

# Test report

**Number:** T211-0046/19

**Project file:** C20190040

**Date:** 2019-01-21

**Pages:** 7

**Product:** Recessed LED luminaire

**Type reference:** SCREEN 596

**Ratings:** 220 - 240 V; 50/60 Hz; 40 W; Ta = 45 °C;  
IP65 bottom part

**Trademark:**



**Applicant:** Lumenia d.o.o.  
Kandrše del 7, SI-1252 Vače, Slovenia

**Manufacturer:** Strip's d.o.o.  
Kandrše del 7, SI-1252 Vače, Slovenia

**Place of manufacture:** PE Strip's  
Breg pri Litiji 53, SI-1270 Litija, Slovenia

## Summary of testing

**Testing method:** EN 60598-1:2015 + A1:2018, cl. 9.2.2; 9.2.6

**Testing location:** SIQ Ljubljana, Mašera-Spasičeva ulica 10, SI-1000 Ljubljana, Slovenia

**Remarks:** Date of receipt of test items: 2019-01-07  
Number of items tested: 1  
Date of performance of tests: from 2019-01-10 to 2019-01-21  
The test results presented in this report relate only to the items tested.  
The product complies with the requirements of the testing methods.  
The tests were performed on luminaires type SCREEN 596 and were considered representative to cover all models in SCREEN family (SCREEN 596, SCREEN 620 and SCREEN 645).

**Tested by:** Igor Smrke



**Approved by:** Tomaž Knez



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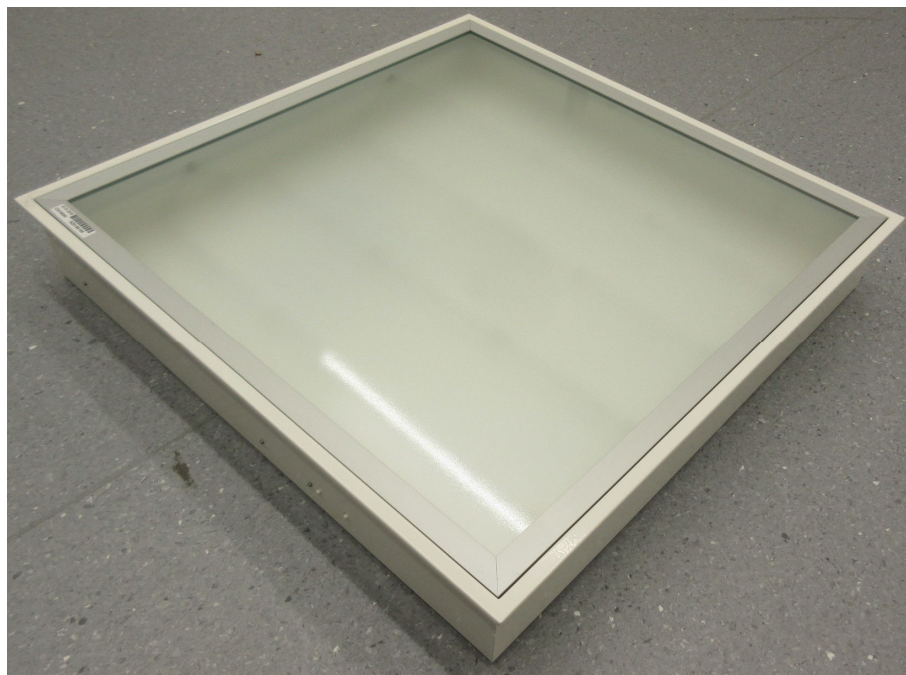
**TEST EQUIPMENT**

- Heating cabinet – ID 788
- Dust chamber – ID 357 (2019-09-22).
- Test nozzle for verification of water jet protection (IPx5) – ID 700 (2020-08-31).
- Dielectric tester, Kikusui, TOS5301, ID 495 (2019-03-14).

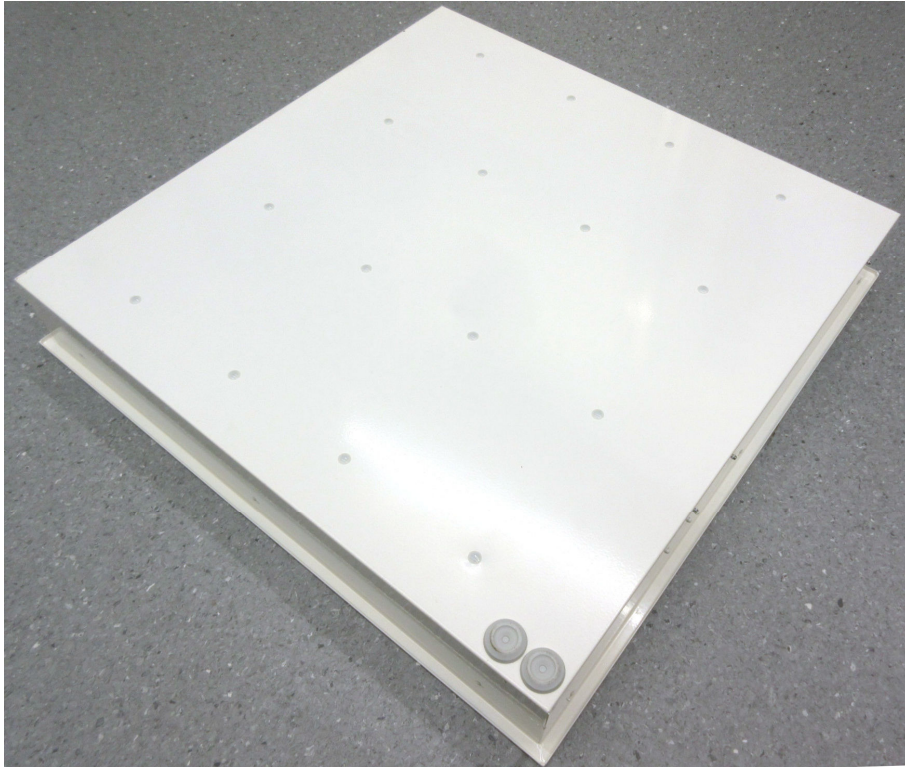
Note: The date of the recommended recalibration is given for each measuring instrument (in brackets).

**EQUIPMENT UNDER TEST (EUT)**

One sample of recessed LED luminaire (Figure 1) was subjected to test for IP65 degree of protection. Only the bottom part of sample was exposed to IP test.  
Before the IP test the sample was additionally exposed to endurance test for 240 h at ambient temperature of 55 °C ( $T_a+10^{\circ}\text{C}$ ) and supplied with a voltage of 264 V (240 V x 1,1).



*Figure 1: Sample Lumenia SCREEN 596*



*Figure 2: Sample Lumenia SCREEN 596*

## **1. PROTECTION AGAINST PENETRATION OF DUST AND WATER**

### **IP65 numeric description:**

The first characteristic numeral X indicates the degree of protection against solid foreign objects (degree 6 - dust protected). The protection is satisfactory if there is no deposit of talcum powder in dust-tight luminaire enclosure (IP6X).

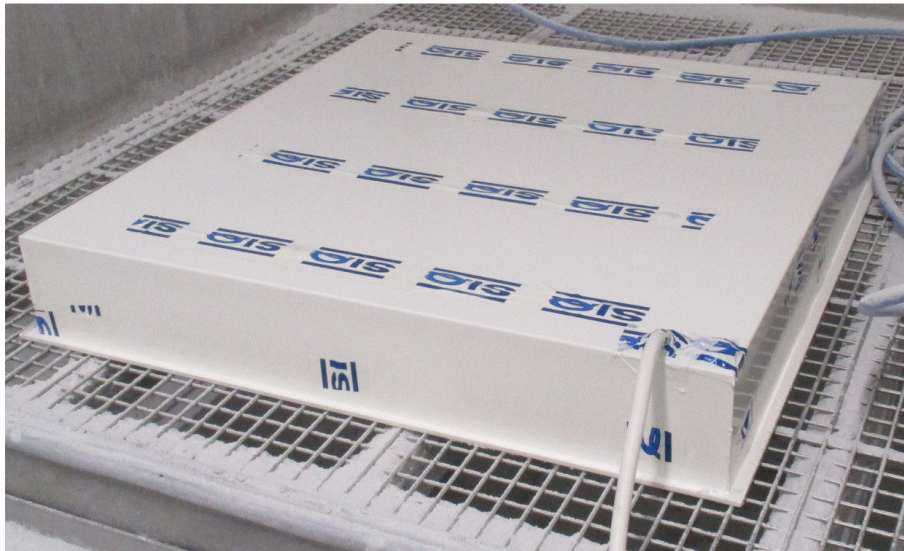
The second characteristic numeral X indicates the degree of protection provided by enclosures with respect to harmful effects on the equipment due to the ingress of water (degree 5 - jet-proof). Water splashed against the enclosure from any direction shall not enter the enclosure (IPX5).



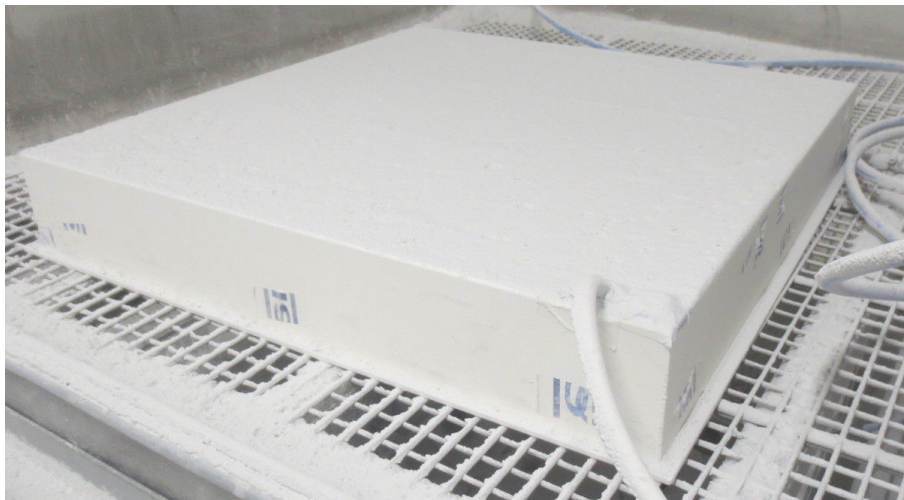
### 3.1 Dust test – IP6X

#### Procedure (IP6X):

- Dust used for the test: talcum powder.
- Environmental temperature: 22 °C.
- Duration of the exposure: 3 hours - 1 minute switched ON and 2h 59min switched OFF



*Figure 2: Sample Lumenia SCREEN 596 before the dust test*



*Figure 3: Sample Lumenia SCREEN 596 after the dust test*

### 3.2 Tests for protection against ingress of water-IPX5

After the IP6X dust test the sample was exposed to IPX5 water test (Figure 5).

Procedure:

- Environmental temperature: 22 °C.
- Test device: IPX5 nozzle.
- Total water flow: 12,5 l/min.
- Spray angle: 180° (on bottom side of the recessed LED luminaire).
- Duration of the exposure: 15 min. - switched OFF



Figure 5: Sample SCREEN 596 during the IPX5 test

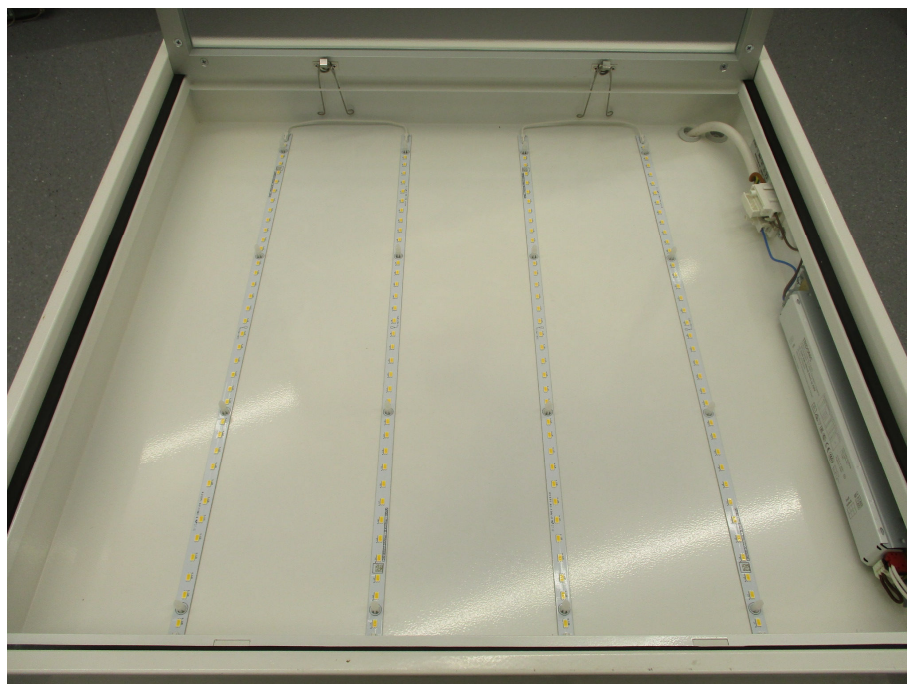


**Conclusion:** After the water and dust test the sample was opened and visually checked. There were no traces of dust and water inside the enclosures (Figures 7 and 8).

After the IPX5 water test the electric strength test with 1480 V a.c. has been conducted between terminals and enclosure. The voltage was applied and maintained for a period of one minute between the points indicated. There was no break down. The electric strength test was passed successfully.



*Figure 4: Sample SCREEN 596 after the IPX5 test*



*Figure 5: Sample SCREEN 596 after the IPX5 test*

#### **4 RESULTS AND CONCLUSIONS: GENERAL**

After the IP65 exposure was concluded the samples were opened for visual examination. There were no traces of dust and water inside the enclosure.

**Following the acceptance conditions, the EUT (Lumenia SCREEN 596) sustained the test conditions for IP65 degree of protection**