PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Zanelli S.r.l

Via Lombardia 2, 26019 Vailate (CR), Italia

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2017

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Electrical Testing

(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
July 20, 2016	July 09, 2022	September 30, 2024

Accreditation No.:	*Certificate No.:*
90212	L22-481

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com

Certificate of Accreditation: Supplement

Zanelli S.r.l.
Via Lombardia 2, 26019 Vailate (CR), Italia
Contact Name: Sig. Nicola Zanelli Phone: 0363848962

Accreditation is granted to the facility to perform the following testing:

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Electrical [F]	Luminaires	Marking	IEC 60598-1:2014 + A1:2017 EN 60598-1:2015 + A1:2018 IEC 60598-2-1:79 + A1:1987 EN 60598-2-1:1989 IEC 60598-2-2:2011 EN 60598-2-2:2012 IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012 IEC 60598-2-4:2017 EN 60598-2-4:2018 IEC 60598-2-5:2015 EN 60598-2-5 :2015 IEC 60598-2-11:2013 EN 60598-2-11:2013 IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016 IEC 60598-2-18:1993 + A1:2011 EN60598-2-18:1994 + A1:2012 IEC 60598-2-24:2013 EN 60598-2-24:2013 IEC 60598-2-25:1994 + A1:2004 EN 60598-2-251994 + A1:2004	N/A
		Construction Checks	IEC 60598-1:2014 + A1:2017 EN 60598-1:2015 + A1:2018 IEC 60598-2-1:79 + A1:1987 EN 60598-2-1:1989 IEC 60598-2-2:2011 EN 60598-2-2:2012 IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012 IEC 60598-2-4:2017 EN 60598-2-4:2018 IEC 60598-2-5:2015 EN 60598-2-5 :2015 IEC 60598-2-11:2013 EN 60598-2-11:2013 IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016 IEC 60598-2-18:1993 + A1:2011	0.2 Nm to 20 Nm 0.2 J to 1 J 0.1 kg to 120 kg

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Electrical [F]	Luminaires	Construction Checks	EN60598-2-18:1994 + A1:2012 IEC 60598-2-24:2013 EN 60598-2-24:2013 IEC 60598-2-25:1994 + A1:2004 EN 60598-2-251994 + A1:2004	0.2 Nm to 20 Nm 0.2 J to 1 J 0.1 kg to 120 kg
		External and internal wiring	IEC 60598-1:2014 + A1:2017 EN 60598-1:2015 + A1:2018 IEC 60598-2-1:79 + A1:1987 EN 60598-2-1:1989 IEC 60598-2-2:2011 EN 60598-2-2:2012 IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012 IEC 60598-2-4:2017 EN 60598-2-4:2018 IEC 60598-2-5:2015 EN 60598-2-5 :2015 IEC 60598-2-11:2013 EN 60598-2-11:2013 IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016 IEC 60598-2-18:1993 + A1:2011 EN60598-2-18:1994 + A1:2012 IEC 60598-2-24:2013 EN 60598-2-24:2013 IEC 60598-2-25:1994 + A1:2004 EN 60598-2-251994 + A1:2004	30 N to 120 N 0.15 Nm a 0.35 Nm

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Electrical [F]	Luminaires	Duration and heating	IEC 60598-1:2014 + A1:2017 EN 60598-1:2015 + A1:2018 IEC 60598-2-1:79 + A1:1987 EN 60598-2-1:1989 IEC 60598-2-2:2011 EN 60598-2-2:2012 IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012 IEC 60598-2-4:2017 EN 60598-2-4:2018 IEC 60598-2-5:2015 EN 60598-2-5 :2015 IEC 60598-2-11:2013 EN 60598-2-11:2013 IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016 IEC 60598-2-18:1993 + A1:2011 EN60598-2-18:1994 + A1:2012 IEC 60598-2-24:2013 EN 60598-2-24:2013 IEC 60598-2-25:1994 + A1:2004 EN 60598-2-251994 + A1:2004	1 V to 270 V 20 °C to 400 °C
		Checking grounding	IEC 60598-1:2014 + A1:2017 EN 60598-1:2015 + A1:2018 IEC 60598-2-1:79 + A1:1987 EN 60598-2-1:1989 IEC 60598-2-2:2011 EN 60598-2-2:2012 IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012 IEC 60598-2-4:2017 EN 60598-2-4:2018 IEC 60598-2-5:2015 EN 60598-2-5 :2015 IEC 60598-2-11:2013 EN 60598-2-11:2013 IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016 IEC 60598-2-18:1993 + A1:2011 EN60598-2-18:1994 + A1:2012	0.01 Ω a 0.5 Ω

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Electrical [F]	Luminaires	Checking grounding	IEC 60598-2-24:2013 EN 60598-2-24:2013 IEC 60598-2-25:1994 + A1:2004 EN 60598-2-251994 + A1:2004	0.01 Ω a 0.5 Ω
		Test against the penetration of dust, solid bodies and moisture	IEC 60598-1:2014 + A1:2017 EN 60598-1:2015 + A1:2018 IEC 60598-2-1:79 + A1:1987 EN 60598-2-1:1989 IEC 60598-2-2:2011 EN 60598-2-2:2012 IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012 IEC 60598-2-4:2017 EN 60598-2-4:2018 IEC 60598-2-5:2015 EN 60598-2-5 :2015 IEC 60598-2-11:2013 EN 60598-2-11:2013 IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016 IEC 60598-2-18:1993 + A1:2011 EN60598-2-18:1994 + A1:2012 IEC 60598-2-24:2013 EN 60598-2-24:2013 IEC 60598-2-25:1994 + A1:2004 EN 60598-2-251994 + A1:2004	1.5 l/min32EWZX to 100 l/min
		Resistance to heat and fire	IEC 60598-1:2014 + A1:2017 EN 60598-1:2015 + A1:2018 IEC 60598-2-1:79 + A1:1987 EN 60598-2-1:1989 IEC 60598-2-2:2011 EN 60598-2-2:2012 IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012 IEC 60598-2-4:2017 EN 60598-2-4:2018 IEC 60598-2-5:2015 EN 60598-2-5 :2015 IEC 60598-2-11:2013 EN 60598-2-11:2013	0 °C to 960 °C

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Electrical [F]	Luminaires	Resistance to heat and fire	IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016 IEC 60598-2-18:1993 + A1:2011 EN60598-2-18:1994 + A1:2012 IEC 60598-2-24:2013 EN 60598-2-24:2013 IEC 60598-2-25:1994 + A1:2004 EN 60598-2-251994 + A1:2004	0 °C to 960 °C
		Insulation resistance and dielectric strength. Contact current	IEC 60598-1:2014 + A1:2017 EN 60598-1:2015 + A1:2018 IEC 60598-2-1:79 + A1:1987 EN 60598-2-1:1989 IEC 60598-2-2:2011 EN 60598-2-2:2012 IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012 IEC 60598-2-4:2017 EN 60598-2-4:2018 IEC 60598-2-5:2015 EN 60598-2-5 :2015 IEC 60598-2-11:2013 EN 60598-2-11:2013 IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016 IEC 60598-2-18:1993 + A1:2011 EN60598-2-18:1994 + A1:2012 IEC 60598-2-24:2013 EN 60598-2-24:2013 IEC 60598-2-25:1994 + A1:2004 EN 60598-2-251994 + A1:2004	0.5 MΩ to 50 MΩ Da 1 Vac a 5 000 Vac
		Verification of electric shock protection	IEC 60598-1:2014 + A1:2017 EN 60598-1:2015 + A1:2018 IEC 60598-2-1:79 + A1:1987 EN 60598-2-1:1989 IEC 60598-2-2:2011 EN 60598-2-2:2012 IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012	Digital Caliper & Probe

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Electrical [F]	Luminaires	Verification of electric shock protection	IEC 60598-2-4:2017 EN 60598-2-4:2018 IEC 60598-2-5:2015 EN 60598-2-5 :2015 IEC 60598-2-11:2013 EN 60598-2-11:2013 IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016 IEC 60598-2-18:1993 + A1:2011 EN60598-2-18:1994 + A1:2012 IEC 60598-2-24:2013 EN 60598-2-24:2013 IEC 60598-2-25:1994 + A1:2004 EN 60598-2-251994 + A1:2004	Digital Caliper & Probe
		Surface isolation and air distances	IEC 60598-1:2014 + A1:2017 EN 60598-1:2015 + A1:2018 IEC 60598-2-1:79 + A1:1987 EN 60598-2-1:1989 IEC 60598-2-2:2011 EN 60598-2-2:2012 IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012 IEC 60598-2-4:2017 EN 60598-2-4:2018 IEC 60598-2-5:2015 EN 60598-2-5 :2015 IEC 60598-2-11:2013 EN 60598-2-11:2013 IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016 IEC 60598-2-18:1993 + A1:2011 EN60598-2-18:1994 + A1:2012 IEC 60598-2-24:2013 EN 60598-2-24:2013 IEC 60598-2-25:1994 + A1:2004 EN 60598-2-251994 + A1:2004	Up to 150 mm

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Electrical [F]	Luminaires	Glass Breaking Test	IEC 60598-2-3:2002 + A1:2011 EN 60598-2-3:2003 + A1:2012	0 mm to 50 mm
		Stability Test	IEC 60598-2-4:2017 EN 60598-2-4:2018	0° to 15°
		Glass Breaking Test Wind Thrust Test	IEC 60598-2-5:2015 EN 60598-2-5 :2015	0 mm to 50 mm D.L. = 2.4 kn/m^2
		Static Load Resistance Torsion Test Scroll Test	IEC 60598-2-13:2006 + A1:2011 + A2:2016 EN 60598-2-13:2006 + A1:2012 + A2:2016	0 kg a 5000 Kg D.L. = 50 N D.L. = 5 kN
	Enclosures	Mechanical checks	IEC 62262:2002 EN 62262:2002	0.2 J to 20 J
		Test against the penetration of dust, solid bodies and moisture	IEC 60529:1989 + A1:1999 + A2:2013 EN 60598:1991 + A1:2000 + A2:2013	1.5 l/min to 100 l/min
	LED modules	Voltage and Current	IEC 62031:2008 + A1:2012 + A2:2014 EN 62031:2008 + A1:2013 + A2:2015 Sec. 13.2	0 Vdc to 100 Vdc 100 Vac to 270 Vac 0 A to 5 A

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer [F] would mean that the laboratory performs this testing at its fixed location.