



TEST REPORT
EN 60598-2-18
Luminaires
Part 2: Particular requirements
Section 18: Luminaires for swimming pools
and similar applications

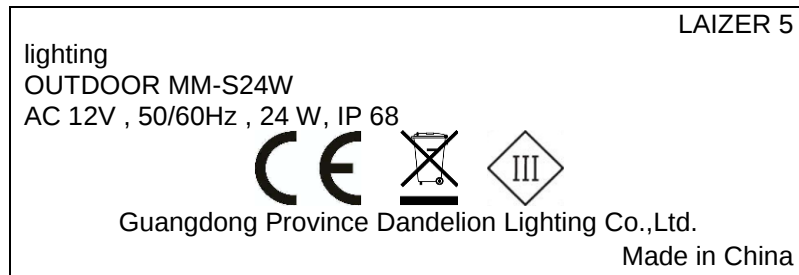
Report Number.	AOC251009003S
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Name of Testing Laboratory preparing the Report	Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China Shenzhen AOCE Electronic Technology Service Co., Ltd
Applicant's name	Guangdong Province Dandelion Lighting Co.,Ltd.
Address	One of the second floors of Building 2, No.5 Lifeng Road, Maohui Industrial Zone, Henglan Town, Zhongshan City
Test specification:	
Standard	IEC 60598-2-18:2022 used in conjunction with IEC 60598-1:2020
Test procedure	Type testing
Non-standard test method	N/A
Test Report Form No.	IEC60598_2_18D
Test Report Form(s) Originator	Intertek Semko AB
Master TRF	2017-02
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Test item description	lighting	
Trade Mark	LAIZER 5	
Manufacturer	Guangdong Province Dandelion Lighting Co.,Ltd. One of the second floors of Building 2, No.5 Lifeng Road, Maohui Industrial Zone, Henglan Town, Zhongshan City	
Model/Type reference.....	OUTDOOR MM-S24W, OUTDOOR WW-S18W, OUTDOOR MM-S6W, OUTDOOR MM-S9W, OUTDOOR MM-S12W, XH-YCD5020, XH-YCD5021, XH-YCD5022, XH-YCD5023, XH-YCD5024, XH-YCD5025, XH-YCD5026, XH-YCD5027, XH-YCD5028, XH-YCD5029, XH-YCD5030, XH-YCD5031, XH-YCD5032, XH-YCD5033, XH-YCD5034, XH-YCD5035, XH-YCD5036, XH-YCD5037, XH-YCD5038, XH-YCD5039, XH-YCD5040	
Ratings	AC 12V, 50/60Hz, 24 W, IP 68, Class III, ta:25°C	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒ Testing Laboratory.....	Shenzhen AOCE Electronic Technology Service Co., Ltd	
Testing location/ address.....	Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China	
Tested by (name, function, signature).....	ZhiCong Xian Technical Engineer	<i>ZhiCong Xian</i>
Approved by (name, function, signature).....	Robin Liu Technical Manager	<i>Robin. Liu</i>
Testing procedure: CTF Stage 1:		
☐	N/A	
Testing location/ address		
Tested by (name, function, signature)		
Approved by (name, function, signature) ..		
Testing procedure: CTF Stage 2:		
☐	N/A	
Testing location/ address		
Tested by (name + signature).....		
Witnessed by (name, function, signature) .		
Approved by (name, function, signature) ..		
Testing procedure: CTF Stage 3:		
☐	N/A	
Testing procedure: CTF Stage 4:		
☐	N/A	
Testing location/ address		
Tested by (name, function, signature)		

Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
Supervised by (name, function, signature) :		
List of Attachments (including a total number of pages in each attachment):		
Attachment No.1: Photo document.		
Summary of testing:		
Tests performed (name of test and test clause): All tests are carried out on OUTDOOR MM-S24W	Testing location: Shenzhen AOCE Electronic Technology Service Co., Ltd Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China	
Summary of compliance with National Differences: N/A		

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.

**Remark:**

1. The marking of other models are identical with the marking of model OUTDOOR MM-S24W except model designation and rated power.
2. The above mark is the minimum requirements required by the safety standard. For the final production, the additional mark which do not give rise to misunderstanding may be added.
3. The size of marking 'Luminaires not suitable for covering with thermally insulating material' not less than 25mm each side.

Test item particulars..... :	
Classification of installation and use..... :	Immersed in water
Supply Connection	Supply cord
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement.....	P (Pass)
- test object does not meet the requirement.....	F (Fail)
Testing..... :	
Date of receipt of test item	2025-09-22
Date (s) of performance of tests	2025-09-22 to 2025-10-21
General remarks:	
The tested sample(s) and the sample information are provided by the client. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Note: EN Group Differences together with National Differences and Special National Conditions, if any, are in the Appendix to the main body of this TRF. Throughout this report a ☐ comma / ☒ point is used as the decimal separator. The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid. When determining for test conclusion, measurement uncertainty of tests has been considered. Clause numbers between brackets refer to clauses in EN 60598-1. Note: clauses marked “**” not included in CNAS scope.	
Manufacturer's Declaration per sub-clause 4.2.5 of ENEC 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 manufacturer

General product information:

- Immersed in water

Models description:

- Construction and circuit diagram are same for all models but appearance, size and rating are different.

IEC 60598-2-18			
Clause	Requirement + Test	Result - Remark	Verdict
18.2 (0)	GENERAL TEST REQUIREMENTS		N/A
18.2 (0.1)	Information for luminaire design considered	Yes ☐ No ☒ Lamp standard:	—
18.2 (0.3)	More sections applicable	Yes ☐ No ☒ Section/s:	—

18.4 (2)	CLASSIFICATION		P
18.4 (2.2)	Type of protection	Class III	P
18.4 (2.3)	Degree of protection	IP 68	P
18.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces	Yes ☒ No ☐	—
18.4 (2.5)	Luminaire for normal use	Yes ☒ No ☐	—
	Luminaire for rough service	Yes ☐ No ☐	—
18.4.1 (-)	Class III and external and internal voltages $\leq 12V$ AC or $\leq 30V$ DC	12 V	P
18.4.2 (-)	Degree of protection:		P
18.4.2.1 (-)	Parts in contact with water IP X8	IP 68	P
18.4.2.2 (-)	Parts not in contact with water at least IP 54		P
18.4.3 (-)	Classification of mounting, lamp changing and supply connection:		P
18.4.3.1 (-)	Category A. Supply connection and lamp replacement on the side not in contact with water ...:	Yes ☒ No ☐	—
18.4.3.2 (-)	Category B. Lamp replacement on the side in contact with water	Yes ☐ No ☒	—
18.4.3.3 (-)	Category C. Luminaire removed from water for lamp replacement	Yes ☐ No ☒	—

18.5 (3)	MARKING		P
18.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
18.5 (3.3)	Additional information		P
	Language of instructions		P
18.5 (3.3.1)	Combination luminaires		N/A
18.5 (3.3.2)	Nominal frequency in Hz		P

IEC 60598-2-18			
Clause	Requirement + Test	Result - Remark	Verdict
18.5 (3.3.3)	Operating temperature		N/A
18.5 (3.3.4)	Symbol or warning notice		N/A
18.5 (3.3.5)	Wiring diagram		N/A
18.5 (3.3.6)	Special conditions		N/A
18.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
18.5 (3.3.8)	Limitation for semi-luminaires		N/A
18.5 (3.3.9)	Power factor and supply current		N/A
18.5 (3.3.10)	Suitability for use indoors		N/A
18.5 (3.3.11)	Luminaires with remote control		N/A
18.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
18.5 (3.3.13)	Specifications of protective shields		N/A
18.5 (3.3.14)	Symbol for nature of supply		P
18.5 (3.3.15)	Rated current of socket outlet		N/A
18.5 (3.3.16)	Rough service luminaire		N/A
18.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		P
18.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
18.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
18.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
18.5 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		P
	Cautionary symbol		N/A
18.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
18.5 (3.4)	Test with water		P
	Test with hexane		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Legible after test		P
	Label attached		P
18.5.1 (-)	Marking of luminaires for use only in water		N/A
18.5.2 (-)	Marking of luminaires for use only with safety isolating transformer		N/A
	Output in voltamperes on the luminaire or in leaflet with the luminaire		N/A
18.5.3 (-)	Installation instructions with the luminaire		P
18.5.4 (-)	Instruction provide advice regard to corrosion		P
	Information of correct installation according EN 364-7-702		P

18.6 (4)	CONSTRUCTION		P
18.6 (4.2)	Components replaceable without difficulty		P
18.6 (4.3)	Wireways smooth and free from sharp edges		P
18.6 (4.4)	Lampholders		N/A
18.6 (4.4.1)	Integral lampholder		N/A
18.6 (4.4.2)	Wiring connection		N/A
18.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
18.6 (4.4.4)	Positioning		N/A
	- pressure test (N)		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N)		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
18.6 (4.4.5)	Peak pulse voltage		N/A
18.6 (4.4.6)	Centre contact		N/A
18.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
18.6 (4.4.8)	Lamp connectors		N/A

IEC 60598-2-18			
Clause	Requirement + Test	Result - Remark	Verdict
18.6 (4.4.9)	Caps and bases correctly used		N/A
18.6 (4.4.10)	Light source for lampholder or connection according EN 60061 not connected another way		N/A
18.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
18.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
18.6 (4.7)	Terminals and supply connections		P
18.6 (4.7.1)	Contact to metal parts		N/A
18.6 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
18.6 (4.7.3)	Terminals for supply conductors		P
18.6 (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
18.6 (4.7.4)	Terminals other than supply connection		N/A
18.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
18.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
18.6 (4.8)	Switches		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with EN 61058-1 for electronic switches		N/A

IEC 60598-2-18			
Clause	Requirement + Test	Result - Remark	Verdict
18.6 (4.9)	Insulating lining and sleeves		N/A
18.6 (4.9.1)	Retainment		N/A
	Method of fixing		N/A
18.6 (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
18.6 (4.10)	Double or reinforced insulation		N/A
18.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to EN 60384-14		N/A
18.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
18.6 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
18.6 (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 EN 60384-14		N/A
	Resistors comply with test (a) in 14.1 of EN 60065		N/A
18.6 (4.11)	Electrical connections and current-carrying parts		P

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Clause	Requirement + Test	Result - Remark	Verdict
18.6 (4.11.1)	Contact pressure		P
18.6 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
18.6 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
18.6 (4.11.4)	Material of current-carrying parts		P
18.6 (4.11.5)	No contact to wood or mounting surface		P
18.6 (4.11.6)	Electro-mechanical contact systems		N/A
18.6 (4.12)	Screws and connections (mechanical) and glands		P
18.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part	Fixed enclosure screw:0.5Nm	P
	Torque test: torque (Nm); part		N/A
	Torque test: torque (Nm); part		N/A
18.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
18.6 (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
18.6 (4.12.5)	Screwed glands; force (Nm)		N/A
18.6 (4.13)	Mechanical strength		P
18.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm).....		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- other parts; energy (Nm)		P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
18.6 (4.13.3)	Straight test finger		N/A
18.6 (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
18.6 (4.13.6)	Tumbling barrel		N/A
18.6 (4.14)	Suspensions, fixings and means of adjusting		P
18.6 (4.14.1)	Mechanical load:		N/A
	A) four times the weight		N/A
	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
18.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)		—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Bending moment (Nm) of semi-luminaire		N/A
18.6 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles		N/A
	- strands broken.....		N/A
	- electric strength test afterwards		N/A
18.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
18.6 (4.14.5)	Guide pulleys		N/A
18.6 (4.14.6)	Strain on socket-outlets		N/A
18.6 (4.15)	Flammable materials		N/A
	- glow-wire test 650°C	See Test Table 18.15 (13.3.2)	N/A
	- spacing ≥ 30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		N/A
	- thermal protection		N/A
	- electronic circuits exempted		N/A
18.6 (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
18.6 (4.16)	Luminaires for mounting on normally flammable surfaces		N/A
	No lamp control gear	(compliance with Section 12)	P
18.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
18.6 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
18.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
18.6 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
18.6 (4.18)	Resistance to corrosion		P
18.6 (4.18.1)	- rust-resistance		N/A
18.6 (4.18.2)	- season cracking in copper		N/A
18.6 (4.18.3)	- corrosion of aluminium		P
18.6 (4.19)	Igniters compatible with ballast		N/A
18.6 4.20)	Rough service vibration		N/A
18.6 (4.21)	Protective shield		N/A
18.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
18.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
18.6 (4.21.3)	No direct path		N/A
18.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment.....:	See Test Table 18.15 (13.3.2)	N/A
18.6 (4.22)	Attachments to lamps not cause overheating or damage		P
18.6 (4.23)	Semi-luminaires comply Class II		N/A
18.6 (4.24)	Photobiological hazards		N/A
18.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
18.6 (4.24.2)	Retinal blue light hazard		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Class of risk group assessed according to EN/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 EN/TR 62778		N/A
	Portable luminaires for childrEN EN 60598-2-10 and Mains socket outlet nightlights EN 60598-2-12 not exceed RG1 at 200 mm according to EN/62778		N/A
18.6 (4.25)	Mechanical hazard		P
	No sharp point or edges		P
18.6 (4.26)	Short-circuit protection		N/A
18.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
18.6 (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
18.6 (4.27)	Terminal blocks with integrated screwless earthing contacts		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
18.6 (4.28)	Fixing of thermal sensing control		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C):		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
18.6 (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
18.6 (4.30)	Luminaires with non-user replaceable light source		P
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	Minimum two fixing means		P
18.6 (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
18.6 (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
	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

IEC 60598-2-18			
Clause	Requirement + Test	Result - Remark	Verdict
	Plugs and socket-outlets does not have protective conductor contact		N/A
18.6 (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 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
18.6 (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
18.6 (4.32)	Overvoltage protective devices		N/A
	Comply with EN 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
18.6.1 (-)	Impact test with the energy 0,7 Nm of parts in contact with water		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

18.6.2 (-)	Corrosion test of parts in contact with water		N/A
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18.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
18.7(11.2)	Creepage distances and clearances	See Table 18.7 (11.2)	P
	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1)	Category II ☒ Category III ☐	—

18.9 (14)	SCREW TERMINALS		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	N/A
18.9.1 (-)	Allow conductors 1,5 – 4 mm ²		N/A

18.9 (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
18.9.1 (-)	Allow conductors 1,5 – 4 mm ²		N/A

18.10 (5)	EXTERNAL AND INTERNAL WIRING		P
18.10 (5.2)	Supply connection and external wiring		P
18.10 (5.2.1)	Means of connection		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
18.10 (5.2.2)	Type of cable		P
	Nominal cross-sectional area (mm ²).....		P
	Cables equal to EN 60227 or EN 60245		P
18.10 (5.2.3)	Type of attachment, X, Y or Z		P
18.10 (5.2.5)	Type Z not connected to screws		N/A
18.10 (5.2.6)	Cable entries:		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- suitable for introduction		P
	- adequate degree of protection		P
18.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
18.10 (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
18.10 (5.2.9)	Locking of screwed bushings		N/A
18.10 (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
18.10 (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
18.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		P
18.10 (5.2.10.3)	Tests:		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N)		P
	- torque test: torque (Nm)		P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		N/A
18.10 (5.2.11)	External wiring passing into luminaire		P
18.10 (5.2.12)	Looping-in terminals		N/A
18.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P
18.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
18.10 (5.2.16)	Appliance inlets (EN 60320)		N/A
	Installation couplers (EN 61535)		N/A
	Other appliance inlet or connector according relevant EN standard		N/A
18.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
18.10 (5.2.18)	Used plug in accordance with		N/A
	- EN 60083		N/A
	- other standard		N/A
18.10 (5.3)	Internal wiring		P
18.10 (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

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Clause	Requirement + Test	Result - Remark	Verdict
	- socket outlet loaded (A).....:		N/A
	- temperatures:	(see Annex 2)	N/A
	Green-yellow for earth only		N/A
18.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm ²).....:		P
	Insulation thickness		P
	Extra insulation added where necessary		N/A
18.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Adequate cross-sectional area and insulation thickness		N/A
18.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
18.10 (5.3.1.4)	Conductors without insulation		N/A
18.10 (5.3.1.5)	SELV current-carrying parts		P
18.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
18.10 (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
18.10 (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
18.10 (5.3.4)	Joints and junctions effectively insulated		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
18.10 (5.3.5)	Strain on internal wiring		N/A
18.10 (5.3.6)	Wire carriers		N/A
18.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P
18.10.1 (-)	Not connecting leads (tails)		P
18.10.2 (-)	No switches in flexible cables or cords		P
18.10.3 (-)	Conductors in external cables or cords not less than (mm ²) :	2×1.5mm ²	P
18.10.4 (-)	Provided with non-detachable flexible cable or cord at least equivalent to 60245 EN 57 in category B luminaire		N/A
18.10.5 (-)	Any non-detachable flexible cable or cord at least equivalent to 60245 EN 57 in category C luminaire		N/A

18.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
18.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		N/A
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		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		N/A
	Double-ended high pressure discharge lamp		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
18.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
18.11 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
18.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
18.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		P
	Ordinary luminaire:		N/A
	- voltage under load (V)		N/A
	- no-load voltage (V)		N/A
	- touch current if applicable (mA)		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		P
	- nominal voltage (V)		P
	Class III luminaire only for connection to SELV		P
	Class III luminaire not provided with means for protective earthing		N/A
18.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
18.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
18.11 (8.2.6)	Covers reliably secured		P
18.11 (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

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Clause	Requirement + Test	Result - Remark	Verdict
	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

18.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
18.12 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 18.13		—
18.12 (12.3)	Endurance test:		P
	- mounting-position		—
	- test temperature (°C)		—
	- total duration (h)		—
	- supply voltage: Un factor; calculated voltage (V) ...		—
	- lamp used		—
18.12 (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
18.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
18.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
18.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
18.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)		—
	- case of abnormal conditions.....		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un		—
	- measured mounting surface temperature (°C) at 1,1 Un		N/A
	- calculated mounting surface temperature (°C)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- track-mounted luminaires		N/A
18.12 (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
18.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
18.12 (12.7.1)	Luminaire without temperature sensing control		N/A
18.12 (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 Table 18.15 (13.2.1)	N/A
18.12 (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.....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un.....:		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test.....:	See Table 18.15 (13.2.1)	N/A
18.12 (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
18.12 (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 Table 18.15 (13.2.1)	N/A
18.12.1 (-)	Luminaire mounted for most unfavourable temperature		N/A

18.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
18.13 (-)	If IP > IP 20 the order of tests as specified in clause 18.12		—
18.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP	IP68	—
	- mounting position during test		—
	- fixing screws tightened; torque (Nm).....:		—
	- tests according to clauses		—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P

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Clause	Requirement + Test	Result - Remark	Verdict
	c.1) For luminaires without drain holes – no water entry		P
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire		P
	e) no contact with live parts (IP 2X)		N/A
	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		P
	g) no damage of protective shield or glass envelope		N/A
18.13 (9.3)	Humidity test 48 h	25°C, 93%	P
18.13.1 (-)	Thermal shock test precede those of (9)		—
18.13 (-)	Dismantled and reassembled before tests of (9)		—

18.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
18.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø		—
	Insulation resistance (MΩ)		—
	SELV		P
	- between current-carrying parts of different polarity :	>100MΩ	P
	- between current-carrying parts and mounting surface	>100MΩ	P
	- between current-carrying parts and metal parts of the luminaire	>100MΩ	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		P
	- Insulation bushings as described in Section 5		N/A
	Other than SELV		N/A
	- between live parts of different polarity		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- between live parts and mounting surface.....:		N/A
	- between live parts and metal parts.....:		N/A
	- 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
18.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V)		N/A
	SELV		P
	- between current-carrying parts of different polarity :	500V	P
	- between current-carrying parts and mounting surface	500V	P
	- between current-carrying parts and metal parts of the luminaire	500V	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5		N/A
	Other than SELV		N/A
	- between live parts of different polarity.....:		N/A
	- between live parts and mounting surface.....:		N/A
	- between live parts and metal parts.....:		N/A
	- 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
18.14 (10.3)	Touch current or protective conductor current (mA):		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

18.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		N/A
18.15 (13.2.1)	Ball-pressure test.....:	See Test Table 18.15 (13.2.1)	N/A
18.15 (13.3.1)	Needle-flame test (10 s)	See Test Table 18.15 (13.3.1)	N/A
18.15 (13.3.2)	Glow-wire test (650°C)	See Test Table 18.15 (13.3.2)	N/A
18.15 (13.4)	Proof tracking test (EN 60112)	See Test Table 18.15 (13.4)	N/A

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Clause	Requirement + Test				Result - Remark		Verdict
18.7 (11.2)	TABLE: Creepage distances and clearances (SELV 12V, no required)						P
	Minimum distances (mm) for a.c. (50/60 Hz) sinusoidal voltages						N/A
	Applicable part of EN 60598-1 Table 11.1* and 11.2*						N/A
	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	-	-	-	-	-	-	-
Working voltage (V)					-		—
PTI					< 600 ☐ ≥ 600 ☐		—
Pulse voltage if applicable (kV)							—
Supplementary information:							
Distance 2:	-	-	-	-	-	-	-
Working voltage (V)					-		—
PTI					< 600 ☐ ≥ 600 ☐		—
Pulse voltage if applicable (kV)							—
Supplementary information:							
Distance 3:	-	-	-	-	-	-	-
Working voltage (V)					-		—
PTI					< 600 ☐ ≥ 600 ☐		—
Pulse voltage if applicable (kV)							—
Supplementary information:							

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

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Clause	Requirement + Test	Result - Remark	Verdict

18.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			N/A
Allowed impression diameter (mm) :				—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Supplementary information:				

18.15 (13.3.1)	TABLE: Needle-flame test (EN 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:					

18.15 (13.3.2)	TABLE: Glow-wire test (EN 60695-2-11)				N/A
Glow wire temperature		650°C			—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict	
Any flame or glowing of the sample extinguished within 30 s of withdrawing the glow-wire, and any burning or molten drop did not ignite the underlying parts (Yes/No)					
Supplementary information:					

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Clause	Requirement + Test			Result - Remark	Verdict
18.15 (13.4)	TABLE: Proof tracking test (EN 60112)				N/A
Test voltage PTI		175 V			—
Object/ Part No./ Material		Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens		Verdict
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1 TABLE: Critical components information						P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹
Lens	C	DONGGUAN THAILIGHT SEMICONDUCTOR LIGHTING CO LTD	TL-CLF150HXYZ	CCT: 6500 Max. IF: 500mA Max. VF: 3.2V Max.	EN 62031	Tested with appliance
PCB	C	ANHUI HONGXIN ELECTRONIC TECHNOLOGY CO LTD	HX-03	V-0	--	Tested with appliance (UL E468758)
Supplementary information: ¹) Provided evidence ensures the agreed level of compliance. See OD-CB2039. The codes above have the following meaning: A - The component is replaceable with another one, also certified, with equivalent characteristics B - The component is replaceable if authorised by the test house C - Integrated component tested together with the appliance D - Alternative component						

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12			P			
	Type reference.....:	OUTDOOR MM-S24W		—			
	Lamp used	LED		—			
	Lamp control gear used	-		—			
	Mounting position of luminaire	Normal mounting		—			
	Supply wattage (W)	35W		—			
	Supply current (A).....:	-		—			
	Calculated power factor	-		—			
	Table: measured temperatures corrected for ta = 45 °C:						
	- abnormal operating mode	-		—			
	- test 1: rated voltage	-		—			
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	12V×1.06		—			
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	-		—			
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage	-		—			
	Through wiring or looping-in wiring loaded by a current of A during the test	-		—			
Temperature measurements, (°C)							
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Mounting surface	45	-	51.2	-	90	-	-
Light subject	45	-	59.1	-	90	-	-
Supply cord	45	-	47.5	-	90	-	-
Supplementary information:							

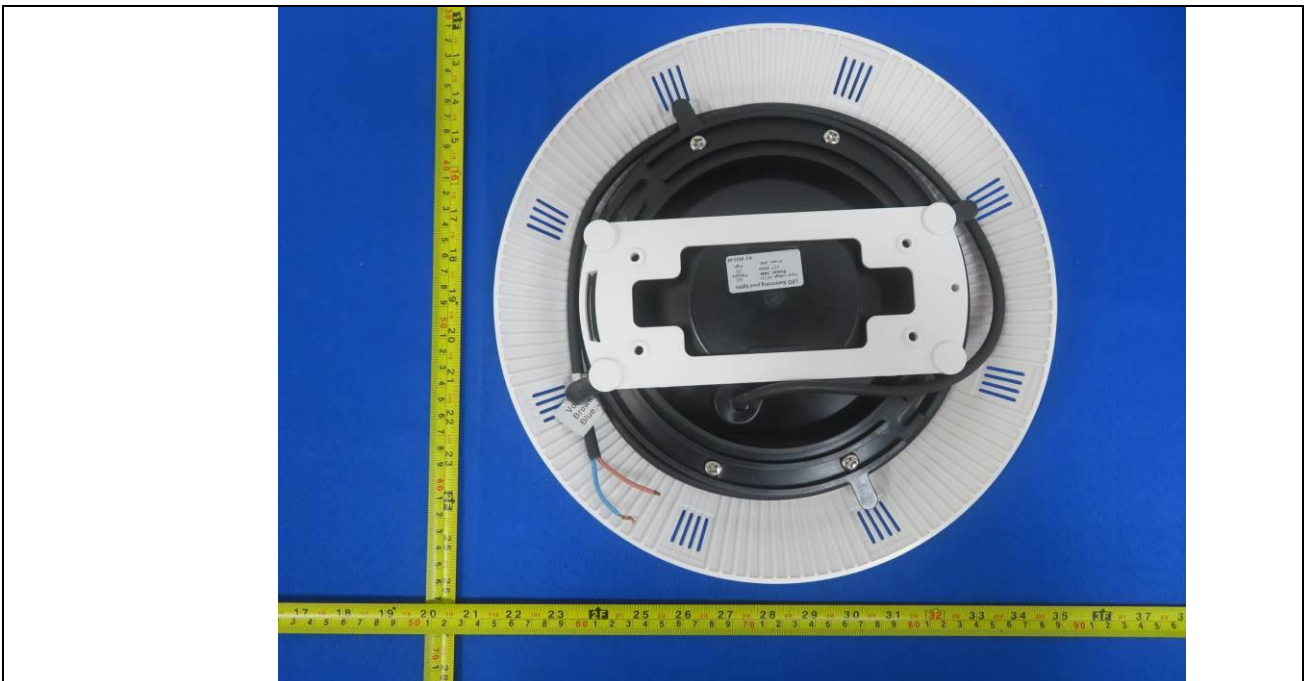
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Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 3	Screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		N/A
(14.2)	Type of terminal		—
	Rated current (A)		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (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

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Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 4	Screwless terminals (part of the luminaire)		N/A
(15)	SCREWLESS TERMINALS		N/A
(15.2)	Type of terminal		—
	Rated current (A)		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples)		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples)		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
(15.6)	Terminals and connections for external wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
(15.6.1)	Conductors		N/A
	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 EN 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)										N/A
	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)										N/A
	Voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										N/A
	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)										N/A
	Continued ageing: voltage drop after 50th alt. 100th cycle									N/A

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Clause	Requirement + Test					Result - Remark				Verdict
	Max. allowed voltage drop (mV) :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										N/A
										N/A
Supplementary information:										

Attachment No.1**Product Photos**Details of: Fig.1Details of: Fig.2**-- End of Report --**