



## IEC 60598-1 : 2008, Edition 7.0

### TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING

#### Luminaires – Part 1: General requirements and tests

*R=Required by Lab.*

*S=May be subcontracted*

*W=Witness testing*

*3PPS=Three Phase Power Supply required*

<b>Clause</b>	<b>Measurement/testing</b>	<b>Testing / measuring equipment / material needed</b>	<b>Subcontracting</b>
3.4	Test of marking	Piece of cloth / Water / Petroleum spirit	<b>R</b>
4.4.4	Lampholder pressure test	Test caps / Pressure device / Torque driver	<b>R</b>
4.4.5	Voltage across lampholders	High voltage probe / Oscilloscope	<b>R</b>
4.11.6	Electro-mechanical contact system	Low voltage variable current power supply, voltmeter, high voltage transformer	<b>R</b>
4.12.1/4.12.5	Screws and connections (mechanical) and glands testing	Test screwdriver or spanner / Test rods	<b>R</b>
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	<b>R</b>



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4.14.1/4.14.2 4.14.3	Adjusting devices testing	Glass test shelves / Weighting device / Test apparatus for adjustable devices	<b>R</b>
4.9.2/4.18.1	Insulating linings and sleeves tests / Resistance to corrosion	Heating cabinet, humidity cabinet, megaohmmeter, high voltage transformer	<b>R</b>
4.18.2 / Annex F	Stress corrosion	Closeable glass vessel / test solution / Heating cabinet / Facilities to wash samples after test	<b>R</b>
4.20	Rough service luminaires	Vibration test equipment	<b>S</b>
4.22	Attachment to lamps	Weighing device	<b>R</b>
4.24/Annex P	Protective measures against UV radiation	UV radiation test instruments	<b>S</b>
4.26	Short circuit protection test	Test chain / Weighting device	<b>R</b>
5.2.10.1	Pull and torque tests on cord anchorage	Cord anchorage tests apparatus (pull and torque)	<b>R</b>
5.3	Internal wiring dimensions	Micrometer / Equipment for insulation thickness	<b>R</b>
7.2.3	Earth continuity test	Earthing test equipment	<b>R</b>
8.2.5 8.2.7	Protection against electric shock tests / Capacitor discharge	Standard test finger (IEC 60529) / Unjointed test finger Voltmeter / oscilloscope	<b>R</b>
9.2.0	Solid object proof luminaire testing	IP 3X (2,5 mm) / IP 4X (1 mm) probes	<b>R</b>
9.2.1/9.2.2	Dust proof luminaire tests	Apparatus for proving protection against dust	<b>R</b>
9.2.3,4,5,6,7, 8,9	Water proof luminaires testing	Apparatus for protection against water tests	<b>R</b>
9.3.1	Humidity tests	Humidity cabinet	<b>R</b>
10.2.1	Insulation resistance tests	Megaohmmeter	<b>R</b>
10.2.2	Electric strength tests	High voltage transformer	<b>R</b>
10.3.1	Leakage current testing	Leakage current tester	<b>R</b>



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<b>Clause</b>	<b>Measurement/testing</b>	<b>Testing / measuring equipment / material needed</b>	<b>Subcontracting</b>
11.2.1	Creepage distances and clearances measurements	Digital calliper (or equivalent)	<b>R</b>
12.3.1	Endurance tests	Thermal cabinet (35°C) / Endurance test equipment / Multimeter / Wattmeter	<b>R</b>
12.4.1	Thermal tests	Draught-proof enclosure (25°C) / Thermometer / Thermocouples / Voltage stabilizer / Multimeter / Wattmeter	<b>R</b>
12.5.1e) Annex C Fig. C3	Abnormal operation testing	Test circuit for metal halide luminaires	<b>R</b>
12.7.2	Test for luminaires with temperature sensing controls internal/external to the ballast or transformer	Relevant equipment of clauses 15.3 and 20.5, Equipment List of IEC 61558-1, Edition 2 - 2005	<b>R</b>
13.2.1	Resistance to heat test	Heating cabinet / Ball pressure test apparatus (see also CTL D.S. N. 391.mod)	<b>R</b>
13.3.1	Resistance to flame test	Needle flame test apparatus	<b>R</b>
13.3.2	Resistance to ignition testing	Glow-wire test apparatus	<b>R</b>
13.4.1	Resistance to tracking test	Proof tracking test device	<b>R</b>
14	Screw terminals	Torque drivers, test cables, pull device, micrometer, timer	<b>R</b>
15	Screwless terminals	Pull device, variable current source, voltmeter, heating cabinet, timer, test cables	<b>R</b>