TEST REPORT

IS 10322 (Part 5/Sec 5) : 2026

Luminaires

Part 5 Particular Requirements

Section 5 Floodlights

Report Number. .....:

Date of issue .....:

Total number of pages.....:

Name of CB Testing Laboratory preparing the Report :

Applicant's name.....:

Address .....:

Test specification:

Standard .....: IS 10322 (Part 5/Sec 5) : 2026 / IEC 60598-2-5:2015 used in conjunction with IEC 60598-1:2024

Test procedure.....:

Non-standard test method.....:

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the BIS.

Test item description .....: **Trade Mark(s) .....:** **Manufacturer .....:** **Model/Type reference.....:** **Ratings.....:**	

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☐	**CB Testing Laboratory:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature) .. :			
☐	**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):	
Summary of testing:	
Tests performed (name of test and test clause):	**Testing location: (CBTL, SPTL, CTF, Subcontractor)**

Use of uncertainty of measurement for decisions on conformity (decision rule) :

☐ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").

☐ Other: … (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)

Information on uncertainty of measurement:
The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.
IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the 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.

Test item particulars .....:	
Classification of installation and use .....: **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 .....:** **Date (s) of performance of tests.....:**	
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. **Throughout this report a ☐ comma / ☐ point is used as the decimal separator.**	
Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☐ **Not applicable**
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies).....:	
General product information and other remarks:	

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict

5.2 (4)	**GENERAL TEST REQUIREMENTS**		
5.2 (4.1.2)	More parts of IEC 60598-2 series applicable ..... :	Yes ☐ No ☐	—
	Part(s)..... :		
5.2 (4.2)	Batteries or EDLCs operated luminaire	(see ANNEX 5)	
5.2 (4.3)	Components	(see ANNEX 1)	—
5.2 (4.4)	**Information for luminaire design in light sources standards**		—
5.2 (4.4.2)	Light source and/or controlgear safety standard .... :		—
	Luminaire design in the light source and/or controlgear safety standard		

5.4 (5)	**CLASSIFICATION OF LUMINAIRES**		
5.4 (5.2)	Type of protection ..... :	Class	
5.4 (5.3)	Degree of protection..... :	IP	—
5.4 (5.4)	Luminaire suitable for direct mounting on normally flammable surfaces ..... :	Yes ☐ No ☐	—
5.4 (5.5)	Luminaire for normal use ..... :	Yes ☐ No ☐	—
	Luminaire for rough service ..... :	Yes ☐ No ☐	—

5.5 (6)	**MARKING**		
5.5 (6.1)	Language of instructions		
5.5 (6.2)	**Marking on luminaire**		
	Position of the marking		
	Format of symbols/text		
5.5 (6.3)	Information on luminaire		
5.5 (6.4)	**Additional information**		
5.5 (6.4.2)	Combination luminaires		
5.5 (6.4.3)	Rated frequency in Hz		
5.5 (6.4.4)	Operating temperature		
5.5 (6.4.5)	Wiring diagram		
5.5 (6.4.6)	Special conditions		
5.5 (6.4.7)	Metal halide lamp luminaire – warning		
5.5 (6.4.8)	Limitation for semi-luminaires		
5.5 (6.4.9)	Power factor and supply current		
5.5 (6.4.10)	Luminaires using remote controlgear		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
5.5 (6.4.11)	Clip-mounted luminaire – warning		
5.5 (6.4.12)	Specifications of protective shields		
5.5 (6.4.13)	Rough service luminaire		
5.5 (6.4.14)	Mounting instruction for type Y, type Z and some type X attachments		
5.5 (6.4.15)	Non-ordinary luminaires with PVC cable		
5.5 (6.4.16)	Protective conductor current in instruction if applicable		
5.5 (6.4.17)	Provided with information if not intended to be mounted within arm's reach		
5.5 (6.4.18)	Non replaceable and non-user replaceable light sources information provided		
5.5 (6.4.19)	Controllable luminaires, classification of insulation provided		
5.5 (6.4.20)	Luminaires without controlgear provided with necessary information for selection of appropriate component		
5.5 (6.4.21)	If not supplied with terminal block, information on the packaging		
5.5 (6.4.22)	Luminaires employing light sources emitting UV on mains wiring, information provided		
5.5 (6.4.23)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		
5.5 (6.4.24)	Information for replacement or non-replacement of controlgear provided		
	a) Non-serviceable controlgear		
	b) Non-user serviceable controlgear		
	c) Serviceable controlgear		
5.5 (6.5)	**Test of marking**		
	Test with water		
	Test with hexane		
	Legible after test		
	Label attached		
5.5 (-)	Additional information if applicable		
	a) Operation position		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
	b) Weight and dimensions		
	c) Maximum protected area		
	d) Limitation of use indoors and/or outdoor		
	e) Maximum mounting height if ≤ 5 m		
5.6 (7)	**CONSTRUCTION**		
5.6 (7.2)	Components replaceable or serviceable without difficulty		
5.6 (7.3)	Wireways smooth and free from sharp edges		
5.6 (7.4)	**Lamp holders**		
5.6 (7.4.1)	Integral lamp holder		
5.6 (7.4.2)	Wiring connection		
5.6 (7.4.3)	Lamp holder for end-to-end mounting		
5.6 (7.4.4)	Positioning		
	- pressure test (N) .....:		—
	After test the lamp holder comply with relevant standard sheets and show no damage		
	After test on single-capped lamp holder the lamp holder has not moved from its position and show no permanent deformation		
	- bending test (N) .....:		—
	After test the lamp holder has not moved from its position and show no permanent deformation		
5.6 (7.4.5)	Peak pulse voltage		
5.6 (7.4.6)	Centre contact		
5.6 (7.4.7)	Parts in rough service luminaires resistant to tracking		
5.6 (7.4.8)	Lamp connectors		
5.6 (7.4.9)	Caps and bases correctly used		
5.6 (7.4.10)	Light source for lamp holder or connection according to IEC 60061 not connected another way		
5.6 (7.5)	**Starter holders**		
	Starter holder in luminaires other than class II		
	Starter holder class II construction		
5.6 (7.6)	**Terminal blocks**		
	Connecting leads (tails)		
	Unsecured blocks		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
5.6 (7.7)	**Terminals and supply connections**		
5.6 (7.7.1)	Contact to metal parts		
5.6 (7.7.2)	Test 8 mm hazardous live conductor		
	Test 8 mm earth conductor		
5.6 (7.7.3)	Terminals for supply conductors		
5.6 (7.7.4)	Welded method and material		
	- stranded or solid conductor		
	- spot welding		
	- type Y and Z attachment		
	- mechanical test according to 17.5.2		
	- electrical test according to 17.5.3		
	- heat test according to 17.5.3.3.4 and 17.5.3.3.5		
5.6 (7.7.5)	Terminals other than supply connection		
5.6 (7.7.6)	Heat-resistant wiring/sleeves		
5.6 (7.7.7)	Multi-pole plug		
	- test at 30 N		
5.6 (7.8)	**Switches**		
	- adequate rating		
	- adequate fixing		
	- polarized supply		
	- compliance with IEC 61058-1-1 or IEC 60669-1 for mechanical switches		
	- compliance with IEC 61058-1-2 or IEC 60669-1 for electronic switches		
	- compliance with IEC 61058-2-1 for cord switches		
5.6 (7.9)	**Insulating lining and sleeves**		
5.6 (7.9.1)	Retainment		
	Method of fixing.....:		
5.6 (7.9.2)	Insulated linings and sleeves:		
	Resistant to a temperature > 20 °C to the wire temperature or		
	a) & c) Insulation resistance and electric strength		
	b) Ageing test. Temperature (°C).....:		
5.6 (7.10)	**Double or reinforced insulation**		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
5.6 (7.10.1)	No contact, mounting surface – accessible metal parts –basic insulation		
	Safe installation fixed luminaires		
	Capacitors and switches		
5.6 (7.10.2)	Assembly gaps:		
	- not coincidental		
	- no straight access with test probe		
5.6 (7.10.3)	Retainment of insulation:		
	- fixed		
	- unable to be replaced; luminaire inoperative		
	- sleeves retained in position		
	- lining in lamp holder		
5.6 (7.10.4)	Protective impedance device:		
	Basic or supplementary insulation bridged by resistor(s) or appropriate capacitor		
	Double or reinforced insulation bridged by at least two separate resistors in series or appropriate capacitor(s)		
	Capacitors comply with IEC 60384-14		
	Resistors comply with IEC 62368-1:2018, Clause G.10.		
5.6 (7.11)	**Electrical connections and current-carrying parts**		
5.6 (7.11.1)	Contact pressure		
5.6 (7.11.2)	Screws:		
	- self-tapping screws		
	- thread-cutting screws		
5.6 (7.11.3)	Screw locking:		
	- spring washer		
	- rivets		
5.6 (7.11.4)	Material of current-carrying parts		
	FELV, SELV or PELV supplying circuits:		
	- load less than 15 W		
	- load (including short-circuit) not higher than 2 A		
5.6 (7.11.5)	No contact to wood or mounting surface		
5.6 (7.11.6)	Electro-mechanical contact systems		
5.6 (7.12)	**Screws and connections (mechanical) and glands**		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
5.6 (7.12.1)	Screws not made of soft metal		
	Screws of insulating material		
	Torque test: torque (Nm); part .....:		
	Torque test: torque (Nm); part .....:		
	Torque test: torque (Nm); part .....:		
5.6 (7.12.2)	Screws with diameter < 3 mm screwed into metal		
5.6 (7.12.3)	Locked connections:		
	- fixed arms; torque (Nm) .....:		
	- lamp holder; torque (Nm).....:		
	- push-button switches; torque 0,8 Nm .....:		
5.6 (7.12.4)	Screwed glands; force (Nm) .....:		
5.6 (7.13)	**Mechanical strength**		
5.6 (7.13.1)	Impact tests:		
	- fragile parts; energy (Nm) .....:		
	- other parts; energy (Nm).....:		
	1) live parts		
	2) linings		
	3) protection		
	4) covers		
5.6 (7.13.2)	Metal parts have adequate mechanical strength		
5.6 (7.13.3)	Test with straight unjointed test finger		
5.6 (7.13.4)	Tumbling barrel		
5.6 (7.14)	**Suspensions, fixings and means of adjusting**		
5.6 (7.14.1)	Mechanical load:		
	A) four times the weight		
	B) torque 2,5 Nm		
	C) bracket arm; bending moment (Nm) .....:		
	D) load track-mounted luminaires		
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) .....:		
	Metal rod. diameter (mm) .....:		
	Fixed luminaire or independent controlgear without fixing devices		
	Magnets not used as the primary fixing		
5.6 (7.14.2)	Load to flexible cables:		

IS 10322 (Part 5/Sec 5) : 2026

Clause	Requirement + Test	Result - Remark	Verdict
	Mass (kg) .....:		—
	Stress in conductors (N/mm²) .....:		
	Special cable or cord, force applied (N).....:		
	Mass (kg) of semi-luminaire .....:		
	Bending moment (Nm) of semi-luminaire .....:		
5.6 (7.14.3)	Adjusting devices:		
	- flexing test; number of cycles .....:		
	- strands broken .....:		
	- insulation resistance and electric strength tests afterwards		
5.6 (7.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		
5.6 (7.14.5)	Guide pulleys		
5.6 (7.14.6)	Strain on socket-outlets		
5.6 (7.15)	**Flammable materials**		
	- glow-wire test 650°C.....:	See Test Table 5.15 (15.3.3)	
	- spacing ≥30 mm		
	- screen withstanding test of 15.3.2		
	- screen dimensions		
	- no fiercely burning material		
	- thermal protection		
	- electronic circuits exempted		
5.6 (7.15.2)	Luminaires made of thermoplastic material with controlgear:		
	a) construction		
	b) temperature sensing control		
	c) surface temperature		
5.6 (7.16)	**Luminaires for mounting on normally flammable surfaces**		
5.6 (7.16.1)	No controlgear .....:	(compliance with Clause 14)	
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		
5.6 (7.16.2)	Controlgear spacing:		
	- spacing 35 mm		
	- spacing 10 mm		
5.6 (7.16.3)	Thermal protection:		

IS 10322 (Part 5/Sec 5) : 2026

Clause	Requirement + Test	Result - Remark	Verdict
	- in controlgear		
	- external		
	- fixed position		
	- temperature marked controlgear		
5.6 (7.16.4)	Design to satisfy the test of 14.6	(see 14.6)	
5.6 (7.17)	**Drain holes**		
	Clearance at least 5 mm		
5.6 (7.18)	**Resistance to corrosion**		
5.6 (7.18.1)	- rust-resistance		
5.6 (7.18.2)	- season cracking in copper		
5.6 (7.18.3)	- corrosion of aluminium		
5.6 (7.19)	Ignitors compatible with ballast		
5.6 (7.20)	**Rough service luminaires**		
5.6 (7.20.1)	Resistance to vibrations		
5.6 (7.20.2)	IP54 or higher		
	a) fixed		
	b) hand-held		
	c) delivered with a stand		
	d) for temporary installations and suitable for mounting on a stand		
5.6 (7.21)	**Protective shield**		
5.6 (7.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		
	Shield of glass if tungsten halogen lamps		
5.6 (7.21.2)	Particles from a shattering lamp not impair safety		
5.6 (7.21.3)	No direct path		
5.6 (7.21.4)	Impact test on shield		
	Glow-wire test on lamp compartment .....:	See Test Table 5.15 (15.3.3)	
5.6 (7.22)	**Attachments to lamps**		
	Attachments to lamps do not cause overheating or damage		
5.6 (7.23)	**Semi-luminaires**		
	Semi-luminaires comply Class II		
5.6 (7.24)	**Photobiological hazards**		
5.6 (7.24.1)	**Actinic UV hazards for skin and eye 200 nm to 400 nm)**		

IS 10322 (Part 5/Sec 5) : 2026

Clause	Requirement + Test	Result - Remark	Verdict
	No excessive UV radiation: luminaires used with:		
	- self-shielded lamps or light sources having a UV emission ≤ 2 mW · klm^{-1}		
	- light sources emitting ≤ 6 mW · klm^{-1} and having a glass cover		
	- light sources emitting > 6 mW · klm^{-1}, compliance with Annex M		
5.6 (7.24.2)	**UV-A hazard for the eye lens (315 nm to 400 nm)**		
	No excessive UV-A radiation		
5.6 (7.24.3)	**Retinal blue light hazard**		
5.6 (7.24.3.2)	**Luminaire assessment according to IEC 62471-7:2023**		
	Luminaire application group.....:	☐ BLH-A ☐ BLH-B ☐ BLH-C	–
	Blue light radiance emission limit not exceeded for application group at applicable assessment distance		
	Increased assessment distance for fixed luminaire based on luminaire application applied		
	Assessment distance used (m)……:		—
	Information according to clause 6.3.22 a) provided		
	Luminaire assessment based on light source data		
	Light source application group.....:	☐ BLH-A ☐ BLH-B ☐ BLH-C	—
	Data in accordance with luminaire application group emission limit		
5.6 (7.24.3.3)	**Luminaire assessment according to IEC TR 62778:2014**		
	Class of risk group assessed according to IEC TR 62778 .....:		—
	Luminaires with E_{thr} :		
	a) Fixed luminaires		
	- distance x m, borderline between RG1 and RG2...:		
	- marking and instruction according 6.3.22		
	b) Portable and handheld luminaires		
	- marking according 6.3.22 if RG1 exceeded at 200 mm according to IEC/TR 62778		

IS 10322 (Part 5/Sec 5) : 2026

Clause	Requirement + Test	Result - Remark	Verdict
	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 TR 62778		
5.6 (7.24.4)	**Retinal thermal hazard (380 nm to 1400 nm)**		
	Not exceeding retinal thermal radiance limits		
5.6 (7.24.5)	**Infrared hazard for the eye (780 nm to 3000 nm)**		
	Not exceeding limits for IR radiation		
5.6 (7.24.6)	**Thermal hazard for the skin (380 nm to 3000 nm)**		
	Not exceeding exposure limit		—
5.6 (7.25)	**Mechanical hazard**		
	No sharp point or edges		
5.6 (7.26)	**Short-circuit protection**		
5.6 (7.26.1)	Means preventing impairing of safety of uninsulated accessible SELV / PELV parts		
	Short-circuit test with test chain according 7.26.2:		
	Supply source ES1 PSE		
	Test chain does not melt through		
	Test sample does not exceed values of Table 21 and 22		
5.6 (7.27)	**Terminal blocks with integrated screwless protective earthing contacts**		
	Test according to Annex R		
	Pull test of terminal fixing (20 N)		
	After test, resistance < 0,05 Ω		
	Pull test of mechanical connection (50 N)		
	After test, resistance < 0,05 Ω		
	Voltage drop test, resistance < 0,05 Ω		
5.6 (7.28)	**Fixing of thermal sensing control**		
	Not plug-in or easily replaceable type		
	Reliably kept in position		
	No adhesive fixing if UV radiations from light source can degrade the fixing		
	Not outside the luminaire enclosure		
	Test of adhesive fixing:		
	Max. temperature on adhesive material (°C) .....:		—
	100 cycles between t min and t max		
	Temperature sensing control still in position		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
5.6 (7.29)	**Luminaires with non-replaceable light source**		
	Not possible to replace light source		
	Hazardous live part not accessible after parts have been opened by hand or tools		
5.6 (7.30)	**Luminaires with non-user replaceable light source and non-user serviceable components**		
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		
	At least one fixing means requiring use of tool		
5.6 (7.31)	**Insulation between circuits**		
5.6 (7.31.1)	Circuits insulated from mains supply fulfil requirements according 7.31.2 – 7.31.4		
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and mains supply fulfil requirements according 7.31.2 – 7.31.4		
5.6 (7.31.2)	**SELV or PELV circuits**		
	Used SELV/PELV source		
	Voltage ≤ ELV		
	PELV connected to earth		
	Insulation of SELV/PELV circuits from mains supply		
	Insulation of SELV/PELV circuits from other non SELV/PELV circuits		
	Insulation of SELV/PELV circuits from FELV		
	Insulation of SELV/PELV circuits from other SELV/PELV circuits		
	SELV/PELV circuits insulated from accessible parts according Table T.1		
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems		
	Socket outlets do not admit plugs of other voltage systems		
	Plugs and socket-outlets do not have protective conductor contact		
5.6 (7.31.3)	**FELV circuits**		
	Used FELV source		
	Voltage ≤ ELV		
	Insulating of FELV circuits from mains supply		

IS 10322 (Part 5/Sec 5) : 2026

Clause	Requirement + Test	Result - Remark	Verdict
	FELV circuits insulated from accessible parts according Table T.1		
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems		
	Socket outlets do not admit plugs of other voltage systems		
	Socket-outlets have protective conductor contact		
5.6 (7.31.4)	**Other circuits**		
	Other circuits insulated from accessible conductive parts according Table T.1		
	Class II construction with equipotential bonding for protection against indirect contacts with hazardous live parts:		
	- conductive parts are connected together		
	- test according 9.2.3		
	- conductive part does not cause electric shock in case of insulation fault		
	- equipotential bonding used in applications when one or more luminaires supplied by another		
	- supplying luminaire provided with terminal for accessible conductive parts of other luminaires		
	- other luminaire constructed as class I		
5.6 (7.31.5)	**Additional requirements for luminaires using controllable controlgear providing SELV output(s)**		
	Insulation between SELV output(s) of controlgear and control port meets requirements of IEC 61347-1 for interconnected controlgear		
5.6 (7.32)	**Overvoltage protective devices external to controlgear**		
5.6 (7.32.1)	SPDs comply with requirements in 7.32.2		
	SPCs comply with requirements in 7.31.3		
	SPDs requiring connection to earth:		
	- only used in fixed luminaires		
	- only connected to protective earth		
5.6 (7.32.2)	**Surge protective devices (SPDs)**		
	Compliance with IEC 61643-11		
	Rated ambient temperature verified according to test in 14.4		
5.6 (7.32.3)	**Surge protective components (SPCs)**		
5.6 (7.32.3.1)	Only connected across the mains (L to L or L to N)		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance with IEC 61051-2:2021 or IEC 61643-331:2020		
	Compliance with requirements in 7.32.3.2 – 7.32.3.6		
5.6 (7.32.3.2)	**Climatic conditions**		
	Climatic conditions according to:		
	- Option A		
	- Option B		
5.6 (7.32.3.3)	**Maximum continuous voltage**		
	At least 1.25 times rated voltage of luminaire / upper voltage of rated voltage range		
5.6 (7.32.3.4)	**Surge capability**		
	Mains supply voltage (V)..... :		—
5.6 (7.32.3.5)	**SPC resistance to fire**		
	Needle flame test	See Test Table 5.15 (15.3.2)	
5.6 (7.32.3.6)	**SPC overload test**		
5.6 (7.33)	**Luminaire powered via information technology communication cabling**		
	Requirements for Class III luminaire		
	Rated voltage does not exceed maximum voltage of used connector		
	Luminaire does not create any hazard from overvoltage	(see Annex 2)	
5.6 (7.34)	**Electromagnetic fields (EMF)**		
	No harmful electromagnetic fields		
5.6 (7.35)	**Protection against moving fan blades**		
	Test with a standard test finger		
	Test with test probe acc. to Figure 13 (IEC 61032) for portable luminaire		
	Blades rounded with radius ≥ 0.5 mm and:		
	-hardness less than D60 Shore		
	-peripheral speed less than 15 m/s		
	-input power of fan ≤ 2 W at rated voltage		
5.6 (7.36)	**Track-mounted luminaires**		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
	Test in accordance with Annex A of IEC 60570:2003/AMD2:2019		
5.6.1 (-)	At least IPX3 if for outdoor use		
5.6.2 (-)	Lamp holder brackets and lamp supports		
5.6.3 (-)	Adjusting means		
5.6.4 (-)	Controlling components		
5.6.5 (-)	Fixing device		
	Wind force test		
5.6.6 (-)	Locking of angular adjustment		
5.6.7 (-)	Vibration resistance		
5.6.8 (-)	Requirement on glass cover if mounting height > 5 m		
	Method of protection .....:		—

5.7 (13)	**CREEPAGE DISTANCES AND CLEARANCES**		
5.7 (13.2.1)	Impulse withstand category (Normal category II)	Category II ☐ Category III ☐	—
	Category III according to Annex Q		
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1:2015		
5.7 (13.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 5.7 (13) I	
	Creepage distances for frequency over 30 kHz:		
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{UOUT} according to IEC 61347-1:2015, clause 7.1, item w	See Test Table 5.7 (13) II	
	- Requirements according to IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 5.7 (13) II	
5.7 (13.2.3)	Clearances for frequency up to 30 kHz	See Test Table 5.7 (13) I	
	Clearances distances for frequency over 30 kHz:		
	- Controlgear marked with U_P	See Test Table 5.7 (13) II	
	- Requirements according to IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 5.7 (13) II	

5.8 (9)	**PROVISION FOR EARTHING**		
5.8 (9.2.1 + 9.2.3)	Accessible metal parts		
	Metal parts in contact with supporting surface		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
	Resistance < 0,5 Ω ..... :		
	Self-tapping screws used		
	Thread-forming screws		
	Thread-forming screw used in a grove		
	Protective earth makes contact first		
	Terminal blocks with integrated screwless protective earthing contacts tested according to Annex R		
	Protective earthing of the luminaire not via built-in controlgear		
5.8 (9.2.2 + 9.2.3)	Protective earth continuity in joints, etc.		
5.8 (9.2.4)	Locking of clamping means		
	Compliance with 7.7.3		
5.8 (9.2.5)	Protective earth terminal integral part of connector socket		
5.8 (9.2.6)	Protective earth terminal adjacent to mains terminals		
5.8 (9.2.7)	Electrolytic corrosion of the protective earth terminal		
5.8 (9.2.8)	Material of protective earth terminal		
	Contact surface bare metal		
5.8 (9.2.10)	Class II luminaire for looping-in or through wiring		
	Double or reinforced insulation to functional earth		
5.8 (9.2.11)	Protective earthing core coloured green-yellow		
	Length of protective earthing conductor		
5.8 (9.2.12)	PELV circuit connected to protective earth for functional purpose		

5.9 (16)	**SCREW TERMINALS**		
	Separately approved; component list	(See Annex 1)	
	Part of the luminaire	(See Annex 3)	

5.9 (17)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		
	Separately approved; component list ..... :	(See Annex 1)	
	Part of the luminaire..... :	(See Annex 4)	

IS 10322 (Part 5/Sec 5) : 2026

Clause	Requirement + Test	Result - Remark	Verdict
5.10 (8)	**EXTERNAL AND INTERNAL WIRING**		
5.10 (8.2)	**Supply connection and external wiring**		
5.10 (8.2.1)	Means of connection ..... :		
	Outdoor luminaire without PVC insulated external wiring unless Class III or SELV/PELV circuits ≤ 25 V AC or 60 V DC or 25 V peak interrupted DC voltage with frequency 10Hz -200 Hz or protected from outdoor environment		
5.10 (8.2.2)	Type of cable..... :		
	Nominal cross-sectional area (mm²)..... :		
	Cables equal to IEC 60227 or IEC 60245		
5.10 (8.2.3)	Type of attachment, X, Y or Z		
5.10 (8.2.5)	Type Z not connected to screws		
5.10 (8.2.6)	Cable entries:		
	- suitable for introduction		
	- adequate degree of protection		
5.10 (8.2.7)	Cable entries through rigid material have rounded edges		
5.10 (8.2.8)	Insulating bushings:		
	- suitably fixed		
	- material in bushings		
	- material not likely to deteriorate		
	- tubes or guards made of insulating material		
5.10 (8.2.9)	Locking of screwed bushings		
5.10 (8.2.10)	Cord anchorage:		
	- covering protected from abrasion		
	- clear how to be effective		
	- no mechanical or thermal stress		
	- no tying of cables into knots etc.		
	- insulating material or lining		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
5.10 (8.2.10.2)	Cord anchorage for type X attachment:		
	a) at least one part fixed		
	b) types of cable		
	c) no damaging of the cable		
	d) whole cable can be mounted		
	e) no touching of clamping screws		
	f) metal screw not directly on cable		
	g) replacement without special tool		
	Glands not used as anchorage		
	Labyrinth type anchorages		
5.10 (8.2.10.3)	Adequate cord anchorage for type Y and type Z attachment		
5.10 (8.2.10.4)	Tests:		
	- impossible to push cable; unsafe		
	- pull test: 25 times; pull (N) ..... :		
	- torque test: torque (Nm)..... :		
	- displacement ≤ 2 mm		
	- no movement of conductors		
	- no damage of cable or cord		
	- function independent of electrical connection		
5.10 (8.2.10.5)	Luminaire with/designed for use with supply cord with maximum current of 2A:		
	- Ordinary Class III luminaire supplied with SELV ≤ 25 V RMS or 60 V DC		
	- Ordinary Class III luminaire supplied with PELV ≤12 V RMS or 30 V DC		
	- Other than ordinary Class III luminaire supplied with voltage ≤12 V RMS or 30 V DC		
	Pull test of 30 N		
5.10 (8.2.11)	External wiring passing into luminaire		
5.10 (8.2.12)	Looping-in terminals		
5.10 (8.2.13)	Wire ends not tinned		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
	Wire ends tinned: no cold flow		
5.10 (8.2.14)	Mains plug same protection		
	Class III luminaire plug		
	No unsafe compatibility		
5.10 (8.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		
5.10 (8.2.16)	Appliance inlets (IEC 60320)		
	Installation couplers (IEC 61535)		
	Appliance inlet or connector systems (IEC 61984)		
5.10 (8.2.17)	No standardized interconnecting cables properly assembled		
5.10 (8.2.18)	Used plug in accordance with:		
	- IEC 60083		
	- other standard		
5.10 (8.3)	**Internal wiring**		
5.10 (8.3.1.1)	Internal wiring of suitable size and type		
	Through wiring:		
	- not delivered/ mounting instruction		
	- factory assembled		
	Green-yellow for protective earth only		
5.10 (8.3.1.2)	Internal wiring connected directly to fixed wiring:		
	Cross-sectional area (mm²) ..... :		
	Insulation thickness (mm) .....:		
	Extra insulation added where necessary		
5.10 (8.3.1.3)	Internal wiring connected to fixed wiring via internal current-limiting device:		
	Cross-sectional area (mm²) .....:		
5.10 (8.3.1.4)	Double or reinforced insulation for class II		
5.10 (8.3.1.5)	Conductors without insulation		
5.10 (8.3.1.6)	SELV/PELV current-carrying parts		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
5.10 (8.3.1.7)	Insulation thickness other than PVC or rubber		
5.10 (8.3.2)	Sharp edges etc.		
	No moving parts of switches etc.		
	Joints, raising/lowering devices		
	Telescopic tubes etc.		
	No twisting over 360°		
5.10 (8.3.3)	Insulating bushings:		
	- suitable fixed		
	- material in bushings		
	- material not likely to deteriorate		
	- cables with protective sheath		
5.10 (8.3.4)	Joints and junctions effectively insulated		
5.10 (8.3.5)	Strain on internal wiring		
5.10 (8.3.6)	Wire carriers		
5.10 (8.3.7)	Wire ends not tinned		
	Wire ends tinned: no cold flow		
5.10 (8.4)	**Test to determine suitability of conductors having a reduced cross-sectional area**		
	Under test the temperature of the luminaire wiring insulation does not exceed the limits stated in Table 22	(see Annex 2)	
	No damage to luminaire wiring after test		

5.11 (10)	**PROTECTION AGAINST ELECTRIC SHOCK**		
5.11 (10.2.1)	Hazardous live parts not accessible		
	Basic insulated parts not used on the outer surface without appropriate protection		
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
	Lamp and starter holders in portable, settable and adjustable luminaires comply with double or reinforced insulation requirements		
	Basic insulation only accessible under light source/ starter replacement or for accessing serviceable components		
	Protection in any position		
	Double-ended tungsten filament lamp or equivalent lamps		
	Insulation lacquer not reliable		
	Double-ended high-pressure discharge lamp		
	Relevant warning according to 6.3.18 fitted to the luminaire		
5.11 (10.2.2)	Portable luminaire adjusted in most unfavourable position		
5.11 (10.2.3.a)	Class II luminaire:		
	- basic insulated metal parts not accessible		
	- required insulation from hazardous live parts in compliance with Table T.1		
	- glass protective shields not used as supplementary insulation		
5.11 (10.2.3.b)	BC lamp holder of metal in class I luminaires shall be connected to protective earth		
5.11 (10.2.3.c)	SELV circuits with exposed current carrying parts:		
	Ordinary luminaire:		
	- voltage under load/ no-load AC (V) ..... :		
	- voltage under load/ no-load DC (V)……...:		
	- interrupted DC voltage (V) …….:		
	- touch current if applicable (mA) ..... :		
	One conductive part insulated if required		
	Other than ordinary luminaire:		
	- voltage under load/ no-load AC (V) ..... :		
	- voltage under load/ no-load DC (V)……...:		
	- Interrupted DC (f<10Hz or f >200Hz) (mA)……..:		
	- Interrupted DC (10Hz ≤ f ≤ 200 Hz) (mA)….....:		
	Class III luminaire only for connection to SELV/PELV		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
5.11 (10.2.3.d)	PELV circuits with exposed current carrying parts:		
	Ordinary luminaire:		
	- voltage under load/ no-load AC (V) ..... :		
	- voltage under load/ no-load DC (V)……...:		
	Other than ordinary luminaire:		
	- voltage under load/ no-load AC (V) ..... :		
	- voltage under load/ no-load DC (V)……...:		
	One pole insulated if required		
5.11 (10.2.4)	Portable luminaire has protection independent of mounting surface		
5.11 (10.2.5)	Compliance with the standard test finger or relevant probe		
5.11 (10.2.6)	Covers reliably secured		
5.11 (10.2.7)	Luminaire other than below with capacitor > 0,5 μF does not exceed 50 V, 1 min after disconnection		
	Portable luminaire with capacitor > 0,1 μF (0.25) not exceed 34 V, 1 s after disconnection		
	Other luminaires with capacitor > 0,1 μF (0.25) with plug and track adaptors do not exceed 60 V, 5 s after disconnection		

5.12 (14)	**ENDURANCE TEST AND THERMAL TEST**		
5.12 (-)	If IP > IP 20 relevant test of (14.4), (14.5), (14.6) and (14.7) after (11.2) before (11.3) specified in 5.13		—
5.12 (14.2)	**Selection of lamps and controlgear**		—
	Lamp used according to Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied	(Controlgear used see Annex 2)	—
5.12 (14.3)	**Endurance test**		
5.12 (14.3.2)	a) mounting-position ..... :		—
	b) test temperature (°C) ..... :		—
	c) total duration (h) ..... :		—

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
	d) supply voltage (V) ..... :		—
	d) if not equipped with control gear, constant voltage/current (V) or (A) ..... :		—
	d) Class III luminaires powered via information technology communication cable:		
	- voltage under normal operation (V)……...:		—
	- voltage under abnormal operation (V)……..:		—
	e) luminaire ceases to operate		—
	f) luminaire with constant light output function		
5.12 (14.3.3)	After endurance test:		
	- no part unserviceable		
	- luminaire not unsafe		
	- no damage to track system		
	- marking legible		
	- no cracks, deformation etc.		
5.12 (14.4)	**Thermal test (normal operation)**	(see Annex 2)	
5.12 (14.5)	**Thermal test (abnormal operation)**	(see Annex 2)	
5.12 (14.6)	**Thermal test (failed windings in controlgear):**		
5.12 (14.6.2)	Through wiring or looping-in wiring loaded by a current of (A) ..... :		—
	- case of abnormal conditions ..... :		—
	- electronic controlgear		
	- measured winding temperature (°C): at 1,1 Un .... :		—
	- measured mounting surface temperature (°C) at 1,1 Un ..... :		
	- calculated mounting surface temperature (°C) ..... :		
	- track-mounted luminaires		
5.12 (14.6.3)	Temperature sensing control		
	- case of abnormal conditions ..... :		—
	- thermal link		
	- manual reset cut-out		
	- auto reset cut-out		
	- measured mounting surface temperature (°C) ..... :		
	- track-mounted luminaires		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
5.12 (14.7)	**Thermal test in regard to fault conditions in controlgear or electronic devices incorporated in thermoplastic luminaires**		
5.12 (14.7.2)	**Luminaire without temperature sensing control**		
5.12 (14.7.2.1)	Luminaire with fluorescent lamp ≤ 70W:		
	Test method 14.7.1.1 or Annex S ..... :		—
	Test according to 14.7.1.1:		
	- case of abnormal conditions ..... :		—
	- Ballast failure at supply voltage (V) ..... :		—
	- Components retained in place after the test		
	- Test with standard test finger after the test		
	Test according to Annex S:		
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test .....:	See Test Table 5.15 (15.2.2)	
5.12 (14.7.2.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA:		
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test ..... :	See Test Table 5.15 (15.2.2)	
5.12 (14.7.2.3)	Luminaire with short circuit proof transformers ≤ 10 VA:		
	- case of abnormal conditions ..... :		—
	- Components retained in place after the test		
	- Test with standard test finger after the test		
5.12 (14.7.3)	**Luminaire with temperature sensing control**		
	- thermal link..... :	Yes ☐ No ☐	—

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
	- manual reset cut-out ..... :	Yes ☐ No ☐	—
	- auto reset cut-out ..... :	Yes ☐ No ☐	—
	- case of abnormal conditions ..... :		—
	- highest measured temperature of fixing point/ exposed part (°C): ..... :		—
	Ball-pressure test: ..... :	See Test Table 5.15 (15.2.2)	
5.12.1 (-)	Reduction 10°C of measured temperature if for outdoor use		—
5.12.2 (-)	Glass covers used within the thermal limits declared by the glass manufacturer		

5.13 (11)	**RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE**		
5.13.1 (-)	If IP > IP 20 the order of tests as specified in clause 5.12		
5.13 (11.2.1)	Tests for ingress of dust, solid objects and moisture:		
	- classification according to IP ..... :	IP	—
	- mounting position during test..... :		—
	- fixing screws tightened; torque (Nm)..... :		—
	- tests according to clauses ..... :		—
	- electric strength test afterwards		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
	a) no deposit in dust-proof luminaire		
	b) no talcum in dust-tight luminaire		
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		
	c.1) For luminaires without drain holes – no water entry		
	c.2) For luminaires with drain holes – no hazardous water entry		
	d) no water in watertight, pressure watertight, high pressure and temperature water jet-proof or high pressure and cold-water jet-proof luminaire		
	e) no contact with live parts (IP 2X)		
	e) no entry into enclosure (IP 3X and IP 4X)		
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		
	f) no trace of water on part of lamp requiring protection from splashing water		
	g) no damage of protective shield or glass envelope		
5.13 (11.3)	Humidity test 48 h		

5.14 (12)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH, TOUCH CURRENT AND PROTECTIVE CONDUCTOR CURRENT**		
5.14 (12.2.2)	**Insulation resistance test**		
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø ..... :		—
	Insulation resistance (MΩ):		
	SELV/PELV:		
	- between current-carrying parts of different polarity :		
	- between current-carrying parts and mounting surface ..... :		
	- between current-carrying parts and metal parts of the luminaire..... :		

IS 10322 (Part 5/Sec 5) : 2026

Clause	Requirement + Test	Result - Remark	Verdict
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		
	- Insulation bushings as described in Clause 8 ..... :		
	Other than SELV/PELV:		
	- between hazardous live parts of different polarity . :		
	- between hazardous live parts and mounting surface :		
	- between hazardous live parts and metal parts ..... :		
	- between hazardous live parts of different polarity through action of a switch ..... :		
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		
	- Insulation bushings as described in Clause 8 ..... :		
5.14 (12.2.3)	**Electric strength test**		
	Dummy lamp		
	Luminaires with ignitors after 24 h test		
	Luminaires with manual ignitors		
	Test voltage (V):		
	SELV/PELV:		
	- between current-carrying parts of different polarity :		
	- between current-carrying parts and mounting surface ..... :		
	- between current-carrying parts and metal parts of the luminaire..... :		
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		
	- Insulation bushings as described in Clause 8 ..... :		
	Other than SELV/PELV:		
	- between hazardous live parts of different polarity . :		
	- between hazardous live parts and mounting surface :		
	- between hazardous live parts and metal parts ..... :		
	- between hazardous live parts of different polarity through action of a switch ..... :		
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict

	- Insulation bushings as described in Clause 8 ..... :		
5.14 (12.3)	**Touch current, protective conductor current and electric burn**		
5.14 (12.3)	Touch current (mA)……:		
	Protective conductor current (mA)...……:		

5.15 (15)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		
5.15 (15.2.2)	Ball-pressure test ..... :	See Test Table 5.15 (15.2.2)	
5.15 (15.3.2)	Needle-flame test (10 s)..... :	See Test Table 5.15 (15.3.2)	
5.15 (15.3.3)	Glow-wire test (650°C) ..... :	See Test Table 5.15 (15.3.3)	
5.15 (15.4.2)	Proof tracking test (IEC 60112)..... :	See Test Table 5.15 (15.4.2)	

5.7 (13)	**TABLE I: Creepage distances and clearances**						
	Minimum distances (mm) for AC up to 30 kHz sinusoidal voltages						
	Applicable part of IEC 60598-1 Table 18*, 19* and 20*						
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**	
			clearance	***Table**		**creepage**	***Table**
Distance 1:							
Working voltage (V) ..... :							—
PTI ..... :					< 600 ☐ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :							—
Supplementary information:							
Distance 2:							

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict

Working voltage (V) ..... :							—
PTI ..... :					< 600 ☐ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :							—
Supplementary information:							
Distance 3:							
Working voltage (V) ..... :							—
PTI ..... :					< 600 ☐ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :							—
Supplementary information:							

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

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict

5.7 (13)	**TABLE II: Creepage distances and clearances**							
	Minimum distances (mm) for AC 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 Ûout if applicable (kV) .....:								—
Supplementary information:								
Distance 2:								
Working voltage (V) .....:								—
Frequency if applicable (kHz) .....:								—
PTI .....:					< 600 ☐	≥ 600 ☐		—
Peak value of the working voltage Ûout if applicable (kV) .....:								—
Supplementary information:								
Distance 3:								
Working voltage (V) .....:								—
Frequency if applicable (kHz) .....:								—
PTI .....:					< 600 ☐	≥ 600 ☐		—
Peak value of the working voltage Ûout if applicable (kV) .....:								—
Supplementary information:								

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

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict

5.15 (15.2.2)	**TABLE: Ball Pressure Test of Thermoplastics**		
Allowed impression diameter (mm) ..... :		2	—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)
Supplementary information:			

5.15 (15.3.2)	**TABLE: Needle-flame test**				
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Supplementary information:					

5.15 (15.3.3)	**TABLE: Resistance to heat and fire - Glow wire tests**					
Object/ Part No./ Material	Manufacturer/ trademark	GWT (°C) : 650			Ignition of specified layer	Verdict
		t_E (s)	t_I (s)	t_R (s)	Yes/No	
Supplementary information:						

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict

5.15 (15.4.2)	**TABLE: Proof tracking test**				
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:					

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	**TABLE: Critical components information**					
Object / part No.	**Code**	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Description:						
Description:						
Description:						

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

IS 10322 (Part 5/Sec 5) : 2026

Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 2	**TABLE: Thermal tests of Section 14**		
	Type reference ..... :		—
	Light source used..... :		—
	Controlgear used..... :		—
	Battery/EDLC used ..... :		—
	Mounting position of luminaire ..... :		—
	Supply wattage (W) ..... :		—
	Supply current (A) ..... :		—
	Temperatures in test 1 - 4 below are corrected for ta (°C) ..... :		—
	- abnormal operating mode ..... :		—
5.12 (14.4)	- test 1: rated voltage ..... :		—
	- test 2: 1,06 times rated voltage, or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :		—
	- 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 ..... :		—
5.12 (14.5)	- test 4: 1,1 times rated voltage, or 1,05 times rated wattage or 1,1 times constant voltage/current or 130/150% of rated input voltage ..... :		—

Temperature measurements (°C)

Part	Ambient	Sub-cl. 14.4 – normal				Sub-cl. 14.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

Supplementary information:

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 3	**Screw terminals (part of the luminaire)**		
(16)	**SCREW TERMINALS**		
(16.2)	Type of terminal ..... :		—
	Rated current (A)..... :		—
(16.2.2.2)	One or more conductors		
(16.2.2.3)	Special preparation		
(16.2.2.4)	Terminal size		
	Cross-sectional area (mm²)..... :		—
(16.2.3)	Conductor space (mm)..... :		
(16.3)	**Mechanical requirements and tests**		
(16.3.1)	Minimum distance		
(16.3.2)	Cannot slip out		
(16.3.3)	Special preparation		
(16.3.4)	Nominal diameter of thread (metric ISO thread) ..... :	M	
	External wiring		
	No soft metal		
(16.3.5)	Corrosion		
(16.3.6)	Nominal diameter of thread (mm) ..... :		
	Torque (Nm)..... :		
(16.3.7)	Between metal surfaces		
	Lug terminal		
	Mantle terminal		
	Pull test; pull (N)..... :		
(16.3.8)	Without undue damage		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 4	**Screwless terminals (part of the luminaire)**		
(17)	**SCREWLESS TERMINALS**		
(17.2)	Type of terminal ..... :		—
	Rated current (A)..... :		—
(17.2.1)	Material		
(17.2.2)	Clamping		
(17.2.3)	Stop		
(17.2.4)	Unprepared conductors		
(17.2.5)	Pressure on insulating material		
(17.2.6)	Clear connection method		
(17.2.7)	Clamping independently		
(17.2.8)	Fixed in position		
(17.2.10)	Conductor size		
	Type of conductor		
(17.4)	**Terminals and connections for internal wiring**		
(17.4.1)	Mechanical tests		
(17.4.1.2.1)	Pull test spring-type terminals (4 N, 4 samples) ..... :		
(17.4.1.2.3)	Pull test pin or tab terminals (4 N, 4 samples) ..... :		
	Insertion force not exceeding 50 N		
(17.4.1.3)	Permanent connections: pull-off test (20 N)		
(17.4.2)	**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) ..... :		
(17.5)	**Terminals and connections for external wiring**		
(17.5.1)	Conductors		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict

	Terminal size and rating		
17.5.2	Mechanical tests		
(17.5.2.2)	Pull test spring-type terminals or welded connections (4 samples); pull (N) ..... :		
(17.5.2.3)	Pull test pin or tab terminals (4 samples); pull (N) ..... :		
(17.5.3)	**Electrical tests**		
	Tests according 17.5.3.2 + 17.5.3.3 in IEC 60598-1		

(17.5.3.2) **(17.5.3.3)**	**TABLE: Contact resistance test / Heating tests**									
	Voltage drop (mV) after 1 h									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop of two inseparable joints									
	Voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
Supplementary information:										

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 5	**Battery/EDLC-operated luminaires**		
(Annex W)	**Battery/EDLC-operated luminaires**		
(W.3)	**Marking**		
(W.3.2)	Luminaires with replaceable battery		
	Relevant information and warnings provided		
(W.3.3)	Coin and button batteries		
	Relevant information, warnings and marking provided		
(W.3.4)	Other standardized batteries		
	Compartment and polarity correctly marked		
	Compartment marked with the shape of the batteries		
(W.3.5)	Luminaires with non-standardized replaceable rechargeable battery		
	Relevant information, warnings and marking provided		
(W.3.6)	Luminaires with non-user replaceable battery/EDLC		
	Relevant information, warnings and marking provided		
(W.3.7)	Luminaires with non-replaceable battery/EDLC		
	Relevant information, warnings and marking provided		
(W.3.8)	Luminaires supplied by external dedicated power supply units		
	Relevant information, warnings and marking provided		
(W.3.9)	Rechargeable luminaires other than ordinary		
	Relevant information provided		
(W.3.10)	Conditions for charging		
	Relevant information provided		
(W.4)	**Construction**		
(W.4.1)	Luminaires with a replaceable battery/EDLC, the compartment is designed to reduce the possibility of children removing the battery:		—
	- tool required		
	- two independent and simultaneous movements required		
	Luminaires with a non-replaceable battery/EDLC, no access to the battery or EDLC		
	No recharging function for luminaires intended for non-rechargeable and rechargeable batteries		
(W.4.2)	Small batteries		
	Batteries that fit within the small parts cylinder not removable without a tool		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict
	Parts that fit within the small parts cylinder not removable without a tool		
	Battery compartment has adequate mechanical strength		
(W.4.3)	Battery compartment fasteners for small batteries and other standardized batteries		
	Screws or fasteners are captive		
(W.4.4)	Battery/EDLC chargers incorporated in luminaires		
	Electronic circuits used in battery or EDLC chargers comply with IEC 61347-2-11		
	Battery or EDLC charger considered a controlgear and comply with ..... :		
(W.4.5)	Short-circuit protection		
	The luminaire is operated under the following fault conditions:		—
	- cord short-circuited		
	- battery terminals short-circuited		
	- simultaneously accessible charging terminal short-circuited		
	Appliance does not emit flames, molten metal, or ignitable gas		
	No explosion or ignition of the battery		
	Venting of the cells		
(W.4.6)	Electrical parameters of batteries operation		
(W.4.6.2)	Normal charging of lithium-ion systems		
	Specified operating region for charging not exceeded		
	- min. temperature (°C) ..... :		—
	- max. temperature (°C) ..... :		—
	Imbalanced battery		
(W.4.7)	Protection against overpressure for Li-ion batteries used in luminaires		
	The battery enclosure or compartment withstands the pressure generated when a cell vents during failure:		
	- capacity of the single Li-ion cell (Ah) ..... :		—
	a) area of the unobstructed openings (mm^2) ..... :		
	b) volume of air injected (ml)..... :		
(W.4.8)	Protection against the consequence of failure of cells or EDLCs		
	Vents of cells not obstructed		
	Space provided to allow EDLC expansion		

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict

(W.5)	**Protection against electric shock**		
	Hazardous live parts not accessible when the luminaire is opened for replacing batteries		
	Protective cover provided		
(W.6)	**Endurance test and thermal test**		
(W.6.1)	Endurance test		
	Luminaires with charging function:	Yes ☐ No ☐	—
	c) total duration (h) ..... :		—
	d) supply voltage (V) ..... :		—
(W.6.2)	Thermal test (normal operation)	(see Annex 2)	
(W.6.3)	Thermal test (abnormal operation)	(see Annex 2)	
(W.6.4)	Lithium-ion charging systems – Fault conditions		
	a) electronic components in the charging system of the luminaire subjected to the fault condition test according to IEC 61347-1:2015, Clause 14		
	b) series configured battery charged with a deliberate imbalance		
	c) one cell shorted		
	No explosion during the test		
	No charring or burning of the gauze or tissue paper		
	No evidence of damage to any cell vent		
	Upper limit charging voltage not exceeded		
	Charging system permanently disabled		
	Hazardous live parts shall not become accessible		

(W.6.4)	**TABLE: Lithium-ion charging systems – Fault conditions**	
Part	Simulated fault	Hazard
		YES/NO

IS 10322 (Part 5/Sec 5) : 2026			
Clause	Requirement + Test	Result - Remark	Verdict