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. ..... :	ETA25060001S-001
Date of issue ..... :	July 14, 2025
Total number of pages ..... :	62 pages
Name of Testing Laboratory preparing the Report ..... :	Hangzhou ETA Testing Technology Co., Ltd 8/F., Building A, The Western Science Park, Yuhang District, Hangzhou, Zhejiang, China
Applicant's name ..... :	Hangzhou Longlux Electronic Technology Co., Ltd
Address ..... :	The Western Science Park, Hangzhou City, China
Test specification:	
Standard ..... :	IEC 60598-2-2:2023 used in conjunction with IEC 60598-1:2020
Test procedure ..... :	CE-LVD
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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Test item description ..... :	LED Panel Lights with SELV driver
Trade Mark(s) ..... :	Longlux
Manufacturer ..... :	Same as applicant
Model/Type reference ..... :	See model list
Ratings ..... :	220-240V~, 50/60Hz, Class II, IP20, ta: 40°C, more details see model list

Model list

For size 300*300 series

Mode name	Rated current (A)	Rated wattage (W)	LED Driver	CCT switch
LLX-Panel-3030-10W	0,042	10	LF- GIF040YS1050H	N/A
LLX-Panel-3030-10W-CCT	0,042	10	LF- GIF040YS1050H	With
LLX-Panel-3030-12W	0,05	12	LF- GIF040YS1050H	N/A
LLX-Panel-3030-12W-CCT	0,05	12	LF- GIF040YS1050H	With
LLX-Panel-3030-14W	0,06	14	LF- GIF040YS1050H	N/A
LLX-Panel-3030-14W-CCT	0,06	14	LF- GIF040YS1050H	With
LLX-Panel-3030-16W	0,07	16	LF- GIF040YS1050H	N/A
LLX-Panel-3030-16W-CCT	0,07	16	LF- GIF040YS1050H	With
LLX-Panel-3030-18W	0,08	18	LF- GIF040YS1050H	N/A
LLX-Panel-3030-18W-CCT	0,08	18	LF- GIF040YS1050H	With
LLX-Panel-3030-20W	0,09	20	LF- GIF040YS1050H	N/A
LLX-Panel-3030-20W-CCT	0,09	20	LF- GIF040YS1050H	With
LLX-Panel-3030-24W	0,105	24	LF- GIF040YS1050H	N/A
LLX-Panel-3030-24W-CCT	0,105	24	LF- GIF040YS1050H	With
LLX-Panel-3030-28W	0,14	28	LF- GIF040YS1050H	N/A
LLX-Panel-3030-28W-CCT	0,14	28	LF- GIF040YS1050H	With
LLX-Panel-3030-30W	0,15	30	LF- GIF040YS1050H	N/A
LLX-Panel-3030-30W-CCT	0,15	30	LF- GIF040YS1050H	With

For size 300*600 series

Mode name	Rated current (A)	Rated wattage (W)	LED Driver	CCT switch
LLX-Panel-3060-10W	0,042	10	LF- GIF040YS1050H	N/A
LLX-Panel-3060-10W-CCT	0,042	10	LF- GIF040YS1050H	With
LLX-Panel-3060-12W	0,05	12	LF- GIF040YS1050H	N/A
LLX-Panel-3060-12W-CCT	0,05	12	LF- GIF040YS1050H	With
LLX-Panel-3060-14W	0,06	14	LF- GIF040YS1050H	N/A
LLX-Panel-3060-14W-CCT	0,06	14	LF- GIF040YS1050H	With
LLX-Panel-3060-16W	0,07	16	LF- GIF040YS1050H	N/A
LLX-Panel-3060-16W-CCT	0,07	16	LF- GIF040YS1050H	With
LLX-Panel-3060-18W	0,08	18	LF- GIF040YS1050H	N/A
LLX-Panel-3060-18W-CCT	0,08	18	LF- GIF040YS1050H	With
LLX-Panel-3060-20W	0,09	20	LF- GIF040YS1050H	N/A
LLX-Panel-3060-20W-CCT	0,09	20	LF- GIF040YS1050H	With
LLX-Panel-3060-24W	0,105	24	LF- GIF040YS1050H	N/A
LLX-Panel-3060-24W-CCT	0,105	24	LF- GIF040YS1050H	With
LLX-Panel-3060-28W	0,14	28	LF- GIF040YS1050H	N/A
LLX-Panel-3060-28W-CCT	0,14	28	LF- GIF040YS1050H	With
LLX-Panel-3060-30W	0,15	30	LF- GIF040YS1050H	N/A
LLX-Panel-3060-30W-CCT	0,15	30	LF- GIF040YS1050H	With

LLX-Panel-3060-32W	0,16	32	LF- GIF040YS1050H	N/A
LLX-Panel-3060-32W-CCT	0,16	32	LF- GIF040YS1050H	With
LLX-Panel-3060-36W	0,18	36	LF- GIF040YS1050H	N/A
LLX-Panel-3060-36W-CCT	0,18	36	LF- GIF040YS1050H	With

For size 600*600 series

Mode name	Rated current (A)	Rated wattage (W)	LED Driver	CCT switch
LLX-Panel-6060-20W	0,09	20	LF- GIF040YS1050H	N/A
LLX-Panel-6060-20W-CCT	0,09	20	LF- GIF040YS1050H	With
LLX-Panel-6060-24W	0,105	24	LF- GIF040YS1050H	N/A
LLX-Panel-6060-24W-CCT	0,105	24	LF- GIF040YS1050H	With
LLX-Panel-6060-28W	0,14	28	LF- GIF040YS1050H	N/A
LLX-Panel-6060-28W-CCT	0,14	28	LF- GIF040YS1050H	With
LLX-Panel-6060-30W	0,15	30	LF- GIF040YS1050H	N/A
LLX-Panel-6060-30W-CCT	0,15	30	LF- GIF040YS1050H	With
LLX-Panel-6060-32W	0,16	32	LF- GIF040YS1050H	N/A
LLX-Panel-6060-32W-CCT	0,16	32	LF- GIF040YS1050H	With
LLX-Panel-6060-36W	0,18	36	LF- GIF040YS1050H	N/A
LLX-Panel-6060-36W-CCT	0,18	36	LF- GIF040YS1050H	With
LLX-Panel-6060-40W	0,19	40	LF- GIF040YS1050H	N/A
LLX-Panel-6060-40W-CCT	0,19	40	LF- GIF040YS1050H	With
LLX-Panel-6060-48W	0,21	48	LF- GIF060YS1500H	N/A
LLX-Panel-6060-48W-CCT	0,21	48	LF- GIF060YS1500H	With

For size 620*620 series

Mode name	Rated current (A)	Rated wattage (W)	LED Driver	CCT switch
LLX-Panel-6262-20W	0,09	20	LF- GIF040YS1050H	N/A
LLX-Panel-6262-20W-CCT	0,09	20	LF- GIF040YS1050H	With
LLX-Panel-6262-24W	0,105	24	LF- GIF040YS1050H	N/A
LLX-Panel-6262-24W-CCT	0,105	24	LF- GIF040YS1050H	With
LLX-Panel-6262-28W	0,14	28	LF- GIF040YS1050H	N/A
LLX-Panel-6262-28W-CCT	0,14	28	LF- GIF040YS1050H	With
LLX-Panel-6262-30W	0,15	30	LF- GIF040YS1050H	N/A
LLX-Panel-6262-30W-CCT	0,15	30	LF- GIF040YS1050H	With
LLX-Panel-6262-32W	0,16	32	LF- GIF040YS1050H	N/A
LLX-Panel-6262-32W-CCT	0,16	32	LF- GIF040YS1050H	With
LLX-Panel-6262-36W	0,18	36	LF- GIF040YS1050H	N/A
LLX-Panel-6262-36W-CCT	0,18	36	LF- GIF040YS1050H	With
LLX-Panel-6262-40W	0,19	40	LF- GIF040YS1050H	N/A
LLX-Panel-6262-40W-CCT	0,19	40	LF- GIF040YS1050H	With
LLX-Panel-6262-48W	0,21	48	LF- GIF060YS1500H	N/A
LLX-Panel-6262-48W-CCT	0,21	48	LF- GIF060YS1500H	With

For size 300*1200 series

Mode name	Rated current (A)	Rated wattage (W)	LED Driver	CCT switch
LLX-Panel-30120-20W	0,09	20	LF- GIF040YS1050H	N/A
LLX-Panel-30120-20W-CCT	0,09	20	LF- GIF040YS1050H	With
LLX-Panel-30120-24W	0,105	24	LF- GIF040YS1050H	N/A
LLX-Panel-30120-24W-CCT	0,105	24	LF- GIF040YS1050H	With
LLX-Panel-30120-28W	0,14	28	LF- GIF040YS1050H	N/A
LLX-Panel-30120-28W-CCT	0,14	28	LF- GIF040YS1050H	With
LLX-Panel-30120-30W	0,15	30	LF- GIF040YS1050H	N/A
LLX-Panel-30120-30W-CCT	0,15	30	LF- GIF040YS1050H	With
LLX-Panel-30120-32W	0,16	32	LF- GIF040YS1050H	N/A
LLX-Panel-30120-32W-CCT	0,16	32	LF- GIF040YS1050H	With
LLX-Panel-30120-36W	0,18	36	LF- GIF040YS1050H	N/A
LLX-Panel-30120-36W-CCT	0,18	36	LF- GIF040YS1050H	With
LLX-Panel-30120-40W	0,19	40	LF- GIF040YS1050H	N/A
LLX-Panel-30120-40W-CCT	0,19	40	LF- GIF040YS1050H	With
LLX-Panel-30120-48W	0,21	48	LF- GIF060YS1500H	N/A
LLX-Panel-30120-48W-CCT	0,21	48	LF- GIF060YS1500H	With

For size 600*1200 series

Mode name	Rated current (A)	Rated wattage (W)	LED Driver	CCT switch
LLX-Panel-60120-40W	0,19	40	LF- GIF040YS1050H	N/A
LLX-Panel-60120-40W-CCT	0,19	40	LF- GIF040YS1050H	With
LLX-Panel-60120-48W	0,21	48	LF- GIF060YS1500H	N/A
LLX-Panel-60120-48W-CCT	0,21	48	LF- GIF060YS1500H	With
LLX-Panel-60120-50W	0,25	50	LF- GIF060YS1500H	N/A
LLX-Panel-60120-50W-CCT	0,25	50	LF- GIF060YS1500H	With
LLX-Panel-60120-60W	0,29	60	LF- GIF060YS1500H	N/A
LLX-Panel-60120-60W-CCT	0,29	60	LF- GIF060YS1500H	With
LLX-Panel-60120-72W	0,36	72	LF- GIF040YS1050H	N/A
LLX-Panel-60120-72W-CCT	0,36	72	LF- GIF040YS1050H	With
LLX-Panel-60120-80W	0,38	80	LF- GIF040YS1050H	N/A
LLX-Panel-60120-80W-CCT	0,38	80	LF- GIF040YS1050H	With

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**Testing Laboratory:**	Hangzhou ETA Testing Technology Co., Ltd	
Testing location/ address.....:		8/F., Building A, The Western Science Park, Yuhang District, Hangzhou, Zhejiang, China	
Tested by (name, function, signature).....:		Danny Zhou (Certification Engineer)	
Approved by (name, function, signature)...:		Sean Wan (Reviewer)	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address.....:		N/A	
Tested by (name, function, signature).....:		N/A	
Approved by (name, function, signature)...:		N/A	
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address.....:		N/A	
Tested by (name + signature).....:		N/A	
Witnessed by (name, function, signature) .:		N/A	
Approved by (name, function, signature)...:		N/A	
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address.....:		N/A	
Tested by (name, function, signature).....:		N/A	
Witnessed by (name, function, signature) .:		N/A	
Approved by (name, function, signature)...:		N/A	
Supervised by (name, function, signature) :		N/A	

List of Attachments (including a total number of pages in each attachment):

-Page 1—50: test reports;

-Page 51—62: photos of the simples

Summary of testing:

Tests performed (name of test, test clause and date test performed):	**Testing location:**
FULL	Hangzhou ETA Testing Technology Co., Ltd 8/F., Building A, The Western Science Park, Yuhang District, Hangzhou, Zhejiang, China

Summary of compliance with National Differences (List of countries addressed):

EU Group Differences

☒ **The product fulfils the requirements of EN IEC 60598-2-2:2024, EN IEC 60598-2-1:2021 used in conjunction with EN IEC 60598-1:2021+A11:2022.**

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").

☐ 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.

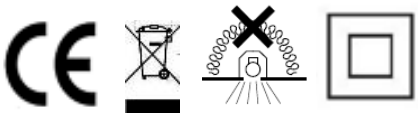
Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

Copy of marking plate:

Take model LLX-Panel-60120-80W-CCT **for example**

Attached on the Package

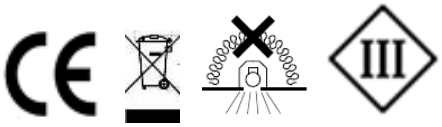
Model: LLX-Panel-60120-80W-CCT
AC 220-240V, 50/60Hz, 0,38A, 80W,
ta 40°C



Hangzhou Longlux Electronic Technology Co., Ltd
The Western Science Park, Hangzhou City, China

LED panel light
Label on the luminaire:

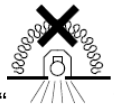
Input Voltage: 33-40V ⎓
Rated Power: 80W
ta 40°C



Hangzhou Longlux Electronic Technology Co., Ltd
The Western Science Park, Hangzhou City, China

The marking plates for other models are same as the above representative except for the model name and ratings.

The height of letters and numerals shall not be less than 2mm.
The height of graphical symbols shall not be less than 5 mm.
The height of symbol of WEEE shall not be less than 7 mm.

The height of symbol “  ” shall not be less than 25 mm.

Test item particulars.....:	LED Panel Lights with SELV driver
Classification of installation and use.....:	Class II (LED panel light: Class III)
Supply Connection.....:	Power cable
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 .....:	June 12, 2025
Date (s) of performance of tests.....:	June 12, 2025 – July 14, 2025

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

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 ..... :	☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) ..... :	Hangzhou Longlux Electronic Technology Co., Ltd The Western Science Park, Hangzhou City, China

General product information and other remarks:

The products covered in this report are LED Panel Lights with Independent SELV driver, Indoor used.

The products have two kind of installation method, can be with suspension kit for hanging-mount or with recessed mount clips for recessed mounting. For hanging-mount, the requirement of EN60598-2-1 also considered.

All models share the same construction and LED chip, except for the dimension, LED driver, with or without CCT switch and electrical rating are different. Detail difference see model list.

All relevant tests were performed on models LLX-Panel-60120-80W-CCT and LLX-Panel-60120-60W-CCT which gives the most unfavourable test result. Photobiological safety were evaluated as RG0 unlimited according to IEC TR 62778:2014 and Exempt Group according to EN 62471:2008

Refer to Appendix 1 for the testing of LED module according to EN IEC 62031:2020+A11:2021.

According clause 4.2.2 of EN 62493 2015+A1 2022, lighting equipment deemed to comply with the requirements of EN 62493 2015+A1 2022 without testing.

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 ☒ No ☐ Section/s: IEC 60598-2-1	—
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	EN IEC 62031, EN 62471, IEC/TR 62778	—
	Luminaire design in the light source safety standard		P

2.5 (2)	**CLASSIFICATION OF LUMINAIRES**		**P**
2.5 (2.2)	Type of protection .....:	Class II	P
2.5 (2.3)	Degree of protection.....:	IP20	—
2.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces .....:	Yes ☒ No ☐	—
2.5 (2.5)	Luminaire for normal use .....:	Yes ☒ No ☐	—
	Luminaire for rough service .....:	Yes ☐ No ☒	—

2.6 (3)	**MARKING**		**P**
2.6 (3.2)	Mandatory markings		P
	Position of the marking	On the enclosure	P
	Format of symbols/text		P
2.6 (3.3)	Additional information		P
	Language of instructions	English	P
2.6 (3.3.1)	Combination luminaires		N/A
2.6 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
2.6 (3.3.3)	Operating temperature		N/A
2.6 (3.3.5)	Wiring diagram		N/A
2.6 (3.3.6)	Special conditions		N/A
2.6 (3.3.7)	Metal halide lamp luminaire – warning		N/A
2.6 (3.3.8)	Limitation for semi-luminaires		N/A
2.6 (3.3.9)	Power factor and supply current		P
2.6 (3.3.10)	Suitability for use indoors		P

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
2.6 (3.3.11)	Luminaires with remote control		N/A
2.6 (3.3.12)	Clip-mounted luminaire – warning		N/A
2.6 (3.3.13)	Specifications of protective shields		N/A
2.6 (3.3.14)	Symbol for nature of supply	Whole product: ~ LED panel light: ⎓	P
2.6 (3.3.15)	Rated current of socket outlet		N/A
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	Type Y	P
2.6 (3.3.18)	Non-ordinary luminaires with PVC cable		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		N/A
2.6 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided	Non-user replaceable light sources	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		N/A
2.6 (3.3.24)	If not supplied with terminal block, information on the packaging		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		N/A
2.6 (3.4)	Test with water	15S	P
	Test with hexane	15S	P
	Legible after test		P
	Label attached		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		P

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

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		P
2.7 (4.4)	**Lampholders**		**N/A**
2.7 (4.4.1)	Integral lampholder		N/A
2.7 (4.4.2)	Wiring connection		N/A
2.7 (4.4.3)	Lampholder for end-to-end mounting		N/A
2.7 (4.4.4)	Positioning		N/A
	- pressure test (N) ..... :		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) ..... :		—
	After test the lampholder 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 lampholder or connection according 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**		N/A
	Tails		N/A
	Unsecured blocks		N/A
2.7 (4.7)	**Terminals and supply connections**		**P**
2.7 (4.7.1)	Contact to metal parts		P
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		P

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
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		P
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		N/A
	- 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**		N/A
2.7 (4.9.1)	Retainment		N/A
	Method of fixing ..... :		N/A
2.7 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) ..... :		N/A
2.7 (4.10)	**Double or reinforced insulation**	**Enclosure covered driver**	**P**
2.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		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

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Clause	Requirement + Test	Result - Remark	Verdict
2.7 (4.10.3)	Retainment of insulation:		P
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		P
	- lining in 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:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
2.7 (4.11.3)	Screw locking:		P
	- spring washer		P
	- 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		N/A
	Torque test: torque (Nm); part..... :	Fixing enclosure: 0,5	P
	Torque test: torque (Nm); part..... :		N/A
	Torque test: torque (Nm); part..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
2.7 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) ..... :		N/A
	- lampholder; torque (Nm) ..... :		N/A
	- push-button switches; torque 0,8 Nm ..... :		N/A
2.7 (4.12.5)	Screwed glands; force (Nm)..... :		N/A
2.7 (4.13)	**Mechanical strength**		**P**
2.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm) ..... :		N/A
	- other parts; energy (Nm)..... :	Enclosure, LED driver and diffuser; 0,35	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
2.7 (4.13.2)	Metal parts have adequate mechanical strength		P
2.7 (4.13.3)	Straight test finger		P
2.7 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	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	Max 6,4 kg x 4 =25,6 Kg	P
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) ..... :		N/A
	Metal rod. diameter (mm) ..... :		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) ..... :		—
	Stress in conductors (N/mm²) ..... :		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..... :		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		N/A
2.7 (4.14.5)	Guide pulleys		N/A
2.7 (4.14.6)	Strain on socket-outlets		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		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
2.7 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	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 ..... :	(compliance with Section 12)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
2.7 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
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		N/A
2.7 (4.18)	**Resistance to corrosion**		**N/A**
2.7 (4.18.1)	- rust-resistance		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		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..... :	See Test Table 2.16 (13.3.2)	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

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Clause	Requirement + Test	Result - Remark	Verdict
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
2.7 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778 ..... :	RG0	—
	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		P
2.7 (4.26)	**Short-circuit protection**		**N/A**
2.7 (4.26.1)	Adequate means of uninsulated accessible SELV or PELV parts		N/A
2.7 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
2.7 (4.27)	**Terminal blocks with integrated screwless earthing contacts**		**N/A**
	Test according Annex V		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		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	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**		**N/A**
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
2.7 (4.30)	**Luminaires with non-user replaceable light source**		**P**
	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		P
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	SELV output LED driver used	P
	Voltage ≤ ELV		N/A
	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		N/A
	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		P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	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		P
	Other circuits insulated from accessible parts according Table X.1		P
	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		N/A
	External to controlgear 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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
2.7(4.34)	Electromagnetic field (EMF)		P
	Compliance to IEC 62493:2015	According to clause 4.2.2 of EN 62493:2015+A1:2022, this product is a LED-light-source technology and it is deemed to comply with the requirement of EN 62493: 2015+A1:2022 and 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		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		N/A

2.8 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		P
2.8 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☒ Category III ☐	—
	Category III according 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	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{UOUT} according IEC 61347-1, clause 7.1, item w	See Test Table 2.8 (11.2) II	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 2.8 (11.2) II	N/A
2.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 2.8 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 2.8 (11.2) II	N/A

2.9 (7)	**PROVISION FOR EARTHING**		N/A
2.9 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 Ω..... :		N/A
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Earth makes contact first		N/A
	Terminal blocks with integrated screwless earthing contacts tested according to Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A
2.9 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
2.9 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A
	Terminal blocks with integrated screwless earthing contacts tested according to Annex V		N/A
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		N/A
2.9 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
2.9 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
2.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
2.9 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	(See Annex 1)	N/A
	Part of the luminaire	(See Annex 3)	N/A
2.10 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		N/A
	Separately approved; component list..... :	(See Annex 1)	N/A
	Part of the luminaire ..... :	(See Annex 4)	N/A
2.11 (5)	**EXTERNAL AND INTERNAL WIRING**		**P**
2.11 (5.2)	**Supply connection and external wiring**		**P**
2.11 (5.2.1)	Means of connection ..... :	Terminal block	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		N/A
2.11 (5.2.2)	Type of cable..... :	H03VVH2-F	P
	Nominal cross-sectional area (mm²) ..... :	2 x 0,75mm^2	P
	Cables equal to IEC 60227 or IEC 60245		P
2.11 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
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:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- tubes or guards made of insulating material		N/A
2.11 (5.2.9)	Locking of screwed bushings		N/A
2.11 (5.2.10)	Cord anchorage:		P
	- 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		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		N/A
2.11 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N)..... :	60	P
	- torque test: torque (Nm) ..... :	0,15	P
	- displacement ≤ 2 mm	1,1	P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
2.11 (5.2.10.4)	Exemption from cord anchorage test in 5.2.10.3 if maximum current 2A, including short circuit current.		P
	Prior to the operation of an overcurrent limiting device and the following conditions and test requirements are met		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Ordinary SELV Class III luminaire at voltage not exceeding 25Vrms or 60VDC		P
	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
	Pull test 30N for 1min		P
2.11 (5.2.11)	External wiring passing into luminaire		P
2.11 (5.2.12)	Looping-in terminals		N/A
2.11 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P
2.11 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
1.10 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
2.11 (5.2.16)	Appliance inlets (IEC 60320)		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		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

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Clause	Requirement + Test	Result - Remark	Verdict
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A) ..... :		N/A
	- temperatures ..... :	(see Annex 2)	N/A
	Green-yellow for earth only		N/A
2.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A
	Cross-sectional area (mm²)..... :		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 (mm²)..... :	See Annex 1	P
2.11 (5.3.1.3)	Double or reinforced insulation for class II		N/A
2.11 (5.3.1.4)	Conductors without insulation		N/A
2.11 (5.3.1.5)	SELV current-carrying parts		N/A
2.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
2.11 (5.3.2)	Sharp edges etc.		N/A
	No moving parts of switches etc.		P
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
2.11 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		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		N/A
2.11 (5.3.5)	Strain on internal wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.11 (5.3.6)	Wire carriers		N/A
2.11 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
2.11 (5.4)	**Test to determine suitability of conductors having a reduced cross-sectional area**		**P**
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	P
	No damage to luminaire wiring after test		P

2.12 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		P
2.12 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		N/A
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		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		P
	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		N/A
2.12 (8.2.3.a)	Class II luminaire:		P
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		P
	- glass protective shields not used as supplementary insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.12 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
2.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V)..... :		N/A
	- no-load voltage (V)..... :		N/A
	- touch current if applicable (mA) ..... :		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage (V) ..... :		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		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 μF not exceed 50 V 1 min after disconnection	0V < 50V	P
	Portable luminaire with capacitor > 0,1 μF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A
2.12 (-)	Parts within the celling space provide same degree of protection against electric shock as parts below the celling space		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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	(Lamp used see Annex 2)	—
	Control gear if separate and not supplied	(Control gear used see Annex 2)	—
2.13 (12.3)	**Endurance test**		**P**
	a) mounting-position .....:	As normal use	—
	b) test temperature (°C) .....:	50°C	—
	c) total duration (h) .....:	240	—
	d) supply voltage (V) .....:	264V	—
	d) if not equipped with control gear, constant voltage/current (V) or (A) .....:	--	—
	e) luminaire ceases to operate		—
2.13 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
2.13 (12.4)	**Thermal test (normal operation)**	(See Annex 2)	P
2.13 (12.5)	**Thermal test (abnormal operation)**	(See Annex 2)	P
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) .....:		—
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
	- track-mounted luminaires		N/A
2.13 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions.....:		—
	- 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**
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 .....:		—
	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.....:	See Test Table 2.16 (13.2.1)	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).....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Ball-pressure test.....:	See Test Table 2.16 (13.2.1)	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 ☐ No ☐	—
	- manual reset cut-out.....:	Yes ☐ No ☐	—
	- auto reset cut-out.....:	Yes ☐ No ☐	—
	- case of abnormal conditions.....:		—
	- highest measured temperature of fixing point/ exposed part (°C):.....:		—
	Ball-pressure test: .....:	See Test Table 2.16 (13.2.1)	N/A
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
	- .....N ormal operation		N/A
	- .....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 normal use	—
	- fixing screws tightened; torque (Nm).....	N/A	—
	- tests according to clauses	9.2.0	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		N/A
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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)		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		N/A
2.14 (9.3)	Humidity test 48 h	25°C, 93%	P

2.15 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
2.15 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø ..... :	Covered by metal foil	—
	Insulation resistance (MΩ) ..... :	See below	—
	SELV/PELV		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface ..... :	>199MΩ	P
	- between current-carrying parts and metal parts of the luminaire..... :	>199MΩ	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts ..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
	Other than SELV/PELV		P
	- between live parts of different polarity ..... :	>199MΩ	P
	- between live parts and mounting surface ..... :	>199MΩ	P
	- between live parts and metal parts ..... :	>199MΩ	P
	- between live parts of different polarity through action of a switch ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts ..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
2.15 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V)..... :	See below	P
	SELV/PELV		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface ..... :	500V	P
	- between current-carrying parts and metal parts of the luminaire..... :	500V	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts ..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
	Other than SELV/PELV		P
	- between live parts of different polarity ..... :	1480V	P
	- between live parts and mounting surface ..... :	2960V	P
	- between live parts and metal parts ..... :	2960V	P
	- between live parts of different polarity through action of a switch ..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts ..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
2.15 (10.3)	Touch current or protective conductor current (mA).:	0,05mA	P

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Clause	Requirement + Test	Result - Remark	Verdict

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)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

2.8 (11.2)	**TABLE I: Creepage distances and clearances**							**P**
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages							**P**
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*							**P**
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**		
			clearance	***Table**		**creepage**	***Table**	
Distance 1:	B	Min 2,7	1,5	**11.1.B***	Min 3,5	2,5	**11.1.A***	
Working voltage (V) ..... :					240V			—
PTI ..... :					< 600 ☒	≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					-			—
Supplementary information: Between live parts of different polarity								
Distance 2:	R	Min 6,5	3,0	**11.1.B***	Min 6,5	5,0	**11.1.A***	
Working voltage (V) ..... :					240V			—
PTI ..... :					< 600 ☒	≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					-			—
Supplementary information: Between live part and accessible parts								
Distance 3:								
Working voltage (V) ..... :					240V			—
PTI ..... :					< 600 ☒	≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					-			—
Supplementary information:								
Distance 4:								
Working voltage (V) ..... :								—
PTI ..... :					< 600 ☐	≥ 600 ☐		—
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 ☐	≥ 600 ☐		—
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 ☐	≥ 600 ☐		—
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 ☐	≥ 600 ☐		—
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)
PCB of CCT switch	See Annex 1	125	1,5
Diffuser and plastic enclosure	See Annex 1	75	1,2
DC Connector	See Annex 1	125	1,0
Supplementary information: N/A			

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
PCB of CCT switch	See Annex 1	10	No	0	P
DC Connector	See Annex 1	10	No	0	P
Supplementary information: N/A					

2.16 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)			P
Glow wire temperature .....:		650°C		—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Diffuser and plastic enclosure	See Annex 1	No	0	P
Supplementary information: N/A				

2.16 (13.4)	TABLE: Proof tracking test (IEC 60112)				N/A
Test voltage PTI .....:		175 V			—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
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])2)**
External wire (Input of LED driver)	B	Dongguan Hongfuwei Cable Technology Co., Ltd	H03VV-F	2 x 0,75mm^2	EN 50525-2-11	VDE/ 40043104
Alternative	D	Guangdong Hongpai Wire Products Co., Ltd.	H03VV-F	2 x 0,75mm^2	EN 50525-2-11	VDE/ 40053463
LED driver	B	Lifud Techology Co., Ltd	LF-GIF060YS150 0H	Input: 220-240V~ 50/60Hz; 0,5A Output: 30-40VDC, U-out: 55VDC; Irated: 1500mA; Prated: 60W; SELV ta:45°C; tc:90°C	EN 61347-1 EN 61347-2-13	TUV SUD/ (SG PSB-LE-03490M2)
LED driver	B	Lifud Techology Co., Ltd	LF-GIF040YS105 0H	Input: 220-240V~ 50/60Hz; 0,28A Output: 30-40VDC, U-out: 55VDC; Irated: 1050mA; Prated: 42W; SELV ta:45°C; tc:90°C	EN 61347-1 EN 61347-2-13	TUV SUD/ (SG PSB-LE-03490M2)
Internal wire (output of LED driver and LED panel light input)	B, C	DONGGUAN HONGFUWEI CABLE TECHNOLOGY CO LTD	2464	20AWG, 80°C 300Vac	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E316005 Tested with appliance
DC connector	C	Zhejiang Ruipu Intelligent Lighting Technology Co., Ltd	--	Φ3,5mm (Female part); Φ5,5 (male part)	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	Tested with appliance
DC connector (Plastics)	C	Zhejiang Ruipu Intelligent Lighting Technology Co., Ltd	--	PC	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	Tested with appliance
Internal wire	B, C	DONGGUAN HONGFUWEI CABLE TECHNOLOGY CO LTD	2464	20AWG; 80°C 300Vac	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E316005 Tested with appliance

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	D	Guangdong Hongpai Wire Products Co., Ltd	2464; 1007; 1569	20-24AWG; 80°C 300Vac	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E508352 Tested with appliance
Alternative	D	Guangdong Hongpai Wire Products Co., Ltd	1015	20-24AWG; 80°C 600Vac	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E508352 Tested with appliance
Alternative	D	Shenzhen Runqi Wire Co Ltd	3239	20-24AWG; 200°C Max. 60000V	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E495994 Tested with appliance
Alternative	D	Shenzhen Runqi Wire Co Ltd	1007	20-24AWG; 80°C 300Vac	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E495994 Tested with appliance
Alternative	D	DONG GUAN SHENG PAI ELECTRIC WIRE & CABLE CO LTD	3239	20-24AWG; 200°C Max. 60000V	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E347603 Tested with appliance
Alternative	D	Suzhou Dian Hang Electronic Co Ltd	1569; 1007	20-24AWG; 80°C 300Vac	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E354173 Tested with appliance
Alternative	D	TONGXIANG CTIY MEIHONG WIRE & CABLE CO LTD	1007	20-24AWG; 80°C 300Vac	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E486495 Tested with appliance
Alternative	D	HANGZHOU LAIEN ELECTRICAL EQUIPMENT CO LTD	3266	20-24AWG; 125°C 300Vac	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E488264 Tested with appliance
Alternative	D	HANGZHOU LAIEN ELECTRICAL EQUIPMENT CO LTD	3239	20-24AWG; 200°C Max. 60000V	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E488264 Tested with appliance
Alternative	D	HANGZHOU LAIEN ELECTRICAL EQUIPMENT CO LTD	3135	20-24AWG; 80°C 600Vac	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E488264 Tested with appliance
Alternative	D	HANGZHOU LAIEN ELECTRICAL EQUIPMENT CO LTD	1569; 1007	20-24AWG; 80°C 300Vac	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E488264 Tested with appliance

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Clause	Requirement + Test	Result - Remark	Verdict

MPCB	B, C	Jiangxi Xinhong Electronics Co. Ltd	XH-4	V-0; 130°C	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E522084 Tested with appliance
Alternative	D	Jiangxi Chishuo Technology Co Ltd	TY-005; TY-001	V-0; 130°C	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E496359 Tested with appliance
Alternative	D	Zhejiang Dichroa Febrifuga Juhua Electronics Co Ltd	YH-02	V-0; 130°C	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E356913 Tested with appliance
Alternative	D	Ningbo Hong Tao Electronic Technology Co Ltd	HT-01	V-0; 140°C	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E494537 Tested with appliance
Diffuser and plastic enclosure	B, C	FORMOSA CHEMICALS & FIBRE CORP PLASTICS DIV	GP550#	HB	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E162823 Tested with appliance
LED	C	JIANGXI MTC Lighting co., Ltd	SMD 2835	If=100mA; Vf=8,5-9,4V; 2700-6500K	IEC TR 62778 EN 62471	Tested with appliance
LED lens for RP-CB series	C	Zhejiang Ruipu Intelligent Lighting Technology Co., Ltd	-	PMMA	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	Tested with appliance
CCT switch	C	Zhejiang Ruipu Intelligent Lighting Technology Co., Ltd	-	Max.60V; 2A	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	Tested with appliance
PCB of CCT switch	B, C	GOLDENMAX INTERNATIONAL TECHNOLOGY (ZHUHAI) LTD	FR-4.0	V-0; 130°C	EN IEC 60598-2-2 EN IEC 60598-2-1 EN IEC 60598-1	UL/E330731 Tested with appliance

Supplementary information:

[1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.

[2)] License available upon request.

The codes above have the following meaning:

A - The component is replaceable with another one, also certified, with equivalent characteristics

B - The component is replaceable if authorised by the test house

C - Integrated component tested together with the appliance

D - Alternative component

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Thermal tests of Section 12		P
	Type reference.....:	Panel-60120-80W-CCT	—
	Lamp used .....:	LED module	—
	Lamp control gear used.....:	LF- GIF040YS1050H*2	—
	Mounting position of luminaire.....:	Recessed mounting	—
	Supply wattage (W) .....:	79,6	—
	Supply current (A).....:	0,319	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	40	—
	- abnormal operating mode .....:	Short-circuit LED output	—
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 .....:	1,06 times rated voltage 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.....:	1,1 times rated voltage 264V	—

Temperature measurements (°C)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Supply cord not stressed	40	-	44,4	-	90	-	-
Supply cord stressed	40	-	44,7	-	75	-	-
LED driver-Tc	40	61,3	-	-	85	41,9	85
Wire for output of LED driver	40	-	44,3	-	75	-	-
Internal wire near LED module	40	-	52,4	-	90	-	-
MPCB	40	-	62,7	-	130	-	-
Diffuser	40	-	55,6	-	Ball Pressure Test	-	-
CCT Switch surface	40	-	49,9	-	55	-	-
Mounting surface	40	-	41,5	-	90	40,9	130
Min-point of cavity	40	-	40,0	-	-	-	-

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

Supplementary information: N/A

ANNEX 2	TABLE: Thermal tests of Section 12		P
	Type reference.....:	LLX-Panel-60120-60W-CCT	—
	Lamp used .....:	LED module	—
	Lamp control gear used.....:	LF- GIF060YS1500H	—
	Mounting position of luminaire.....:	Recessed mounting	—
	Supply wattage (W) .....:	56,6	—
	Supply current (A).....:	0,227	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	40	—
	- abnormal operating mode .....:	Short-circuit LED output	—
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 .....:	1,06 times rated voltage 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.....:	1,1 times rated voltage 264V	—

Temperature measurements (°C)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Supply cord not stressed	40	-	47,3	-	90	-	-
Supply cord stressed	40	-	48,8	-	75	-	-
LED driver-Tc	40	66,2	-	-	90	43,3	90
Wire for output of LED driver	40	-	48,6	-	75	-	-
Internal wire near LED module	40	-	54,5	-	90	-	-
MPCB	40	-	61,9	-	130	-	-
Diffuser	40	-	56,8	-	Ball Pressure Test	-	-
CCT Switch surface	40	-	51,6	-	55	-	-

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

Mounting surface	40	-	44,6	-	90	41,1	130
Min-point of cavity	40	-	40,0	-	-	-	-
Supplementary information: N/A							

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		—
	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 (mm²)		—
(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)**		**P**
(15)	**SCREWLESS TERMINALS**		**P**
(15.2)	Type of terminal.....:	Screwless terminals	—
	Rated current (A).....:	1A	—
(15.3.1)	Material		P
(15.3.2)	Clamping		P
(15.3.3)	Stop		P
(15.3.4)	Unprepared conductors		P
(15.3.5)	Pressure on insulating material		P
(15.3.6)	Clear connection method		P
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		P
(15.3.10)	Conductor size		P
	Type of conductor		P
(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		P
(15.6.1)	Conductors		P
	Terminal size and rating		P

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
15.6.2	Mechanical tests		P
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) .....:	20N	P
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) .....:		N/A
(15.6.3)	Electrical tests		P
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		P

(15.6.3.1) (15.6.3.2)	**TABLE: Contact resistance test / Heating tests**									**P**
	Voltage drop (mV) after 1 h									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	8,1	8,1	8,1	8,0	8,0	8,1	8,2	8,1	8,1	8,0
	Voltage drop of two inseparable joints									P
	Voltage drop after 10th alt. 25th cycle									P
	Max. allowed voltage drop (mV).....:	8,2								—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	8,3	8,3	8,4	8,5	8,5	8,5	8,5	8,4	8,5	8,5
	Voltage drop after 50th alt. 100th cycle									P
	Max. allowed voltage drop (mV).....:	8,5								—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	-	-	-	-	-	-	-	-	-	-
	Continued ageing: voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV).....:	-								—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	8,8	8,6	8,7	8,6	8,6	8,7	8,8	8,7	8,9	8,7
	Continued ageing: voltage drop after 50th alt. 100th cycle									P
	Max. allowed voltage drop (mV).....:	8,9								—
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 TO TEST REPORT
IEC 60598-2-2:2023
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
LUMINAIRES
PART 2: PARTICULAR REQUIREMENTS
SECTION 2: FIXED GENERAL PURPOSE LUMINAIRES

Differences according to ..... :	EN IEC 60598-2-2:2024 used in conjunction with EN IEC 60598-1:2021+A11:2022
TRF template used ..... :	IECEE OD-2020-F2:2022, Ed. 1.2
Attachment Form No. ..... :	EU_GD_IEC60598_2_2H
Attachment Originator ..... :	Association of Polish Electricians – Quality Testing Office (SEP – BBJ)
Master Attachment..... :	Dated 2024-09-03

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	CENELEC COMMON MODIFICATIONS (EN)		
1.6 (3)	**MARKING**		P
1.6 (3.2.12)	Note 4 deleted		N/A
1.7 (4)	**CONSTRUCTION**		P
1.7 (4.11.6)	Electro-mechanical contact systems: electric strength test at 1 500 V		N/A
1.11 (5)	**EXTERNAL AND INTERNAL WIRING”**		P
1.11 (5.2.2)	Cables equal to EN 50525 (all parts)		P
	Paragraph 2 deleted		N/A
	Replace table 5.1 – Supply cord		P
1.13 (12)	**ENDURANCE TESTS AND THERMAL TESTS**		P
1.13 (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
(5.2.18)	DK: socket-outlets		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	FR: Safety requirements for high buildings *(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)* 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		N/A
	UK: Requirements according to United Kingdom Building Regulation		N/A

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

	Appendix 1: Summary of requirements and test clauses of: **EN IEC 62031:2020+A11:2021 LED modules for general lighting – Safety specifications**	**P**

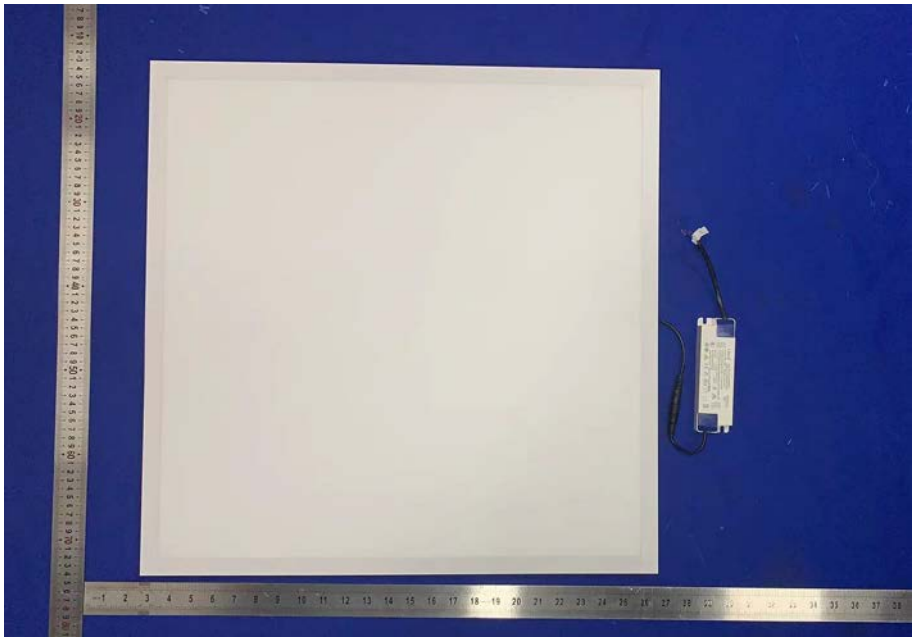
4.2	Classification		**P**
	Built-in; Independent; Integral	Built-in	P
6	Marking		P
6.2	Contents of marking for built-in and for independent LED modules		P
6.3	Location of marking for built-in LED modules		P
6.4	Location of marking for independent LED modules		N/A
6.5	Marking of integral LED modules		N/A
6.6	Durable and legibility of marking		P
7	Terminals		N/A
8	Provisions for protective earthing		N/A
9	Protection against accidental contact with live parts		P
10	Moisture resistance and insulation	Evaluated in final product.	P
11	Electric strength	Evaluated in final product.	P
12	Fault conditions		P
12.1	Fault conditions according to IEC 61347-1, cl.14		P
12.2	Overpower conditions		P
13	Conformity testing during manufacture		N/A
14	Construction		P
	No wood, cotton, silk, paper and similar fibrous material used as insulation		P
15	Creepage distances and clearances	Evaluated in final product.	P
16	Screw, current-carrying parts and connections	Evaluated in final product.	P
17	Resistance to heat, fire and tracking	Evaluated in final product.	P
18	Resistance to corrosion		N/A
20	Heat management		N/A
22	Photobiological safety	Evaluated in final product.	P

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

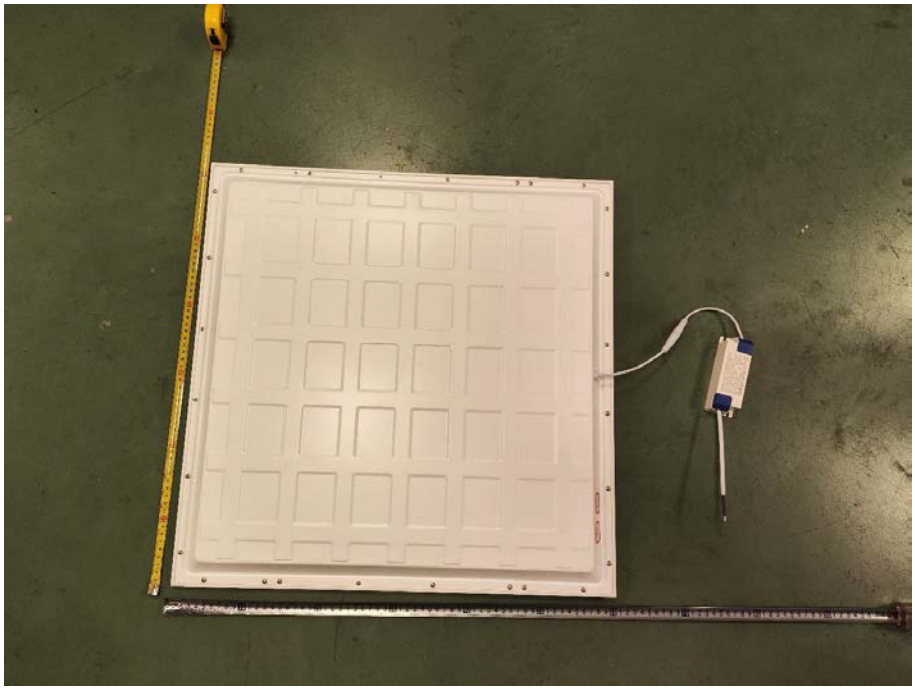
14	**TABLE: tests of fault conditions**	**P**
Part	Simulated fault	Hazard
LED (+ -)	Shorted-circuited – unit shut down, no flames, no gases, recoverable	No
LED (+ -)	opened-circuited – unit shut down, no flames, no gases, recoverable	No

Remark

Photos

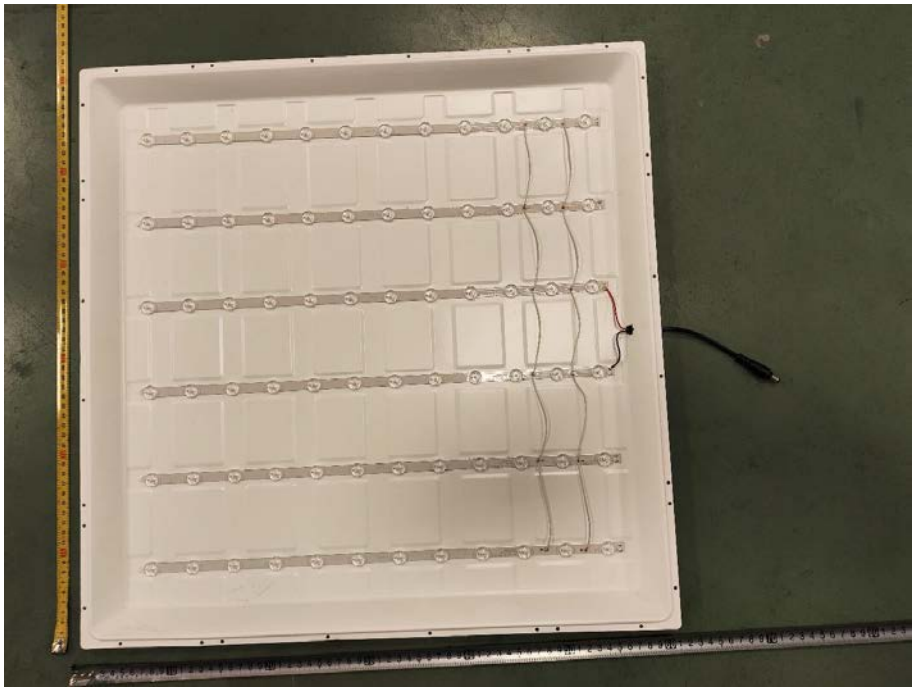


Overview for LLX-Panel-6060 series

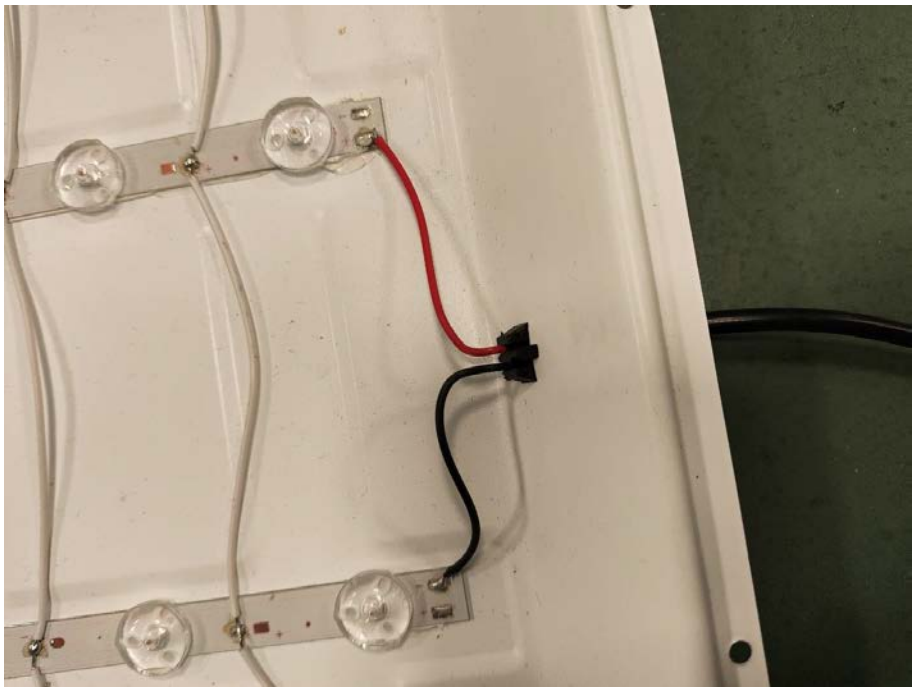


Back view for LLX-Panel-6060 series

Remark



Inside view



Cord anchorage

Remark



Lamp LED module

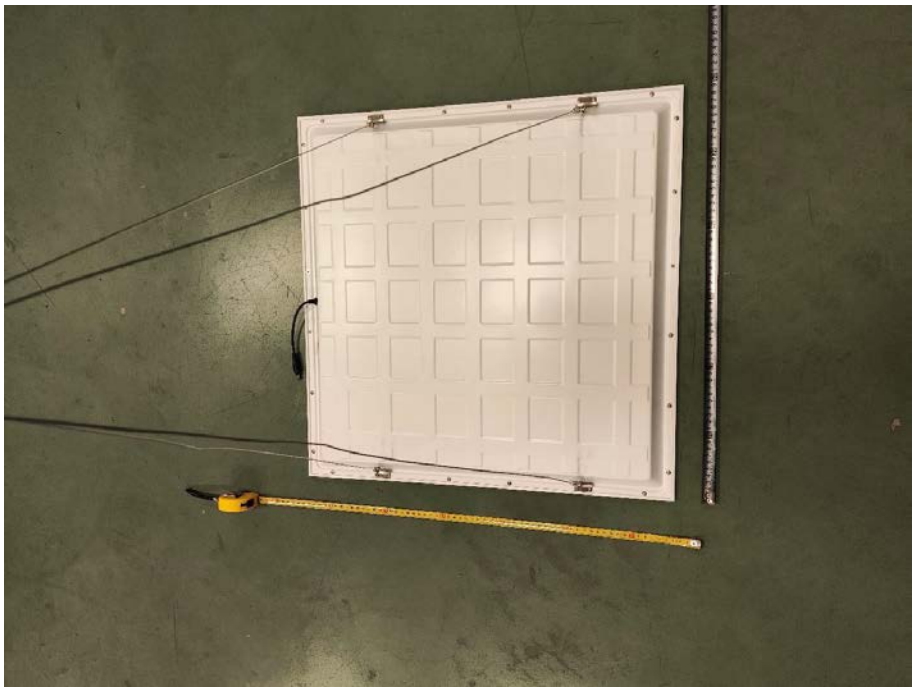


Suspension kit

Remark



Suspension kit for all

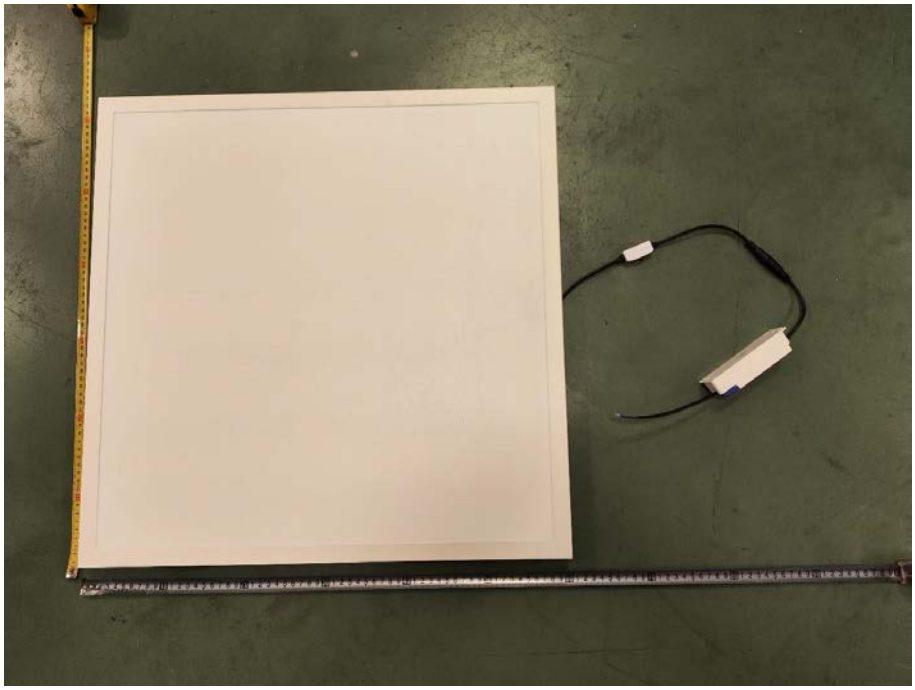


Suspension kit for type model (all other models are the same)

Remark

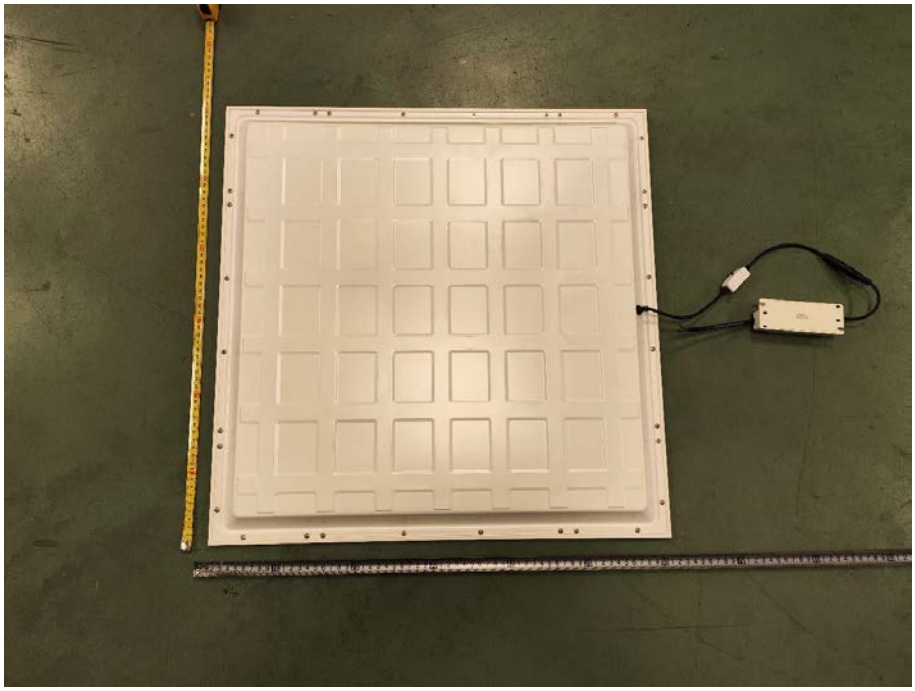


recessed mount clips for type model (all other models are the same)

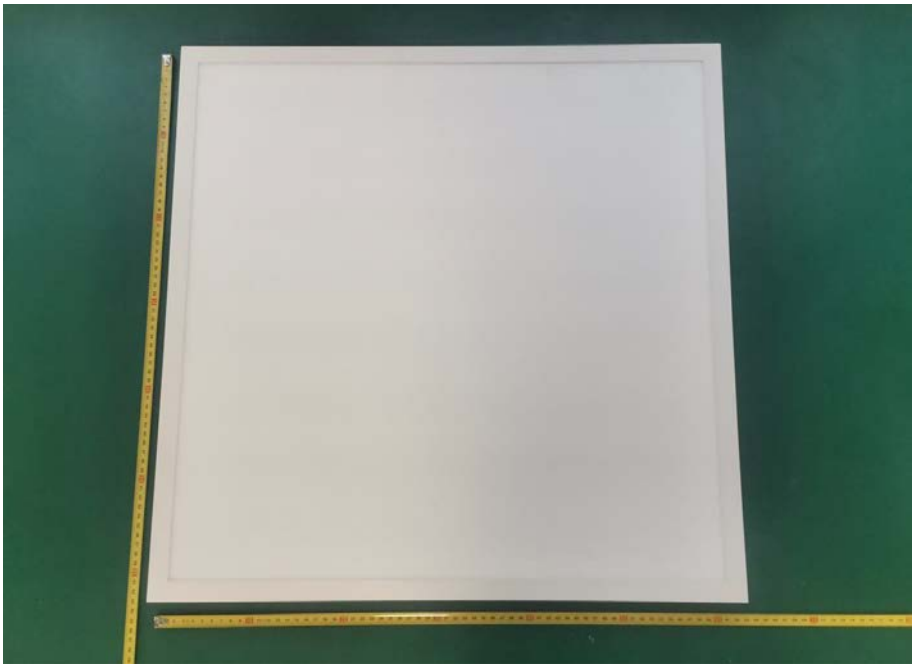


Overview With CCT switch for type model (all other models are the same)

Remark

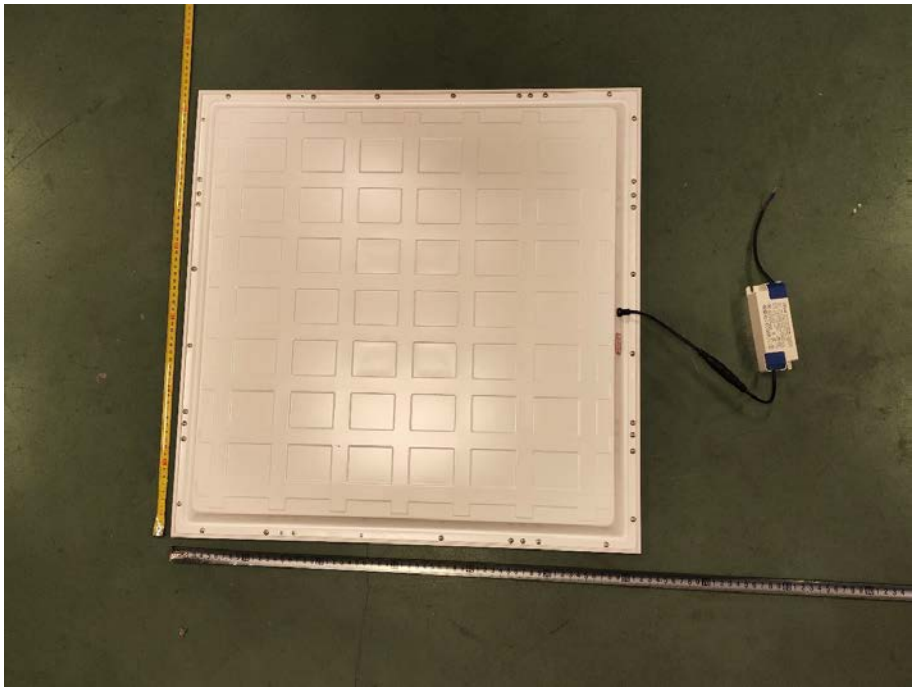


Back view With CCT switch for type model (all other models are the same)



Overview for LLX-Panel-6262 series

Remark

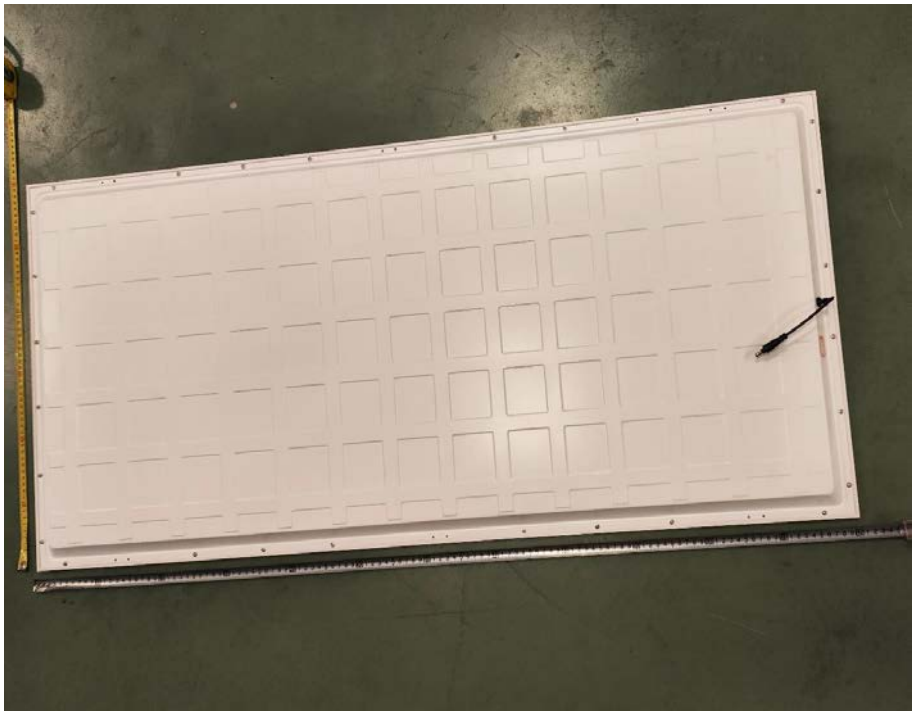


Back view for LLX-Panel-6262 series



Overview for LLX-Panel-60120 series

Remark

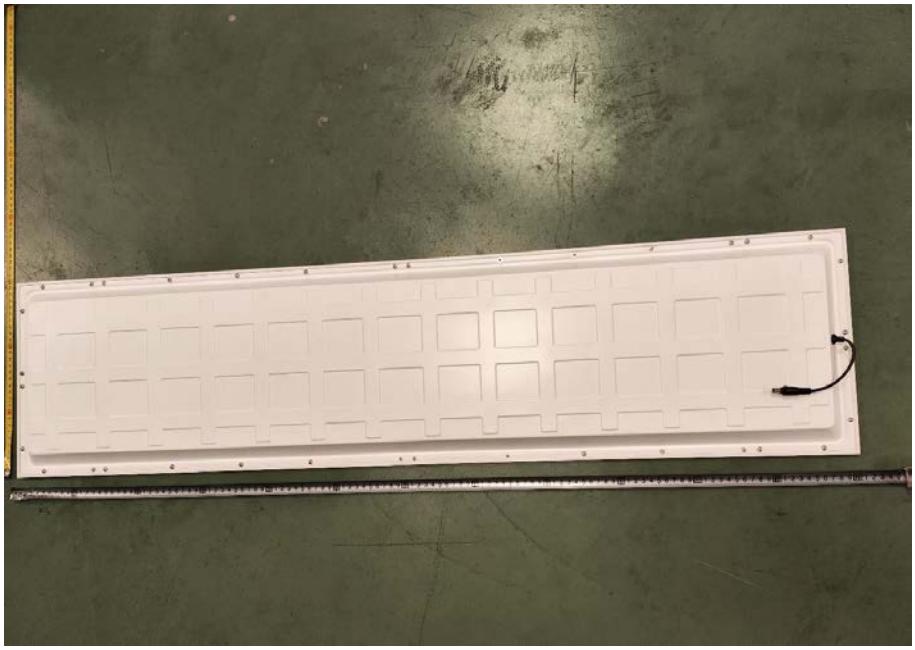


Back view for LLX-Panel-60120 series



Overview for LLX-Panel-30120 series

Remark

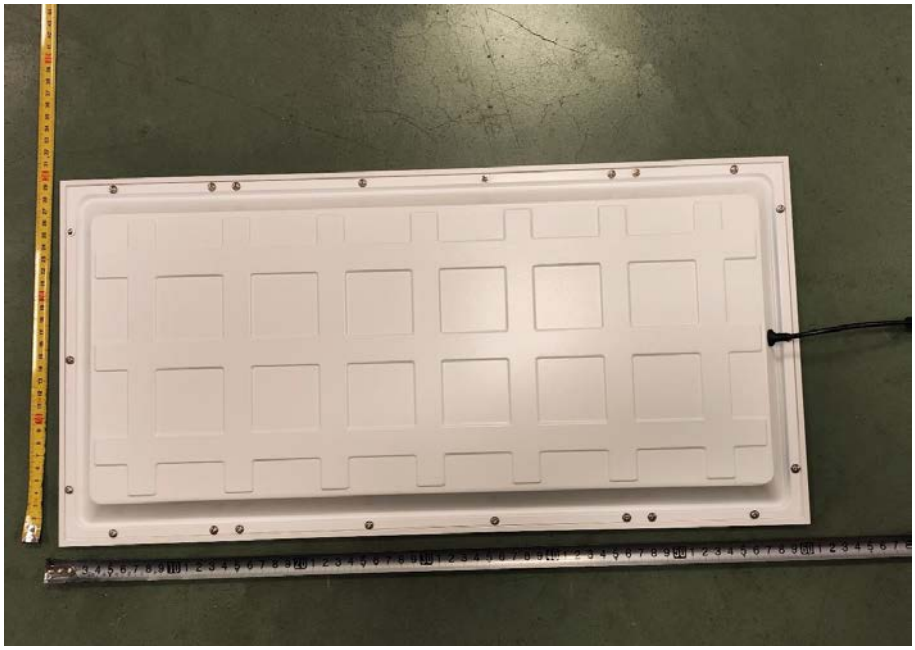


Back view for LLX-Panel-30120 series

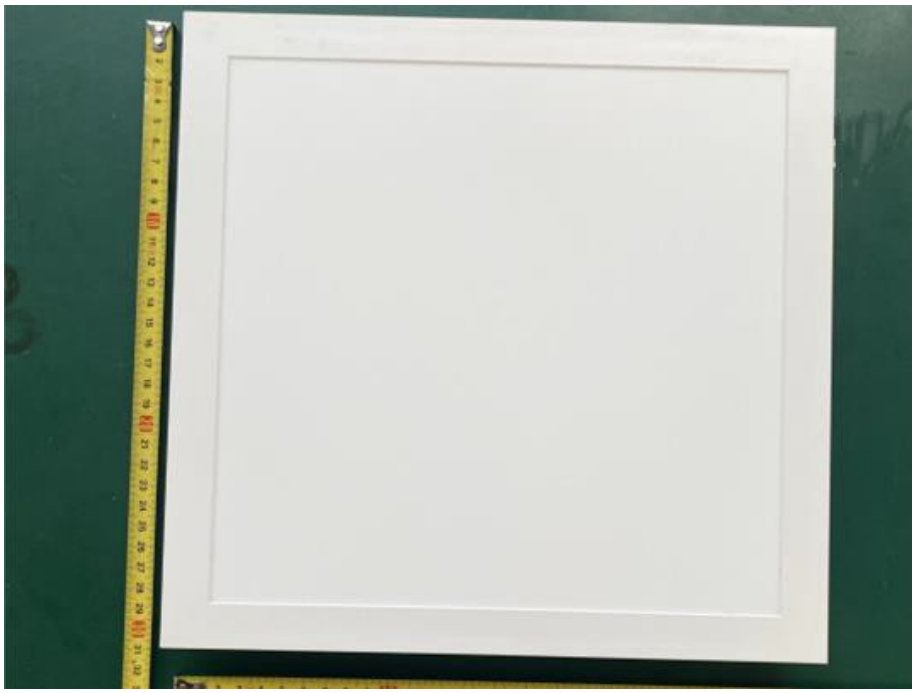


Overview for LLX-Panel-3060 series

Remark

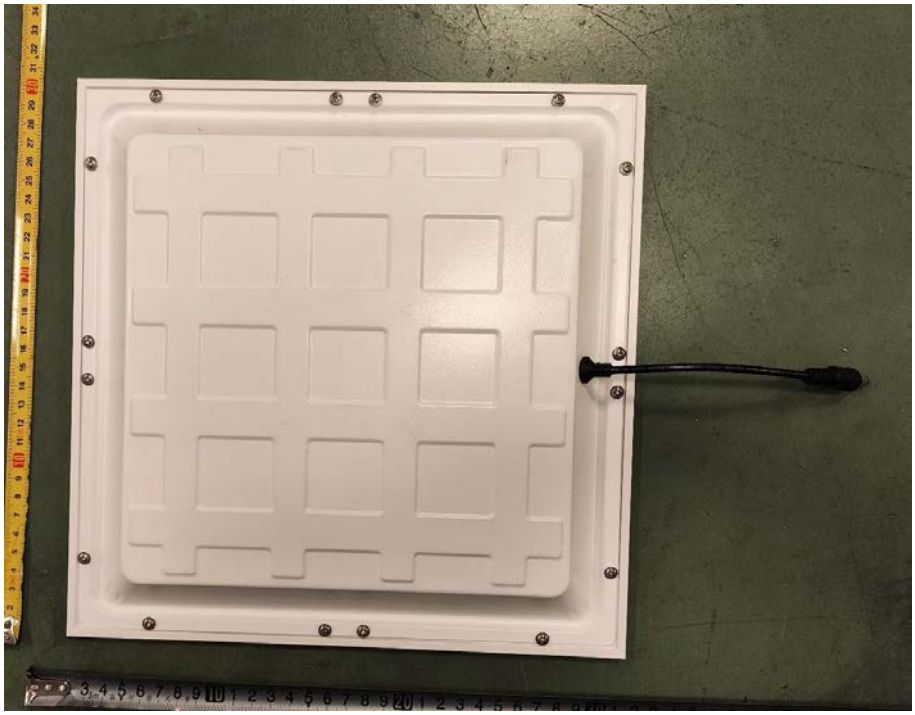


Back view for LLX-Panel-3060 series



Overview for LLX-Panel-3030 series

Remark



Back view for LLX-Panel-3030 series



CCT Switch and connector for all

Remark



LED Driver LF-GIF040YS1050H



LED Driver LF-GIF060YS1500H