



Light Emission Distribution Laboratory

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Accreditation No. 19541

Test Report: 180327LCP

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

for Roadflair Streetlight 240W Model No. BRP393 240W

Type of product: LED Streetlight

Prepared for: Philips Lighting Australia

Model number: BRP393 240W

Description: 240W LED StreetLight. Features IP66 cast aluminium housing, 8xLED modules made of 260xLEDs powered from 2x Philips Xitanium driver Xi FP 150W 0.2-0.7A SNLDAE 230V S240 sXt model number 9290 009 622.

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:

Philips Lighting Australia contact Jacek Lipiec, 65 Epping Road, North Ryde, NSW, 2113

Tested by: David Orwin On 13/03/2018 Authorised Signatory

Date: 21/03/2018

Alain Yetendje

Conclusions

Test results are given in following Tables.

The Average Load (W) is 235.57W at 0.98 Power Factor.

Results

Time till stabilisation: 3h

Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.505	0.965	235.921	0.976
Min	249.450	0.962	235.900	0.976
Max	251.420	0.969	235.950	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	250.47	0.9648	235.82	0.976
Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.445	0.965	235.889	0.976
Min	250.030	0.962	235.860	0.976
Max	251.150	0.966	235.910	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	250.41	0.9643	235.79	0.976
Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.413	0.969	236.730	0.976
Min	249.930	0.967	236.700	0.976
Max	250.900	0.971	236.770	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	250.38	0.9686	236.63	0.976
Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.190	0.964	235.275	0.976
Min	249.900	0.961	235.240	0.975
Max	250.960	0.965	235.310	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	250.16	0.9636	235.18	0.976

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Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.197	0.964	235.443	0.976
Min	249.410	0.961	235.410	0.976
Max	251.090	0.967	235.470	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	250.17	0.9638	235.34	0.976
Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.362	0.965	235.581	0.975
Min	249.830	0.962	235.560	0.975
Max	251.220	0.967	235.610	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	250.33	0.9647	235.48	0.975
Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.093	0.965	235.571	0.976
Min	249.280	0.963	235.430	0.975
Max	250.730	0.968	235.710	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	250.06	0.9649	235.47	0.976
Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.104	0.964	235.129	0.975
Min	249.540	0.961	235.090	0.975
Max	250.820	0.966	235.160	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	250.07	0.9635	235.03	0.975
Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.391	0.965	235.661	0.976
Min	249.710	0.961	235.640	0.975
Max	251.330	0.967	235.680	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	250.36	0.9644	235.56	0.976
Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.390	0.964	235.530	0.976
Min	249.620	0.961	235.470	0.975
Max	251.320	0.967	235.590	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	250.36	0.9637	235.43	0.976

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

This report only applies to the items tested and shall only be reproduced in full unless approved in writing by Light Emission Distribution Laboratory (LEDLab).

Electrical operating parameters of Roadflair Streetlight 240W

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.505	0.965	235.822	0.976
Sample 2	250.414	0.964	235.791	0.976
Sample 3	250.381	0.969	236.631	0.976
Sample 4	250.158	0.964	235.177	0.976
Sample 5	250.166	0.964	235.344	0.976
Sample 6	250.330	0.965	235.483	0.975
Sample 7	250.062	0.965	235.473	0.976
Sample 8	250.073	0.963	235.030	0.975
Sample 9	250.360	0.964	235.562	0.976
Sample 10	250.358	0.964	235.432	0.976
Average	250.28	0.96	235.57	0.98

Illustration 1: Electrical operating parameters of Roadflair Streetlight 240W

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: NC17.36115

Luminaire thermometer: AMA S No. 1086110-0.1deg

General Photographs



Illustration 2: Luminaire



Illustration 3: Luminaire label

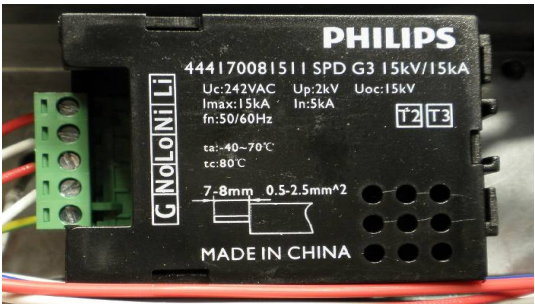


Illustration 4: Surge protector



Illustration 6: LED driver (2x off)



Illustration 5: Setup