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Degree of protection against ingress of water, dust or solid objects, according the IP66 test requirements on MINI MARTIN Series Luminaires

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On request of:

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1 INTRODUCTION

On request of SIA VIZULO, Riga, Latvia, an IP66 test was conducted on a representative model of the MINI MARTIN street luminaires. The requirements as well as the method of testing and test equipment of the IP66 test are described in EN 60598-1:2008, 8th edition, and as detailed on the following pages.

2 TESTED PRODUCT AND TEST DESCRIPTION

Product overview

Figs. 1 and 2 – front side of MINI MARTIN luminaire
(back side (not shown) consists of an aluminium housing).

IP66 denotes:

- IP6X = Dust tight.
- IPX6 = Powerful Jet Proof tight.

Preparation and tests:

Before the below tests were conducted the luminaire was subjected to an endurance test as described in section 12 of EN 60598-1.

In case the product holds screws in parts which are to be operated by the user (e.g. for lamp replacement, supply connection, etc), these were tightened with a torque of 2/3 of full torque.

IP6X:

The luminaire was mounted as in normal use and connected to the supply for at least two hrs. to heat up.

After that, the luminaire was placed in the dust cabinet and during the first minute of circulation of the dust the product was still connected to the supply. Then the product was disconnected from the supply and subjected to circulating dust for total duration of 3 hrs.

IPX6:

Directly after the IP6X test the luminaire was cleaned (most of dust was removed from the luminaire) and connected to the supply for at least 2 hrs. to heat up.

After that, the luminaire was disconnected from the supply and immediately sprayed with a powerful jet set to 100 l/min. for three minutes with the appropriate nozzle. After the test, the luminaire was carefully dried and opened of visual check. Before it was opened a dielectric voltage-withstand test was conducted at 1000 V + 2xUin (Uin = maximum input voltage or maximum output voltage of the LED driver, whichever is higher).

Pass criteria:

For IP6X:
No entry of dust allowed into the luminaire enclosure, connection compartment, light source compartment, etc.

For IPX6:
No entry of water allowed in the luminaire enclosure, connection compartment, light source compartment, etc. that is in contact with live parts or components or where it can accumulate and cause a dangerous situation over time.

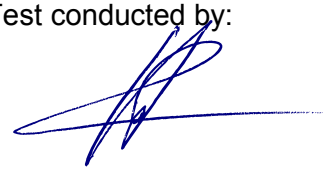
No flash-over or breakdown shall occur during the dielectric voltage-withstand test at 1000 V + 2xUin (Uin = maximum input voltage or maximum output voltage of the LED driver, whichever is higher)

3 RESULTS/CONCLUSION

After the test there was no dust or water found in the luminaire housing, connection compartment, light source compartment, etc. of the MINI MARTIN Luminaire. No flash-over or breakdown occur during the dielectric voltage-withstand test.

The product passed the test and complies with the specified requirements for IP66.

Test conducted by:



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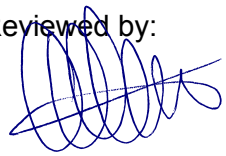
Reviewed by:



L.N.H. Huynh

END OF EXAMINATION REPORT