

TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING
IEC 60598-1:2014, A1:2017 Edition 8.1
Luminaires – Part 1: General requirements and tests

“R”	Required
“S”	May be subcontracted, see OD 2012
“SP”	Specialized Facility, see IECEE 02-2
“W”	Witness testing in the categories “MED” and “MEAS”
“3PPS”	Three Phase Power Supply required

Clause	Measurement/testing	Testing / measuring equipment / material needed	Equipment Classification
3.4	Test of marking	Piece of cloth / Water / Petroleum spirit	R
4.4.4	Lampholder pressure test	Test caps / Pressure device / Torque driver	R
4.4.5	Voltage across lampholders	High voltage probe / Oscilloscope	R
4.11.6	Electro-mechanical contact system	Low voltage variable current power supply, voltmeter, high voltage transformer	R
4.12.1 / 4.12.5	Screws and connections (mechanical) and glands testing	Test screwdriver or spanner / Test rods	R
4.13.1/4.13.4 4.13.6/4.21.4	Mechanical strength tests	Spring-operated impact test apparatus / Apparatus for ball impact tests Conditioning cabinet (e.g. freezer) / Angle measuring device / Weighting device / Tumbling barrel test equipment	R
4.14.1/4.14.2 4.14.3	Adjusting devices testing	Glass test shelves / Weighting device / Test apparatus for adjustable devices	R
4.9.2/4.18.1	Insulating linings and sleeves tests / Resistance to corrosion	Heating cabinet, humidity cabinet, megaohmmeter, high voltage transformer	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Equipment Classification
4.18.2/Annex F	Stress corrosion	Closeable glass vessel / test solution / Heating cabinet / Facilities to wash samples after test	R
4.20	Rough service luminaires	Vibration test equipment	S
4.22	Attachment to lamps	Weighing device	R
4.24/Annex P	Photobiological hazard: UV radiation, retinal blue light hazard	- UV radiation test instruments / retinal blue light hazard test instruments (Equipment List of IEC/TR 62778	S
		- Goniophotometric measurement system	S
4.26	Short circuit protection test	Test chain / Weighing device	R
4.28	Fixing of thermal sensing controls	Temperature change test instruments in accordance to IEC 60068-2-14, test Na	S
5.2.10.1	Pull and torque tests on cord anchorage	Cord anchorage tests apparatus (pull and torque)	R
5.3	Internal wiring dimensions	Micrometer / Equipment for insulation thickness	R
5.4	Test of conductors having a reduced cross-sectional area	Thermometer / Thermocouples / Ammeter / Adjustable resistive load	R
7.2.3	Earth continuity test	Earthing test equipment	R
8.2.5 8.2.7	Protection against electric shock tests / Capacitor discharge	Standard test finger (IEC 60529) / Unjointed test finger Voltmeter / oscilloscope	R
9.2.0	Solid object proof luminaire testing	IP 3X (2,5 mm) / IP 4X (1 mm) probes	R
9.2.1 / 9.2.2	Dust proof luminaire tests	Apparatus for proving protection against dust	R
9.2.3,4,5,6,7, 8,9	Water proof luminaires testing	Apparatus for protection against water tests	R
9.3.1	Humidity tests	Humidity cabinet	R
10.2.1	Insulation resistance tests	Megaohmmeter	R
10.2.2	Electric strength tests	High voltage transformer	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Equipment Classification
10.3.1	Leakage current testing	Leakage current tester	R
11.2.1	Creepage distances and clearances measurements	Digital calliper (or equivalent) / Oscilloscope	R
12.3.1	Endurance tests	Thermal cabinet (35°C) / Endurance test equipment / Multimeter / Wattmeter	R
12.4.1	Thermal tests	Draught-proof enclosure (25°C) or alternative chamber/room / Thermometer / Thermocouples / Voltage stabilizer / Multimeter / Wattmeter	R
12.5.1e) Annex C Fig. C3	Abnormal operation testing	Test circuit for metal halide luminaires	R
12.7.2	Test for luminaires with temperature sensing controls internal/external to the ballast or transformer	Relevant equipment of clauses 15.3 and 20.6, Equipment List of IEC 61558-1:2005	R
13.2.1	Resistance to heat test	Heating cabinet / Ball pressure test apparatus (see also CTL DSH 391 D)	R
13.3.1	Resistance to flame test	Needle flame test apparatus	R
13.3.2	Resistance to ignition testing	Glow-wire test apparatus	R
13.4.1	Resistance to tracking test	Proof tracking test device	R
14	Screw terminals	Torque drivers, test cables, pull device, micrometer, timer	R
15	Screwless terminals	Pull device, variable current source, voltmeter, heating cabinet, timer, test cables	R