



Light Emission Distribution Laboratory

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

Test Report: 180449BLCP

Note: This test report supersedes TR 180449ALCP and contains additional information

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

for SastaLED maXimus 175W, SastaLED Sekurit 185W Model Nos. SL99Q45L175, SL99Z43L175 & SL99Z55L185

Type of product: LED Floodlight

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

Model numbers: SL99Q45L175, SL99Z43L175 & SL99Z55L185

Description: *Sylvania SastaLED maXimus 175W 4K X T PEB7 9007 DI, Sylvania SastaLED maXimus 175W 4K X T PES7 CO 9007, Sylvania SastaLED Sekurit 185W 4K B T PES7 CO 9007* Floodlight with die cast aluminium body and RAL9007 finish. SL99Q45L175 & SL99Z43L175 have asymmetric throw while SL99Z55L185 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 SL99Q45L175 is double insulated and SL99Z43L175 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 177.17 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	250.337	0.722	176.127	0.975
Min	249.290	0.720	176.110	0.974
Max	251.110	0.725	176.150	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	250.31	0.7215	176.04	0.975

Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.144	0.731	178.335	0.975
Min	249.320	0.728	178.320	0.975
Max	251.270	0.733	178.370	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	250.11	0.7308	178.25	0.975

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	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 3				
Average	250.375	0.717	174.894	0.974
Min	249.400	0.715	174.850	0.974
Max	251.220	0.720	174.930	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	250.34	0.7167	174.81	0.974
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 4				
Average	250.463	0.725	177.142	0.975
Min	249.340	0.724	177.100	0.975
Max	251.030	0.728	177.180	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	250.43	0.7249	177.05	0.975
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 5				
Average	250.338	0.724	176.847	0.975
Min	249.910	0.723	176.830	0.975
Max	250.740	0.725	176.860	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	250.31	0.7240	176.76	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	250.398	0.733	179.189	0.976
Min	249.670	0.731	179.180	0.976
Max	251.060	0.735	179.200	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	250.37	0.7328	179.10	0.976
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 7				
Average	250.354	0.721	175.918	0.975
Min	249.850	0.719	175.890	0.975
Max	250.770	0.722	175.940	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	250.32	0.7202	175.83	0.975
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 8				
Average	250.348	0.730	178.021	0.975
Min	249.930	0.728	177.980	0.974
Max	250.850	0.731	178.060	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	250.32	0.7294	177.93	0.975

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Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.081	0.726	177.227	0.976
Min	249.630	0.726	177.220	0.975
Max	250.440	0.728	177.250	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	250.05	0.7261	177.14	0.976

Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.248	0.732	178.890	0.976
Min	249.360	0.730	178.870	0.976
Max	251.140	0.735	178.910	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	250.22	0.7321	178.80	0.976

Electrical operating parameters of SastaLED 175W

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.337	0.722	176.039	0.975
Sample 2	250.113	0.731	178.247	0.975
Sample 3	250.343	0.717	174.806	0.974
Sample 4	250.432	0.725	177.053	0.975
Sample 5	250.306	0.724	176.759	0.975
Sample 6	250.367	0.733	179.100	0.976
Sample 7	250.322	0.720	175.829	0.975
Sample 8	250.316	0.729	177.933	0.975
Sample 9	250.049	0.726	177.138	0.976
Sample 10	250.216	0.732	178.801	0.976
Average	250.28	0.73	177.17	0.98

Illustration 1: Electrical operating parameters of SastaLED maXimus 175W, SastaLED Sekurit 185W

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

SYLVANIA
 SastaLED maXimus
 SL99Q45L175
 SLED 175W 4K X PEB7 9007 DI DLI
 240V 50Hz 0.77A > 0.9pF
 IP 66 IK06 Ta: 40°C
 FWO: XXXX DD MM, YYYY
 Made in China

Illustration 3: Luminaire label (sample tested)

SYLVANIA
 SastaLED maXimus
 SL99Z43L175
 SLED 175W 4K X T PES7 CO 9007
 240V 50Hz 0.77A > 0.9pF
 IP 66 IK06 Ta: 40°C
 FWO: XXXX DD MM, YYYY
 Made in China

Illustration 2: Luminaire label (maXimus)



Illustration 5: Surge protector

SYLVANIA
 SastaLED Sekurit
 SL99Z55L185
 SLED 185W 4K B T PES7 CO 9007
 240V 50Hz 0.77A > 0.9pF
 IP 66 IK06 Ta: 40°C
 FWO: 14-01-2019
 Made in China

Illustration 4: Luminaire label (Sekurit)



Illustration 6: LED driver



Illustration 8: Setup



Illustration 7: Luminaire (maXimus)



Illustration 9: Luminaire (Sekurit)