Test Report issued under the responsibility of:

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

Report Number.....:	AOC250616004S
Date of issue.....:	2025-06-20
Total number of pages.....:	90 pages
Name of Testing Laboratory preparing the Report.....:	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
Applicant's name.....:	Shenzhen Chongsheng Technology Co., Ltd.
Address.....:	Room 501, Building C, Jingchengda Industrial Park, Keji 4th Road, Tangtou Community, Shiyan Street, Bao'an District, Shenzhen
Test specification:	
Standard.....:	☒ IEC 60598-2-4:2017 ☒ IEC 60598-1:2020 ☒ Japan National Differences
Test procedure.....:	Type testing
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60598_2_4H
Test Report Form(s) Originator.....:	UL(US)
Master TRF.....:	2020-02-14

General disclaimer:

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Test item description.....:	Night Light
Trade Mark.....:	N/A
Manufacturer.....:	Shenzhen Chongsheng Technology Co., Ltd. Room 501, Building C, Jingchengda Industrial Park, Keji 4th Road, Tangtou Community, Shiyan Street, Bao'an District, Shenzhen
Model/Type reference.....:	N132C, N131, N132, N211-M, N212-M, N213-M, N311-A, N312-A, N313-A, N314-A
Ratings.....:	100-240 V, 50/60 Hz, 1.6 W, Class II, IP 20, ta: 25℃

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	ZhiCong X
Approved by (name, function, signature)...:		Robin Liu Technical Manager	Robin.
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address.....:			
Tested by (name, function, signature).....:			
Approved by (name, function, signature)...:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address.....:			
Tested by (name + signature).....:			
Witnessed by (name, function, signature)..:			
Approved by (name, function, signature)...:			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
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: Japan National Differences
Attachment No.2: Clause 13 of IEC 62031:2018
Attachment No.3: IEC TR 62778:2014
Attachment No.4: Photo document.

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
- J60598-1(H29) - J60598-2-4(H29) - IEC TR 62778:2014	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 (List of countries addressed):

Japan National Differences

☒ **The product fulfils the requirements of** J60598-1(H29) & J60598-2-4(H29)

Statement concerning the uncertainty of the measurement systems used for the tests

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title: N/A

☒ **Statement not required by the standard used for type testing**

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.

Night Light
N132C
100-240 V, 50/60 Hz, 1.6 W

Shenzhen Chongsheng Technology Co., Ltd.

Made in China

Test item particulars..... :	
Classification of installation and use.....:	Portable luminaires
Supply Connection.....:	-
.....:	
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.....:	2025-06-03
Date (s) of performance of tests.....:	2025-06-03 to 2025-06-20

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: 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 IEC 60598-1.

Note: clauses marked '*' not included in CNAS scope.

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 manufacturer

General product information and other remarks:

- Portable luminaires.
- All models have the same electrical and mechanical structure, if no specially description, all test were carry out on model N132C.

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.4 (0)	**GENERAL TEST REQUIREMENTS**		P
4.4 (0.3)	More sections applicable.....:	Yes ☐ No ☒ Section/s:	—
4.4 (0.7)	**Information for luminaire design in light sources standards**		—
4.4 (0.7.2)	Light source safety standard ..... :		—
	Luminaire design in the light source safety standard		P
4.5 (2)	**CLASSIFICATION OF LUMINAIRES**		P
4.5 (2.2)	Type of protection .....:	Class II	P
4.5 (2.3)	Degree of protection.....:	IP 20	P
4.5 (2.5)	Luminaire for normal use ..... :	Yes ☒ No ☐	—
	Luminaire for rough service ..... :	Yes ☐ No ☒	—
4.5.1 (-)	Ordinary luminaire.....:	Yes ☒ No ☐	—
4.5.2 (-)	Portable luminaire for outdoor use.....:	Yes ☐ No ☒	—
	Classified IPX4 or higher		N/A
4.5.3 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces.....:	Yes ☒ No ☐	—
4.6 (3)	**MARKING**		P
4.6 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
4.6 (3.3)	Additional information		P
	Language of instructions		P
4.6 (3.3.1)	Combination luminaires		N/A
4.6 (3.3.2)	Nominal frequency in Hz		P
4.6 (3.3.3)	Operating temperature		N/A
4.6 (3.3.5)	Wiring diagram		N/A
4.6 (3.3.6)	Special conditions		N/A
4.6 (3.3.7)	Metal halide lamp luminaire – warning		N/A
4.6 (3.3.8)	Limitation for semi-luminaires		N/A
4.6 (3.3.9)	Power factor and supply current		N/A
4.6 (3.3.10)	Suitability for use indoors		P
4.6 (3.3.11)	Luminaires with remote control		N/A

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.6 (3.3.12)	Clip-mounted luminaire – warning		N/A
4.6 (3.3.13)	Specifications of protective shields		N/A
4.6 (3.3.14)	Symbol for nature of supply		P
4.6 (3.3.15)	Rated current of socket outlet		N/A
4.6 (3.3.16)	Rough service luminaire		N/A
4.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		N/A
4.6 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
4.6 (3.3.19)	Protective conductor current in instructions, if applicable		N/A
4.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
4.6 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		P
	Cautionary symbol		N/A
4.6 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
4.6 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A
4.6 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
4.6 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
4.6.1 (-)	Luminaire not suitable for outdoor application		N/A
	Required symbol		N/A
	Information in the instructions		N/A
4.6.2 (-)	Outdoor use, socket outlet incorporated in the luminaire		N/A
	Maximum power rating marked		N/A
	Position of the marking		N/A
4.7 (4)	**CONSTRUCTION**		**P**
4.7 (4.2)	Components replaceable without difficulty		P

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.7 (4.3)	Wireways smooth and free from sharp edges		P
4.7 (4.4)	**Lampholders**		N/A
4.7 (4.4.1)	Integral lampholder		N/A
4.7 (4.4.2)	Wiring connection		N/A
4.7 (4.4.3)	Lampholder for end-to-end mounting		N/A
4.7 (4.4.4)	Positioning		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
4.7 (4.4.5)	Peak pulse voltage		N/A
4.7 (4.4.6)	Centre contact		N/A
4.7 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
4.7 (4.4.8)	Lamp connectors		N/A
4.7 (4.4.9)	Caps and bases correctly used		N/A
4.7 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
4.7 (4.5)	**Starter holders**		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
4.7 (4.6)	**Terminal blocks**		N/A
	Tails		N/A
	Unsecured blocks		N/A
4.7 (4.7)	**Terminals and supply connections**		N/A
4.7 (4.7.1)	Contact to metal parts		N/A
4.7 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
4.7 (4.7.3)	Terminals for supply conductors		N/A

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.7 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
4.7 (4.7.4)	Terminals other than supply connection		N/A
4.7 (4.7.5)	Heat-resistant wiring/sleeves		N/A
4.7 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
4.7 (4.8)	**Switches**		**P**
	- adequate rating		P
	- adequate fixing		P
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		P
4.7 (4.9)	**Insulating lining and sleeves**		N/A
4.7 (4.9.1)	Retainment		N/A
	Method of fixing.....:		N/A
4.7 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C).....:		N/A
4.7 (4.10)	**Double or reinforced insulation**		P
4.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.7 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
4.7 (4.10.3)	Retainment of insulation:		P
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
4.7 (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
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
4.7 (4.11)	**Electrical connections and current-carrying parts**		**P**
4.7 (4.11.1)	Contact pressure		P
4.7 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
4.7 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
4.7 (4.11.4)	Material of current-carrying parts		P
4.7 (4.11.5)	No contact to wood or mounting surface		P
4.7 (4.11.6)	Electro-mechanical contact systems		N/A
4.7 (4.12)	**Screws and connections (mechanical) and glands**		N/A
4.7 (4.12.1)	Screws not made of soft metal		N/A
	Screws of insulating material		N/A
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A
4.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
4.7 (4.12.4)	Locked connections:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- fixed arms; torque (Nm)..... :		N/A
	- lampholder; torque (Nm)..... :		N/A
	- push-button switches; torque 0,8 Nm..... :		N/A
4.7 (4.12.5)	Screwed glands; force (Nm)..... :		N/A
4.7 (4.13)	**Mechanical strength**		**P**
4.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)..... :		N/A
	- other parts; energy (Nm)..... :		P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
4.7 (4.13.3)	Straight test finger		N/A
4.7 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
4.7 (4.13.6)	Tumbling barrel		N/A
4.7 (4.14)	**Suspensions, fixings and means of adjusting**		N/A
4.7 (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) ..... :		—
	Metal rod. diameter (mm) ..... :		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
4.7 (4.14.2)	Load to flexible cables		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Mass (kg) ..... :		—
	Stress in conductors (N/mm²) ..... :		N/A
	Mass (kg) of semi-luminaire ..... :		N/A
	Bending moment (Nm) of semi-luminaire ..... :		N/A
4.7 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles..... :		N/A
	- strands broken..... :		N/A
	- electric strength test afterwards		N/A
4.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
4.7 (4.14.5)	Guide pulleys		N/A
4.7 (4.14.6)	Strain on socket-outlets		N/A
4.7 (4.15)	**Flammable materials**		**P**
	- glow-wire test 650°C..... :	See Test Table 4.15 (13.3.2)	N/A
	- spacing ≥30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
4.7 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
4.7 (4.16)	**Luminaires for mounting on normally flammable surfaces**		**P**
	No lamp control gear..... :	(compliance with Section 12)	N/A
4.7 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
4.7 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
4.7 (4.16.3)	Design to satisfy the test of 12.6.....:	(see clause 12.6)	N/A
4.7 (4.17)	**Drain holes**		N/A
	Clearance at least 5 mm		N/A
4.7 (4.18)	**Resistance to corrosion**		N/A
4.7 (4.18.1)	- rust- resistance		N/A
4.7 (4.18.2)	- season cracking in copper		N/A
4.7 (4.18.3)	- corrosion of aluminium		N/A
4.7 (4.19)	Ignitors compatible with ballast		N/A
4.7 (4.20)	Rough service vibration		N/A
4.7 (4.21)	**Protective shield**		N/A
4.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
4.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
4.7 (4.21.3)	No direct path		N/A
4.7 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment.....:	See Test Table 4.15 (13.3.2)	N/A
4.7 (4.22)	Attachments to lamps not cause overheating or damage		N/A
4.7 (4.23)	Semi-luminaires comply Class II		N/A
4.7 (4.24)	**Photobiological hazards**		N/A
4.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
4.7 (4.24.2)	Retinal blue light hazard		N/A
	Class of risk group assessed according to IEC/TR 62778 .....:		—
	Luminaires with E_{thr} :		N/A
	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2... :		N/A
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
4.7 (4.25)	**Mechanical hazard**		**P**
	No sharp point or edges		P
4.7 (4.26)	**Short-circuit protection**		N/A
4.7 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
4.7 (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
4.7 (4.27)	**Terminal blocks with integrated screwless earthing contacts**		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
4.7 (4.28)	**Fixing of thermal sensing control**		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C) .....:		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
4.7 (4.29)	**Luminaires with non-replaceable light source**		P
	Not possible to replace light source		P

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
	Live part not accessible after parts have been opened by hand or tools		P
4.7 (4.30)	**Luminaires with non-user replaceable light source**		N/A
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	Minimum two fixing means		N/A
4.7 (4.31)	**Insulation between circuits**		P
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
4.7 (4.31.2)	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
4.7 (4.31.3)	Other circuits		P
	Other circuits insulated from accessible parts according Table X.1		P
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- 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

IEC 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
	- slave luminaire constructed as class I		N/A
4.7 (4.32)	**Overvoltage protective devices**		N/A
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
4.7.1 (-)	Insulation not damaged when moving, adjusting or placing on support		P
4.7.2 (-)	Wiring fixed, to avoid rubbing		P
	Carrier or clips of insulation material or with insulating lining		P
4.7.3 (-)	Luminaire not overturn at angle 6°		P
	Outdoor use luminaire not overturn at an angle 15°		N/A
4.7.4 (-)	Candlestick luminaires with E5 or E10 lampholders provided with a switch		N/A
	Switch part of the luminaire or within 300 mm of the luminaire if with cord		N/A
4.7.5 (-)	Voltage not exceeding 25 V for E5 lampholders		N/A
	E10 lampholder voltage:		N/A
	- not exceeding 60 V for series connection) or		N/A
	- not exceeding 250 V for parallel connections		N/A
	Maximum rated wattage not exceed 100 W		N/A
4.7.6 (-)	Portable luminaires for outdoor use tails not provided		P
4.7.7 (-)	Portable luminaires for outdoor use, cable entries		N/A
4.7.8 (-)	Portable luminaires for outdoor use, socket-outlet degree of protection at least same as the luminaire but not less than IPX4.		P
	Degree of protection maintained with or without a plug inserted into the socket-outlet.		N/A
	Class II luminaires, mains socket-outlets comply with the standard and only allow connection to Class II luminaires		N/A
	Class I luminaires, mains socket-outlets comply with the standard and only allow connection to Class I or Class II luminaires		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.9 (-)	Portable luminaires for outdoor use, lampholders and plugs are of material resistant to tracking		N/A
	Compliance to clause 13.4		N/A
4.8 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		P
	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1).....:	Category II ☒ Category III ☐	—
4.8 (11.2.1)	Category III according Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
4.7 (11.2.2)	Creepage distances for frequency up to 30 kHz..... :	See Test Table 4.7 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{UOUT} according IEC 61347-1, clause 7.1, item w).....:	See Test Table 4.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347..... :	See Test Table 4.7 (11.2) II	N/A
4.7 (11.2.3)	Clearances for frequency up to 30 kHz.....:	See Test Table 4.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P..... :	See Test Table 4.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347..... :	See Test Table 4.7 (11.2) II	N/A
4.9 (7)	**PROVISION FOR EARTHING**		N/A
4.9 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 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
4.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
4.9 (7.2.4)	Locking of clamping means		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Compliance with 4.7.3		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
4.9 (7.2.5)	Earth terminal integral part of connector socket		N/A
4.9 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
4.9 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
4.9 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
4.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
4.9 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A
4.10 (14)	**SCREW TERMINALS**		N/A
	Separately approved; component list.....:	(see Annex 1)	N/A
	Part of the luminaire.....:	(see Annex 3)	N/A
4.10 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		N/A
	Separately approved; component list.....:	(see Annex 1)	N/A
	Part of the luminaire.....:	(see Annex 4)	N/A
4.11 (5)	**EXTERNAL AND INTERNAL WIRING**		N/A
4.11 (5.2)	**Supply connection and external wiring**		N/A
4.11 (5.2.1)	Means of connection.....:		N/A
	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
4.11 (5.2.2)	Type of cable.....:		N/A
	Nominal cross-sectional area (mm²)..... :		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
4.11 (5.2.3)	Type of attachment, X, Y or Z.....:		N/A
4.11 (5.2.5)	Type Z not connected to screws		N/A
4.11 (5.2.6)	Cable entries:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- suitable for introduction		N/A
	- adequate degree of protection		N/A
4.11 (5.2.7)	Cable entries through rigid material have rounded edges		N/A
4.11 (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
4.11 (5.2.9)	Locking of screwed bushings		N/A
4.11 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion		N/A
	- clear how to be effective		N/A
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
4.11 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
4.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
4.11 (5.2.10.3)	Tests:		N/A
	- impossible to push cable; unsafe		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- pull test: 25 times; pull (N)..... :		N/A
	- torque test: torque (Nm)..... :		N/A
	- displacement ≤ 2 mm		N/A
	- no movement of conductors		N/A
	- no damage of cable or cord		N/A
	- function independent of electrical connection		N/A
4.11 (5.2.11)	External wiring passing into luminaire		N/A
4.11 (5.2.12)	Looping-in terminals		N/A
4.11 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
4.11 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
4.11 (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
4.11 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
4.11 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
4.11 (5.3)	**Internal wiring**		**P**
4.11 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A)..... :		N/A
	- temperatures..... :	(see Annex 2)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Green- yellow for earth only		N/A
4.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²)..... :		P
	Insulation thickness		P
	Extra insulation added where necessary		N/A
4.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm²)..... :		N/A
4.11 (5.3.1.3)	Double or reinforced insulation for class II		N/A
4.11 (5.3.1.4)	Conductors without insulation		N/A
4.11 (5.3.1.5)	SELV current-carrying parts		N/A
4.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
4.11 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
4.11 (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
4.11 (5.3.4)	Joints and junctions effectively insulated		N/A
4.11 (5.3.5)	Strain on internal wiring		N/A
4.11 (5.3.6)	Wire carriers		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.11 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
4.11 (5.4)	**Test to determine suitability of conductors having a reduced cross-sectional area**		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A
	No damage to luminaire wiring after test		N/A
4.11.1 (-)	Indoor use luminaire The requirement of one part of cord anchorage to be fixed to the luminaire not applied for table lamps of glass or ceramic		—
4.11.2 (-)	Class I and class II indoor use Luminaire with a mass less than 1 kg the current ≤ 2,5 A and cable ≤ 2 m and conductor ≥ 0,5 mm²		N/A
4.11.3 (-)	Terminals, a cord anchorage and an inlet opening for the proper connection of the flexible cable or cord if for outdoor use and delivered without a flexible cable or cord and a plug.		N/A
4.11.4 (-)	Portable luminaires for outdoor use Insulation class I and class II, non-detachable flexible cables or cords at least type 245 IEC 57.		N/A
4.12 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		P
4.12 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		P
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		N/A
	Lamp and starter holders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Double-ended high pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
4.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
4.12 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
4.12 (8.2.3.b)	BC lampholder of metal in class I luminaires is earthed		N/A
4.12 (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
	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
4.12 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
4.12 (8.2.5)	Compliance with the standard test finger or relevant probe		N/A
4.12 (8.2.6)	Covers reliably secured		P
4.12 (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

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Clause	Requirement + Test	Result - Remark	Verdict
	Other luminaires with capacitor > 0,1 μF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A
4.12. (-)	Class I luminaire with bayonet lampholder:		N/A
	1) cap not accessible with test finger		N/A
	2) metal lampholder is earthed		N/A
4.13 (12)	**ENDURANCE TEST AND THERMAL TEST**		**P**
4.13 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) specified in 4.13		—
4.13 (12.2)	**Selection of lamps and ballasts**		**—**
	Lamp used according Annex B.....:	See Annex 2 for lamp used	—
	Controlgear if separate and not supplied.....:	See Annex 2 for controlgear used	—
4.13 (12.3)	Endurance test:		P
	a) mounting-position.....:	Normal mounting	—
	b) test temperature (°C).....:	35 °C	—
	c) total duration (h).....:	240 h	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A) .....:	1.06×100 V	—
	e) luminaire ceases to operate		—
4.13 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
4.13 (12.4)	**Thermal test (normal operation)**.....:	(see Annex 2)	**P**
4.13 (12.5)	**Thermal test (abnormal operation)**.....:	(see Annex 2)	N/A
4.13 (12.6)	**Thermal test (failed lamp control gear condition):**		N/A
4.13 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) .....:		—
	- case of abnormal conditions.....:		—
	- electronic lamp control gear		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured mounting surface temperature (°C) at 1,1 Un.....:		N/A
	- calculated mounting surface temperature (°C) .....:		N/A
	- track-mounted luminaires		N/A
4.13 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions.....:		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C).....:		N/A
	- track-mounted luminaires		N/A
4.13 (12.7)	**Thermal test (failed lamp control gear in plastic luminaires):**		N/A
4.13 (12.7.1)	Luminaire without temperature sensing control		N/A
4.13 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W .....:		—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions.....:		—
	- Ballast failure at supply voltage (V) .....:		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions.....:		—
	- measured winding temperature (°C): at 1,1 Un.....:		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un..... :		—
	- calculated temperature of fixing point/exposed part (°C).....:		—
	Ball-pressure test.....:	See Table 4.15 (13.2.1)	N/A
4.13 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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 4.15 (13.2.1)	N/A
4.13 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions.....:		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
4.13 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link.....:	Yes ☐ No ☐	—
	- 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 4.15 (13.2.1)	N/A
4.13 (-)	Indoor use luminaire, Test overturned position (overturns < 15°)		P
4.14 (9)	**RESISTANCE TO DUST AND MOISTURE**		P
4.14 (-)	If IP > IP 20 the order of tests as specified in clause 4.12		N/A
4.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP.....:	IP 20	—
	- mounting position during test.....:	As normal used	—
	- fixing screws tightened; torque (Nm).....:		—
	- tests according to clauses.....:		—
	- electric strength test afterwards		N/A
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust- tight luminaire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
4.14 (9.3)	Humidity test 48 h		P
4.14 (-)	Portable luminaire for outdoor use tested in the most unfavourable of the overturned positions likely to occur		P
4.15 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
4.15 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø .....:		—
	Insulation resistance (MΩ)..... :		—
	SELV		P
	- between current-carrying parts of different polarity :	100 MΩ > 1 MΩ	P
	- between current-carrying parts and mounting surface.....:	100 MΩ > 1 MΩ	P
	- 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 > 2 MΩ	P
	- between live parts and mounting surface.....:	100 MΩ > 4 MΩ	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
4.15 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V)..... :		N/A
	SELV		P
	- between current-carrying parts of different polarity :	500 V	P
	- between current-carrying parts and mounting surface..... :	500 V	P
	- 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..... :	1480 V	P
	- between live parts and mounting surface..... :	2960 V	P
	- 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
4.15 (10.3)	Touch current or protective conductor current (mA).:	Touch current: 0.02mA	P
4.16 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		**P**
4.16 (13.2.1)	Ball-pressure test..... :	See Test Table 4.15 (13.2.1)	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.16 (13.3.1)	Needle-flame test (10 s)....:	See Test Table 4.15 (13.3.1)	P
4.16 (13.3.2)	Glow- wire test (650°C)....:	See Test Table 4.15 (13.3.2)	N/A
4.16 (13.4)	Proof tracking test (IEC 60112)....:	See Test Table 4.15 (13.4)	N/A

4.7 (11.2)	**TABLE I: Creepage distances and clearances**						**P**
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						**P**
	Applicable part of IEC 60598-1 Table 11.1A*, 11.1B* and 11.2*						**P**
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**	
			clearance	***Table**		**creepage**	***Table**
Distance 1:	-	-	-	-	-	-	-
Working voltage (V)....:					100 Vdc no request		—
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 IEC 60598-1 Annex M.							

4.7 (11.2)	**TABLE II: Creepage distances and clearances**	**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict

Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages							
Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2							
Distances	**Insulation type ****	**Measured clearance**	**Required**		**Measured creepage**	**Required**	
			clearance	***Table**		**creepage**	***Table**
Distance 1:							
Working voltage (V)..... :							—
Frequency if applicable (kHz)..... :							—
PTI..... :					< 600 ☐	≥ 600 ☐	—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :							—
Supplementary information:							
Distance 2:							
Working voltage (V)..... :							—
Frequency if applicable (kHz)..... :							—
PTI..... :					< 600 ☐	≥ 600 ☐	—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :							—
Supplementary information:							
Distance 3:							
Working voltage (V)..... :							—
Frequency if applicable (kHz)..... :							—
PTI..... :					< 600 ☐	≥ 600 ☐	—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :							—
Supplementary information: ** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.							

4.15a (13.2.1)	**TABLE: Ball Pressure Test of Thermoplastics**		**P**
Allowed impression diameter (mm) .....:		2	—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)
PCB	See annex 1	125	0.9

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

Supplementary information:

4.15b (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				P
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
PCB	See annex 1	10 s	No	0	pass

Supplementary information:

4.15c (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)			N/A
Glow wire temperature .....:	650°C			—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict

Supplementary information:

4.15d (13.4)	TABLE: Proof tracking test (IEC 60112)				N/A
Test voltage PTI .....:	175 V				—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict

Supplementary information:

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

ANNEX 1	**TABLE: Critical components information**					P
Object / part No.	**Code**	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
LED Cover	C	Chi Mei Corporation	PS, 930	V-0	J60598-1(H29)	Tested with appliance UL E225348
PCB	C	JIANG MEN CHANG MING PCB FACTORY	CM-1	V-0, 130 ℃	J60598-1(H29)	Tested with appliance UL E232206
LED	C	Ningbo Huiliang Electric Co.,Ltd	SMD LED	IF=30 mA VF=3.0-3.2 V	IEC 62031 J60598-1(H29)	Tested with appliance
Enclosure	C	PETROCHINA CO LTD JILIN PETROCHEMICAL CO	ABS, 0215F	V-0	J60598-1(H29)	Tested with appliance UL E243093

Supplementary information:

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

The codes above have the following meaning:

A - The component is replaceable with another one, also certified, with equivalent characteristics

B - The component is replaceable if authorised by the test house

C - Integrated component tested together with the appliance

D - Alternative component

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

ANNEX 2	**TABLE: Temperature measurements, thermal tests of Section 12**		P
	Type reference..... :	N132C	—
	Lamp used..... :	tungsten lamp	—
	Lamp control gear used..... :	-	—
	Mounting position of luminaire..... :	-	—
	Supply wattage (W)..... :	5 W	—
	Supply current (A)..... :	-	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) ..... :	25 °C	—
	- abnormal operating mode..... :		—
4.12 (12.4)	- test 1: rated voltage..... :		—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage..... :		—
	- 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 ..... :		—
4.12 (12.5)	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
Surface	25	-	28.8	-	75	-	-
LED cover	25	-	54.4	-	cl 13.2	-	-
Battery	25	-	36.8	-	55	-	-

Supplementary information:

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

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

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

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

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

(15.6.1)	Conductors		
	Terminal size and rating		
15.6.2	Mechanical tests		
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) .....:		
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) .....:		
(15.6.3)	Electrical tests		
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		

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

IEC 60598-2-4			
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)											
Supplementary information:											

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60598-2-1
JAPAN NATIONAL DIFFERENCES

Luminaires

Part 2: Particular requirements

Section 1: Fixed general purpose luminaires

Differences according to.....:	J60598-2-1(H29) used in conjunction with J60598-1(H29)
Attachment Form No..... :	JP_ND_IEC60598_2_1F
Attachment Originator.....:	TUV Rheinland Japan Ltd.
Master Attachment.....:	Date 2019-06-25

	National Differences - Japan		-
1.1 (0.1)	**Scope**		-
1.1 (-)	Replace this sub-clause by the following. This standard specifies requirements for fixed general purpose luminaires for use with electrical light source on supply voltages not exceeding 1000V. (J60598-2-1(H29))		P
1.1A (-)	After sub-clause 1.1, add the following new sub-clause. 1.1A The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. The latest edition of the referenced document (including any amendments) applies. JIS C 8105-1, Luminaires – Part 1: General requirements for safety (IEC 60598-1:MOD) (J60598-2-1(H29))		P
1.1 (0.1)	At the beginning of the tenth paragraph, add the following. Except for 10.2.1 Test – Insulation resistance, (J60598-1(H29))		P
-- (0.2)	**Normative references**		-

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
-- (0.2)	Replace the standards with the following. - JIS A 9521:2014, Thermal insulation materials for buildings - JIS A 9523:2011, Loose fill thermal insulation materials - JIS B 1007:2003, Tapping screws thread - JIS C 0366:1997, Voltage bands for electrical installations of buildings corresponding to IEC 60449:1973 and Amendment 1:1979 (IDT) - JIS C 0617-2:2011, Graphical symbols for diagrams - Part 2: Symbol elements, qualifying symbols and other symbols having general application - JIS C 0920:2003, Degrees of protection provided by enclosures (IP Code) corresponding to IEC 60529 (IDT) - JIS C 0922:2002, Protection of persons and equipment by enclosures for electrical apparatus- Probes for verification corresponding to IEC 61032:1997 (IDT) - JIS C 1302:2014, Insulation resistance testers - JIS C 1602:2015, Thermocouples - JIS C 1609-1:2006, Illuminance meters - Part 1: General measuring instruments - JIS C 2134:2007, Method for the determination of the proof and the comparative tracking indices of solid insulating materials corresponding to IEC 60112:2003 (IDT) - JIS C 3301, Rubber insulated flexible cords - JIS C 3306, Polyvinyl chloride insulated flexible cords - JIS C 3307, 600 V Polyvinyl chloride insulated wires - JIS C 3312, 600 V Grade polyvinyl chloride insulated and sheathed portable power cables - JIS C 3315, Rubber insulated lead wires for electric machinery and apparatus - JIS C 3316, Electric polyvinyl chloride insulated wires for electrical apparatus - JIS C 3317, 600V Grade heat-resistant polyvinyl chloride insulated wires - JIS C 3323, 600 V Silicone rubber insulated wires - JIS C 3327, 600V Rubber insulated flexible cables - JIS C 3605, 600V Polyethylene insulated cables		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	- JIS C 3612, 600V Flame retardant polyethylene insulated wires - JIS C 3662-5, Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V - Part 5 Flexible cables (cords) - JIS C 3663-4, Rubber insulated cables - Rated voltages up to and including 450/750V - Part 4: Cords and flexible cables - JIS C 4003:2010, Thermal evaluation and classification of electrical insulation corresponding to IEC 60085 (MOD) - JIS C 4526-1:2013, Switches for appliances - Part 1: General requirements corresponding to IEC 61058-1:2000 (IDT) - JIS C 4908, Capacitors for electrical apparatus - JIS C 5101-14:2014, Fixed capacitors for use in electronic equipment - Part 14: Sectional specification-Fixed capacitors for electromagnetic interference suppression and connection to the supply mains corresponding to IEC 60384-14 (IDT) - JIS C 5381-11:2014, Low-voltage surge protective devices—Part 11: Surge protective devices connected to low-voltage power systems—Requirements and test methods, corresponding to IEC 61643-11 (IDT) - JIS C 6065:2013, Audio, video and similar electronic apparatus - Safety requirements corresponding to IEC 60065:2001 (MOD) - JIS C 6950-1, Information technology equipment-Safety - Part 1: General requirements - JIS C 7527, Tungsten halogen lamps (non-vehicle) - Performance specifications corresponding to IEC 60357 (MOD) - JIS C 7550:2014, Photobiological safety of lamps and lamp systems - JIS C 7551-2, Incandescent lamps-Safety specifications - Part 2: Tungsten halogen lamps for domestic and similar general lighting purposes corresponding to IEC 60432-2 (MOD) - JIS C 7618-1:2008, Single-capped fluorescent lamps - Part 1: Safety specifications corresponding to IEC 61199 (MOD) - JIS C 7619, Glow-starters for fluorescent lamps corresponding to IEC 60155 (MOD) - JIS C 7621, High-pressure sodium vapour lamps -		

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Clause	Requirement + Test	Result - Remark	Verdict
	Performance specification corresponding to IEC 60662 (MOD) - JIS C 7623, Metal halide lamps - Performance specification corresponding to IEC 61167 (MOD) - JIS C 7624, Discharge lamps (excluding fluorescent lamps) - Safety specifications corresponding to IEC 62035 (MOD) - JIS C 7709-1, Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 1: Lamp caps corresponding to IEC 60061-1 (MOD) - JIS C 7709-2, Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 2: Lampholders corresponding to IEC 60061-2 (MOD) - JIS C 7709-3, Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 3: Gauges corresponding to IEC 60061-3 (MOD) - JIS C 7802:1999, Method of measuring the pinch temperature of quartz glass lamps corresponding to IEC 60682 (MOD) - JIS C 8105-2 (all parts), Luminaires - Part 2 corresponding to IEC 60598-2 (all parts) (MOD) - JIS C 8105-2-4, Luminaires - Part 2: Particular requirements for safety - Section 4: Portable general purpose luminaires corresponding to IEC 60598-2-4 (IDT) - JIS C 8105-2-12, Luminaires - Part 2: Particular requirements for safety - Section 12: Mains socket-outlet mounted nightlights - JIS C 8105-3:2011, Luminaires - Part 3: General requirements for performance - JIS C 8108, Ballasts for fluorescent lamps - JIS C 8117, AC supplied electronic ballasts for fluorescent lamps - JIS C 8121 (all parts), Miscellaneous lampholders corresponding to IEC 60838 (all parts) (MOD) - JIS C 8122, Bayonet lampholders corresponding to IEC 61184 (MOD) - JIS C 8147 (all parts), Lamp controlgear corresponding to IEC 61347 (all parts) - JIS C 8147-2-3, Lamp controlgear - Part 2-3: Particular requirements for a.c. supplied electronic ballasts for fluorescent lamps		

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	- JIS C 8147-2-8, Lamp controlgear - Part 2-8: Particular requirements for ballasts for fluorescent lamps - JIS C 8147-2-9, Lamp controlgear - Part 2-9: Particular requirements for ballasts for discharge lamps (excluding fluorescent lamps) corresponding to IEC 61347-2-9 (MOD) - JIS C 8147-2-13, Lamp controlgear - Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules - JIS C 8269 (all parts), Low-voltage fuses - JIS C 8280, Edison screw lampholders corresponding to IEC 60238 (MOD) - JIS C 8282 (all parts), Plugs and socket-outlets for household and similar purposes - JIS C 8283-1, Appliance couplers for household and similar general purposes - Part 1: General requirements corresponding to IEC 60320 (all parts) (MOD) - JIS C 8303, Plugs and receptacles for domestic and similar general use - JIS C 8324, Lampholders and starterholders for fluorescent lamps corresponding to IEC 60400 (MOD) - JIS C 8472:2005, Lighting busways - Particular safety requirements for luminaires use corresponding to IEC 60570:2003 (MOD) - JIS C 9335-1:2014, Household and similar electrical appliances-Safety Part 1: General requirements - JIS C 60068-2-6:2010, Environmental testing - Test Fc: Vibration (sinusoidal) corresponding to IEC 60068-2-6:2007 (IDT) - JIS C 60068-2-14:2011, Environmental testing – Test N: Change of temperature corresponding to IEC 60068-2-14:2009 (IDT) - JIS C 60068-2-75:2004, Environmental testing – Test Eh: Hammer tests corresponding to IEC 60068-2-75 (IDT) - JIS C 60664-1, Insulation coordination for equipment within low-voltage systems-Part 1: Principles, requirements and tests - JIS C 60695-2-11:2004, Fire hazard testing - Part 2-11: Glowing-wire flammability test methods for end-products, corresponding to IEC 60695-2-11 (IDT) - JIS C 60695-2-12:2013, Fire hazard testing - Part 2-		

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	12: Glowing-wire flammability test methods for materials - JIS C 60695-2-13:2013, Fire hazard testing - Part 2-13: Glowing-wire ignition test methods for materials - JIS C 60695-11-5:2007, Fire hazard testing - Part 11-5: Test flames-Needle-flame test method - Apparatus, confirmatory test arrangement and guidance corresponding to IEC 60695-11-5 (IDT) - JIS C 60695-11-10:2015, Test flames – 50 W horizontal and vertical flame test methods - JIS C 61558-1:2008, Safety of power transformers, power supply units, reactors and similar products - Part 1: General requirements and tests corresponding to IEC 61558-1:2005 (MOD) - JIS C 61558-2 (all parts), Safety of power transformers, power supplies, reactors and similar products-Part 2 corresponding to IEC 61558-2 (all parts) (MOD) - JIS C 61558-2-5, Safety of power transformers, power supply units, reactors and similar products - Part 2-5: Particular requirements for shaver transformers and shaver supply units corresponding to IEC 61558-2-5 (MOD) - JIS C 61558-2-6, Safety of power transformers, power supply units, reactors and similar products - Part 2-6: Particular requirements for safety isolating transformers for general use corresponding to IEC 61558-2-6 (MOD) - JIS K 7341, Plastics- Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source - JIS P 0001:1998, Paper, board and pulp - Vocabulary - IEC 60227 (all parts), Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - IEC 60245 (all parts), Rubber insulated cables - Rated voltages up to and including 450/750 V - IEC 60417, Graphical symbols for use on equipment - IEC 60634:1993, Heat test source (H.T.S.) lamps for carrying out heating tests on luminaires - IEC 60684-2, Flexible insulating sleeving—Part 2: Methods of test - IEC 60989, Separating transformers,		

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Clause	Requirement + Test	Result - Remark	Verdict
	autotransformers, variable transformers and reactors - IEC 60990:1999, Methods of measurement of touch current and protective conductor current - IEC 61249 (all parts), Materials for printed boards and other interconnecting structures - IEC 61535, Installation couplers intended for permanent connection in fixed installations - IEC 80416-1:2008, Basic Principles for graphical symbols for use on equipment – Part 1: Creation of graphical symbols for registration (J60598-1(H29))		
1.3 (1.2)	**Terms and definitions**		-
1.3 (1.2.8)	Add the following after NOTE 1 NOTE 1A Fixed luminaire includes track-mounted luminaires and luminaires using ceiling rosette. (J60598-1(H29))		P
1.3 (1.2.21)	In the second paragraph, delete the second sentence on Class 0. (J60598-1(H29))		P
	Delete NOTE 4. (J60598-1(H29))		P
1.3 (1.2.21A)	After sub-clause 1.2.21, add the following new sub-clause. 1.2.21A class 0I luminaires luminaires having at least basic insulation for protection against electric shock, having an earthing terminal or earthing lead for connecting the accessible conductive part, which becomes to a live part if the basic insulation is damaged, to the earthing conductor of the fixed-wiring of the building, and using a supply cord without earthing core and a plug without earthing pole. Luminaires using a supply cord set of which an earthing lead is provided in the plug or using a plug adaptor for transforming from 3 pins to 2 pins are also considered as class 0I luminaires. NOTE 1 Luminaires with insulated enclosure, which		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	have earthing means for the internal parts, are regarded as Class 0I or I. NOTE 2 Class 0I luminaires may have double or reinforced insulated parts. NOTE 3 .Luminaires using ceiling rosette and having earth terminal are regarded as Class 0I. (J60598-1(H29))		
1.3 (1.2.23)	In the first sentence of NOTE 4, replace “class I construction” with “class I luminaire or class 0I luminaire”. (J60598-1(H29))		P
1.3 (1.2.35)	In the second paragraph, replace “with contact tubes” with “with contact tubes or blade contacts”, and “with contact pins” with “with contact pins or blades”. (J60598-1(H29))		P
1.3 (1.2.49)	Delete NOTE 1. (J60598-1(H29))		P
1.3 (1.2.68)	In the paragraph, replace “step-down convertors” with “step-down convertors (including electronic step-down convertors)”. (J60598-1(H29))		P
	Replace NOTE with the following. NOTE LED module controlgear includes the control of LED lamps in addition to those of LED module. Convertor and step-down convertor do not include LED module control gear. This definition does not include devices for the switching of lamps or the control of brightness such as dimmers and daylight sensors. (J60598-1(H29))		P
1.2.77.2	In the first paragraph, replace “converter or” with “convertor (including electronic convertor) or”. (J60598-1(H29))		P
1.2.82	Replace the whole including NOTE with the following. arms reach for examples, - if indoors, the place being the height of 2,3 m or less from the floor; - if outdoors, the place being the height of 2,5 m or		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	less from the ground surface etc.; - the area where is reachable by a stretched hand from the place like a middle of the stairs, a windows, a laundry hanging balcony. (J60598-1(H29))		
1.2.86A	After sub-clause 1.2.86, add the following new sub-clause. 1.2.86A Accessible Test probe B specified in JIS C 0922 is accessible. NOTE Conventional expressions were, for example, “persons could be touched”, “there is a fear of contacting with hand”, “touchable by persons”, or “easily accessible”. (J60598-1(H29))		P
1.2.88A	After sub-clause 1.2.88.3, add the following new sub-clause. 1.2.88A Lamp Light source provided with one or more lamp cap (J60598-1(H29))		P
1.2.91A	After sub-clause 1.2.91, add the following new sub-clause. 1.2.91A LED light source Units which are supplied as LED modules or LED lamps (J60598-1(H29))		P
1.2.91B	After sub-clause 1.2.91A, add the following new sub-clause. 1.2.91B LED luminaire Luminaires provided with a LED light source (J60598-1(H29))		
1.4 (2)	**Classification of luminaires**		-
1.4 (2.2)	Replace the first paragraph with the following.		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	Luminaires shall be classified according to the type of protection against electric shock provided, as class 0, class 0I class I, class II or class III (see definitions in Section 1). However, class 0 is applicable only to ordinary luminaires with a rated voltage 150 V or less (including the rated secondary voltage in the case of suspended fluorescent luminaires for household). Luminaires with protection class of IPX1 or higher, moisture-proof luminaires and rough service luminaires shall not be of class 0. (J60598-1(H29))		
	In the second paragraph, replace “class I” with “class I or class 0I”. (J60598-1(H29))		N/A
1.4 (2.3)	Except for the title, replace the whole with the following. Luminaires shall be classified in accordance with the “IP number” system of classification described in JIS C 0920 and Annex 2 (Degrees of protection against high temperature and high moisture for luminaires) of JIS C 0920. Tests for the degrees of protection are given in Section 9. NOTE 1 Luminaires classified as watertight are not necessarily suitable for operation under water. Pressure watertight luminaires should be used for such applications. NOTE 1A Annex 2 of JIS C 0920 specifies the degrees of protection against high temperature and high moisture and also specifies the conditions for the tests and conformity for the degrees of protection. (J60598-1(H29))		P
1.5 (3)	**Marking**		-
1.5 (3.2)	In the left column of the Table 3.1, delete “3.2.23 Do not stare at light source”. (J60598-1(H29))		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	In Table 3.1, replace the center columns of table with the following. Markings belonging to b) 3.2.1 3.2.2 [b] 3.2.3 Ambient temperature 3.2.4 3.2.5 3.2.6 Corresponding IP number, and for moisture-proof lu marking of “防湿 ” or “防湿形” 3.2.7 Maker’s model number or type reference 3.2.9 Symbols The relevant symbol for luminaires not suitable for di on normally flammable surface 3.2.12 Termination 3.2.17 [c] For interconnected luminaires, the maximum c number of luminaires or the maximum current 3.2.19A The rated frequency 3.2.19B The rated secondary voltage, the rated second circuit current 3.2.19C The type of thermally insulating material constr 3.2.19D The rated power consumption or the rated inpu 3.2.19E The restriction for use of class I track-mounted 3.2.21 The relevant symbol for not suitable for coverin thermally insulating material (J60598-1(H29))		P
	In Item c in the bottom column of Table 3.1, replace “Interconnected luminaires” with “For interconnected luminaires, the maximum connectable number of luminaires or the maximum current”. (J60598-1(H29))		P
	In the last paragraph, replace “the base plate” with “the base plate or connector”. (J60598-1(H29))		P
1.5 (3.2.2)	In the first paragraph, delete the second sentence. (J60598-1(H29))		P
1.5 (3.2.6)	After the first paragraph, add the following.		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	Moisture-proof luminaires shall be marked with “防湿 ” or “防湿形”. (J60598-1(H29))		
1.5 (3.2.12)	Delete NOTE 4. (J60598-1(H29))		P
1.5 (3.2.18)	In the paragraph, delete “and luminaires with double-capped Fa8 tubular lamps”. (J60598-1(H29))		P
	(only informative) The following is an example of Japanese text corresponding to the English warning notice specified in b) of sub-clause 3.2.18. 注意： ランプ交換に先立ち、イグナイタ又はスイッチング素 ランプ交換の後に取り外した部品を取り付ける。 (J60598-1(H29))		P
1.5 (3.2.19A)	After sub-clause 3.2.19, add the following new sub-clause. 3.2.19A Rated frequency in hertz (limited to those having a discharge lamp, transformer or motor) (J60598-1(H29))		P
1.5 (3.2.19B)	After sub-clause 3.2.19A, add the following new sub-clause. 3.2.19B Luminaires shall be marked with: - the rated secondary voltage, if the rated secondary voltage exceeds 150 V; - the rated secondary short-circuit current, if the rated secondary voltage exceeds 300 V and the rated secondary current exceeds 1 A. The rated secondary voltage, the rated secondary current and the rated secondary short-circuit current are the values marked on the lamp controlgear used or the values measured in accordance with the relevant JIS standard for the lamp controlgear used. (J60598-1(H29))		N/A
1.5 (3.2.19C)	After sub-clause 3.2.19B, add the following new sub-clause.		P

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Clause	Requirement + Test	Result - Remark	Verdict
	3.2.19C For luminaires suitable for covering with thermally insulating materials, the type of thermally insulating material construction, and the declared value of the thermal resistance if required. However, this does not apply to the luminaires subjected to the test of a) specified in Annex D. NOTE In Japan, for recessed luminaires which the thermally insulating material construction is done, there is JIL 5002 of a group standard published by the Japan lighting Manufacturers Association. The standard specifies the type of thermally insulating material construction. (J60598-1(H29))		
1.5 (3.2.19D)	After sub-clause 3.2.19C, add the following new sub-clause. 3.2.19D Rated power consumption in watt or rated input power in watt(limited to those having a discharge lamp, transformer or motor) The rated power consumption or rated input power is the value specified by the manufacturer, based on the value measured in accordance with 7.5 (Input) of JIS C 8105-3 or A8.3 of JIS C 8105-3. (J60598-1(H29))		P
1.5 (3.2.19E)	After sub-clause 3.2.19D, add the following new sub-clause. Class I track-mounted luminaires shall be marked with the substance that this luminaire shall not be mounted to class 0 tracks. (J60598-1(H29))		P
1.5 (3.2.21)	Replace the whole with the following. The relevant Symbol a), b) or c) (see Figure 1) for luminaires not suitable for covering with thermally insulated material shall be explained on the luminaire or in the manufacturer's instructions provided with the luminaire. (See Table N.1.) The dimensions of the rectangle which is circumscribed to the symbol a) in Figure 1 shall be at least 25 mm for each side. The dimensions of the rectangle which is circumscribed to the symbol b) shall be at		P

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Clause	Requirement + Test	Result - Remark	Verdict
	least 20 mm for each side. And, the area of the rectangle which is circumscribed to the symbol c) shall be at least 4 cm^2. However, for small luminaires, if ensuring of a space for marking is not possible, it may be explained on the packaging of the luminaire or in the instructions. A warning notice and symbol is required when a luminaire is not suitable for covering with thermally insulated material. (J60598-1(H29))		
1.5 (3.2.22)	In the paragraph, replace the first sentence with the following. Luminaires with internal replaceable fuses may be marked with symbol (see Figure 1 from IEC 61558-1) shown in Figure 1 at the end of marking of the rating of fuse, if required. (J60598-1(H29))		P
1.5 (3.2.23)	In the first paragraph, replace the first sentence with the following. Warning symbol “Do not stare at the operating light source” (see Figure 1) for portable and handheld luminaires that have been classified as risk group RG1 according to 4.24.2. (J60598-1(H29))		P
	Replace the all paragraph from the second one with the following. For fixed luminaires that have been classified as risk group RG1 according to 4.24.2, the manufacturer’s instructions provided with the luminaire shall give the following or equivalent text, “照明器具を長時間見続けることがないように照明器具 (J60598-1(H29))		P
1.5 (3.2.24)	Add the following to the end of the paragraph. However where it is not possible to mark the symbol in height of 15mm on the cover due to the construction of luminaires, it may be marked in adjacent to the cover which can draw well attention. Nevertheless where it is no possible to mark it in height of 15mm, it shall be marked on cover or in		P

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Clause	Requirement + Test	Result - Remark	Verdict
	adjacent to cover in the maximum height as possible. (J60598-1(H29))		
1.5 (3.3)	In the first sentence of the paragraph, replace “all details” with “all details (shown in sub-clauses 3.3.1 to 3.3.22)” (J60598-1(H29))		P
1.5 (3.3.2)	Replace “Nominal frequency in hertz” with “(See 3.2.19A.)” (J60598-1(H29))		P
1.5 (3.3.3)	In the first sentence of the Item c), replace “The maximum temperature” with “The type of cable useable or the maximum temperature”, and replace “90 °C” with “60 °C”. (J60598-1(H29))		P
1.5 (3.3.9)	Add the following after NOTE 1. NOTE 1A If the power factor is 0,85 or more, the value of the power factor shall be marked. Instead of the value, it may be marked with “高力率”. NOTE 1B An example of luminaires suitable for both resistive and inductive loads is the luminaire which both incandescent and self-ballasted lamps are usable. (J60598-1(H29))		P
1.5 (3.3.11)	Replace the paragraph with the following. For luminaires using remote control gear, e.g., ballast, the range of lamps for which the luminaire is designed. For luminaires which high-pressure mercury vapour lamps, metal halide lamps and high pressure sodium vapour lamps are usable as HID lamp, those may be marked with, for example, “HID 200 ~ 400”. (J60598-1(H29))		P
1.5 (3.3.15)	In the paragraph, replace “The rated current” with “The rated current or maximum wattage”. (J60598-1(H29))		P
1.5 (3.3.16)	Replace the first dash with the following.		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- the connection to socket outlets of which the degree of protection against ingress of water is rated with IPX4; (J60598-1(H29))		
1.5 (3.3.18A)	After sub-clause 3.3.18, add the following new sub-clause. 3.3.18A For luminaires which secondary-processing is required for the luminaire itself or the component of the luminaire when a constructor mounts the luminaire, the following shall be explained in the instructions etc.: - the substance that depending on the processing method there is a possibility causing a hazard; - the processing method for protection which is made not to cause injuries Knockout is an example of secondary-processing. (J60598-1(H29))		P
1.5 (3.3.20)	(only informative) The following is an example of Japanese text corresponding to English text for advice specified in sub-clause 3.3.20. 人が触れるおそれのある場所に取り付けてはならない (J60598-1(H29))		P
1.6 (4)	**Construction**		-
1.6 (4.4.1)	Add the end of the second paragraph, add the following. However, if lampholders which complies with JIS C 8280 or lampholders equivalent to those are used, this does not apply to the part of cap of the lamp. (J60598-1(H29))		N/A
1.6 (4.4.4)	In the second sentence of the second paragraph of Item i), replace “in IEC 60061-3:” with “in IEC 60061-3 or shall be caps equivalent to these:”. (J60598-1(H29))		N/A
	In Item b), replace the first paragraph with the following.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Mounting brackets for Edison screw or bayonet-capped lampholders are subjected to testing for 1 min, to the following bending moments: for E14 and B15 lampholders 1,2 Nm; for E26 and B22 lampholders 2,0 Nm; for E39 lampholders 4,0 Nm; for E12 lampholders 0,5 Nm; for E17 lampholders 1,2 Nm; The values for other lampholders are under consideration. (J60598-1(H29))		
1.6 (4.4.5)	At the end of this sub-clause, add the following. For lampholders having other rated voltage than mentioned above, it is considered that the lampholder complies with this requirement, if it withstands the test voltage specified in Table 10.2. (J60598-1(H29))		N/A
1.6 (4.4.6)	At the end of the first paragraph, add the following. For workshop luminaires provided with Edison Screw lampholders, the shell of base shall be connected to the neutral of the supply terminals. (J60598-1(H29))		N/A
1.6 (4.4.9A)	After sub-clause 4.4.9, add the following new sub-clause. 4.4.9A E27 and E40 lampholders shall not be used. (J60598-1(H29))		N/A
1.6 (4.4.9B)	After sub-clause 4.4.9A, add the following new sub-clause. 4.4.9B Mechanical strength of Edison screw lampholders is checked according to JIS C 8280. (J60598-1(H29))		N/A
1.6 (4.5)	Replace the whole with the following except for the title of sub-clause. Starter holders in luminaires other than class II shall accept starters which comply with JIS C 7619.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Class II luminaires shall have a structure that the starter can not be touched with the standard test finger, after removing the components removable by hand. And the starter incorporated shall be provided with cap of Type P and with enclosure other than metal. If an E17 starterholder and an E17 lampholder for incandescent lamps are used for same luminaire, the starterholder and the lampholder shall be located with a suitable distance for preventing misuse when mounting a starter or incandescent lamp or replacing those, or markings indicating clearly that it is for either of starter or incandescent lamp shall be provided adjacent to the starterholder and the lampholder. Compliance is checked by inspection. (J60598-1(H29))		
1.6 (4.6)	After the first paragraph, add the following. NOTE 0A "Within a box specified by the manufacturer" includes outlet boxes etc. (J60598-1(H29))		N/A
1.6 (4.7.1)	In the first paragraph, replace "In portable luminaires of class I and class II and in fixed luminaires of class I and class II that are frequently adjusted" with "In portable luminaires of class 0, class 0I, class I and class II and in fixed luminaires of class 0, class 0I, class I and class II that are frequently adjusted" (J60598-1(H29))		N/A
	In Item c) of the second paragraph for NOTE, replace "is anchored to" with "is anchored (for example, by passing through a hole, by tying) to". (J60598-1(H29))		N/A
	In the second paragraph for NOTE, add a new item after Item h) as follows. hA) the wire conductor is fixed by a screw or nut, by using washer(s) for prevention against loosening. However, this applies to the part which its removal is not required, when the supply cord is replaced or when other protective inspection work is performed.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	(J60598-1(H29))		
	In the last paragraph for NOTE, replace “a) to h)” with “a) to hA)”, and “a) and b)” with “a), b) and hA)”. (J60598-1(H29))		N/A
1.6 (4.7.2)	At the beginning of the first paragraph, replace “Supply terminals” with “Supply terminals of luminaires having a type X attachment supply cord” (J60598-1(H29))		N/A
	In the last paragraph, replace “IEC standard” with “IEC standard, JIS standard or the relevant regulations”, and “a shorter length” with “a shorter length 8 mm or less” (J60598-1(H29))		N/A
1.6 (4.7.3)	In NOTE 3, replace “snap-on connectors” with “snap-on connectors and welding”. (J60598-1(H29))		N/A
1.6 (4.7.4)	At the end of the second paragraph, replace “external wiring” with “external wiring of luminaires which are intended for connection to fixed wirings and for replacement of cables/cords or components by users”. (J60598-1(H29))		N/A
1.6 (4.8)	At the end of this sub-clause, add the following. The fixing part for a pull-cord of pull-switch and the pull-cord shall withstand the test which a pull force of 70 N for a period of 1 minute applies to the fixing part for pull-cord after mounting the luminaire as in normal use. And, after the test, when a pull force of 150 N for a period of 1 minute applies to the tip of the pull-cord, the pull-cord shall be cut. Otherwise, it shall be come off from the switch. And, any abnormality (for example, the state which the electrical connection of the ceiling rosette is subjected to a force or the state which electric shock or fire may be caused) shall not be caused in the body. Moreover, there shall be no fear of damaging of the glass part like lamp by the pull-cord tab subjected to a repulsive force of the pull-cord. (J60598-1(H29))		N/A
1.6 (4.11.2)	After the second paragraph, add the following. Even if locking device against loosening, the		P

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Clause	Requirement + Test	Result - Remark	Verdict
	interconnection of such metals shall not be used. (J60598-1(H29))		
	After the third paragraph, add the following. Class 2 self-tapping screw according to JIS B 1007 may be used to provide conductive parts and earth continuity. (J60598-1(H29))		N/A
1.6 (4.11.6)	After the second paragraph, add the following NOTE. NOTE A cycle consisting of making of the contact and breaking is repeated 50 times in total. (J60598-1(H29))		P
1.6 (4.12.1)	In Table 4.1, replace the title with “Torque to be applied to screws”. (J60598-1(H29))		P
1.6 (4.12.4)	In the third paragraph, replace the existing five dashes with the following. - 4,0 Nm for E39 lampholders; - 2,0 Nm for E26 and B22 lampholders; - 1,2 Nm for E17 lampholders; - 0,6 Nm for E17 starterholders; - 1,2 Nm for E14 and B15 lampholders (except candle type); - 0,5 Nm for E14 and B15 candle lampholders; - 0,5 Nm for E10, E11 and E12 lampholders; (J60598-1(H29))		N/A
1.6 (4.12.5)	In Table 4.2, replace the title with “Table 4.2 - Moment to be applied to test rod”. (J60598-1(H29))		N/A
1.6 (4.13.1)	At the beginning of the first sentence of the sixth paragraph, replace “Three blows” with “One blow against the fragile points and three blows against other points”. (J60598-1(H29))		N/A
	In the last sentence of the sixth paragraph, replace “three blows” with “blows of the above specified respective number”.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	(J60598-1(H29))		
1.6 (4.14.1)	In the paragraph for Test A, add the following after the first sentence. For luminaires provided with ceiling rosette, the load shall be added so that a load equal to four times the weight of the luminaire is applied to the ceiling rosette. (J60598-1(H29))		P
1.6 (4.14.2)	In the first paragraph, add the following after the first sentence. However, for luminaires provided with a textile braided or round braided cord without reinforcement core, the weight of the luminaire shall be 3 kg or less. (J60598-1(H29))		N/A
	In Table 4.4, replace the title with “Table 4.4 – Maximum mass of semi-luminaires and maximum bending moment”. (J60598-1(H29))		N/A
	In the left column of Table 4.4, replace “E14 and B15” with “E14, E17 and B15”, and “E27 and B22” with “E26 and B22”. (J60598-1(H29))		N/A
1.6 (4.14.3)	In Table 4.5, replace the title with “Number of cycles of operation of adjusting devices”. (J60598-1(H29))		P
	In the left column of Table 4.5, replace “for example shop-window spotlights” with “for example shop-window spotlights and luminaires provided with a flexible tube”. (J60598-1(H29))		N/A
1.6 (4.15.2)	In the second sentence of Item b), replace “or a thermal link” with “or a thermal link (a thermal cut-out which operates only once and then requires replacement)”. (J60598-1(H29))		N/A
	In Item c), replace “the relevant auxiliary standard” with “the relevant auxiliary standard, e.g., JIS C 8147-2-3, JIS C 8147-2-8, JIS C 8147-2-9, JIS C 8108, JIS C 8117, etc.”		P

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Clause	Requirement + Test	Result - Remark	Verdict
	(J60598-1(H29))		
1.6 (4.16.2)	In the second sentence of the first paragraph, replace “the relevant auxiliary standard” with “the relevant auxiliary standard, e.g., JIS C 8147-2-3, JIS C 8147-2-8, JIS C 8147-2-9, JIS C 8147-2-13, JIS C 8108, JIS C 8117, etc.” (J60598-1(H29))		P
	In the fifth paragraph, replace as follows: - “the relevant auxiliary standard” with “the relevant auxiliary standard, e.g., JIS C 8147-2-3, JIS C 8147-2-8, JIS C 8147-2-9, JIS C 8147-2-13, JIS C 8147-2-13, JIS C 8108, JIS C 8117, etc.”; - “temperature declared thermally protected ballast/transformer(s)” with “temperature declared thermally protected ballast/transformer/LED module controlgear(s)”, and; - “or below 130 °C” with “or below 130 °C, and thermally protected ballast(s) marked with the symbol TB or TAB”. (J60598-1(H29))		N/A
	In the last paragraph, replace “value above 130 °C” with “value above 130 °C or with the symbol TC or OP”. (J60598-1(H29))		N/A
1.6 (4.17)	In the first paragraph, replace “and jet-proof” with “, jet-proof and powerful water jet-proof”. (J60598-1(H29))		N/A
1.6 (4.18.1)	In the first paragraph, replace “, jet-proof,” with “, jet-proof, powerful water jet-proof,”. (J60598-1(H29))		N/A
1.6 (4.18.3)	In the paragraph, replace “, jet-proof,” with “, jet-proof, powerful water jet-proof,”. (J60598-1(H29))		N/A
1.6 (4.19)	Replace the second paragraph with “Compliance is checked by inspection, in addition to check of marking of ballasts and ignitors etc.” (J60598-1(H29))		N/A
1.6 (4.20)	Replace the part of “Sweep rate” with the following. Sweep rate: approximately one octave per minute (speed rate which a frequency reaches to two times		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	or half of the original in one minute) (J60598-1(H29))		
1.6 (4.21.1)	After NOTE 2, add the following. The requirements of this sub-clause do not apply to luminaires like emergency lighting exclusive-use luminaires, which a lighting time is obviously of short. (J60598-1(H29))		N/A
1.6 (4.21.4)	Add the following new dash after NOTE 2. - the following test or Annex JA applies, except for metal halide lamps Luminaires are operated, by using the tungsten halogen lamp of the maximum rated power for which the luminaire is designed, until the stable condition of temperature is reached. After that, the tungsten halogen lamp is burst by applying an electrical overload, which is the minimum energy being enough to burst. Adjustable luminaires shall be adjusted in the most suitable position where fragments of glass fly out from the luminaire. During the test, a wrapping tissue specified in No. 6228 of JIS P 0001 is spread out horizontally at the 500 mm below of the luminaire. For luminaires recessed, the tissue is spread out so as to cover on the surface of the ceiling suspended. After burst of the tungsten halogen lamp, the luminaire and the protective shield shall show no damage in the part other than the surface. The wrapping tissue shall not ignite by the fragments of glass which flied out from the luminaire. After inspection of the luminaire, the luminaire shall be possible to mount a new tungsten halogen lamp, and the protective shield and components, which were removed for mounting of the tungsten halogen lamp, shall be possible to mount again. That time, the luminaire shall light with same state. And, this tungsten halogen lamp is broken in the same manner mentioned above. The luminaire shall be in the state of conformity with the requirements, except for the damage of the protective shield. The part of the protective shield shall not be discrete. (J60598-1(H29))		N/A
1.6 (4.24.2)	Replace “IEC/TR 62778.” of the first paragraph with “Annex JC”		P

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Clause	Requirement + Test	Result - Remark	Verdict
	(J60598-1(H29))		
	Replace a) with the following. For fixed mounted luminaires, the risk group shall not exceed RG1 at the distance obtaining 500 lx. (J60598-1(H29))		P
	Replace b) with the following. For mains socket-outlet mounted nightlights specified in JIS C 8105-2-12, portable and handheld luminaires, the risk group shall not exceed RG1 at the distance of 200 mm. (J60598-1(H29))		P
1.6 (4.25)	At the end of the first paragraph, add the following. However, if secondary-processing is required for the luminaire or the component of luminaire when a constructor mounts the luminaire, the hazards of the following part described in the instructions etc. shall be checked in the state where processing for protection was made. - the part for which the substance that there is a fear of causing a hazard by the process method is described - the part for which the method for the protection-processing for not causing injury is described (J60598-1(H29))		P
1.6 (4.26.1)	In the second sentence of NOTE, replace “this transformer/converter” with “this transformer/convertor (including electronic convertor)”. (J60598-1(H29))		N/A
1.6 (4.26A)	After sub-clause 4.26, add the following new sub-clause. 4.26A Luminaires which the thermally insulating material construction by the blowing method is made Luminaires, which the thermally insulating material construction by the blowing method is made, shall not have openings where the test probe for the first IP number 3 specified in Table 9.1 can be inserted. During test, no load is applied to the test probe.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	(J60598-1(H29))		
1.6 (4.27A)	After sub-clause 4.27, add the following new sub-clause. 4.27A Optical output Optical outputs of LED luminaires for general lighting shall be of the output which people do not feel a flicker. However, this does not apply to the following. a) luminaires for lighting the feet; b) luminaires for lighting at stages or studios (limited to those intended for the special effect like stroboscopic effect); c) ground recessed luminaires; d) luminaires for underwater lighting; e) luminaires for showcases; f) Indicating lights; g) nightlights; h) in addition to Items a) to g), luminaires not used for lighting for a long time at ordinary houses, offices etc. If a luminaires is complying with the following Items i) or j), the luminaire is considered that it complies with this requirement. i) the optical output does not have any missed-part which is less than 5 % of the peak value of the optical output, and the repeated frequency of the optical output is 100 Hz or more. j) the repeated frequency of the optical output is 500 Hz or more. (J60598-1(H29))		P
1.6 (4.27B)	After sub-clause 4.27A, add the following new sub-clause. 4.27B Prevention of smoking, flaming, etc. during the period of use LED luminaires shall be designed so that failures relating to fire (for example, smoking, flaming, etc.) are not caused during the period of use of the luminaire.		P

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Clause	Requirement + Test	Result - Remark	Verdict
	The luminaires complying with the following Items a) and b) are considered to be in conformity with this requirement. a) During the following test was carried out, flame, smoke or flammable gas shall not be generated. The input power is increased to 150 % rated value, by adjusting the input voltage. After the temperature was stabilized, the state is kept for 15 minutes. If the input power is not possible to increase to 150 % rated value, the input voltage or input current is increased to 150 % rated value concerned. However, if the input power is limited by a protective device or circuit, it is increased up to the power value limited. (For luminaires having surge-absorbers etc., the test may be carried out by removing of it from the circuit, during testing.) Atomized spraying of electrolytic solution generated by operation of the safety valve of electrolytic capacitor is not considered as smoking. Flammability of gases generated by components of luminaires is checked by the test of a high-frequency spark generator. b) Luminaire enclosures protecting live parts of electric circuits against electric shock or enclosures for supply circuits installed inside luminaires shall be constructed with: - metal; - materials complying with the test at 650 °C test temperature, specified in JIS C 60695-2-11 or JIS C 60695-2-12, or; - materials of 675 °C or better glow-wire ignition temperature (GWIT), confirmed by the test specified in JIS C 60695-2-13 However, this does not apply to the part of luminaire enclosure, which has translucency and which is a unavoidable part for the optical properties of the luminaire. (J60598-1(H29))		
1.6 (4.30A)	After sub-clause 4.30, add the following new sub-clause. 4.30A Lamps other than fluorescent lamps having		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	caps for fluorescent lamps For luminaires having a structure which lamps are removable, lampholders (except for GX53) for fluorescent lamps, which are specified in JIS C8324, shall not be supplied with electricity if they are connected with other lamps than fluorescent lamps. However, if the lamp is a non-removal lamp other than fluorescent lamps, this excludes the lamp. Here, non-removal lamps are the lamps of which the mounting or removing is possible only by use of a tool. The lamps which the mounting or removing is possible in accordance with the instruction manual although a tool is required for the mounting or removing are considered not to be non-removable lamp. If a tool is required for the mounting or removing and if the instruction for mounting or removing is available only in the construction manual for the constructors, the lamp is considered to be non-removable lamp. Compliance is checked by inspection. (J60598-1(H29))		
1.6 (4.32)	Add the following after the paragraph. Overvoltage protective devices shall not be used to connect between live parts and accessible metel parts of Class 0I luminaires. (J60598-1(H29))		N/A
1.7 (11)	**Creepage distances and clearances**		-
1.7 (11.2.1)	In the seventh paragraph, replace “IEC publications” with “Appendixes (except for Appendix 12) of “Interpretation of METI Ordinance establishing Technical Requirements for Electrical Appliances and Materials”, IEC standards or JIS standards harmonizing with IEC standards”. (J60598-1(H29))		P
	Replace Table 11.1 with the following. Table 11.1 – Minimum distances for a.c. (50/60 Hz) sinusoidal voltages (to be used in conjunction with Annex M)		P

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Clause	Requirement + Test	Result - Remark	Verdict
	RMS working voltage V / Distances mm	50	100	150	200	250
	Creepage distances[b]					
	- Basic insulation PTI[a] ≥ 600	0,6	0,71	0,8	1,5	1,5
	PTI[a] < 600	1,2	1,4 (1,5)[f]	1,6 (1,5)[f]	2,0	2,5
	- Supplementary insulation PTI[a] ≥ 600	-	0,71	0,8	1,5	1,5
	PTI[a] < 600	-	1,4	1,6	2,0	2,5
	- Reinforced insulation	-	2,8[e]	3,2[d]	4,0[d]	5[d]
	Clearances[c]					
	- Basic insulation	0,2	0,5 (1,5)[f]	0,8 (1,5)[f]	1,5	1,5
	- Supplementary insulation	-	0,5	0,8	1,5	1,5
	- Reinforced insulation	-	1,5	1,6	3	3
	a PTI (proof tracking index) in accordance with JIS C2134. b For creepage distances, the equivalent d.c. voltage is equal to the r.m.s. value voltage. c For clearances, the equivalent d.c. voltage is equal to the peak of the a.c. volta d For insulation material with PTI ≥ 600, this is reduced to twice that of the ba material. e For insulation material with PTI ≥ 600, this is reduced to 1,5 mm. f The values in the parentheses apply to basic insulation of class 0 luminaires, ex parts of different polarity.					
	(J60598-1(H29))					
1.8 (7)	**Provision for earthing**					-
1.8 (7.2.1)	In the first paragraph, replace “class I luminaires” with “class I luminaires and class 0I luminaires”, “a lamp or replaceable starter” with “a replaceable light source or starter”, and “an earthing terminal or earthing contact” with “an earthing terminal, earthing contact or earthing lead”. (J60598-1(H29))					N/A
	In the second paragraph, replace “the earthing terminal or earthing contact” with “the earthing terminal, earthing contact or earthing lead”. (J60598-1(H29))					N/A
	At the end of the third paragraph, replace “an earthing terminal” with “an earthing terminal, earthing contact or earthing lead”. (J60598-1(H29))					N/A
1.8 (7.2.3)	At the end of NOTE, add the following. In the case of class 0I luminaires with a earthing lead, the earthing contact is at the end of the earthing lead. (J60598-1(H29))					N/A
1.8 (7.2.5)	At the end of paragraph, add the following. However, this does not apply to class 0I luminaires.					N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	(J60598-1(H29))		
1.8 (7.2.6)	At the end of paragraph, add the following. For class 0I luminaires, the earthing terminal or earting lead shall be provided in the easily visible place of enclosure. (J60598-1(H29))		N/A
1.8 (7.2.8)	Add the following at the end. NOTE Bare metal includes metals for which conductive surface treatment was made. (J60598-1(H29))		N/A
1.8 (7.2.9)	At the end of paragraph, add the following. And the compliance to the requirement of clause 7.2.7 is judged by referring Annex F of JIS C 6065. (J60598-1(H29))		N/A
1.8 (7.2.11)	In the first paragraph, replace “coloured green-yellow” with “coloured green-yellow or an earthing core marked with the purport for earthing by means of not easily erased”. (J60598-1(H29))		N/A
	In the second paragraph, replace “of a supply cord” with “of a supply cord or the earthing core marked with the purport for earthing by means of not easily erased”. (J60598-1(H29))		N/A
	In the third paragraph, replace “the green and yellow colour combination” with “the green and yellow colour combination or which are marked with the purport for earthing,” (J60598-1(H29))		N/A
	In the fourth paragraph, replace “with supply cords” with “with supply cords having an earthing core”. (J60598-1(H29))		N/A
	Add the following after the second paragraph. Class 0I luminaires shall be provided with any of the following: - an earthing lead coloured green-yellow;		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	- an earthing lead marked with the purport for earthing by means of not easily erased, or; - an earthing terminal. (J60598-1(H29))		
1.9 (14 & 15)	**Terminals**		-
1.9 (14.3.1)	After the first paragraph, add the following. The requirement based on terminal sizes applies to only terminals intended for connecting cables/cords complying with IEC standards, e.g., IEC 60227 (all parts). (J60598-1(H29))		N/A
1.9 (14.3.2.3)	After the first sentence of the first paragraph, add the following. And, this requirement applies to only terminals intended for connecting cables/cords complying with IEC standards, e.g., IEC 60227 (all parts). (J60598-1(H29))		N/A
1.9 (14.3.3)	At the beginning of the first paragraph, replace “Terminals” with “Terminals intended for connecting cables/cords complying with IEC standards, e.g., IEC 60227 (all parts)”. (J60598-1(H29))		N/A
	Replace the last paragraph with the following. Compliance is checked by inspection, by measurement and by fitting conductors of the smallest and largest nominal cross-sectional areas specified in Table 14.2 or conductors of the smallest and largest nominal cross-sectional areas specified by the manufacturer. (J60598-1(H29))		N/A
1.9 (14.4.1)	At the beginning of the first paragraph, replace “For pillar terminals” with “For pillar terminals intended for connecting cables/cords complying with IEC standards, e.g., IEC 60227 (all parts)”. (J60598-1(H29))		N/A
	At the beginning of the third paragraph, replace “For mantle terminals” with “For mantle terminals intended for connecting cables/cords complying with		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	IEC standards, e.g., IEC 60227 (all parts)". (J60598-1(H29))		
1.9 (14.4.2)	Replace the fifth paragraph with the following. Terminals intended for connecting cables/cords complying with IEC standards, e.g., IEC 60227 (all parts), are fitted with a conductor having the composition given in Table 14.3, and other terminals are fitted with a standard conductor of the cable/cord specified. (J60598-1(H29))		N/A
1.9 (14.4.3)	At the beginning of the first paragraph, replace "Terminal sizes up to and including size 5" with "Terminal sizes up to and including size 5, which are intended for connecting cables/cords complying with IEC standards, e.g., IEC 60227 (all parts),". (J60598-1(H29))		N/A
1.9 (14.4.6)	In the first sentence of the fifth paragraph, replace "Table 14.2" with "Table 14.2 or of the largest nominal cross-sectional area specified by the manufacturer". (J60598-1(H29))		N/A
	In the second sentence of the fifth paragraph, replace "Table 14.4 or" with "Table 14.4 or, if terminals are intended for connecting cables/cords complying with IEC standards, e.g., IEC 60227 (all parts)," (J60598-1(H29))		N/A
1.9 (14.4.7)	In the second paragraph, replace "For lug terminals" with "For lug terminals and terminals intended for connection by crimp terminals". (J60598-1(H29))		N/A
	Replace the fourth paragraph with the following. Compliance is checked by inspection and, by the following test if terminals are other than terminal intended for connection by crimp terminals. (J60598-1(H29))		N/A
	In the fifth paragraph, replace "in Table 14.2" with "in Table 14.2 or of the smallest and largest nominal cross-sectional areas specified by the manufacturer".		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

<table>
<tr><th>Clause</th><th>Requirement + Test</th><th>Result - Remark</th><th>Verdict</th></tr>
<tr><td></td><td>(J60598-1(H29))</td><td></td><td></td></tr>
<tr><td></td><td>Replace seventh paragraph with the following.

Each conductor is then subjected to a full of the value, a pull , given in Table 14.5 if the terminals are intended for connecting cables/cords complying with IEC standards, e.g., IEC 60227 (all parts), and a pull given in Table 14.5A if terminals are provided with marking of the applicable cables/cords.
(J60598-1(H29))</td><td></td><td>N/A</td></tr>
<tr><td></td><td>After Table 14.5, add the following table.

Table 14.5A – Pull to be applied to conductor
<table><tr><td>Nominal cross-sectional areas of applicable cables/cords mm²</td><td>≤ 1,0</td><td>1,0 < and ≤ 1,5</td><td>1,5 < and ≤ 2,5</td><td>2,5 < and ≤ 4</td><td>4 < and ≤ 6</td><td>6 ar ≤</td></tr><tr><td>Pull (N)</td><td>35</td><td>40</td><td>50</td><td>60</td><td>80</td><td>9</td></tr></table>(J60598-1(H29))</td><td></td><td>N/A</td></tr>
<tr><td>1.9 (14.4.8)</td><td>In the second paragraph, replace “in Table 14.2” with “in Table 14.2 or of the smallest and largest nominal cross-sectional areas specified by the manufacturer”.
(J60598-1(H29))</td><td></td><td>N/A</td></tr>
<tr><td>1.9 (15.2.6)</td><td>In the paragraph, replace “terminals” with “terminals, lampholders, etc.”
(J60598-1(H29))</td><td></td><td>N/A</td></tr>
<tr><td>1.9 (15.3.10)</td><td>In the paragraph, replace “Manufacturers shall state” with “For terminals intended for connection to the fixed wiring and for replacement by users, manufacturers shall state”.
(J60598-1(H29))</td><td></td><td>N/A</td></tr>
<tr><td>1.9 (15.5.2.2.1)</td><td>In the first sentence of the paragraph, replace “at a temperature of T ± 5 °C or 100 °C ± 5 °C, whichever is the higher,” with “at a temperature of T ± 5 °C or 100 °C ± 5 °C, whichever is the higher, if it is a T-marked component, and at a temperature of t ± 5 °C if it is a t-marked component”.
(J60598-1(H29))</td><td></td><td>N/A</td></tr>
<tr><td></td><td>Replace NOTE with the following.

NOTE The temperatures T and t are the marked maximum rated temperature for T-marked or t-marked components such as lampholders.</td><td></td><td>N/A</td></tr>
</table>

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	(J60598-1(H29))		
1.9 (15.6.1)	In the first paragraph, replace “in Table 15.1” with “in Table 15.1 or with the nominal cross-sectional areas specified by the manufacturer”. (J60598-1(H29))		N/A
	Add the following values at the bottom of Table 15.1. 20 | > 2,0 to 3,5 (J60598-1(H29))		N/A
	At the end of the last paragraph, replace “cross-sectional areas specified” with “cross-sectional areas specified or of the smallest and largest nominal cross-sectional areas specified by the manufacturer”. (J60598-1(H29))		N/A
1.9 (15.6.2.1)	Replace “specified in 15.6.” in the first paragraph with “specified in 15.6 or by the manufacturer. (J60598-1(H29))		N/A
	Replace “each terminal five times” in the first paragraph with “each terminal five times with solid copper conductors having the largest and then the smallest cross-sectional areas alternately". (J60598-1(H29))		N/A
1.9 (15.6.2.2)	Add the following values at the bottom of Table 15.2. 20 | 30 | 15 (J60598-1(H29))		N/A
1.9 (15.6.3.2.3)	In the first sentence of the paragraph, replace “at a temperature of *T* ± 5 °C or 100 °C ± 5 °C, whichever is the higher,” with “at a temperature of *T* ± 5 °C or 100 °C ± 5 °C, whichever is the higher, if it is a *T*-marked component, and at a temperature of *t* ± 5 °C if it is a *t*-marked component”. (J60598-1(H29))		N/A
	Replace NOTE with the following. NOTE The temperatures *T* and *t* are the marked maximum rated temperature for *T*-marked or *t*-		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	marked components, such as lampholders. (J60598-1(H29))		
1.10 (5)	**External and internal wiring**		N/A
1.10 (5.2.1)	Add “Ceiling rosette” after “appliance inlets;”.in dashed paragraph of “fixed luminaires”. (J60598-1(H29))		N/A
1.10 (5.2.2)	In the first paragraph, replace “those specified in IEC 60227 and IEC 60245, as indicated in Table 5.1” with “JIS C 3662-5, JIS C 3663-4 and IEC 60245, as indicated in Table 5.1, or those specified in Table 5.1A or Appendix 1 of “Interpretation of METI Ordinance establishing Technical requirements for Electrical Appliances and Materials””. (J60598-1(H29))		N/A
	Add the following after the third paragraph. The use of cords without sheath is not acceptable for Luminaires other than ordinary class 0 luminaires (J60598-1(H29))		N/A
	In the left column of the Table 5.1, replace “Ordinary class I luminaires” with “Ordinary class I luminaires, ordinary class 0I luminaires”, and “Ordinary class II luminaires” with “Ordinary class II luminaires, class 0 luminaires”. (J60598-1(H29))		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

<table>
<tr><th>Clause</th><th>Requirement + Test</th><th>Result - Remark</th><th>Verdict</th></tr>
<tr><td></td><td>After Table 5.1, add the following.

Table 5.1A – Cables/cords for external wiring
<table>
<tr><th>Service voltage V</th><th>Type of cable/cord</th><th>Symbol fo cable/cor</th></tr>
<tr><td>≤ 150</td><td>Indoor silicone rubber insulated cords</td><td>-</td></tr>
<tr><td>≤ 300</td><td>Rubber insulated flexible cords</td><td>-</td></tr>
<tr><td></td><td>Polyvinyl chloride insulated flexible cords</td><td>-</td></tr>
<tr><td>≤ 600</td><td>600 V Polyvinyl chloride insulated wires</td><td>IV</td></tr>
<tr><td></td><td>600 V Grade polyvinyl chloride insulated and sheathed portable power cables</td><td>VCT</td></tr>
<tr><td></td><td>Rubber insulated lead wires for electric machinery and apparatus</td><td>600V LKGB</td></tr>
<tr><td></td><td>Electric polyvinyl chloride insulated wires for electrical apparatus</td><td>KIV</td></tr>
<tr><td></td><td>600V Grade heat-resistant polyvinyl chloride insulated wires</td><td>HIV</td></tr>
<tr><td></td><td>600 V Silicone rubber insulated wires</td><td>600V KGE</td></tr>
<tr><td></td><td>600V Rubber insulated flexible cables</td><td>2CT, 2RNCT</td></tr>
<tr><td></td><td>600V Polyethylene insulated cables</td><td>600VEE</td></tr>
<tr><td></td><td>600V Flame retardant polyethylene insulated wires</td><td>1E/F</td></tr>
<tr><td>≤ 1 000</td><td>1 000 V Fluorescent discharge lamps wires</td><td>1 000V FL</td></tr>
</table>
(J60598-1(H29))</td><td></td><td>N/A</td></tr>
<tr><td></td><td>In the third paragraph, replace the second and third dash with the following.

- 1,0 mm^2 for rough service luminaires;
- 0,75 mm^2 for other luminaires.
(J60598-1(H29))</td><td></td><td>N/A</td></tr>
</table>

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	Replace the last paragraph with the following. Flexible conductors of luminaires having a socket-outlet shall have sufficient nominal cross-sectional areas corresponding to the capacity supplied from wall-sockets. (J60598-1(H29))		N/A
1.10 (5.2.8)	After NOTE 2, add the following. NOTE 2A Bushing includes tubes. (J60598-1(H29))		N/A
1.10 (5.2.10.3)	In Table 5.2, replace the title with “Table 5.2 – Pull-force applied to cables/cords”. (J60598-1(H29))		N/A
1.10 (5.2.14)	After the second paragraph, add the following. NOTE 0A In Appendix 4 of “Interpretation of METI Ordinance establishing Technical requirements for Electrical Appliances and Materials”, protection class against electric shock for plugs has not been defined. Therefore, if the luminaire including the plug fulfills the protection class against electric shock, the plug is considered to be in compliance with the requirement of this sub-clause. (J60598-1(H29))		N/A
	In the fourth paragraph, replace “IEC 60083” with “Table 1 of JIS C 8303”. (J60598-1(H29))		N/A
1.10 (5.2.18)	In the first paragraph, replace “IEC 60083, or with regional or national standards where applicable” with “JIS C 8282 (all parts), or with Appendix 4 of “Interpretation of METI Ordinance establishing Technical requirements for Electrical Appliances and Materials”. (J60598-1(H29))		N/A
1.10 (5.3.1)	Replace the sixth paragraph with the following. When stable conditions are reached, the voltage is increased to the voltage specified in d) of 12.4.1 (J60598-1(H29))		P
1.10 (5.3.3)	At the end of this paragraph, add the following.		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	For class 0, class 0I and class I luminaires, if the metal parts for passing have smoothly rounded edges, they are considered to be in conformity with this requirement. (J60598-1(H29))		
1.11 (8)	**Protection against electric shock**		-
1.11 (8.2.1)	In the first sentence of the first paragraph, replace “for replacing lamps or (replaceable) starters” with “for replacing replaceable light sources or (replaceable) starters”. (J60598-1(H29))		N/A
	At the beginning of the second sentence of the first paragraph, add “Except for class 0 luminaires,” (J60598-1(H29))		N/A
	In the second sentence of the paragraph before item a), replace “except lamps and” with “except lamps, starters and”. (J60598-1(H29))		N/A
	At the beginning of the fifth paragraph from the last, replace “Class I and class II” with “Class 0, class 0I, class I and class II”. (J60598-1(H29))		N/A
	In the last paragraph, replace “double-capped Fa8 tubular lamps” with “double-capped FaX6 fluorescent lamps”. (J60598-1(H29))		N/A
1.11 (8.2.3)	In the second sentence of item a), replace “cap” with “ cap and accessible metal parts other than cap”. (J60598-1(H29))		N/A
	In Item b), replace “class I” with “class 0I and class I”. (J60598-1(H29))		N/A
1.11 (8.2.6)	In the fourth paragraph, replace “20 N” with “ at least 20 N”, and “80 N” with “at least 80 N”, (J60598-1(H29))		P
1.12 (12)	**Endurance tests and thermal tests**		-
1.12(-)	Replace the first and second paragraph with the following.		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	The provisions of Section 12 of JIS C 8105-1 apply. Luminaires with an IP classification greater than IP20 shall be subjected to the relevant tests of Clauses 12.4 Thermal test (normal operation), 12.5 Thermal test (abnormal operation), 12.6 Thermal test (failed windings in lamp control gear) and 12.7 Thermal test in regard to fault conditions in lamp control gear or electronic devices incorporated in thermoplastic luminaires of JIS C 8105-1 after the test(s) of Clause 9.2 but before the test(s) of Clause 9.3 of JIS C 8105-1 (J60598-2-1(H29))		
1.12 (12.2)	In the second sentence of the third paragraph, replace “the ballast” with “the ballast (reference ballast)” (J60598-1(H29))		N/A
1.12 (12.3.1)	In 1) of Item e), replace “cyclic protective devices” with “cyclic thermal protective devices”, and “(thermal links)” with “(thermal links, ballasts marked with the symbol TC or OP)” (J60598-1(H29))		N/A
	In 2) of Item e), replace “the protective device” with “the thermal protective device” in both the first and second sentences, and “adjustment below” with “adjustment of the supply voltage or ambient temperature at that time below” in the second sentence. (J60598-1(H29))		N/A
	In the NOTE, replace “the intended protection” with “the intended thermal protection”. (J60598-1(H29))		P
1.12 (12.3.2)	In the second sentence of paragraph, replace “a chance failure” with “a chance failure (including operation of thermal protective device)”. (J60598-1(H29))		N/A
1.12 (12.4.1)	At the end of the second dash of Item d), add the following. However, for tubular fluorescent and other discharge lamp luminaires, using electronic ballasts, the most unfavourable value in the range of 0,94 and 1,06 times of the rated voltage (the range of 0,94 times of the minimum and 1,06 times of the		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	maximum, for the rated voltage range) (J60598-1(H29))		
	At the end of the second dash of Item d), add the following. - Tubular fluorescent, other discharge lamp luminaires and Filament lamp luminaires for ELV may be as follows instead of above second dash. However luminaires with electronic ballasts are excluded. For luminaires using protected ballasts and luminaires with ballasts/transformers which are classified by the winding insulation system, 1,0 times may be applied. For luminaires not incorporating ballast, the rated voltage marked on the ballast may be applied, by using the ballast specified by the manufacturer. For luminaires for which plural ballasts are specified, the rated voltage marked on the ballast may be applied, by using the ballast presenting the most unfavourable condition. (J60598-1(H29))		N/A
	After the third dash of Item d), add the following new dash. - For LED luminaires: the most unfavourable value in the range of 0,94 and 1,06 times of the rated voltage (the range of 0,94 times of the minimum and 1,06 times of the maximum, for the rated voltage range) (J60598-1(H29))		P
	In Item j), replace “in Annex D” with “in Annex D, and the maximum temperature of the surface subjected to the light beam is measured”. (J60598-1(H29))		P
1.12 (12.4.2)	Add the following after the first sentence of item a). This is not applied to the test according to test condition third dash of 12.4.1 d). (J60598-1(H29))		P
	Add the following to the end of item b). .For the permissible maximum temperature of the		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	material, Appendix JB is available. (J60598-1(H29))		
	In item c), replace “for example clamped)” with “for example clamped), limited to the case where cables/cords listed in Table 5.1 complying with the relevant IEC standard are used” (J60598-1(H29))		N/A
	Replace Table 12.1 with the following except for the bottom column. Table 12.1 – Maximum temperatures under the test conditions 12.4.1, for principal parts		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict

Part¤				Max
Lamp·caps¤				A ap
Windings¤	Ballasts·or·transformers·with·t_w·marking¤			
	Windings·in·ballasts,·transformers,·motors,·etc.,·if·the·winding·insulation·system·according·to·JIS·C·4003¤	-·of·class·A·material·[c]¤		
		-·of·class·E·material·[c]¤		
		-·of·class·B·material·[c]¤		
		-·of·class·F·material·[c]¤		
		-·of·class·H·material·[c]¤		
Case·(of·capacitor,·starting·device,·electronic·ballast·or·convertor·(including·electronic·step-down·converter),·LED·module·control·gear,·etc.)¤		If·t_c·is·marked¤		
		For·capacitor·if·t_c·is·not·marked¤		
Insulation·of·winding:¤				Se Item
Contacts·of·ceramic·lampholders·and·insulating·material·of·lampholders·and·starterholders·other·than·ceramic·lampholders:¤	¶ ¤	With·*T*-marking¤	(B15,·B22)·[d]·(JISC·8122)¤	165·t
			Others·(JIS·C·8280,·JIS·C·8324,·JIS·C·8121·(all·parts)·[e]·and·JIS·C·8122)¤	
		With·*t*-marking¤	Others¤	
		Without·*T*-or·*t*-marking¤	(E14,·B15)·(JIS·C·8121·(all·parts)·and·JIS·C·8122)¤	
			(B22,·E26,·E17)·(JIS·C·8280·and·JIS·C·8122)¤	
			E39,·E11¤	
			E12¤	
			Fluorescent·lampholders/starterholders·(JIS·C·8324)·and·miscellaneous·lampholders·(JIS·C·8121·(all·parts)·[e])¤	
Switches·marked·with·individual·ratings¤		Switches·with·*T*·marking¤		
		Switches·without·*T*·marking¤		
Other·parts·of·the·luminaire·(according·to·material·and·use):¤				See·
Mounting·surface:¤		Normally·flammable·surface¤		
		Non-combustible·surface¤		
Means·of·adjustment·and·its·surrounding·space·[f]¤		Metal·parts¤		
		Non-metal·parts¤		
Accessible·parts·of·enclosure·[j]¤		Metal·parts¤		
		Non-metal·parts¤		
Enclosure·to·which·a·person·is·not·easily·accessible·[k]¤				
Objects·lighted·by·spotlights·(see·12.4.1·j))¤				90·(the·v man the·v
Track·(for·track-mounted·luminaires)¤				As·
Mains·socket-outlet-mounted·luminaire·and·plug-ballast/transformer:¤		-·case·parts·intended·to·be·gripped·by·hand¤		
		-·the·plug/socket·interface¤		
		-·all·other·parts¤		
Replaceable·glow-starting·devices¤				

(J60598-1(H29))

	At the end of Item b in the bottom column of Table 12.1, add the following sentence. If capacitors comply with JIS C 4908 and are marked with the symbol expressing the maximum allowable temperature, the marked symbol is replaced with the value of maximum temperature. (J60598-1(H29))		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	At the end of Item f in the bottom column of Table 12.1, add the following sentence. Part of the enclosure is not considered to be a means of adjustment, except for the part for which the manufacturer's instructions explains the purport that the part is an operation part for adjusting the luminaire during use. (J60598-1(H29))		P
	In the bottom column of Table 12.1, add the following new items after Item h. i For lampholders complying with only the relevant regulations, the maximum temperatures specified in the regulations apply. j In this table, "enclosure" is the enclosure in the state of normal use, except for the following part. - upper surface of the electric installation part of the suspended fluorescent luminaires for household - lamps in the light source part inside the cover, and the part of inner surface of reflecting shades, globes and lighting covers etc. - road lighting luminaires, floodlights (including projectors, however, limited to floodlights with marking of the purport of luminaires for exhibition business on the surface of the body), luminaires for high ceiling (limited to those with marking of the purport on the surface of body, except for those to be used by contacted with (or by recessed into) the building materials), and reflecting shades, globes and lighting covers of luminaires for stages or studios k Examples of the enclosure to which a person is not easily accessible: - for recessed luminaires, the enclosure of the part of chassis recessed - the enclosure of the luminaires providing a clear guidance, which an instruction for mounting the luminaire out of arms reach is available in the installation instructions. (J60598-1(H29))		N/A
	In the title of Table 12.2, replace "12.4.2" with "12.4.1". (J60598-1(H29))		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
1.12 (12.5.1)	At the end of the third paragraph of Item b), add the following. However, for tubular fluorescent and other discharge lamp luminaires, using electronic ballasts, the most unfavourable value in the range of 0,9 and 1,1 times of the rated voltage (the range of 0,9 times of the minimum and 1,1 times of the maximum, for the rated voltage range) (J60598-1(H29))		P
	After the third paragraph of Item b), add the following. - For tubular fluorescent, other discharge lamp luminaires and Filament lamp luminaires for ELV, the rated voltage(in case of rated voltage range, maximum voltage) can be applied instead of above second dash, provided that luminaires using protected ballasts and luminaires with ballasts/transformers which are classified by the winding insulation system. However luminaires with electronic ballasts are excluded. (J60598-1(H29))		N/A
	After the fourth paragraph of Item b), add the following. - For LED luminaires: the most unfavourable value in the range of 0,9 and 1,1 times of the rated voltage (the range of 0,9 times of the minimum and 1,1 times of the maximum, for the rated voltage range). (J60598-1(H29))		P
	In the fifth paragraph of Item b), replace “transformer/convertors” with “transformer/convertors (including electronic convertor)”. (J60598-1(H29))		N/A
	In the paragraph of Item e), replace “metal halide lamps” with “metal halide lamps [1)]” (J60598-1(H29))		N/A
	At the end of Item e), add the following. However, for luminaires which the one-shot type protective device operates, the assessment for the winding temperatures of ballasts is not carried out.		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	NOTE [1)] Lamps which the purport is stated clearly in the manufacturer's specifications etc. (J60598-1(H29))		
	After Item e), add the following new item. eA) For luminaires which an one-shot type protective device operates during the test, assessment for capacitors is not carried out if the capacitor is; - capacitors with a built-in safety device specified in JIS C 4908; - capacitors with safety mechanism, specified in JIS C 4908, or; - capacitors protected by the enclosure of ballast, except for power factor improvement capacitors and phase-advanced capacitors (J60598-1(H29))		N/A
1.12 (12.5.2)	Add the following after the first paragraph. This is not applied to the test according to test condition third dash of 12.5.1 b). (J60598-1(H29))		P
	In Item a in the bottom row of Table 12.3, replace "marked on" with "marked with S on". (J60598-1(H29))		P
	Replace the title of Table 12.4 with the following. Table 12.4 – Maximum temperature of windings under abnormal operating conditions and at 110 % of rated voltage for lamp control gear (the case of use of protected ballasts: at 100 % of rated voltage) (J60598-1(H29))		P
	Replace the title of Table 12.5 with the following. Table 12.5 – Maximum temperature of windings under abnormal operating conditions and at 110 % of rated voltage for lamp control gear marked "D6" (the case of use of protected ballasts: at 100 % of rated voltage) (J60598-1(H29))		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	In the last paragraph, replace “the relevant IEC auxiliary standard” with “clause 13 (Thermal endurance test for windings of ballasts) of JIS C8147-1”. (J60598-1(H29))		P
	In the sentence with parentheses after the last paragraph, replace “the relevant IEC auxiliary standard” with “clause 13 of JIS C8147-1”. (J60598-1(H29))		P
1.12 (12.6.1)	The end of the second sentence of Item b), add “(See Figure 9)”. (J60598-1(H29))		P
1.12 (12.6.2)	In the title, replace “above 130 °C” with “above 130 °C, or symbol TC or OP” (J60598-1(H29))		N/A
1.12 (12.7.1.2)	In the fifth paragraph, add the following after the second sentence. The best straight line through these points is drawn. (J60598-1(H29))		N/A
1.13 (9)	**Resistance to dust and moisture**		-
1.13 (9.2)	In this sub-clause, replace “9.2.9” with “9.2.9A”. (J60598-1(H29))		P
	In the seventh paragraph, add the following after the first sentence. If the manufacturer specifies the method for mounting to the mounting surface, the test is carried out after mounting in accordance with the method specified. (J60598-1(H29))		P
	After Item e), add the following new item. eA) For moisture-proof luminaires used in bathroom etc., after the moisture-proof test specified in 9.2.9A, the luminaire tested shall be fulfill the following. - that entry of moisture which inhibits normal operation is not inside the luminaire; and - that the insulation resistance between all live parts		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	and the earthed part is at least 1 MΩ, by measuring with an insulation resistance tester of DC 500 V rated measurement voltage which is specified in JIS C 1302. (J60598-1(H29))		
1.13 (9.2.4)	At the end of NOTE, add the following. However, the state of lighting-on and lighting-off of the luminaire and the test duration shall be of as mentioned above. (J60598-1(H29))		P
1.13 (9.2.5)	At the end of NOTE, add the following. However, the state of lighting-on and lighting-off of the luminaire and the test duration shall be of as mentioned above. (J60598-1(H29))		P
1.13 (9.2.9A)	After sub-clause 9.2.9, add the following new sub-clause. 9.2.9A For luminaires usable in bath rooms etc., the luminaire under test is placed in the most unfavourable position of normal use, in the thermostatic chamber generating gentle breeze and maintained at 91 to 95 % relative humidity. In the thermostatic chamber, the temperatures at all positions where the luminaire under test is placed shall be kept at the appropriate temperature of t °C ± 1 °C, within the range of 35 to 40 °C. The luminaire shall be kept the state of lighting-on for a period of 8 h, and then the luminaire is placed in the state of lighting-off for a period of 16 h in the room of normal temperature and normal humidity. This cyclic operation is repeated 10 times. (J60598-1(H29))		P
1.14 (10)	**Insulation resistance and electric strength**		-
1.14 (10.2)	Add the following to the end of last paragraph. Note 1A Uout specified in JIS C 8147-1 means the maximum voltage generated between output terminals of control gear or output terminal and earth. (J60598-1(H29))		P

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
1.14 (10.2.1)	In the first paragraph, replace “after the application of the voltage” with “immediately after humidity test and thermal test (normal operation)”. (J60598-1(H29))		P
	In the second row of Table 10.1, replace “class I luminaires” with “class 0, class 0I and class I luminaires”. (J60598-1(H29))		N/A
1.14 (10.2.2)	At the end of the second paragraph, add the following. In this case, the applied time after reaching to the specified voltage is considered as the specified time. (J60598-1(H29))		N/A
	In the 11th paragraph, replace “the ignitor operating” with “the ignitor operating (without fitting of lamp in the circuit)”. (J60598-1(H29))		N/A
	In the 13th paragraph after NOTE 2, replace “100 % rated voltage” with “100 % rated voltage, without fitting of lamp”. (J60598-1(H29))		N/A
	In the 15th paragraph, replace “with ignitors provided” with “with ignitors (including ignitors incorporated in ballasts) provided” (J60598-1(H29))		N/A
	Add the following to the end of last paragraph. Note 2A Uout specified in JIS C 8147-1 means the maximum voltage generated between output terminals or output terminal and earth of control gear. (J60598-1(H29))		N/A
	In the second row of Table 10.2, replace “class I luminaires” with “class 0, class 0I and class I luminaires”. (J60598-1(H29))		N/A
	In the bottom of Table 10.2, replace the second footnote with “*U*: working voltage”. (J60598-1(H29))		N/A

Attachment No.1 IEC60598_2_4D ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
1.14 (10.3)	In the second row of Table 10.3, replace the text with the following. All luminaires of class 0, class 0I and class II (J60598-1(H29))		P
	In the third row of Table 10.3, replace the text with the following. Class I luminaires rated up to and including 16 A fitted with a plug connectable to a mains socket-outlet (J60598-1(H29))		P
	In the fourth row of Table 10.3, replace “Class I luminaires” with “Class 0I and class I luminaires”. (J60598-1(H29))		N/A
	In the fifth row of Table 10.3, replace “Class I luminaires” with “Class 0I and class I luminaires”. (J60598-1(H29))		N/A
	In the sixth row of Table 10.3, add [a)] to the value of 10 mA. (J60598-1(H29))		P
	By creating a column in the bottom of Table 10.3, add the following NOTE. NOTE [a)] Luminaires fitted with plural electronic lamp control gears may exceed 10 mA. In such case, marking specified in 3.3.19 is required. (J60598-1(H29))		P

Attachment No.2 IEC 62031

Clause	Requirement + Test	Result - Remark	Verdict
13 (14)	**FAULT CONDITIONS**		**P**
- (14.1)	In compliance with IEC 61347-1 (clause numbers between parentheses refer to IEC 61347-1)		N/A
	When operated under fault conditions the LED module:		N/A
	- does not emit flames or molten material		N/A
	- does not produce flammable gases		N/A
	- protection against accidental contact not impaired		N/A
	Thermally protected controlgear does not exceed the marked temperature value		N/A
	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected		N/A
- (14.2)	Short-circuit of creepage distances and clearances if less than specified in clause 16 in Part 1 (except between live parts and accessible metal parts)		N/A
	Creepage distances on printed boards less than specified in clause 16 in Part 1 provided with coating according to IEC 60664-3		N/A
- (14.3)	Short-circuit or interruption of semiconductor devices		N/A
- (14.4)	Short-circuit across insulation consisting of lacquer, enamel or textile		N/A
- (14.5)	Short-circuit across electrolytic capacitors		N/A
- (14.6)	After the tests has been carried out on three samples:		N/A
	The insulation resistance ≥ 1 MΩ ..... :		N/A
	No flammable gases		N/A
	No accessible parts have become live		N/A
	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite		N/A
- (14.7)	Relevant fault condition tests with high-power supply		N/A
13.2	**Overpower condition**		**P**
	Module withstands overpower condition >15 min.		P
	Module with automatic protective device or power limiter, test performed 15 min. at limit.		N/A
	No fire, smoke or flammable gas is produced		P
	Molten material does not ignite tissue paper, spread below the module		P

Attachment No.3 IEC 62778

Clause	Requirement + Test	Result - Remark	Verdict

Table 6.1	Emission limits for risk groups of continuous wave lamps (based on EU Directive 2006/25/EC)									—
	Photobiological safety of lamps and lamp systems (LED bulb emit white light)									P
Risk	Action spectrum	Symbol	Units	Emission limits						
				Exempt	Result	Low risk	Result	Mod risk	Result	
Actinic UV	$S_{UV}(\lambda)$	E_s	$mW \cdot m^{-2}$	0,001	1.002E-06	0.003	--	--	--	
Near UV	--	E_{UVA}	$W \cdot m^{-2}$	0,33	3.455E-04	33	--	--	--	
Blue light	B(λ)	L_B	$W \cdot m^{-2} \cdot sr^{-1}$	100	3.087E+00	10000	--	4000000	--	
Blue light, small source	B(λ)	E_B	$W \cdot m^{-2}$	1,0*	--	--	--	400	--	
Retinal thermal	R(λ)	L_R	$W \cdot m^{-2} \cdot sr^{-1}$	28000/α	1.006E+03	1.011E+06	--	71000/α	--	
Retinal thermal, weak visual stimulus**	R(λ)	L_{IR}	$W \cdot m^{-2} \cdot sr^{-1}$	545000 0,0017≤ α ≤ 0,011	--					
					--					
IR radiation, eye	--	E_{IR}	$W \cdot m^{-2}$	6000/α 0,011≤ α ≤ 0,1	0.000E+00	570	--	3200	--	
* Small source defined as one with α < 0,011radian. Averaging field of view at 10000 s is 0.1radian. ** Involves evaluation of non-GLS source NOTE 1. Angular subtense of apparent source: α=77.53 mrad 2. Measure distance is 200mm.										
Blue light	B(λ)	LB	$W \cdot m^{-2} \cdot sr^{-1}$	100	3.746E+00	10000	--	4000000	--	
NOTE Angular subtense of apparent source: α= 77.53 mrad. Measure distance 200mm.										

Attachment No.4 **Product Photos**

Details of: Fig. 1

Details of: Fig. 2

Attachment No.4 **Product Photos**

Details of: Fig. 3

- End of test report -