Light Emission Distribution Laboratory
Division of Photometry & Electrical Testing Pty. Ltd ABN 11 166 255 134
All tests conducted at Unit 4, 140 George St, Hornsby NSW 2077 Australia
Ph: +61 2 9476 3097 E: info@ledlab.com.au

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This report replaces and supersedes 220915LCP as it involves a model number change.

Test Report: 220915ALCP

Testing of Road Light Power for AEMO's NEM Load Table for Unmetered Loads on Road lighting luminaires

For Ozlite LED11 Decorative LED Streetlight

Type of product: Decorative LED streetlight

Model Number: SWOZ12T – Top Entry (sample tested), SWOZ12S – Side Entry

Prepared for: Streetworx Pty Ltd

Description: 12W top entry LED decorative streetlight. Features spun aluminium reflector, 12x 4000K LEDs and clear plastic visor, driven from Meanwell LED driver (model no. LPF-16D-12). The sample tested is representative of both model numbers as they are electrically identical and only differ in the mounting (top or side entry) and metalwork supporting the LEDs

Test objective

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_v2_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 Wattmeter for their twenty readings.

Client

Contact Joe Calvi, Streetworx Pty Ltd, 185 Liverpool Rd, Kilsyth, Victoria 3137, Australia

Conclusions

The Average Load (W) is 11.51W at 0.867 Power Factor.

Tested by: David Orwin — 20/09/2022

Authorised Signatory: David Ford — Date: 20/09/2022 Re-issued 19/06/23

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Results

Time till stabilisation: 2h

Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.296	0.053	11.565	0.869
Min	250.050	0.053	11.563	0.868
Max	250.530	0.053	11.566	0.869
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.36**	**0.053**	**11.57**	**0.869**

Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.222	0.053	11.604	0.872
Min	249.860	0.053	11.600	0.871
Max	250.380	0.053	11.607	0.872
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.28**	**0.053**	**11.61**	**0.872**

Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.289	0.053	11.492	0.866
Min	250.120	0.053	11.491	0.866
Max	250.400	0.053	11.494	0.867
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.35**	**0.053**	**11.49**	**0.866**

Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.180	0.053	11.374	0.865
Min	250.060	0.053	11.370	0.865
Max	250.350	0.053	11.378	0.865
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.24**	**0.053**	**11.38**	**0.865**

Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.298	0.053	11.556	0.866
Min	250.020	0.053	11.551	0.865
Max	250.490	0.053	11.558	0.866
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.36**	**0.053**	**11.56**	**0.866**

Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.097	0.053	11.456	0.869
Min	249.360	0.053	11.446	0.868
Max	250.270	0.053	11.462	0.870
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.16**	**0.053**	**11.46**	**0.869**

Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.330	0.053	11.621	0.869
Min	250.010	0.053	11.619	0.869
Max	250.660	0.053	11.623	0.870
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.39**	**0.053**	**11.62**	**0.869**

Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.988	0.053	11.454	0.867
Min	249.810	0.053	11.452	0.867
Max	250.140	0.053	11.456	0.867
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.05**	**0.053**	**11.46**	**0.867**

Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.144	0.053	11.554	0.868
Min	249.920	0.053	11.552	0.868
Max	250.420	0.053	11.556	0.868
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.21**	**0.053**	**11.55**	**0.868**

Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.006	0.053	11.366	0.862
Min	249.580	0.053	11.362	0.861
Max	250.240	0.053	11.369	0.863
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.07**	**0.053**	**11.37**	**0.862**

Letter Height

The height of the external letters on the luminaire was measured as 22mm

Table 1. Electrical operating parameters of

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.36	0.053	11.57	0.869
Sample 2	250.28	0.053	11.61	0.872
Sample 3	250.35	0.053	11.49	0.866
Sample 4	250.24	0.053	11.38	0.865
Sample 5	250.36	0.053	11.56	0.866
Sample 6	250.16	0.053	11.46	0.869
Sample 7	250.39	0.053	11.62	0.869
Sample 8	250.05	0.053	11.46	0.867
Sample 9	250.21	0.053	11.55	0.868
Sample 10	250.07	0.053	11.37	0.862
Average	**250.25**	**0.053**	**11.51**	**0.867**

Uncertainties

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

Supply Voltage: ± 0.07%
Supply Current: ± 0.14%
Supply Power: ± 0.19%
Power Factor: ± 0.005
Ambient Temperature: ± 1°C

Test Equipment Used

Power meter: Newton 4th Power Analyser KinetiQ Model PPA2520 SN 133-00467
Power meter integration time (s): 5
Calibration Report: PlusEs report no. 2020002794
Luminaire thermometer: AMA S No. 1086110-0.1deg

General Photographs

Photo 1. Luminaire.

Photo 2. Luminaire.

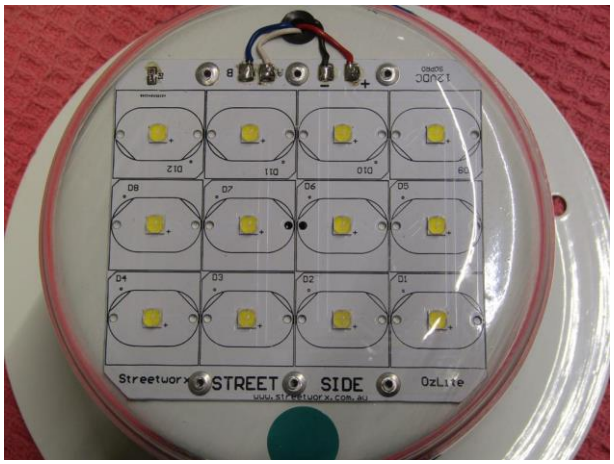


Photo 3. LED module.

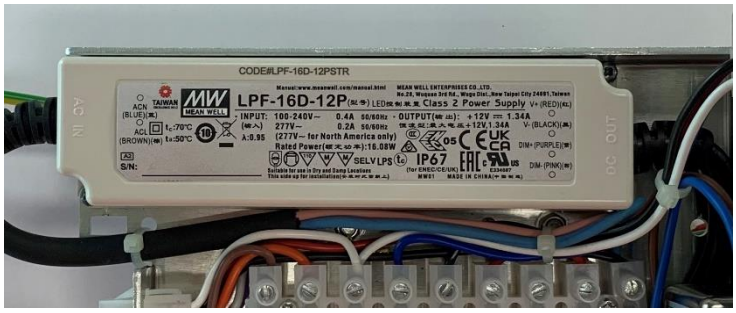
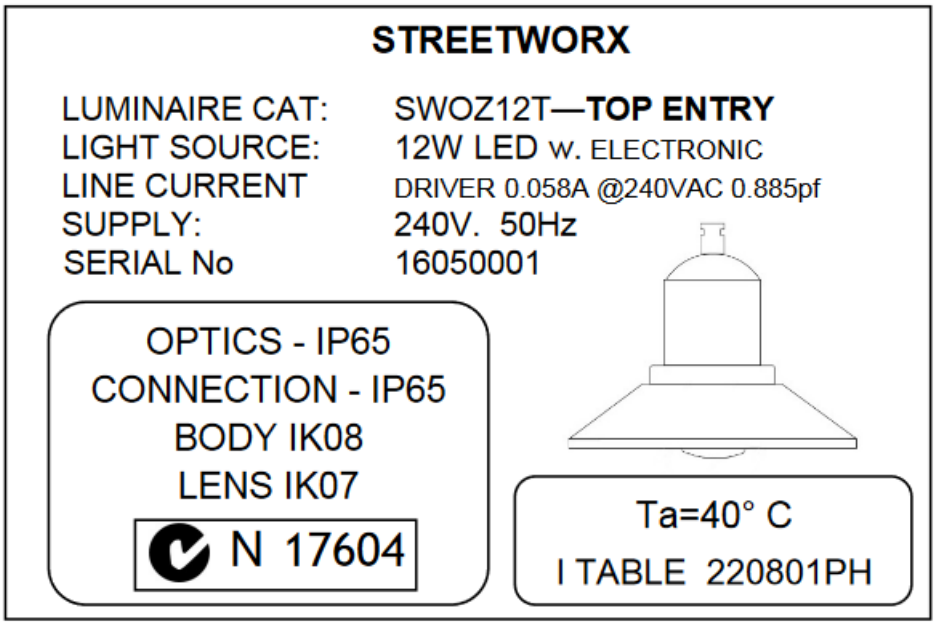


Photo 4. LED driver.

Marking



Also