

Test report no.: <i>Prüfbericht Nr.:</i>	AU213SLO 001	Order No.: <i>Auftrags-Nr.:</i>	252103738	Page 1 of 16 Seite 1 von 16
Client Reference No.: <i>Kunden-Referenz-Nr.:</i>	2071295	Order date: <i>Auftragsdatum:</i>	10-Sep-2021	
Client: <i>Auftraggeber:</i>	Advanced Lighting Technologies 110 Lewis Road, Wantirna South, VIC 3152, Australia			
Test item: <i>Prüfgegenstand:</i>	LED Street Light			
Identification/ Type No.: <i>Bezeichnung / Typ-Nr.</i>	Refer to section 8 on page 5			
Order content: <i>Auftrags-Inhalt:</i>	Lamp Circuit Power (LCP) Measurement			
Test specification: <i>Prüfgrundlage:</i>	Refer to page 3			
Date of sample receipt: <i>Wareneingangsdatum:</i>	06-Sep-2021	Refer to page 11 for details photo documentation		
Test sample No: <i>Prüfmuster-Nr.:</i>	A003126526-001 to A003126526-010			
Testing period: <i>Prüfzeitraum:</i>	10-Sep-2021 - 13-Sep-2021			
Place of testing: <i>Ort der Prüfung:</i>	TUV Rheinland Australia Pty Ltd			
Testing laboratory: <i>Prüflaboratorium:</i>	TUV Rheinland Australia Pty Ltd			
Test result*: <i>Prüfergebnis*:</i>	Samples were submitted for measurement only, no compliance limits			
tested by: <i>geprüft von:</i>	authorized by: / <i>genehmigt von:</i>			
Date: 14-Sep-2021 <i>Datum:</i>	Sathvik Varma P. /		Issue Date: 14-Sep-2021 <i>Ausstellungsdatum:</i> Daniel Ngo /	
Position / Stellung:	Expert		Position / Stellung: Expert	
Other / <i>Sonstiges:</i>	- Power consumption measurement at rated voltage for AEMO (Australian Energy Market Operator) at lab condition (Ambient (20±5)°C, Relative Humidity (45–75)%).			
Condition of the test item at delivery: <i>Zustand des Prüfgegenstandes bei Anlieferung:</i>	Test item complete and undamaged			
* Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested * Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet				
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark. <i>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</i>				

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Remarks

1	The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.
2	As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged.
3	Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.
4	Reporting of results herein is in accordance with NATA recommendations taking into account U of M. (a) For minimum limits - Where measurement is on the limit or above the limit it is deemed to comply. Where measurement is below the limit it is deemed not to comply. (b) For maximum limits - Where measurement is on the limit or below the limit it is deemed to comply. Where measurement is above the limit it is deemed not to comply.
5	For reporting of results the estimated uncertainty for measurement taken into account at 95% confidence level.
6	This test report is based on assessment and tests applied to the specific test item(s) as submitted by the client. TÜV Rheinland Australia disclaims any and all responsibility or obligation for any other item.
7	LCP test was conducted on 10 fittings as per requested schemes.
8	Tests were conducted on submitted 25W sample model SYSA2210A4308+24NBKBDLAO as representative for model series fitted with PE cell and model SYSA2210A4308+24BKBDLAO as representative for model series without PE cell. Tests were conducted on submitted 40W sample model SYSA2210A7408+24NBKBAO as representative for model series fitted with PE cell and model SYSA2210A7408+24BKBAO as representative for model series without PE cell.

History of revision:

N/A

Options/accessories/ancillary equipment:

The equipment was tested without any optional accessory installed. Hence, this report does not cover parameters that are influenced by the installation of optional accessory that might affect safety in the meaning of this standard.

Uncertainty of equipment used:

Equipment	Equipment No.	Range used	Uncertainty	Calibration Due Date
Digital Power Meter	MEL-1464	Voltage: 200V - 300V	±0.2V	12-Apr-2022
Model:		Current: 250mA – 500mA	±0.3mA	
WT310		Power: 115mW – 4.6kW	±2.5%	
		Power Factor: 1	±0.001pf	

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Remarks

Test procedure:

The submitted test samples (consisted of the supplied lamp and control gear combination, if applicable) for the lamp circuit power consumption measurement were placed in a draught free room and at the laboratory condition (Ambient $(20\pm 5)^{\circ}\text{C}$, Relative Humidity (45–75)%) for 24 hours before and during the measurement.

The test samples were connected to the power source and supplied with voltage and frequency as listed in "TABLE: Power Measurement". The test samples were operated until the conditions of overall temperature equilibrium were established or at least 4 hours in stabilized operation with the supplied sources. Then the total power consumption measurements have been taken by power meter.

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TABLE: Power Measurement

1	Product details:	<p>The product is the side-entry street light comprises of LED modules, electrical connection compartment including a LED programmable driver enclosed in the metal enclosure and a NEMA base for fitting with PE cell.</p> <p>Tradename: Advance Lighting Technologies Australia / Manufacturer: CREE. Model / type number: SYSA2210A4308+24NBKBDLAO and SYSA2210A4308+24BKBDLAO Rating: 220-240Vac 50Hz 0.11A 25W; Ta=40°C; IP66</p> <p>Tradename: Advance Lighting Technologies Australia / Manufacturer: CREE. Model / type number: SYSA2210A7408+24NBKBAO and SYSA2210A7408+24BKBAO Rating: 220-240Vac 50Hz 0.17A 40W; Ta=40°C; IP66</p>
2	Dimensions / Weight:	<p>Model / type number: SYSA2210A4308+24NBKBDLAO and SYSA2210A4308+24BKBDLAO Length x Width x Height [mm]: 650 x 280 x 180 Weight [kg]: 5.40</p> <p>Model / type number: SYSA2210A7408+24NBKBAO and SYSA2210A7408+24BKBAO Length x Width x Height [mm]: 650 x 280 x 180 Weight [kg]: 5.40</p>
3	Operating elements:	<p>Built-in LED driver in luminaire model SYSA2210A4308+24NBKBDLAO and SYSA2210A4308+24BKBDLAO Trademark / Manufacturer: PHILIPS XITANIUM™ Model: Xi SR 40W 0.3-1.0A SNEMP 230V C133 sXt Input rating: 220-240V 50/60Hz 0.23-0.20A; pf: 0.95; 49W Output rating: 20-54Vdc 300-1050mA 40W Ta: -40-55°C; Tc: 85°C</p> <p>Built-in LED driver in luminaire model SYSA2210A7408+24NBKBAO and SYSA2210A7408+24BKBAO Trademark / Manufacturer: PHILIPS XITANIUM™ Model: XiLP 40W 0.3-1.0A S1230V S175 sXt Input rating: 220-240V 50/60Hz 0.21-0.19A; pf: 0.95; 46W Output rating: 20-54Vdc 300-1050mA 40W Ta: -40-55°C; Tc: 80°C</p>
4	Equipment / Accessories:	The product is fitted with supply cord and plug
5	Used materials:	N/A
6	Other:	Test sample(s), as well sample information, description, product details and intended usage was provided by customer.

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TABLE: Power Measurement

7	Test sample obtaining:	<input checked="" type="checkbox"/> Sending by customer <input type="checkbox"/> Sampling by TÜV Rheinland Group <input type="checkbox"/> others:
8	Model variation:	<p>Model SYS*****24***AO can be represented as below:</p> <p>The first star * represents the LED version options. It may up to 1 character as follow: A - Z</p> <p>The second star * represents the mounting options. It may be up to 1 character as below: 2 – Tenon 60mm 3 – Tenon 76mm</p> <p>The third star * represents the optic variations. It can be 210, 2SH etc</p> <p>The forth star * represents the power rating as below: A7 – 40W A4 – 25W</p> <p>The fifth star * represents the CCT and CRI of LEDs as below: 278 – CCT is 2700K and CRI is 80 307 – CCT is 3000K and CRI is 70 308 – CCT is 3000K and CRI is 80 407 – CCT is 4000K and CRI is 70 408 – CCT is 4000K and CRI is 80</p> <p>The sixth star * represents the insulation class of luminaire as below: + – class I ^ – class II</p> <p>The seventh star * represents the NEMA base fitted device as below: N – fitted with PE cell "Blank" – fitted without PE cell</p> <p>The eighth star * represents the colour of luminaire housing. It can be BKB (black), SVS (silver) etc</p> <p>The ninth star * represents the dimming functions as below: DIM – dimmable DL – DALI dimmable "Blank" – non-dimmable</p>

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TABLE: Power Measurement

Table 1: Sirius 25W luminaire without PE cell

	Test Item	Supplied Voltage (V)	Frequency (Hz)	Measured Input Power (W)	Measured Input Current (A)	Power Factor
1	SYSA2210A4308+24BKBDLAO	250.99	50	25.1	0.106	0.9423
2	SYSA2210A4308+24BKBDLAO	250.82	50	24.9	0.106	0.9411
3	SYSA2210A4308+24BKBDLAO	250.84	50	25.3	0.107	0.9407
4	SYSA2210A4308+24BKBDLAO	250.83	50	25.1	0.106	0.9388
5	SYSA2210A4308+24BKBDLAO	250.87	50	25.1	0.107	0.9363
6	SYSA2210A4308+24BKBDLAO	250.89	50	25.3	0.107	0.9438
7	SYSA2210A4308+24BKBDLAO	250.82	50	25.2	0.106	0.9448
8	SYSA2210A4308+24BKBDLAO	250.98	50	25.0	0.106	0.9405
9	SYSA2210A4308+24BKBDLAO	250.80	50	25.2	0.106	0.9456
10	SYSA2210A4308+24BKBDLAO	250.93	50	25.3	0.106	0.9472
Average		250.877	50	25.15	0.1063	0.9421

Table 2: Sirius 25W luminaire with PE cell

	Test Item	Supplied Voltage (V)	Frequency (Hz)	Measured Input Power (W)	Measured Input Current (A)	Power Factor
1	SYSA2210A4308+24NBKBDLAO	250.80	50	25.4	0.107	0.9467
2	SYSA2210A4308+24NBKBDLAO	250.89	50	25.3	0.107	0.9453
3	SYSA2210A4308+24NBKBDLAO	250.86	50	25.4	0.107	0.9468
4	SYSA2210A4308+24NBKBDLAO	250.87	50	25.4	0.107	0.9464
5	SYSA2210A4308+24NBKBDLAO	250.79	50	25.5	0.108	0.9443
6	SYSA2210A4308+24NBKBDLAO	250.87	50	25.6	0.108	0.9467
7	SYSA2210A4308+24NBKBDLAO	250.91	50	25.5	0.108	0.9461
8	SYSA2210A4308+24NBKBDLAO	250.81	50	25.4	0.108	0.9435

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TABLE: Power Measurement

9	SYSA2210A4308+24NBKBDLAO	250.96	50	25.6	0.108	0.9468
10	SYSA2210A4308+24NBKBDLAO	250.85	50	25.6	0.108	0.9481
Average		250.861	50	25.47	0.1076	0.9461

Table 3: Sirius 40W luminaire without PE cell

	Test Item	Supplied Voltage (V)	Frequency (Hz)	Measured Input Power (W)	Measured Input Current (A)	Power Factor
1	SYSA2210A7408+24BKBAO	250.74	50	39.5	0.161	0.9777
2	SYSA2210A7408+24BKBAO	250.84	50	39.2	0.160	0.9755
3	SYSA2210A7408+24BKBAO	250.89	50	39.3	0.161	0.9766
4	SYSA2210A7408+24BKBAO	250.88	50	38.9	0.159	0.9756
5	SYSA2210A7408+24BKBAO	250.92	50	39.2	0.160	0.9741
6	SYSA2210A7408+24BKBAO	250.93	50	39.0	0.159	0.9741
7	SYSA2210A7408+24BKBAO	250.98	50	39.3	0.161	0.9747
8	SYSA2210A7408+24BKBAO	250.89	50	39.6	0.162	0.9746
9	SYSA2210A7408+24BKBAO	250.90	50	39.3	0.161	0.9753
10	SYSA2210A7408+24BKBAO	250.86	50	39.4	0.161	0.9755
Average		250.883	50	39.27	0.1605	0.9754

Table 4: Sirius 40W luminaire with PE cell

	Test Item	Supplied Voltage (V)	Frequency (Hz)	Measured Input Power (W)	Measured Input Current (A)	Power Factor
1	SYSA2210A7408+24NBKBAO	250.98	50	39.7	0.162	0.9785
2	SYSA2210A7408+24NBKBAO	250.89	50	39.5	0.161	0.9774
3	SYSA2210A7408+24NBKBAO	250.93	50	39.5	0.161	0.9783
4	SYSA2210A7408+24NBKBAO	250.89	50	39.1	0.159	0.9778

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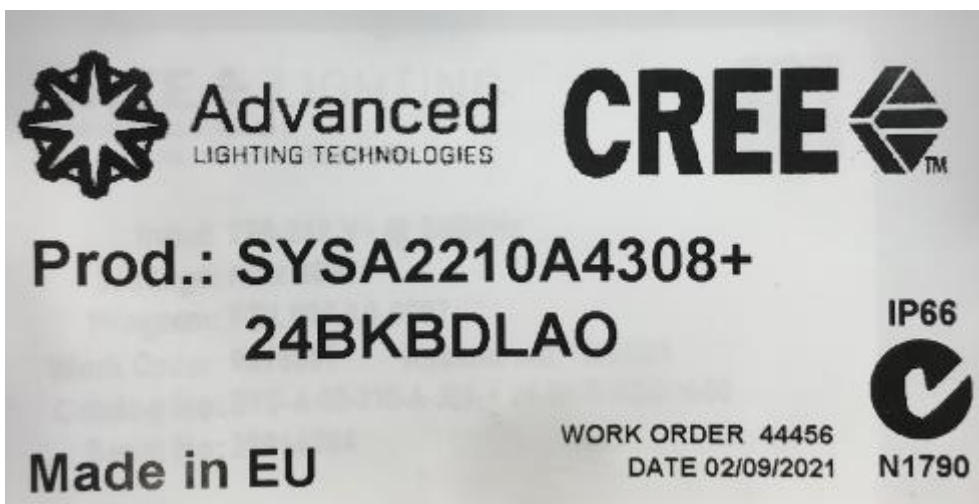
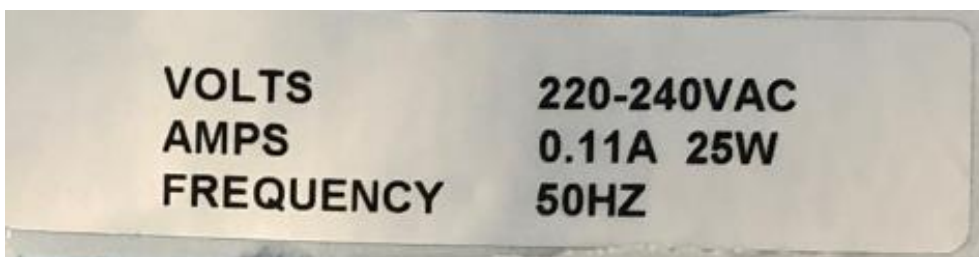
TABLE: Power Measurement

5	SYSA2210A7408+24NBKBAO	250.95	50	39.5	0.161	0.9768
6	SYSA2210A7408+24NBKBAO	250.99	50	39.2	0.160	0.9766
7	SYSA2210A7408+24NBKBAO	250.88	50	39.6	0.162	0.9774
8	SYSA2210A7408+24NBKBAO	250.97	50	39.8	0.162	0.9772
9	SYSA2210A7408+24NBKBAO	250.80	50	39.6	0.161	0.9777
10	SYSA2210A7408+24NBKBAO	250.87	50	39.7	0.162	0.9777
Average		250.915	50	39.52	0.1611	0.9775

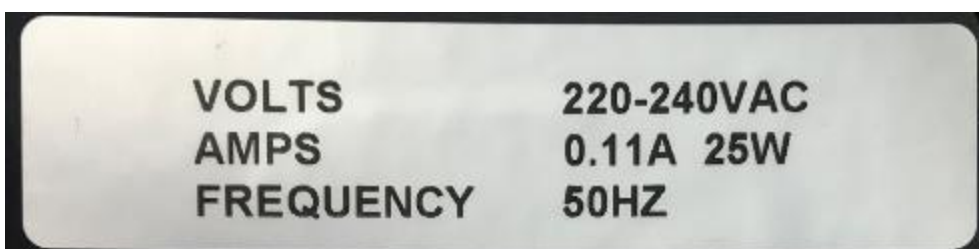
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Marking	



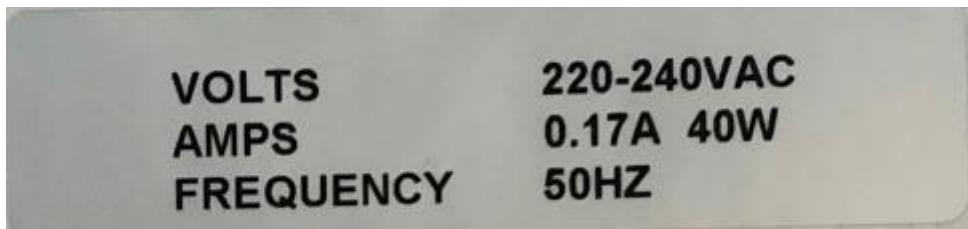
Rating label for 25W luminaire model fitted with PE cell



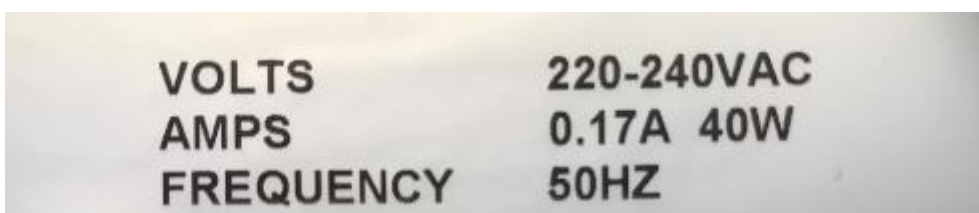
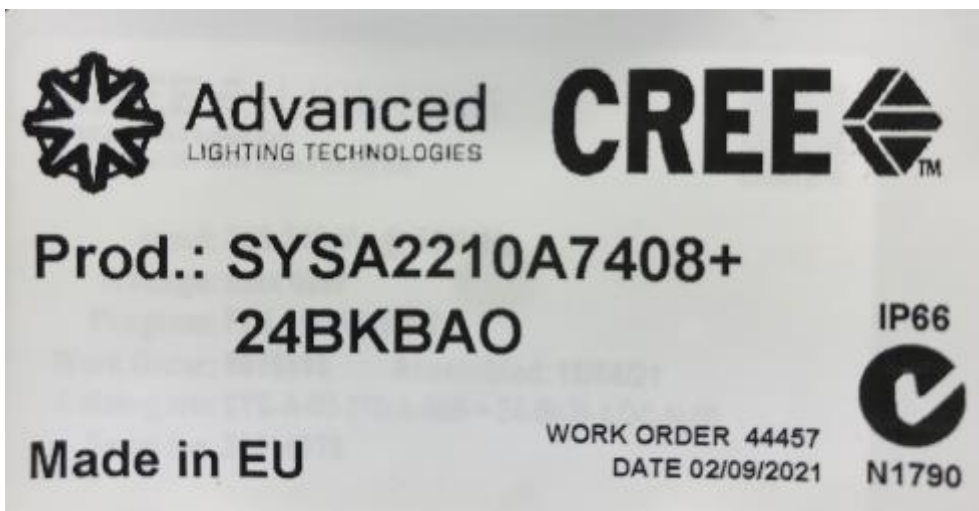
Rating label for 25W luminaire model fitted without PE cell



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Marking	



Rating label for 40W luminaire model fitted with PE cell



Rating label for 40W luminaire model fitted without PE cell

Photo documentation



25W luminaire model – Product overview

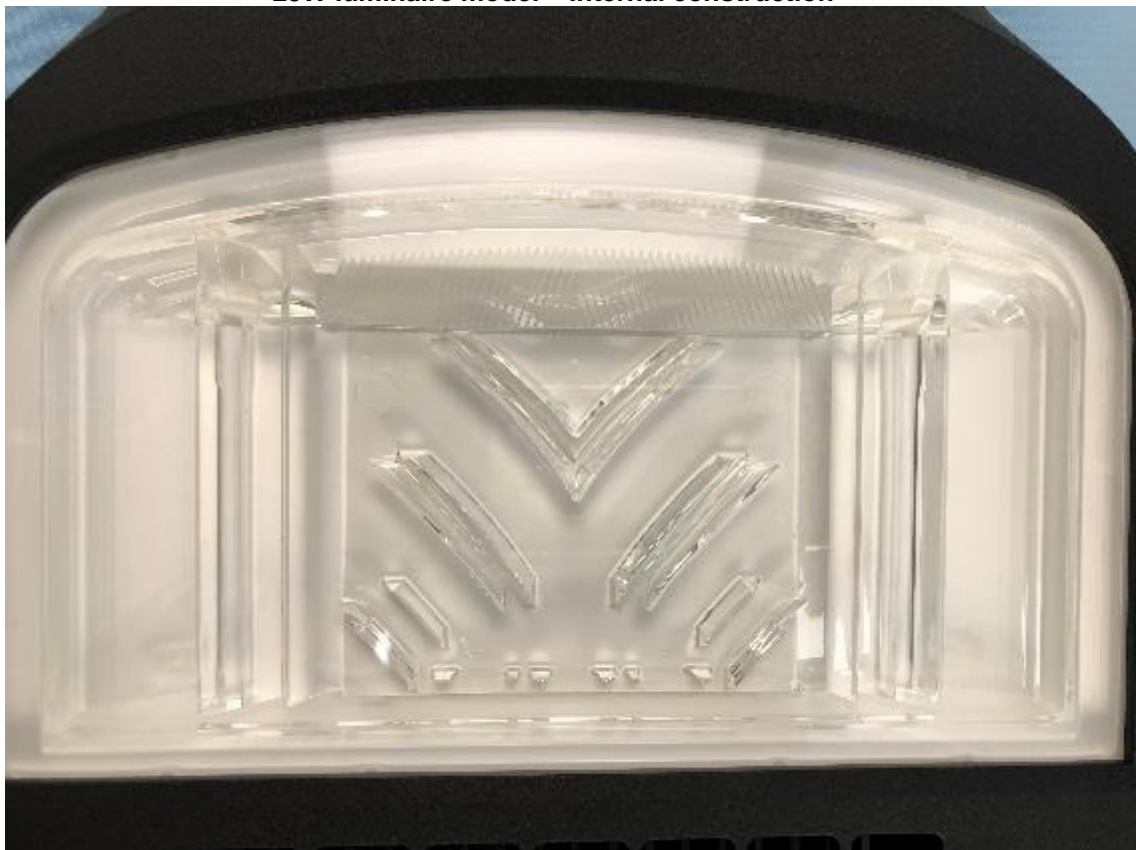


25W luminaire model – Product overview

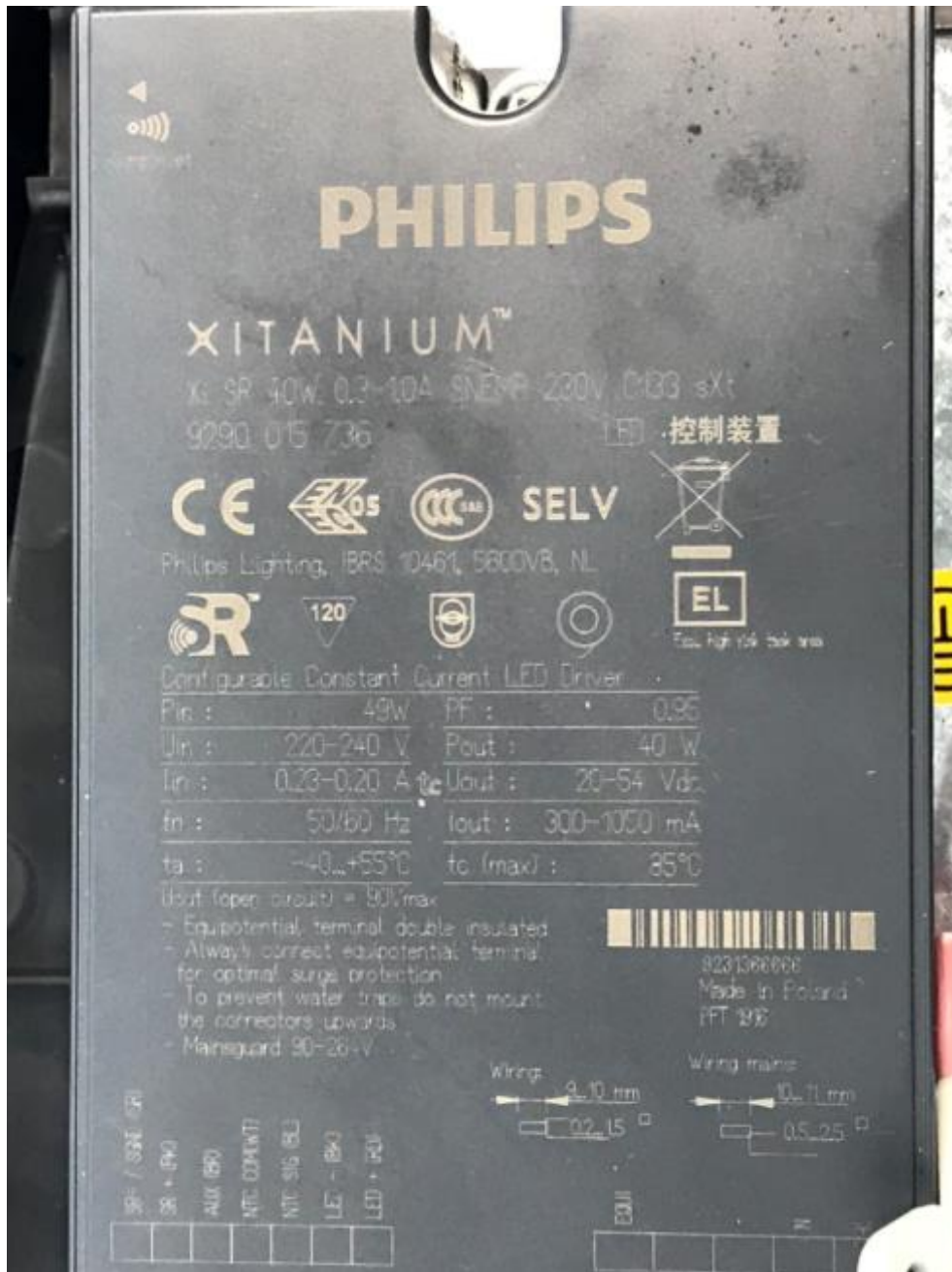
Photo documentation



25W luminaire model – Internal construction



25W luminaire model – LEDs compartment



25W luminaire model - LED driver

Photo documentation



40W luminaire model – Product overview

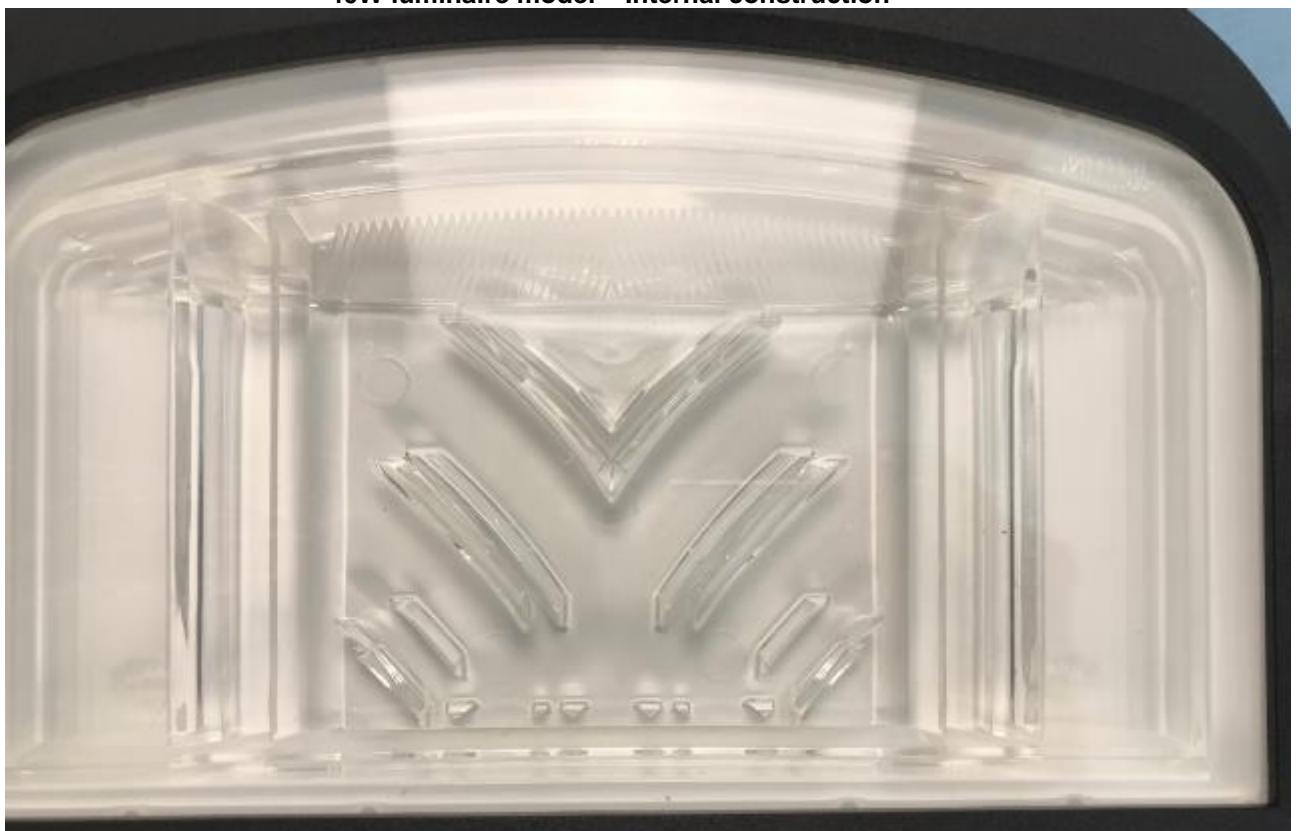


40W luminaire model – Product overview

Photo documentation



40W luminaire model – Internal construction



40W luminaire model – LEDs compartment

Photo documentation



40W luminaire model - LED driver

End of test report