



TEST REPORT

Reference No...... : WTU22U04076226E
Applicant..... : PhotonTek, Inc.
Address..... : Ewropa Business centre, Level 3-701,Dun Karm Street Birkirkara,
BKR 9034,Malta
Manufacturer : PhotonTek, Inc.
Address..... : Ewropa Business centre, Level 3-701,Dun Karm Street Birkirkara,
BKR 9034,Malta
Product..... : LED Luminaires
Model(s) : P-TEK SQ300W PRO
Standards..... : FCC PART15 SUBPART B: 2017
Date of Receipt sample : Jun.21, 2021
Date of Test : Jun.22, 2021 to Jun.23, 2021
Date of Issue..... : Apr.24, 2022
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company.
The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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2 Revision History

| Test report No. | Date of Receipt sample | Date of Test | Date of Issue | Purpose | Comment | Approved |
|-----------------|------------------------|------------------------------|---------------|----------|---------|----------|
| WTU22U04076226E | Jun.21, 2021 | Jun.22, 2021 to Jun.23, 2021 | Apr.24, 2022 | Original | / | Valid |

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3 General Information

3.1 General Description of E.U.T.

Product Name : LED Luminaires

Model No..... : P-TEK SQ300W PRO

Remark..... : This report is based on the original report WTU21U06059799E
to change the name and address of the applicant and the
manufacturer and model.

3.2 Details of E.U.T.

Ratings : AC 120-277V, 50/60Hz, 300W

3.3 Description of Support Units

The EUT has been tested as an independent unit. The test was performed in the condition of AC 120V/60Hz input.

3.4 Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

Yes No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

3.5 Abnormalities from Standard Conditions

None.



4 Test Summary

| Test Item | Test Requirement | Test Result |
|---|------------------------|-------------|
| AC Power Line Conducted Emission (150kHz to 30MHz) | FCC PART 15, SUBPART B | Pass |
| Radiated Emission (30MHz to 1GHz) | FCC PART 15, SUBPART B | Pass |

Remark:

- Pass Test item meets the requirement
Fail Test item does not meet the requirement
N/A Test case does not apply to the test object

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5 Equipment Used during Test

5.1 Equipment List

| <input checked="" type="checkbox"/> Radiated Emission | | | | | |
|--|--------------------|----------------|-----------|---------------|-----------------|
| Item | Equipment | Manufacturer | Model No. | Serial No. | Calibration Due |
| 1. | EMI Test Receiver | R&S | ESCI | 101346 | 2022.03.25 |
| 2. | Broadband Antenna | SCHWARZBECK | VULB9163 | VULB 9163-580 | 2022.04.05 |
| 3. | Horn Antenna | Schwarzbeck | BBHA9120D | 9120D-1092 | 2022.03.31 |
| 4. | Preamplifier | SCHWARZBECK | BBV 9743 | 9743-0069 | 2022.03.27 |
| <input checked="" type="checkbox"/> Conducted Emission | | | | | |
| Item | Equipment | Manufacturer | Model No. | Serial No. | Calibration Due |
| 1. | Test Receiver | ROHDE& SCHWARZ | ESCI | 101346 | 2022.03.25 |
| 2. | Two-Line V-Network | ROHDE& SCHWARZ | ENV216 | 101538 | 2022.03.27 |
| 3. | Manual RF SW | ESE | RSU-A41 | - | N/A |
| 4. | LISN | Schwarzbeck | NSLK8128 | 8128-308 | 2022.03.27 |

5.2 Measurement Uncertainty

| Parameter | Uncertainty (Note 1) |
|-------------------------------|-------------------------|
| Temperature | $\pm 1^{\circ}\text{C}$ |
| Humidity | $\pm 5\%$ |
| DC and low frequency voltages | $\pm 3\%$ |
| Conducted Emissions | $\pm 2.66\text{dB}$ |
| Radiated Emission(30MHz~1GHz) | $\pm 4.75\text{dB}$ |

Note 1: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.



6 Emission Test Results

6.1 Conducted Emission at the mains terminals, 150kHz to 30MHz

Test Requirement : FCC PART 15, SUBPART B
Test Method..... : ANSI C63.4
Test Result..... : Pass
Test Limit..... : FCC PART 15, SUBPART B Section 15.107
Frequency Range..... : 150kHz to 30MHz
Class : Class B
Limit

| Frequency of emission (MHz) | Conducted limit (dB μ V) | |
|-----------------------------|------------------------------|-----------|
| | Quasi-peak | Average |
| 0.15–0.5 | 66 to 56* | 56 to 46* |
| 0.5–5 | 56 | 46 |
| 5–30 | 60 | 50 |

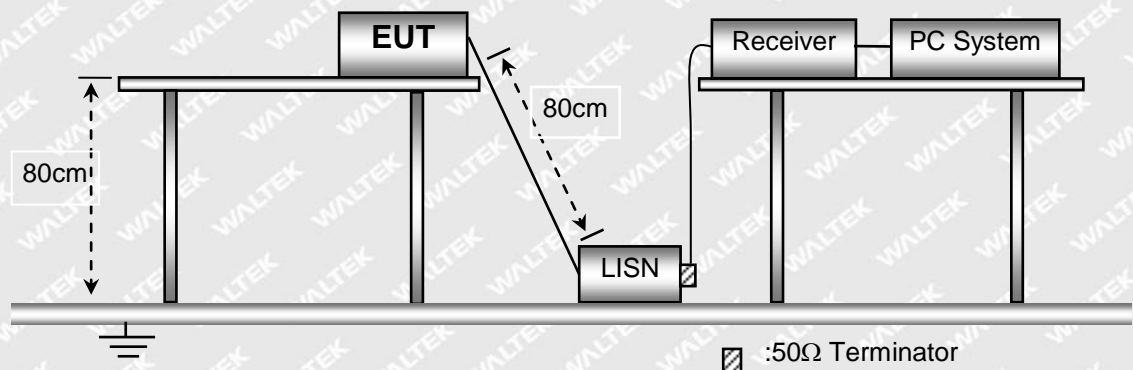
6.1.1 E.U.T. Operation

Operating Environment:

Temperature : 21.2°C
Humidity..... : 42.6%RH
Atmospheric Pressure..... : 101.9 kPa
EUT Operation..... : Lighting mode

6.1.2 Block Diagram of Test Setup

The Mains Terminals Disturbance Voltage tests were performed in accordance with the FCC PART 15, SUBPART B





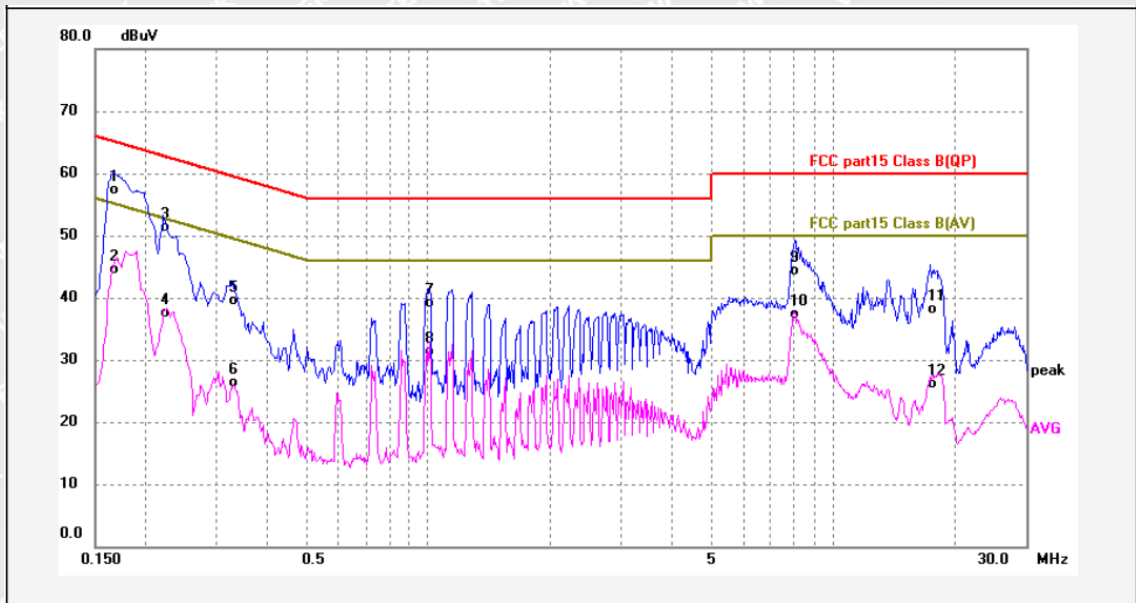
6.1.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

6.1.4 Mains Terminals Disturbance Voltage Test Data

AC 120V/60Hz

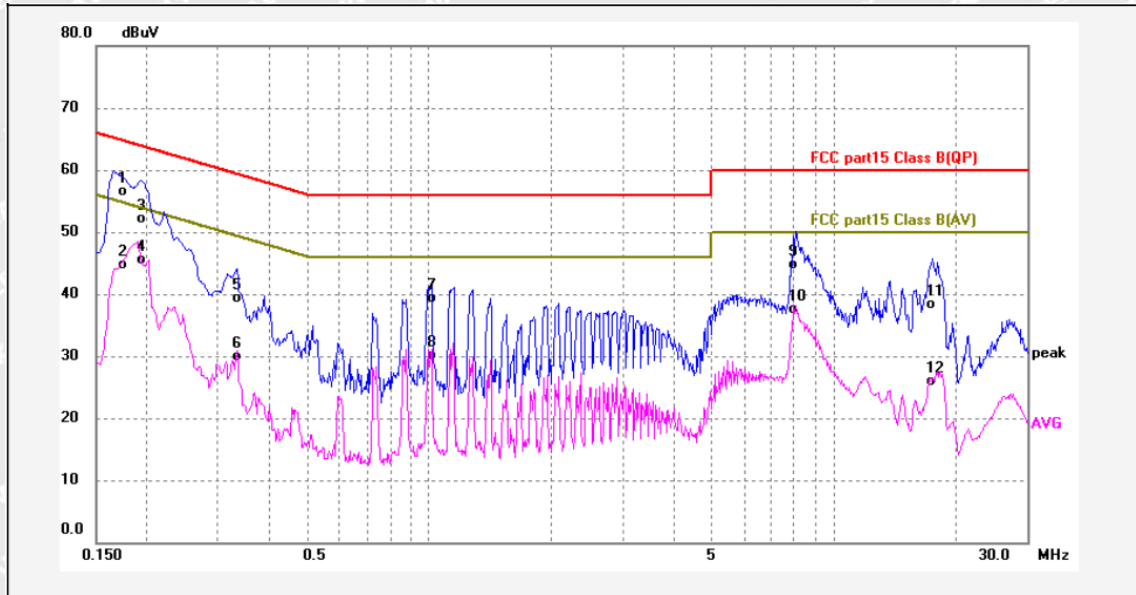
Live Line:



| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB) | Result (dBuV) | Limit dBuV | Margin (dB) | Detector | Remark |
|-----|-------------|----------------|-------------|---------------|------------|-------------|----------|--------|
| 1 | 0.1660 | 37.80 | 19.58 | 57.38 | 65.15 | -7.77 | QP | |
| 2 | 0.1660 | 24.90 | 19.58 | 44.48 | 55.15 | -10.67 | AVG | |
| 3 | 0.2220 | 31.68 | 19.59 | 51.27 | 62.74 | -11.47 | QP | |
| 4 | 0.2220 | 17.91 | 19.59 | 37.50 | 52.74 | -15.24 | AVG | |
| 5 | 0.3300 | 19.87 | 19.61 | 39.48 | 59.45 | -19.97 | QP | |
| 6 | 0.3300 | 6.62 | 19.61 | 26.23 | 49.45 | -23.22 | AVG | |
| 7 | 1.0100 | 19.37 | 19.75 | 39.12 | 56.00 | -16.88 | QP | |
| 8 | 1.0100 | 11.53 | 19.75 | 31.28 | 46.00 | -14.72 | AVG | |
| 9 | 8.0260 | 24.38 | 19.86 | 44.24 | 60.00 | -15.76 | QP | |
| 10 | 8.0260 | 17.39 | 19.86 | 37.25 | 50.00 | -12.75 | AVG | |
| 11 | 17.4180 | 17.98 | 20.12 | 38.10 | 60.00 | -21.90 | QP | |
| 12 | 17.4180 | 5.93 | 20.12 | 26.05 | 50.00 | -23.95 | AVG | |



Neutral Line:



| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB) | Result (dBuV) | Limit dBuV | Margin (dB) | Detector | Remark |
|-----|-------------|----------------|-------------|---------------|------------|-------------|----------|--------|
| 1 | 0.1722 | 37.00 | 19.58 | 56.58 | 64.85 | -8.27 | QP | |
| 2 | 0.1722 | 25.16 | 19.58 | 44.74 | 54.85 | -10.11 | AVG | |
| 3 | 0.1965 | 32.53 | 19.59 | 52.12 | 63.75 | -11.63 | QP | |
| 4 | 0.1965 | 25.89 | 19.59 | 45.48 | 53.75 | -8.27 | AVG | |
| 5 | 0.3339 | 19.62 | 19.61 | 39.23 | 59.35 | -20.12 | QP | |
| 6 | 0.3339 | 10.24 | 19.61 | 29.85 | 49.35 | -19.50 | AVG | |
| 7 | 1.0140 | 19.55 | 19.75 | 39.30 | 56.00 | -16.70 | QP | |
| 8 | 1.0140 | 10.41 | 19.75 | 30.16 | 46.00 | -15.84 | AVG | |
| 9 | 8.0340 | 24.80 | 19.86 | 44.66 | 60.00 | -15.34 | QP | |
| 10 | 8.0340 | 17.61 | 19.86 | 37.47 | 50.00 | -12.53 | AVG | |
| 11 | 17.5580 | 18.10 | 20.11 | 38.21 | 60.00 | -21.79 | QP | |
| 12 | 17.5580 | 5.73 | 20.11 | 25.84 | 50.00 | -24.16 | AVG | |



6.2 Radiation Emission, 30MHz to 1000MHz

| | |
|-----------------------|---|
| Test Requirement..... | : FCC PART 15, SUBPART B |
| Test Method..... | : ANSI C63.4 |
| Test Limit | : FCC PART 15, SUBPART B Section 15.109 |
| Test Result..... | : Pass |
| Frequency Range | : 30MHz to 1000MHz |
| Class..... | : Class B |
| Limit..... | : |

| Frequency (MHz) | Distance (Meter) | Limit (dB μ V/m) |
|-----------------|------------------|----------------------|
| | | Quasi-peak |
| 30 to 88 | 3 | 40 |
| 88 to 216 | 3 | 43.5 |
| 216 to 960 | 3 | 46 |
| 960 to 1000 | 3 | 54 |

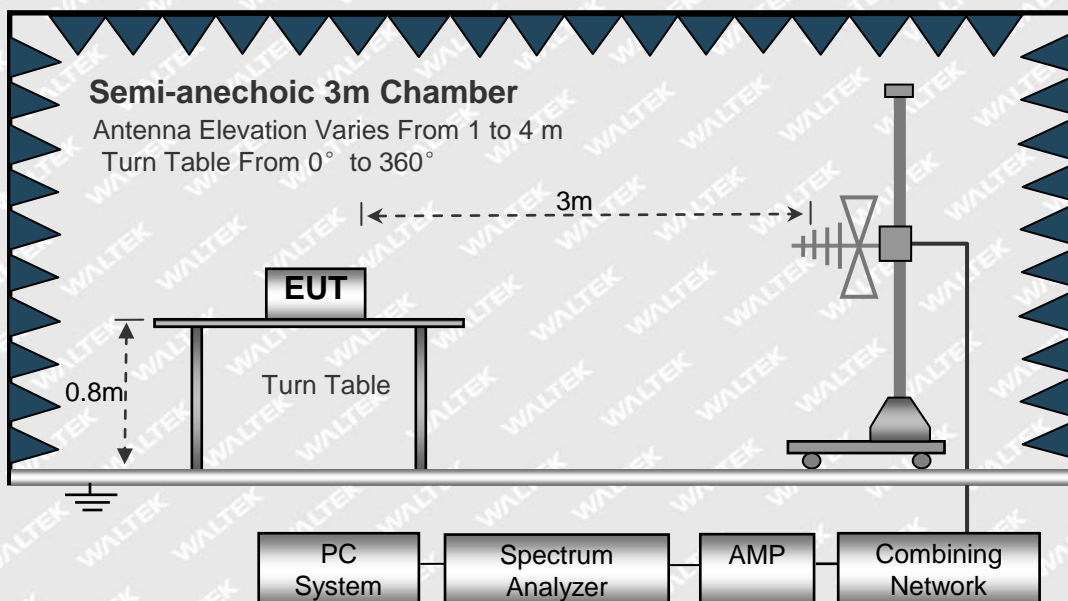
6.2.1 E.U.T. Operation

Operating Environment:

| | |
|---------------------------|-----------------|
| Temperature..... | : 21.2°C |
| Humidity | : 54.7%RH |
| Atmospheric Pressure..... | : 101.1kPa |
| EUT Operation..... | : Lighting mode |

6.2.2 Block Diagram of Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.





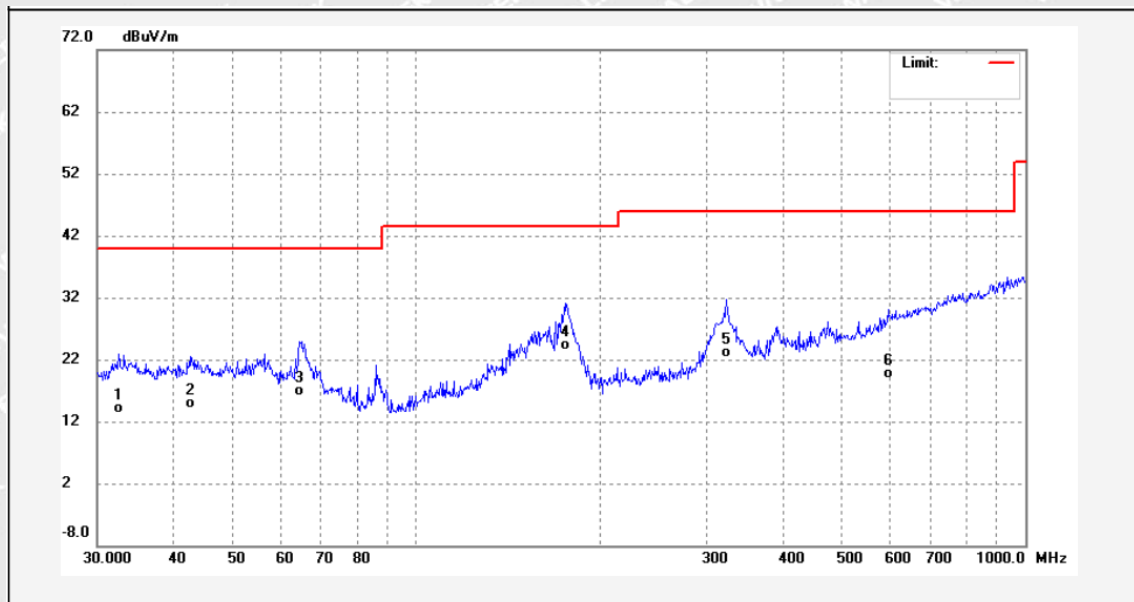
6.2.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Antenna Vertical Polarization and Antenna Horizontal Polarization. Quasi-peak measurements were performed if peak emissions were within 6dB of the Quasi-peak limit line.

6.2.4 Radiated Emission Test Data, 30MHz to 1000MHz

AC 120V/60Hz

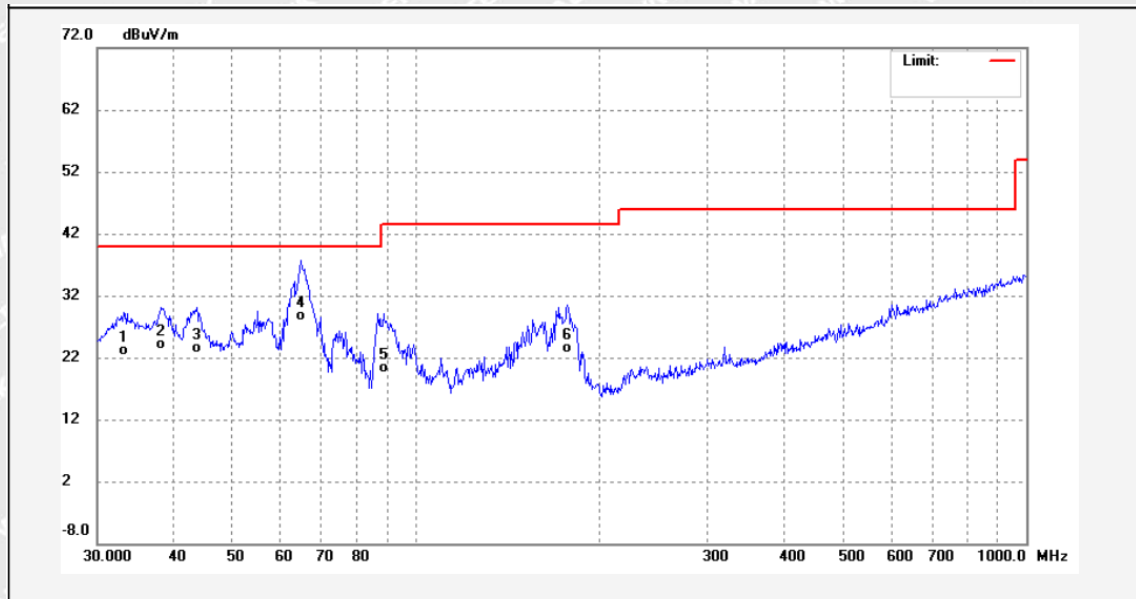
Antenna Polarization: Horizontal



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|--------|
| 1 | 32.5198 | 0.52 | 13.51 | 14.03 | 40.00 | -25.97 | QP | |
| 2 | 42.6000 | 0.66 | 14.32 | 14.98 | 40.00 | -25.02 | QP | |
| 3 | 64.4331 | 3.39 | 13.51 | 16.90 | 40.00 | -23.10 | QP | |
| 4 | 175.6516 | 10.56 | 13.67 | 24.23 | 43.50 | -19.27 | QP | |
| 5 | 323.3204 | 7.29 | 15.91 | 23.20 | 46.00 | -22.80 | QP | |
| 6 | 595.1329 | -3.28 | 23.04 | 19.76 | 46.00 | -26.24 | QP | |



Antenna Polarization: Vertical



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|--------|
| 1 | 33.2112 | 9.61 | 13.58 | 23.19 | 40.00 | -16.81 | QP | |
| 2 | 38.2120 | 10.11 | 14.00 | 24.11 | 40.00 | -15.89 | QP | |
| 3 | 43.6584 | 9.14 | 14.38 | 23.52 | 40.00 | -16.48 | QP | |
| 4 | 64.6594 | 15.27 | 13.47 | 28.74 | 40.00 | -11.26 | QP | |
| 5 | 88.3421 | 11.36 | 8.98 | 20.34 | 43.50 | -23.16 | QP | |
| 6 | 176.8878 | 9.94 | 13.54 | 23.48 | 43.50 | -20.02 | QP | |



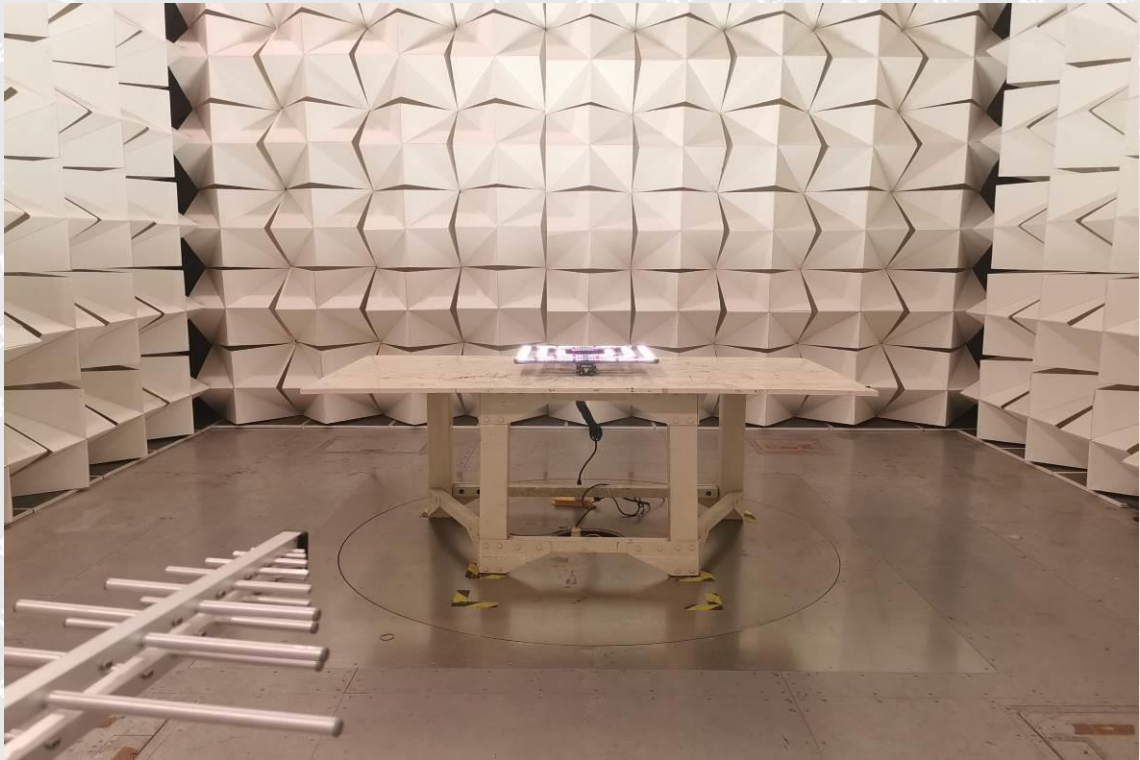
7 Photographs – Test Setup

7.1 Photograph –Conducted Emission at the mains terminals Test Setup





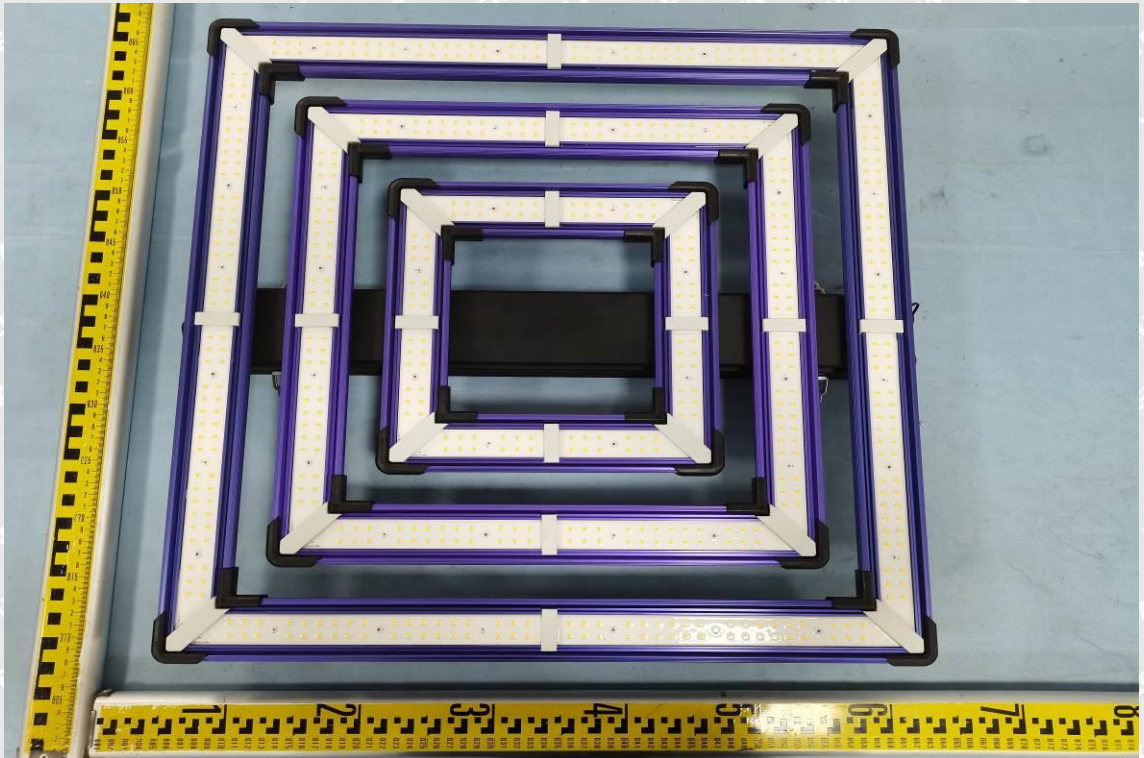
7.2 Photograph –Radiated Emission Test Setup For 30MHz-1000MHz



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8 Photographs – EUT View



=====End of Report=====