**Zakłady Badań i Atestacji „ZETOM”**
**im. Prof. F. Stauba w Katowicach sp. z o.o.**
*Institutions for Research and Certification „Zetom” Ltd.*
ul. Ks. Bpa H. Bednorza 17, 40-384 Katowice; tel. 32 256 92 57; e-mail: biuro@zetom.eu
**Laboratorium Badawcze i Wzorcujące**
Laboratorium badawcze akredytowane przez
Polskie Centrum Akredytacji, sygnatariusza porozumień EA MLA i ILAC MRA
dotyczy wzajemnego uznawania wyników badań.
Nr akredytacji AB 024

AB 024

# TEST REPORT

**Ref. no. B/2024/167 dated 22/07/2024**

| | | | |
|---|---|---|---|
| **Subject:** | Testing the resistance to the ingress of dust, solids and water of the ALA2 800 lighting fixture. | | |
| **Tested for:** | Furnika Sp. z o.o. [Limited Liability Partnership] Limited Partnership | | |
| | 48-200 Prudnik | | |
| | Przemysłowa street 11 | | |
| **Tested at:** | Institutes for Research and Certification “ZETOM” Katowice | | |
| | Testing and Calibration Laboratory “ZETOM" Katowice | | |
| Customer Order Index: | Order | dated: | 18/06/2024 |
| 3Laboratory Log Reference No. of Order: B/2024/306 | | | |
| **Test start date:** | 17/07/2024 | **Test end date:** | 22/07/2024 |
| This Test Report contains: 7 | pages | | |
| 3 copies hereof are issued to the following recipients: | | | |
| 1. | Furnika Sp. z o.o. [Limited Liability Partnership] Limited Partnership | | |
| 2. | Furnika Sp. z o.o. [Limited Liability Partnership] Limited Partnership | | |
| 3. | LT | | |
| **Test supervisor:** | Piotr Jureczko, MSc Eng. | | |
| Tested and measured by: | Piotr Jureczko, MSc Eng. | | Lab Section: WE |
| | Kamil Długajczyk Eng. | | Lab Section: WE |
| **Test Report prepared by:** | Kamil Długajczyk Eng. | | |

**Authorised by:**

Kierownik Pracowni Elektrotechnicznej
mgr inż. Piotr Jureczko

**Approved by:**

DYREKTOR
DS. BADAŃ I WZORCOWAŃ
mgr inż. Marcin Szota

**Zakłady Badań i Atestacji „ZETOM”**

**im. Prof. F. Stauba w Katowicach sp. z o.o.**

**Institutions for Research and Certification „ZETOM” Ltd.**

**EU Notified Body no. 1436,**

**for the following Directives: Construction, Low Voltage & Machinery**

Ks. Bpa H. Bednorza 17 street; 40-384 Katowice, Poland

*Phone: 0048(032) 2569-257, 0048(032) 2569-273, 0048(032) 2569-353*

# PROVISIONS

## A. Obligatory:

1. The Test Report shall be property of the Customer who has ordered to have the test done.
2. The Test Report and all information contained therein shall only be used with the consent of the Test Report owner.
3. This Test Report shall only be used in full.
4. All test and measurement reports listed herein refer to the test objects only and shall not be construed as a quality approval thereof.
5. The work covered herein has been carried out according to its Work Plan and in line with the Management System requirements specified in the Testing and Calibration Laboratory Quality Manual.
6. All reference to this Test Report shall be made with the following statement (or its equivalent in meaning):

***Tested by the Testing and Calibration Laboratory “ZETOM” in Katowice, a unit accredited by the Polish Centre for Accreditation seated in Warsaw within the scope of the Certificate No. AB 024 Annex.***

## B. Complementary (listed in this Test Report) Section

## C. Anomalies (listed in this Test Report) Section

When using the contents of this Test Report, the owner hereof shall state that they use the results produced by the Testing and Calibration Laboratory at the Institutes for Research and Certification “ZETOM" in Katowice, accredited by the Polish Centre for Accreditation in Warsaw.

## 1. BASIS OF TESTING

**1.1. Customer's document title:** Order from Furnika Sp. z o.o. [Limited Liability Partnership] Limited Partnership for the test at the Testing and Calibration Laboratory “ZETOM" in Katowice

**1.2. Customer's document identification:** Order dated: 18/06/2024

**1.3. Subject:** Testing of compliance to essential requirements

## 2. TESTING OBJECTIVE

Control of properties and characteristics against reference standards and according to the Testing Program

## 3. TEST OBJECT

**3.1.** Object designation: Fixed luminaire LED model ALA2 800

**3.2.** Customer: Furnika Sp. z o.o. Limited Partnership, 48-200 Prudnik, Przemysłowa 11 street

**3.3.** Supplier/Manufacturer: Furnika Sp. z o.o. Limited Partnership, 48-200 Prudnik, Przemysłowa 11 street

**3.4.** Place of production: Furnika Sp. z o.o. Limited Partnership, 48-200 Prudnik, Przemysłowa 11 street

**3.5.** Method of object delivery for testing: delivered by the Customer

**3.6.** Objects collected at: the Customer

**3.7.** Collect Report: -

**3.8.** Date of receiving the test objects: 11/07/2024

**3.9.** Collector's additional labelling applied: -

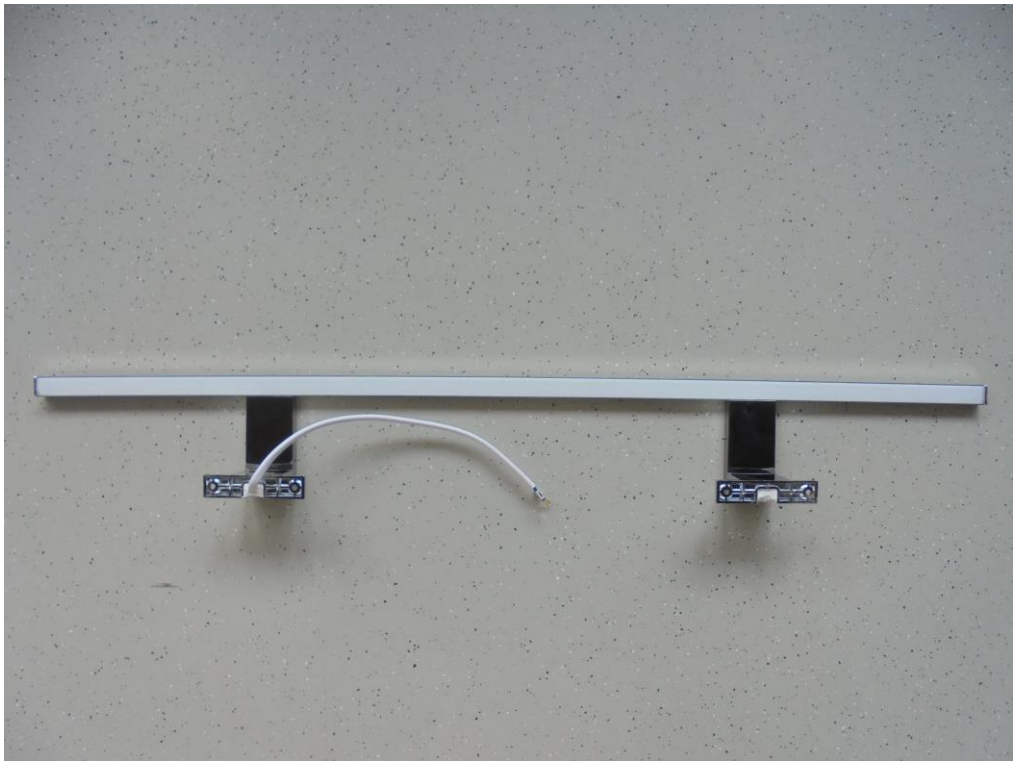
**3.10.** Object packaging: Cardboard box

**3.11.** In-laboratory labelling of objects:

| Object labelling in prior of delivery to the Lab | Labelling of objects made at the Lab[1)] | Notes |
|---|---|---|
| Labelling | B/2024/306 | ——————— |
| directly | | |
| on the product | | |
| (marking plate) | | |
| | | |
| | | |
| | | |
| | | |

[1)] Remains the Sample Index

Marking plate

Fixed luminaire LED model ALA2 800

## 4. TESTING PROGRAM

The Testing Program includes the testing's cope of the following reference standards:

- PN-EN IEC 60598-1:2021-07+A11:2022-12 "Luminaires. Part 1: General requirements and tests"
    - Section 9: Testing of resistance to ingress of dust, solids and water.
- PN-EN 60529:2003+A2:2014 "Degrees of protection provided by enclosures (IP code)"

**Possible evaluation results:**
- test description not applicable to the test object ..... : **N** (Not applicable))
- test object meets the requirement ..... : **P** (Pass)
- test object fails to meet the requirement ..... : **F** (Fail)
- not within the scope of testing …….. : **-** (-)

**General remarks:**
The numbers contained in the parentheses in the column refer to the Sections of PN-EN IEC 60598-1.
"(See note #)" refers to notes appended herein.
"(See Annex #)" refers to Annexes appended herein.

The report refers to complete studies performed for:

Fixed luminaire LED model ALA2 800

Technical specifications:

Supply voltage: 230 V~
Rated mains frequency: 50 Hz
Max. power consumption: 5 W
Light source: LED
IP44
Insulation class: II

The test sample is representative of a series consisting of the following models:

ALA2 300
ALA2 400
ALA2 500
ALA2 600

## 5. MEASUREMENT EQUIPMENT

- Thermohygrometer ID no. 9200014
- High-voltage apparatus ID no. 2100047
- Seconds meter ID no. 4500001
- INSTEK GPT measuring device ID no. 1005008
- Ruler ID no. 0110068
- IP leakage test facility

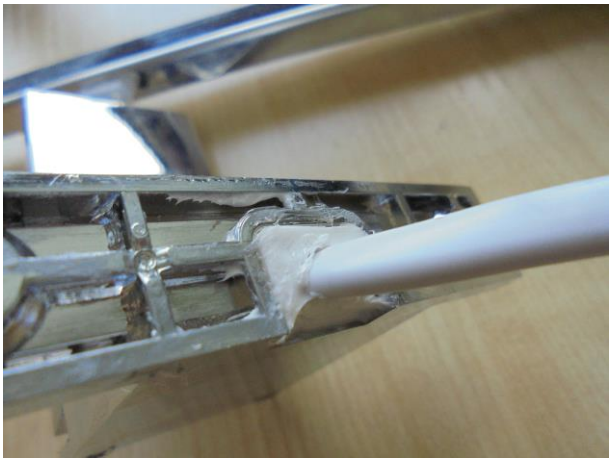
## 6. TEST DESCRIPTION AND RESULTS

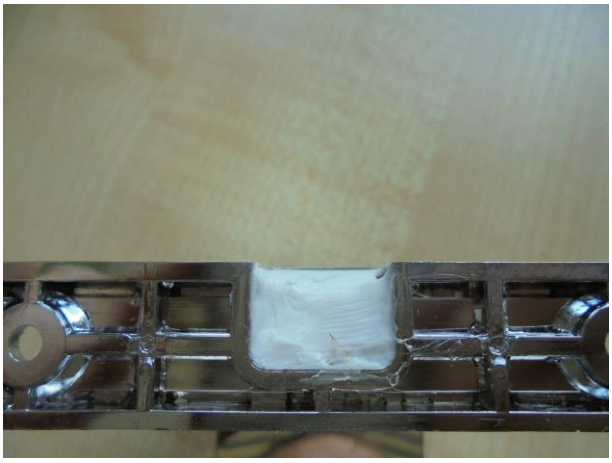
**6.1** Research done by the standards PN-EN IEC 60598-1:2021-07+A11:2022-12

| PN-EN IEC 60598-1:2021-07+A11:2022-12 | | | |
|---|---|---|---|
| Section | Requirement - Check | Result | Evaluation |
| 9.2 | Testing of resistance to ingress of dust, solids and water. | | |
| | - Classification rating ……..... : | IP44 | |
| | - Luminaire orientation during the test ... : | as in normal use | |
| | - Tightened mounting screws (Nm) ..... : | | |
| | - Test comply with Section ..... : | 9.2.0 and 9.2.5 | |
| | - Electric strength | 2920 V | P |
| | a) No excessive amounts of talc in the dust-proof luminaire | | N |
| | b) No talc in the dust-proof luminaire | | N |
| | c) No traces of water on live parts | | P |
| | d) No water in the waterproof luminaire | | N |
| | e) No access to live parts | | N |
| | f) No traces of water on any part which requires flooding protection | | P |
| | g) No mechanical damage | | N |
| 9.3 | 48 h humidity test | | P |

Testing according to PN-EN IEC 60598-1:2021-07+A11:2022-12 “Luminaires. Part 1: General requirements and tests” section 9: ‘Resistance to ingress of dust, solids and moisture’ are the same with the corresponding requirements of PN-EN 60529:2003+A2:2014-07 “Degrees of protection provided by enclosures (IP code)” to the extent relevant to them.

Complementary photos:



END OF REPORT