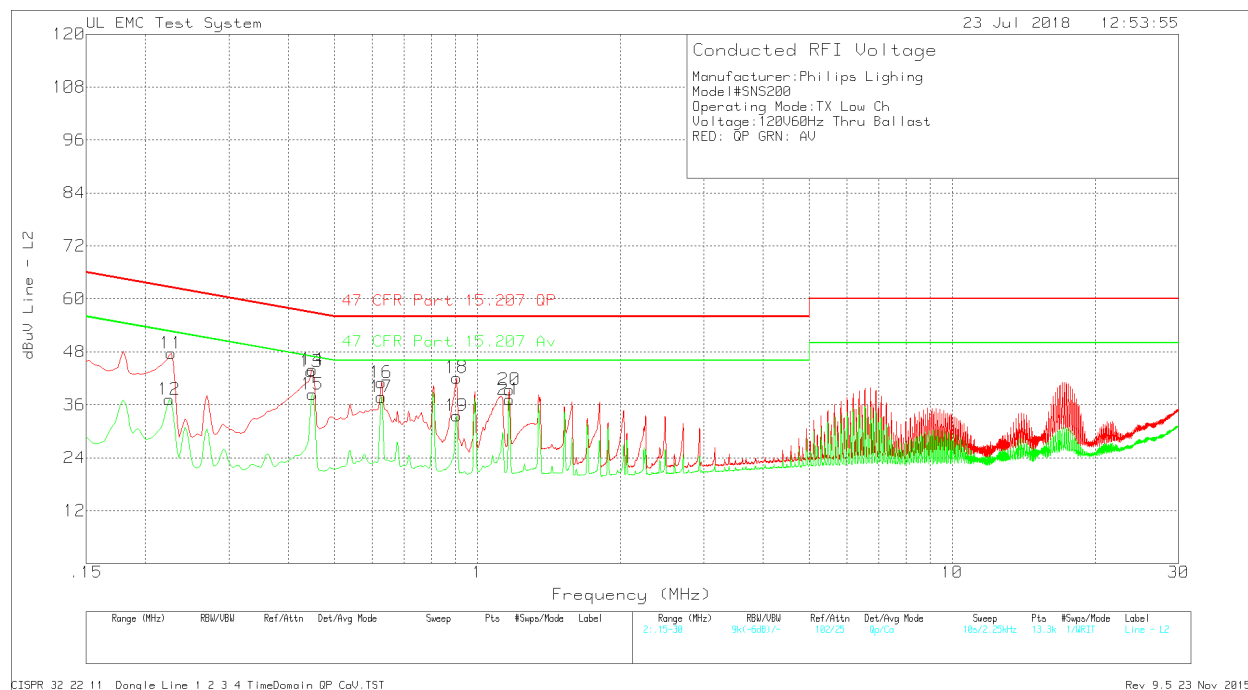
RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

RESULTS

10.1.1. AC Power Line Results – TX Mode / Low Channel



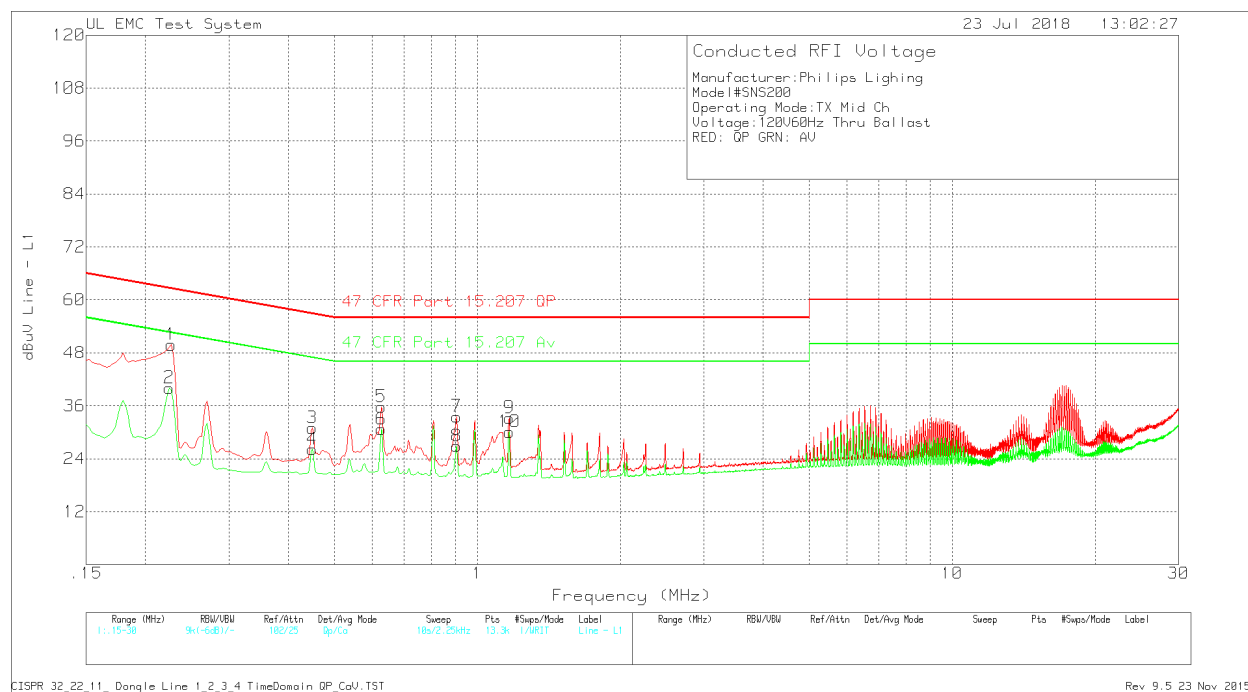
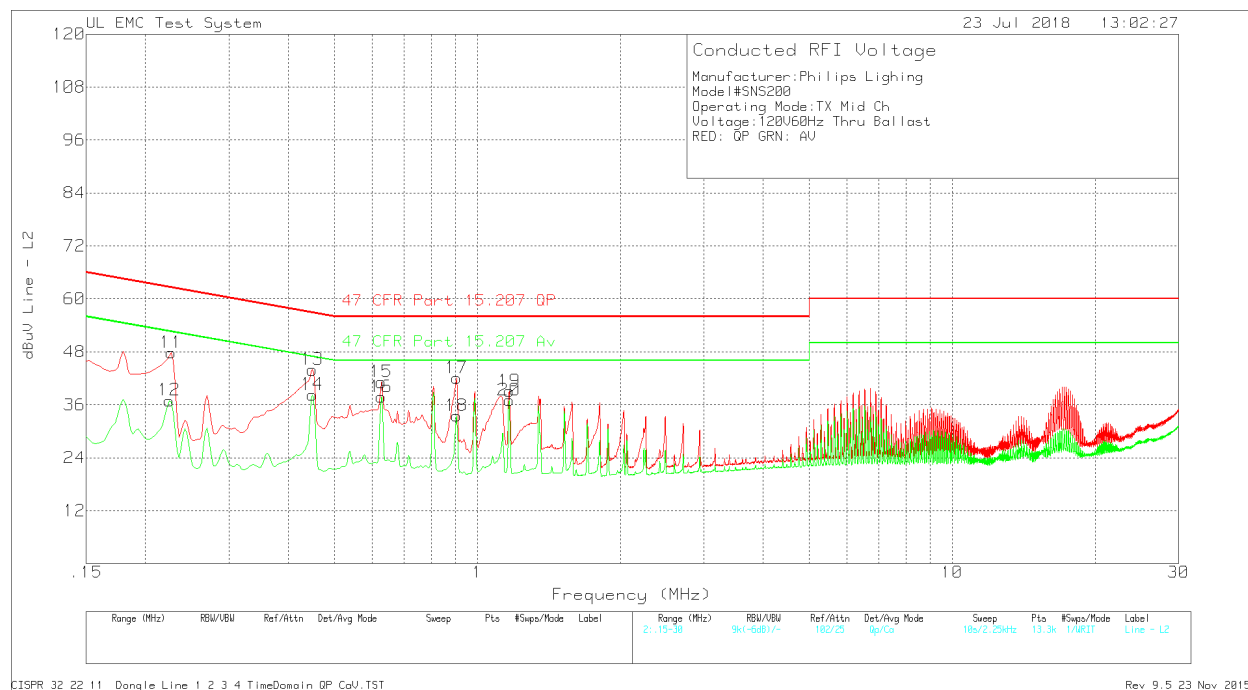
Manufacturer: Philips Lighting
Model#SNS200
Operating Mode:TX Low Ch
Voltage:120V60Hz Thru Ballast
RED: QP GRN: AV

Trace Markers	Test	Meter	Transducer	Gain/Loss	Corrected	Limit:1	2
No.	Frequency	Reading	Factor	Factor	Reading	dBuV	
(MHz)			(dB)	(dB)			
=====							
Line 1							
1 .2265		38.45dBuV Qp	0	11.4	49.85	62.58	52.58
					Margin (dB)	-12.73	-2.73
2 .22425		28.88dBuV Ca	0	11.4	40.28	62.66	52.66
					Margin (dB)	-22.38	-12.38
3 .44925		20.29dBuV Qp	0	10.7	30.99	56.89	46.89
					Margin (dB)	-25.9	-15.9
4 .44925		15.39dBuV Ca	0	10.7	26.09	56.89	46.89
					Margin (dB)	-30.8	-20.8
5 .627		24.45dBuV Qp	0	10.6	35.05	56	46
					Margin (dB)	-20.95	-10.95
6 .627		19.65dBuV Ca	0	10.6	30.25	56	46
					Margin (dB)	-25.75	-15.75
7 .9015		22.43dBuV Qp	0	10.6	33.03	56	46
					Margin (dB)	-22.97	-12.97
8 .9015		16.15dBuV Ca	0	10.6	26.75	56	46
					Margin (dB)	-29.25	-19.25
9 1.167		22.92dBuV Qp	0	10.6	33.52	56	46
					Margin (dB)	-22.48	-12.48
10 1.167		19.72dBuV Ca	0	10.6	30.32	56	46
					Margin (dB)	-25.68	-15.68
Neutral							
11 .2265		36.29dBuV Qp	0	11.4	47.69	62.58	52.58
					Margin (dB)	-14.89	-4.89
12 .22425		25.75dBuV Ca	0	11.4	37.15	62.66	52.66
					Margin (dB)	-25.51	-15.51
13 .447		32.79dBuV Qp	0	10.7	43.49	56.93	46.93
					Margin (dB)	-13.44	-3.44
14 .44925		33.22dBuV Qp	0	10.7	43.92	56.89	46.89
					Margin (dB)	-12.97	-2.97
15 .44925		27.71dBuV Ca	0	10.7	38.41	56.89	46.89
					Margin (dB)	-18.48	-8.48
16 .627		30.41dBuV Qp	0	10.6	41.01	56	46
					Margin (dB)	-14.99	-4.99
17 .627		27.13dBuV Ca	0	10.6	37.73	56	46
					Margin (dB)	-18.27	-8.27
18 .90375		31.53dBuV Qp	0	10.6	42.13	56	46
					Margin (dB)	-13.87	-3.87
19 .90375		22.87dBuV Ca	0	10.6	33.47	56	46
					Margin (dB)	-22.53	-12.53
20 1.167		28.82dBuV Qp	0	10.6	39.42	56	46
					Margin (dB)	-16.58	-6.58
21 1.167		26.58dBuV Ca	0	10.6	37.18	56	46
					Margin (dB)	-18.82	-8.82

LIMIT 1: 47 CFR Part 15.207 QP
LIMIT 2: 47 CFR Part 15.207 Av

Qp - Quasi-Peak detector
Ca - CISPR Average detection

10.1.2. AC Power Line Results – TX Mode / Middle Channel



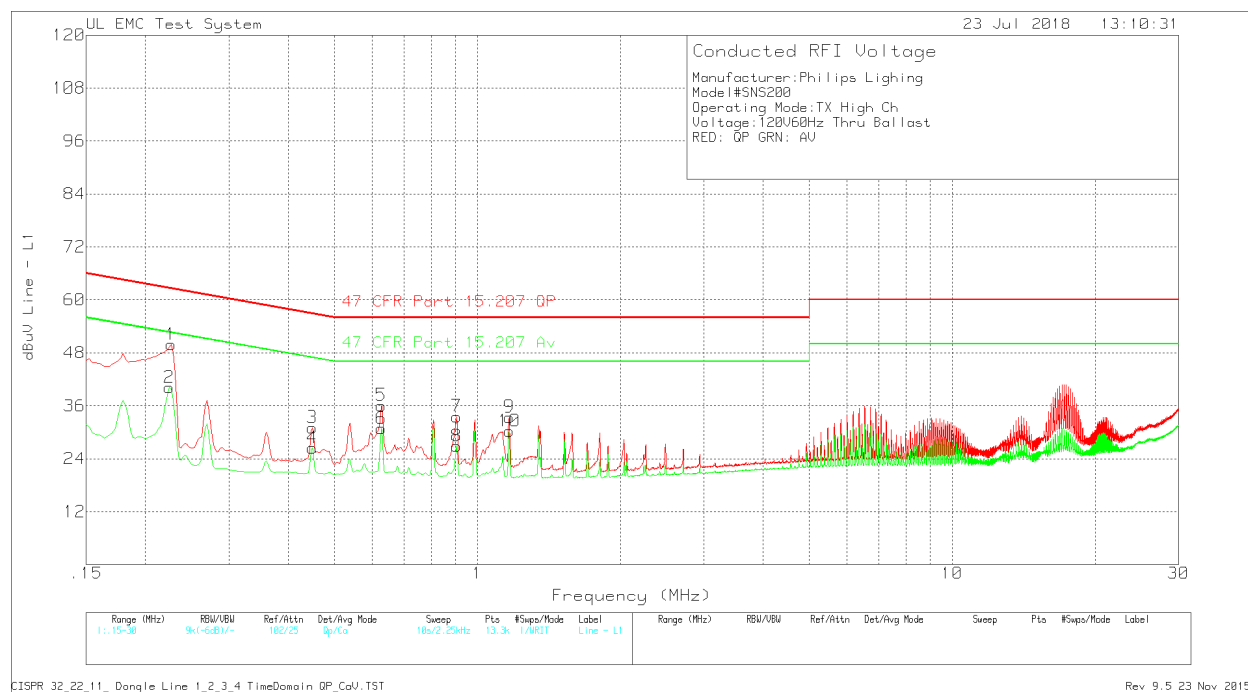
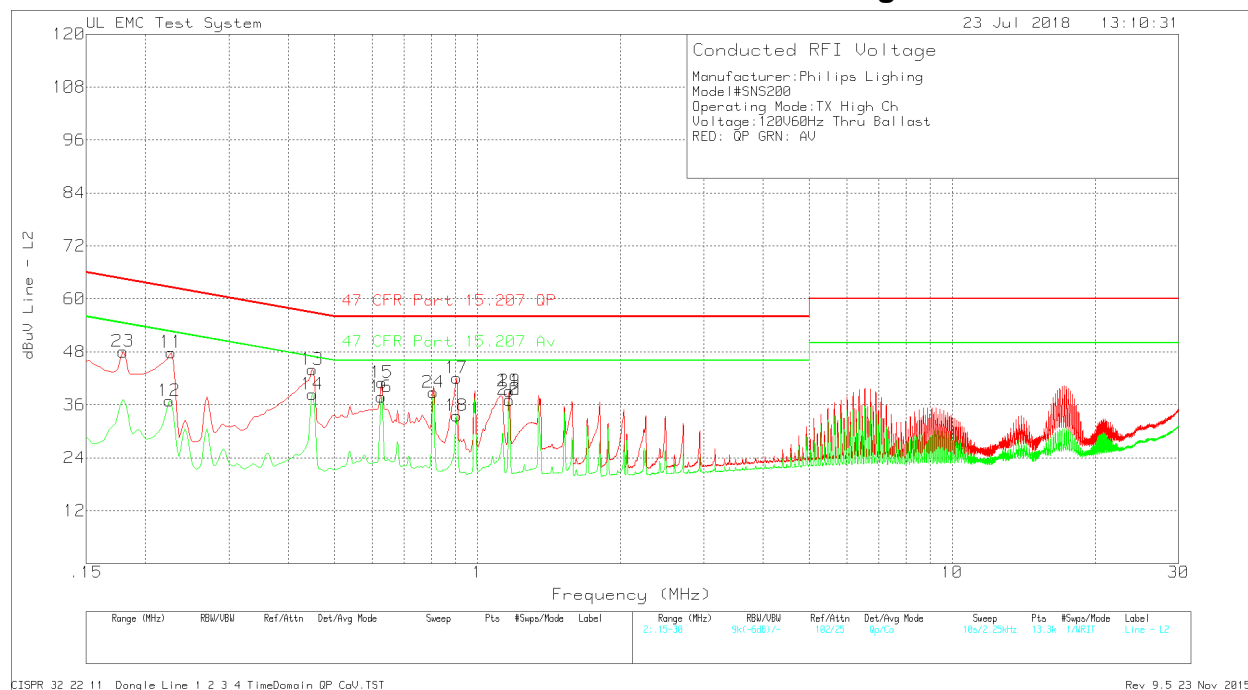
Manufacturer:Philips Lighting
Model#SNS200
Operating Mode:TX Mid Ch
Voltage:120V60Hz Thru Ballast
RED: QP GRN: AV

Trace Markers	Test	Meter	Transducer	Gain/Loss	Corrected	Limit:1	2
No.	Frequency	Reading	Factor	Factor	Reading		
(MHz)			(dB)	(dB)	dBuV		
1	.2265	38.42dBuV Qp	0	11.4	49.82	62.58	52.58
					Margin (dB)	-12.76	-2.76
2	.22425	28.66dBuV Ca	0	11.4	40.06	62.66	52.66
					Margin (dB)	-22.6	-12.6
3	.44925	20.25dBuV Qp	0	10.7	30.95	56.89	46.89
					Margin (dB)	-25.94	-15.94
4	.44925	15.39dBuV Ca	0	10.7	26.09	56.89	46.89
					Margin (dB)	-30.8	-20.8
5	.627	25.17dBuV Qp	0	10.6	35.77	56	46
					Margin (dB)	-20.23	-10.23
6	.627	20.06dBuV Ca	0	10.6	30.66	56	46
					Margin (dB)	-25.34	-15.34
7	.90375	22.96dBuV Qp	0	10.6	33.56	56	46
					Margin (dB)	-22.44	-12.44
8	.90375	16.3dBuV Ca	0	10.6	26.9	56	46
					Margin (dB)	-29.1	-19.1
9	1.167	22.66dBuV Qp	0	10.6	33.26	56	46
					Margin (dB)	-22.74	-12.74
10	1.167	19.46dBuV Ca	0	10.6	30.06	56	46
					Margin (dB)	-25.94	-15.94
Neutral							
11	.2265	36.37dBuV Qp	0	11.4	47.77	62.58	52.58
					Margin (dB)	-14.81	-4.81
12	.22425	25.58dBuV Ca	0	11.4	36.98	62.66	52.66
					Margin (dB)	-25.68	-15.68
13	.44925	33.23dBuV Qp	0	10.7	43.93	56.89	46.89
					Margin (dB)	-12.96	-2.96
14	.44925	27.59dBuV Ca	0	10.7	38.29	56.89	46.89
					Margin (dB)	-18.6	-8.6
15	.627	30.52dBuV Qp	0	10.6	41.12	56	46
					Margin (dB)	-14.88	-4.88
16	.627	27.22dBuV Ca	0	10.6	37.82	56	46
					Margin (dB)	-18.18	-8.18
17	.90375	31.47dBuV Qp	0	10.6	42.07	56	46
					Margin (dB)	-13.93	-3.93
18	.90375	22.87dBuV Ca	0	10.6	33.47	56	46
					Margin (dB)	-22.53	-12.53
19	1.167	28.51dBuV Qp	0	10.6	39.11	56	46
					Margin (dB)	-16.89	-6.89
20	1.167	26.4dBuV Ca	0	10.6	37	56	46
					Margin (dB)	-19	-9

LIMIT 1: 47 CFR Part 15.207 QP
LIMIT 2: 47 CFR Part 15.207 Av

Qp - Quasi-Peak detector
Ca - CISPR Average detection

10.1.3. AC Power Line Results – TX Mode / High Channel



Manufacturer:Philips Lighting
Model#SNS200
Operating Mode:TX High Ch
Voltage:120V60Hz Thru Ballast
RED: QP GRN: AV

Trace Markers	Test	Meter	Transducer	Gain/Loss	Corrected	Limit:1	2
No.	Frequency	Reading	Factor	Factor	Reading	dBuV	
(MHz)	(MHz)		(dB)	(dB)			
=====							
Line 1							
1	.2265	38.45dBuV Qp	0	11.4	49.85	62.58	52.58
					Margin (dB)	-12.73	-2.73
2	.22425	28.71dBuV Ca	0	11.4	40.11	62.66	52.66
					Margin (dB)	-22.55	-12.55
3	.44925	20.34dBuV Qp	0	10.7	31.04	56.89	46.89
					Margin (dB)	-25.85	-15.85
4	.44925	15.72dBuV Ca	0	10.7	26.42	56.89	46.89
					Margin (dB)	-30.47	-20.47
5	.627	25.47dBuV Qp	0	10.6	36.07	56	46
					Margin (dB)	-19.93	-9.93
6	.627	20.22dBuV Ca	0	10.6	30.82	56	46
					Margin (dB)	-25.18	-15.18
7	.906	22.98dBuV Qp	0	10.6	33.58	56	46
					Margin (dB)	-22.42	-12.42
8	.90375	16.29dBuV Ca	0	10.6	26.89	56	46
					Margin (dB)	-29.11	-19.11
9	1.167	22.83dBuV Qp	0	10.6	33.43	56	46
					Margin (dB)	-22.57	-12.57
10	1.167	19.65dBuV Ca	0	10.6	30.25	56	46
					Margin (dB)	-25.75	-15.75
Neutral							
11	.2265	36.48dBuV Qp	0	11.4	47.88	62.58	52.58
					Margin (dB)	-14.7	-4.7
12	.22425	25.5dBuV Ca	0	11.4	36.9	62.66	52.66
					Margin (dB)	-25.76	-15.76
13	.44925	33.26dBuV Qp	0	10.7	43.96	56.89	46.89
					Margin (dB)	-12.93	-2.93
14	.44925	27.65dBuV Ca	0	10.7	38.35	56.89	46.89
					Margin (dB)	-18.54	-8.54
15	.62925	30.4dBuV Qp	0	10.6	41	56	46
					Margin (dB)	-15	-5
16	.627	27.16dBuV Ca	0	10.6	37.76	56	46
					Margin (dB)	-18.24	-8.24
17	.90375	31.5dBuV Qp	0	10.6	42.1	56	46
					Margin (dB)	-13.9	-3.9
18	.90375	22.91dBuV Ca	0	10.6	33.51	56	46
					Margin (dB)	-22.49	-12.49
19	1.167	28.53dBuV Qp	0	10.6	39.13	56	46
					Margin (dB)	-16.87	-6.87
20	1.167	26.53dBuV Ca	0	10.6	37.13	56	46
					Margin (dB)	-18.87	-8.87
21	1.167	28.53dBuV Qp	0	10.6	39.13	56	46
					Margin (dB)	-16.87	-6.87
22	1.167	26.53dBuV Ca	0	10.6	37.13	56	46
					Margin (dB)	-18.87	-8.87
23	.17925	36.15dBuV Qp	.1	11.8	48.05	64.52	54.52
					Margin (dB)	-16.47	-6.47
24	.807	28.25dBuV Ca	0	10.6	38.85	56	46
					Margin (dB)	-17.15	-7.15

LIMIT 1: 47 CFR Part 15.207 QP
LIMIT 2: 47 CFR Part 15.207 Av

Qp - Quasi-Peak detector
Ca - CISPR Average detection