

Tightness test

General information

Subject : IZYLUM 1 - 20 LH351C - Philips FP 75W - 700mA - Nema - CL I

Asked by : SZÜGYI János Péter

Created on : 22/10/2019

Validated on : 29/10/2019

Test number : D190974

Reference norm : IEC/EN 60598-1 Standard

Sample(s) : E190738

Folder : P-F19084

Test conditions

Luminaire : IZYLUM 1

Number of LED : 20

LED : Samsung LH351C

Driver current (mA) : 700

Protector Material : Glass Extra Clear

Protector Shape : Flat

Preconditionning time (minutes) : 60

Operator : Philippe Léonard



IMG_5327

Conclusion



Success

Conclusion :

IP67 granted.

Validated by :
GHYSENS Gilles



Duplicate to : SZÜGYI János Péter, HORVÁTH Csaba, BEDŐ
Péter, BOS Peter
LAB : 06/11/2019

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Test(s) details

Test(s)

Name	Description	Result
IP6X	- Luminaire switched ON until stable T° - Talcum in suspension (blowing ON) - After 1', luminaire OFF - Talcum for 3 hours	Success
IPX7	- Luminaire switched ON until stable T - Luminaire switched OFF and immediately immersed in water deep (lowest part of luminaire under 1 meter of water) - Test duration: 30 minutes	Success

IP6X

Result(s)



Test passed no dust entry in the optical and auxiliary part.

IPX7

Result(s)



Test succeeded no water ingress in the optical and auxiliary part.

Test room temperature (°C) : 23.5

Measurement equipment :

IP6X

Talcum chamber (A003)

Thermometer (A039/2)

Chronometer (A043/4)

Caliper (M054/M055)

IPX6

Rotating table (A001/2)

Chronometer (A043/4)

Thermometer (A039/1)

Flowmeter (A001/9)

IPx6 nozzle (A001/5)

Quantities measured:

Verification of water/dust ingress within a luminaire enclosure according to

For IP2X: PT-S-14

For IP3X/4X: PT-S-15

For IP5X/6X: PT-S-06

For IPX3/X4: PT-S-01

For IPX5/X6: PT-S-08

For IPX7/X8: PT-S-09

Uncertainties:

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

Time: 0,35 seconds per 10 minutes

Temperature: 0,6 °K

Calipers: 0,005 mm

Measuring tape: ± 1,13 mm

Dynamometric key :

From 0.5 to 2.5 Nm : 0,15 Nm

From 2.5 to 5 Nm : 0,22 Nm

From 5 to 25 Nm : 0,83 Nm

From 25 to 60 Nm : 2,73 Nm

From 60 to 100 Nm : 3,55 Nm

For solid ingress test:

IP2X:

Probe dimensions: ± 0,6 mm

Applied force: ± 0,4 N

IP3X:

Probe dimensions: ± 0,3 mm

Applied force: ± 0,13 N

IP4X:

Probe dimensions: ± 0,1 mm

Applied force: ± 0,11 N

IP5X/6X

Test duration (talcum suspension time): ± 3 seconds

Talcum mass: 0,02 %

For liquid ingress test:

IPX3/X4

Table rotation: ± 6 sec/rotation

Arms Rotation angle: $\pm 3^\circ$

Water flow: ± 4 %

IPX5/X6

Table rotation: ± 6 sec/rotation

Water flow: ± 4 %

Test Distance: +0 / -50 cm

IPX7/X8

Test depth: +10 cm / -0 cm

Decision rules:

Pass/fail criteria

For solid ingress test:

IP2X:

If contact possible with live parts: fail

Otherwise: pass

IP3X/4X:

For luminaires without draining holes, nor ventilation slots for forced cooling, penetration of the test probe in the enclosure: fail

For luminaires with draining holes, or ventilation slots for forced cooling, if contact possible with live part: fail

Otherwise: pass

IP5X/6X

By visual inspection:

If possible hazard due to presence of conductive dust: fail

If no possible hazard due to the presence of conductive dust: IP5X granted

No presence of talcum: IP6X granted

For liquid ingress test:

IPX3/X4/X5/X6:

By visual inspection:

If possible hazard due to presence of water: fail

If no possible hazard due to the presence of water and no efficient way to evacuate the water: fail

If no possible hazard due to the presence of water and an efficient way to evacuate the water: pass

No presence of water: pass

IPX7/X8:

By visual inspection:

Presence of water: fail

No presence of water: pass

End of test report -----