

# Laboratory Test report



226-TEST

NBN EN ISO/IEC 17025 :2017



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Member of Schröder Group

FORM L-54 Edition 01 – Revision 02 - Date: 14/11/2019

## Tightness test

### General information

Subject : IZYLUM 4 - 120 LH351C - 2x Philips FP 150W - Nema - CL II (N°125)

Asked by : SZÜGYI János Péter

Created on : 07/04/2020

Started on : 14/04/2020

Test number : D200469

Reference norm : IEC/EN 60598-1 Standard

Sample(s) : E200262

Folder : P-F20015

### Test conditions

Luminaire : IZYLUM 4

Number of LED : 120

LED : Samsung LH351C

Driver current (mA) : 700

Protector Material : Glass Extra Clear

Protector Shape : Flat

External accessories :

Nema 7P M400

SCIP66

Preconditioning time (minutes) : 84

Operator : KOY Fiston



IMG\_6210

### Conclusion



Success

Conclusion :

IP66 and IP67 passed.

Validated by :  
GHYSENS Gilles

Duplicate to : RACANELLI Frank, SZÜGYI János Péter,  
HEYMANS Tom, HORVÁTH Csaba, BEDŐ Péter  
LAB : 20/04/2020

**D200469**

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## Test(s) details

### Test(s)

Name	Description	Result
IP6X	<ul style="list-style-type: none"><li>- Luminaire switched ON until stable T°</li><li>- Talcum in suspension (blowing ON)</li><li>- After 1', luminaire OFF</li><li>- Talcum for 3 hours</li></ul>	Success
IPX6	<ul style="list-style-type: none"><li>- Luminaire switched ON until stable T°</li><li>- Luminaire switched OFF and immediately sprayed with water jet</li><li>- Hose diam. 12,5 mm</li><li>- Water flow: 100 l/min</li><li>- Spraying distance: 3 m</li><li>- Duration of test: 3 minutes</li></ul>	Success
IPX7	<ul style="list-style-type: none"><li>- Luminaire switched ON until stable T</li><li>- Luminaire switched OFF and immediately immersed in water deep (lowest part of luminaire under 1 meter of water)</li><li>- Test duration: 30 minutes</li></ul>	Success

### IP6X

### Result(s)



Test succeeded: no dust ingress in the optical and auxiliary parts.

### Annex(es)



IMG\_6209

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## **IPX6**

### **Result(s)**



Test succeeded: no water ingress in the optical and auxiliary parts.



Condensation in the optical part. (see picture)

### **Annex(es)**



IMG\_20200408\_111814

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## **IPX7**

### **Result(s)**



Test succeeded: no water ingress in the optical and auxiliary parts.

**Test room temperature (°C) :**

25.3

**Measurement equipment :**

**IP X6:**

Rotating table (A001/2)

Chronometer (A043/3)

Thermometer (A039/1)

Flowmeter (A001/9)

IPx6 nozzle (A001/5)

**IP6X:**

Talcum chamber (A003)

Thermometer (A039/2)

Chronometer (A043/3)

**IPX7:**

Water tank

Chronometer (A043/5)

Thermometer (A039/1)

Tape meter (M071/5)

**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:  $\pm 6$  sec/rotation

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

Water flow:  $\pm 4 \%$

IPX5/X6

Table rotation:  $\pm 6$  sec/rotation

Water flow:  $\pm 4 \%$

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 :**

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