

TEST REPORT

Product Name : Portable luminaire
Model Number : See below model list

Prepared for : ILUMI CONTEMPORARY LIGHTING FACTORIES
LIMITED
Address : CHANG AN TANG ADMINISTRATIVE ZONE, JUNDA
INDUSTRIAL DISTRICT, DONGKENG TOWN,
DONGGUAN CITY, GUANGDONG PROVINCE, CHINA

Prepared by : EMTEK(DONGGUAN) CO., LTD.
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Report Number : EDG2403260177L00201R
Date(s) of Tests : May 06, 2021 to May 27, 2021
Date of issue : March 29, 2024



TEST REPORT
IEC 60598-2-4
Luminaires
Luminaires, Part 2: Particular requirements
Section 4: Portable general purpose luminaires

Report Number. : EDG2403260177L00201R

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Total number of pages..... : 79 pages

Name of Testing Laboratory
preparing the Report..... : EMTEK(DONGGUAN) CO., LTD.

Applicant's name : ILUMI CONTEMPORARY LIGHTING FACTORIES LIMITED

Address : CHANG AN TANG ADMINISTRATIVE ZONE, JUNDA
INDUSTRIAL DISTRICT, DONGKENG TOWN, DONGGUAN
CITY, GUANGDONG PROVINCE, CHINA

Test specification:

Standard : IEC 60598-2-4:2017 for use in conjunction with IEC 60598-1:2020

Test procedure..... : Safety report(LVD)

Non-standard test method : N/A

Test Report Form No..... : IEC60598_2_4I_Emtek

Master TRF Dated : 2021-06-10

Test item description:	Portable luminaire	
Trade Mark(s)	N/A	
Manufacturer	ILUMI CONTEMPORARY LIGHTING FACTORIES LIMITED CHANG AN TANG ADMINISTRATIVE ZONE, JUNDA INDUSTRIAL DISTRICT, DONGKENG TOWN, DONGGUAN CITY, GUANGDONG PROVINCE, CHINA	
Model/Type reference:	FL-14017, FL-17011, FL-20078, FL-20022, TL-20049, FL-20037, FL-20026, TL-20039, TL-20068, FL-20063, FL-3009, FL-5081, FL-17017, FL-10050, FL-10047, FL-1401, WL-18018, WL-14002	
Ratings:	220-240V~, 50/60Hz, Class II, IP20, ta:25°C, more details see "General product information"	
Testing Laboratory	EMTEK(DONGGUAN) CO., LTD.	
Testing location/ address	-1&2F, Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No.9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China	
Tested by (name, function, signature)	Coral Chen, PE	 EMTEK(DONGGUAN) CO., LTD.
Approved by (name, function, signature) ..	June Luo, Reviewer	 TESTING

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

Attachment No. 1: Photo documentation (total 25 pages);

Summary of testing:**Tests performed (name of test and test clause):**

All clauses of the standards mentioned above.
Unless otherwise specified, full tests were performed on the model FL-20037, FL-20026, FL-20022, FL-20063, FL-3009, FL-17017, FL-10047, WL-14002.
According to IEC 62493:2015: The lamp belongs to unintentional radiating part of lighting equipment. The lamp is deemed to comply with requirements of this standard without testing.

Testing location:

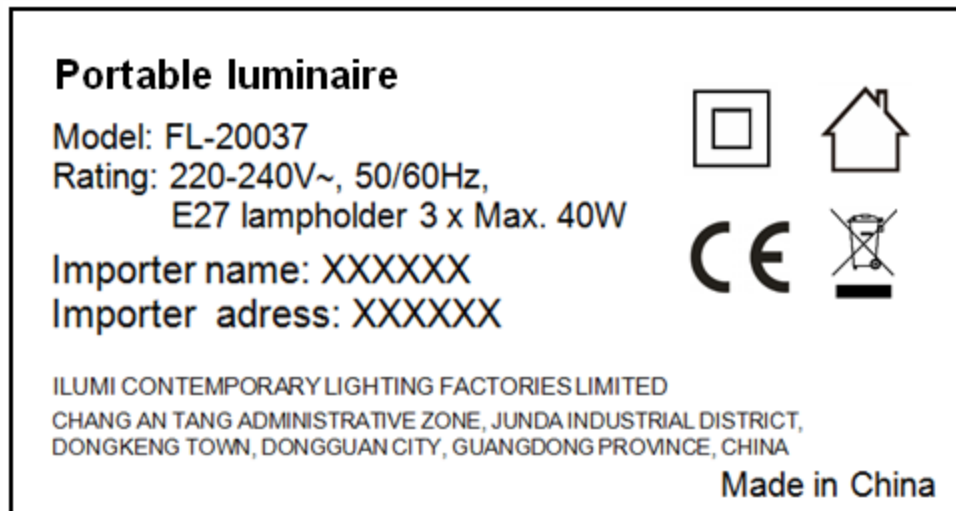
EMTEK (DONGGUAN) CO., LTD.
-1&2F, Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No.9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China

Summary of compliance with National Differences:☐ The product fulfils the requirements of

Modified History:			
Version	Report No.	Revision date	Summary
	ED210430053L	May 27, 2021	Original Report
M1	EDG2306190303L00201R	June 21, 2023	Added Critical components information, detail see Annex 1;
M2	EDG2403260177L00201R	March 29, 2024	Updated standard from 'IEC 60598-1:2014, AMD1:2017' to 'IEC 60598-1:2020'

Copy of marking plate:

The artwork below may be only a draft.



Location: Printed on the lamp enclosure.

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

Location: Printed on the lampholder.

Remark:

The marking label for the other models are identical as above, expect the model name, power.

Note:

1. The height of graphical symbols shall not be less than 5 mm.
2. The height of letters and numerals either shown separately or with or as part of symbols shall not be less than 2 mm.
3. The height of WEEE symbols shall not be less than 7 mm.
4. According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.
5. The above mark is the minimum requirements of the safety standard. For the final production, the additional marks, which do not give rise to misunderstanding, may be added.

Test item particulars	See "General product information"
Classification of installation and use	Class II, Portable mounted and indoor use only
Supply Connection	Supply cord with plug
.....	
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	May 06, 2021
Date (s) of performance of tests	May 06, 2021 to May 27, 2021
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 IEC 60598-1	
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ie s)	ILUMI CONTEMPORARY LIGHTING FACTORIES LIMITED CHANG AN TANG ADMINISTRATIVE ZONE, JUNDA INDUSTRIAL DISTRICT, DONGKENG TOWN, DONGGUAN CITY, GUANGDONG PROVINCE, CHINA
General product information and other remarks:	
1. These products are class II portable luminaires, IP20, for indoor use only, ta: 25°C, suitable for mounting on normal flammable surface. The internal wires are double-insulated wire for all models. 2. These products have similar construction, only differences are appearance, lampholder and power. 3. All models are also available and covered with different colors. More details see below model list.	

Model list				
Model	Rating	Power	lampholder	Photo
FL-14017	220-240V~, 50/60Hz	1 x Max. 40W incandescent lamp	1 x E27	
FL-17011	220-240V~, 50/60Hz	1 x Max. 40W incandescent lamp	1 x E27	
FL-20078	220-240V~, 50/60Hz	1 x Max. 40W incandescent lamp	1 x E27	
FL-20022	220-240V~, 50/60Hz	1 x Max. 5W incandescent lamp	1 x GU10	
TL-20049	220-240V~, 50/60Hz	2 x Max. 40W incandescent lamp	2 x E27	
FL-20037	220-240V~, 50/60Hz	3 x Max. 40W incandescent lamp	3 x E27	
FL-20026	220-240V~, 50/60Hz	1 x Max. 40W incandescent lamp	1 x E27	
TL-20039	220-240V~, 50/60Hz	1 x Max. 40W incandescent lamp	1 x E27	
TL-20068	220-240V~, 50/60Hz	1 x Max. 5W incandescent lamp	1 x GU10	

FL-20063	220-240V~, 50/60Hz	2 x Max. 5W incandescent lamp	2 x GU10	
FL-3009	220-240V~, 50/60Hz	5 x Max. 40W incandescent lamp	5 x E14	
FL-5081	220-240V~, 50/60Hz	3 x Max. 40W incandescent lamp	3 x E14	
FL-17017	220-240V~, 50/60Hz	5 x Max. 40W incandescent lamp	5 x E27	
FL-10050	220-240V~, 50/60Hz	3 x Max. 40W incandescent lamp	3 x E14	
FL-10047	220-240V~, 50/60Hz	3 x Max. 40W incandescent lamp	3 x E14	
FL-14019	220-240V~, 50/60Hz	1 x Max. 40W incandescent lamp	1 x E27	

WL-18018	220-240V~, 50/60Hz	5 x Max. 40W incandescent lamp	5 x E14	
WL-14002	220-240V~, 50/60Hz	5 x Max. 25W incandescent lamp	5 x E27	



IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.4 (0)	GENERAL TEST REQUIREMENTS		P
4.4 (0.3)	More sections applicable	Yes ☐ No ☒ Section/s:	—
4.4 (0.5)	Components	(see Annex 1)	—
4.4 (0.7)	Information for luminaire design in light sources standards		—
4.4 (0.7.2)	Light source safety standard		—
	Luminaire design in the light source safety standard		N/A

4.5 (2)	CLASSIFICATION OF LUMINAIRES		P
4.5 (2.2)	Type of protection	Class II	P
4.5 (2.3)	Degree of protection.....	IP20	—
4.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces	Yes ☒ No ☐	—
4.5 (2.5)	Luminaire for normal use	Yes ☒ No ☐	—
	Luminaire for rough service	Yes ☐ No ☒	—
4.5.1 (-)	Ordinary luminaire classified “for indoor use only” ..	Yes ☒ No ☐	—
	Luminaires other than ordinary classified “for indoor use only”	Yes ☐ No ☒	—
	Luminaires other than ordinary classified for “outdoor use” and “for indoor use”	Yes ☐ No ☒	—
4.5.2 (-)	Portable luminaire for outdoor use classified IPX4 or higher	IP20	N/A
4.5.3 (-)	Luminaires designed for standing on a floor or table classified as suitable for direct mounting on normally flammable surfaces		P

4.6 (3)	MARKING		P
4.6 (3.2)	Mandatory markings		P
	Position of the marking	Enclosure	P
	Format of symbols/text		P
4.6 (3.3)	Additional information		P
	Language of instructions	English	P
4.6 (3.3.1)	Combination luminaires		N/A
4.6 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
4.6 (3.3.3)	Operating temperature		N/A
4.6 (3.3.5)	Wiring diagram		N/A
4.6 (3.3.6)	Special conditions		N/A

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.6 (3.3.7)	Metal halide lamp luminaire – warning		N/A
4.6 (3.3.8)	Limitation for semi-luminaires		N/A
4.6 (3.3.9)	Power factor and supply current	Power factor: 1.0	P
4.6 (3.3.10)	Suitability for use indoors		P
4.6 (3.3.11)	Luminaires with remote control		N/A
4.6 (3.3.12)	Clip-mounted luminaire – warning		N/A
4.6 (3.3.13)	Specifications of protective shields		N/A
4.6 (3.3.14)	Symbol for nature of supply	~	P
4.6 (3.3.15)	Rated current of socket outlet		N/A
4.6 (3.3.16)	Rough service luminaire		N/A
4.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Y	P
4.6 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
4.6 (3.3.19)	Protective conductor current in instruction if applicable		N/A
4.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
4.6 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		N/A
4.6 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
4.6 (3.3.23)	Luminaires without controlgear provided with necessary information for selection of appropriate component		N/A
4.6 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
4.6 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided		N/A
4.6 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		P
4.6 (3.4)	Test with water	15s	P
	Test with hexane	15s	P
	Legible after test		P
	Label attached		P
4.6.1 (-)	Luminaire not suitable for outdoor application		N/A
	Required symbol		N/A
	Information in the instructions		N/A
4.6.2 (-)	Outdoor use, socket outlet incorporated in the luminaire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Maximum power rating marked		N/A
	Position of the marking		N/A

4.7 (4)	CONSTRUCTION		P
4.7 (4.2)	Components replaceable without difficulty		P
4.7 (4.3)	Wireways smooth and free from sharp edges		P
4.7 (4.4)	Lampholders		P
4.7 (4.4.1)	Integral lampholder		N/A
4.7 (4.4.2)	Wiring connection		N/A
4.7 (4.4.3)	Lampholder for end-to-end mounting		N/A
4.7 (4.4.4)	Positioning		P
	- pressure test (N)		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N)	1.2Nm for E14 lampholder; 2.0Nm for E27 lampholder	—
	After test the lampholder has not moved from its position and show no permanent deformation		P
4.7 (4.4.5)	Peak pulse voltage		N/A
4.7 (4.4.6)	Centre contact		N/A
4.7 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
4.7 (4.4.8)	Lamp connectors		N/A
4.7 (4.4.9)	Caps and bases correctly used		N/A
4.7 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		P
4.7 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
4.7 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
4.7 (4.7)	Terminals and supply connections		P
4.7 (4.7.1)	Contact to metal parts		P
4.7 (4.7.2)	Test 8 mm live conductor		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Test 8 mm earth conductor		N/A
4.7 (4.7.3)	Terminals for supply conductors		P
4.7 (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
4.7 (4.7.4)	Terminals other than supply connection		N/A
4.7 (4.7.5)	Heat-resistant wiring/sleeves		N/A
4.7 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
4.7 (4.8)	Switches		P
	- adequate rating		P
	- adequate fixing		P
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		P
4.7 (4.9)	Insulating lining and sleeves		P
4.7 (4.9.1)	Retainment		P
	Method of fixing :	Parts of luminaires	P
4.7 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) :		N/A
4.7 (4.10)	Double or reinforced insulation		P
4.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		P
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
4.7 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7 (4.10.3)	Retainment of insulation:		P
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		P
	- lining in lampholder		P
4.7 (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
4.7 (4.11)	Electrical connections and current-carrying parts		P
4.7 (4.11.1)	Contact pressure		P
4.7 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
4.7 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
4.7 (4.11.4)	Material of current-carrying parts		P
4.7 (4.14.7)	No contact to wood or mounting surface		P
4.7 (4.14.7)	Electro-mechanical contact systems		N/A
4.7 (4.12)	Screws and connections (mechanical) and glands		P
4.7 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		P
	Torque test: torque (Nm); part..... : Screw for fixing GU10 lampholder: 2.89mm, 0.5Nm		P
	Torque test: torque (Nm); part..... : Screw for fixing switch enclosure: 3.05mm, 0.6Nm		P
	Torque test: torque (Nm); part..... : Screw of insulating material for fixing cord anchorage: 0.5Nm		P
	Torque test: torque (Nm); part..... : Screw for fixing cord anchorage: 5.96mm, 2.5Nm		P
4.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
4.7 (4.12.4)	Locked connections:		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- fixed arms; torque (Nm)		N/A
	- lampholder; torque (Nm)	1.2Nm for E14 lampholder; 2.0Nm for E27 lampholder	P
	- push-button switches; torque 0,8 Nm		N/A
4.7 (4.12.5)	Screwed glands; force (Nm)		N/A
4.7 (4.13)	Mechanical strength		P
4.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)		N/A
	- other parts; energy (Nm)	0.5Nm for external parts	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
4.7 (4.13.2)	Metal parts have adequate mechanical strength		N/A
4.7 (4.13.3)	Straight test finger	30N	P
4.7 (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
4.7 (4.13.6)	Tumbling barrel		N/A
4.7 (4.14)	Suspensions, fixings and means of adjusting		P
4.7 (4.14.1)	Mechanical load:		P
	A) four times the weight	For model WL-14002: 4x5=20kg	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
4.7 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	Bending moment (Nm) of semi-luminaire		N/A
4.7 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles	1500 cycles	P
	- strands broken	No broken	P
	- electric strength test afterwards		P
4.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
4.7 (4.14.5)	Guide pulleys		N/A
4.7 (4.14.6)	Strain on socket-outlets		N/A
4.7 (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
4.7 (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
4.7 (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
4.7 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
4.7 (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

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.7 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
4.7 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
4.7 (4.18)	Resistance to corrosion		N/A
4.7 (4.18.1)	- rust-resistance		N/A
4.7 (4.18.2)	- season cracking in copper		N/A
4.7 (4.18.3)	- corrosion of aluminium		N/A
4.7 (4.19)	Igniters compatible with ballast		N/A
4.7 (4.20)	Rough service vibration		N/A
4.7 (4.21)	Protective shield		N/A
4.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
4.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
4.7 (4.21.3)	No direct path		N/A
4.7 (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
4.7 (4.22)	Attachments to lamps not cause overheating or damage		N/A
4.7 (4.23)	Semi-luminaires comply Class II		N/A
4.7 (4.24)	Photobiological hazards		N/A
4.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
4.7 (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
4.7 (4.25)	Mechanical hazard		P

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Clause	Requirement + Test	Result - Remark	Verdict
	No sharp point or edges		P
4.7 (4.26)	Short-circuit protection		N/A
4.7 (4.26.1)	Adequate means of uninsulated accessible SELV or PELV parts		N/A
4.7 (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
4.7 (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
4.7 (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 ($^{\circ}\text{C}$) :		—
	100 cycles between $t_{\min}$ and $t_{\max}$		N/A
	Temperature sensing control still in position		N/A
4.7 (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
4.7 (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
4.7 (4.31)	Insulation between circuits		P
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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
4.7 (4.31.1)	SELV or PELV circuits		N/A
	Used SELV or PELV source		N/A
+	Voltage $\leq$ ELV		N/A
	Insulating of SELV or PELV circuits from LV supply		N/A
	Insulating of SELV or PELV circuits from other non SELV or PELV 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 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
4.7 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage $\leq$ 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
4.7 (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

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Clause	Requirement + Test	Result - Remark	Verdict
	- conductive part does 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
4.7 (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
4.7 (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
4.7 (4.34)	Electromagnetic fields (EMF)		P
	No harmful electromagnetic fields		P
4.7 (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
4.7 (4.36)	Track-mounted luminaires		N/A
	Test in accordance with Annex A of IEC60570:2003/AMD2:2019		N/A
4.7.1 (-)	Insulation not damaged when moving, adjusting or placing on support		P
4.7.2 (-)	Wiring fixed, to avoid rubbing		P
	Carrier or clips of insulation material or with insulating lining		N/A
4.7.3 (-)	Luminaire does not overturn:		P
	- at an angle of 6° for indoor use		P
	- at an angle 15° for outdoor use		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.4 (-)	Candlestick luminaires provided with switch		N/A
	Switch in candlestick luminaires with E5 or E10 lampholders switches all lamps on and off simultaneously		N/A
	Switch part of the luminaire or within 300 mm of the luminaire if with cord		N/A
4.7.5 (-)	Voltage not exceeding 25 V for E5 lampholders		N/A
	E10 lampholder voltage:		N/A
	- not exceeding 60 V for series connection		N/A
	- not exceeding 250 V for parallel connection		N/A
	Maximum rated wattage does not exceed 100 W		N/A
4.7.6 (-)	Tails not provided for luminaires for outdoor use		N/A
4.7.7 (-)	Not more than two cable entries for luminaires for outdoor use		N/A
4.7.8 (-)	Portable luminaires for outdoor use, socket-outlet degree of protection at least same as the luminaire but not less than IPX4.		N/A
	Degree of protection maintained with or without a plug inserted into the socket-outlet.		N/A
	Class II luminaires, mains socket-outlets comply with the standard and only allow connection to Class II luminaires		N/A
	Class I luminaires, mains socket-outlets comply with the standard and only allow connection to Class I or Class II luminaires		N/A
4.7.9 (-)	Lampholders and plugs resistant to tracking for luminaires for outdoor use	See Test Table 4.16 (13.4)	N/A
	Compliance to clause 13.4		N/A

4.8 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
4.8 (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
4.8 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 4.8 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{OUT} according IEC 61347-1, clause 7.1, item w	See Test Table 4.8 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 4.8 (11.2) II	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 4.8 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 4.8 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 4.8 (11.2) II	N/A

4.9 (7)	PROVISION FOR EARTHING		N/A
4.9 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance $< 0,5 \Omega$		N/A
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a groove		N/A
	Protective earth makes contact first		N/A
	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		N/A
4.9 (7.2.2 + 7.2.3)	Protective earthing continuity in joints, etc.		N/A
4.9 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A
4.9 (7.2.5)	Earth terminal integral part of connector socket		N/A
4.9 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
4.9 (7.2.7)	Electrolytic corrosion of the protective earth terminal		N/A
4.9 (7.2.8)	Material of protective earth terminal		N/A
	Contact surface bare metal		N/A
4.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
4.9 (7.2.11)	Protective earthing core coloured green-yellow		N/A
	Length of protective earthing conductor		N/A
4.9 (7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A

4.10 (14)	SCREW TERMINALS		N/A
	Separately approved; component list..... :	(see Annex 1)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Part of the luminaire :	(see Annex 3)	N/A
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4.10 (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

4.11 (5)	EXTERNAL AND INTERNAL WIRING		P
4.11 (5.2)	Supply connection and external wiring		P
4.11 (5.2.1)	Means of connection :	Supply cord with plug	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
4.11 (5.2.2)	Type of cable :	(see Annex 1)	P
	Nominal cross-sectional area (mm ²) :	(see Annex 1)	P
	Cables equal to IEC 60227 or IEC 60245		P
4.11 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
4.11 (5.2.5)	Type Z not connected to screws		N/A
4.11 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
4.11 (5.2.7)	Cable entries through rigid material have rounded edges		P
4.11 (5.2.8)	Insulating bushings:		P
	- suitably fixed		P
	- material in bushings		P
	- material not likely to deteriorate		P
	- tubes or guards made of insulating material		P
4.11 (5.2.9)	Locking of screwed bushings		P
4.11 (5.2.10)	Cord anchorage:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P

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Clause	Requirement + Test	Result - Remark	Verdict
4.11 (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
4.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	Type Y	P
4.11 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N)	60N	P
	- torque test: torque (Nm)	0.15Nm	P
	- displacement ≤ 2 mm	Max.1.36mm	P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
4.11 (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 $\leq 25V$ RMS/60V DC		N/A
	- Ordinary Class III luminaire supplied with PELV $\leq 12V$ RMS/30V DC		N/A
	- Other than ordinary Class III luminaire supplied with voltage $\leq 12V$ RMS/30V DC		N/A
	Pull test of 30 N		N/A
4.11 (5.2.11)	External wiring passing into luminaire		P
4.11 (5.2.12)	Looping-in terminals		N/A
4.11 (5.2.13)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.11 (5.2.14)	Mains plug same protection		P
	Class III luminaire plug		N/A
	No unsafe compatibility		P
4.11 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
4.11 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Appliance inlet or connector systems (IEC 61984)		N/A
4.11 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
4.11 (5.2.18)	Used plug in accordance with		P
	- IEC 60083		N/A
	- other standard		P
4.11 (5.3)	Internal wiring		P
4.11 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A)		N/A
	- temperatures	(see Annex 2)	N/A
	Green-yellow for protective earth only		N/A
4.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm ²)	(see Annex 1)	P
	Insulation thickness (mm)	(see Annex 1)	P
	Extra insulation added where necessary		P
4.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm ²)	(see Annex 1)	N/A
4.11 (5.3.1.3)	Double or reinforced insulation for class II		P
4.11 (5.3.1.4)	Conductors without insulation		N/A
4.11 (5.3.1.5)	SELV or PELV current-carrying parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
4.11 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		P
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
4.11 (5.3.3)	Insulating bushings:		P
	- suitable fixed		P
	- material in bushings		P
	- material not likely to deteriorate		P
	- cables with protective sheath		P
4.11 (5.3.4)	Joints and junctions effectively insulated		P
4.11 (5.3.5)	Strain on internal wiring		N/A
4.11 (5.3.6)	Wire carriers		N/A
4.11 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
4.11 (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 does not exceed the limits stated in Table 12.2		N/A
	No damage to luminaire wiring after test		N/A
4.11.1 (-)	Cord anchorage of luminaire for indoor use made of glass or ceramic not fixed or integral		N/A
4.11.2 (-)	For Class I and Class II luminaires for indoor use, if:		N/A
	- mass < 1 kg (kg)		N/A
	- rated current ≤ 2,5 A (A)		N/A
	- cable length ≤ 2 m (m).....		N/A
	- the nominal cross-sectional area of copper conductor ≥ 0,5 mm ² (mm ²).....		N/A
4.11.3 (-)	Terminals, cord anchorage and inlet opening provided for luminaire for outdoor use delivered without a flexible cable or cord and a plug.		N/A
4.11.4 (-)	Non-detachable flexible cables or cords not lighter than type 245 IEC 57 for Class I and Class II luminaires for outdoor use.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.12 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
4.12 (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 starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		P
	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
4.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position		P
4.12 (8.2.3.a)	Class II luminaire:		P
	- basic insulated metal parts not accessible		N/A
	- required insulation from live parts in compliance with Table X.1		P
	- glass protective shields not used as supplementary insulation		N/A
4.12 (8.2.3.b)	Metal BC lampholder in class I luminaires connected to protective earth		N/A
4.12 (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		N/A
	Other than ordinary luminaire:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- voltage under load/ no-load AC (V)		N/A
	- voltage under load/ no-load DC (V)		N/A
	- interrupted DC voltage (V)		N/A
4.12 (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
	Pole not connected to earth insulated		N/A
	Class III luminaire only for connection to SELV or PELV		N/A
4.12 (8.2.4)	Portable luminaire has protection independent of supporting surface		P
4.12 (8.2.5)	Compliance with the standard test finger or relevant probe		P
4.12 (8.2.6)	Covers reliably secured		P
4.12 (8.2.7)	Luminaire other than below with capacitor > 0,5 μ F not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μ F (0,25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μ F (0,25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A
4.12 (-)	Class I luminaire with bayonet lampholder:		N/A
	1) cap not accessible with test finger		N/A
	2) metal lampholder is earthed		N/A

4.13 (12)	ENDURANCE TEST AND THERMAL TEST		P
4.13 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) but before (9.3) specified in 4.14		—
4.13 (12.2)	Selection of lamps and ballasts		—
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied	(Controlgear used see Annex 2)	—
4.13 (12.3)	Endurance test		P
	a) mounting-position	As normal use	—

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Clause	Requirement + Test	Result - Remark	Verdict
	b) test temperature (°C)	35°C	—
	c) total duration (h)	240h	—
	d) supply voltage (V)	1.05 voltage which obtains its rated power	—
	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:		—
	- voltage under normal operation (V)		—
	- voltage under abnormal operation (V)		—
	e) luminaire ceases to operate		—
	f) luminaire with a constant light output function		N/A
4.13 (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
4.13 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
4.13 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	P
4.13 (12.6)	Thermal test (failed lamp control gear condition):		N/A
4.13 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)		—
	- case of abnormal conditions		—
	- electronic lamp control gear		
	- 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
4.13 (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

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Clause	Requirement + Test	Result - Remark	Verdict
	- measured mounting surface temperature (°C) :		N/A
	- track-mounted luminaires		N/A
4.13 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
4.13 (12.7.1)	Luminaire without temperature sensing control		N/A
4.13 (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
4.13 (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
4.13 (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
4.13 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link..... :	Yes ☐ No ☐	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
4.13 (-)	Luminaire for indoor use tested in overturned position (overturns < 15°)		P

4.14 (9)	RESISTANCE TO DUST AND MOISTURE		P
4.14 (-)	If IP > IP 20 the order of tests as specified in clause 4.13		N/A
4.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP	IP20	—
	- mounting position during test	As normal use	—
	- fixing screws tightened; torque (Nm)	--	—
	- 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)		P
	e) no entry into enclosure (IP 3X and IP 4X)		N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		N/A
4.14 (9.3)	Humidity test 48 h	25°C, 93%R.H.	P

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.15 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
4.15 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø :		I
	Insulation resistance (MΩ):		I
	SELV or 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 or 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	>100MΩ	P
	- Insulation bushings as described in Section 5	>100MΩ	P
4.15 (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
	Luminaires with ignitors provided with ballasts conforming to IEC 61347-2-9		N/A
	SELV or 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

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5		N/A
	Other than SELV/PELV:		P
	- between live parts of different polarity	1480V	P
	- between live parts and mounting surface	2960V	P
	- between live parts and metal parts	2960V	P
	- between live parts of different polarity through action of a switch		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	1480V	P
	- Insulation bushings as described in Section 5	1480V	P
4.15 (10.3)	Touch current (mA)	Max. 0.239mA	P
	Protective conductor current (mA)		N/A

4.16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
4.16 (13.2.1)	Ball-pressure test.....	See Test Table 4.16 (13.2.1)	P
4.16 (13.3.1)	Needle-flame test (10 s)	See Test Table 4.16 (13.3.1)	P
4.16 (13.3.2)	Glow-wire test (650°C)	See Test Table 4.16 (13.3.2)	P
4.16 (13.4)	Proof tracking test (IEC 60112)	See Test Table 4.16 (13.4)	N/A

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict

4.8 (11.2)	TABLE I: Creepage distances and clearances						P
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2* and Table U.1*						
Distances	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1: Between different polarity	B	>10.0	1.5	11.1.B*	>10.0	2.5	11.1.A*
Working voltage (V)					240V~		—
PTI					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV)					--		—
Supplementary information:							
Distance 2: Between Current-carrying parts and supporting surface	R	>6.5	3.0	11.1.B*	>6.5	5.0	11.1.A*
Working voltage (V)					240V~		—
PTI					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV)					--		—
Supplementary information:							
Distance 3: Between live parts and accessible parts	R	>6.5	3.0	11.1.B*	>6.5	5.0	11.1.A*
Working voltage (V)					240V~		—
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.							

4.8 (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		

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict

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.							

4.16 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm)		2mm		---
Object/ Part No./ Material		Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)
Close-end connector		See Annex 1	125	0.68
Switch		See Annex 1	125	0.72
E27 lampholder		See Annex 1	160	0.82
E14 lampholder		See Annex 1	185	0.96
Supplementary information:				

4.16 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)			P
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IEC 60598-2-4					
Clause	Requirement + Test		Result - Remark		Verdict
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
Close-end connector	See Annex 1	10	No	0	P
Switch	See Annex 1	10	No	0	P
E27 lampholder	See Annex 1	10	No	0	P
E14 lampholder	See Annex 1	10	No	0	P
Supplementary information:					

4.16 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)				P
Glow wire temperature :			650°C		—
Object/ Part No./ Material	Manufacturer/ trademark		Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
E27 lampholder	See Annex 1		No	0	P
E14 lampholder	See Annex 1		No	0	P
Supplementary information:					

4.16 (13.4)	TABLE: Proof tracking test (IEC 60112)				N/A
Test voltage PTI		175 V			—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Supplementary information:					

IEC 60598-2-4			
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⁾	
Plug	B	Toong Yean Plastic Ind. Co., Ltd.	TY-011	2,5A, 250V~, IP20	EN 50075	VDE 40002154	
Alternative	D	Zhongshan Hongyun Electrical Appliance Co., Ltd.	HY-008	2,5A, 250V~, IP20	EN 50075	VDE 40032414	
Alternative	D	Dongguan Yisheng Electrical Appliance Co., Ltd.	YS-001	2,5A, 250V~, IP20	EN 50075	VDE 40046089	
Alternative	D	Zhongshan Yucheng Lighting Accessories Factory	YC-18	2,5A, 250V~, IP20	EN 50075	VDE 40049494	
Alternative	D	Guangdong Yongrui Cable Technology Co., Ltd	YR-101	2,5A, 250V~, IP20	EN 50075	VDE 40022869	
Alternative	D	Arditi S.p.A.	2130	2,5A, 250V~, IP20	EN 50075	VDE 40000145	
Alternative	D	Dong Guan Yuan Hui Electric Co.,Ltd	YH-A01	2,5A, 250V~, IP20	EN 50075	VDE 40042931	
Alternative	D	Jhi Wei Electric Wire & Cable Co. Ltd.	JW-05	2,5A, 250V~, IP20	EN 50075	VDE 40005490	
Alternative	D	Dongguan Power-Sun Industry Co., Ltd.	BCP-012	2,5A, 250V~, IP20	EN 50075	VDE 40033684	
Alternative	D	Zhongshan Honglin Electrical Co., Ltd	HL-02	2,5A, 250V~, IP20	EN 50075	VDE 40051795	
Supply cord	B	Toong Yean Plastic Ind. Co., Ltd.	H03VVH2-F	2 x 0,75mm ²	EN 50525	VDE 40024356	
Alternative	D	Zhongshan Hongyun Electrical Appliance Co., Ltd.	H03VVH2-F	2 x 0,75mm ²	EN 50525	VDE 40041433	
Alternative	D	Dongguan Yisheng Electrical Appliance Co., Ltd.	H03VVH2-F	2 x 0,75mm ²	EN 50525	VDE 40045727	
Alternative	D	Zhongshan Yucheng Lighting Accessories Factory	H03VVH2-F	2 x 0,75mm ²	EN 50525	VDE 40045674	

IEC 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Alternative	D	Arditi CN Electric (Huizhou) Co., Ltd.	H03VVH2-F, H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40032075
Alternative	D	Guangdong Yongrui Cable Technology Co., Ltd	H03VVH2-F, H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40021527
Alternative	D	Dong Guan Yuan Hui Electric Co.,Ltd	H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40042368
Alternative	D	Toong Yean Plastic Ind. Co., Ltd.	H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40024356
Alternative	D	Dongguan Poweryuan Wire Industries Co., Ltd.	H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40038705
Alternative	D	Shenzhen City Rongkang Electrical Co., Ltd.	H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40047262
Alternative	D	Jhi Wei Electric Wire & Cable Co. Ltd.	H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40004775
Alternative	D	Guangdong KaiHua Electric Appliance Co., Ltd	H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40001903
Alternative	D	Dongguan Power-Sun Industry Co., Ltd.	H03VVH2-F, H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40033035
Alternative	D	Guangdong Detong Electric Wire & Cable Co., Ltd.	H03VVH2-F, H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40050872
Alternative	D	Zhongshan Honglin Electrical Co., Ltd	H03VVH2-F, H03VV-F	2 x 0,75mm ²	EN 50525	VDE 40050643
Switch for model: WL-18018 and WL-14002	D	OPENWISE INDUSTRIAL LIMITED	304	2A, 250V~, T55, IP30	EN 61058-1 EN 61058-2-1	SE-ENEC-2100867
Alternative	D	Foshan shunde Ojun Electrical Co.,Ltd	OJ-304	2A, 250V~, T55, IP20	EN 61058-1 EN 61058-2-1	ENEC 35-112799
Alternative	D	Dongguan Xianghui Elec Engineering Material Co.,Ltd	XH-304	2A, 250V~, T55, IP20	EN 61058-1 EN 61058-2-1	ENEC 35-121538
Alternative	D	Guangdong Ojun Technology Co., Ltd.	8s.303	2A, 250V~, T55, IP20	EN 61058-1 EN 61058-2-1	VDE 40023915

IEC 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Switch for other models	B	Guangdong Ojun Technology Co., Ltd.	8s.317	2A, 250V~, T55, IP20	EN 61058-1 EN 61058-2-1	DEKRA ENEC 35-111440 REV.2
Alternative	D	OPENWISE INDUSTRIAL LIMITED	317	2A, 250V~, T55, IP30	EN 61058-1 EN 61058-2-1	SE-ENEC-2100869
Alternative	D	Dongguan Xianghui Elec Engineering Material Co.,Ltd	XH-317	2A, 250V~, T55, IP20	EN 61058-1 EN 61058-2-1	DEKRA ENEC 35-121535
Alternative	D	ARDITI SPA	350	2A, 250V~, T55	EN 61058-1 EN 61058-2-1	IMQ CA02.01835
E27 lampholder	B	Yacht Electric Lighting Co., Ltd.	AT756	250V, 4A, T210	EN 60238	VDE 40024035
Alternative	D	ARDITI SPA	81S	250V, 4A, T180	EN 60238	IMQ EN732
Alternative	D	Guangdong Kangrong High-Tech New Material Co., Ltd	K327K	250V, 4A, T210	EN 60238	VDE 40028752
Alternative	D	Dongguan Nuobaixin Lighting Technology Co., Ltd.	270	250V, 4A, T210	EN 60238	VDE 40030292
Alternative	D	Xiaolan Town BaiLe Electrical Appliance Factory	E27-B/1	250V, 4A, T210	EN 60238	VDE 40032321
Alternative	D	Zhong Shan Yi Hang Electric Co., Ltd.	YH267	250V, 4A, T210	EN 60238	VDE 40033010
GU10 lampholder	B	Zhongshan Gexin Electric Appliances Co., Ltd.	E61, E63	250V, 2A, T300	EN 60838	VDE 40045862
Alternative	D	Yarncin Lighting Technology Co. Ltd.	YX509	250V, 2A, T250	EN 60838	VDE 40017435
Alternative	D	Guangdong Jiaqixing Electric Tech Co., Ltd.	JQX-003	250V, 2A, T250	EN 60838	VDE 40036604
Alternative	D	Yacht Electric Lighting Co., Ltd.	AT819	250V, 2A, T250	EN 60838	VDE 40020697
E14 lampholder	B	Zhongshan Heng Lan Town Ruicheng Housing Appl. Fittings Fact.	HD38	250V, 2A, T210	EN IEC 60238	VDE 40037307

IEC 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Alternative	D	Dongguan Nuobaixin Lighting Technology Co., Ltd.	140S	250V, 2A, T210	EN 60238	VDE 40030134
Alternative	D	Xiaolan Town BaiLe Electrical Appliance Factory	E14-B/1	250V, 2A, T210	EN 60238	VDE 40032350
Alternative	D	Yacht Electric Lighting Co., Ltd.	AT707	250V, 2A, T210	EN 60238	VDE 40024034
Heat shrinkable tube	C	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR-H	125°C, 600V	EN 60598-1 EN 60598-2-4	UL E203950 and test with appliance
Alternative	D	DONGGUAN SALIPT CO LTD	SALIPT S-901-600	125°C, 600V	EN 60598-1 EN 60598-2-4	UL E209436 and test with appliance
Alternative	D	SHENZHEN WOLIDA TRADING CO LTD	RSFR-H	125°C, 600V	EN 60598-1 EN 60598-2-4	UL E329530 Test with appliance
Alternative	D	GUANGZHOU KAIHENG ENTERPRISE GROUP	K-102	125°C, 600V	EN 60598-1 EN 60598-2-4	UL E321827 and test with appliance
Alternative	D	CHANGYUAN ELECTRONICS GROUP CO LTD	CB-HFT	125°C, 600V	EN 60598-1 EN 60598-2-4	UL E180908 and test with appliance
Alternative	D	Foshan Dongying Hot Shrink Material Co Ltd	DY-HFT	125°C, 600V	EN 60598-1 EN 60598-2-4	UL E487049 and test with appliance
Closed-end connector	B	HEAVY POWER CO LTD	CE1, CE2, CE5	600V, 150°C	EN 60598-1 EN 60598-2-4	UL E113650 and test with appliance
Internal wire	B	DONGGUAN ZHIHE ELECTRICAL CABLE TECH CO., LTD.	8043	1x0,5mm ² , 200/500V, 180°C ,double-insulated	DIN 57250 Teil 106	VDE 40043532
Alternative	D	Guangdong Jiaqixing Electric Tech Co., Ltd.	JQX308 1 x AWG 24....AWG 11	300/500V, 20AWG, 180°C ,double-insulated	DIN 57250 Teil 106	VDE 40035706
Alternative	D	Dongguan Liuquan Wire Co., Ltd.	(N)6Y6YA	300/500V, 0,5 mm ² , FEP, double-insulated, 180°C	DIN 57250 Teil 106	VDE 40042851

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict

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



IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2-a	TABLE: Thermal tests of Section 12		P
	Type reference	FL-10047	—
	Lamp used	E14 3x40W Incandescent lamp	—
	Lamp control gear used	--	—
	Mounting position of luminaire	As normal use	—
	Supply wattage (W)	126	—
	Supply current (A)	0.544	—
	Calculated power factor	1.0	—
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25.0	—
	- 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	1,05 times rated wattage : 231.6V~	—
	- 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
Plug	25.0	--	27.6	--	90	--	--
Supply cords	25.0	--	28.6	--	90	--	--
Switch	25.0	--	28.6	--	55	--	--
Supply cord stressed by cord anchorage	25.0	--	28.4	--	75	--	--
Closed-end connector	25.0	--	27.6	--	150	--	--
Internal wires of lampholder at a distance of 10mm from lampholder terminals	25.0	--	42.2	--	90	--	--
Lampholder rim	25.0	--	82.4	--	210	--	--
Lampshade	25.0	--	36.2	--	Ref.	--	--
Lighted object(10cm)	25.0	--	43.0	--	90	--	--
Mounting surface	25.0	--	27.3	--	90	--	--

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:--

ANNEX 2-b	TABLE: Thermal tests of Section 12			P			
	Type reference	FL-20037		—			
	Lamp used	E27 3x40W Incandescent lamp		—			
	Lamp control gear used.....	--		—			
	Mounting position of luminaire.....	As normal use		—			
	Supply wattage (W)	126		—			
	Supply current (A)	0.535		—			
	Calculated power factor	1.0		—			
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25.0		—			
	- 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	1,05 times rated wattage : 235.5V~		—			
	- 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
Plug	25.0	--	27.6	--	90	--	--
Supply cords	25.0	--	28.3	--	90	--	--
Switch	25.0	--	27.7	--	55	--	--
Supply cord stressed by cord anchorage	25.0	--	28.9	--	75	--	--
Closed-end connector	25.0	--	27.6	--	150	--	--
Internal wires of lampholder at a distance of 10mm from lampholder terminals	25.0	--	74.3	--	180	--	--
Lampholder rim	25.0	--	120.5	--	180	--	--
Metal rod	25.0	--	68.3	--	60	--	--

IEC 60598-2-4							
Clause	Requirement + Test			Result - Remark			Verdict
Lighted object(10cm)	25.0	--	49.9	--	90	--	--
Support surface	25.0	--	26.3	--	90	--	--
Supplementary information:--							

ANNEX 2-c	TABLE: Thermal tests of Section 12			P			
	Type reference	FL-20026	—				
	Lamp used	E27 40W Incandescent lamp	—				
	Lamp control gear used	--	—				
	Mounting position of luminaire.....	As normal use	—				
	Supply wattage (W)	42	—				
	Supply current (A)	0.177	—				
	Calculated power factor	1.0	—				
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25.0	—				
	- abnormal operating mode	Overturn at 15° plane, then made with the luminaire on a horizontal surface, in the most unfavourable of the overturned positions that may reasonably expected in practice;	—				
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	1,05 times rated wattage : 237.3V~	—				
	- 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	1,05 times rated wattage : 237.3V~	—				
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Plug	25.0	--	28.3	--	90	--	--
Supply cords	25.0	--	28.6	--	90	--	--
Switch	25.0	--	27.7	--	55	--	--
Supply cord stressed by cord anchorage	25.0	--	28.8	--	75	--	--

IEC 60598-2-4							
Clause	Requirement + Test			Result - Remark			Verdict
Internal wires of lampholder at a distance of 10mm from lampholder terminals	25.0	--	66.5	--	90	--	--
Lampholder rim	25.0	--	133.3	--	180	--	--
Lampshade	25.0	--	57.3	--	Ref.	--	--
Metal rod	25.0	--	29.4		60	--	--
Lighted object(10cm)	25.0	--	49.7	--	90	42.1	90
Support surface	25.0	--	27.2	--	90	35.0	130
Supplementary information:--							

ANNEX 2-d	TABLE: Thermal tests of Section 12					P	
	Type reference	FL-20063				—	
	Lamp used	GU10 2x5W Incandescent lamp				—	
	Lamp control gear used.....	--				—	
	Mounting position of luminaire.....	As normal use				—	
	Supply wattage (W)	10.5				—	
	Supply current (A)	0.045				—	
	Calculated power factor	1.0				—	
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25.0				—	
	- 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	1,05 times rated wattage : 233.3V~				—	
	- 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
Plug	25.0	--	28.2	--	90	--	--
Supply cords	25.0	--	28.3	--	90	--	--
Switch	25.0	--	27.6	--	55	--	--

IEC 60598-2-4							
Clause	Requirement + Test			Result - Remark			Verdict
Supply cord stressed by cord anchorage	25.0	--	27.9	--	75	--	--
Closed-end connector	25.0	--	38.1	--	150	--	--
Internal wires of lampholder at a distance of 10mm from lampholder terminals	25.0	--	49.7	--	180	--	--
Lampholder rim	25.0	--	34.7	--	250	--	--
Metal rod	25.0	--	28.1	--	60	--	--
Lighted object(10cm)	25.0	--	32.6	--	90	--	--
Support surface	25.0	--	27.2	--	90	--	--
Supplementary information:--							

ANNEX 2-e	TABLE: Thermal tests of Section 12				P		
	Type reference	FL-3009			—		
	Lamp used	E14 5x40W Incandescent lamp			—		
	Lamp control gear used	--			—		
	Mounting position of luminaire	As normal use			—		
	Supply wattage (W)	210			—		
	Supply current (A)	0.892			—		
	Calculated power factor	1.0			—		
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25.0			—		
	- 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	1,05 times rated wattage : 235.4V~			—		
	- 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
Plug	25.0	--	28.3	--	90	--	--

IEC 60598-2-4							
Clause	Requirement + Test			Result - Remark			Verdict
Supply cords	25.0	--	27.9	--	90	--	--
Switch	25.0	--	28.6	--	55	--	--
Supply cord stressed by cord anchorage	25.0	--	29.3	--	75	--	--
Closed-end connector	25.0	--	27.8	--	150	--	--
Internal wires of lampholder at a distance of 10mm from lampholder terminals	25.0	--	71.1	--	180	--	--
Lampholder rim	25.0	--	100.2	--	210	--	--
Metal rod	25.0	--	80.3	--	60	--	--
Lighted object(10cm)	25.0	--	45.2	--	90	--	--
Support surface	25.0	--	28.0	--	90	--	--
Supplementary information:--							

ANNEX 2-f	TABLE: Thermal tests of Section 12		P
	Type reference	FL-17017	—
	Lamp used	E27 5x40W Incandescent lamp	—
	Lamp control gear used	--	—
	Mounting position of luminaire	As normal use	—
	Supply wattage (W)	210	—
	Supply current (A)	0.896	—
	Calculated power factor	1.0	—
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25.0	—
	- 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	1,05 times rated wattage : 234.4V~	—
	- 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

IEC 60598-2-4							
Clause	Requirement + Test			Result - Remark			Verdict
		test 1	test 2	test 3	limit	test 4	limit
Plug	25.0	--	26.3	--	90	--	--
Supply cords	25.0	--	27.6	--	90	--	--
Switch	25.0	--	27.9	--	55	--	--
Supply cord stressed by cord anchorage	25.0	--	28.2	--	75	--	--
Closed-end connector	25.0	--	28.3	--	150	--	--
Internal wires of lampholder at a distance of 10mm from lampholder terminals	25.0	--	66.3	--	180	--	--
Lampholder rim	25.0	--	123.0	--	210	--	--
Metal rod	25.0	--	37.3	--	60	--	--
Lighted object(10cm)	25.0	--	44.4	--	90	--	--
Support surface	25.0	--	27.2	--	90	--	--
Supplementary information:--							

ANNEX 2-g	TABLE: Thermal tests of Section 12		P
	Type reference	FL-20022	—
	Lamp used	GU10 5W Incandescent lamp	—
	Lamp control gear used	--	—
	Mounting position of luminaire	As normal use	—
	Supply wattage (W)	5.25	—
	Supply current (A)	0.023	—
	Calculated power factor	1.0	—
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25.0	—
	- 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	1,05 times rated wattage : 228.3V~	—
	- 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	--	—

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict

Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Plug	25.0	--	27.8	--	90	--	--
Supply cords	25.0	--	27.3	--	90	--	--
Switch	25.0	--	27.6	--	55	--	--
Supply cord stressed by cord anchorage	25.0	--	28.3	--	75	--	--
Closed-end connector	25.0	--	36.8	--	150	--	--
Internal wires of lampholder at a distance of 10mm from lampholder terminals	25.0	--	44.4	--	180	--	--
Lampholder rim	25.0	--	30.1	--	250	--	--
Metal rod	25.0	--	28.6	--	60	--	--
Lighted object(10cm)	25.0	--	37.4	--	90	--	--
Support surface	25.0	--	28.3	--	90	--	--
Supplementary information:--							

ANNEX 2-h	TABLE: Thermal tests of Section 12		P
	Type reference	WL-14002	—
	Lamp used	E27 5x40W Incandescent lamp	—
	Lamp control gear used	--	—
	Mounting position of luminaire	As normal use	—
	Supply wattage (W)	131.25	—
	Supply current (A)	0.563	—
	Calculated power factor	1.0	—
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25.0	—
	- 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	1,05 times rated wattage : 233.1V~	—
	- 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	--	—

IEC 60598-2-4							
Clause	Requirement + Test				Result - Remark		Verdict
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
Plug	25.0	--	29.1	--	90	--	--
Supply cords	25.0	--	28.6	--	90	--	--
Switch	25.0	--	27.4	--	55	--	--
Supply cord stressed by cord anchorage	25.0	--	27.7	--	75	--	--
Closed-end connector	25.0	--	28.9	--	150	--	--
Internal wires of lampholder at a distance of 10mm from lampholder terminals	25.0	--	68.4	--	180	--	--
Lampholder rim	25.0	--	105.2	--	180	--	--
Lampshade	25.0	--	34.3	--	Ref.	--	--
Lighted object(10cm)	25.0	--	42.7	--	90	--	--
Support surface	25.0	--	26.3	--	90	--	--
Supplementary information:--							

IEC 60598-2-4			
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 (mm ²)		—
(14.3.3)	Conductor space (mm)		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread)	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm)		N/A
	Torque (Nm)		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N)		N/A
(14.4.8)	Without undue damage		N/A

IEC 60598-2-4			
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
15.6.2	Mechanical tests		N/A

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
(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)	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	
Supplementary information:--											



Figure 1: Whole view for model: FL-20022

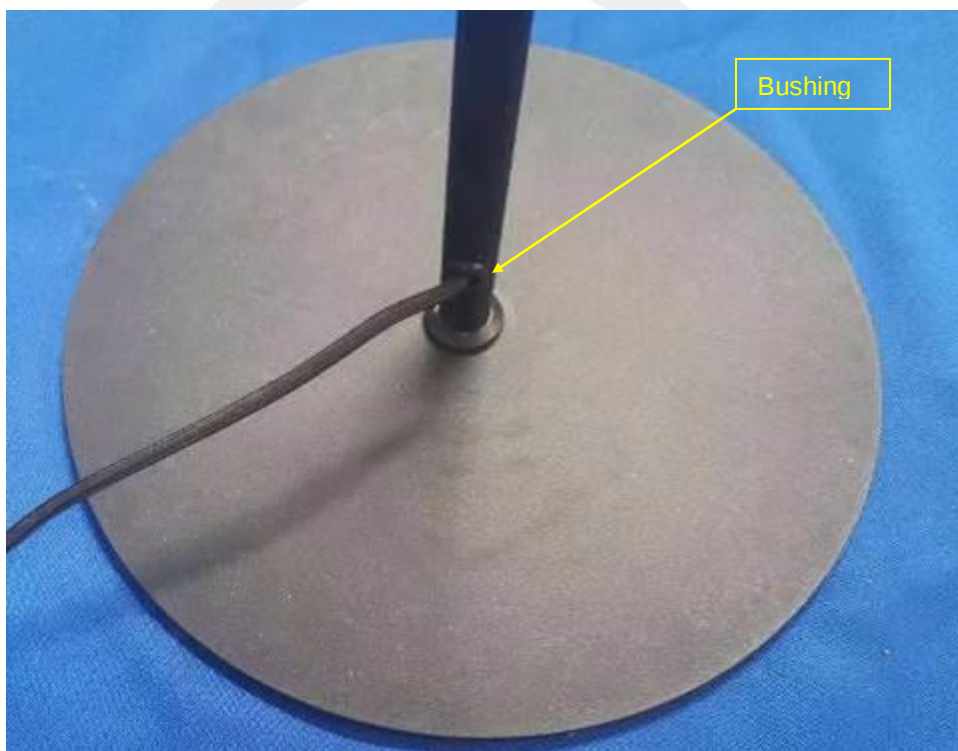


Figure 2: Lamp base for model: FL-20022



Figure 3: GU10 lampholder

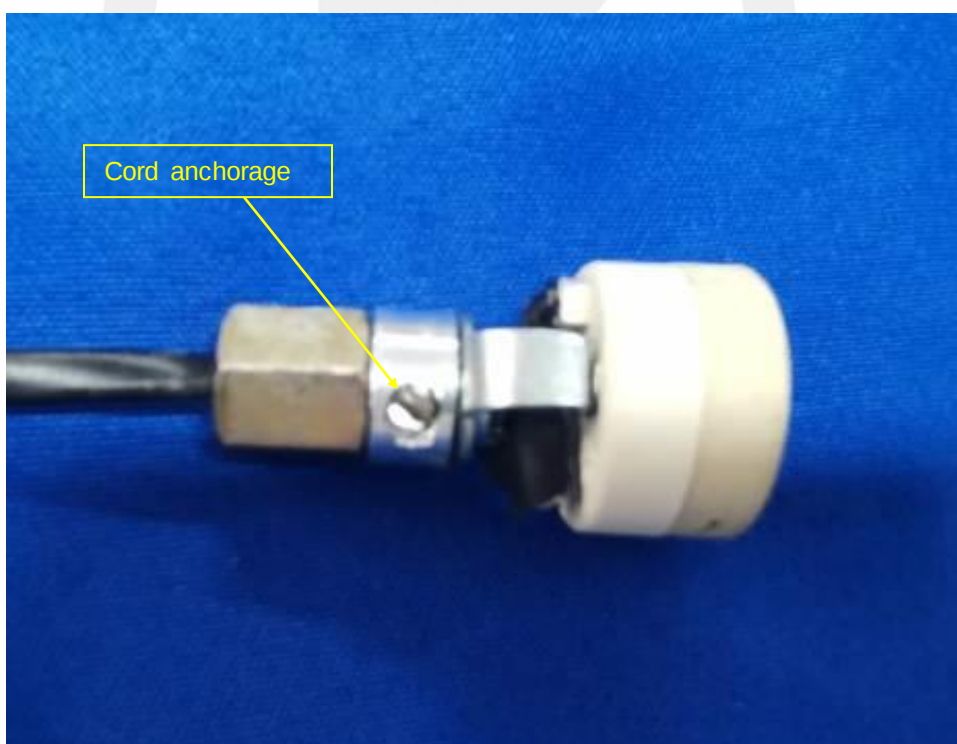


Figure 4: Cord anchorage

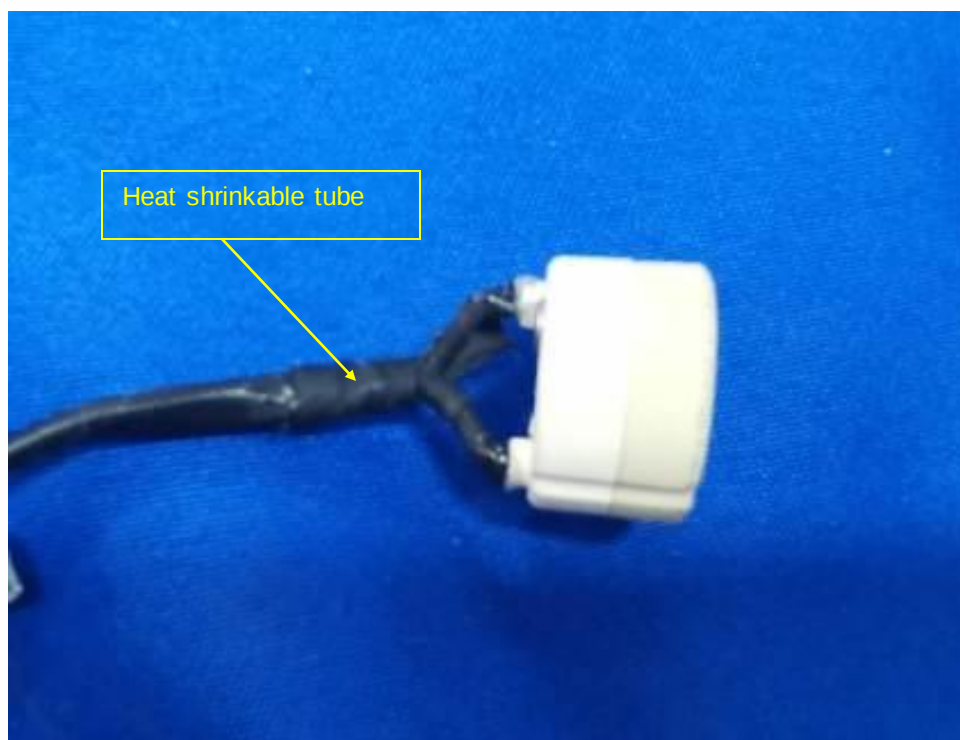


Figure 5: GU10 lampholder



Figure 6: Whole view for Model: FL-20037



Figure 7: Adjustable equipment



Figure 8: Cord anchorage

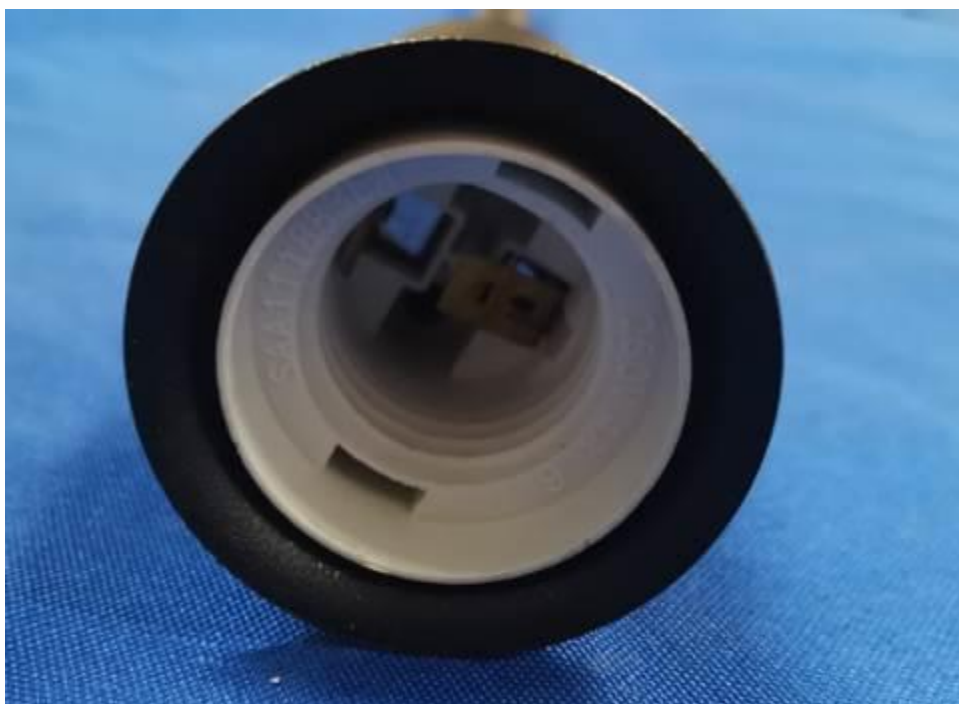


Figure 9: E27 lampholder



Figure 10: Internal view



Figure 11: Internal view



Figure 12: Whole view for Model: FL-20026



Figure 13: Adjustable arm



Figure 14: Cord anchorage

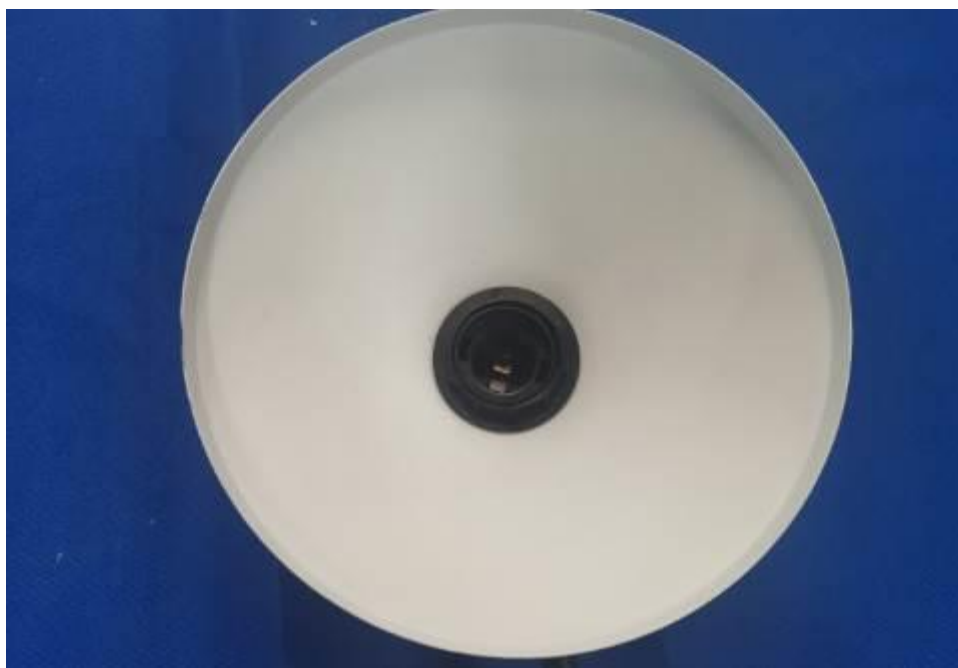


Figure 15: Internal view



Figure 16: Separated view



Figure 17: E27 lampholder



Figure 18: E27 lampholder



Figure 19: Whole view for Model: FL-20063



Figure 20: Lamp base for Model: FL-20063



Figure 21: Cord anchorage

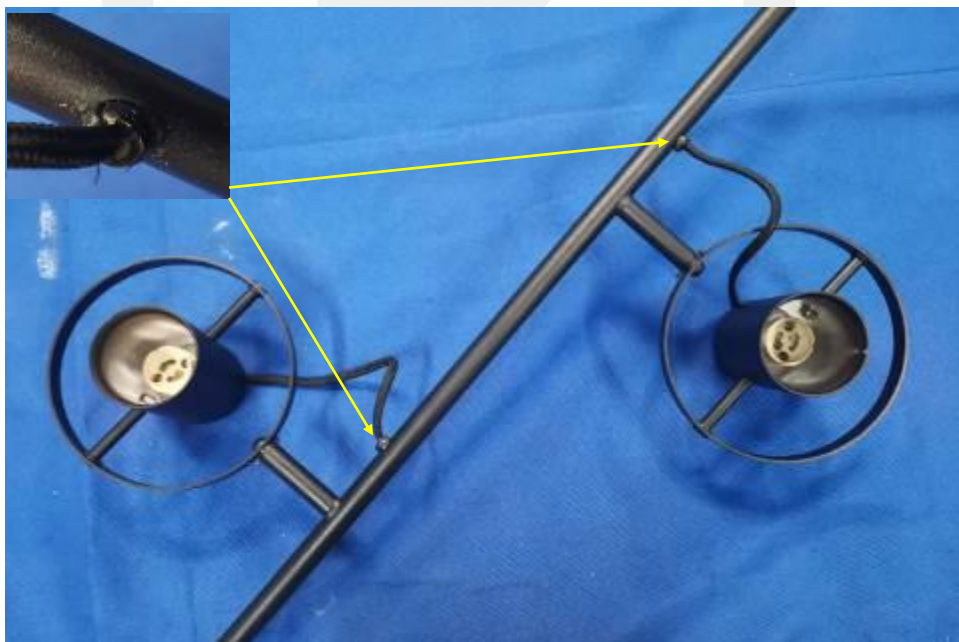


Figure 22: Cord anchorage



Figure 23: Prevent twisting device



Figure 24: Cord anchorage

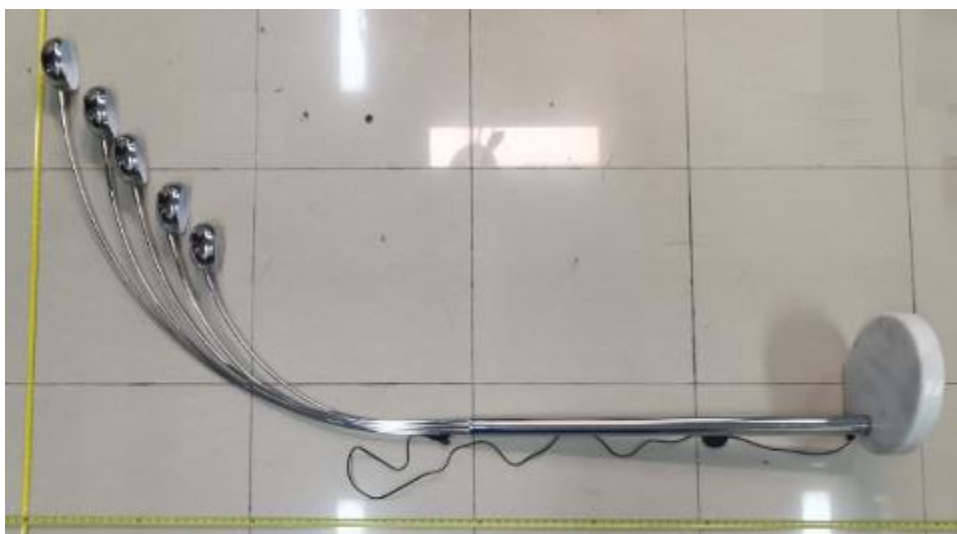


Figure 25: Whole view for Model: FL-20063



Figure 26: Cord anchorage



Figure 27: Internal view

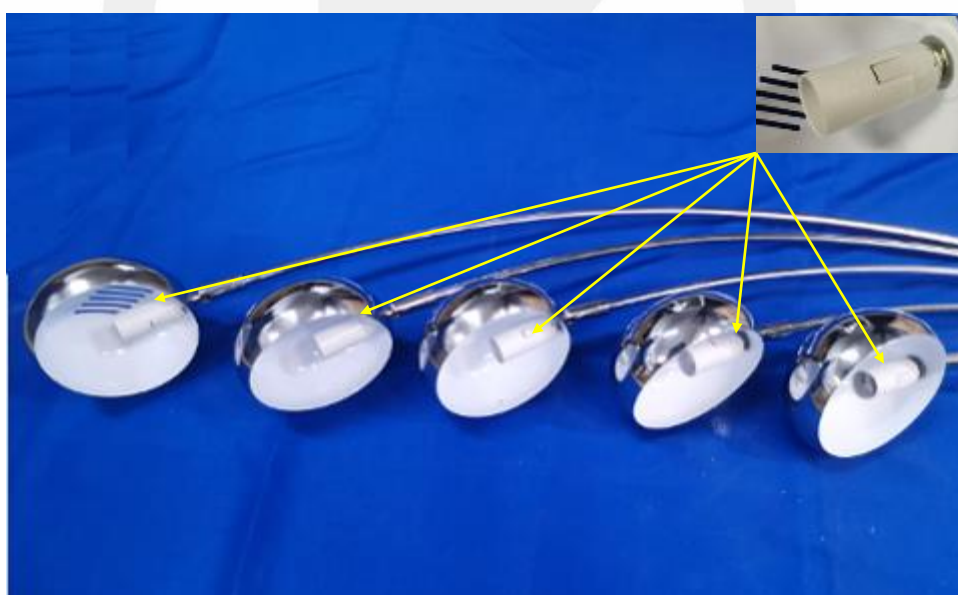


Figure 28: Lampshade



Figure 29: E14 lampholder

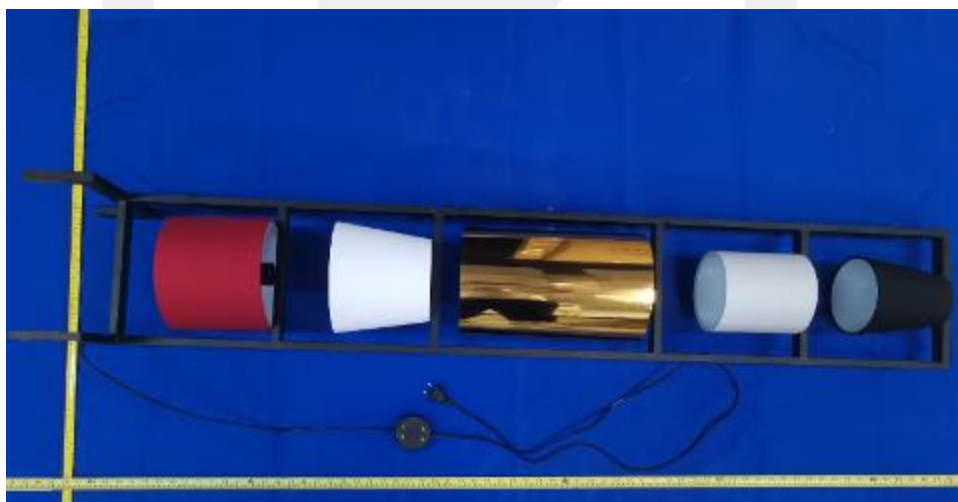


Figure 30: Whole view for Model: FL-17017



Figure 31: Separated view



Figure 32: Cord anchorage

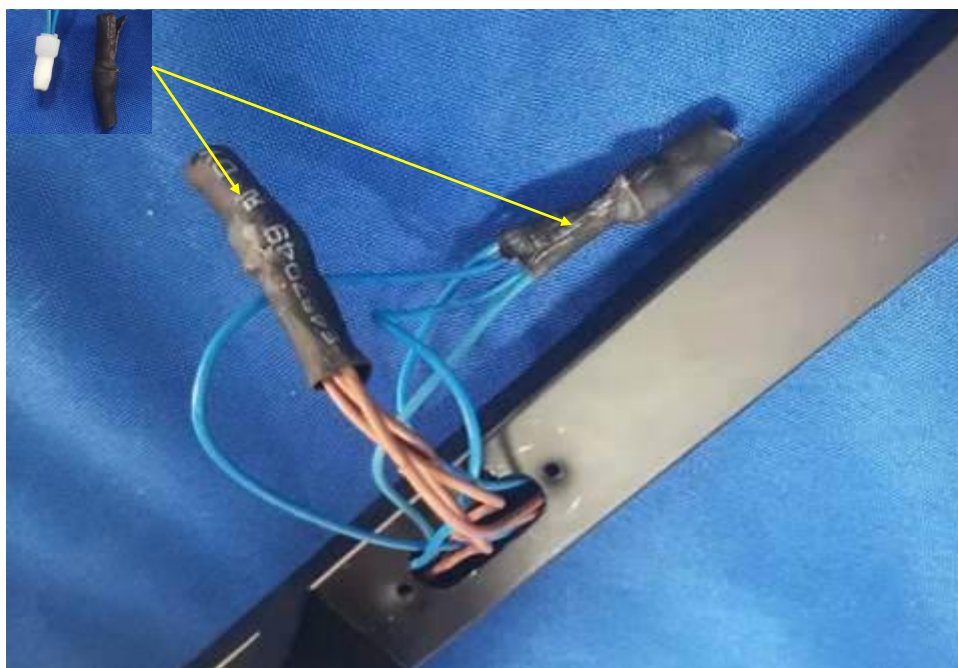


Figure 33: Internal view



Figure 34: E27 lampholder

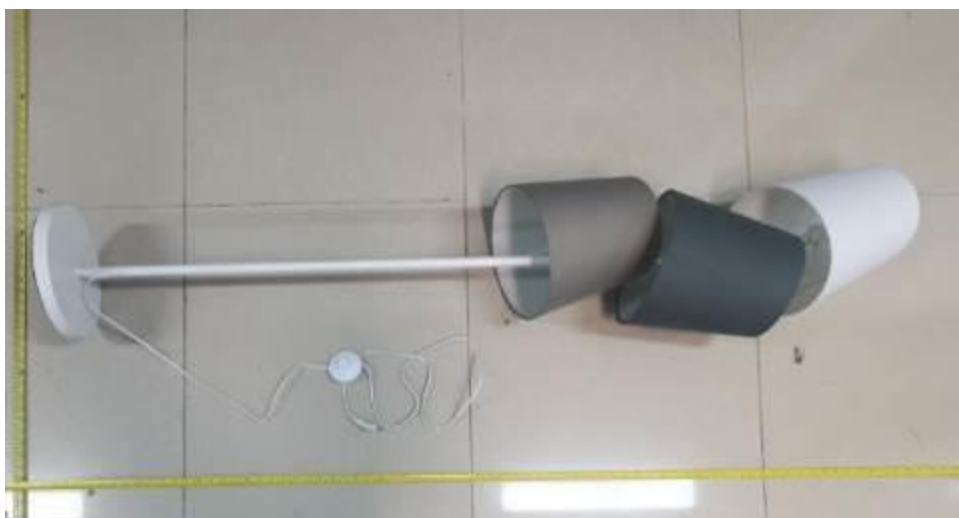


Figure 35: Whole view for Model: FL-10047



Figure 36: Separated view for Model: FL-10047



Figure 37: Cord anchorage



Figure 38: E14 lampholder

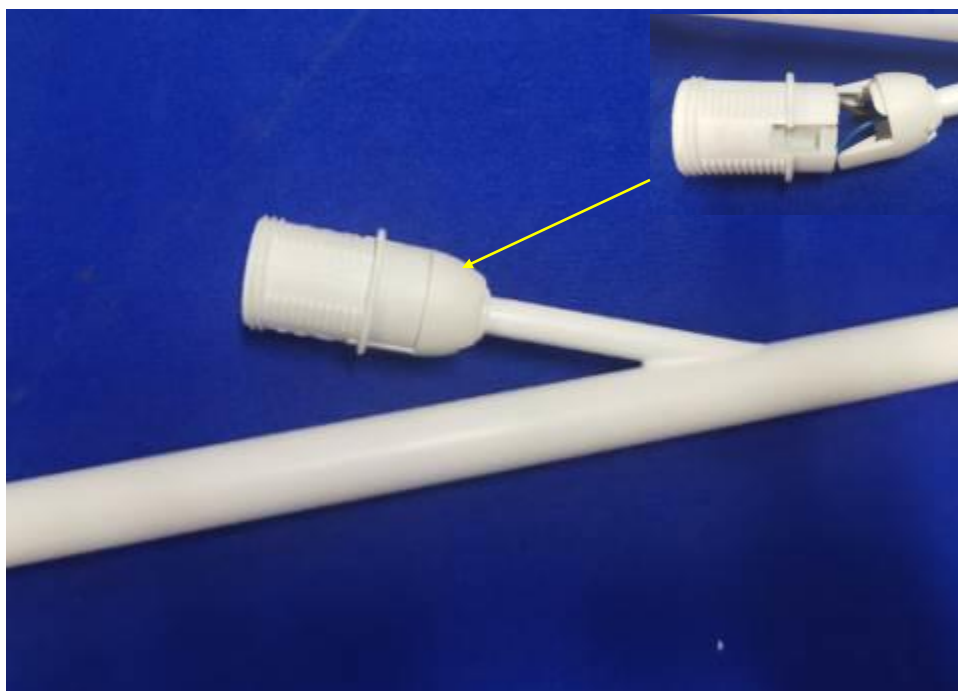


Figure 39: E14 lampholder



Figure 40: Plug for all models



Figure 41: Top view of switch for all models (except model WL-14002 and WL-18018)



Figure 42: Bottom view of switch for all models(except model WL-14002 and WL-18018)



Figure 43: Whole view for Model: WL-14002



Figure 44: Whole view for Model: WL-14002



Figure 45: Separated view for Model: WL-14002



Figure 46: E27 lampholder



Figure 47: Cord anchorage



Figure 48: Internal view



Figure 49: Top view of switch for model WL-18018 and WL-14002



Figure 50: Bottom view of switch for model WL-18018 and WL-14002

*** End of Report ***

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