



Light Emission Distribution Laboratory

Division of Photometry & Electrical Testing Pty. Ltd

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compliance with
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Accreditation
No. 19541

Test Report: 171246LCP

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

for Roadflair Streetlight 170W Model No. BRP393 170W

Type of product: LED Streetlight

Prepared for: Philips Lighting Australia

Model number: BRP393 170W

Description: 170W LED StreetLight. Features IP66 cast aluminium housing, 4xLED modules made of 185xLEDs 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 21/12/2017 Authorised Signatory

Date: 05/01/2018

Alain Yetendje

Conclusions

Test results are given in following Tables.

The Average Load (W) is 171.59W at 0.96 Power Factor.

Results

Time till stabilisation: 3h

Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.558	0.716	172.512	0.962
Min	249.550	0.714	172.500	0.961
Max	251.290	0.719	172.530	0.962
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	250.53	0.7157	172.42	0.962
Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.316	0.714	171.690	0.961
Min	249.820	0.712	171.660	0.961
Max	250.820	0.715	171.710	0.961
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	250.29	0.7134	171.60	0.961
Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.709	0.709	170.726	0.961
Min	250.080	0.708	170.700	0.960
Max	251.130	0.711	170.750	0.961
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	250.68	0.7086	170.64	0.961
Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.422	0.718	172.506	0.960
Min	249.560	0.716	172.490	0.960
Max	251.000	0.720	172.520	0.961
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	0.7172	172.42	0.960

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Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.508	0.712	171.486	0.961
Min	249.120	0.710	171.450	0.961
Max	251.270	0.716	171.540	0.962
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	250.48	0.7120	171.40	0.961
Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.662	0.713	171.766	0.961
Min	249.370	0.711	171.720	0.960
Max	251.600	0.717	171.810	0.961
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	250.63	0.7130	171.68	0.961
Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.633	0.712	171.521	0.961
Min	249.870	0.711	171.500	0.961
Max	251.110	0.714	171.540	0.961
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	250.60	0.7118	171.43	0.961
Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.342	0.713	171.605	0.961
Min	249.400	0.711	171.560	0.961
Max	251.230	0.715	171.640	0.962
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	0.7127	171.52	0.961
Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.311	0.711	171.078	0.961
Min	249.590	0.709	171.050	0.961
Max	251.220	0.713	171.090	0.962
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	0.7108	170.99	0.961
Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.379	0.715	171.934	0.960
Min	249.500	0.713	171.900	0.960
Max	251.290	0.717	171.960	0.961
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	250.35	0.7147	171.85	0.960

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 170W

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.558	0.716	172.424	0.962
Sample 2	250.285	0.713	171.603	0.961
Sample 3	250.678	0.709	170.638	0.961
Sample 4	250.391	0.717	172.418	0.960
Sample 5	250.477	0.712	171.399	0.961
Sample 6	250.630	0.713	171.679	0.961
Sample 7	250.601	0.712	171.434	0.961
Sample 8	250.310	0.713	171.518	0.961
Sample 9	250.279	0.711	170.991	0.961
Sample 10	250.348	0.715	171.847	0.960
Average	250.46	0.71	171.59	0.96

Illustration 1: Electrical operating parameters of Roadflair Streetlight 170W

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: NC17.36096

Luminaire thermometer: AMA S No. 1086110-0.1deg

General Photographs



Illustration 2: Luminaire



Illustration 3: Luminaire label



Illustration 4: Surge protector

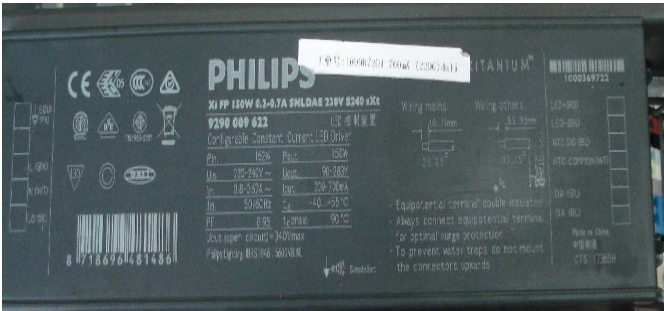


Illustration 6: LED driver (2x off)



Illustration 5: Setup