

202301063IST

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Test Report issued under the responsibility of:



TEST REPORT IEC 60598-2-2 Luminaires Part 2: Particular requirements Section 2: Recessed luminaires and recessed air-handling luminaires	
Report Number.....	202301063IST
Date of issue.....	10.01.2024
Total number of pages	59
Name of Testing Laboratory preparing the Report	Intertek Test Hizmetleri A.S. Electrical Laboratory
Applicant's name	Pan Aydınlatma ve Elk. San. Tic. Ltd. Sti.
Address.....	İkitelli O.S.B. Sefaköy San.Sit. 7.Blok No:10 Başakşehir/İSTANBUL/TURKEY
Test specification:	
Standard	IEC 60598-2-2:2023 used in conjunction with IEC 60598-1:2020
Test procedure	GS Scheme
Non-standard test method	N/A
TRF template used.....	IECEE OD-2020-F1:2022, Ed.1.5
Test Report Form No.	IEC60598_2_2H
Test Report Form(s) Originator	Intertek Semko AB
Master TRF	Dated 2023-02-21
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If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.	
This report is not valid as a CB Test Report unless signed by an approved IECEE Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.	
General disclaimer:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing NCB. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	

Test item description	Recessed Luminaire
Trade Mark(s)	MONOS
Manufacturer	Pan Aydinlatma ve Elk. San. Tic. Ltd. Sti.
Model/Type reference	005.0001.6450/005.0001.7385/005.0001.7386/005.0001.7855 005.0001.7155-...-005.0001.7163 005.0001.7794-...-005.0001.7849 005.0001.7918-...-005.0001.7933 005.0001.8093-...-005.0001.8105 005.0001.8112-...-005.0001.8115 Please see general product information for details.
Ratings	220-240V~, 50Hz, Rated power:30W or 35W or 40W, Class I Please see general product information for details.

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	Intertek Test Hizmetleri A.S. Electrical Laboratory
Testing location/ address :		Merkez Mahallesi Sanayi Caddesi No:23 Altındağ Plaza 34197 Yenibosna/İstanbul/Türkiye
Tested by (name, function, signature) :		Hüseyin YAMAN Senior Project Engineer
Approved by (name, function, signature) .. :		Mert AKYÜZ Technical Laboratory Manager
<hr/>		
<input type="checkbox"/>	Testing procedure: CTF Stage 1:	
Testing location/ address :		
Tested by (name, function, signature) :		
Approved by (name, function, signature) .. :		
<hr/>		
<input type="checkbox"/>	Testing procedure: CTF Stage 2:	
Testing location/ address :		
Tested by (name + signature) :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
<hr/>		
<input type="checkbox"/>	Testing procedure: CTF Stage 3:	
<input type="checkbox"/>	Testing procedure: CTF Stage 4:	
Testing location/ address :		
Tested by (name, function, signature) :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
Supervised by (name, function, signature) :		
<hr/>		

<p>List of Attachments (including a total number of pages in each attachment):</p> <p>Attachment I: - List of test equipment (1 page)</p> <p>Attachment II: -EN 60598-2-2:2012 used in conjunction with EN IEC 60598-1:2021 + A11:2022 (2 pages)</p> <p>Attachment III: - Photos (6 Pages)</p>	
<p>Summary of testing: The EUT is in compliance with the requirements of the applied standards within this test report.</p>	
<p>Tests performed (name of test, test clause and date test performed): IEC 60598-2-2:2023 IEC 60598-1:2020 EN 60598-2-2:2012 EN 60598-1:2021 + A11:2022</p> <p>All clauses applied as applicable; See tables at the end of this report for the tests results: Cl.11.2, Cl.13.2.1, Cl.13.3.1, Cl.13.3.2, Cl.13.4, ANNEX 1, ANNEX 2.</p> <p>2.6 Marking 2.7 Construction 2.8 Creepage distances and clearances 2.9 Provision for earthing 2.10 Screw terminals 2.10 Screwless terminals and electrical connections 2.11 External and internal wiring 2.12 Protection against electric shock 2.13 Endurance test and thermal test 2.14 Resistance to dust and moisture 2.15 Insulation resistance and electric strength 2.16 Resistance to heat, fire and tracking ANNEX 1 TABLE: Critical components information ANNEX 2 TABLE: Thermal tests of Section 12</p> <p>All relevant tests were performed on models 005.0001.6450 and 005.0001.7158.</p>	<p>Testing location: (CBTL, SPTL, CTF, Subcontractor) Intertek Test Hizmetleri A.S. Electrical Laboratory Merkez Mahallesi Sanayi Caddesi No:23 Altındağ Plaza 34197 Yenibosna/İstanbul/Türkiye</p>
<p>Summary of compliance with National Differences (List of countries addressed): EU group differences, Germany</p> <p><input checked="" type="checkbox"/> The product fulfils the requirements of EN 60598-2-2:2012 used in conjunction with EN IEC 60598-1:2021 + A11:2022</p>	

Use of uncertainty of measurement for decisions on conformity (decision rule) :

No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").

LMS-EMEA-TR-QC-12. 07.02.2023. Elektrik Laboratuvarı Metot Doğrulama/Verifikasyonu Belirsizlik Hesaplama Prosedürü

LMS-EMEA-TR-FM-16. 15.11.2021. Elektrik Laboratuvarı Metrolojik İzlenebilirlik Prosedürü

Other: ... (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)

Information on uncertainty of measurement:

The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.

IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

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Test item particulars	: Recessed luminaire
Classification of installation and use	: Recessed into ceiling by struts, Class I, indoor use
Supply Connection	: LED driver terminals for connection to fixed wiring or terminal block for connection to fixed wiring
Possible test case verdicts:	
- test case does not apply to the test object.....	: N/A
- test object does meet the requirement.....	: P (Pass)
- test object does not meet the requirement.....	: F (Fail)
Testing :	
Date of receipt of test item	: 16.06.2023, 27.10.2023
Test item receipt number	: S23.0666, S23.0667, S23.0668, S23.1235
Test item serial number	: Engineering Samples
Date (s) of performance of tests	: 19.07.2023-07.11.2023
General remarks:	
<p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>The whole and/or the part of this report shall not be reproduced and shall not be shared with third parties. nor to be used for juridical – official and PR activities without the written permission of INTERTEK Test Hizmetleri A.Ş. The results given herein apply to the submitted sample only. Reports are invalid without signature / seal.</p> <p>The results are reported with an expanded uncertainty calculated using a coverage factor k of 2 which gives a level of confidence of approximately 95%.</p> <p>Intertek Turkey Electrical Laboratory applies the shared risk decision rule.</p> <p>The product or test method requires a declaration of conformity in the laboratory report. However. if there is no information about the effects of confidence level and measurement uncertainty in evaluating the conformity with the relevant standards or legislation. the laboratory can evaluate whether the obtained test result is within the specified limits or not as appropriate or not. without considering the level of confidence and measurement uncertainty</p>	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60598-2-21:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable Only one factory
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)	: Pan Aydınlatma ve Elk. San. Tic. Ltd. Sti. İkitelli O.S.B. Sefaköy San.Sit. 7.Blok No:10 Başakşehir/İSTANBUL/TURKEY

General product information and other remarks:

The tested appliance is a recessed luminaire.

The tested product represents the "Classic Recessed Luminaire" model family.

Connection to supply mains through by terminal block provided by the manufacturer to connection of fixed wiring.

Models covered by this test report are Class I recessed luminaires for indoor use. Luminaires are intended to be recessed into the ceiling by struts.

LCA 75W 100–400mA one4all Ip model driver has a dimmable feature in the models it is used in.

Trademark	Model	Type	Driver	Power	Voltage	Frequency	Dimensions (L1/L2 x B) // L1/L1.1 – (L2/L2.1) x B
MONOS	005.0001.7837	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	40	220-240	50	1140/1105 x 297
MONOS	005.0001.7847	DALI	LCA 75W 100– 400mA one4all Ip PRE	35	220-240	50	1140/1105 x 297
MONOS	005.0001.7838	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	40	220-240	50	1145/1110 x 297
MONOS	005.0001.7855	DALI	LCA 75W 100– 400mA one4all Ip PRE	35	220-240	50	1145/1110 x 297
MONOS	005.0001.7839	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	40	220-240	50	1150/1115 x 297
MONOS	005.0001.7918	DALI	LCA 75W 100– 400mA one4all Ip PRE	35	220-240	50	1150/1115 x 297
MONOS	005.0001.7840	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	40	220-240	50	1155/1120 x 297
MONOS	005.0001.7919	DALI	LCA 75W 100– 400mA one4all Ip PRE	35	220-240	50	1155/1120 x 297
MONOS	005.0001.7841	ON/OFF	LC 38/400-	40	220-240	50	1160/1125 x 297

			700/54 flexC lp SNC4				
MONOS	005.0001.7920	DALI	LCA 75W 100– 400mA one4all lp PRE	35	220-240	50	1160/1125 x 297
MONOS	005.0001.7385	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1165/1130 x 297
MONOS	005.0001.7921	DALI	LCA 75W 100– 400mA one4all lp PRE	35	220-240	50	1165/1130 x 297
MONOS	005.0001.7815	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1170/1135 x 297
MONOS	005.0001.7922	DALI	LCA 75W 100– 400mA one4all lp PRE	35	220-240	50	1170/1135 x 297
MONOS	005.0001.7849	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1175/1140 x 297
MONOS	005.0001.7923	DALI	LCA 75W 100– 400mA one4all lp PRE	35	220-240	50	1175/1140 x 297
MONOS	005.0001.7823	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1180/1145 x 297
MONOS	005.0001.7924	DALI	LCA 75W 100– 400mA one4all lp PRE	35	220-240	50	1180/1145 x 297
MONOS	005.0001.7159	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1185/1150 x 297
MONOS	005.0001.7160	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1190/1155 x 297
MONOS	005.0001.7161	ON/OFF	LC 38/400- 700/54 flexC lp	40	220-240	50	1195/1160 x 297

			SNC4				
MONOS	005.0001.8096	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1195/1240 – (1160/1205) x 297
MONOS	005.0001.8112	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1198/1168 x 297
MONOS	005.0001.8113	DALI	LCA 75W 100– 400mA one4all lp PRE	35	220-240	50	1198/1168 x 297
MONOS	005.0001.7163	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220- 240V	50	1200/1165 x 297
MONOS	005.0001.7806	DALI	LCA 75W 100– 400mA one4all lp PRE	35	220-240	50	1200/1165 x 297
MONOS	005.0001.8094	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1200/1210 – (1165/1175) x 297
MONOS	005.0001.7386	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1205/1170 x 297
MONOS	005.0001.7807	DALI	LCA 75W 100– 400mA one4all lp PRE	35	220-240	50	1205/1170 x 297
MONOS	005.0001.7808	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1210/1175 x 297
MONOS	005.0001.7809	DALI	LCA 75W 100– 400mA one4all lp PRE	35	220-240	50	1210/1175 x 297
MONOS	005.0001.7794	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	40	220-240	50	1215/1180 x 297
MONOS	005.0001.7810	DALI	LCA 75W 100– 400mA one4all lp PRE	35	220-240	50	1220/1185 x 297
MONOS	005.0001.7925	ON/OFF	LC	40	220-240	50	1220/1185 x

			38/400-700/54 flexC lp SNC4				297
MONOS	005.0001.7795	ON/OFF	LC 38/400-700/54 flexC lp SNC4	40	220-240	50	1225/1190 x 297
MONOS	005.0001.7811	DALI	LCA 75W 100-400mA one4all lp PRE	35	220-240	50	1225/1190 x 297
MONOS	005.0001.7796	ON/OFF	LC 38/400-700/54 flexC lp SNC4	40	220-240	50	1230/1195 x 297
MONOS	005.0001.7835	DALI	LCA 75W 100-400mA one4all lp PRE	35	220-240V	50	1230/1195 x 297
MONOS	005.0001.7797	ON/OFF	LC 38/400-700/54 flexC lp SNC4	40	220-240	50	1235/1200 x 297
MONOS	005.0001.7834	DALI	LCA 75W 100-400mA one4all lp PRE	35	220-240	50	1235/1200 x 297
MONOS	005.0001.7156	ON/OFF	LC 38/400-700/54 flexC lp SNC4	40	220-240	50	1240/1205 x 297
MONOS	005.0001.7836	DALI	LCA 75W 100-400mA one4all lp PRE	35	220-240	50	1240/1205 x 297
MONOS	005.0001.7162	ON/OFF	LC 38/400-700/54 flexC lp SNC4	40	220-240	50	1245/1210 x 297
MONOS	005.0001.6450	ON/OFF	LC 38/400-700/54 flexC lp SNC4	35	220-240	50	1247/1217 x 297
MONOS	005.0001.7158	DALI	LCA 75W 100-400mA one4all lp PRE	40	220-240	50	1247/1217 x 297
MONOS	005.0001.7816	ON/OFF	LC 38/400-700/54	35	220-240	50	1250/1215 x 297

			flexC Ip SNC4				
MONOS	005.0001.7798	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	35	220-240	50	1255/1220 x 297
MONOS	005.0001.8093	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	35	220-240	50	1255/1270 – (1220/1235) x 297
MONOS	005.0001.8105	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	35	220-240	50	1257/1217 x 297
MONOS	005.0001.7812	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	35	220-240	50	1260/1225 x 297
MONOS	005.0001.7817	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	35	220-240	50	1265/1230 x 297
MONOS	005.0001.7926	DALI	LCA 75W 100– 400mA one4all Ip PRE	40	220-240	50	1265/1230 x 297
MONOS	005.0001.7799	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	35	220-240	50	1270/1235 x 297
MONOS	005.0001.7927	DALI	LCA 75W 100– 400mA one4all Ip PRE	40	220-240	50	1270/1235 x 297
MONOS	005.0001.7842	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	35	220-240	50	1275/1240 x 297
MONOS	005.0001.7928	DALI	LCA 75W 100– 400mA one4all Ip PRE	40	220-240	50	1275/1240 x 297
MONOS	005.0001.7843	ON/OFF	LC 38/400- 700/54 flexC Ip SNC4	35	220-240	50	1285/1250 x 297
MONOS	005.0001.7929	DALI	LCA 75W 100– 400mA one4all Ip PRE	40	220-240	50	1285/1250 x 297

MONOS	005.0001.7844	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1290/1255 x 297
MONOS	005.0001.7930	DALI	LCA 75W 100– 400mA one4all lp PRE	40	220-240	50	1290/1255 x 297
MONOS	005.0001.7845	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1295/1260 x 297
MONOS	005.0001.7931	DALI	LCA 75W 100– 400mA one4all lp PRE	40	220-240	50	1295/1260 x 297
MONOS	005.0001.8114	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1298/1268 x 297
MONOS	005.0001.8115	DALI	LCA 75W 100– 400mA one4all lp PRE	40	220-240	50	1298/1268 x 297
MONOS	005.0001.8104	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1310/1275 x 297
MONOS	005.0001.7824	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1355/1320 x 297
MONOS	005.0001.8103	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1355/1395 – (1320/1360) x 297
MONOS	005.0001.7818	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1365/1330 x 297
MONOS	005.0001.7800	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1370/1335 x 297
MONOS	005.0001.7830	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1375/1340 x 297
MONOS	005.0001.7846	ON/OFF	LC 38/400-	35	220-240	50	1380/1345 x 297

			700/54 flexC lp SNC4				
MONOS	005.0001.8097	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220- 240V	50	1380/1420 – (1345/1385) x 297
MONOS	005.0001.7813	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1385/1350 x 297
MONOS	005.0001.8102	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1390/1430 – (1355/1395) x 297
MONOS	005.0001.7814	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1395/1360 x 297
MONOS	005.0001.7801	DALI	LCA 75W 100– 400mA one4all lp PRE	40	220-240	50	1400/1365 x 297
MONOS	005.0001.8099	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1405/1365 – (1370/1330) x 297
MONOS	005.0001.7802	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1405/1370 x 297
MONOS	005.0001.8101	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1410/1370 – (1375/1335) x 297
MONOS	005.0001.7803	DALI	LCA 75W 100– 400mA one4all lp PRE	40	220-240	50	1410/1375 x 297
MONOS	005.0001.7848	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1410/1375 x 297
MONOS	005.0001.8095	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1410/1450 – (1375/1415) x 297
MONOS	005.0001.8098	ON/OFF	LC 38/400- 700/54 flexC lp	35	220-240	50	1415/1375 – (1380/1340) x 297

			SNC4				
MONOS	005.0001.7819	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1415/1380 x 297
MONOS	005.0001.7932	DALI	LCA 75W 100– 400mA one4all lp PRE	40	220-240	50	1415/1380 x 297
MONOS	005.0001.7825	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1420/1385 x 297
MONOS	005.0001.7831	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1425/1390 x 297
MONOS	005.0001.7826	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1430/1395 x 297
MONOS	005.0001.8100	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1435/1395 – (1400/1360) x 297
MONOS	005.0001.7820	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1435/1400 x 297
MONOS	005.0001.7827	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1440/1405 x 297
MONOS	005.0001.7821	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	35	220-240	50	1445/1410 x 297
MONOS	005.0001.7828	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	30	220-240	50	1450/1415 x 297
MONOS	005.0001.7832	ON/OFF	LC 38/400- 700/54 flexC lp SNC4	30	220-240	50	1455/1420 x 297
MONOS	005.0001.7933	DALI	LCA 75W 100– 400mA one4all lp PRE	40	220-240	50	1455/1420 x 297
MONOS	005.0001.7829	ON/OFF	LC	30	220-240	50	1460/1425 x

			38/400-700/54 flexC Ip SNC4				297
MONOS	005.0001.7822	ON/OFF	LC 38/400-700/54 flexC Ip SNC4	30	220-240	50	1465/1430 x 297
MONOS	005.0001.7157	ON/OFF	LC 38/400-700/54 flexC Ip SNC4	30	220-240	50	1470/1435 x 297
MONOS	005.0001.7833	DALI	LCA 75W 100-400mA one4all Ip PRE	40	220-240	50	1475/1440 x 297
MONOS	005.0001.7804	ON/OFF	LC 38/400-700/54 flexC Ip SNC4	30	220-240	50	1480/1445 x 297
MONOS	005.0001.7155	ON/OFF	LC 38/400-700/54 flexC Ip SNC4	30	220-240	50	1485/1450 x 297
MONOS	005.0001.7805	ON/OFF	LC 38/400-700/54 flexC Ip SNC4	30	220-240	50	1490/1455 x 297



IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

2.4 (0)	GENERAL TEST REQUIREMENTS		P
2.4 (-)	Measurement of ambient temperature according to Annex A		—
2.4 (0.3)	More sections applicable.....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Section/s:	—
2.4 (0.5)	Components	(See Annex 1)	—
2.4 (0.7)	Information for luminaire design in light sources standards		—
2.4 (0.7.2)	Light source safety standard	IEC 62031	—
	Luminaire design in the light source safety standard		P

2.5 (2)	CLASSIFICATION OF LUMINAIRES		
2.5 (2.2)	Type of protection	Class I	P
2.5 (2.3)	Degree of protection	IPX0	—
2.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces.....	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
2.5 (2.5)	Luminaire for normal use	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	Luminaire for rough service	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—

2.6 (3)	MARKING		P
2.6 (3.2)	Mandatory markings	See marking label	P
	Position of the marking		P
	Format of symbols/text		P
2.6 (3.3)	Additional information		P
	Language of instructions	English and German	P
2.6 (3.3.1)	Combination luminaires		N/A
2.6 (3.3.2)	Nominal frequency in Hz	50	P
2.6 (3.3.3)	Operating temperature	25°C	P
2.6 (3.3.5)	Wiring diagram		P
2.6 (3.3.6)	Special conditions		N/A
2.6 (3.3.7)	Metal halide lamp luminaire – warning	Only LED as light source	N/A
2.6 (3.3.8)	Limitation for semi-luminaires	No semi-luminaire	N/A
2.6 (3.3.9)	Power factor and supply current	≥0.9	P
2.6 (3.3.10)	Suitability for use indoors	Indoor use only	P
2.6 (3.3.11)	Luminaires with remote control	No remote control	N/A
2.6 (3.3.12)	Clip-mounted luminaire – warning		N/A
2.6 (3.3.13)	Specifications of protective shields	No protective shield	N/A
2.6 (3.3.14)	Symbol for nature of supply		N/A
2.6 (3.3.15)	Rated current of socket outlet	No socket outlet	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.6 (3.3.16)	Rough service luminaire		N/A
2.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	No supply cord	N/A
2.6 (3.3.18)	Non-ordinary luminaires with PVC cable	Ordinary luminaire, IP20	N/A
2.6 (3.3.19)	Protective conductor current in instruction if applicable		N/A
2.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		P
2.6 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided	Provided for non-user replaceable light source	P
2.6 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
2.6 (3.3.23)	Luminaire without control gear provided with necessary information for selection of appropriate component	Provided with controlgear	N/A
2.6 (3.3.24)	If not supplied with terminal block, information on the packaging	Provided with the luminaire	N/A
2.6 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided		N/A
2.6 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided	Not wall mounted luminaire	N/A
2.6 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached	Legible after the tests	P
2.6.2 (-)	Luminaires with two IP ratings		N/A
2.6.3 (-)	Symbol "not suitable for direct mounting on normally flammable surface", if applicable		N/A
2.6.4 (-)	Symbol "not suitable for covering with thermally insulated material", if applicable		N/A


2.7 (4)	CONSTRUCTION		P
2.7 (4.2)	Components replaceable without difficulty		P
2.7 (4.3)	Wireways smooth and free from sharp edges	Free from sharp edges	P
2.7 (4.4)	Lamp holders		N/A
2.7 (4.4.1)	Integral lamp holder	No lampholder	N/A
2.7 (4.4.2)	Wiring connection		N/A
2.7 (4.4.3)	Lamp holder for end-to-end mounting		N/A
2.7 (4.4.4)	Positioning		N/A
	- pressure test (N)		—
	After test the lamp holder comply with relevant standard sheets and show no damage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	After test on single-capped lamp holder the lamp holder has not moved from its position and shows no permanent deformation		N/A
	- bending test (N)		—
	After test the lamp holder have not moved from its position and show no permanent deformation		N/A
2.7 (4.4.5)	Peak pulse voltage		N/A
2.7 (4.4.6)	Centre contact		N/A
2.7 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
2.7 (4.4.8)	Lamp connectors		N/A
2.7 (4.4.9)	Caps and bases correctly used		N/A
2.7 (4.4.10)	Light source for lamp holder or connection according to IEC 60061 not connected another way		N/A
2.7 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
2.7 (4.6)	Terminal blocks		P
	Tails		P
	Unsecured blocks		N/A
2.7 (4.7)	Terminals and supply connections		N/A
2.7 (4.7.1)	Contact to metal parts		N/A
2.7 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
2.7 (4.7.3)	Terminals for supply conductors		N/A
2.7 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
2.7 (4.7.4)	Terminals other than supply connection		N/A
2.7 (4.7.5)	Heat-resistant wiring/sleeves		N/A
2.7 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
2.7 (4.8)	Switches		N/A
	- adequate rating	No switch	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
2.7 (4.9)	Insulating lining and sleeves		P
2.7 (4.9.1)	Retainment		P
	Method of fixing	Taken into consideration	P
2.7 (4.9.2)	Insulated linings and sleeves:		P
	Resistant to a temperature > 20 °C to the wire temperature or		P
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C)		N/A
2.7 (4.10)	Double or reinforced insulation		P
2.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation	Class I	N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
2.7 (4.10.2)	Assembly gaps:		P
	- not coincidental		P
	- no straight access with test probe		P
2.7 (4.10.3)	Retainment of insulation:		P
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		P
	- lining in lamp holder	No lampholder	N/A
2.7 (4.10.4)	Protective impedance device		N/A
	Basic and supplementary insulation bridged by resistor(s) or appropriate capacitor		N/A
	Double or reinforced insulation bridged by at least two separate resistors in series or appropriate capacitor(s)		N/A
	Capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.2 of IEC 60065		N/A
2.7 (4.11)	Electrical connections and current-carrying parts		P
2.7 (4.11.1)	Contact pressure		P
2.7 (4.11.2)	Screws:		P
	- self-tapping screws	Not used	P
	- thread-cutting screws	Not used	P
2.7 (4.11.3)	Screw locking:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- spring washer	No screw is used for electrical connections, only mechanical	N/A
	- rivets		N/A
2.7 (4.11.4)	Material of current-carrying parts		P
2.7 (4.11.5)	No contact to wood or mounting surface		P
2.7 (4.11.6)	Electro-mechanical contact systems		N/A
2.7 (4.12)	Screws and connections (mechanical) and glands		P
2.7 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material	No screw of insulating material	N/A
	Torque test: torque (Nm); part.....	2.91mm fixing screw of led module, 0.5Nm	P
	Torque test: torque (Nm); part.....	3.9mm fixing screw of led driver, 1.2Nm	P
	Torque test: torque (Nm); part.....	3.9mm fixing screw of terminal block, 1.2Nm	P
2.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		P
2.7 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm)	No fixed arm	N/A
	- lamp holder; torque (Nm)	No lampholder	N/A
	- push-button switches; torque 0,8 Nm.....	No switch	N/A
2.7 (4.12.5)	Screwed glands; force (Nm)	No screwed gland	N/A
2.7 (4.13)	Mechanical strength		P
2.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)	Diffuser plastic 0.2 Nm	P
	- other parts; energy (Nm)	Product body 0.35 Nm Driver body 0.35 Nm	P
	1) live parts	Not accessible after the impacts	P
	2) linings	Considered for sleeves on internal wiring	P
	3) protection	IPX0	N/A
	4) covers	No external cover	N/A
2.7 (4.13.2)	Metal parts have adequate mechanical strength		P
2.7 (4.13.3)	Straight test finger	30N applied on metal enclosure	P
2.7 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher	No rough service luminaire	N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	d) for temporary installations and suitable for mounting on a stand		N/A
2.7 (4.13.6)	Tumbling barrel		N/A
2.7 (4.14)	Suspensions, fixings and means of adjusting		P
2.7 (4.14.1)	Mechanical load:		P
	A) four times the weight	20.21kg for model 005.0001.6450	P
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm).....	No bracket arm	N/A
	D) load track-mounted luminaires	No track mounted luminaire	N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)	No clip-mounted luminaire	N/A
	Metal rod. diameter (mm)	Not suitable for mounting on tubular material	N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
2.7 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)	Not suspended by cables	—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	Bending moment (Nm) of semi-luminaire		N/A
2.7 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles.....	There are no adjusting devices	N/A
	- strands broken.....		N/A
	- electric strength test afterwards		N/A
2.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors	No telescopic tube	N/A
2.7 (4.14.5)	Guide pulleys	No pulley	N/A
2.7 (4.14.6)	Strain on socket-outlets	No socket outlet	N/A
2.7 (4.15)	Flammable materials		P
	- glow-wire test 650°C	See Test Table 2.16 (13.3.2)	P
	- spacing ≥ 30 mm		P
	- screen withstanding test of 13.3.1	No screen	N/A
	- screen dimensions		N/A
	- no fiercely burning material	Not used	N/A
	- thermal protection		P
	- electronic circuits exempted		N/A
2.7 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction	No luminaire made of thermoplastic material	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	b) temperature sensing control		N/A
	c) surface temperature		N/A
2.7 (4.16)	Luminaires for mounting on normally flammable surfaces		P
	No lamp control gear		N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
2.7 (4.16.1)	Lamp control gear spacing:		P
	- spacing 35 mm		P
	- spacing 10 mm		N/A
2.7 (4.16.2)	Thermal protection:		P
	- in lamp control gear		P
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		P
2.7 (4.16.3)	Design to satisfy the test of 12.6	(See clause 12.6)	N/A
2.7 (4.17)	Drain holes		N/A
	Clearance at least 5 mm	No drain hole	N/A
2.7 (4.18)	Resistance to corrosion		N/A
2.7 (4.18.1)	- rust-resistance	IPX0	N/A
2.7 (4.18.2)	- season cracking in copper		N/A
2.7 (4.18.3)	- corrosion of aluminium		N/A
2.7 (4.19)	Ignitors compatible with ballast		N/A
2.7 (4.20)	Rough service vibration		N/A
2.7 (4.21)	Protective shield		N/A
2.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps	No protective shield	N/A
	Shield of glass if tungsten halogen lamps		N/A
2.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
2.7 (4.21.3)	No direct path		N/A
2.7 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment.....		N/A
2.7 (4.22)	Attachments to lamps not cause overheating or damage		N/A
2.7 (4.23)	Semi-luminaires comply Class II		N/A
2.7 (4.24)	Photobiological hazards		P
2.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.7 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778	RG1 Reference report: CB Certificate 6111899.50P(DEKRA)	—
	Luminaires with E_{thr} :		N/A
	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2 ..		N/A
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
2.7 (4.25)	Mechanical hazard		P
	No sharp point or edges	Free from sharp edges	P
2.7 (4.26)	Short-circuit protection		P
2.7 (4.26.1)	Adequate means of uninsulated accessible SELV or PELV parts		P
2.7 (4.26.2)	Short-circuit test with test chain according 4.26.3		P
	Test chain not melt through	No melting of test chain	P
	Test sample not exceed values of Table 12.1 and 12.2	Operated with 1.1 times rated voltage 264V and test chain is placed between supply terminals of LED, no excessive temperatures	P
2.7 (4.27)	Terminal blocks with integrated screwless earthing contacts		N/A
	Test according Annex V	No such component is in use	N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
2.7 (4.28)	Fixing of thermal sensing control		N/A
	Not plug-in or easily replaceable type	No external thermal control	N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Max. temperature on adhesive material (°C)		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
2.7 (4.29)	Luminaires with non-replaceable light source		P
	Not possible to replace light source		P
	Live part not accessible after parts have been opened by hand or tools		P
2.7 (4.30)	Luminaires with non-user replaceable light source		N/A
	If protective cover provide protection against electric shock and marked with "caution, electric shock risk" symbol:		N/A
	One fixing means requiring the use of a tool for its removal		N/A
2.7 (4.31)	Insulation between circuits		P
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
2.7 (4.31.1)	SELV or PELV circuits		P
	Used SELV or PELV source		P
	Voltage ≤ ELV		P
	PELV circuit shall have one pole connected to functional earth		N/A
	The connection between PELV and earth shall comply with functional earth		N/A
	Insulating of SELV or PELV circuits from LV supply		P
	Insulating of SELV or PELV circuits from other non SELV circuits		N/A
	Insulating of SELV or PELV circuits from FELV		N/A
	Insulating of SELV or PELV circuits from other SELV or PELV circuits		N/A
	SELV or PELV circuits insulated from accessible parts according Table X.1		P
	Plugs not able to make any electrical contact socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
2.7 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage ≤ ELV		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to make any electrical contact socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
2.7 (4.31.3)	Other circuits		N/A
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
2.7 (4.32)	Overvoltage protective devices		N/A
	Comply with IEC 61643-11	No overvoltage protective device	N/A
	External to control gear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
2.7(4.33)	Luminaire powered via information technology communication cabling		N/A
	Luminaire shall fulfil the requirement for Class III		N/A
	Rated voltage of luminaire shall be within range of ES1, not exceed maximum voltage rated to used connector		N/A
	The luminaire shall be designed in line with the limits of the electrical parameters of a PSE.		N/A
	No hazard with 130% rated input voltage minimum 7.5VDC for circuit greater than 5VDC		N/A
	No hazard with 150% rated input voltage for circuit equal to or less than 5VDC		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.7(4.34)	Electromagnetic field (EMF)		P
	Compliance to IEC 62493:2015	According to clause 4.2.2 of EN 62493:2015, LED lighting equipment deemed to comply with the requirements of EN 62493:2015 without testing.	P
2.7(4.35)	Protection against moving fan blades		N/A
	Fan blades not accessible when installed and wired as in normal use and replacing light sources or components	No moving fan blades	N/A
	This test is not necessary for fans have leading edges and tips rounded with a radius of not less than 0,5mm and:		N/A
	Hardness less than D60 Shore, or		N/A
	Peripheral speed less than 15m/s supplied with rated voltage, or		N/A
	Fan has input power not exceeding 2W supplied with rated voltage.		N/A
2.7(4.36)	Track-mounted luminaires		N/A
	Tested according to Annex A of IEC 60570	No track-mounted luminaires	N/A

2.8 (11)	CREEPAGE DISTANCES AND CLEARANCES		N/A
2.8 (11.2.1)	Impulse withstand category (Normal category II)	Category II <input type="checkbox"/> Category III <input type="checkbox"/>	—
	Category III according to Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
2.8 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	N/A
	Creepage distances for frequency over 30 kHz:		N/A
	- Control gear marked with \hat{U}_{OUT} and $f_{U_{OUT}}$ according to IEC 61347-1, clause 7.1, item w		N/A
	- Requirements according to IEC 60664-4 for control gear not covered by IEC 61347		N/A
2.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	N/A
	Clearances distances for frequency over 30 kHz:		N/A
	- Control gear marked with U_p		N/A
	- Requirements according to IEC 60664-4 for control gear not covered by IEC 61347		N/A



2.9 (7)	PROVISION FOR EARTHING		P
2.9 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω	0.012 Ω	P


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Clause	Requirement + Test	Result - Remark	Verdict
	Self-tapping screws used		N/A
	Thread-forming screws		P
	Thread-forming screw used in a groove		N/A
	Earth makes contact first		P
	Terminal blocks with integrated screwless earthing contacts tested according to Annex V		P
	Protective earthing of the luminaire not via built-in control gear		P
2.9 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
2.9 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
	Terminal blocks with integrated screwless earthing contacts tested according to Annex V		P
2.9 (7.2.5)	Earth terminal integral part of connector socket		N/A
2.9 (7.2.6)	Earth terminal adjacent to mains terminals		P
2.9 (7.2.7)	Electrolytic corrosion of the earth terminal		P
2.9 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
2.9 (7.2.10)	Class II luminaire for looping-in	Class I	N/A
	Double or reinforced insulation to functional earth		N/A
2.9 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		N/A
2.9 (7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A

2.10 (14)	SCREW TERMINALS		N/A
	Separately approved; component list	No screw terminal	N/A
	Part of the luminaire		N/A

2.10 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		N/A
	Separately approved; component list.....	LED driver terminals	N/A
	Part of the luminaire		N/A

2.11 (5)	EXTERNAL AND INTERNAL WIRING		P
2.11 (5.2)	Supply connection and external wiring		P

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Clause	Requirement + Test	Result - Remark	Verdict
2.11 (5.2.1)	Means of connection	LED driver terminals for connection to fixed wiring or terminal block for connection to fixed wiring	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c./25V peak interrupted DC voltage with frequency between 10Hz and 200Hz or protected from outdoor environment	Indoor use only	N/A
2.11 (5.2.2)	Type of cable	No supply cord	N/A
	Nominal cross-sectional area (mm ²)		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
2.11 (5.2.3)	Type of attachment, X, Y or Z	No supply cord	N/A
2.11 (5.2.5)	Type Z not connected to screws		N/A
2.11 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
2.11 (5.2.7)	Cable entries through rigid material have rounded edges		P
2.11 (5.2.8)	Insulating bushings:		P
	- suitably fixed		P
	- material in bushings		P
	- material not likely to deteriorate		P
	- tubes or guards made of insulating material	No tubing for wiring is used	N/A
2.11 (5.2.9)	Locking of screwed bushings	No screwed bushing	N/A
2.11 (5.2.10)	Cord anchorage:		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		p
	- insulating material or lining		P
2.11 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed	No type X attachment	N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
2.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	No type Y attachment	N/A
2.11 (5.2.10.3)	Tests:		N/A
	- impossible to push cable; unsafe	No supply cord	N/A
	- pull test: 25 times; pull (N).....:		N/A
	- torque test: torque (Nm)		N/A
	- displacement ≤ 2 mm		N/A
	- no movement of conductors		N/A
	- no damage of cable or cord		N/A
	- function independent of electrical connection		N/A
2.11 (5.2.10.4)	Exemption from cord anchorage test in 5.2.10.3 if maximum current 2A, including short circuit current.		N/A
	Prior to the operation of an overcurrent limiting device and the following conditions and test requirements are met		N/A
	Ordinary SELV Class III luminaire at voltage not exceeding 25Vrms or 60VDC		N/A
	Ordinary PELV Class III luminaire at voltage not exceeding 12Vrms or 30VDC		N/A
	Other than ordinary Class III luminaire at voltage not exceeding 12Vrms or 30VDC		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Pull test 30N for 1min		N/A
2.11 (5.2.11)	External wiring passing into luminaire		P
2.11 (5.2.12)	Looping-in terminals	No looping-in	N/A
2.11 (5.2.13)	Wire ends not tinned	No cold flow	P
	Wire ends tinned: no cold flow		N/A
2.11 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
2.11 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
2.11 (5.2.16)	Appliance inlets (IEC 60320)	No inlet	N/A
	Installation couplers (IEC 61535)		N/A
	For appliance inlet or connector systems according to IEC 61984, additional requirements apply:		N/A
	a) Polarization		N/A
	b) Protection against electric shock		N/A
	c) Mechanical locking		N/A
	d) Early contact making		N/A
	e) Protection against short circuit poles		N/A
	f) Cable Clamp		N/A
2.11 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
2.11 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083	No plug	N/A
	- other standard		N/A
2.11 (5.3)	Internal wiring		P
2.11 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A)		N/A
	- temperatures		N/A
	Green-yellow for earth only		N/A
2.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Cross-sectional area (mm ²).....:		N/A
	Insulation thickness (mm)		N/A
	Extra insulation added where necessary		N/A
2.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Cross-sectional area (mm ²).....:	LED driver is considered as current-limiting device, wiring between driver output and LED has a cross-sectional area less than 1mm ² and insulated with sleeve (supplementary insulation marked with 600V)	P
2.11 (5.3.1.3)	Double or reinforced insulation for class II	Class I	N/A
2.11 (5.3.1.4)	Conductors without insulation	No conductor without insulation	N/A
2.11 (5.3.1.5)	SELV current-carrying parts	SELV current carrying wires are insulated and tested according to section 10	P
2.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
2.11 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.	No switch	N/A
	Joints, raising/lowering devices	No joints, raising/lowering devices	N/A
	Telescopic tubes etc.	No telescopic tube	N/A
	No twisting over 360°		P
2.11 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed	No insulating bushing	N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
2.11 (5.3.4)	Joints and junctions effectively insulated		P
2.11 (5.3.5)	Strain on internal wiring		P
2.11 (5.3.6)	Wire carriers		P
2.11 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow	No cold flow	P
2.11 (5.4)	Test to determine suitability of conductors having a reduced cross-sectional area		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2		N/A
	No damage to luminaire wiring after test		N/A

2.12 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
2.12 (8.2.1)	Live parts not accessible	No live part is accessible	P
	Basic insulated parts not used on the outer surface without appropriate protection	No basic insulated part on outer surface	P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires	No portable, settable and adjustable luminaires	P
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		N/A
	Lamp and starter holders in portable and adjustable luminaires comply with double or reinforced insulation requirements	No lampholder or starterholder	N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable	Not used	N/A
	Double-ended high-pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
2.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position	Recessed luminaire	N/A
2.12 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement	Class I	N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
2.12 (8.2.3.b)	BC lamp holder of metal in class I luminaires shall be earthed		N/A
2.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:		P
	Ordinary luminaire:		P
	- voltage under load (V)	3V d.c.	P
	- no-load voltage (V)	< 60V d.c.	P
	- touch current if applicable (mA)		N/A
	One conductive part insulated if required		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Other than ordinary luminaire:		N/A
	- nominal voltage (V)	Ordinary luminaire	N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
2.12 (8.2.3.d)	PELV circuit may have exposed current carrying parts under the following conditions:		N/A
	For ordinary luminaires voltage not exceed 12 VRMS or 30VDC (under load and no load)		N/A
	For other than ordinary, voltage nor exceed 12 VRMS or 30VDC (under load and no load)		N/A
	If voltage exceed, only the earthed pole may be accessible, other pole shall be insulated accordance with 10.2.2		N/A
	Class III luminaires are accepted by connection to SELV source or PELV source		N/A
2.12 (8.2.4)	Portable luminaire has protection independent of supporting surface	Recessed luminaire	N/A
2.12 (8.2.5)	Compliance with the standard test finger or relevant probe		P
2.12 (8.2.6)	Covers reliably secured		P
2.12 (8.2.7)	Luminaire other than below with capacitor > 0,5 μ F not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μ F (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A
2.12 (-)	Parts within ceiling space provide same degree of protection against electric shock as parts below ceiling space		P

2.13 (12)	ENDURANCE TEST AND THERMAL TEST		P
2.13.1 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) specified in 2.14		—
2.13.2 (-)	Luminaire mounted and tested according to Annex B		—
2.13 (12.2)	Selection of lamps and ballasts		—
	Lamp used according to Annex B		—
	Control gear if separate and not supplied	(Control gear used see Annex 2)	—
2.13 (12.3)	Endurance test		
	a) mounting-position	As in normal use	—
	b) test temperature (°C).....	35	—

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Clause	Requirement + Test	Result - Remark	Verdict
	c) total duration (h)	240	—
	d) supply voltage (V).....	264	—
	d) if not equipped with control gear, constant voltage/current (V) or (A)	Equipped with controlgear	—
	e) luminaire ceases to operate	Did not cease to operate, still functional	—
2.13 (12.3.2)	After endurance test:		P
	- no part unserviceable	All parts are serviceable	P
	- luminaire not unsafe	No unsafe condition	P
	- no damage to track system	No track system is in use	N/A
	- marking legible	Markings are legible	P
	- no cracks, deformation etc.	No crack or deformation	P
2.13 (12.4)	Thermal test (normal operation)	(See Annex 2)	P
2.13 (12.5)	Thermal test (abnormal operation)	Certified controlgear is in use in accordance with IEC 61347-1 and IEC 61347-2-13 therefore abnormal conditions not applied for electronic board incorporated in controlgear	N/A
2.13 (12.6)	Thermal test (failed lamp control gear condition):		N/A
2.13 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)	Compliance with Cl.4.16.2	—
	- case of abnormal conditions		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un		—
	- measured mounting surface temperature (°C) at 1,1 Un		N/A
	- calculated mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
2.13 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions	No thermal sensing control external to controlgear	—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
2.13 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.13 (12.7.1)	Luminaire without temperature sensing control		N/A
2.13 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W	No fluorescent lamp is in use	—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions		—
	- Ballast failure at supply voltage (V)		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test..... :		N/A
2.13 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test..... :		N/A
2.13 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
2.13 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- manual reset cut-out	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- auto reset cut-out	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- case of abnormal conditions		—
	- highest measured temperature of fixing point/exposed part (°C):		—
	Ball-pressure test..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.13.3 (-)	Wiring, for connection to the supply, not reach unsafe temperature		N/A
	- measured temperature of the cable (°C)		N/A

2.13. 4(-)	Test for air-handling luminaires under static operating conditions:		N/A
	- ormal operation		N/A
	- bnormal operation		N/A

2.14 (9)	RESISTANCE TO DUST AND MOISTURE		P
2.14 (-)	If IP > IP 20 the order of tests as specified in clause 2.13		N/A
2.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP	IP20	—
	- mounting position during test	As in normal use	—
	- fixing screws tightened; torque (Nm)		—
	- tests according to clauses	9.2.0	—
	- electric strength test afterwards	No breakdown	P
	a) no deposit in dust-proof luminaire	No dust-proof luminaire	N/A
	b) no talcum in dust-tight luminaire	No dust tight luminaire	N/A
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard	IP20	N/A
	c.1) For luminaires without drain holes – no water entry		N/A
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire or high pressure and temperature water jet-proof luminaire or high pressure and cold water jet-proof luminaire		N/A
	e) no contact with live parts (IP 2X)	No contact with live parts	P
	e) no entry into enclosure (IP 3X and IP 4X)		N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope	No protective shield	N/A
2.14 (9.3)	Humidity test 48 h	25°C and 93% RH	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.15 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
2.15 (10.2.1)	Insulation resistance test	500V for 1 minute	P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø	Covered by metal foil	—
	Insulation resistance (MΩ).....		—
	SELV/PELV		P
	- between current-carrying parts of different polarity :	>2 MΩ	P
	- between current-carrying parts and mounting surface	>2 MΩ	P
	- between current-carrying parts and metal parts of the luminaire	>2 MΩ	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	>2 MΩ	P
	- Insulation bushings as described in Section 5	No bushing is in use	N/A
	Other than SELV/PELV		P
	- between live parts of different polarity	>4 MΩ	P
	- between live parts and mounting surface	>4 MΩ	P
	- between live parts and metal parts.....	>4 MΩ	P
	- between live parts of different polarity through action of a switch	No switch is in use	N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	>4 MΩ	P
	- Insulation bushings as described in Section 5	No bushing is in use	N/A
2.15 (10.2.2)	Electric strength test		P
	Dummy lamp		P
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V)	500V for SELV, 1500V or 1640V for other than SELV for 1 minute	P
	SELV/PELV		P
	- between current-carrying parts of different polarity :	500V, no breakdown	P
	- between current-carrying parts and mounting surface	500V, no breakdown	P
	- between current-carrying parts and metal parts of the luminaire	500V, no breakdown	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	500V, no breakdown	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- Insulation bushings as described in Section 5	No bushing	N/A
	Other than SELV/PELV		P
	- between live parts of different polarity	LCA 75W 100–400mA one4all Ip PRE: 1500V, LC 38/400-700/54 flexC Ip SNC4: 1640V, no breakdown	P
	- between live parts and mounting surface.....	LCA 75W 100–400mA one4all Ip PRE: 1500V, LC 38/400-700/54 flexC Ip SNC4: 1640V, no breakdown	P
	- between live parts and metal parts.....	LCA 75W 100–400mA one4all Ip PRE: 1500V, LC 38/400-700/54 flexC Ip SNC4: 1640V, no breakdown	P
	- between live parts of different polarity through action of a switch	No switch is in use	N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	LCA 75W 100–400mA one4all Ip PRE: 1500V, LC 38/400-700/54 flexC Ip SNC4: 1640V, no breakdown	P
	- Insulation bushings as described in Section 5		N/A
2.15 (10.3)	Touch current or protective conductor current (mA):	0.35mA peak maximum measured where the limit is 0.7mA peak	P

2.16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
2.16 (13.2.1)	Ball-pressure test.....	See Test Table 2.16 (13.2.1)	P
2.16 (13.3.1)	Needle-flame test (10 s)	See Test Table 2.16 (13.3.1)	P
2.16 (13.3.2)	Glow-wire test (650°C)	See Test Table 2.16 (13.3.2)	P
2.16 (13.4)	Proof tracking test (IEC 60112)	See Test Table 2.16 (13.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict

2.8 (11.2)	TABLE I: Creepage distances and clearances						N/A
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						N/A
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						N/A
	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	B						
Working voltage (V)							—
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
Pulse voltage or U_P if applicable (kV)							—
Supplementary information:							
Distance 2:	S						
Working voltage (V)							—
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
Pulse voltage or U_P if applicable (kV)							—
Supplementary information:							
Distance 3:	R						
Working voltage (V)							—
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
Pulse voltage or U_P if applicable (kV)							—
Supplementary information:							

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

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Clause	Requirement + Test	Result - Remark	Verdict

2.8 (11.2)		TABLE II: Creepage distances and clearances						N/A
Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages								
Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2								
Distances	Insulation type **	Measured clearance	Required		Measured creepage	Required		
			clearance	*Table		creepage	*Table	
Distance 1:								
Working voltage (V)							—	
Frequency if applicable (kHz)							—	
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—	
Peak value of the working voltage \hat{U}_{out} if applicable (kV)							—	
Supplementary information:								
Distance 2:								
Working voltage (V)							—	
Frequency if applicable (kHz)							—	
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—	
Peak value of the working voltage \hat{U}_{out} if applicable (kV)							—	
Supplementary information:								
Distance 3:								
Working voltage (V)							—	
Frequency if applicable (kHz)							—	
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—	
Peak value of the working voltage \hat{U}_{out} if applicable (kV)							—	
Supplementary information:								

** Insulation type: B – Basic; S – Supplementary; R – Reinforced.

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Clause	Requirement + Test	Result - Remark	Verdict

2.16 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm)		≤2		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
PVC Fiberglass Sleeving	NEBIER ELEKTRİK	75	1.052	
Fixing plate and strain relief	Electro Terminal	75	0.954	
Diffuser	Yongtek Co. LTD.	75	0.808	
Terminal Block	Electro Terminal	125	0.75	
Supplementary information:				

2.16 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				P
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
PVC Fiberglass Sleeving	NEBIER ELEKTRİK	10	No	0	Pass
Fixing plate and strain relief	Electro Terminal	10	No	0	Pass
Terminal Block	Electro Terminal	10	No	0	Pass
Supplementary information:					

2.16 (13.3.2)	TABLE: Resistance to heat and fire - Glow wire tests				P
Object/ Part No./ Material	Manufacturer/ trademark	GWT (°C): 650			Verdict
		t _E (s)	t _I (s)	t _R (s)	
Cable ties	PEMSAN	X (No flame)	X (No flame)	0	Pass
Fixing plate and strain relief	Electro Terminal	X (No flame)	X (No flame)	0	Pass
Terminal Block	Electro Terminal	X (No flame)	X (No flame)	0	Pass
Diffuser	Yongtek Co. LTD.	X (No flame)	X (No flame)	0	Pass
Fiberglass tube	NEBIER ELEKTRİK	X (No flame)	X (No flame)	0	Pass
Ignition of the specified layer placed underneath the test specimen (Yes/No)..... :					No
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

2.16 (13.4)	TABLE: Proof tracking test (IEC 60112)			P	
Test voltage PTI		175 V		—	
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens		Verdict	
Diffuser	Yongtek Co. LTD.	50	50	50	Pass
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1		TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
LED module	B	WODE ELECTRONICS	PCBP16600.36.2S3P	FR4 1.2mm thickness	IEC/EN 62031	Intertek 202300804IST	
Internal Wiring	B	GMS Kablo Sanayi	H05Z1-U	300/500V 0,5-1mm2	EN 50525-3-31	TSE 000259-HAR-11/04	
Terminal Block	B	Electro Terminal	SLK-3	450V, 24A T110 1,5-2,5mm2	EN 60998-1 EN 60998-2-2	VDE 40020996	
Led driver	B	Tridonic	LC 38/400-700/54 flexC lp SNC4	LC 38/400-700/54 flexC lp SNC4: 220V-240VAC, 50/60Hz U-Out:320V Tc:90°C	EN 61347-1 EN 61347-2-13	ENEC 7590-296	
Led driver (DALI)	B	Tridonic	LCA 75W 100-400mA one4all lp PRE	LCA 75W 100-400mA one4all lp PRE: 220V-240VAC, 50/60Hz U-Out:250V Tc:80°C	EN 61347-1 EN 61347-2-13	ENEC 7590-145	
Enclosure	B	EREĞLİ DEMİR ÇELİK	Pyramid Grommet	0.6mm thickness DKP sheet metal	IEC/EN 60598-1 IEC/EN 60598-2-2	Tested in appliance	
Diffuser	B	Yongtek Co. LTD.	PA-90B	PS material 1.4 thickness 70°C	IEC/EN 60598-1 IEC/EN 60598-2-2 UL 94 GWT:650°C BP:75°C	Tested in appliance UL E342994	
Fixing plate and strain relief	B	Electro Terminal	BFP+ZUG SLK 3 OF	85°C	IEC/EN 60598-1 IEC/EN 60598-2-2 GWT:650°C BP:75°C	Tested in appliance	

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Clause	Requirement + Test			Result - Remark		Verdict
Cable ties	B	PEMSAN	EK.01.1001	20mmx20mm 60°C	IEC/EN 60598-1 IEC/EN 60598-2-2 GWT:650°C BP:75°C	Tested in appliance
PVC Fiberglass Sleeving	B	NEBIER ELEKTRİK	--	PVC	GWT:650°C	Tested in appliance
Cable gland seal	B	İşıldar plastik	CPR20	PVC Resin	GWT:650°C BP:75°C	Tested in appliance
Plastic cuff	B	PEMSAN	EB.02.202	2.5mmx100m m Max 12kg	-	-
<p>Supplementary information:</p> <p>1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.</p> <p>The codes above have the following meaning:</p> <p>A - The component is replaceable with another one, also certified, with equivalent characteristics</p> <p>B - The component is replaceable if authorised by the test house</p> <p>C - Integrated component tested together with the appliance</p> <p>D - Alternative component</p>						

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Thermal tests of Section 12			P			
	Type reference	005.0001.6450 and 005.0001.7836		—			
	Lamp used	LED module: PCBP16600.36.2S3P		—			
	Lamp control gear used	LED driver: LC 38/400-700/54 flexC Ip SNC4: 220V-240VAC, 50/60Hz U-Out:320V Tc:90°C LED driver: LCA 75W 100–400mA one4all Ip PRE: 220V-240VAC, 50/60Hz U-Out:250V Tc:80°C		—			
	Mounting position of luminaire	Recessed into the ceiling as in normal use		—			
	Supply wattage (W)	32.84W and 42.10W		—			
	Supply current (A)	0.15A and 0.1766A		—			
	Temperatures in test 1 - 4 below are corrected for ta (°C)	--		—			
	- abnormal operating mode	Certified control gear in accordance with IEC 61347-1 and IEC 61347-2-13 therefore no abnormal test performed for control gear		—			
2.13 (12.4)	- test 1: rated voltage	--		—			
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1.06x240V=254.4V		—			
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--		—			
	Through wiring or looping-in wiring loaded by a current of A during the test	--		—			
2.13 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	Certified control gear in accordance with IEC 61347-1 and IEC 61347-2-13 therefore no abnormal test performed for control gear		—			
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
LC 38/400-700/54 flexC Ip SNC4							

IEC 60598-2-2								
Clause	Requirement + Test			Result - Remark			Verdict	
Terminal Block	25.0	--	34.5	--	110	--	--	
Internal Wire	25.0	--	43.3	--	70	--	--	
Driver Tc	25.0	--	36	--	90	--	--	
Enclosure surface (Pyramid Grommet)	25.0	--	26.2	--	60	--	--	
Mounting surface	25.0	--	30.3	--	90	--	--	
LED module Tc	25.0	--	31	--	85	--	--	
Diffuser	25.0	--	28.2	--	70	--	--	
Fixing plate and strain relief	25.0	--	29.7	--	85	--	--	
Cable ties	25.0	--	29.3	--	60	--	--	
PVC Fiberglass Sleeving	25.0	--	32.6	--	For info	--	--	
LCA 75W 100–400mA one4all Ip PRE								
Terminal Block	25.0	--	31.4	--	110	--	--	
Internal Wire	25.0	--	31.4	--	70	--	--	
Driver Tc	25.0	--	43.4	--	90	--	--	
Enclosure surface (Pyramid Grommet)	25.0	--	31.3	--	60	--	--	
Mounting surface	25.0	--	29.5	--	90	--	--	
LED module Tc	25.0	--	31.9	--	85	--	--	
Diffuser	25.0	--	29.5	--	70	--	--	
Fixing plate and strain relief	25.0	--	30.3	--	85	--	--	
Cable ties	25.0	--	32.5	--	60	--	--	
PVC Fiberglass Sleeving	25.0	--	30.2	--	For info	--	--	
Supplementary information:								

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	Screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		N/A
(14.2)	Type of terminal.....	No screw terminal	—
	Rated current (A).....		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm ²).....		—
(14.3.3)	Conductor space (mm).....		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread)	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm)		N/A
	Torque (Nm)		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N)		N/A
(14.4.8)	Without undue damage		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 4	Screwless terminals (part of the luminaire)		N/A
(15)	SCREWLESS TERMINALS		N/A
(15.2)	Type of terminal		—
	Rated current (A)		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples)		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		
	Voltage drop (mV) after 1 h (4 samples)		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N)		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

(15.6.3.1) (15.6.3.2)	TABLE: Contact resistance test / Heating tests	N/A
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Voltage drop (mV) after 1 h											—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
Voltage drop of two inseparable joints											
Voltage drop after 10th alt. 25th cycle											
Max. allowed voltage drop (mV)											—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
Voltage drop after 50th alt. 100th cycle											
Max. allowed voltage drop (mV)											—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
Continued ageing: voltage drop after 10th alt. 25th cycle											
Max. allowed voltage drop (mV)											—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
Continued ageing: voltage drop after 50th alt. 100th cycle											
Max. allowed voltage drop (mV)											—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											

Supplementary information:

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment I:**List of test equipment used:**

Measurement / testing	Testing / measuring equipment / material used,	Equipment ID	Last Calibration date	Calibration due date
Variable Stabilized Power Source	CHROMA 61612	EN 023	Initial calibration	Initial calibration
Mono-Phase Power Meter	YOKOGAWA WT310	EN 033	12.2022	12.2023
Temperature Recorder	YOKOGAWA	EN 236	10.2023	10.2024
Hand-held Multimeter	Fluke	EN 317	11.2022	11.2023
Electrical Safety Tester	Chroma	EN 021	01.2023	01.2024
Glow Wire Test Apparatus	Testing Europe T4-08	EN 043	07.2023	07.2024
Chronometer	CASIO HS-80TW	EN 114	02.2023	02.2024
Digital Torque Screwdriver	Imada	EN 018	10.2022	10.2023
Probe B	Testing Europe T5-75	EN 050	11.2022	11.2023
Probe 13	Testing Europe T5-47	EN 058	11.2022	11.2023
Probe 18	Testing Europe T5-77	EN 059	05.2023	05.2026
Heating Chamber with Forced Convection	Testing Europe SP120E	EN 045	01.2023	01.2024
Impact Hammer	PTL	EN 041	11.2022	11.2023
Tracking Test apparatus	Testing Europe T4-41A	EN 044	08.2023	08.2024
Calliper	MUTITOYO	EN 312	11.2022	11.2023
Plastic Ruler for LCD Digital Microscope	Celestron CL44361	EN 125A	09.2021	09.2024
Tape	Ceta Form P05-0316	EN 040	11.2022	11.2025
Needle Flame apparatus	Testing Europe T4 - 31	EN 046	11.2022	11.2023
Scale	HÜRAY A1-2	EN 067	07.2023	07.2024
Climatic Chamber	SANWOOD SMC800-CB	EN 279	04.2023	04.2024
Variable Stabilized Power Source	AC POWER CORP. AFV-PLUS-33100	EN 307	Initial calibration	Initial calibration
Mono-Phase Power Meter	HIOKI 3333	EN 282	06.2023	06.2024

Attachment II:

Report No.: 202301063IST

IEC60598_2_2G ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 60598-2-2 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES LUMINAIRES PART 2: PARTICULAR REQUIREMENTS SECTION 2: RECESSED LUMINAIRES			
Differences according to : EN 60598-2-2:2012 used in conjunction with EN IEC 60598-1:2021 + A11:2022			
TRF template used : IECEE OD-2020-F2:2020, Ed. 1.1			
Attachment Form No : EU_GD_IEC60598_2_2G			
Attachment Originator : UL(Demko)			
Master Attachment : 2022-05-23			
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	CENELEC COMMON MODIFICATIONS (EN)		N/A
2.6 (3)	MARKING		N/A
2.6 (3.2.12)	Note 4 deleted		N/A
2.7 (4)	CONSTRUCTION		N/A
2.7 (4.11.6)	Electro-mechanical contact systems: electric strength test at 1 500 V		N/A
2.11 (5)	EXTERNAL AND INTERNAL WIRING		P
2.11 (5.2.2)	Cables equal to EN 50525 (all parts)	H05Z1-U	P
	Paragraph 2 deleted		P
	Replace table 5.1 – Supply cord		P
2.13 (12)	ENDURANCE TESTS AND THERMAL TESTS		N/A
2.13 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		N/A
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		N/A
(3.3)	DK: power supply cords of class I luminaires with label		N/A
(5.2.1)	CY, DK, FI, UK: type of plug		N/A

IEC60598_2_2G ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
(5.2.18)	DK: socket-outlets		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		P
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A
	FR: Safety requirements for high buildings <i>(Decree of 30 December 2011 on safety regulations for the construction of high-rise buildings and their protection against fire and panic risks; Section VIII; Article GH 48, Lighting)</i> Glow-wire test for outer parts of luminaires:		N/A
	- 850°C for luminaires in stairways and horizontal travel paths		N/A
	- 650°C for indoor luminaires		P
	UK: Requirements according to United Kingdom Building Regulation		N/A

Attachment III

Photos:



Photo 1. General view of the luminaire



Photo 2. Bottom view of the luminaire



Photo 3. Internal view of the luminaire(Model 005.0001.6450)



Photo 4. Internal view of the luminaire(Model 005.0001.7158)



Photo 5. Electrical connections of the luminaire



Photo 6. Electrical connections of the luminaire



Photo 7. Led driver(ON-OFF)



Photo 8. Led driver(DALI)



Photo 9. PVC Fiberglass Sleeving



Photo 10. Terminal Block



Photo 11. Fixing plate and strain relief