Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

1286

Accredited to ISO/IEC 17025:2017

LIA LABORATORY LIMITED

Issue No: 045 **Issue date:** 30 July 2021

Stafford Park 7
Telford
Shropshire
TF3 3BQ

Contact: Mr Tariq Malik
Tel: +44 (0)1952 290907
Fax: +44 (0)1952 290908
E-Mail: lab@thelia.org.uk
Website: www.lialab.org.uk

Testing performed at the above address only

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SECTION 1: LUMINAIRES		
General Requirements	<u>Safety Tests</u> Electrical, Mechanical and Thermal <u>Ingress Protection Tests</u> IP1X to IP6X IPX3 to IPX5, IPX6, IPX7 and IPX8 RESTRICTIONS: Ingress protection tests restricted to luminaires not exceeding 900 mm in length Humidity tests restricted to luminaires not exceeding 1200 mm in length Thermal tests restricted to luminaires not exceeding:- Tungsten/tungsten-halogen lamps: 1000 W Sodium/mercury type discharge lamps: 400 W	**EN 60598-1:2015+Amd1:2018** Excluding: Fixed rough service luminaires EN 60598-1:2008 Excluding: Fixed rough service luminaires
Fixed luminaires	Safety tests	EN 60598-2-1:1989 IEC 60598-2-1:2020 BS 4533-102.1:1990
Recessed luminaires	Safety tests	EN 60598-2-2:1997 + A1 EN 60598-2-2:2012

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SECTION 1: LUMINAIRES (cont'd)		
Road and Street Lighting	Safety tests Maximum input voltage 250 V ac C_d to be 1.2	EN 60598-2-3:2003 + A1 Excluding: Clause 3.6, Drag coefficient measurement Clause 3.6.8, 5 Nm Impact test Deviation: Clause 13.3 carried out at 25 - 30°C
Portable luminaires	Safety tests	**EN 60598-2-4:2018**
Floodlights	Safety tests	**EN 60598-2-5:2015**
Luminaires with built in transformers	Safety tests	EN 60598-2-6:1995 + A1
Portable luminaires for garden use	Safety tests	EN 60598-2-7:1997 + A1 + A2
Portable child appealing luminaires	Safety tests	EN 60598-2-10:2003 Excluding: Clause 10.15.2
Socket-outlet mounted night lights	Safety tests	EN 60598-2-12:2006, Excluding: Clause 12.6.1, plug pins Clause 12.6.2, plug pins Clause 12.6.11, impulse test Clause 12.13.1, plug pins
Ground recessed luminaires	Safety tests	EN 60598-2-13:2006 + A1:2012 + A2: 2016
Lighting chains	Safety tests	EN 60598-2-20:2010, Excluding: Clause 20.16 Sealed chains only
Emergency lighting	Safety tests	EN 60598-2-22:2014 + A1:2020 IEC 60598-2-22:2014+Amd1:2017
Self-Ballasted LED Lamps	Electrical safety	EN 62560:2012 + A1 Excluding: Clause 6 GZ10 and GX53 lamp caps Clause 9 Torsion resistance of unused lamps Clause 17 Photobiological Safety

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SECTION 2: COMPONENTS FOR LUMINAIRES		
Double-capped LED lamps for general lighting servicesn	Electrical Safety	IEC 62776 Edition 1.0 2014
AC supplied electronic ballasts for tubular fluorescent lamps	Safety tests Maximum input voltage 250 V ac Rated Frequency 50 Hz only	EN 60929:2011 Excluding: Clause 8.3.2 control interfaces
Self ballasted lamps for general lighting services	Safety tests	EN 60968:2013 + A11 Excluding: Lamp caps other than B22
Lamp Controlgear	Safety tests Maximum input voltage 250 V ac Rated Frequency 50 Hz only	EN 61347-1: 2008 + A1 & A2 Excluding: DC equipment Convertors Clause 14.4, Fault condition EN 61347-1:2015
AC Supplied electronic ballasts for tubular fluorescent lamps	Safety tests Maximum input voltage 250 V ac Rated Frequency 50 Hz only	EN 61347-2-3: 2011 Excluding: Clause 11 Leakage current Annex 1, Leakage current
Ballasts for emergency luminaires	Safety tests	EN 61347-2-7:2012
Ballasts for tubular fluorescent lamps	Safety tests Maximum input voltage 250 V ac Rated Frequency 50 Hz only	EN 61347-2-8:2001 + A1 Excluding: DC equipment Convertors Clause 15.1, HV Impulse test Clause 18, Tests on wires
Miscellaneous electronic circuits used with Luminaires	Safety tests	EN 61347-2-11:2002
DC or AC supplied electronic ballasts for LED modules	Safety tests Maximum input voltage 250 V ac Rated Frequency 50 Hz only a.c. only	EN 61347-2-13:2014 EN 61347-2-13:2006

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SECTION 2: COMPONENTS FOR LUMINAIRES (cont'd)		
LED modules for general lighting	Safety tests	EN 62031:2008 + A1:2013 + A2:2015 EN 62031:2020 Excluding: Clause 22 Photobiological Safety
DC or AC supplied electronic contolgear for LED modules	Safety tests Maximum input voltage 250 V ac Rated Frequency 50 Hz only a.c. only	EN 62384:2006 + A1 Excluding: Clause 11, audio frequencies
Ceiling roses	Electrical safety	BS 67:1987
Bayonet lampholders	Electrical safety	EN 61184:1997 B22d lampholder type only
Bayonet lampholders with enhanced safety	Electrical safety	BS 7895:1997 + A1 Excluding: Clause 20.1, Mercurous nitrate
Edison screw lampholders	Electrical safety	**EN 60238:2018+A1:2018** E27, E14 & E40 lampholder types only
Supply track systems for luminaires	Electrical safety	EN 60570:2003 + A2:2020
Electric Toys (Luminaire toys only)	Safety tests	EN 62115: 2005 +A2
Self-ballasted lamps – performance	Performance tests	EN.60969: 1993
Self-ballasted LED lamps – performance	Performance tests	EN.62612: 2013

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SECTION 3: GENERAL TESTS		
Electrical equipment for connection to un-metered Supplies (UMSUG)	Voltage Current Power Volt-amperes Power factor Resistance Efficiency	ELEXON Operational Information Document Version 21.0 testing procedure for issue of a charge code for new apparatus
Electrical Equipment - IK codes	Safety tests – Impact resistance	EN 62262:2002 Excluding: IK01 IK06
Luminaires – IK codes	Safety tests – Impact resistance	IEC TR 62696:2011
Double capped tubular fluorescent tubes	Safety test - Fragment retention	EN 61549:2003 + A1-A3 Sheet 61549-IEC-810 only
Fire hazard testing	Glow wire test	EN 60695-2-10:2013 EN 60695-2-11:2014 EN 60695-2-12:2010 + A1EN 60695-2-13:2010 + A1
Fire hazard testing	Ball Pressure test	EN 60695-10-2:2014
Fire hazard testing	Needle flame test	EN 60695-11-5: 2005 EN 60695-11-5: 2017
Enclosures for Electrical Equipment	Ingress protection tests:- IP1X Protected against solid objects greater than 50 mm diameter IP2X Protected against solid objects greater than 12 mm diameter IP3X Protected against solid objects greater than 2.5 mm diameter IP4X Protected against solid objects greater than 1.0 mm diameter IP5X Dust protected Excluding: Objects greater than 810 x 760 x 800 mm	EN 60529:1992 + A1 + A2

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SECTION 3: GENERAL TESTS (cont'd)		
Enclosures for Electrical Equipment (cont'd)	Ingress protection tests:- (cont'd) IP6X Dust Tight Excluding: Objects greater than 810 x 760 x 800 mm IPX3 Protected against spraying water IPX4 Protected against splashing water IPX5 Protected against water jets IPX6 Protected against powerfull water Jets IPX7 Protected against the effects of immersion Excluding: Objects greater than Ø 350 x 500 mm IPX8 Protected against the effects of submersion. Excluding: Objects greater than Ø 350 x 500 mm Maximum depth: 100 metres	EN 60529:1992 + A1 + A2 Excluding: IPX9

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SECTION 4: PHOTOMETRY		
Lamps and Luminaires	Photometric measurement: **Measurements using an Integrating sphere:** Luminous Flux, Luminous efficacy, Spectral total flux, Chromaticity Coordinates, Correlated Colour Temperature and Colour Rendering Indices using an Integrating Sphere Integrating Sphere: Maximum largest dimension of test artefact 1800mm **Measurements using a Goniophotometer:** Total Luminous Flux Useful Luminous Flux Luminous Efficacy Centre Beam Intensity and Beam angles Luminous Intensity Distribution Goniophotometer: Maximum largest dimension of test artefact 1900mm	Documented in-house method in accordance with : IES-LM-79-08 (Clause 9.1 and 9.3) IEC/PAS 62612 (Clauses 6, 7, 8, 9 and 10) CIE 13.3:1995 CIE 84:1989 CIE 121:1996 (Clause 6.3.3) CIE 127:2007 (integrating sphere method) EN 13032-1:2004 + A1:2012 (Clause 6.1.1.3 and 6.1.2) EN 13032-4:2015 + A1:2019 (Clause 4.5.3,4.5.4, 6.2, 6.3, 6.4, 6.5 and 6.6)
Lamps and Lamp systems	Photometric Flicker measurements	IES Lighting Handbook, 10th Edition (definition of flicker index)
LED lamps and luminaires	Blue Light Hazard	BS EN 60598-1:2015 EN 62560:2012 + A1:2015 (Clause 17.2) EN 62031:2008 + A1:2013 + A2:2015 (Clause 22.2) IEC/TR 62778:2014 BS EN 62471:2008 Clauses 4.3.3 and 4.3.4 only

NOTE: Where the EN standards listed above have technical equivalents in IEC and BS EN standards, these IEC and BS EN standards are also included in the accreditation.

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