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

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

Test Report: 220534LCP

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

For Kensington MK II 16W

Type of product: Post Top Decorative Streetlight

Model Number: Kensington MK II 16W, KX47Z0001L16, KX37Z0001L16

Prepared for: Schréder Australia Pty. Ltd

Description: 16W Sylvania LED Decorative Streetlight. Features die-cast aluminium body with powder coated finish, Acrylic/PMMA diffuser, 2x Samsung LED modules made of 9x LH351C Samsung LED chips driven from aInventronics LED driver (model no. EUM-030S105DE set at 540mA).

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 Swati Dhembre, Schréder Australia Pty. Ltd., Bldg 4A, Parklands Estate, 21-23 South Street, Rydalmere, NSW 2116

Conclusions

The Average Load (W) is 16.40W at 0.920 Power Factor.

Tested by: Alain Yetendje — 23/05/2022

Authorised Signatory: David Ford — Date: 20/06/2022

Results

Time till stabilisation: 2h. LED Power marking viewed from ground measured > 20mm. Complied as lower than 9m mounting height.

Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.345	0.071	16.394	0.920
Min	248.340	0.071	16.389	0.920
Max	250.070	0.072	16.403	0.922
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	**249.41**	**0.071**	**16.40**	**0.920**

Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.067	0.072	16.549	0.919
Min	249.720	0.072	16.545	0.918
Max	250.310	0.072	16.554	0.919
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	**250.13**	**0.072**	**16.55**	**0.919**

Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.115	0.071	16.300	0.922
Min	249.520	0.071	16.292	0.921
Max	250.600	0.071	16.306	0.922
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	**250.18**	**0.071**	**16.30**	**0.922**

Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.025	0.071	16.413	0.921
Min	249.510	0.071	16.409	0.921
Max	250.190	0.071	16.416	0.922
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	**250.09**	**0.071**	**16.41**	**0.921**

Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.929	0.070	16.033	0.917
Min	249.520	0.070	16.028	0.916
Max	250.250	0.070	16.038	0.917
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	**249.99**	**0.070**	**16.03**	**0.917**

Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.065	0.072	16.503	0.922
Min	249.640	0.071	16.499	0.921
Max	250.580	0.072	16.508	0.922
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	**250.13**	**0.072**	**16.50**	**0.922**

Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.070	0.072	16.388	0.915
Min	249.790	0.072	16.383	0.915
Max	250.470	0.072	16.397	0.916
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	**250.13**	**0.072**	**16.39**	**0.915**

Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.041	0.071	16.441	0.922
Min	249.460	0.071	16.436	0.921
Max	250.360	0.071	16.446	0.922
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	**250.10**	**0.071**	**16.44**	**0.922**

Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.121	0.072	16.473	0.920
Min	249.710	0.072	16.469	0.919
Max	250.440	0.072	16.477	0.920
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	**250.18**	**0.072**	**16.47**	**0.920**

Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.849	0.072	16.442	0.919
Min	249.160	0.071	16.437	0.918
Max	250.430	0.072	16.446	0.920
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00059	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	**249.91**	**0.072**	**16.44**	**0.919**

Table 1. Electrical operating parameters of Kensington MK II 16W

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	249.41	0.071	16.40	0.920
Sample 2	250.13	0.072	16.55	0.919
Sample 3	250.18	0.071	16.30	0.922
Sample 4	250.09	0.071	16.41	0.921
Sample 5	249.99	0.070	16.03	0.917
Sample 6	250.13	0.072	16.50	0.922
Sample 7	250.13	0.072	16.39	0.915
Sample 8	250.10	0.071	16.44	0.922
Sample 9	250.18	0.072	16.47	0.920
Sample 10	249.91	0.072	16.44	0.919
Average	**250.02**	**0.071**	**16.40**	**0.920**

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. Light source.

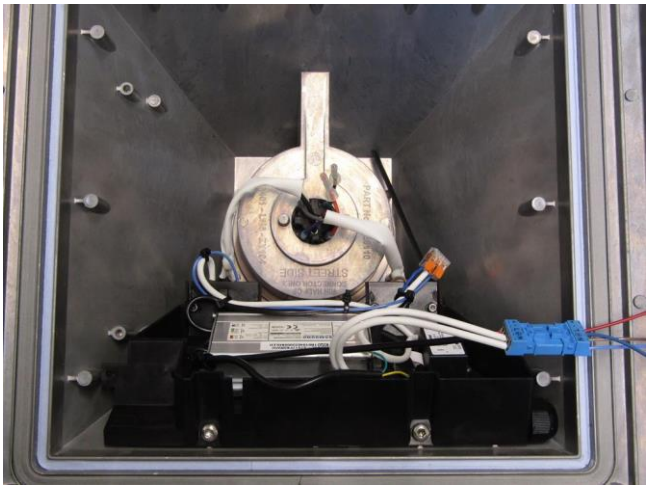

Photo 4. Gear tray.

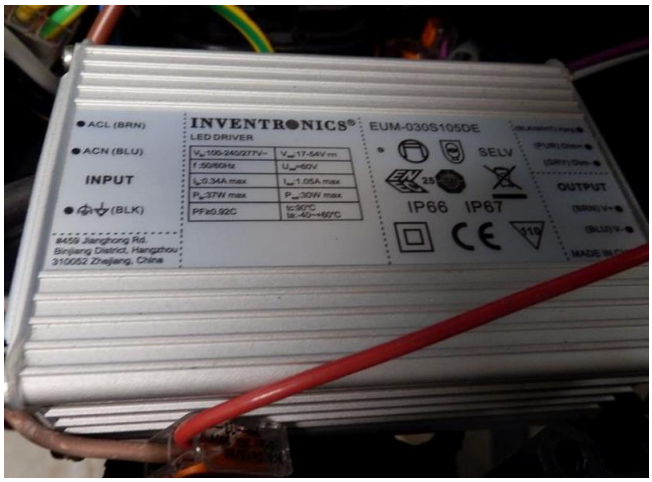

Photo 5. LED driver.

Photo 6. Luminaire.

Photo 7. Luminaire during the test.