

Tightness test

General information

Subject : IZYLUM 2 - 40 LH351C - Philips FP 110W - 700mA - Nema - CL I (N#3)

Asked by : SZÜGYI János Péter

Created on : 10/12/2019

Started on : 17/12/2019

Test number : D191141

Reference norm : IEC/EN 60598-1 Standard

Sample(s) : E190875

Folder : P-F19085

Test conditions

Luminaire : IZYLUM 2

Number of LED : 40

LED : Samsung LH351C

Driver current (mA) : 700

Protector Material : Glass Extra Clear

Protector Shape : Flat

Preconditioning time (minutes) : 98

Operator : KOY Fiston



IMG_5588

Conclusion



Success

Conclusion :

IP66 granted

Validated by :
Maghe Laurent



Duplicate to : SZÜGYI János Péter, HEYMANS Tom, LÁMFALUSI Ferenc,
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LAB : 18/12/2019

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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
IPX6	- Luminaire switched ON until stable T° - Luminaire switched OFF and immediately sprayed with water jet - Hose diam. 12,5 mm - Water flow: 100 l/min - Spraying distance: 3 m - Duration of test: 3 minutes	Success

IP6X

Result(s)



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

IPX6

Result(s)



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

Test room temperature (°C) :

IP6X

22.3°C

IPX6

22.5°C

Measurement equipment :

IPX6

Rotating table (A001/2)

Chronometer (A043/5)

Thermometer (A039/1)

Flowmeter (A001/9)

IPx5 nozzle (A001/4)

IPx6 nozzle (A001/5)

Caliper (M054/M055)

IP6X

Talcum chamber (A003)

Thermometer (A039/2)

Chronometer (A043/5)

Caliper (M054/M055)

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 :
