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CNAS L18872

Global Testing Group

EN IEC 55015:2019/A11:2020
EN IEC 61547:2023
EN IEC 61000-3-2:2019/A2:2024
EN 61000-3-3:2013/A2:2021

TEST REPORT

For

LED bulb

MODEL NUMBER: Refer to the model list.

REPORT NUMBER: E04A25071006E00101

ISSUE DATE: August 22, 2025

Prepared for

Shenzhen Fluence Lighting Technology Co., Ltd.
B701, Building 1, Tian'an Digital City Innovation Park, No.475 Huangge North Road, Huanggekeng Community, Longcheng Street,Longgang District, Shenzhen.

Prepared by

Guangdong Global Testing Technology Co., Ltd.

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	August 22, 2025	Initial Issue	

Summary of Test Results

Emission			
Standard	**Test Item**	**Limit**	**Result**
EN IEC 55015:2019/A11:2020	Conducted emission (AC or DC electric power supply)	Clause 4.3	Pass
	Radiated Emission (30MHz to 1GHz)	Clause 4.5.3	Pass
	Radiated Emission (9 kHz to 30 MHz 2m loop)	Clause 4.5.2	Pass
EN IEC 61000-3-2:2019/A2:2024	Harmonic Current Emission	Clause 7	Pass
EN 61000-3-3:2013/A2:2021	Voltage fluctuations and flicker	Clause 5	N/A (NOTE 1, 3)

Immunity (EN IEC 61547:2023)				
Basic Standard	**Test Item**	**Test Specification**	**Criteria**	**Result**
IEC 61000-4-2:2008	Electrostatic Discharge	Contact +/- 4 kV; Air +/- 2 kV;+/- 4 kV;+/- 8 kV	B	Pass
IEC 61000-4-3:2006+A1:2007+A2:2010	Continuous RF electromagnetic field disturbances	3 V/m, 1 kHz, 80 % AM, 80 MHz-1000 MHz	A	Pass
IEC 61000-4-4:2012	Electrical fast transients burst (AC mains power ports)	+/- 1.0 kV 5/50 ns, 5 kHz	B	Pass
IEC 61000-4-5:2014+A1:2017	Surges (AC mains power ports)	refer to Clause 5.7 of the standard	C,B(emergency light)	Pass
IEC 61000-4-6:2013	Continuous induced RF disturbances (AC mains power ports)	150 kHz-80 MHz; 1 kHz 80 % AM, 3 V r.m.s.	A	Pass
IEC 61000-4-8:2009	Power frequency magnetic field	50/60 Hz, 3 A/m	A	N/A (NOTE 1, 2)
IEC 61000-4-11:2004+A1:2017	Voltage dips and interruptions (AC mains power ports)	Interruptions 0 %: 0.5 cycle; Dips 70 %: 10 cycles	B,B	Pass

Note:
1. N/A: In this whole report not applicable.
2. This item need only to be applied to equipment containing components susceptible to magnetic fields, such as Hall elements or magnetic field sensors (EN IEC 61547:2023, Clause 5.4).
3. Incandescent lamp luminaires with ratings less than or equal to 1000W and discharge and LED lamp luminaires with ratings less than 600W, are deemed to comply the dmax limits in this standard and are not required to be tested.

*This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

*The measurement result for the sample received is <Pass> according to <EN IEC 55015:2019/A11:2020, EN IEC 61547:2023, EN IEC 61000-3-2:2019/A2:2024, EN 61000-3-3:2013/A2:2021> when <Accuracy Method> decision rule is applied.

CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Shenzhen Fluence Lighting Technology Co., Ltd.
Address:	B701, Building 1, Tian'an Digital City Innovation Park, No.475 Huangge North Road, Huanggekeng Community, Longcheng Street,Longgang District, Shenzhen.

Manufacturer Information

Company Name:	Shenzhen Fluence Lighting Technology Co., Ltd.
Address:	B701, Building 1, Tian'an Digital City Innovation Park, No.475 Huangge North Road, Huanggekeng Community, Longcheng Street,Longgang District, Shenzhen.

Factory Information

Company Name:	Huizhou Fluence Lighting Technology Co., Ltd.
Address:	4F, 1F, Workshop No. 3, Xingping West Road, Dongjiang Hi-tech Industrial Park, Zhongkai Hi-Tech Zone, Huizhou

EUT Information

Product Description:	LED bulb
Model:	A60-QZG-08F01-30-E27
Series Model:	Refer to the model list.
Brand:	N/A
Sample Received Date:	24 July 2025
Sample ID:	A25071006 001
Date of Tested:	July 24, 2025 to July 29, 2025

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
EN IEC 55015:2019/A11:2020	**Pass**
EN IEC 61547:2023	**Pass**
EN IEC 61000-3-2:2019/A2:2024	**Pass**
EN 61000-3-3:2013/A2:2021	**Pass**

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2. TEST METHODOLOGY

All tests were performed in accordance with the standard EN IEC 55015:2019/A11:2020, EN IEC 61547:2023, EN IEC 61000-3-2:2019/A2:2024, EN 61000-3-3:2013/A2:2021

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 6947.01)** Guangdong Global Testing Technology Co., Ltd. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1343)** Guangdong Global Testing Technology Co., Ltd. has been recognized to perform compliance testing on equipment subject to Supplier's Declaration of Conformity (SDoC) and Certification rules **ISED (Company No.: 30714)** Guangdong Global Testing Technology Co., Ltd. has been registered and fully described in a report filed with ISED. The Company Number is 30714 and the test lab Conformity Assessment Body Identifier (CABID) is CN0148.

Note: All tests measurement facilities use to collect the measurement data are located at Room 101-105, 203-210, Building 1, No.2, Keji 8 Road, Songshan Lake Park, Dongguan city, Guangdong, People's Republic of China, 523808

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. MEASUREMENT UNCERTAINTY

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

Test Item	Measurement Frequency Range	K	U(dB)
Conducted emission (AC or DC electric power supply)	0.009 MHz - 30 MHz	2	3.35
Radiated Emission (30MHz to 1GHz)	30 MHz -1 GHz	2	3.83
Radiated Emission (9 kHz to 30 MHz 2m loop)	0.009 MHz - 30 MHz	2	2.78
Note1: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.			
Note 2: According to the standard CISPR 16-4-2, the MU for the Conducted emissions from the AC mains power ports using AMN should not exceed 3.8 in range of 9kHz to 150kHz and 3.4 in range of 150kHz to 30MHz. We have considered the test results containing the value of Ulab (in dB) for the measurement instrumentation actually used for the measurements.			

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name		LED bulb
Model		A60-QZG-08F01-30-E27
Series Model		Refer to the model list.
Model Difference		Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model A60-QZG-08F01-30-E27, but the circuit and the electronic construction do not change, declared by the manufacturer.
Ratings		AC220-240V 50/60Hz 8W
Power Supply	AC	AC230V/50Hz

5.2. TEST MODE

Test Mode	Description
M01	Lighting
M02	Handling mode: for ESD immunity test

5.3. SUPPORT UNITS FOR SYSTEM TEST

The EUT has been tested as an independent unit

Model list:

Model	Rated voltage（V）	Power（W）	Light switch
G9S-QZG-03C01-27-G9	220-240	2.5	G9
G9S-QZG-03C01-30-G9	220-240	2.5	G9
G9S-QZG-03C01-35-G9	220-240	2.5	G9
G9S-QZG-03C01-40-G9	220-240	2.5	G9
G9S-QZG-03C01-50-G9	220-240	2.5	G9
G9S-QZG-03C01-60-G9	220-240	2.5	G9
G9S-QZG-03F01-27-G9	220-240	2.5	G9
G9S-QZG-03F01-30-G9	220-240	2.5	G9
G9S-QZG-03F01-35-G9	220-240	2.5	G9
G9S-QZG-03F01-40-G9	220-240	2.5	G9
G9S-QZG-03F01-50-G9	220-240	2.5	G9
G9S-QZG-03F01-60-G9	220-240	2.5	G9
G9L-QZG-04C01-27-G9	220-240	3	G9
G9L-QZG-04C01-30-G9	220-240	3	G9
G9L-QZG-04C01-35-G9	220-240	3	G9
G9L-QZG-04C01-40-G9	220-240	3	G9
G9L-QZG-04C01-50-G9	220-240	3	G9
G9L-QZG-04C01-60-G9	220-240	3	G9
G9L-QZG-04F01-27-G9	220-240	3	G9
G9L-QZG-04F01-30-G9	220-240	3	G9
G9L-QZG-04F01-35-G9	220-240	3	G9
G9L-QZG-04F01-40-G9	220-240	3	G9
G9L-QZG-04F01-50-G9	220-240	3	G9
G9L-QZG-04F01-60-G9	220-240	3	G9
C35-QZG-04C01-27-E14	220-240	4	E14
C35-QZG-04C01-30-E14	220-240	4	E14
C35-QZG-04C01-35-E14	220-240	4	E14
C35-QZG-04C01-40-E14	220-240	4	E14
C35-QZG-04C01-50-E14	220-240	4	E14
C35-QZG-04C01-60-E14	220-240	4	E14
C35-QZG-04F01-27-E14	220-240	4	E14
C35-QZG-04F01-30-E14	220-240	4	E14
C35-QZG-04F01-35-E14	220-240	4	E14
C35-QZG-04F01-40-E14	220-240	4	E14
C35-QZG-04F01-50-E14	220-240	4	E14
C35-QZG-04F01-60-E14	220-240	4	E14
T42-N08-WS1-3000K	220-240	8	E27
T42-N08-WS1-4000K	220-240	8	E27
T42-N08-WS1-6000K	220-240	8	E27
T42-N08-CS1-3000K	220-240	8	E27
T42-N08-CS1-4000K	220-240	8	E27
T42-N08-CS1-6000K	220-240	8	E27

A60-QZG-06F01-27-E27	220-240	6	E27
A60-QZG-06F01-30-E27	220-240	6	E27
A60-QZG-06F01-35-E27	220-240	6	E27
A60-QZG-06F01-40-E27	220-240	6	E27
A60-QZG-06F01-50-E27	220-240	6	E27
A60-QZG-06F01-60-E27	220-240	6	E27
A60-QZG-06C01-27-E27	220-240	6	E27
A60-QZG-06C01-30-E27	220-240	6	E27
A60-QZG-06C01-35-E27	220-240	6	E27
A60-QZG-06C01-40-E27	220-240	6	E27
A60-QZG-06C01-50-E27	220-240	6	E27
A60-QZG-06C01-60-E27	220-240	6	E27
A60-QZG-08F01-E27	220-240	8	E27
A60-QZG-08C01-E27	220-240	8	E27
A60-QZG-08F01-27-E27	220-240	8	E27
A60-QZG-08F01-30-E27	220-240	8	E27
A60-QZG-08F01-35-E27	220-240	8	E27
A60-QZG-08F01-40-E27	220-240	8	E27
A60-QZG-08F01-50-E27	220-240	8	E27
A60-QZG-08F01-60-E27	220-240	8	E27
A60-QZG-08C01-27-E27	220-240	8	E27
A60-QZG-08C01-30-E27	220-240	8	E27
A60-QZG-08C01-35-E27	220-240	8	E27
A60-QZG-08C01-40-E27	220-240	8	E27
A60-QZG-08C01-50-E27	220-240	8	E27
A60-QZG-08C01-60-E27	220-240	8	E27

6. MEASURING EQUIPMENT AND SOFTWARE USED

Test Equipment of Conducted emission (AC or DC electric power supply)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
Shielding Room 1	CHENG YU	8*5*4	N/A	10/29/2022	10/28/2025
LISN	R&S	ENV216	102843	9/13/2024	9/12/2025
EMI Test Receiver	R&S	ESR3	102647	9/14/2024	9/13/2025
LISN	Schwarzbeck	NNLK 8129 RC	5046	9/13/2024	9/12/2025
Test Software for CE	Farad	EZ-EMC	V1.1.4.2	N/A	N/A

Test Equipment of Radiated Emission (30MHz to 1GHz)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
Chamber	ETS	9*6*6	Q2146	8/30/2022	8/29/2025
Receiver	R&S	ESCI3	101409	9/14/2024	9/13/2025
Loop Antenna	ETS	6502	243668	2/22/2025	2/21/2028
Pre-Amplifier	HzEMC	HPA-9K0130	HYPA21001	9/14/2024	9/13/2025
Biconilog Antenna	Schwarzbeck	VULB 9168	1315	10/10/2022	10/9/2025
Biconilog Antenna	ETS	3142E	243651	2/22/2025	2/21/2028
Test Software for RE	Farad	EZ-EMC	V1.1.4.2	N/A	N/A

Test Equipment of Radiated Emission (9 kHz to 30 MHz 2m loop)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
EMI Test Receiver	R&S	ESR3	102647	9/14/2024	9/13/2025
3 Loop Antenna	Da Ze	ZN30401	2944A09491	9/13/2024	9/12/2025
Test Software for MR	Farad	EZ-EMC	V1.1.4.2	N/A	N/A

Test Equipment of Electrostatic Discharge					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
ESD Simulator	TESEQ	NSG437	336	9/14/2024	9/13/2025

Test Equipment of Continuous RF electromagnetic field disturbances					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
Stacked Log-Per-Broadband Antenna	Schwarzbeck	STLP 9129	170	N/A	N/A
Power amplifier	MiCOTOP	MPA-80-1000-500	MPA2209336	9/13/2024	9/12/2025
Power amplifier	MiCOTOP	MPA-1000-6000-100	MPA2209337	9/13/2024	9/12/2025
EPM Series Power Meter	Keysight	N1914A	MY53240003	9/14/2024	9/13/2025
Average Power Sensor	Keysight	E9304A	MY41498925	9/14/2024	9/13/2025
Average Power Sensor	Keysight	E9304A	MY41497454	9/14/2024	9/13/2025
EXG Analog Signal Generator	Keysight	N5171B	MY61252624	9/14/2024	9/13/2025
Field Probe	Narda	EP 601	811ZX11137	9/14/2024	9/13/2025
Test Software for RS	HzEMC	FASLAB-RS	V2.7.2.3	N/A	N/A

Test Equipment of Electrical fast transients burst (AC mains power ports)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
EFT Generator	Everfine	EMS61000-4B	G114921CA1341115	9/13/2024	9/12/2025

Test Equipment of Surges (AC mains power ports)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
Immunity Teat System	EMC PARTNER	IMU3000 S-T	105684-2060	9/13/2024	9/12/2025
Signal line coupled decoupling network	EMC PARTNER	CDN-UTP8 ED3	1558	9/13/2024	9/12/2025

Test Equipment of Continuous induced RF disturbances (AC mains power ports)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
EXG Analog Signal Generator	KEYSIGHT	N5171B	MY61252670	9/14/2024	9/13/2025
EPM Series Power Meter	KEYSIGHT	N1914A	MY50000188	9/14/2024	9/13/2025
Power Sensor	KEYSIGHT	E9304A	MY51180004	9/14/2024	9/13/2025
Power Sensor	KEYSIGHT	E9304A	MY51120019	9/14/2024	9/13/2025
Power Amplifier	AR	AR/100A 400M	305558	9/14/2024	9/13/2025
Double directional coupler	XIANGHUA	DDT0-1-40	221008732	9/13/2024	9/12/2025
COUPLING AND DECOUPLING NETWORK	Schwarzbeck	CDN M2/M3PE 16A	148	9/14/2024	9/13/2025
COUPLING AND DECOUPLING NETWORK	Schwarzbeck	CDN T8	53	9/14/2024	9/13/2025
Electromagnetic injection pliers	3ctest	EM CL100	EM C22060625	9/14/2024	9/13/2025
6 db attenuator	Huaxiang	WDTS	220831156	9/13/2024	9/12/2025
Test Software for CS	HzEMC	FASLAB-CS	V2.7.2.1	N/A	N/A

Test Equipment of Voltage dips and interruptions (AC mains power ports)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
DIP Generator	Everfine	EMS61000-11K	G113317CA 8341117	9/13/2024	9/12/2025

Test Equipment of Harmonic Current Emission					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
Harmonic and Fliker Analyzer	EMC PARTNER	Harmonics 1000-1P 230V	241	9/14/2024	9/13/2025
Test Software for H&F	EMC PARTNER AG	HARCS	V6.2	N/A	N/A

7. EMISSION TEST

7.1. CONDUCTED EMISSION (AC OR DC ELECTRIC POWER SUPPLY)

LIMITS

FREQUENCY (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.009-0.05	110	--
0.05-0.15	90-80	--
0.15 -0.5	66 - 56 *	56- 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.09 MHz
Stop Frequency	30 MHz
IF Bandwidth	200Hz (from 9kHz to 150kHz) and 9kHz (from 150kHz to 30MHz)

TEST PROCEDURE

a. The EUT was placed on the top of a rotating table 0.8 meters above the horizontal ground plane and being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

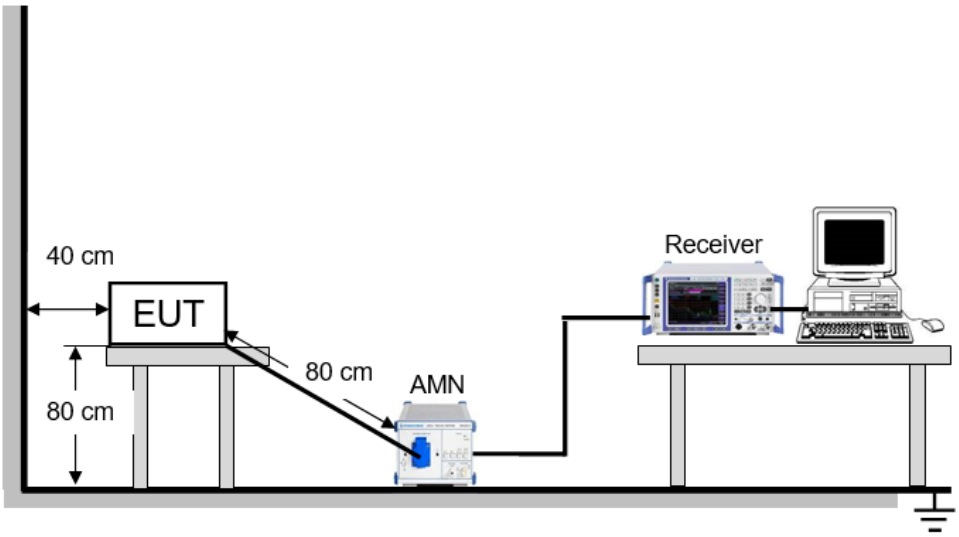
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

d. Cables of hand-operated devices, such as keyboards and mice, shall be placed as for normal used.

e. LISN at least 80 cm from nearest part of EUT chassis.

f. Conducted emissions from the EUT measured in the frequency range between 0.09 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

TEST SETUP



TEST ENVIRONMENT

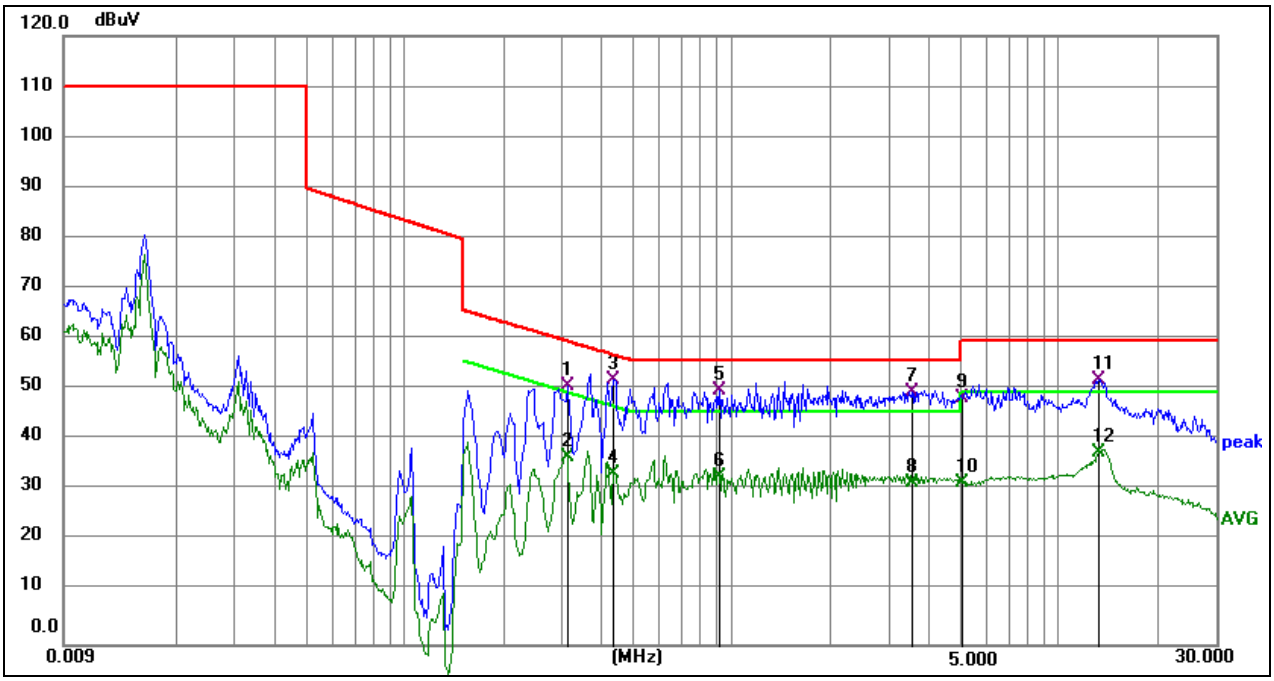
Temperature	25.3℃	Relative Humidity	52%
Atmosphere Pressure	101kPa		

TEST MODE

Pre-test Mode:	M01 ~ M01
Final Test Mode:	M01

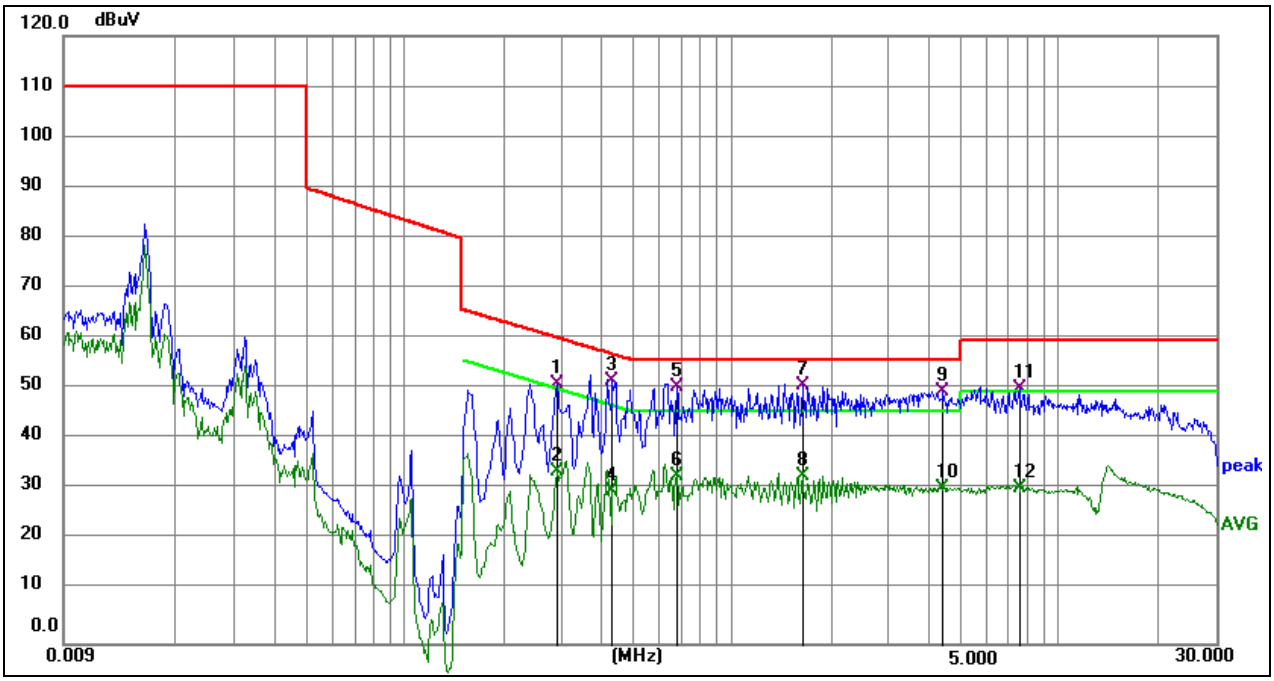
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



Phase: L1	Mode: M01

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.3120	41.43	9.78	51.21	59.92	-8.71	QP
2	0.3120	27.22	9.78	37.00	49.92	-12.92	AVG
3	0.4334	42.54	9.79	52.33	57.19	-4.86	QP
4	0.4334	24.07	9.79	33.86	47.19	-13.33	AVG
5	0.9150	40.32	9.81	50.13	56.00	-5.87	QP
6	0.9150	23.45	9.81	33.26	46.00	-12.74	AVG
7	3.5250	40.06	9.85	49.91	56.00	-6.09	QP
8	3.5250	22.19	9.85	32.04	46.00	-13.96	AVG
9	5.0235	38.73	9.87	48.60	60.00	-11.40	QP
10	5.0235	22.20	9.87	32.07	50.00	-17.93	AVG
11	13.2090	42.02	10.13	52.15	60.00	-7.85	QP
12	13.2090	27.84	10.13	37.97	50.00	-12.03	AVG



Phase: N	Mode: M01

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.2894	41.79	9.68	51.47	60.54	-9.07	QP
2	0.2894	24.38	9.68	34.06	50.54	-16.48	AVG
3	0.4290	42.26	9.69	51.95	57.27	-5.32	QP
4	0.4290	20.55	9.69	30.24	47.27	-17.03	AVG
5	0.6764	41.20	9.70	50.90	56.00	-5.10	QP
6	0.6764	23.50	9.70	33.20	46.00	-12.80	AVG
7	1.6394	41.49	9.72	51.21	56.00	-4.79	QP
8	1.6394	23.51	9.72	33.23	46.00	-12.77	AVG
9	4.4203	40.08	9.77	49.85	56.00	-6.15	QP
10	4.4203	20.99	9.77	30.76	46.00	-15.24	AVG
11	7.5480	40.37	9.98	50.35	60.00	-9.65	QP
12	7.5480	20.85	9.98	30.83	50.00	-19.17	AVG

7.2. RADIATED EMISSION (30MHZ TO 1GHZ)

LIMITS

FREQUENCY (MHz)	At 10 m	At 3 m
	dB(μV/m)	dB(μV/m)
30 – 230	30	40
230 – 1000	37	47

Note:
(1) The limit for radiated test was performed according to EN IEC 55015
(2) The tighter limit applies at the band edges.
(3) Emission level (dBμV/m)=20log Emission level (μV/m).

TEST PROCEDURE

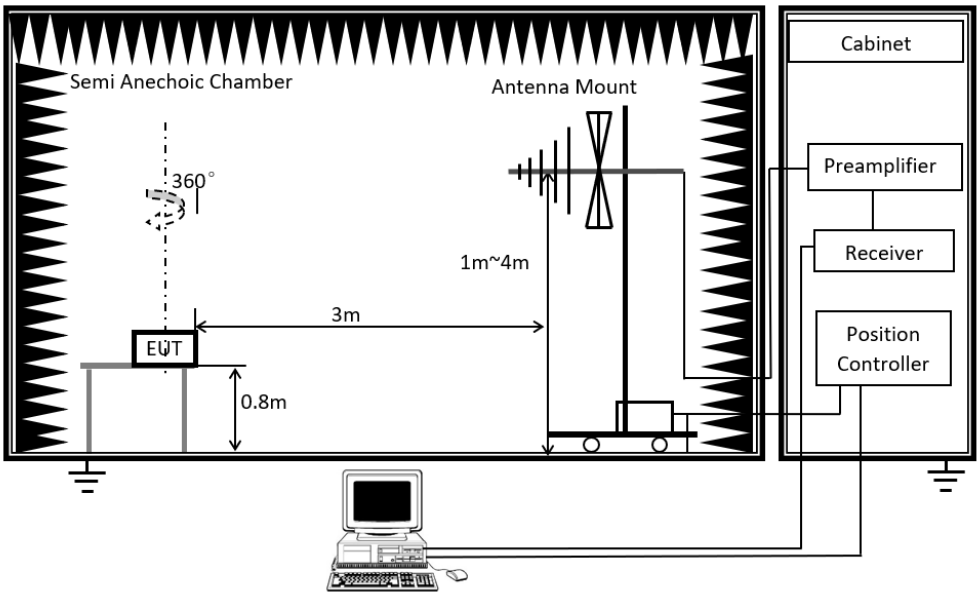
Below 1 GHz and above 30 MHz

The setting of the spectrum analyzer

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak and QP
Trace	Max hold

a. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp was used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
b. The EUT was placed on a turntable with 80 cm above ground.
c. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
d. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
e. Cables of hand-operated devices, such as keyboards and mice, shall be placed as for normal used.
f. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
g. For measurement below 1 GHz, the initial step in collecting Radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

TEST SETUP



TEST ENVIRONMENT

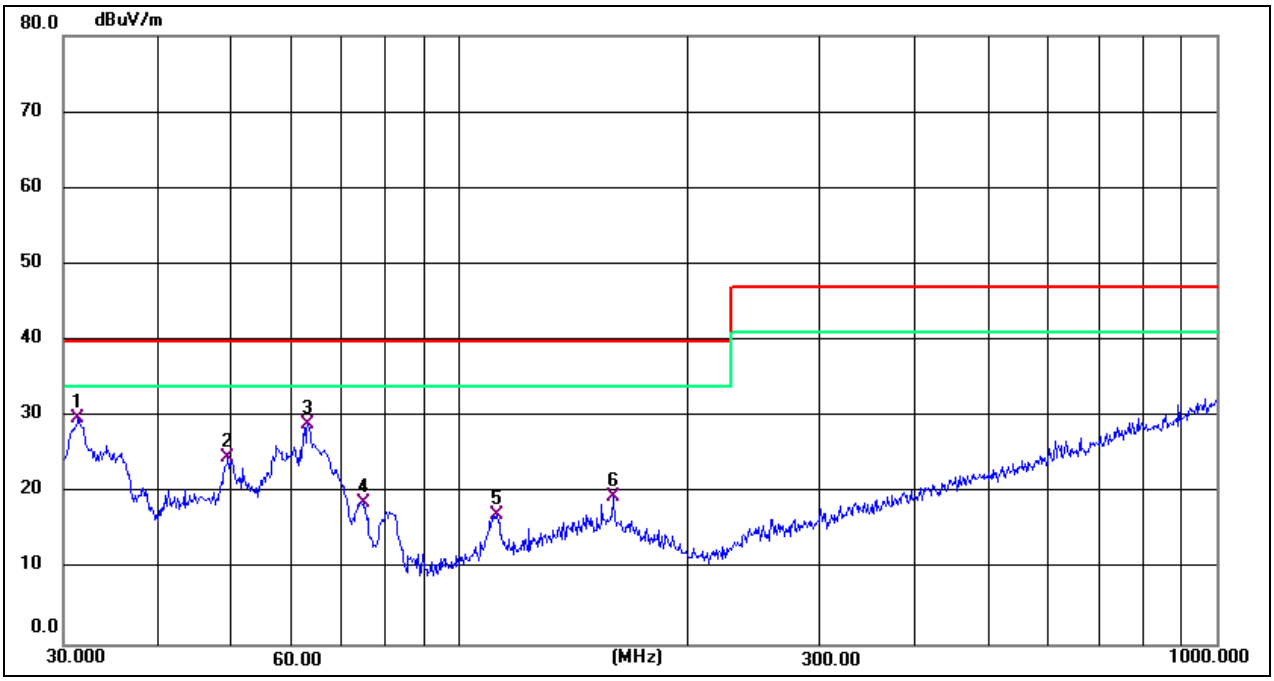
Temperature	22.8℃	Relative Humidity	53%
Atmosphere Pressure	101kPa		

TEST MODE

Pre-test Mode:	M01 ~ M01
Final Test Mode:	M01

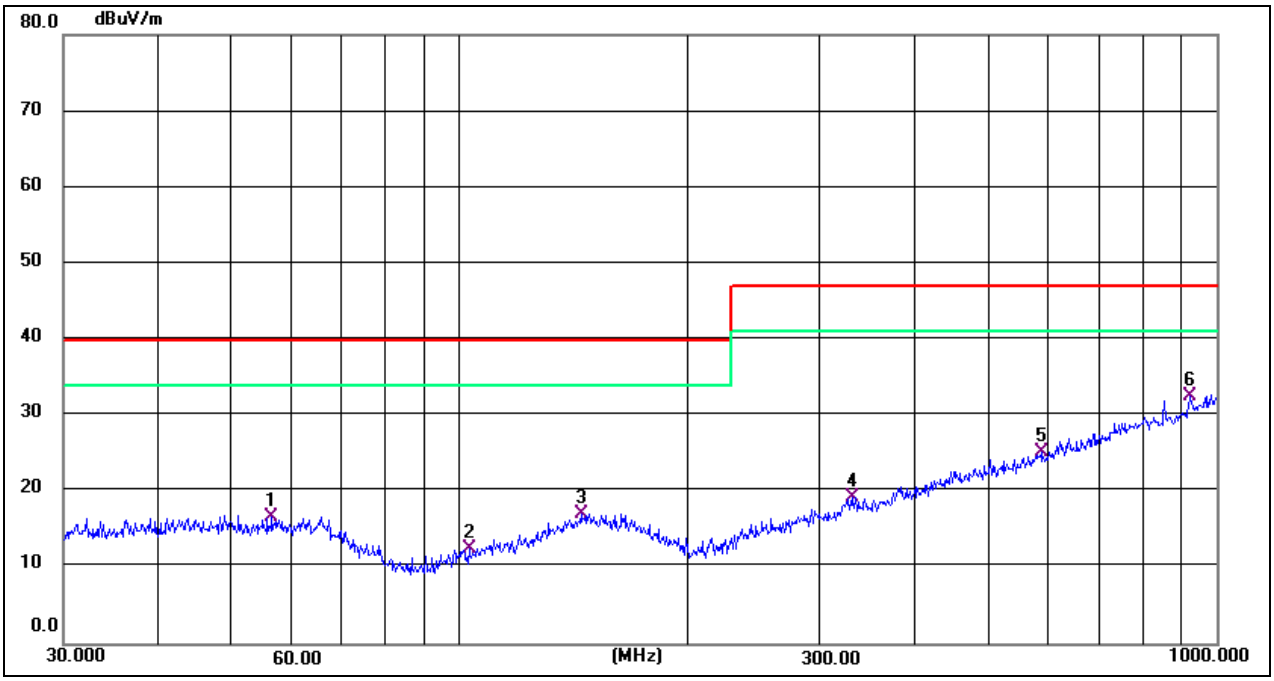
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



Antenna::Vertical	Mode: M01

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1 *	31.3992	42.77	-12.89	29.88	40.00	-10.12	QP	
2	49.5328	36.95	-12.24	24.71	40.00	-15.29	QP	
3	63.0916	42.17	-13.08	29.09	40.00	-10.91	QP	
4	74.6568	33.99	-15.32	18.67	40.00	-21.33	QP	
5	112.1304	32.23	-15.13	17.10	40.00	-22.90	QP	
6	159.7844	31.74	-12.25	19.49	40.00	-20.51	QP	



Antenna::Horizontal	Mode: M01

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	56.5929	29.18	-12.43	16.75	40.00	-23.25	QP	
2	103.0800	28.60	-15.99	12.61	40.00	-27.39	QP	
3	144.8418	29.43	-12.24	17.19	40.00	-22.81	QP	
4	330.1949	30.38	-11.05	19.33	47.00	-27.67	QP	
5	586.8437	29.73	-4.53	25.20	47.00	-21.80	QP	
6 *	922.5157	30.62	1.89	32.51	47.00	-14.49	QP	

7.3. RADIATED EMISSION (9 KHZ TO 30 MHZ 2M LOOP)

LIMITS

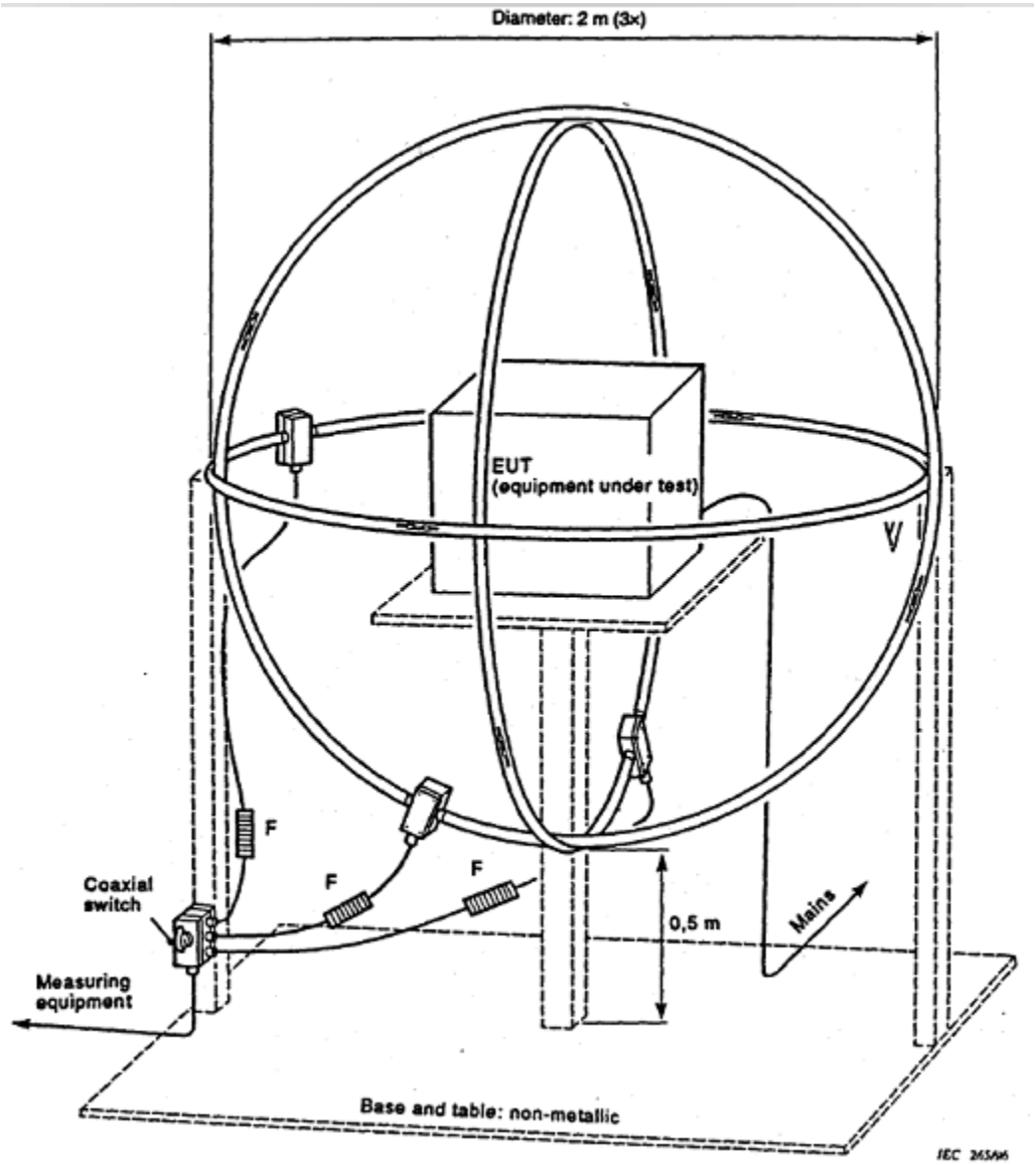
Frequency Range	Quasi-peak limits for three loop diameters dB(μA)
	2m
9 kHz - 70 kHz	88
70 kHz - 150 kHz	88-58*
150 kHz - 3.0 MHz	58-22*
3.0 MHz - 30 MHz	22

Note:
(1) The tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

TEST PROCEDURE

a. The quasi-peak limits of the magnetic component of the radiated electromagnetic disturbance field strength in the frequency range 9 kHz to 30 MHz measured as a current in 2 m, loop antennas around the lighting equipment.
b. The measurement range of radiated emission, which is from 9 kHz to 30 MHz, was investigated. All readings are quasi-peak values with a proper resolution Bandwidth. The initial step in collecting radiated emission data is a spectrum analyzer peak scans of the measurement range for all the test modes and then use test receiver for final measurement.

TEST SETUP



TEST ENVIRONMENT

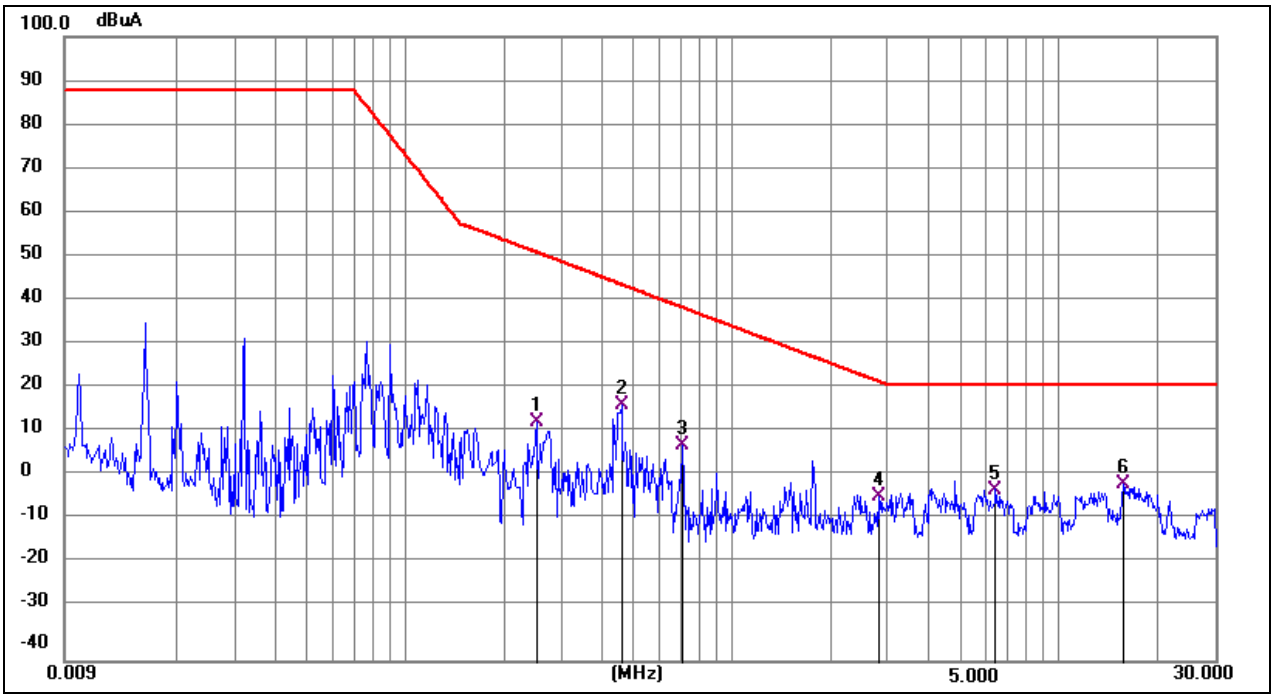
Temperature	26℃	Relative Humidity	54%
Atmosphere Pressure	101kPa		

TEST MODE

Pre-test Mode:	M01 ~ M01
Final Test Mode:	M01

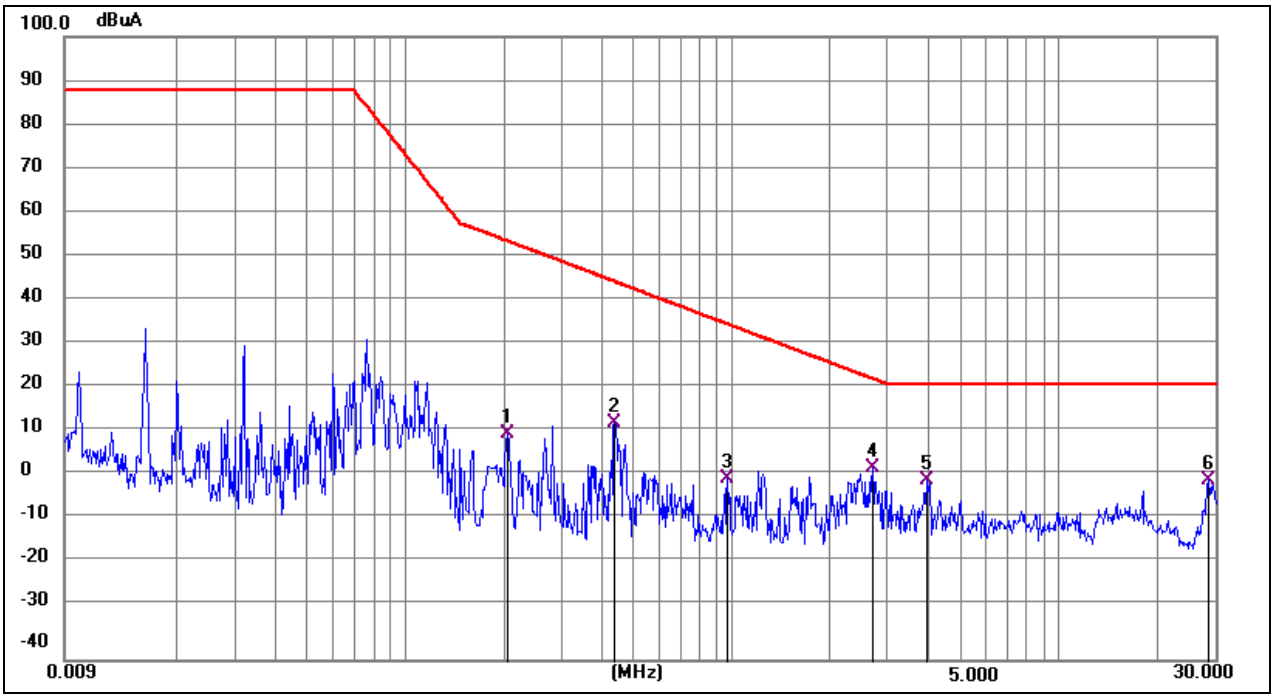
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



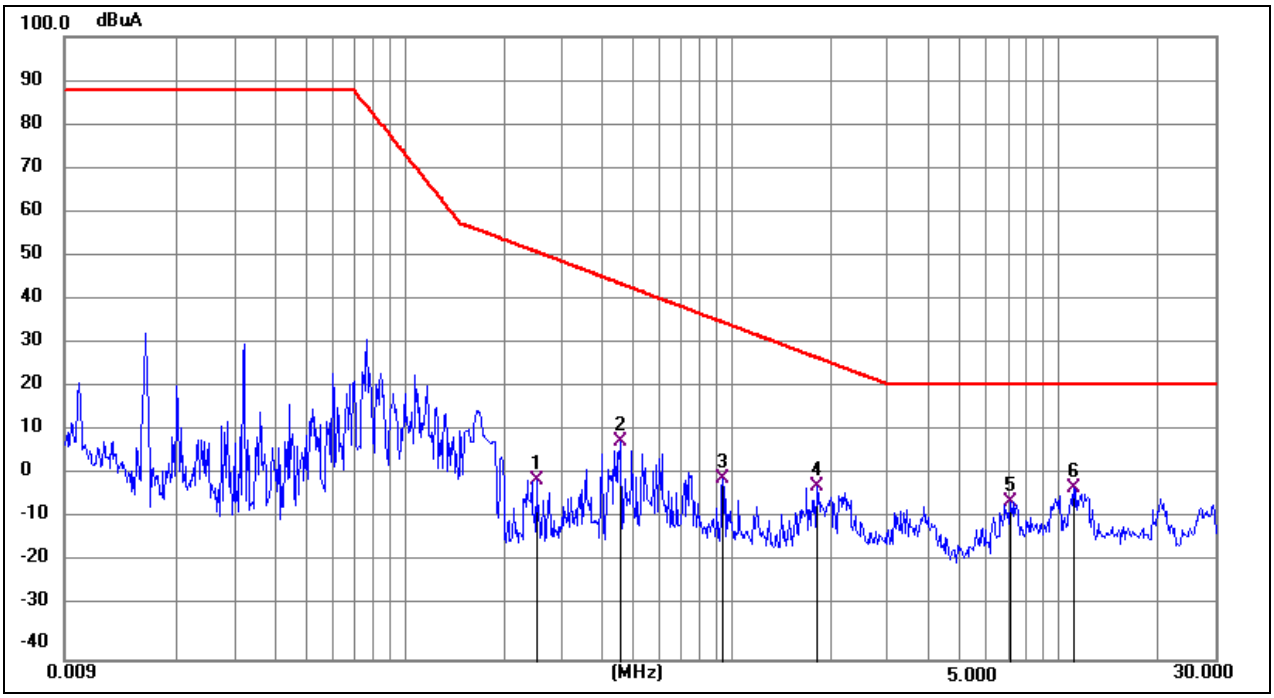
Phase: X	Mode: M01

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2490	15.03	-1.48	13.55	51.80	-38.25	QP
2	0.4560	18.62	-1.12	17.50	44.56	-27.06	QP
3	0.7035	9.01	-0.45	8.56	39.37	-30.81	QP
4	2.8003	-2.81	-0.07	-2.88	22.82	-25.70	QP
5	6.4005	-0.65	-0.79	-1.44	22.00	-23.44	QP
6	15.8055	-1.87	1.60	-0.27	22.00	-22.27	QP



Phase: Y	Mode: M01

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuA)	(dBuA)	(dB)	
1	0.2040	12.43	-1.57	10.86	54.19	-43.33	QP
2	0.4344	14.61	-1.15	13.46	45.14	-31.68	QP
3	0.9645	0.52	0.29	0.81	35.59	-34.78	QP
4	2.6833	3.18	-0.05	3.13	23.34	-20.21	QP
5	3.9344	0.73	-0.24	0.49	22.00	-21.51	QP
6	28.7520	8.04	-7.61	0.43	22.00	-21.57	QP



Phase: Z	Mode: M01

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuA)	(dBuA)	(dB)	
1	0.2490	1.79	-1.48	0.31	51.80	-51.49	QP
2	0.4526	10.21	-1.13	9.08	44.65	-35.57	QP
3	0.9375	0.51	0.25	0.76	35.93	-35.17	QP
4	1.8240	-1.06	0.09	-0.97	27.96	-28.93	QP
5	7.0890	-3.35	-1.07	-4.42	22.00	-26.42	QP
6	11.1074	-1.22	0.03	-1.19	22.00	-23.19	QP

7.4. HARMONIC CURRENT EMISSION

LIMITS

a) Active input power > 25 W

For luminaires with incandescent lamps and built-in phase control dimming having a rated power greater than 25 W, the harmonics of the input current shall not exceed the limits given in Table 1.

For any other lighting equipment having a rated power greater than 25 W, the harmonics of the input current shall not exceed the relative limits given in Table 2. For those types that include means for control (e.g. dimming, colour), the harmonics of the input current shall not exceed the harmonic current values derived from the percentage limits given in Table 2 for the maximum active input power (P max) condition when tested in both following conditions:

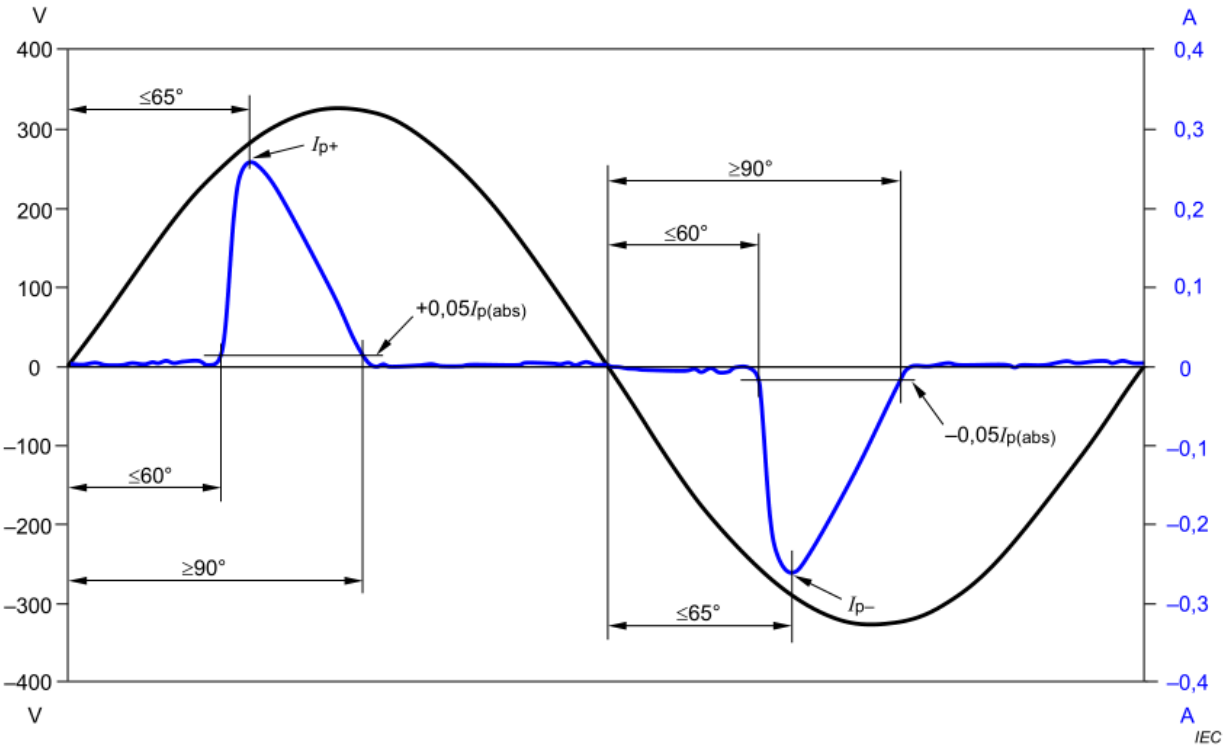
- with the means for control set to obtain P max ;
- with the means for control set to the position expected to produce the maximum total harmonic current (THC) within the active input power range [P min , P max], where

• P min = 5 W, if P max ⩽ 50 W;
• P min = 10 % of P max, if 50 W < P max ⩽ 250 W;
• P min = 25 W, if P max > 250 W.

b) Rated power ⩾ 5 W and ⩽ 25 W

Lighting equipment having a rated power greater than or equal to 5 W and less than or equal to 25 W shall comply with one of the following three sets of requirements:

- the harmonic currents shall not exceed the power-related limits of Table 3, column 2;
- the third harmonic current, expressed as a percentage of the fundamental current, shall not exceed 86 % and the fifth harmonic current shall not exceed 61 %. In addition, the waveform of the input current shall be such that it reaches the 5 % current threshold before or at 60°, has its peak value before or at 65° and does not fall below the 5 % current threshold before 90°, referenced to any zero crossing of the fundamental supply voltage. The current threshold is 5 % of the highest absolute peak value that occurs in the measurement window, and the phase angle measurements are made on the cycle that includes this absolute peak value (see Figure 2). Components of current with frequencies above 9 kHz shall not influence this evaluation (a filter similar to the one described in 5.3 of IEC 61000-4-7:2002 and IEC 61000-4-7:2002/AMD1:2008 may be used);
- the THD shall not exceed 70 %. The third order harmonic current, expressed as a percentage of the fundamental current, shall not exceed 35 %, the fifth order current shall not exceed 25 %, the seventh order current shall not exceed 30 %, the ninth and eleventh order currents shall not exceed 20 % and the second order current shall not exceed 5 %.



NOTE $I_{p(abs)}$ is the higher absolute value of I_{p+} and I_{p-}.

Table 1 – Limits for Class A equipment

Limits for class A Equipment	
Harmonic order h	Maximum permissible harmonic current A
Odd harmonics	
3	2.30
5	1.14
7	0.77
9	0.40
11	0.33
13	0.21
15≤ h≤ 39	0.15(15/h)
Even harmonics	
2	1.08
4	0.43
6	0.30
8≤ h ≤40	0.23(8/h)

Table 2 – Limits for Class C equipment

Limits for class C Equipment active input power > 25W	
Harmonic order h	Maximum permissible harmonic current expressed as a percentage of the input current at the fundamental frequency %
2	2
3	27
5	10
7	7
9	5
11≤ h≤ 39 (odd harmonic only)	3
[a] λ is the circuit power factor.	

Table 3 – Limits for Class D equipment

Harmonic order h	**Maximum permissible harmonic current per watt** mA/W	**Maximum permissible harmonic current** A
3	3,4	2,30
5	1,9	1,14
7	1,0	0,77
9	0,5	0,40
11	0,35	0,33
$13 \leq h \leq 39$ (odd harmonics only)	$\frac{3{,}85}{h}$	See Table 1

TEST PROCEDURE

a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating Condition.

b. The classification of EUT is according to EN 61000-3-2. The EUT is classified as follows:

Class A:

Balanced three-phase equipment, Household appliances excluding equipment as Class D, Tools excluding portable tools, Dimmers for incandescent lamps, audio equipment, equipment not specified in one of the three other classes.

Class C:

Lighting equipment.

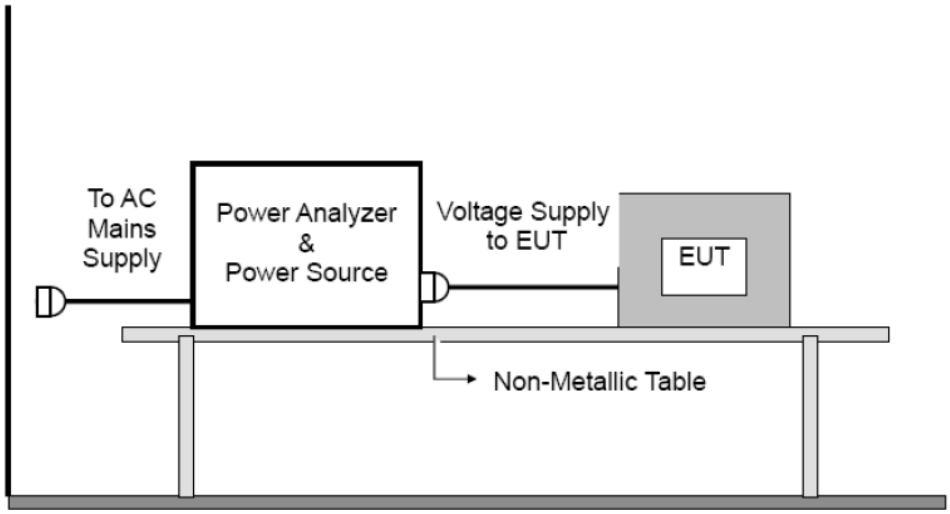
Class D:

Equipment having a specified power less than or equal to 600W of the following types: Personal computers and personal computer monitors and television receivers.

c. The correspondent test program of test instrument to measure the current harmonics emanated

from EUT is chosen. The measure time shall be not less than the time necessary for the EUT to be exercised.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.2℃	Relative Humidity	56%
Atmosphere Pressure	101kPa		

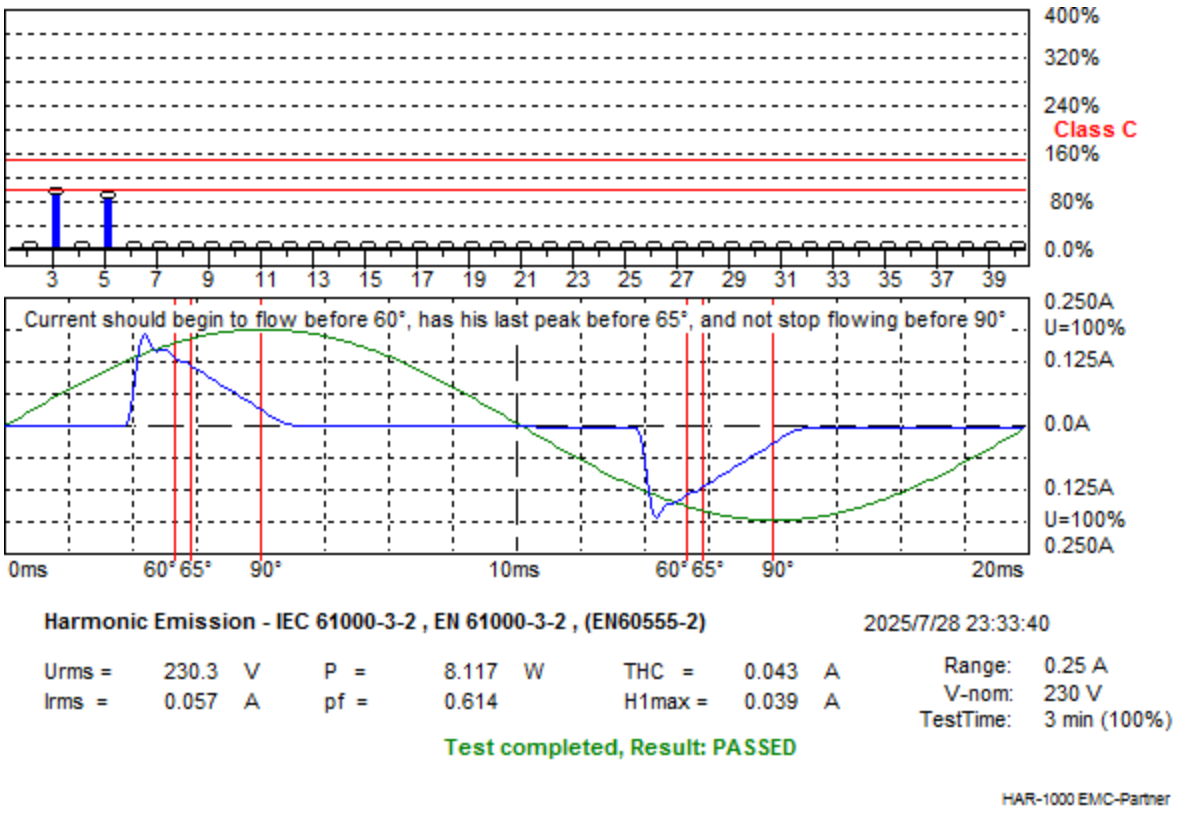
TEST MODE

Pre-test Mode:	M01 ~ M01
Final Test Mode:	M01

Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS

Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2)



Urms = 230.3V Freq = 50.000 Range: 0.25 A
Irms = 0.057A Ipk = 0.188A cf = 3.274
P = 8.117W S = 13.21VA pf = 0.614
THDi = 109 % THDu = 0.10 % Class C

Test - Time : 3min (100 %)

Limit Reference: H1(max)= 0.0393A pf(max)= 0.673

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Irms [A]	Imax [A]	Limit [A]	Status
1	50	0.0391	0.0391	0.0393		
2	100	0.0000	0.0001	0.0001		
3	150	0.0308	0.0307	0.0308	0.0338	
4	200	0.0000	0.0001	0.0001		

5	250	0.0204	0.0204	0.0204	0.0239
6	300	0.0000	0.0001	0.0001	
7	350	0.0112	0.0113	0.0113	
8	400	0.0000	0.0001	0.0001	
9	450	0.0081	0.0081	0.0081	
10	500	0.0000	0.0001	0.0001	
11	550	0.0080	0.0080	0.0080	
12	600	0.0000	0.0001	0.0001	
13	650	0.0065	0.0065	0.0066	
14	700	0.0000	0.0001	0.0001	
15	750	0.0051	0.0051	0.0051	
16	800	0.0000	0.0001	0.0001	
17	850	0.0000	0.0049	0.0049	
18	900	0.0000	0.0001	0.0001	
19	950	0.0000	0.0046	0.0047	
20	1000	0.0000	0.0001	0.0001	
21	1050	0.0000	0.0039	0.0040	
22	1100	0.0000	0.0001	0.0001	
23	1150	0.0000	0.0036	0.0037	
24	1200	0.0000	0.0001	0.0001	
25	1250	0.0000	0.0036	0.0036	
26	1300	0.0000	0.0001	0.0002	
27	1350	0.0000	0.0033	0.0033	
28	1400	0.0000	0.0001	0.0001	
29	1450	0.0000	0.0030	0.0031	
30	1500	0.0000	0.0001	0.0001	
31	1550	0.0000	0.0030	0.0030	
32	1600	0.0000	0.0001	0.0002	
33	1650	0.0000	0.0029	0.0029	
34	1700	0.0000	0.0001	0.0002	
35	1750	0.0000	0.0026	0.0027	
36	1800	0.0000	0.0001	0.0002	
37	1850	0.0000	0.0025	0.0026	
38	1900	0.0000	0.0001	0.0002	
39	1950	0.0000	0.0025	0.0025	
40	2000	0.0000	0.0001	0.0002	

8. IMMUNITY TEST

8.1. PERFORMANCE CRITERIA

EN IEC 61547:2023

GENERAL PERFORMANCE CRITERIA

According to EN 61547 standard, the general performance criteria as following:

Criteria A	During the test, no change of the luminous intensity shall be observed and the regulating control, if any, shall operate during the test as intended.
Criteria B	During the test, the luminous intensity may change to any value. After the test, the luminous intensity shall be restored to its initial value within 1min.Regulating controls need not unaction during the test, but after the test, the mode of the control shall be the same as before the test provided that during the test no mode changing commands were given.
Criteria C	During and after the test, any change of the luminous intensity is allowed and the lamp(s) may be extinguished. After the test, within 30 min, all functions shall return to normal, if necessary by temporary interruption of the mains supply and/or operating the regulating control.Additional requirement for lighting equipment incorporating a starting device: After the test,the lighting equipment is switched off. After half an hour, it is switched on again. The lighting equipment shall start and operate as intended.

8.2. ELECTROSTATIC DISCHARGE

TEST SPECIFICATION

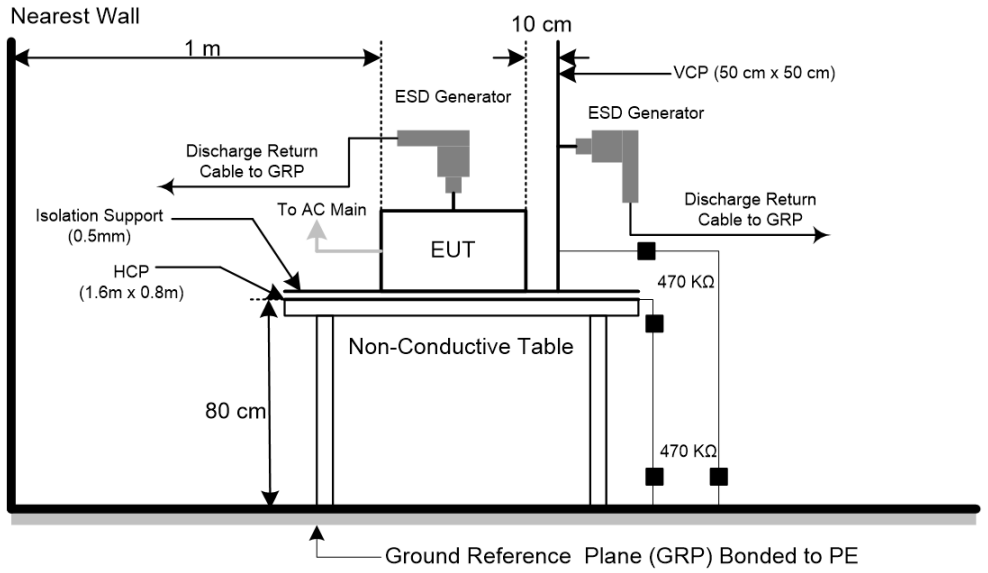
Standard:	EN IEC 61547:2023 IEC 61000-4-2:2008
Test Level:	Air Discharge: 2 kV, 4 kV, 8 kV (Direct); Contact Discharge: 4 kV (Direct/Indirect)
Criterion Required:	Performance criteria B
Discharge Impedance:	330 Ω / 150 pF
Polarity:	Positive & Negative
Number of Discharge:	Minimum 10 times at each test point
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

TEST PROCEDURE

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manner:

a. Contact discharge was applied to conductive surfaces and coupling planes of the EUT.
   During the test, it was performed with single discharges. For the single discharge time between successive single discharges was at least 1 second.
   Vertical Coupling Plane (VCP):
   The coupling plane, of dimensions 0.5 m x 0.5 m, is placed parallel to, and positioned at a distance 0.1 m from, the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.
   Horizontal Coupling Plane (HCP):
   The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1 m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.
b. Air discharges at insulation surfaces of the EUT.
   It was at least ten single discharges with positive and negative at the same selected point.
c. The test shall be performed with single discharges. On each pre-selected point at least 10 single discharges (in the most sensitive polarity) shall be applied.
d. For air discharge testing, the test shall be applied at all test levels 4 kV and 8 kV.
e. The ESD test should be executed for both normal operation and handling cases.
f. For the actual test configuration, please refer to the related Item: EUT Test Photos.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.4℃	Relative Humidity	52%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M01, M02

TEST RESULTS

Mode	Level(kV)	Polarity	Test Point	Criteria	Result	Judgement
Air Discharge	8	+	All Slot	B	A	Pass
Air Discharge	8	-	All Slot	B	A	Pass
Contact Discharge	4	+	All Metal	B	A	Pass
Contact Discharge	4	-	All Metal	B	A	Pass
Horizontal Coupling	4	+	Front,rear,left,right	B	A	Pass
Horizontal Coupling	4	-	Front,rear,left,right	B	A	Pass
Vertical Coupling	4	+	Front,rear,left,right	B	A	Pass
Vertical Coupling	4	-	Front,rear,left,right	B	A	Pass
Air Discharge	15	+	All Slot	/	/	/
Air Discharge	15	-	All Slot	/	/	/
Contact Discharge	8	+	All Metal	/	/	/
Contact Discharge	8	-	All Metal	/	/	/

Observation:
A: No observable change.
Conclusion: The EUT met the requirements of the standard

8.3. CONTINUOUS RF ELECTROMAGNETIC FIELD DISTURBANCES

TEST SPECIFICATION

Standard:	EN IEC 61547:2023 IEC 61000-4-3:2006+A1:2007+A2:2010
Criterion Required:	Performance criteria A
Frequency range:	80 MHz to 1 000 MHz
Test level:	3 V/m (unmodulated)
Modulation:	1 kHz, 80 % AM, sine wave
Frequency Step:	1 % increment
Antenna Polarization:	Horizontal and vertical
Antenna Height:	1.5 meters
Test Distance:	3 meters
Dwell time:	2 seconds

TEST PROCEDURE

The test procedure was in accordance with IEC 61000-4-3.

a. The testing was performed in a fully anechoic chamber. The transmit antenna was located at a distance of 3 meters from the EUT.

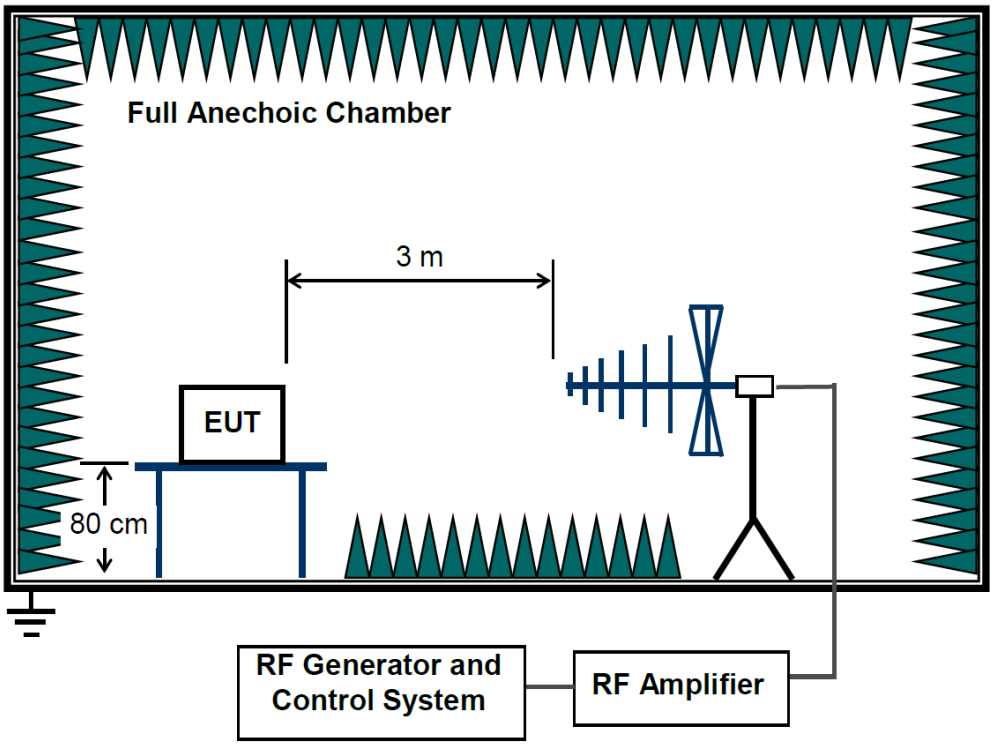
b. The disturbance test signal shall be 80 % amplitude modulated by a sine wave, preferably having a frequency of 1 kHz. A frequency other than 1 kHz may be used where permitted within EN 61547.

c. 1 % step size is preferred, the frequency range can be swept incrementally with a step size not exceeding 4 % of the previous frequency with a test level of twice the value of the specified test level.

d. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised and to be able to respond. However, the dwell time should not exceed 5 s at each of the frequencies during the scan.

e. The test was performed with the EUT exposed to both vertically and horizontally polarized fields.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.4℃	Relative Humidity	54%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M01

TEST RESULTS

Freq.Range (MHz)	Position (Face)	Polarity (H or V)	Field Strength (V/m) (unmodulated,r.m.s)	Criterion	Result	Judgment
80-1000	0°	H&V	3 V/m	A	A	Pass
80-1000	90°	H&V	3 V/m	A	A	Pass
80-1000	180°	H&V	3 V/m	A	A	Pass
80-1000	270°	H&V	3 V/m	A	A	Pass

Observation:
A: No observable change.
Conclusion: The EUT met the requirements of the standard

8.4. ELECTRICAL FAST TRANSIENTS BURST (AC MAINS POWER PORTS)

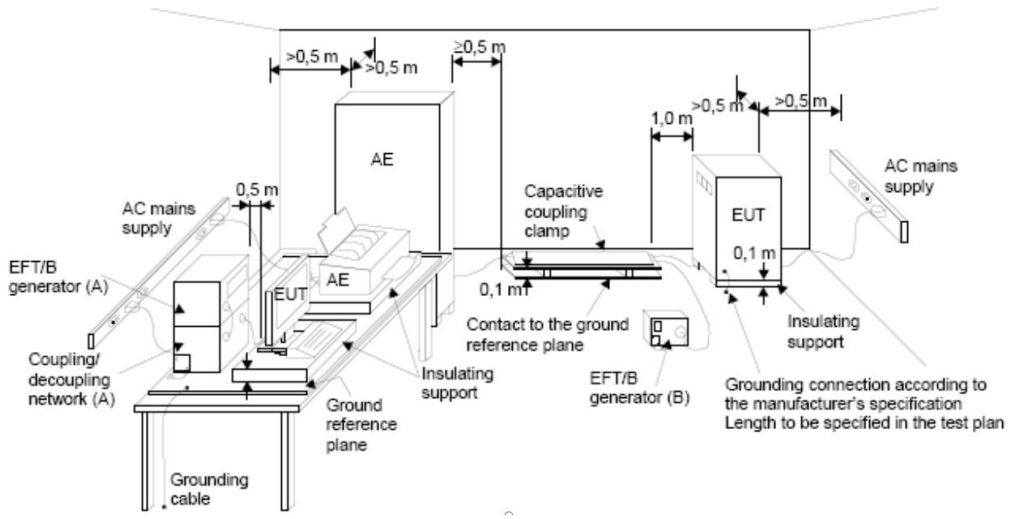
TEST SPECIFICATION

Standard:	EN IEC 61547:2023 IEC 61000-4-4:2012
Criterion Required:	Performance criteria B
Polarity:	Positive & Negative
Test Level:	± 1 kV (peak)
Repetition frequency	5 kHz
Impulse Wave shape:	5/50 ns
Burst Duration:	15 ms
Burst Period:	300 ms
Test Duration:	2 minute per level & polarity

TEST PROCEDURE

a. Both positive and negative polarity discharges were applied.
b. 2 min with a positive polarity and for 2 min with a negative polarity
c. The transient/burst waveform was in accordance with IEC 61000-4-4, 5/50ns.
d. Multi conductor cables shall be tested as a single cable. Cables shall not be split or divided into groups of conductors for this test.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.2℃	Relative Humidity	53%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M01

TEST RESULTS

Coupling Line	Test Levels(kV)	Polarity	Criteria	Results	Judgement
L, N	1	+	B	A	Pass
L, N	1	-	B	A	Pass
Analogue/Digital data ports	0.5	+	B	/	/
Analogue/Digital data ports	0.5	-	B	/	/
DC network power ports	0.5	+	B	/	/
DC network power ports	0.5	-	B	/	/
Observation: A: No observable change. **Conclusion:** The EUT met the requirements of the standard					

8.5. SURGES (AC MAINS POWER PORTS)

TEST SPECIFICATION

Standard:	EN IEC 61547:2023 IEC 61000-4-5:2014+A1:2017
Criterion Required:	Performance criteria C
Wave Shape:	1.2/50 (8/20) μs
Test Level:	Self-ballasted lamps ⩽ 25 W: ± 0.5 kV at line-to-line; Lighting equipment (except selfballasted lamps ⩽ 25 W): ± 1 kV at line-to-line, ± 2 kV at line-to-earth; Road and street lighting equipment : ± 2 kV at line-to-line, ± 4 kV at line-to-earth; 1.2/50 us
Polarity:	Positive & Negative
Interval:	1 per minute
Phase Angle:	5 positive at 90°and 5 negative at 270

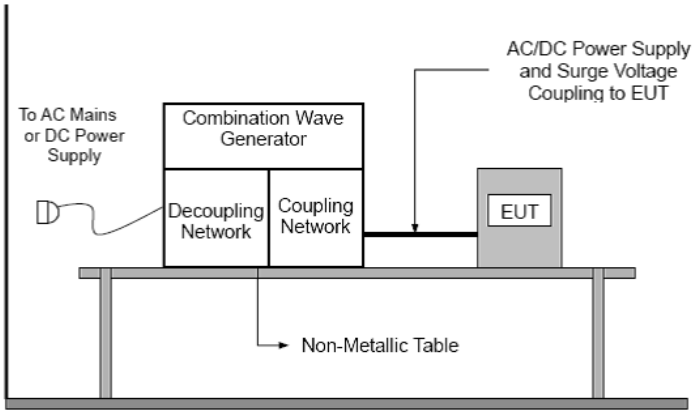
TEST PROCEDURE

a. The EUT and the auxiliary equipment were placed on a table of 0.8m heights above a metal ground reference plane. The size of ground plane is greater than 1m×1m and project beyond the EUT by at least 0.1m on all sides. The ground plane is connected to the protective earth. The length of power cord between the coupling device and the EUT was less than 2 meters (provided by the manufacturer).

b. The EUT was connected to the power mains through a coupling device that directly couples the surge interference signal. The surge noise was applied synchronized to the voltage phase at the zero crossing and the peak value of the AC voltage wave (positive and negative).

c. The surges were applied line to line and line(s) to earth. When testing line to earth the test voltage was applied successively between each of the lines and earth. Steps up to the test level specified increased the test voltage. All lower levels including the selected test level were tested. The polarity of each surge level included positive and negative test pulses.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.2℃	Relative Humidity	52%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M01

TEST RESULTS

Coupling Line	Self-ballasted lamps ⩽ 25 W	Road and street lighting	Other Lighting	Polarity	Phase	Criteria	Result	Judgement
L-N	0.5KV	0.5KV; 1KV; 2KV	0.5KV; 1KV	+	90°	C,B(emergency light)	A	Pass
L-N	0.5KV	0.5KV; 1KV; 2KV	0.5KV; 1KV	-	270°	C,B(emergency light)	A	Pass

Observation:
A: No observable change.
Conclusion: The EUT met the requirements of the standard

8.6. CONTINUOUS INDUCED RF DISTURBANCES (AC MAINS POWER PORTS)

TEST SPECIFICATION

Standard:	EN IEC 61547:2023 IEC 61000-4-6:2013
Criterion Required:	Performance criteria A
Frequency range:	0.15 MHz to 80 MHz
Test Level:	3 V r.m.s. (unmodulated)
Modulation:	1 kHz, 80 % AM, sine wave
Step Size:	1% increment
Dwell Time:	1 seconds

TEST PROCEDURE

a. The EUT shall be tested within its intended operating and climatic conditions.

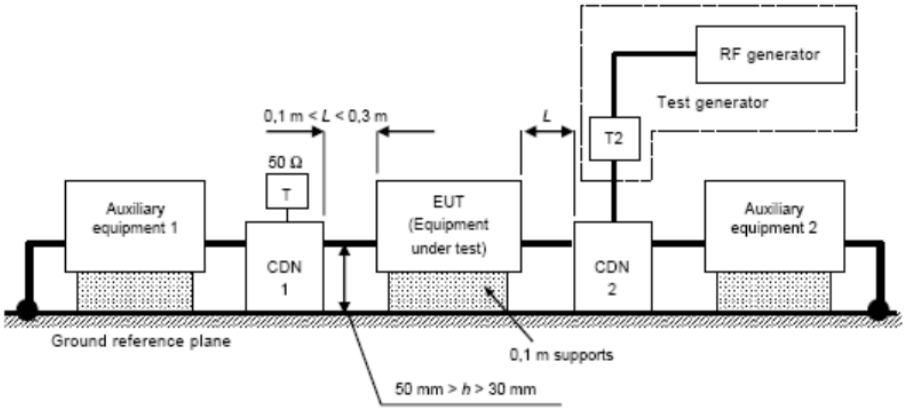
b. The test shall be performed with the test generator connected to each of the coupling and decoupling devices in turn, while the other non-excited RF input ports of the coupling devices are terminated by a 50-ohm load resistor.

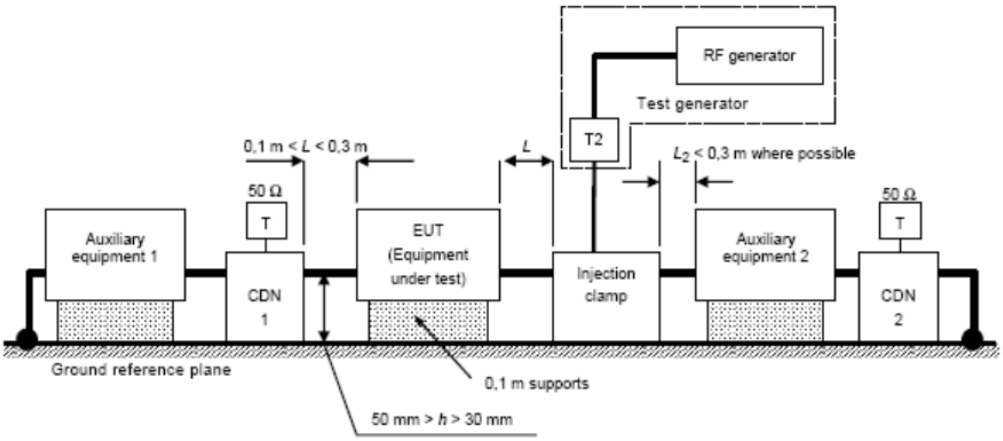
c. The frequency range is swept from 150 kHz to 80 MHz, using the signal level established during the setting process and with a disturbance signal of 80 % amplitude. The signal is modulated with a 1 kHz sine wave, pausing to adjust the RF signal level or the switch coupling devices as necessary. The sweep rate shall not exceed 1.5×10^{-3} decades/s. The step size shall not exceed 1 % of the start and thereafter 1 % of the preceding frequency value where the frequency is swept incrementally.

d. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised, and able to respond. Sensitive frequencies such as clock frequencies and harmonics or frequencies of dominant interest, shall be analyzed separately.

e. Attempts should be made to fully exercise the EUT during test, and to fully interrogate all exercise modes selected for susceptibility.

TEST SETUP





TEST ENVIRONMENT

Temperature	23.4℃	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M01

TEST RESULTS

Test Ports (Mode)	Freq.Range (MHz)	Field Strength (unmodulated,r.m.s)	Criteria	Results	Judgment
AC mains power ports	0.15---80	3 V	A	A	Pass
DC network power ports	0.15---80	3 V	A	/	/
Analogue/digital data ports	0.15---80	3 V	A	/	/
Observation: A: No observable change. **Conclusion:** The EUT met the requirements of the standard					

8.7. VOLTAGE DIPS AND INTERRUPTIONS (AC MAINS POWER PORTS)

TEST SPECIFICATION

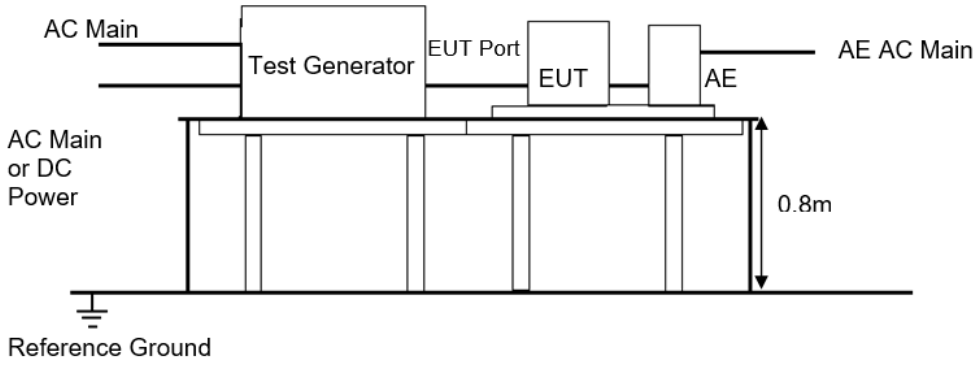
Standard:	EN IEC 61547:2023 IEC 61000-4-11:2004+A1:2017
Criterion Required:	Voltage dips: B; Voltage short interruptions: B
Test Level:	Voltage dips: 70%, 10 Cycles, Voltage short interruptions: 0%, 0.5 Cycles
No. of Dips / Interruptions:	3 per Level
Interval between Event:	Minimum 10 seconds
Phase Angle:	0°/45°/90°/135°/180°/225°/270°/315°

TEST PROCEDURE

a. The power cord was used as supplied by the manufacturer. The EUT was connected to the line output of the Voltage Dips and Interruption Generator.

b. Voltage reductions occur at 0 degree crossover point of the voltage waveform. The performance of the EUT was checked after the voltage dip or interruption.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.5℃	Relative Humidity	52%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M01

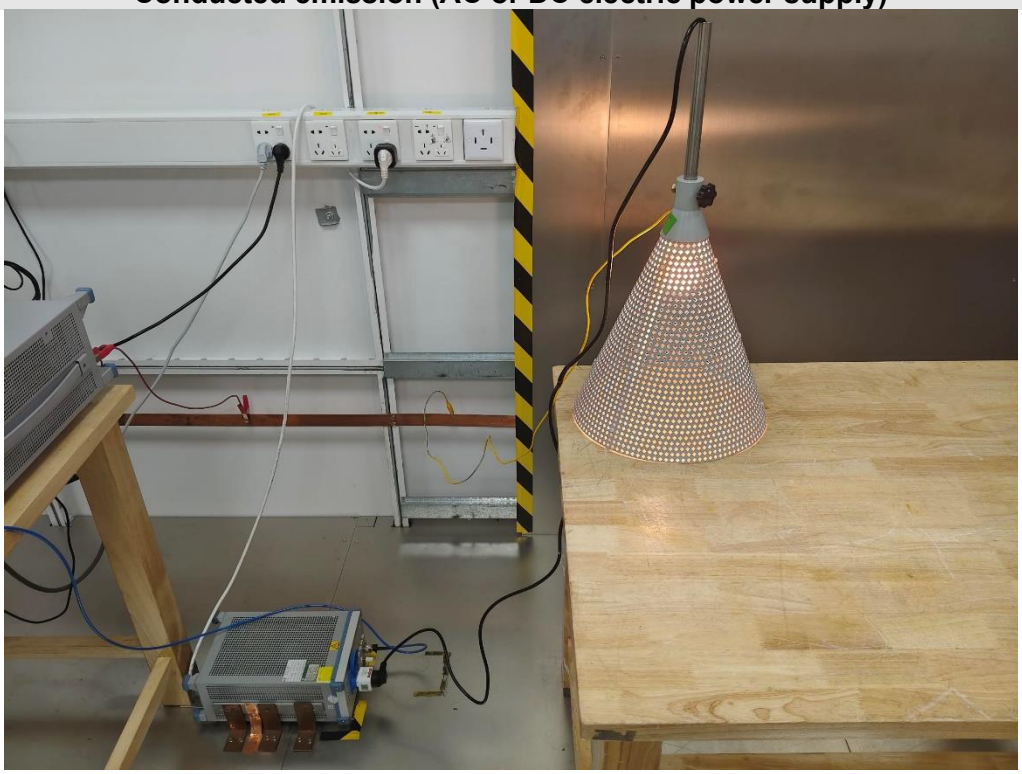
TEST RESULTS

Voltage（AC)	Interruption & Dips	Durations(T)	Volatge Reduction	Perform Criteria	Results	Judgment
230V 50Hz	Voltage dips 70%	10 Cycles	30%	B	B	Pass
230V 50Hz	Voltage short interruptions 0%	0.5 Cycles	100%	B	A	Pass

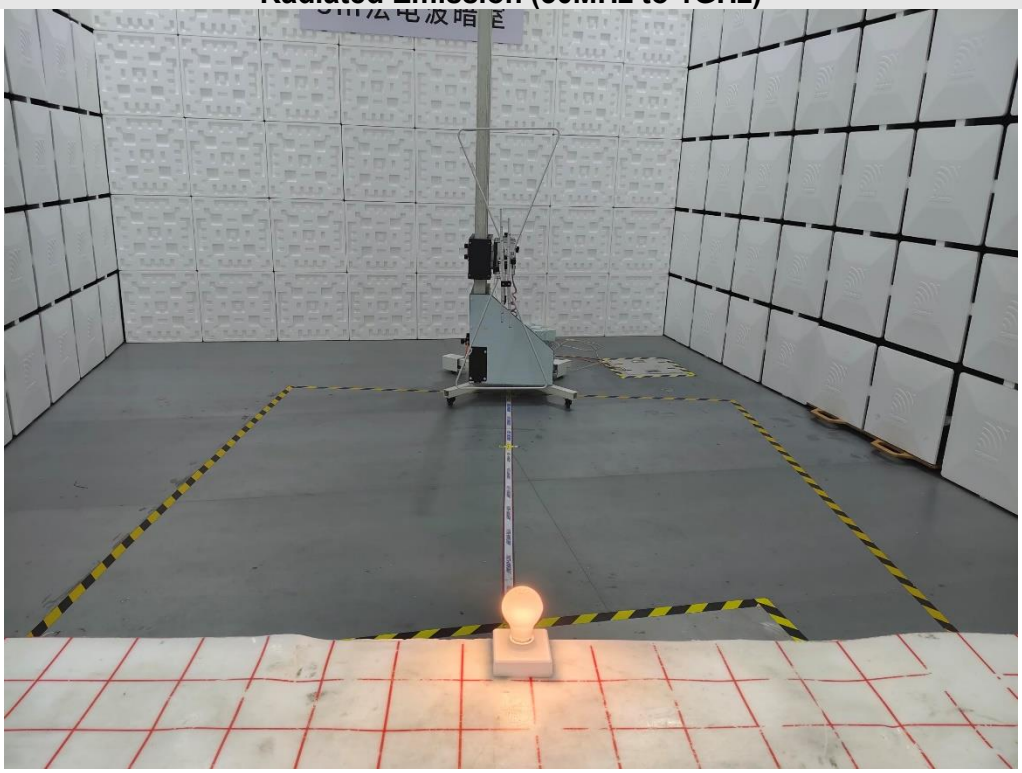
Observation:
A: No observable change.
Conclusion: The EUT met the requirements of the standard

APPENDIX: PHOTOGRAPHS OF TEST CONFIGURATION

Conducted emission (AC or DC electric power supply)

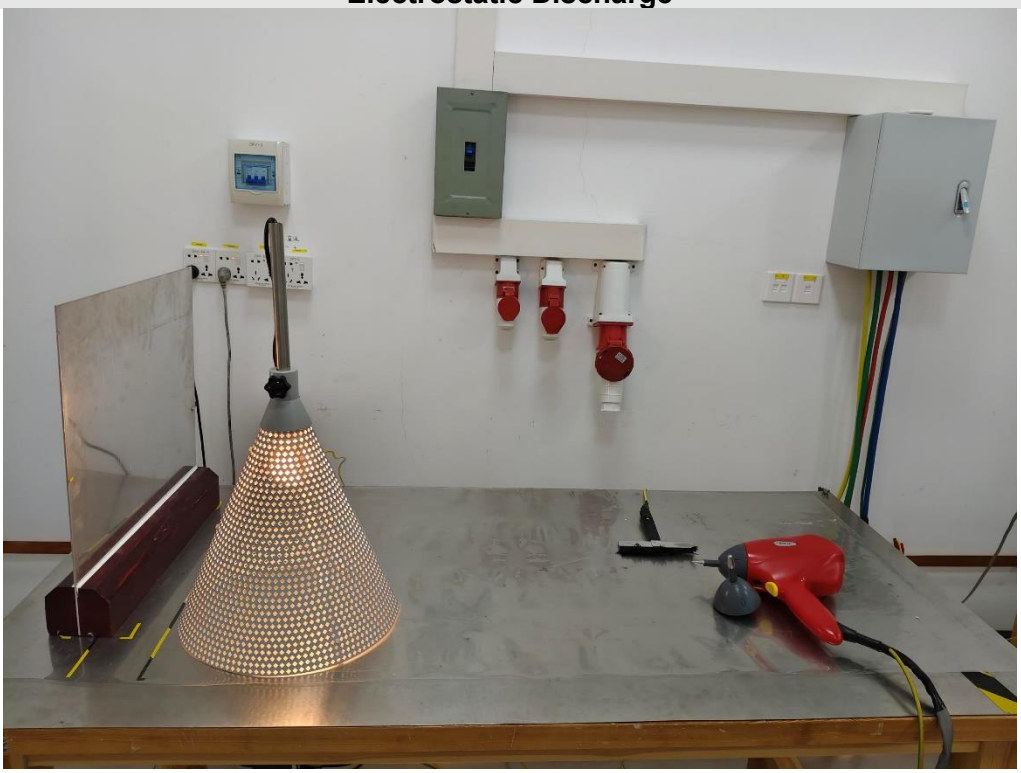


Radiated Emission (30MHz to 1GHz)

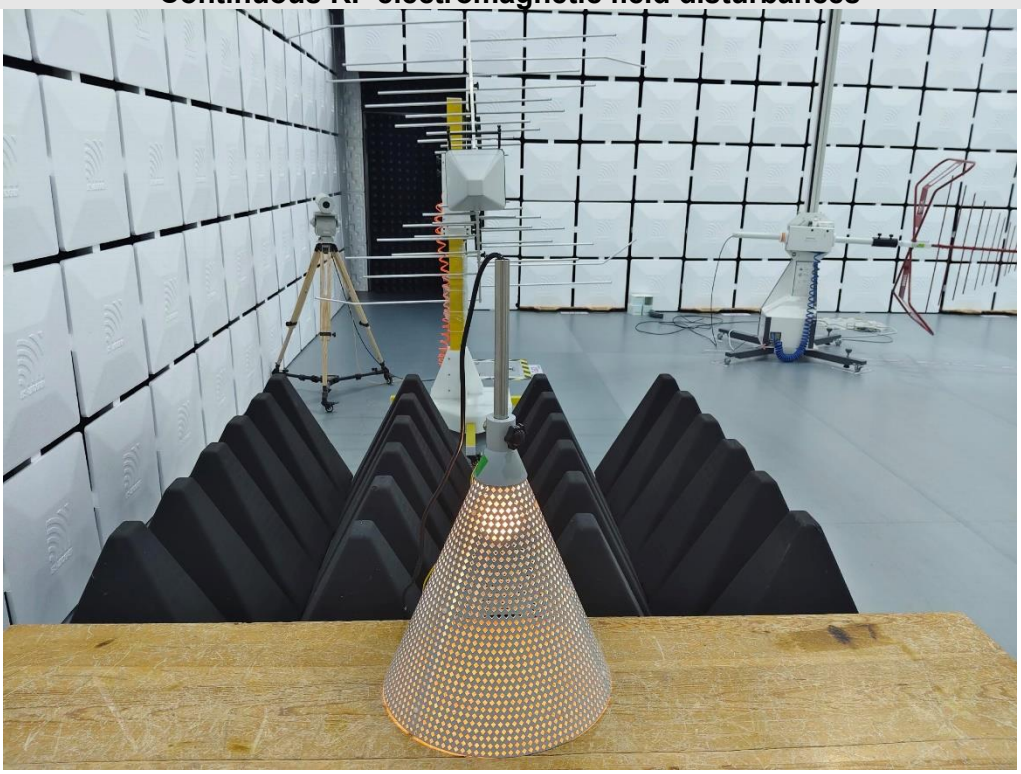


Radiated Emission (9 kHz to 30 MHz 2m loop)

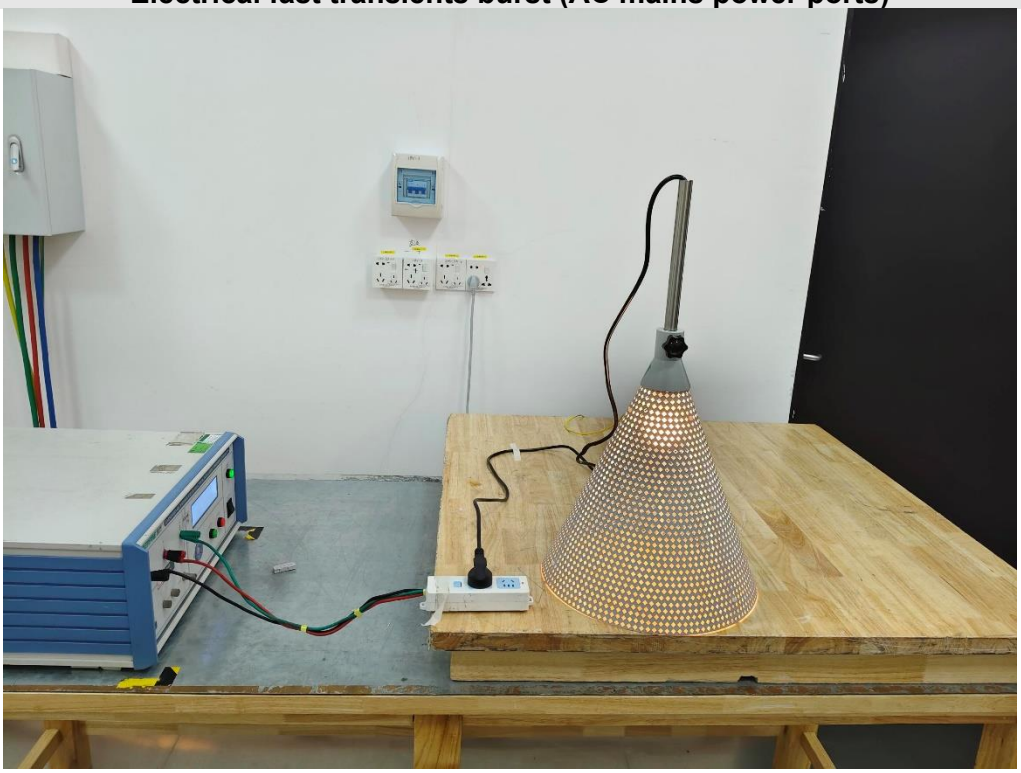
Electrostatic Discharge



Continuous RF electromagnetic field disturbances

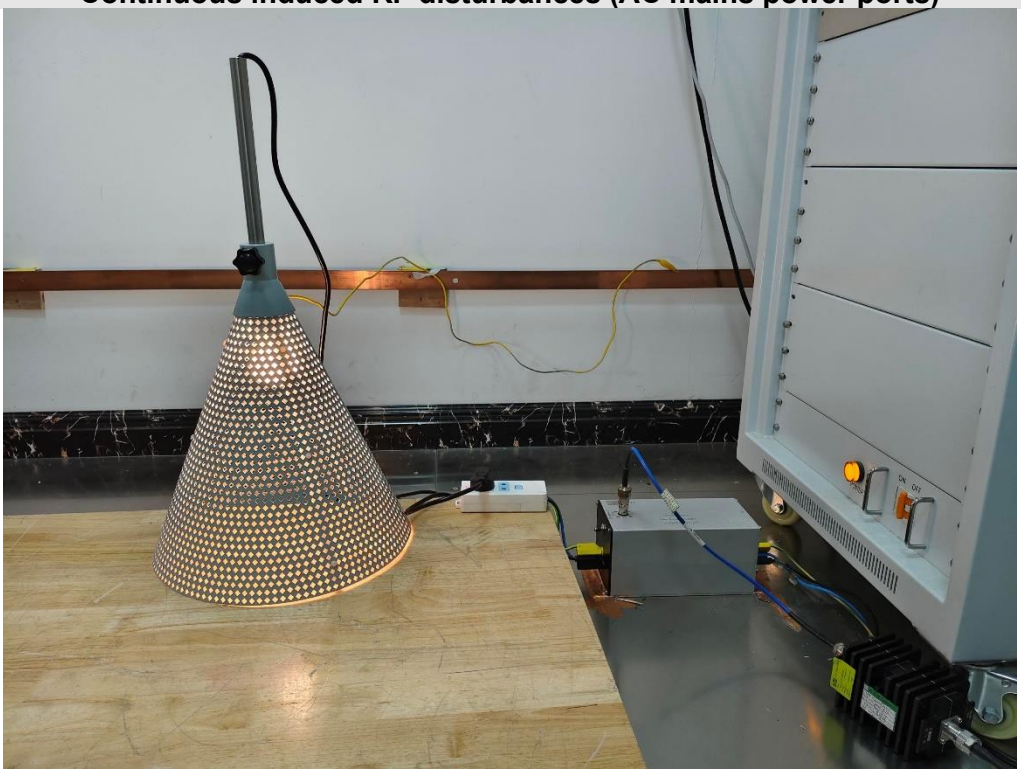


Electrical fast transients burst (AC mains power ports)



Surges (AC mains power ports)

Continuous induced RF disturbances (AC mains power ports)



Voltage dips and interruptions (AC mains power ports)

Harmonic Current Emission

APPENDIX: PHOTOGRAPHS OF THE EUT

External


Made in China
Made in China


Made in China
Made in China


Made in China
CM 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Made in China


Made in China
CM 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Made in China

END OF REPORT