Safety Test Report

Report No.: HB-091E-0445/25A

Product	:	Fixed general purpose luminaires
Model/Type	:	See model list
Brand Name	:	--
Applicant	:	[redacted]Lighting Technology Co., LTD
Application No.	:	20250806002
Date of Issue	:	2025-05-23
Standards	:	EN IEC 60598-2-1:2021 EN IEC 60598-1:2021+A11: 2022

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

Report No. ..... :	HB-091E-0445/25A
Application No. ..... :	20250509003
Testing Laboratory ..... :	Zhongshan Bontek Compliance Testing Laboratory Co., Ltd.
Address ..... :	1-4/F., Annex Building 1, Huayi Tongyi Industrial Park Factory Area, Caosandongxing Road, Guzhen, Zhongshan, Guangdong, China
Applicant's name ..... :	[redacted] Lighting Technology Co., LTD
Address ..... :	[redacted]heast Third Road, [redacted]Avenue, [redacted], China.
Test specification:	
Standards ..... :	EN IEC 60598-2-1:2021 used in conjunction with EN IEC 60598-1:2021+A11:2022
Test procedure ..... :	CE-LVD
Non-standard test method ... :	N/A
Test Report Form No. ..... :	HB-4M-091E-5
TRF Originator ..... :	LTS
Master TRF ..... :	2024-01
Test item description ..... :	Fixed general purpose luminaires
Trade Mark(s) ..... :	--
Manufacturer and address ... :	Same as applicant
Factory and address ..... :	Same as applicant
Model/Type reference ..... :	See model list
Ratings ..... :	220-240V~, 50/60Hz, Class I, ta: 45°C

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Summary of testing:

The submitted samples are found to comply with the requirements of:

- EN IEC 60598-2-1:2021
- EN IEC 60598-1:2021+A11:2022

This report based on report No. HB-091E-0445/25, has registered a new plastic lampholder.

Summary of compliance with National Differences:

☒ No national differences considered.

Tested by (signature).....: Weijian Yuan .....

Reviewed by (signature) .....: Zhaoyi Deng .....

Approved by (signature).....: Zhaofu Peng .....

Date of issue .....: 2025-05-23

General remarks:

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

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

"(see Appendix #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Clause numbers between brackets of main report refer to clauses in IEC 60598-1.

Main report: Page 1 to 37 for EN IEC 60598-2-1 test report;

Attachment 1: Page 38 to 40 for photo documentation.

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Test item particulars:	
Classification of installation and use .....:	Class I, indoor or outdoor use
Supply Connection .....:	Terminal block
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.....:	2025-05-09
Date (s) of performance of tests .....:	2025-05-09 to 2025-05-23

Copy of marking plate:

Model: W7120 ta:45°C
Input: 220-240V~ 50/60Hz
Power: 2 x Max. 40W IP65
Manufacturer: [redacted] Lighting Technology Co., LTD
Address: [redacted]
Importer: xxx
Address: xxx

Stick on canopy

220-240V~ 50/60Hz
E27 Max. 40W

Stick on lampholder

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General product information and other remarks:

1. The products are class I fixed luminaires, suitable for indoor or outdoor use.
2. The products have similar construction and circuit design, see model list below for details.
3. W7120 was selected for full tests. Additional test of cl.9 was performed on model W3009 and W2103, Construction check was performed on all models.

Model list:

No	Model	Input voltage	Power	Lamp holder	Degree of protection
1	W3009	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
2	W3100A	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
3	W3100B	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
4	W3101	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
5	W3013	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
6	W2118	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
7	W2119	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
8	W7118	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
9	W7119	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
10	W7120	220-240V~, 50/60Hz	2 x Max.40W	E27	IP65
11	W3231	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
12	2102W	220-240V~, 50/60Hz	1 x Max.40W	E27	IP44
13	W2104	220-240V~, 50/60Hz	1 x Max.40W	E27	IP44
14	2100W	220-240V~, 50/60Hz	1 x Max.40W	E27	IP44
15	2103W	220-240V~, 50/60Hz	1 x Max.40W	E27	IP44
16	W2815	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
17	W2816	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
18	W2161	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
19	W2160	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
20	W3007	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
21	W3008	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
22	W3005	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
23	W3006	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
24	W2815	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
25	W2816	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
26	7071	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
27	7091	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
28	7072	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
29	7092	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
30	7073	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
31	7093	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
32	7074	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
33	7094	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54

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34	7471	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
35	7472	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
36	7481	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
37	7482	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
38	7424	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
39	7133D	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
40	037072	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
41	037073	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
42	037074	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
43	W2108	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
44	W2109	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
45	W2115	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
46	2105W	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
47	W2501	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
48	W3109	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
49	W3110	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
50	8502	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
51	W2010	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
52	W2116S	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
53	W2116L	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
54	W3112	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
55	W3113	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
56	W3114	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
57	W3115	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
58	W3116	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
59	W3117	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
60	W3118	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
61	W3119	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
62	W3120	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
63	W3121	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
64	W3122	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
65	W3123	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
66	W3124	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
67	W3125	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
68	W3126	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
69	W3127	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
70	W3128	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
71	W3129	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
72	W3130	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
73	W3131	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
74	W3132	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54

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75	W3133	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
76	W3134	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
77	W3135	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
78	W3136	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
79	W3137	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
80	W3138	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
81	W3139	220-240V~, 50/60Hz	1 x Max.40W	E27	IP54
82	W3140	220-240V~, 50/60Hz	2 x Max.40W	E27	IP54
83	W7190	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
84	W7191	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
85	W7192	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
86	W7193	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
87	W7194	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
88	W7195	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
89	W7196	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
90	W7197	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
91	W7198	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
92	W7199	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
93	W7200	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
94	W7201	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
95	W7202	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
96	W7203	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
97	W7204	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
98	W7205	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
99	W7206	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
100	W7207	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
101	W7208	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
102	W7209	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
103	W7210	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
104	W7211	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
105	W7212	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
106	W7213	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
107	W7214	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
108	W7215	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
109	W7216	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
110	W7217	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
111	W7218	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
112	W7219	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
113	W7220	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
114	W7221	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
115	W7222	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65

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116	W7223	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
117	W7224	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
118	W7225	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
119	W7226	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
120	W7227	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
121	W7228	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
122	W7229	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65
123	W7230	220-240V~, 50/60Hz	1 x Max.40W	E27	IP65

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.4 (0)	**GENERAL TEST REQUIREMENTS**		P
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		P
1.5 (2)	**CLASSIFICATION OF LUMINAIRES**		P
1.5 (2.2)	Type of protection .....:	Class I	P
1.5 (2.3)	Degree of protection.....:	IP65 & IP54 & IP44	—
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		P
1.6 (3.3.1)	Combination luminaires		N/A
1.6 (3.3.2)	Nominal frequency in Hz		P
1.6 (3.3.3)	Operating temperature		N/A
1.6 (3.3.5)	Wiring diagram		P
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		P
1.6 (3.3.10)	Suitability for use indoors		N/A
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

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (3.3.14)	Symbol for nature of supply		P
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		N/A
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		N/A
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		N/A
1.7 (4.3)	Wireways smooth and free from sharp edges		P
1.7 (4.4)	**Lamp holders**		**P**
1.7 (4.4.1)	Integral lamp holder		P
1.7 (4.4.2)	Wiring connection		P
1.7 (4.4.3)	Lamp holder for end-to-end mounting		N/A
1.7 (4.4.4)	Positioning		N/A
	- pressure test (N) ..... :		—

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	After test the lamp holder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lamp holder the lamp holder has not moved from its position and show no permanent deformation		N/A
	- bending test (N) ..... :		—
	After test the lamp holder has not moved from its position and show no permanent deformation		N/A
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 lamp holder or connection according IEC 60061 not connected another way		N/A
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**		**P**
1.7 (4.7.1)	Contact to metal parts		P
1.7 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
1.7 (4.7.3)	Terminals for supply conductors		P
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

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
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**
	- 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 ..... :	By construction	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 lamp holder		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

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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
	- 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		N/A
	Torque test: torque (Nm); part..... :	Fix terminal block: 0.5 Nm	P
	Torque test: torque (Nm); part..... :	Fix earth: 0.5 Nm	P
	Torque test: torque (Nm); part..... :	Fix mounting bracket: 0.8 Nm Fix enclosure: 0.4 Nm	P
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) ..... :		P
	- lamp holder; torque (Nm) ..... :	E27: 2.0 Nm	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) ..... :	5.0Nm	P
	- other parts; energy (Nm)..... :	Enclosure: 0.35 Nm	P
	1) live parts		P
	2) linings		P
	3) protection		P

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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
	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		P
	B) torque 2,5 Nm		P
	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:		N/A
	- flexing test; number of cycles..... :		N/A
	- strands broken ..... :		N/A
	- electric strength test afterwards		N/A
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

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7 (4.15)	**Flammable materials**		**P**
	- glow-wire test 650°C ..... :	See Test Table 1.15 (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
1.7 (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
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**		**P**
	Clearance at least 5 mm		P
1.7 (4.18)	**Resistance to corrosion**		**P**
1.7 (4.18.1)	- rust-resistance		P
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

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

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**
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 / PELV 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

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7 (4.27)	**Terminal blocks with integrated screwless protective 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
	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**		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
1.7 (4.31.1)	SELV or PELV circuits		N/A
	Used SELV/PELV source		N/A
	Voltage ≤ ELV		N/A
	Insulating of SELV/PELV circuits from LV supply		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Insulating of SELV/PELV circuits from other non SELV/PELV circuits		N/A
	Insulating of SELV/PELV circuits from FELV		N/A
	Insulating of SELV/PELV circuits from other SELV/PELV circuits		N/A
	SELV/PELV 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
	Plugs and socket-outlets does not have protective conductor contact		N/A
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 have protective conductor contact		N/A
1.7 (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
1.7 (4.32)	**Overvoltage protective devices**		**N/A**

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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
1.7 (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
1.7 (4.34)	**Electromagnetic fields (EMF)**		N/A
	No harmful electromagnetic fields		N/A
1.7 (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
1.7 (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 1.8 (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 1.8 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.8 (11.2) II	N/A
1.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 1.8 (11.2) I	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 1.8 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.8 (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. 0.068Ω	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		P
	Terminal blocks with integrated screwless protective earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		P
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)	Protective earth terminal integral part of connector socket		N/A
1.9 (7.2.6)	Protective earth terminal adjacent to mains terminals		P
1.9 (7.2.7)	Electrolytic corrosion of the protective earth terminal		N/A
1.9 (7.2.8)	Material of protective 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		P
	Length of protective earthing conductor		P
1.9 (7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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**		N/A
	Separately approved; component list..... :	(see Annex 1)	N/A
	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 ..... :	Terminal block	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		P
1.11 (5.2.2)	Type of cable..... :		N/A
	Nominal cross-sectional area (mm²) ..... :		N/A
	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:		N/A
	- suitable for introduction		N/A
	- adequate degree of protection		N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
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
	Appliance inlet or connector systems (IEC 61984)		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**
1.11 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		P
	- 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 protective earth only		N/A
1.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²)..... :		P
	Insulation thickness (mm) ..... :		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)..... :		N/A

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
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:		P
	- suitable fixed		P
	- material in bushings		P
	- material not likely to deteriorate		P
	- cables with protective sheath		P
1.11 (5.3.4)	Joints and junctions effectively insulated		P
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		N/A
	Wire ends tinned: no cold flow		P
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		N/A

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	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		P
	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:		P
	- basic insulated metal parts not accessible		P
	- required insulation from live parts in compliance with Table X.1		P
	- glass protective shields not used as supplementary insulation		N/A
1.12 (8.2.3.b)	BC lamp holder of metal in class I luminaires shall be connected to protective earth		N/A
1.12 (8.2.3.c)	SELV 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
	- 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/PELV		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
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		—
1.13 (12.2)	**Selection of lamps and ballasts**		**—**
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Control gear if separate and not supplied	(Control gear used see Annex 2)	—
1.13 (12.3)	**Endurance test**		**P**
	a) mounting-position ..... :	As normal use	—
	b) test temperature (°C)..... :	55	—
	c) total duration (h) ..... :	240	—
	d) supply voltage (V) ..... :	1.05U (rated power is reached at U)	—
	d) if not equipped with control gear, constant voltage/current (V) or (A) ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
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:		N/A
	- no part unserviceable		N/A
	- luminaire not unsafe		N/A
	- 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
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**

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Clause	Requirement + Test	Result - Remark	Verdict
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
	- 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 ☐	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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		P
1.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP..... :	IP65 & IP54 & IP44	—
	- mounting position during test ..... :	As normal use	—
	- fixing screws tightened; torque (Nm) ..... :	2/3 of the value in clause 4.12	—
	- tests according to clauses..... :	9.2.0, 9.2.1, 9.2.2, 9.2.5, 9.2.6	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		P
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P
	c.1) For luminaires without drain holes – no water entry		P
	c.2) For luminaires with drain holes – no hazardous water entry		P
	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)		P
	e) no entry into enclosure (IP 3X and IP 4X)		P
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		P
	f) no trace of water on part of lamp requiring protection from splashing water		P
	g) no damage of protective shield or glass envelope		P
1.14 (9.3)	Humidity test 48 h		P
1.15 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
1.15 (10.2.1)	Insulation resistance test		P

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø .....:	Metal foil	—
	Insulation resistance (MΩ):		P
	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 .....:	>100MΩ	P
	- between live parts and mounting surface .....:	>100MΩ	P
	- between live parts and metal parts .....:	>100MΩ	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 .....:	>100MΩ	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):		P
	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

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EN IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

	- 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 .....:	1480V for class I parts; 2960V for class II parts	P
	- between live parts and metal parts .....:	1480V for class I parts; 2960V for class II parts	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 .....:	1480V	P
1.15 (10.3)	Touch current (mA).....:	0.006mA	P
	Protective conductor current (mA).....:	0.083mA	P

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

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	>5	1.5	11.1.B	>5	2.5	11.1.A
Working voltage (V) .....:					240VAC		—
PTI .....:					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) .....:					--		—
Supplementary information: Between different polarity of live parts							
Distance 2:	B	>5	1.5	11.1.B	>5	2.5	11.1.A

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Clause	Requirement + Test	Result - Remark	Verdict

Working voltage (V) ..... :					240VAC		—
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					--		—
Supplementary information: Between live parts to earthing enclosure							
Distance 3:	R	>10	3.0	11.1.B	>10	5.0	11.1.A
Working voltage (V) ..... :					240VAC		—
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					--		—
Supplementary information: Between live parts to unearthing enclosure							

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

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 ☐		—

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Clause	Requirement + Test	Result - Remark	Verdict

Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :		—
Supplementary information:		

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

1.16 (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)	
Terminal block	(see Annex 1)	125	1.4	
Dome of E27 lampholder	(see Annex 1)	88	1.1	
Supplementary information: --				

1.16 (13.3.1)	TABLE: Needle-flame test				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
Terminal block	(see Annex 1)	10	No	0	P
Supplementary information: --					

1.16 (13.3.2)	TABLE: Resistance to heat and fire - Glow wire tests				P
Object/ Part No./ Material	**Manufacturer/ trademark**	**GWT (°C) : 650**			**Verdict**
		t_E (s)	**t_i (s)**	**t_R (s)**	
Dome of E27 lampholder	(see Annex 1)	0	0	0	P
Ignition of the specified layer placed underneath the test specimen (Yes/No)..... :					No
Supplementary information: --					

1.16 (13.4)	TABLE: Proof tracking test				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)]**
Terminal block	B	Heavy Power Co., Ltd.	PA9	450V, 24A, 2.5mm^2, 110°C	EN 60998-2-1 EN 60998-1	VDE 40016425 + Tested with appliance#
-Alt	D	Heavy Power Co., Ltd.	PA7	450V, 10A, 2.5mm^2, 110°C	EN 60998-2-1 EN 60998-1	VDE 40019839
Internal wire	B	Zhongshan Yueguan Electric	H05VV-F	2 x 0, 75 mm²	EN 50525-2-31	VDE 40057301
Earth wire	B	Jiangmen Tingjia Wire Co., Ltd	H05V-K	1 x 0, 5 mm²	EN 50525-2-31	VDE 40049814
E27 lampholder (plastic)	B	XINDA ELECTRICAL LIGHTING ACCESSORY FACTORY	CEZM16008	250V, 4A	EN IEC 60238	CE
Dome of E27 lampholder	B	XINDA ELECTRICAL LIGHTING ACCESSORY FACTORY	PC	PC	IEC 60598-1 IEC 60598-2-1	Tested with appliance#

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 ..... :	W7120	—
	Lamp used..... :	E27 lamps	—
	Lamp control gear used..... :	See Annex 1	—
	Mounting position of luminaire ..... :	As normal use	—
	Supply wattage (W) ..... :	78.9W	—
	Supply current (A) ..... :	0.3101	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) ..... :	45	—
	- abnormal operating mode ..... :	--	—
1.13 (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 ..... :	--	—
1.13 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current or 130/150% of rated input voltage ..... :	--	—

Temperature measurements (°C)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Terminal block	45	--	57.6	--	110	--	--
E27 lampholder wire	45	--	67.7	--	90	--	--
E27 lampholder contact	45	--	91.8	--	210	--	--
E27 lampholder rim	45	--	83.4	--	210	--	--
Dome of lampholder	45	--	62.8	--	Ref.	--	--
Mounting surface	45	--	58.2	--	90	--	--

Supplementary information: N/A

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EN IEC 60598-2-1			
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

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EN IEC 60598-2-1			
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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EN IEC 60598-2-1			
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									
	Voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage drop (mV) .....:									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV) .....:									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage drop (mV) .....:									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV) .....:									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
Supplementary information:										

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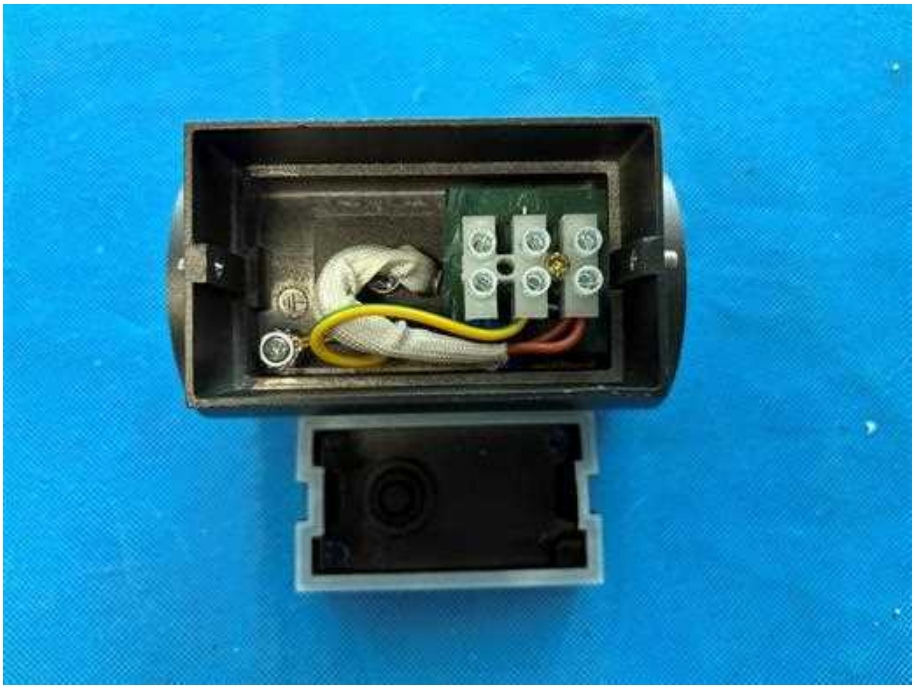
Attachment 1: Photo Documentation

Picture 1: whole view of W7120



Picture 2: Input view of W7120

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Attachment 1: Photo Documentation

Picture 3: Internal view of W7120

Picture 4: lampholder of W7120

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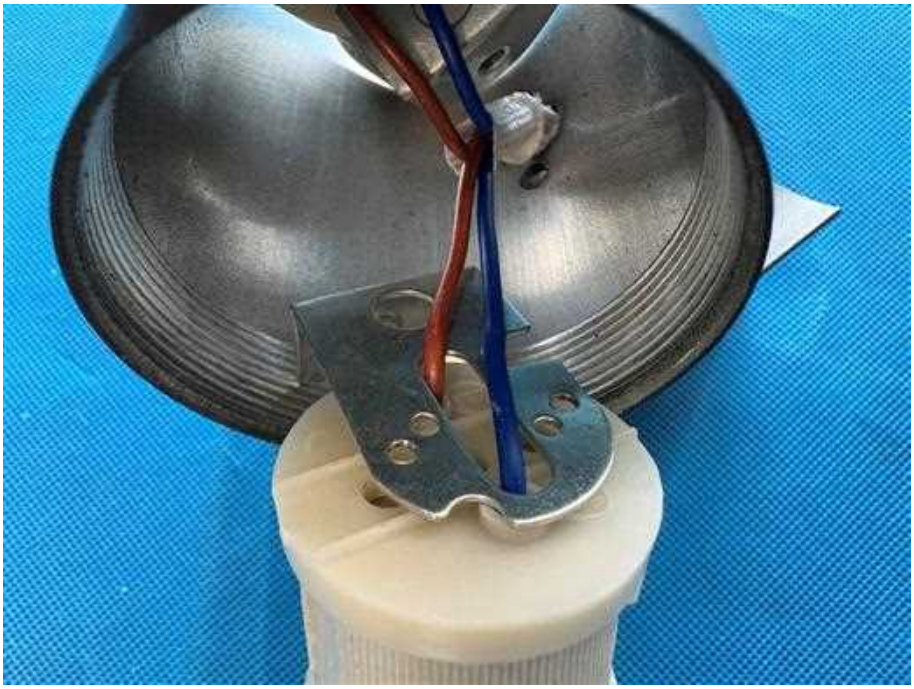
Attachment 1: Photo Documentation



Picture 5: lampholder of W7120

Picture 6: lampholder of W7120 (Plastic)

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Attachment 1: Photo Documentation

Plastic lampholder

--- End of Report ---

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