TEST REPORT

Product name:	**Fixed Luminaires For Incandescent Lamps**
Model and Specification:	**See model list**
Applicant:	**Zhongshan Zhaoliang Lighting Co., Ltd.**
Factory:	**Zhongshan Zhaoliang Lighting Co., Ltd.**

Guangdong Tsaint Hi-tech Co., Ltd.

TSGK

TEST REPORT
EN IEC 60598-2-1
Luminaires
Part 2: Particular requirements
Section 1: Fixed general purpose luminaires

Report Number.....:	TSGK-2023-3742-S
Date of issue.....:	October 5, 2023
Total number of pages.....	39 pages
Name of Testing Laboratory preparing the Report.....:	Guangdong Tsaint Hi-tech Co., Ltd. -1/F, 1/F, Property 1, area B, No.10, Lelin Road, Tongyi Industrial Park, Guzhen, Zhongshan, Guangdong, China
Applicant's name.....:	Zhongshan Zhaoliang Lighting Co., Ltd.
Address.....:	7/F, No. 30 Qingji Street, Tiebian Village, Henglan Town, Zhongshan City, China
Test specification:	
Standard.....:	EN IEC 60598-1:2021 EN IEC 60598-2-1:2021
Test procedure.....:	--
Non-standard test method.....:	N/A
Test Report Form No.....:	--
Test Report Form(s) Originator.....:	Tsaint Hi-tech
Master TRF.....:	--

General disclaimer:

The test results presented in this report relate only to the object tested.

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Test item description.....:	Fixed Luminaires For Incandescent Lamps
Trade Mark.....:	/
Manufacturer.....:	Same as applicant
Model/Type reference.....:	See model list
Ratings.....:	220-240 V～; 50/60 Hz; Class I; IP20; E27, Incandescent lamp for each lampholder; Suitable for direct mounting on normally flammable surfaces; More informations 'General product information'.

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

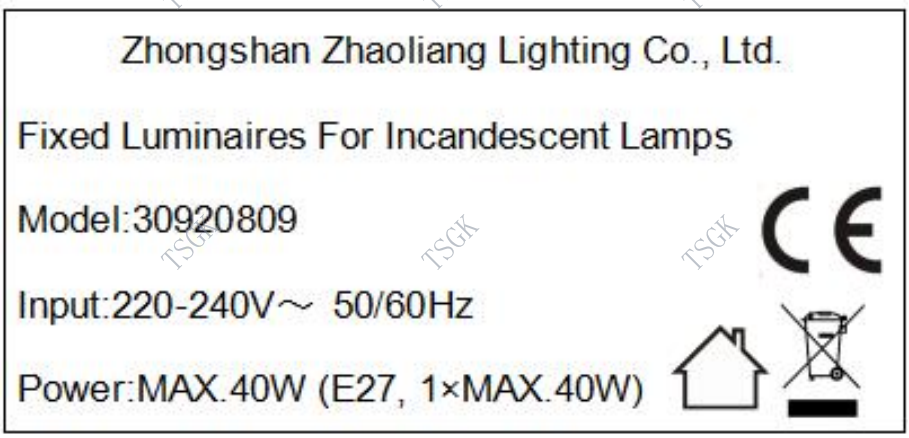
- test report (from page 1 to 35)
- Product photos (from page 36 to 39)

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
1. Model 30920809 was selected to do the full test.	Guangdong Tsaint Hi-tech Co.,Ltd. -1/F, 1/F, Property 1, area B, No.10, Lelin Road, Tongyi Industrial Park, Guzhen, Zhongshan, Guangdong, China

Copy of marking plate:

The artwork below may be only a draft. The marking plate of others (models) are identical with model 30920809, except with different model and rating.



Located on canopy

Located on enclosure near lampholder

Remark:

1. The mark as above is the minimum requirements required by the safety standard. For the final production, the additional marks which do not give rise to misunderstanding may be added.
2. The height of letters and numerals shall be not less than 2 mm.
3. The height of graphical symbols shall not be less than 5 mm except WEEE symbol is 7 mm.

Test item particulars.....:	
Classification of installation and use.....:	Class I fixed luminaire for indoor use only
Supply Connection.....:	Connecting leads(tails)
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.....:	September 14, 2023
Date (s) of performance of tests.....:	September 14, 2023 to September 28, 2023
Tested by (name + signature).....:	Tian Luo (Editor)
Compiled by (name + signature).....:	Lan Jile (Supervisor)
Approved by (name + signature).....:	Fuyu Jiang (Manager)
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.

Clause numbers between brackets refer to clauses in EN IEC 60598-1.

Name and address of factory (ies).....:	Same as applicant

General product information:

1. The products have similar structure and were class I, IP20 fixed luminaires for indoor use only.
2. The products only to be installed outside arm's reach.

Model list

Item	Model	Power	Item	Model	Power
1.	20119202	1×MAX40W	2.	20164306	1×MAX40W
3.	20164315	1×MAX40W	4.	20164316	1×MAX40W
5.	20164318	1×MAX40W	6.	30274403	1×MAX40W
7.	30278402	1×MAX40W	8.	30278403	1×MAX40W
9.	30451201	1×MAX40W	10.	30738404	1×MAX40W

11.	30740504	1×MAX40W	12.	30743901	1×MAX40W
13.	30743902	1×MAX40W	14.	30743903	1×MAX40W
15.	30743906	1×MAX40W	16.	30763201	1×MAX40W
17.	30783804	1×MAX40W	18.	30809003	1×MAX40W
19.	30809004	1×MAX40W	20.	30809602	1×MAX40W
21.	30809603	1×MAX40W	22.	30821601	1×MAX40W
23.	30821602	1×MAX40W	24.	30822201	1×MAX40W
25.	30822202	1×MAX40W	26.	30823507	1×MAX40W
27.	30825301	1×MAX40W	28.	30825302	1×MAX40W
29.	30825304	1×MAX40W	30.	30825305	1×MAX40W
31.	30825306	1×MAX40W	32.	30825307	1×MAX40W
33.	30825308	1×MAX40W	34.	30835501	1×MAX40W
35.	30846101	1×MAX40W	36.	30846108	1×MAX40W
37.	30850402	1×MAX40W	38.	30850403	1×MAX40W
39.	30861501	1×MAX40W	40.	30866101	1×MAX40W
41.	30867701	1×MAX40W	42.	30867801	1×MAX40W
43.	30881801	1×MAX40W	44.	30881802	1×MAX40W
45.	30896401	1×MAX40W	46.	30896402	1×MAX40W
47.	30896403	1×MAX40W	48.	30896405	1×MAX40W
49.	30896406	1×MAX40W	50.	30898001	1×MAX40W
51.	30901401	1×MAX40W	52.	30901402	1×MAX40W
53.	30901403	1×MAX40W	54.	30901404	1×MAX40W
55.	30901405	1×MAX40W	56.	30901406	1×MAX40W
57.	30902101	1×MAX40W	58.	30907401	1×MAX40W
59.	30908001	1×MAX40W	60.	30912101	1×MAX40W
61.	30912102	1×MAX40W	62.	30917801	1×MAX40W
63.	30920802	1×MAX40W	64.	30920803	1×MAX40W
65.	30920804	1×MAX40W	66.	30920806	1×MAX40W
67.	30920806	1×MAX40W	68.	30920807	1×MAX40W

69.	30920808	1×MAX40W	70.	30920809	1×MAX40W
71.	30920810	1×MAX40W	72.	30920811	1×MAX40W
73.	30920812	1×MAX40W	74.	30920813	1×MAX40W
75.	30920814	1×MAX40W	76.	30920815	1×MAX40W
77.	30920816	1×MAX40W	78.	30920817	1×MAX40W
79.	30927203	1×MAX40W	80.	30927502	1×MAX40W
81.	30930701	1×MAX40W	82.	30930702	1×MAX40W
83.	30930703	1×MAX40W	84.	30930704	1×MAX40W
85.	30933401	1×MAX40W	86.	30935002	1×MAX40W
87.	30935003	1×MAX40W	88.	30935701	1×MAX40W
89.	60103401	1×MAX40W	90.	60103403	1×MAX40W

EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.4 (0)	**GENERAL TEST REQUIREMENTS**		—
1.4 (0.3)	More sections applicable.....:	Yes ☐ No ☒ Section/s: —	—
1.4 (0.5)	Components	(see Annex 1)	—
1.4 (0.7)	**Information for luminaire design in light sources standards**		—
1.4 (0.7.2)	Light source safety standard ..... :	EN 60432-1	—
	Luminaire design in the light source safety standard	Yes	—

1.5 (2)	**CLASSIFICATION OF LUMINAIRES**		—
1.5 (2.2)	Type of protection .....:	Class I	—
1.5 (2.3)	Degree of protection.....:	IP20	—
1.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces..... :	Yes ☒ No ☐	—
1.5 (2.5)	Luminaire for normal use ..... :	Yes ☒ No ☐	—
	Luminaire for rough service ..... :	Yes ☐ No ☒	—

1.6 (3)	**MARKING**		P
1.6 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
1.6 (3.3)	Additional information		P
	Language of instructions	English	P
1.6 (3.3.1)	Combination luminaires		N/A
1.6 (3.3.2)	Nominal frequency in Hz	50/60 Hz	P
1.6 (3.3.3)	Operating temperature		N/A
1.6 (3.3.5)	Wiring diagram		N/A
1.6 (3.3.6)	Special conditions		N/A
1.6 (3.3.7)	Metal halide lamp luminaire – warning		N/A
1.6 (3.3.8)	Limitation for semi-luminaires		N/A
1.6 (3.3.9)	Power factor and supply current		N/A
1.6 (3.3.10)	Suitability for use indoors		P
1.6 (3.3.11)	Luminaires with remote control		N/A
1.6 (3.3.12)	Clip-mounted luminaire – warning		N/A
1.6 (3.3.13)	Specifications of protective shields		N/A
1.6 (3.3.14)	Symbol for nature of supply	~	P

EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (3.3.15)	Rated current of socket outlet		N/A
1.6 (3.3.16)	Rough service luminaire		N/A
1.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		N/A
1.6 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
1.6 (3.3.19)	Protective conductor current in instruction if applicable		N/A
1.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach	Only to be installed outside arm's reach	P
1.6 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		N/A
1.6 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
1.6 (3.3.23)	Luminaires without control gear provided with necessary information for selection of appropriate component		N/A
1.6 (3.3.24)	If not supplied with terminal block, information on the packaging		P
1.6 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided		N/A
1.6 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		N/A
1.6 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P

1.7 (4)	**CONSTRUCTION**		P
1.7 (4.2)	Components replaceable without difficulty		P
1.7 (4.3)	Wireways smooth and free from sharp edges		P
1.7 (4.4)	**Lampholders**		P
1.7 (4.4.1)	Integral lampholder		N/A
1.7 (4.4.2)	Wiring connection		N/A
1.7 (4.4.3)	Lampholder for end-to-end mounting		N/A
1.7 (4.4.4)	Positioning		P
	- pressure test (N) ..... :		—
	After test the lampholder 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 lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) .....:	E27: 2.0Nm	—
	After test the lampholder have not moved from its position and show no permanent deformation		P
1.7 (4.4.5)	Peak pulse voltage		N/A
1.7 (4.4.6)	Centre contact		N/A
1.7 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
1.7 (4.4.8)	Lamp connectors		N/A
1.7 (4.4.9)	Caps and bases correctly used		N/A
1.7 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		P
1.7 (4.5)	**Starter holders**		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
1.7 (4.6)	**Terminal blocks**		P
	Tails		P
	Unsecured blocks		N/A
1.7 (4.7)	**Terminals and supply connections**		N/A
1.7 (4.7.1)	Contact to metal parts		N/A
1.7 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
1.7 (4.7.3)	Terminals for supply conductors		N/A
1.7 (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
1.7 (4.7.4)	Terminals other than supply connection		N/A
1.7 (4.7.5)	Heat-resistant wiring/sleeves		N/A
1.7 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
1.7 (4.8)	**Switches**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
1.7 (4.9)	**Insulating lining and sleeves**		P
1.7 (4.9.1)	Retainment		P
	Method of fixing.....:	As integral part	P
1.7 (4.9.2)	Insulated linings and sleeves:		P
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		P
	b) Ageing test. Temperature (°C).....:		N/A
1.7 (4.10)	**Double or reinforced insulation**		N/A
1.7 (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
1.7 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
1.7 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
1.7 (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
1.7 (4.11)	**Electrical connections and current-carrying parts**		P
1.7 (4.11.1)	Contact pressure		P
1.7 (4.11.2)	Screws:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- self-tapping screws		N/A
	- thread- cutting screws		N/A
1.7 (4.11.3)	Screw locking:		P
	- spring washer		P
	- rivets		N/A
1.7 (4.11.4)	Material of current-carrying parts		P
1.7 (4.11.5)	No contact to wood or mounting surface		P
1.7 (4.11.6)	Electro-mechanical contact systems		N/A
1.7 (4.12)	**Screws and connections (mechanical) and glands**		P
1.7 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		P
	Torque test: torque (Nm); part.....:	Earthing: 0.50Nm;	P
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A
1.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
1.7 (4.12.4)	Locked connections:		P
	- fixed arms; torque (Nm)..... :		N/A
	- lampholder; torque (Nm).....:	E27: 2.0Nm	P
	- push-button switches; torque 0,8 Nm..... :		N/A
1.7 (4.12.5)	Screwed glands; force (Nm)..... :		N/A
1.7 (4.13)	**Mechanical strength**		P
1.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)..... :		N/A
	- other parts; energy (Nm).....:	Metal enclosure and Canopy: 0.35 Nm;	P
	1) live parts		P
	2) linings		P
	3) protection		P
	4) covers		P
1.7 (4.13.2)	Metal parts have adequate mechanical strength		P
1.7 (4.13.3)	Straight test finger		P
1.7 (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

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Clause	Requirement + Test	Result - Remark	Verdict
	d) for temporary installations and suitable for mounting on a stand		N/A
1.7 (4.13.6)	Tumbling barrel		N/A
1.7 (4.14)	**Suspensions, fixings and means of adjusting**		P
1.7 (4.14.1)	Mechanical load:		P
	A) four times the weight	Max. 0.84kg(4×Max. 0.21 kg)	P
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)..... :		N/A
	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
1.7 (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
1.7 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles..... :	150 cycles	P
	- strands broken..... :	No broken	P
	- electric strength test afterwards		P
1.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
1.7 (4.14.5)	Guide pulleys		N/A
1.7 (4.14.6)	Strain on socket-outlets		N/A
1.7 (4.15)	**Flammable materials**		P
	- glow- wire test 650°C..... :	See Test Table 1.15 (13.3.2)	N/A
	- 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
1.7 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	b) temperature sensing control		N/A
	c) surface temperature		N/A
1.7 (4.16)	**Luminaires for mounting on normally flammable surfaces**		P
	No lamp control gear.....:	(compliance with Section 12)	P
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
1.7 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
1.7 (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
1.7 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
1.7 (4.17)	**Drain holes**		N/A
	Clearance at least 5 mm		N/A
1.7 (4.18)	**Resistance to corrosion**		N/A
1.7 (4.18.1)	- rust- resistance		N/A
1.7 (4.18.2)	- season cracking in copper		N/A
1.7 (4.18.3)	- corrosion of aluminium		N/A
1.7 (4.19)	Ignitors compatible with ballast		N/A
1.7 (4.20)	Rough service vibration		N/A
1.7 (4.21)	**Protective shield**		N/A
1.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
1.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
1.7 (4.21.3)	No direct path		N/A
1.7 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment.....:	See Test Table 1.15 (13.3.2)	N/A
1.7 (4.22)	Attachments to lamps not cause overheating or damage		N/A
1.7 (4.23)	Semi-luminaires comply Class II		N/A
1.7 (4.24)	**Photobiological hazards**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
1.7 (4.24.2)	Retinal blue light hazard		N/A
	Class of risk group assessed according to IEC/TR 62778 .....:		—
	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
1.7 (4.25)	**Mechanical hazard**		P
	No sharp point or edges		P
1.7 (4.26)	**Short-circuit protection**		N/A
1.7 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
1.7 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Supply source ES1 PSE		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
1.7 (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
1.7 (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
	Not outside the luminaire enclosure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
1.7 (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
1.7 (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
	At least one fixing means requiring use of tool		N/A
1.7 (4.31)	**Insulation between circuits**		N/A
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
	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
1.7 (4.31.1)	SELV or PELV circuits		N/A
	Used SELV or PELV source		N/A
	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		N/A
	SELV or PELV 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
	Plugs and socket-outlets does not have protective conductor contact		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.7 (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 with 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
1.7 (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
1.7 (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
1.6 (4.33)	**Luminaire powered via information technology communication cabling**		N/A
	Requirements for Class III luminaire		N/A
	Rated voltage within the range of ES1 and does not exceed maximum voltage of used connector		N/A
	Luminaire does not create any hazard from overvoltage	(see Annex 2)	N/A
1.6 (4.34)	**Electromagnetic fields (EMF)**		P
	No harmful electromagnetic fields	Incandescent lamp used, complied without test.	P

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Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.35)	**Protection against moving fan blades**		N/A
	Test with a standard test finger		N/A
	Test with test probe acc. to Figure 13 (IEC 61032) for portable luminaire		N/A
	Blades rounded with radius ≥ 0.5 mm and:		N/A
	-hardness less than D60 Shore		N/A
	-peripheral speed less than 15 m/s		N/A
	-input power of fan ≤ 2 W at rated voltage		N/A
1.6 (4.36)	**Track-mounted luminaires**		N/A
	Test in accordance with Annex A of IEC60570:2003/AMD2:2019		N/A
1.8 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		P
1.8 (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
1.8 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 1.7 (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 1.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7 (11.2) II	N/A
1.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 1.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 1.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7 (11.2) II	N/A
1.9 (7)	**PROVISION FOR EARTHING**		P
1.9 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω.....:	Max. 0.036Ω	P
	Self-tapping screws used		N/A
	Thread-forming screws		P
	Thread-forming screw used in a grove		N/A
	Protective earth makes contact first		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A
1.9 (7.2.2 + 7.2.3)	Protective earth continuity in joints, etc.		N/A
1.9 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
1.9 (7.2.5)	Earth terminal integral part of connector socket		N/A
1.9 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
1.9 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
1.9 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
1.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
1.9 (7.2.11)	Protective earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A
1.9 (7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A

1.10 (14)	**SCREW TERMINALS**		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	N/A

1.10 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		P
	Separately approved; component list.....:	(see Annex 1)	P
	Part of the luminaire.....:	(see Annex 4)	N/A

1.11 (5)	**EXTERNAL AND INTERNAL WIRING**		P
1.11 (5.2)	**Supply connection and external wiring**		P
1.11 (5.2.1)	Means of connection.....:	Connecting leads (tails)	P
	Outdoor luminaire has not PVC insulated external wiring if not Class III or SELV/PELV circuits ≤ 25 V AC/60 V DC/25 V peak interrupted DC voltage with frequency 10Hz -200 Hz or protected from outdoor environment		N/A
1.11 (5.2.2)	Type of cable.....:	See annex 1	N/A
	Nominal cross-sectional area (mm²)..... :	See annex 1	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Cables equal to IEC 60227 or IEC 60245		N/A
1.11 (5.2.3)	Type of attachment, X, Y or Z		N/A
1.11 (5.2.5)	Type Z not connected to screws		N/A
1.11 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
1.11 (5.2.7)	Cable entries through rigid material have rounded edges		N/A
1.11 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
1.11 (5.2.9)	Locking of screwed bushings		N/A
1.11 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion		N/A
	- clear how to be effective		N/A
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
1.11 (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
1.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
1.11 (5.2.10.3)	Tests:		N/A
	- impossible to push cable; unsafe		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
1.11 (5.2.10.4)	Luminaire with/designed for use with supply cord with maximum current of 2A:		N/A
	- Ordinary Class III luminaire supplied with SELV ≤ 25V RMS/60V DC		N/A
	- Ordinary Class III luminaire supplied with PELV ≤12V RMS/30V DC		N/A
	- Other than ordinary Class III luminaire supplied with voltage ≤12V RMS/30V DC		N/A
	Pull test of 30N		N/A
1.11 (5.2.11)	External wiring passing into luminaire		N/A
1.11 (5.2.12)	Looping- in terminals		N/A
1.11 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
1.11 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
1.11 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
1.11 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
1.11 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
1.11 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
1.11 (5.3)	**Internal wiring**		P

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Clause	Requirement + Test	Result - Remark	Verdict
1.11 (5.3.1)	Internal wiring of suitable size and type	(see Annex 1)	P
	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		P
1.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²)..... :	(see Annex 1)	P
	Insulation thickness (mm) ..... :	(see Annex 1)	P
	Extra insulation added where necessary		P
1.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm²)..... :	(see Annex 1)	N/A
1.11 (5.3.1.3)	Double or reinforced insulation for class II		N/A
1.11 (5.3.1.4)	Conductors without insulation		N/A
1.11 (5.3.1.5)	SELV/PELV current-carrying parts		N/A
1.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
1.11 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
1.11 (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
1.11 (5.3.4)	Joints and junctions effectively insulated		N/A
1.11 (5.3.5)	Strain on internal wiring		N/A
1.11 (5.3.6)	Wire carriers		N/A
1.11 (5.3.7)	Wire ends not tinned		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Wire ends tinned: no cold flow		N/A
1.11 (5.4)	**Test to determine suitability of conductors having a reduced cross-sectional area**		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A
	No damage to luminaire wiring after test		N/A

1.12 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		P
1.12 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on 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		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
1.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
1.12 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		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
1.12 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
1.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V).....:		N/A
	- voltage under load/ no-load DC (V)……...:		N/A
	- interrupted DC 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
	- voltage under load/ no-load AC (V).....:		N/A
	- voltage under load/ no-load DC (V)……...:		N/A
	- interrupted DC 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
1.12 (8.2.3.d)	PELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V).....:		N/A
	- voltage under load/ no-load DC (V)……...:		N/A
	Other than ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V).....:		N/A
	- voltage under load/ no-load DC (V)……...:		N/A
	One pole insulated if required		N/A
1.12 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
1.12 (8.2.5)	Compliance with the standard test finger or relevant probe		P
1.12 (8.2.6)	Covers reliably secured		P
1.12 (8.2.7)	Luminaire other than below with capacitor > 0,5 μF not exceed 50 V 1 min after disconnection		N/A
	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

1.13 (12)	**ENDURANCE TEST AND THERMAL TEST**	P
1.13 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) as specified in 1.14	—

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Clause	Requirement + Test	Result - Remark	Verdict
1.13 (12.2)	**Selection of lamps and ballasts**		—
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied	(Control gear used see Annex 2)	—
1.13 (12.3)	**Endurance test**		P
	a) mounting- position .....:	As normal used	—
	b) test temperature (°C).....:	35 °C	—
	c) total duration (h) .....:	240 h	—
	d) supply voltage (V).....:	1.05 x voltage@Wn: 241.5 V	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A) .....:		—
1.13 (12.3.1d)	d) Class III luminaires powered via information technology communication cable:		N/A
	- voltage under normal operation (V)……...:		—
	- voltage under abnormal operation (V)……..:		—
	e) luminaire ceases to operate		—
	f) luminaire with constant light output function		N/A
1.13 (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
1.13 (12.4)	**Thermal test (normal operation)**	(see Annex 2)	P
1.13 (12.5)	**Thermal test (abnormal operation)**	(see Annex 2)	N/A
1.13 (12.6)	**Thermal test (failed lamp control gear condition):**		N/A
1.13 (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
	- track- mounted luminaires		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.13 (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
1.13 (12.7)	**Thermal test (failed lamp control gear in plastic luminaires):**		N/A
1.13 (12.7.1)	Luminaire without temperature sensing control		N/A
1.13 (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 1.15 (13.2.1)	N/A
1.13 (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.....:	See Test Table 1.15 (13.2.1)	N/A
1.13 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- case of abnormal conditions.....:		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
1.13 (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 1.15 (13.2.1)	N/A

1.14 (9)	**RESISTANCE TO DUST AND MOISTURE**		P
1.14 (-)	If IP > IP 20 the order of tests as specified in clause 1.12		N/A
1.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP..... :	IP20	—
	- mounting position during test.....:	As normal used	—
	- fixing screws tightened; torque (Nm).....:	/	—
	- tests according to clauses.....:	Clause 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
	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, pressure watertight, high pressure and temperature water jet-proof or high pressure and cold water jet-proof luminaire		N/A
	e) no contact with live parts (IP 2X)	IP20	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

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Clause	Requirement + Test	Result - Remark	Verdict
	g) no damage of protective shield or glass envelope		N/A
1.14 (9.3)	Humidity test 48 h	25 °C, 93% RH	P
1.14 (-)	Thermal shock test precedes those of (9)		—
1.14 (-)	Dismantled and reassembled before tests of (9)		—

1.15 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
1.15 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø .....:		—
	Insulation resistance (MΩ)..... :		—
	SELV/PELV:		N/A
	- between current-carrying parts of different polarity:		N/A
	- between current-carrying parts and mounting surface.....:		N/A
	- between current-carrying parts and metal parts of the luminaire.....:		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
	Other than SELV/PELV:		P
	- between live parts of different polarity..... :	>100 MΩ	P
	- between live parts and mounting surface.....:	>100 MΩ	P
	- between live parts and metal parts.....:	>100 MΩ	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 .....:	>100 MΩ	P
1.15 (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).....:		N/A
	SELV/PELV:		N/A
	- between current-carrying parts of different polarity:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- between current-carrying parts and mounting surface.....:		N/A
	- between current-carrying parts and metal parts of the luminaire.....:		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
	Other than SELV/PELV:		P
	- between live parts of different polarity..... :	1480 V	P
	- between live parts and mounting surface.....:	1480 V	P
	- between live parts and metal parts.....:	1480 V/2960 V	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 ..... :	1480 V	P
1.15 (10.3)	Touch current (mA).....:	0.003 mA (For Adjusting devices)	N/A
	Protective conductor current (mA).....:	0.071 mA	P

1.16 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		N/A
1.16 (13.2.1)	Ball-pressure test..... :	See Test Table 1.16 (13.2.1)	N/A
1.16 (13.3.1)	Needle-flame test (10 s).....:	See Test Table 1.16 (13.3.1)	N/A
1.16 (13.3.2)	Glow- wire test (650°C).....:	See Test Table 1.16 (13.3.2)	N/A
1.16 (13.4)	Proof tracking test (IEC 60112).....:	See Test Table 1.16 (13.4)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

1.8 (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	>10	1.5	11.1.B	>10	2.5	11.1.A
Working voltage (V)..... :					220-240 V		—
PTI..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					—		—
Supplementary information: Between different polarity of live part (L/N of lampholder)							
Distance 2:	B	>6.0	1.5	11.1.B	>6.0	2.5	11.1.A
Working voltage (V)..... :					220-240 V		—
PTI..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					--		—
Supplementary information: Between live parts and accessible metal parts							
Distance 3:	--	--	--	--	--	--	--
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

1.8 (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

1.16 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			N/A
Allowed impression diameter (mm) .....:		2mm		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
—	—	—	—	
Supplementary information: —				

1.16 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				N/A
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
—	—	—	—	—	—
Supplementary information: —					

1.15 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)			N/A
Glow wire temperature .....:		650°C		—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
—	—	—	—	—
Supplementary information: —				

1.15 (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)]**
Internal wire	B	Zhongshan Dongda Wire Co., Ltd.	FEP	1×0.75mm², 180℃	DIN 57250 Teil 106	VDE 40029492
Earthing wire	B	Zhongshan Guzhen Pinzheng Wire and Electric Appliance Factory	H05V-K	1 x 0.75 mm²	EN 50525-2-31	VDE 40044733
E27 lampholder	B	Zhongshan Henglan Boyi Electrical Appliance Factory	BY-271 BY-272	250V, 4A, T210	EN IEC 60238	VDE 40040288
Alternative	D	JiangMen City Jianghai District Langen Electrical Co., Ltd.	LE-27C1	250V, 4A, T210	EN IEC 60238	VDE 40039762
Heat-shrinkable tube	C	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR-H	600 V; 125 ° C VW-1	EN IEC 60598-2-1 EN IEC 60598-1	Test with the appliance and UL E203950

Supplementary information:

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

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.....:	30920809	—
	Lamp used.....:	Incandescent lamp (E27 type, 1xMax.40W)	—
	Lamp control gear used.....:	-	—
	Mounting position of luminaire.....:	As normal use	—
	Supply wattage (W).....:	42W	—
	Supply current (A)..... :	0.179A	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	25	—
	- abnormal operating mode.....:	-	—
1.12 (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 .....:	1.05 times rated wattage:1.05×1×40W=42W	—
	- 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 ..... :	-	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	-	—

Temperature measurements (°C)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Test wire	25	-	32.6	-	90	-	-
Internal wire (10mm from the lampholder termianls)	25	-	76.7	-	120	-	-
The point of contact between the lamp cap and the lampholder	25	-	130.4	-	210	-	-
Plastic of Lampholder	25	-	124.9	-	210	-	-
Mounting surface	25	-	21.7	-	90	-	-
Supplementary information:							

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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)..... :		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

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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		N/A
	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

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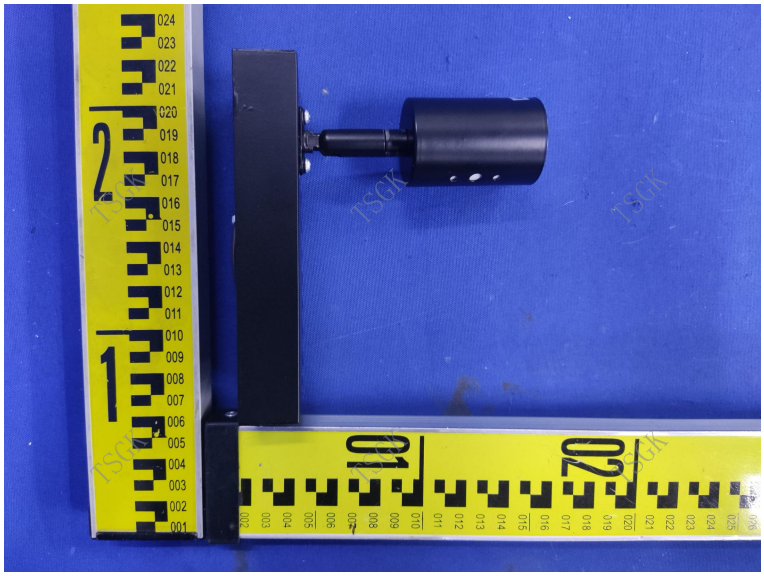
Clause	Requirement + Test	Result - Remark	Verdict

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
(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

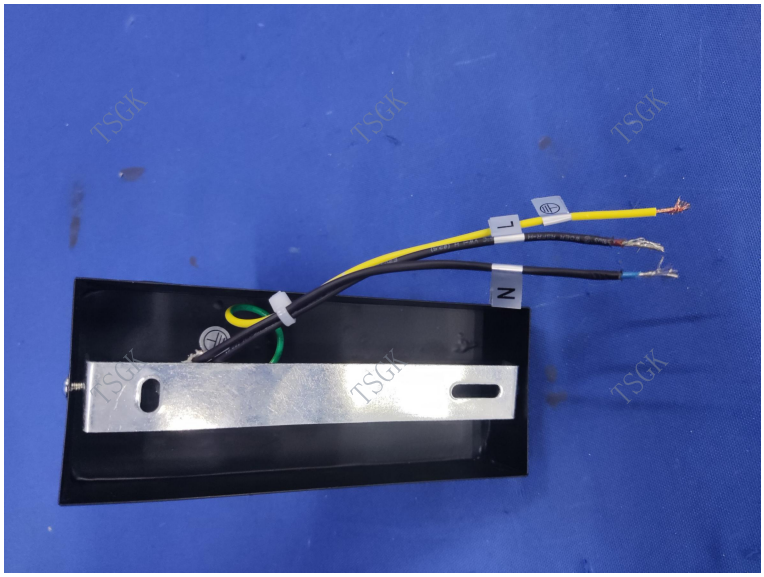
(15.6.3.1) (15.6.3.2)	**TABLE: Contact resistance test / Heating tests**										N/A
	Voltage drop (mV) after 1 h										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop of two inseparable joints										N/A
	Voltage drop after 10th alt. 25th cycle										N/A
	Max. allowed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

Product photos

Overall view for model 30920809



Overall view for model 30920809



Internal structure for model 30920809

Earthing for model 30920809

Adjusting devices for model 30920809

Lampholder for model 30920809

Lampholder for model 30920809

Lampholder for model 30920809

Declaration

1.The test report is invalid without the signatures of Chief Tester, Reviewer and Approver.

2.The test report is invalid without the official testing stamp of TSGK.

3.The test results presented in this report relate only to the object tested.

4.This report cannot be partially copied without permission.

5.The test report is invalid if altered.

6.Objections to the test report must be submitted to TSGK within 15 days.

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