TEST REPORT
IEC 60598-2-2
Luminaires
Part 2: Particular requirements
Section 2: Recessed luminaires

Report Number. .....:	64.140.21.01204.01 Rev.00
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Name of Testing Laboratory preparing the Report .....:	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
Applicant's name.....:	Jiangmen Dilin Lighting High-Tech Co., Ltd.
Address .....:	3rd Floor, No.101 Dongning Road, Gaoxing Industrial District, 529000 Jiangmen, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Test specification:	
Standard.....:	IEC 60598-2-2:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017
Test procedure .....:	CE_LVD
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60598_2_2F
Test Report Form(s) Originator .....:	Intertek Semko AB
Master TRF.....:	Dated 2017-12-21

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Test item description ..... :	Recessed luminaires
Trade Mark ..... :	DiLin
Manufacturer..... :	Same as applicant
Model/Type reference ..... :	DL-210T, DL-211T, DL-229T, DL-230T
Ratings ..... :	220-240V~, 50/60Hz, Class II, IP20, others see model list.

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**Testing Laboratory:**	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch	
Testing location/ address.....:		5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West Guangzhou 510656 P. R. China	
Tested by (name, function, signature).....:		Felix Chen Project Handler	Felix Chen .....
Approved by (name, function, signature)...:		Adams Cheng Designated Reviewer	.....

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

Attachment 1: Deviation of EN 60598-2-2:2012 used in conjunction with EN 60598-1:2015/A1:2018 and IEC 60598-2-2:2011 used in conjunction with IEC 60598-1:2014/A1:2017 (2 pages).

Attachment 2: EN 62493:2015 (9 pages)

Photo document (5 pages).

Summary of testing:

Tests performed (name of test and test clause):

1. The products submitted were found to be complied with the test clauses according to standard EN 60598-2-2:2012 and EN 60598-1:2015/A1:2018.
2. IEC 62493:2015 was considered.
3. DL-230T was subjected full test, construction check for all models.

Testing location:

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch

5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West, Guangzhou, 510656, P.R. China

Summary of compliance with National Differences:

EN 60598-2-2:2012

EN 60598-1:2015/A1:2018

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Location: Attach on luminaire enclosure

GU10 LED Max. 10W

Location: Near the lampholder

Height of CE mark at least 5mm, height of WEEE mark at least 7mm, height of other marks at least 5mm, height of letters and numerals at least 2mm.

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.

Test item particulars:	Recessed luminaires
Classification of installation and use ..... :	Class II
Supply Connection ..... :	Connecting leads
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.....:	2021-04-08
Date (s) of performance of tests .....:	2021-04-08 to 2021-05-14

General remarks:

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

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

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

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... :	☐ **Yes** ☒ **Not applicable**

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

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

General product information:

1. The product was Class II luminaire for recessed use only.
2. The product use GU10 Max.10W LED bulb only.
3. All models have similar electrical construction, the main different are power and appearance, detail see model list and photo document.

Model list:

Model	Rated Power
DL-210T	GU10 LED Max.10W
DL-211T	GU10 LED Max.2x10W
DL-229T	GU10 LED Max.3x10W
DL-230T	GU10 LED Max.4x10W

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
2.3 (0)	**GENERAL TEST REQUIREMENTS**		P
2.3 (0.3)	More sections applicable ..... :	Yes ☐ No ☒	—
2.3 (0.5)	Components		—
2.3 (0.7)	**Information for luminaire design in light sources standards**		—
2.3 (0.7.2)	Light source safety standard ..... :	EN 62560 for LED lamp	—
	Luminaire design in the light source safety standard		N/A
2.5 (2)	**CLASSIFICATION OF LUMINAIRES**		P
2.5 (2.2)	Type of protection ..... :	Class II	P
2.5 (2.3)	Degree of protection..... :	IP20	—
2.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces ..... :	Yes ☒ No ☐	—
2.5 (2.5)	Luminaire for normal use ..... :	Yes ☒ No ☐	—
	Luminaire for rough service ..... :	Yes ☐ No ☒	—
2.6 (3)	**MARKING**		P
2.6 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
2.6 (3.3)	Additional information		P
	Language of instructions		P
2.6 (3.3.1)	Combination luminaires		N/A
2.6 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
2.6 (3.3.3)	Operating temperature		N/A
2.6 (3.3.5)	Wiring diagram		N/A
2.6 (3.3.6)	Special conditions		N/A
2.6 (3.3.7)	Metal halide lamp luminaire – warning		N/A
2.6 (3.3.8)	Limitation for semi-luminaires		N/A
2.6 (3.3.9)	Power factor and supply current		N/A
2.6 (3.3.10)	Suitability for use indoors		P
2.6 (3.3.11)	Luminaires with remote control		N/A
2.6 (3.3.12)	Clip-mounted luminaire – warning		N/A
2.6 (3.3.13)	Specifications of protective shields		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
2.6 (3.3.14)	Symbol for nature of supply	~	P
2.6 (3.3.15)	Rated current of socket outlet		N/A
2.6 (3.3.16)	Rough service luminaire		N/A
2.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		N/A
2.6 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
2.6 (3.3.19)	Protective conductor current in instruction if applicable		N/A
2.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
2.6 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided		N/A
2.6 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
2.6 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A
2.6 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
2.6 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
2.7 (4)	**CONSTRUCTION**		P
2.7 (4.2)	Components replaceable without difficulty		P
2.7 (4.3)	Wireways smooth and free from sharp edges		P
2.7 (4.4)	**Lampholders**		P
2.7 (4.4.1)	Integral lampholder		P
2.7 (4.4.2)	Wiring connection		P
2.7 (4.4.3)	Lampholder for end-to-end mounting		N/A
2.7 (4.4.4)	Positioning		N/A
	- pressure test (N) ..... :		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) ..... :		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
2.7 (4.4.5)	Peak pulse voltage		N/A
2.7 (4.4.6)	Centre contact		N/A
2.7 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
2.7 (4.4.8)	Lamp connectors		N/A
2.7 (4.4.9)	Caps and bases correctly used		P
2.7 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		P
2.7 (4.5)	**Starter holders**		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
2.7 (4.6)	**Terminal blocks**		N/A
	Tails		N/A
	Unsecured blocks		N/A
2.7 (4.7)	**Terminals and supply connections**		P
2.7 (4.7.1)	Contact to metal parts		P
2.7 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
2.7 (4.7.3)	Terminals for supply conductors		P
2.7 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
2.7 (4.7.4)	Terminals other than supply connection		N/A
2.7 (4.7.5)	Heat-resistant wiring/sleeves		P
2.7 (4.7.6)	Multi-pole plug		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	- test at 30 N		N/A
2.7 (4.8)	**Switches**		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
2.7 (4.9)	**Insulating lining and sleeves**		**P**
2.7 (4.9.1)	Retainment		P
	Method of fixing ..... :	By construction	P
2.7 (4.9.2)	Insulated linings and sleeves:		P
	Resistant to a temperature > 20 °C to the wire temperature or		P
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) ..... :		N/A
2.7 (4.10)	**Double or reinforced insulation**		**P**
2.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		P
	Safe installation fixed luminaires		P
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
2.7 (4.10.2)	Assembly gaps:		P
	- not coincidental		P
	- no straight access with test probe		P
2.7 (4.10.3)	Retainment of insulation:		P
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		P
	- lining in lampholder		N/A
2.7 (4.10.4)	Protective impedance device		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
2.7 (4.11)	**Electrical connections and current-carrying parts**		**P**
2.7 (4.11.1)	Contact pressure		P
2.7 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
2.7 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
2.7 (4.11.4)	Material of current-carrying parts		P
2.7 (4.11.5)	No contact to wood or mounting surface		P
2.7 (4.11.6)	Electro-mechanical contact systems		N/A
2.7 (4.12)	**Screws and connections (mechanical) and glands**		P
2.7 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material	Fixed lampholder cover: 0.5Nm	P
	Torque test: torque (Nm); part..... :	--	N/A
	Torque test: torque (Nm); part..... :	--	N/A
	Torque test: torque (Nm); part..... :	--	N/A
2.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
2.7 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) ..... :		N/A
	- lampholder; torque (Nm) ..... :		N/A
	- push-button switches; torque 0,8 Nm ..... :		N/A
2.7 (4.12.5)	Screwed glands; force (Nm)..... :		N/A
2.7 (4.13)	**Mechanical strength**		**P**
2.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm) ..... :		N/A
	- other parts; energy (Nm)..... :	0.35Nm	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
2.7 (4.13.2)	Metal parts have adequate mechanical strength		P

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
2.7 (4.13.3)	Straight test finger	30N	P
2.7 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
2.7 (4.13.6)	Tumbling barrel		N/A
2.7 (4.14)	**Suspensions, fixings and means of adjusting**		**P**
2.7 (4.14.1)	Mechanical load:		P
	A) four times the weight	Max. 4 x 0.84Kg	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
2.7 (4.14.2)	Load to flexible cables		N/A
	Mass (kg) ..... :		—
	Stress in conductors (N/mm²) ..... :		N/A
	Mass (kg) of semi-luminaire ..... :		N/A
	Bending moment (Nm) of semi-luminaire ..... :		N/A
2.7 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles..... :	45	P
	- strands broken ..... :	No broken	P
	- electric strength test afterwards		P
2.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
2.7 (4.14.5)	Guide pulleys		N/A
2.7 (4.14.6)	Strain on socket-outlets		N/A
2.7 (4.15)	**Flammable materials**		P
	- glow-wire test 650°C ..... :	See Test Table 2.16 (13.3.2)	P

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	- spacing ≥30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
2.7 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
2.7 (4.16)	**Luminaires for mounting on normally flammable surfaces**		P
	No lamp control gear ..... :		P
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
2.7 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
2.7 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
2.7 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
2.7 (4.17)	**Drain holes**		N/A
	Clearance at least 5 mm		N/A
2.7 (4.18)	**Resistance to corrosion**		N/A
2.7 (4.18.1)	- rust-resistance		N/A
2.7 (4.18.2)	- season cracking in copper		N/A
2.7 (4.18.3)	- corrosion of aluminium		N/A
2.7 (4.19)	Ignitors compatible with ballast		N/A
2.7 (4.20)	Rough service vibration		N/A
2.7 (4.21)	**Protective shield**		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
2.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
2.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
2.7 (4.21.3)	No direct path		N/A
2.7 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 2.16 (13.3.2)	N/A
2.7 (4.22)	Attachments to lamps not cause overheating or damage		N/A
2.7 (4.23)	Semi-luminaires comply Class II		N/A
2.7 (4.24)	**Photobiological hazards**		**N/A**
2.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
2.7 (4.24.2)	Retinal blue light hazard		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
2.7 (4.25)	**Mechanical hazard**		**P**
	No sharp point or edges		P
2.7 (4.26)	**Short-circuit protection**		N/A
2.7 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
2.7 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
2.7 (4.27)	**Terminal blocks with integrated screwless earthing contacts**		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
2.7 (4.28)	**Fixing of thermal sensing control**		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C) ..... :		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
2.7 (4.29)	**Luminaires with non-replaceable light source**		**N/A**
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
2.7 (4.30)	**Luminaires with non-user replaceable light source**		N/A
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	Minimum two fixing means		N/A
2.7 (4.31)	**Insulation between circuits**		**N/A**
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
2.7 (4.31.1)	SELV circuits		N/A
	Used SELV source		N/A
	Voltage ≤ ELV		N/A
	Insulating of SELV circuits from LV supply		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Insulating of SELV circuits from other non SELV circuits		N/A
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A
	SELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
2.7 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage ≤ ELV		N/A
	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 enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
2.7 (4.31.3)	Other circuits		N/A
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
2.7 (4.32)	**Overvoltage protective devices**		N/A

IEC 60598-2-2			
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
2.8 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		P
2.8 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☒ Category III ☐	—
	Category III according Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
2.8 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and $f_{U_{OUT}}$ according IEC 61347-1, clause 7.1, item w	See Test Table 2.8 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 2.8 (11.2) II	N/A
2.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 2.8 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 2.8 (11.2) II	N/A
2.9 (7)	**PROVISION FOR EARTHING**		N/A
2.9 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 Ω..... :		N/A
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Earth makes contact first		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.9 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
2.9 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
2.9 (7.2.5)	Earth terminal integral part of connector socket		N/A
2.9 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
2.9 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
2.9 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
2.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
2.9 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A
2.10 (14)	**SCREW TERMINALS**		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	N/A
2.10 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		N/A
	Separately approved; component list..... :	(see Annex 1)	N/A
	Part of the luminaire ..... :	(see Annex 4)	N/A
2.11 (5)	**EXTERNAL AND INTERNAL WIRING**		P
2.11 (5.2)	**Supply connection and external wiring**		**P**
2.11 (5.2.1)	Means of connection ..... :	Connecting lead	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment		N/A
2.11 (5.2.2)	Type of cable..... :	See CDF for details	P
	Nominal cross-sectional area (mm^2) ..... :	See CDF for details	P
	Cables equal to IEC 60227 or IEC 60245		N/A
2.11 (5.2.3)	Type of attachment, X, Y or Z		N/A
2.11 (5.2.5)	Type Z not connected to screws		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.11 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
2.11 (5.2.7)	Cable entries through rigid material have rounded edges		P
2.11 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
2.11 (5.2.9)	Locking of screwed bushings		N/A
2.11 (5.2.10)	Cord anchorage:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P
2.11 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
2.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
2.11 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N) ..... :	60	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- torque test: torque (Nm) ..... :	0.15	P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
2.11 (5.2.11)	External wiring passing into luminaire		P
2.11 (5.2.12)	Looping-in terminals		N/A
2.11 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P
2.11 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
2.11 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
2.11 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
2.11 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
2.11 (5.3)	**Internal wiring**		**P**
2.11 (5.3.1)	Internal wiring of suitable size and type	See CDF for details	P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A) ..... :		N/A
	- temperatures ..... :	(see Annex 2)	N/A
	Green-yellow for earth only		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²)..... :	See CDF for details	P
	Insulation thickness (mm) ..... :	See CDF for details	P
	Extra insulation added where necessary		N/A
2.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm²)..... :		N/A
2.11 (5.3.1.3)	Double or reinforced insulation for class II		N/A
2.11 (5.3.1.4)	Conductors without insulation		N/A
2.11 (5.3.1.5)	SELV current-carrying parts		N/A
2.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
2.11 (5.3.2)	Sharp edges etc.		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
2.11 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
2.11 (5.3.4)	Joints and junctions effectively insulated		N/A
2.11 (5.3.5)	Strain on internal wiring		N/A
2.11 (5.3.6)	Wire carriers		N/A
2.11 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
2.11 (5.4)	**Test to determine suitability of conductors having a reduced cross-sectional area**		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

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Clause	Requirement + Test	Result - Remark	Verdict

2.12 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		P
2.12 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		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		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		P
	Double-ended high-pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
2.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
2.12 (8.2.3.a)	Class II luminaire:		P
	- basic insulated metal parts not accessible during starter or lamp replacement		P
	- basic insulation not accessible other than during starter or lamp replacement		P
	- glass protective shields not used as supplementary insulation		N/A
2.12 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
2.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V)..... :	--	N/A
	- no-load voltage (V)..... :	--	N/A
	- touch current if applicable (mA) ..... :	--	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage (V) ..... :		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
2.12 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
2.12 (8.2.5)	Compliance with the standard test finger or relevant probe		P
2.12 (8.2.6)	Covers reliably secured		N/A
2.12 (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
2.12 (-)	Parts within the celling space provide same degree of protection against electric shock as parts below the celling space		P
2.13 (12)	**ENDURANCE TEST AND THERMAL TEST**		P
2.13.1 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 2.14		—
2.13 (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)	—
2.13 (12.3)	**Endurance test**		P
	a) mounting-position ..... :	As in normal use	—
	b) test temperature (°C) ..... :	35°C	—
	c) total duration (h) ..... :	240	—
	d) supply voltage (V) ..... :	1,1x240V=264V	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A) ..... :	--	—
	e) luminaire ceases to operate		—

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Clause	Requirement + Test	Result - Remark	Verdict
2.13 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
2.13 (12.4)	**Thermal test (normal operation)**	(see Annex 2)	P
2.13 (12.5)	**Thermal test (abnormal operation)**	(see Annex 2)	P
2.13 (12.6)	**Thermal test (failed lamp control gear condition):**		N/A
2.13 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) ..... :		—
	- case of abnormal conditions ..... :		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un .... :		—
	- measured mounting surface temperature (°C) at 1,1 Un ..... :		N/A
	- calculated mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
2.13 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions ..... :		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
2.13 (12.7)	**Thermal test (failed lamp control gear in plastic luminaires):**		N/A
2.13 (12.7.1)	Luminaire without temperature sensing control		N/A
2.13 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W ..... :		—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- Ballast failure at supply voltage (V) ..... :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test .....:	See Test Table 2.16 (13.2.1)	N/A
2.13 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test ..... :	See Test Table 2.16 (13.2.1)	N/A
2.13 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions ..... :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
2.13 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link ..... :	Yes ☐ No ☐	—
	- manual reset cut-out ..... :	Yes ☐ No ☐	—
	- auto reset cut-out ..... :	Yes ☐ No ☐	—
	- case of abnormal conditions ..... :		—
	- highest measured temperature of fixing point/ exposed part (°C): ..... :		—
	Ball-pressure test: ..... :	See Test Table 2.16 (13.2.1)	N/A
2.13.1 (-)	Wiring, for connection to the supply, not reach unsafe temperature		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- measured temperature of the cable (°C) ..... :	(see Annex 2)	P
2.14 (9)	**RESISTANCE TO DUST AND MOISTURE**		P
2.14 (-)	If IP > IP 20 the order of tests as specified in clause 2.13		N/A
2.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP..... :	IP20	—
	- mounting position during test ..... :	As in normal use	—
	- fixing screws tightened; torque (Nm) ..... :	--	—
	- tests according to clauses..... :	9.2.0	—
	- electric strength test afterwards		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 or pressure watertight luminaire		N/A
	e) no contact with live parts (IP 2X)		P
	e) no entry into enclosure (IP 3X and IP 4X)		N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		N/A
2.14 (9.3)	Humidity test 48 h	93% R.H.; 25°C	P
2.15 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
2.15 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø ..... :		—
	Insulation resistance (MΩ) ..... :	See below	—
	SELV		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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		P
	- between live parts of different polarity ..... :	>100 MΩ	P
	- between live parts and mounting surface ..... :	>100 MΩ	P
	- between live parts and metal parts ..... :	>100 MΩ	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
2.15 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V)..... :	See below	N/A
	SELV		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		P
	- between live parts of different polarity ..... :	1480V	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- between live parts and mounting surface ..... :	2960V	P
	- between live parts and metal parts ..... :	2960V	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
2.15 (10.3)	Touch current or protective conductor current (mA).:	Max. 0.01mA, Limited: 0.7mA	P

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

2.8 (11.2)	**TABLE: Creepage distances and clearances**							**P**
	Minimum distances (mm) for a.c. (50/60 Hz) sinusoidal voltages							**P**
	Applicable part of IEC 60598-1 Table 11.1* and 11.2*							**P**
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**		
			clearance	***Table**		**creepage**	***Table**	
Distance 1:	B	2.8	1.5	11.1	2.8	2.5	11.1	
Working voltage (V) .....:					240			—
PTI .....:					< 600 ☒ ≥ 600 ☐			—
Pulse voltage if applicable (kV) .....:					--			—
Supplementary information: Live parts of different polarity;								
Distance 2:	B	5.8	3.0	11.1	5.8	5.0	11.1	
Working voltage (V) .....:					240			—
PTI .....:					< 600 ☒ ≥ 600 ☐			—
Pulse voltage if applicable (kV) .....:					--			—
Supplementary information: Live part and accessible part; Live part and mounting surface								

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

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Clause	Requirement + Test	Result - Remark	Verdict

2.16 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm) ..... :		2.0		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Lampholder cover	See CDF	81.2	0.8	
Supplementary information: --				

2.16 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				N/A
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--
Supplementary information: --					

2.16 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)			P
Glow wire temperature ..... :		650°C		—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Lampholder cover	See CDF	No	0	Pass
Supplementary information: --				

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

ANNEX 1	TABLE: Critical components information (See CDF for details)	P

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Thermal tests of Section 12		P
	Type reference ..... :	DL-230T	—
	Lamp used..... :	LED GU10 Max. 4x10W	—
	Lamp control gear used ..... :	--	—
	Mounting position of luminaire ..... :	As in normal use	—
	Supply wattage (W) ..... :	35.3	—
	Supply current (A) ..... :	0.269	—
	Temperatures in test 1-4 below are corrected for ta (°C) ..... :	25	—
	- abnormal operating mode ..... :	Adjusted to unfavourable condition	—
1.12 (12.4)	- test 1: rated voltage ..... :	--	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	1,06x240V=254.4V	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	1,1x240V=264V	—

Temperature measurements (°C)

Part	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Lampholder wire	--	58.4	--	90	--	--
Lampholder wire under cord anchorage	--	27.2	--	75	--	--
lampholder contact	--	62.0	--	300	--	--
Lamphoder cover	--	56.2	--	Ref.	--	--
Box inside (left side)	--	39.5	--	90	--	--
Box inside (right side)	--	39.7	--	90	--	--
Box inside (top)	--	41.4	--	90	--	--
Adjustment part	--	56.5	--	60	--	--
Mounting surface	--	41.0	--	90	41.2	175
Lighted object (0.1m)	--	44.3	--	90	46.6	130
Supplementary information: --						

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	**Screw terminals (part of the luminaire)**		N/A
(14)	**SCREW TERMINALS**		N/A
(14.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm²).....:		—
(14.3.3)	Conductor space (mm).....:		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread) .....:	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm) .....:		N/A
	Torque (Nm).....:		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N).....:		N/A
(14.4.8)	Without undue damage		N/A

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

ANNEX 4	**Screwless terminals (part of the luminaire)**		**N/A**
(15)	**SCREWLESS TERMINALS**		**N/A**
(15.2)	Type of terminal.....:	--	—
	Rated current (A).....:	--	—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples) .....:		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples) .....:		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		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

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

	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) .....:		N/A
(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: --										

Attachment 1

IEC60598_2_2F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60598-2-2 **EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES** Luminaires Part 2: Particular requirements Section 2: Recessed luminaires
Differences according to..... EN 60598-2-2:2012 used in conjunction with EN 60598-1:2015 + A1:2018
Annex Form No...... EU_GD_IEC60598_2_2F **Annex Form Originator**..... OVE **Master Annex Form**..... 2019-01-24
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	CENELEC COMMON MODIFICATIONS (EN)		P

2.6 (3)	**MARKING**		**N/A**
2.6 (3.3.101)	For luminaires not supplied with terminal block: Adequate warning on the package		N/A

2.7 (4)	**CONSTRUCTION**		**N/A**
2.7 (4.11.6)	Electro-mechanical contact systems		N/A

2.11 (5)	**EXTERNAL AND INTERNAL WIRING**		**P**
2.11 (5.2.1)	Connecting leads		P
	- without a means for connection to the supply		N/A
	- terminal block specified		N/A
	- relevant information provided		N/A
	- compliance with 4.6, 4.7.1, 4.7.2, 4.10.1, 11.2, 12 and 13.2 of Part 1		N/A
2.11 (5.2.2)	Cables equal to EN 50525		P
	Replace table 5.1 – Supply cord		P

2.13 (12)	**ENDURANCE TESTS AND THERMAL TESTS**		**P**
2.13 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		P

Attachment 1

ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		**N/A**
(3.3)	DK: power supply cords of class I luminaires with label		N/A
(4.5.1)	DK: socket-outlets		N/A
(5.2.1)	CY, DK, FI, GB: type of plug		N/A

ZC	**ANNEX ZC, NATIONAL DEVIATIONS (EN)**		**N/A**
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A
	FR: Safety requirements for high buildings (Arrêté du 30 décembre 2011 portant règlement de sécurité pour la construction des immeubles de grande hauteur et leur protection contre les risques d'incendie et de panique; Section VIII; Article GH 48, Eclairage) Glow-wire test for outer parts of luminaires:		N/A
	- 850°C for luminaires in stairways and horizontal travel paths		N/A
	- 650°C for indoor luminaires		N/A
	GB: Requirements according to United Kingdom Building Regulation		N/A

TEST REPORT
IEC 62493
Assessment of lighting equipment related to human exposure to electromagnetic fields

Report Number. ..... :	64.140.21.01204.01 Rev.00
Date of issue ..... :	2021-05-14
Total number of pages ..... :	9
Name of Testing Laboratory preparing the Report ..... :	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
Applicant's name ..... :	Jiangmen Dilin Lighting High-Tech Co., Ltd.
Address ..... :	3rd Floor, No.101 Dongning Road, Gaoxing Industrial District, 529000 Jiangmen, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Test specification:	
Standard ..... :	IEC 62493 (ed.2)
Test procedure ..... :	CE_LVD
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC62493B
Test Report Form(s) Originator .... :	Intertek Semko AB
Master TRF ..... :	2016-04

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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description ..... :	See IEC60598_2_2F
Trade Mark ..... :	See IEC60598_2_2F
Manufacturer ..... :	See IEC60598_2_2F
Model/Type reference ..... :	See IEC60598_2_2F
Ratings ..... :	See IEC60598_2_2F

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**Testing Laboratory:**	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch	
Testing location/ address.....:		5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West, Guangzhou, 510656, P.R. China	
Tested by (name, function, signature).....:		See IEC60598_2_2F	
Approved by (name, function, signature)...:		See IEC60598_2_2F	

List of Attachments (including a total number of pages in each attachment): **N/A**	
Summary of testing:	
Tests performed (name of test and test clause): See IEC60598_2_2F	**Testing location:** TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch 5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West Guangzhou, 510656 P. R. China.
Summary of compliance with National Differences (List of countries addressed): ☐ **The product fulfils the requirements of _____ (insert standard number and edition and delete the text in parenthesis, leave it blank or delete the whole sentence, if not applicable)**	

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

See IEC60598_2_2F

IEC 62493			
Clause	Requirement + Test	Result - Remark	Verdict

Test item particulars.....:	See IEC60598_2_2F
Classification of installation and use.....:	See IEC60598_2_2F
Supply Connection.....:	See IEC60598_2_2F
.....:	
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 .....:	2021-04-08
Date (s) of performance of tests.....:	2021-04-08 to 2021-05-14

General remarks:

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

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

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

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**

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

Name and address of factory (ies) ..... : See IEC60598_2_2F

IEC 62493			
Clause	Requirement + Test	Result - Remark	Verdict

General product information:		
Description of the EUT ..... :	☒	Luminaire
		Self-ballasted lamp
		Built-in electronic control gear
		Independent electronic control gear
		Others:
Control Gear ..... :		Magnetic control gear / transformer
		Electronic control gear
		Others:
Lamp technology used ..... :		Fluorescent lamp
		High pressure discharge lamp (HID)
		Light emitting diode (LED)
		Tungsten halogen lamp
	☒	Incandescent lamp
		Others:
Model Number ..... :	All models	
Brand ..... :	N/A	
Rated Voltage/Frequency..... :	☒	AC:220-240V~, 50/60Hz
		DC:
		AC/DC:
Rated Power ..... :	See IEC60598_2_2F	
Protection Class ..... :	I	
Number of phases ..... :	Single	
Accessories ..... :	N/A	

IEC 62493			
Clause	Requirement + Test	Result - Remark	Verdict
4	**LIMITS**		P
4.1	**General**		P
	Comply with Van der Hoofden test limit in 4.2.3 or inherently compliant in 4.2.2 and pass assessment procedure for intentional radiators in 4.3		P
4.2	**Unintentional radiating part of lighting equipment**		P
4.2.2	Lighting equipment deemed to comply with the Van der Hoofden test without testing		P
	1) electronic controlgear	Yes ☐ No ☒	—
	2) incandescent-lamp technology	Yes ☒ No ☐	—
	3) LED-light-source technology	Yes ☐ No ☒	—
	4) OLED-light-source technology	Yes ☐ No ☒	—
	5) high-pressure discharge lamp LED-light-source technologies	Yes ☐ No ☒	—
	6) low-pressure discharge lamp technologies with exposure distance ≥ 50 cm	Yes ☐ No ☒	—
	7) independent auxiliary	Yes ☐ No ☒	—
	Not fulfil any of 1-7 above subject to 4.2.3		—
4.2.3	Applications of limits		N/A
	Not fulfil any of 1-7 in 4.2.2 but the compliance factor *F* is ≤ 1		N/A
4.3	**Intentional radiating part of lighting equipment**		**N/A**
	Comply with one of methods in Clause 7 if intentional radiator		N/A

5	**GENERAL**		**N/A**
5.1	**Measurand**		**N/A**
	Test head, measuring instrumentation and measuring conditions according Clause 5.1 – 5.8		N/A

6	**MEASUREMENT PROCEDURE FOR THE VAN DER HOOFDEN TEST**		**N/A**
6.1	**General**		**N/A**
	Measurements carried out under conditions according Clause 6.1 – 6.6	See Table 6	N/A

IEC 62493			
Clause	Requirement + Test	Result - Remark	Verdict

7	**ASSESSMENT PROCEDURE INTENTIONAL RADIATORS**		**N/A**
7.2	**Low-power exclusion method**		**N/A**
7.2.1	Input $P_{int,rad}$ ..... :		—
	Exclusion level P_{max} ..... :		—
	Input power $P_{int,rad}$ < exclusion level P_{max}		N/A
7.3	**Application of the EMF product standard for body worn-equipment**		**N/A**
	If not Clause 7.2 is met and expose distance ≤ 0.05 m, comply with IEC 62209-2		N/A
7.4	**Application of the EMF product standard for base stations**		**N/A**
	If not Clause 7.2 is met and if intentional radiator is base station, comply with IEC 62232		N/A
7.5	**Application of another EMF standard**		**N/A**
	If not Clause 7.2 is met and if intentional radiator cannot be considered as in Clause 7.3 or 7.4, comply with IEC 62311		N/A

6	**TABLE: Measurement results with Van der Hoofden test head**			**N/A**
Location of EuT	Measuring distance	Result (*F*)	Limit (*F*)	Verdict

6	**TABLE: Equipment used during test with Van der Hoofden test head**		
Equipment	Manufacturer	Type	Id. No.
Van der Hoofden test head			
Measurement receiver			

IEC 62493			
Clause	Requirement + Test	Result - Remark	Verdict

Test set-up, photos

N/A

Photo documentation

Details of: General view of DL-230T

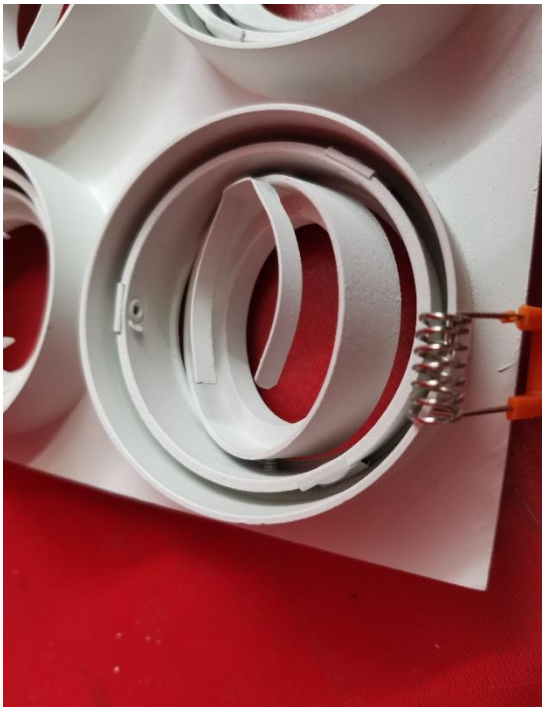
View: [ ] general [ ] front [ ] rear [ ] right [ ] left [ ] top [ ] bottom	

Details of: General view of DL-230T

View: [ ] general [ ] front [ ] rear [ ] right [ ] left [ ] top [ ] bottom	

Photo documentation

Details of: Adjustment view of DL-230T

View: [ ] general [ ] front [ ] rear [ ] right [ ] left [ ] top [ ] bottom	

Details of: Lampholder view of DL-230T

View: [ ] general [ ] front [ ] rear [ ] right [ ] left [ ] top [ ] bottom	

Photo documentation

Details of: Back view of lampholder for DL-230T

View: [ ] general [ ] front [ ] rear [ ] right [ ] left [ ] top [ ] bottom	

Details of: Lampholder lead wire view of DL-230T

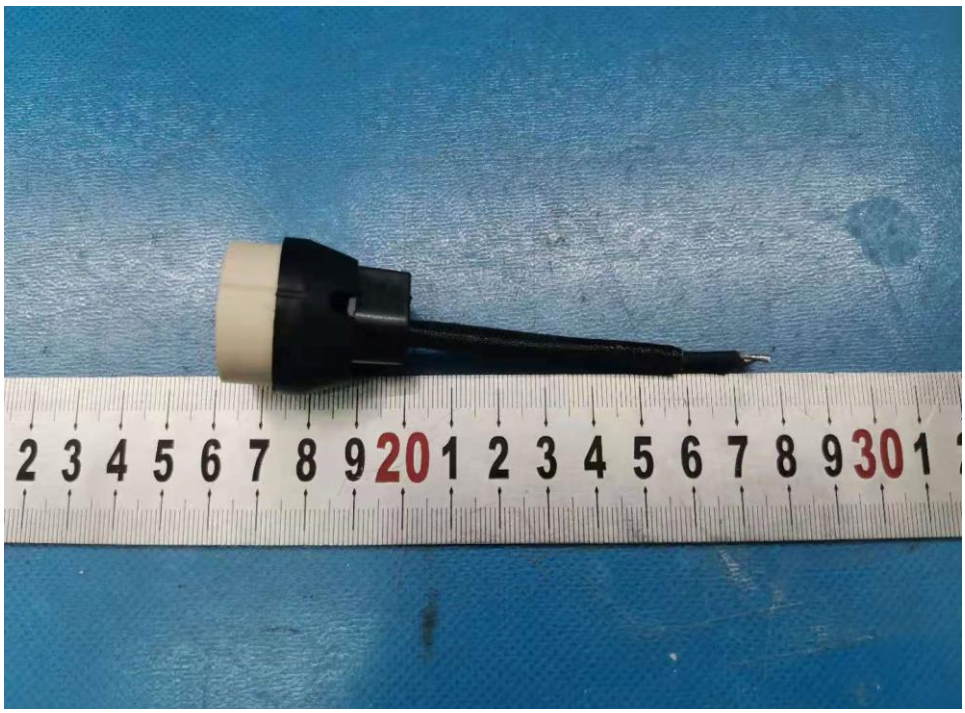
View: [ ] general [ ] front [ ] rear [ ] right [ ] left [ ] top [ ] bottom	

Photo documentation

Details of: General view of DL-229T

View: [ ] general [ ] front [ ] rear [ ] right [ ] left [ ] top [ ] bottom	

Details of: General view of DL-211T

View: [ ] general [ ] front [ ] rear [ ] right [ ] left [ ] top [ ] bottom	

Photo documentation

Details of: General view of DL-210T

View: [ ] general [ ] front [ ] rear [ ] right [ ] left [ ] top [ ] bottom	

-End of report-