



Light Emission Distribution Laboratory

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Accredited for compliance with ISO/IEC 17025 – For Testing.
Accreditation No. 19541

Test Report: 180447BLCP

Note: This test report supersedes TR 180447ALCP and contains additional information

Testing of Road Light Power for AEMO's NEM Load Table and other tests on optical systems

for SastaLED maXimus 110W, SastaLED Sekurit 110W Model Nos. SL99Q45L110, SL99Z43L110 & SL99Z55L110

Type of product: LED Floodlight

Prepared for: Gerard Lighting Pty Ltd, 96-112 Gow St, Padstow NSW 2211 Australia - Project Number: PTR 5693

Model numbers: SL99Q45L110, SL99Z43L110 & SL99Z55L110

Description: *Sylvania SastaLED maXimus 110W 4K X T PEB7 9007 DI, Sylvania SastaLED maXimus 110W 4K X T PES7 CO 9007, Sylvania SastaLED Sekurit 110W 4K B T PES7 CO 9007* Floodlights with die cast aluminium body and RAL9007 finish. SL99Q45L110 & SL99Z43L110 have asymmetric throw while SL99Z55L110 has a bi-symmetric throw. The report covers all model numbers as they are electrically identical; they only differ in their beam distribution and in the fact that SL99Q45L110 is double insulated and SL99Z43L110 is not.

Test objective and Method

Determination of the luminaire supply operating parameters Voltage, Current, Power and Power Factor when tested at nominal test voltages of 250V. By the method of LEDLab Electrical Parameter Determination and AEMO Unmetered_Load_Guideline_v1_0.

Test configuration

The ten luminaires were operated at 25°C ambient temperature in their normal operational orientation at 250VAC, 50Hz, until the monitored luminaire stabilised as defined in IES LM79. Twenty readings were taken ten seconds apart and the average found. The average value is multiplied by the Calibration Correction given in the latest NATA endorsed calibration report then has Voltmeter losses subtracted based on Watt-meter input impedance and test voltage. The other nine luminaires having operated for the same or more time are switched one by one to Watt-meter for their twenty readings.

Client: Gerard Lighting Pty Ltd, 96-112 Gow St, Padstow NSW 2211 Australia contact Mitchell Whittaker

Conclusion

The Average Load (W) is 113.97 W at 0.98 Power Factor.

Tested by: David Orwin

On 23/04/2018

Authorised Signatory

Date: 06/12/2018



Re-issued: 04/02/2019

Alain Yetendje

Results

Time till stabilisation: 4h

Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.614	0.466	113.738	0.974
Min	250.010	0.465	113.720	0.974
Max	251.090	0.467	113.750	0.974
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.58	0.4656	113.66	0.974

Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.425	0.466	113.968	0.976
Min	249.780	0.465	113.960	0.975
Max	251.520	0.468	113.980	0.976
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.39	0.4662	113.89	0.976

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	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 3				
Average	250.110	0.465	113.554	0.976
Min	249.290	0.463	113.540	0.975
Max	251.350	0.467	113.580	0.976
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.08	0.4650	113.48	0.976
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 4				
Average	250.172	0.468	114.179	0.975
Min	249.610	0.467	114.170	0.974
Max	250.980	0.469	114.190	0.975
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.14	0.4680	114.10	0.975
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 5				
Average	250.265	0.467	113.988	0.975
Min	249.560	0.465	113.980	0.975
Max	251.300	0.468	113.990	0.975
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.23	0.4668	113.91	0.975

The tests and measurements covered by this document are traceable to Australian national standards of measurement.

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	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 6				
Average	250.422	0.470	114.674	0.975
Min	249.370	0.469	114.650	0.975
Max	250.870	0.471	114.690	0.976
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.39	0.4693	114.60	0.975
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 7				
Average	250.305	0.466	113.777	0.975
Min	247.850	0.465	113.760	0.974
Max	250.980	0.471	113.800	0.976
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.27	0.4661	113.70	0.975
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 8				
Average	250.316	0.468	114.259	0.975
Min	249.440	0.466	114.240	0.975
Max	251.620	0.470	114.290	0.975
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.28	0.4678	114.18	0.975

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	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 9				
Average	250.426	0.466	113.799	0.975
Min	249.980	0.465	113.790	0.975
Max	250.970	0.467	113.810	0.975
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.39	0.4658	113.72	0.975
Sample 10				
Average	250.111	0.469	114.535	0.976
Min	249.100	0.468	114.450	0.976
Max	250.870	0.471	114.660	0.976
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.08	0.4689	114.46	0.976

Electrical operating parameters of SastaLED 110W

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.614	0.466	113.661	0.974
Sample 2	250.394	0.466	113.891	0.976
Sample 3	250.079	0.465	113.476	0.976
Sample 4	250.141	0.468	114.102	0.975
Sample 5	250.234	0.467	113.911	0.975
Sample 6	250.390	0.469	114.596	0.975
Sample 7	250.273	0.466	113.700	0.975
Sample 8	250.285	0.468	114.182	0.975
Sample 9	250.395	0.466	113.722	0.975
Sample 10	250.079	0.469	114.458	0.976
Average	250.29	0.47	113.97	0.98

Illustration 1: Electrical operating parameters of SastaLED maXimus 110W, SastaLED Sekurit 110W

Uncertainties

At a Confidence Level of 95% with a Coverage Factor of 2

Supply Voltage: $\pm 0.07\%$

Supply Current: $\pm 0.14\%$

Supply Power: $\pm 0.19\%$

Power Factor: ± 0.005

Ambient Temperature: $\pm 1^{\circ}\text{C}$

Test Equipment Used

Power meter: Newton 4th Power Analyser KinetiQ Model PPA2520 SN 133-00467

Power meter integration time (s): 5

Calibration Report: Ausgrid NC17.36115

Luminaire thermometer: AMA S No. 1086110-0.1deg

General Photographs

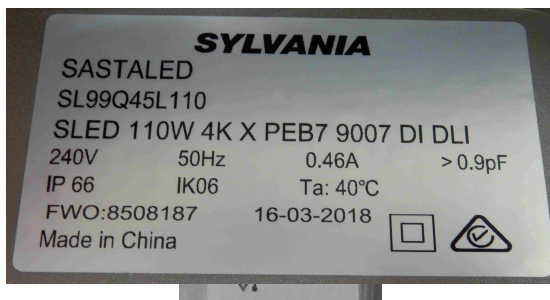


Illustration 3: Luminaire label (maXimus)



Illustration 2: Surge protector

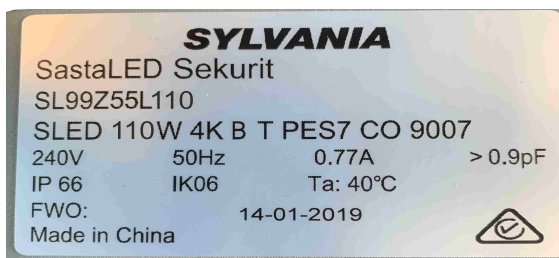


Illustration 4: Luminaire label (Sekurit)



Illustration 5: Luminaire (sample tested)



Illustration 6: Luminaire sample (Sekurit)



Illustration 7: Control gear



Illustration 8: LED driver

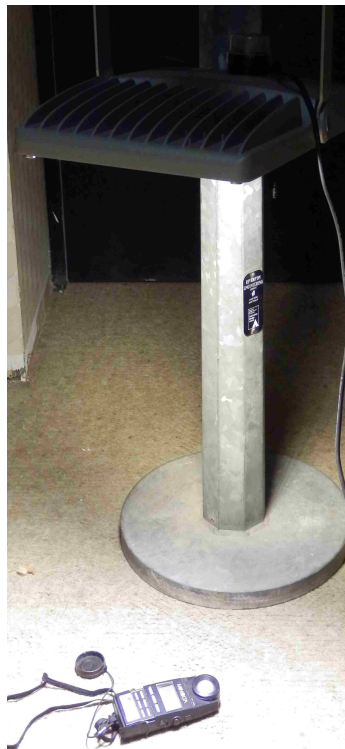


Illustration 9: Setup