



Test Report

Testing of safety against ball throwing

Report-No.: 905 1219 000/e/Sgm

Client: ELKOVO CEPELIK s r.o.
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511401 Turnov
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Order-No. (Client): -

Order-No. (MPA): 905 1219 000

Test Item: **Sports luminaire**
"ZCLED3GSPORTL840/MIKRO"

Specification Applied [1] DIN 18032-3:2023-12
Sports halls – Halls for gymnastics, games and
multi-purpose use-Part 3: testing of safety against ball throwing
[2] DIN EN 13964:2014-08
Suspended ceilings - Requirements and test methods

Date of Receipt of Test Item 03.12.2025

Date of Test: 05.12.2025

Date of Report: 13.01.2026

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Enclosures : 2

Supplements:

Total Number of Pages: 5

Number of Reports: 2

The test results relate only to the items tested.

Publication of this report in full or partly is only allowed with written authorization by MPA University of Stuttgart.

In compliance with DIN EN ISO/IEC 17025 accredited Testing Laboratory recognized by Deutsche Akkreditierungsstelle (DAKKS).
Accreditation valid for testing methods listed in the certificates.

1 Purpose of Investigation

With writing of 2025-11-28 you ordered the Materials Testing Institute University of Stuttgart with testing of the safety against ball throwing on an installation element according to DIN 18032-3 [1], as well as testing of impact-resistance according to DIN EN 13964 [2], annex D.

2 Tests and Analyses Performed

2.1 Description of the element tested

The installation element under investigation was the sports luminaire

"ZCLED3GSPORTL840/MIKRO"

with the dimensions of von 1555 mm x 275 mm x 60 mm.

- Housing: steel sheet thickness 0,6 mm,
- Cover: aluminum frame, thickness 1,5 mm
- Diffusor: Polycarbonate, thickness 3 mm
- Connection cover/diffusor: connected to housing with 6 screws type M5x25 mm
- Connection to lab ceiling: 4 screws type 6x60 mm (wooden ceiling).

Other variants of the luminaire are also covered by the test and are also to be classified as safe against ball throwing (see enclosure 2).

2.2 Execution of the tests and analyses

The test was performed according to DIN 18032-3 [1] and according to DIN EN 13964 [2], Annex D (accredited test methods according to DIN EN ISO / IEC 17025, see DAkkS-certificate D-PL-11027-04-02). The assessment of conformity shall not take into account the uncertainty of measurement of the test results.

The test was performed in a laboratory at 22 °C.

3 Results of Investigation

Table 1: Results of determination of safety against ball throwing according to DIN 18 032-3 [1] on the sports luminaire "ZCLED3GSPORTL840/MIKRO"

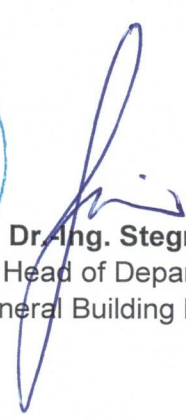
Ball	Impact angle in degree	Number of tests	Impact speed [km/h]	Deterioration of test item
Handball	90	12	category D1 60,0 ± 2,9	none
Handball	60	12		
Handball	60	12		

The tested element passed the test without damage.

Therefore the element can be evaluated as safe against ball throwing according to DIN 18032-3 [1] (category D1) as well as impact-resistant according to DIN EN 13964 [2], Annex D, for the Class 1A (impact speed $16,5 \pm 0,8$ m/s).


Konrad
Testing Engineer




Dr.-Ing. Stegmaier
Head of Department
Mineral Building Materials

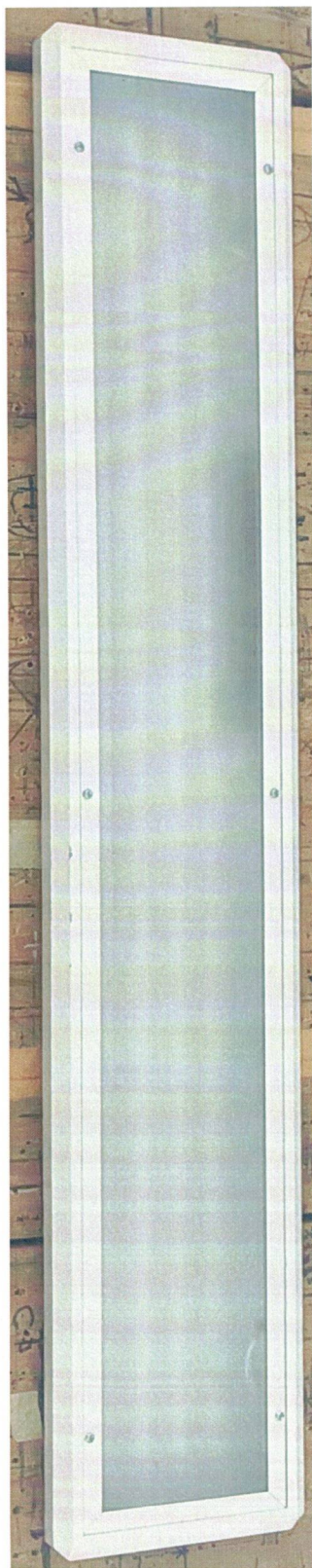


Figure 1
Overall view:
"ZCLED3GSPORTL840/MIKRO"



New product codes	Original product codes	Size mm
ZCLED-SPORT-M-840-9,9k/ZK-L	ZCLED3GSPORT76L840/MIKRO-ZK	275 x 1255 x 60
ZCLED-SPORT-M-840-13,3k/ZK-L	ZCLED3GSPORT102L840/MIKRO-ZK	275 x 1255 x 60
ZCLED-SPORT-M-840-14,6k/ZK-L	ZCLED3GSPORT112L840/MIKRO-ZK	275 x 1255 x 60
ZCLED-SPORT-M-840-15,7k/ZK-L	ZCLED3GSPORT122L840/MIKRO-ZK	275 x 1255 x 60
ZCLED-SPORT-M-840-12,4k/ZK-L	ZCLED3GSPORT95L840/MIKRO-ZK	275 x 1555 x 60
ZCLED-SPORT-M-840-18,3k/ZK-L	ZCLED3GSPORT140L840/MIKRO-ZK	275 x 1555 x 60
ZCLED-SPORT-M-840-13,7k/M600-Q	ZCLED3GSPORT97Q840/MIKRO-M600	595 x 595 x 85
ZCLED-SPORT-M-840-17,0k/M600-Q	ZCLED3GSPORT122Q840/MIKRO-M600	595 x 595 x 85
ZCLED-SPORT-M-840-12,7k/M600-L	ZCLED3GSPORT97L840/MIKRO-M600	295 x 1195 x 85
ZCLED-SPORT-M-840-15,8k/M600-L	ZCLED3GSPORT122L840/MIKRO-M600	295 x 1195 x 85
ZCLED-SPORT-M-840-27,3k/M600-L	ZCLED3GSPORT194L840/MIKRO-M600	595 x 1195 x 85
ZCLED-SPORT-M-840-33,8k/M600-L	ZCLED3GSPORT245L840/MIKRO-M600	595 x 1195 x 85
ZCLED-SPORT-M-840-12,5k/M600-L	ZCLED3GSPORT95L840/MIKRO-M600	295 x 1495 x 85
ZCLED-SPORT-M-840-18,2k/M600-L	ZCLED3GSPORT140L840/MIKRO-M600	295 x 1495 x 85
ZCLED-SPORT-M-840-13,7k/M625-Q	ZCLED3GSPORT97Q840/MIKRO-M625	620 x 620 x 85
ZCLED-SPORT-M-840-17,0k/M625-Q	ZCLED3GSPORT122Q840/MIKRO-M625	620 x 620 x 85
ZCLED-SPORT-M-840-12,7k/M625-L	ZCLED3GSPORT97L840/MIKRO-M625	310 x 1245 x 85
ZCLED-SPORT-M-840-15,8k/M625-L	ZCLED3GSPORT122L840/MIKRO-M625	310 x 1245 x 85
ZCLED-SPORT-M-840-27,3k/M625-L	ZCLED3GSPORT194L840/MIKRO-M625	620 x 1245 x 85
ZCLED-SPORT-M-840-33,8k/M625-L	ZCLED3GSPORT245L840/MIKRO-M625	620 x 1245 x 85
ZCLED-SPORT-M-840-12,5k/M625-L	ZCLED3GSPORT95L840/MIKRO-M625	310 x 1545 x 85
ZCLED-SPORT-M-840-18,2k/M625-L	ZCLED3GSPORT140L840/MIKRO-M625	310 x 1545 x 85

Table 2
versions of the luminaire (old/new designation)
"ZCLED3GSPORTL840/MIKRO"

