Laboratory
Test report

R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

FORM L-54 Edition 01 - Revision 03 - Date : 20/05/2020

Electrical safety

General information

Subject : VOLTANA EVO 1 - 16 Oslon Square Giant - Philips 75W - 1200mA - CL I

Asked by : SZÜGYI János Péter

Created on : 12/01/2021

Started on : 27/01/2021

Test number : D210052

Reference norm : IEC/EN 60598-1 Standard

Sample(s) : E210037

Folder : P-F21002

Test conditions

Luminaire : VOLTANA EVO 1

Number of LED : 16

LED : Osram OSLON SQUARE GIANT

Electrical class : Class I EU

Driver : DRIVER_SIGNIFY_FP_75W_500-1500mA_220-240V_DALI_C133_ / 00-49-491

Number of driver(s) : 1

SPD : VS SPC3/230/10K/i

Operator : CLOSSET Frédérick

IMG_7897-1200

Conclusion

Success

Conclusion :

Conformity Statement:
Protective conductor current (§ 10.3 of IEC 60598-1) : passed
Earth continuity (§ 7.2.3 of IEC 60598-1) : passed
Insulation resistance for basic insulation other than SELV (§10.2.1 of IEC 60598-1) : passed
Electric strength for basic insulation other than SELV (§10.2.2 of IEC 60598-1) : passed

Creepage and clearances according IEC 60598-1:2014, AMD1:2017 : passed

Validated by :

GHYSENS Gilles

Duplicate to : RACANELLI Frank, SZÜGYI János Péter, HORVÁTH Csaba, CSIKÓS Balázs, BEDŐ Péter

LAB : 15/03/2021

Digitally signed by Rotari Dmitrii
Date: 2022.09.24 13:22:10 EEST
Reason: MoldSign Signature
Location: Moldova

Test(s) details

Test(s)

Name	Description	Result
Cl I	Protective conductor current (§ 10.3 of IEC 60598-1) Earth continuity (§ 7.2.3 of IEC 60598-1) Insulation resistance for basic insulation other than SELV (§10.2.1 of IEC 60598-1) Electric strength for basic insulation other than SELV (§10.2.2 of IEC 60598-1)	Success
Creepage and clearances	Evaluation of the creepage and clearances according IEC 60598-1:2014, AMD1:2017.	Success

Cl I

Result(s)

Date: 27.01.2021											
Time: 11:39											
Test: FCT											
Test plan name: ELECTRICAL SAFETY CL1											
Worksation: ATS400_SN20221505190454											
Carried out tests:											
Testindex	Testname	Test time	Test statistic	Min	Reading	Max	Test Number	IO	NIO	error	Result
1	Data input				d210052		1	1	0	None	Passed
2	Leakage current	20.0s	239.30 V	0.000 mA	151.72 µA	3.500 mA	1	1	0	None	Passed
3	Protective earth	60.0 s	10.0 A		55 mΩ	500 mΩ	1	1	0	None	Passed
4	Insulation	60.0 s	500.0 V	4.0 MΩ	400 MΩ		1	1	0	None	Passed
5	High voltage AC	60.0 s	1.50 kV	0.0 mA	1.0 mA	100.0 mA	1	1	0	None	Passed
6	Insulation	60.0 s	500.0 V	4.0 MΩ	400 MΩ		1	1	0	None	Passed

Annex(es)

tested

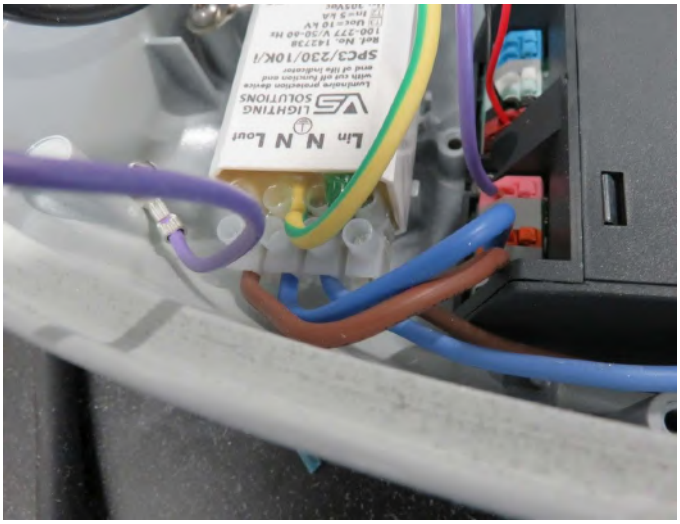
Creepage and clearances

Result(s)

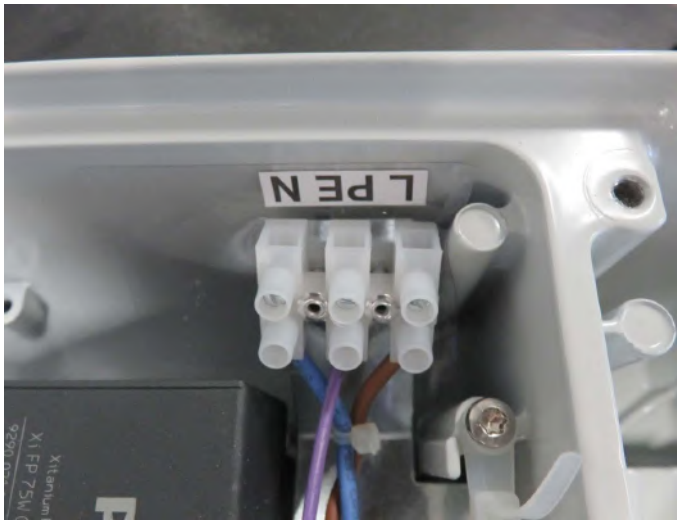
TABLES: Creepage distances and clearances (mm)				
RMS working voltage (V) not exceeding 250V	**Criteria**		**Measurement**	
	Cl I	**Cl II**	**Cl I**	**Cl II**
Live parts of different polarity	≥ 1,5	≥ 1,5	≥ 1,5	
Live parts and accessible metal parts	≥ 1,5	≥ 5 (creepage) ≥ 3 (clearances)	≥ 1,5	
Live parts with single insulation and accessible metal parts	≥ 0	≥ 1,5	≥ 0	

Annex(es)

creep02



creep03



creep01

Test room temperature (°C) :

25

Measurement equipment :

ETL ATS400 (E133) with connecting box
Thermometer (A039/4)

Quantities measured :

Earth continuity test:
Resistance of the earth connection between accessible metal parts and the earth terminal according PT-S-18.

Insulation resistance test:
Resistance of the insulating materials for use in a luminaire according PT-S-19.

Dielectric strength test:
Dielectric strength of materials for use in a luminaire according PT-S-20.

Uncertainties :

Statement of uncertainties (K=2, 95% of confidence level):

Temperature: 0,6 K

Earth continuity test:
Current (10A) : 0.47A
Resistance (500mΩ) : 9.87mΩ

Insulation resistance test:
Resistance (1MΩ): 0.05MΩ
Resistance (2MΩ): 0.16MΩ
Resistance (4MΩ): 0.30MΩ
Voltage (0.5kV): 0.01kV

Dielectric strength test:
Voltage (1,5kV): 0.05kV
Voltage (3kV): 0.07kV
Leakage current (100mA): 1.70mA

Decision rules :

Pass/fail criteria according IEC 60598-1:

Earth continuity test:
By resistance measurement:
Resistance of the earth connection between all accessible metal parts of the DUT and the earth terminal below or equal to 0.5Ω : Pass
Otherwise : Fail

Insulation resistance test:
By resistance measurement:
Resistance of the insulating materials in line with the requirements of table 10.1 of IEC 60598-1 : Pass
Otherwise : Fail

Dielectric strength test:
By current measurement and visual inspection :
No flashover, breakdown, nor tripping of the 100mA relay when applying the requirements of table 10.2 of IEC 60598-1 : Pass
Otherwise : Fail

End of test report :
