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

Test Report: 210326LCP

Testing of Parkville II 120W Power for AEMO's NEM Load Table and other tests on optical systems

for Parkville II 120W

Type of product: LED StreetLight

Prepared for: Sylvania Schréder, Bldg 4A, Parklands Estate, 21-23 South Street, Rydalmere NSW 2116 Australia

Model number: Parkville II 120W

Description: Parkville II 120W LED Streetlight. Features die-cast aluminium housing with powder coated finish, a tempered glass visor, 12x individual lenses, a custom 52V LED board made of 72x Samsung LH351C LED chips driven from 1x Inventronics LED driver (model number EUD-150S350BVA) programmed at 2.17A.

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 Wattmeter for their twenty readings.

Client contact: Swati Dhembre

Conclusion

The Average Load (W) is 119.0W at .97 Power Factor.

Tested by: David Orwin On 29/03/2021 Authorised Signatory Date: 12/04/2021

Alain Yetendje

The data specified in this report relates to the sample measured as received from the client under standard conditions specified in the Test Specification, and may not necessarily relate to other similar luminaires or other operating conditions. The tests and measurements covered by this document are traceable to Australian national standards of measurement. This report shall only be reproduced in full unless approved in writing by Light Emission Distribution Laboratory (LEDLab).

Results

Time till stabilisation: 3h

Electrical Measurements

Sample 1		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.339	0.496	120.601	0.971
Min		249.770	0.495	120.590	0.971
Max		250.810	0.497	120.620	0.973
Calibration correction (see Newton 4th calibr		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.40	0.4956	120.55	0.971

Sample 2		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.173	0.491	119.887	0.975
Min		249.640	0.491	119.880	0.975
Max		250.590	0.492	119.900	0.975
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.23	0.4909	119.84	0.975

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Sample 3		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		249.956	0.487	118.432	0.972
Min		248.710	0.486	118.420	0.972
Max		250.670	0.490	118.460	0.973
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.02	0.4869	118.39	0.972

Sample 4		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.160	0.490	119.584	0.975
Min		249.250	0.490	119.570	0.975
Max		250.490	0.492	119.600	0.976
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.22	0.4897	119.54	0.975

Sample 5		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.283	0.493	119.866	0.972
Min		249.720	0.492	119.860	0.971
Max		250.810	0.494	119.890	0.972
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.34	0.4924	119.82	0.972

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Sample 6		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.328	0.489	119.230	0.975
Min		249.070	0.487	119.200	0.974
Max		251.170	0.491	119.250	0.975
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.39	0.4883	119.18	0.975

Sample 7		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.025	0.490	119.443	0.975
Min		249.410	0.489	119.430	0.975
Max		250.510	0.491	119.450	0.976
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.09	0.4893	119.40	0.975

Sample 8		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.097	0.484	117.866	0.975
Min		249.110	0.483	117.850	0.975
Max		250.550	0.485	117.890	0.975
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.16	0.4831	117.82	0.975

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Sample 9		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.092	0.484	118.013	0.975
Min		249.400	0.484	118.010	0.974
Max		250.470	0.485	118.020	0.975
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.15	0.4837	117.97	0.975

Sample 10		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.299	0.482	117.587	0.975
Min		249.920	0.481	117.570	0.975
Max		250.530	0.482	117.610	0.975
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.36	0.4813	117.54	0.975

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Electrical operating parameters of Parkville II LED Streetlight 120W				
Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.339	0.496	120.555	0.971
Sample 2	250.173	0.491	119.841	0.975
Sample 3	249.956	0.487	118.386	0.972
Sample 4	250.160	0.490	119.538	0.975
Sample 5	250.283	0.492	119.820	0.972
Sample 6	250.328	0.488	119.183	0.975
Sample 7	250.025	0.489	119.396	0.975
Sample 8	250.097	0.483	117.820	0.975
Sample 9	250.092	0.484	117.966	0.975
Sample 10	250.299	0.481	117.541	0.975
Average	250.18	**0.49**	**119.00**	**0.97**

Illustration 1: Electrical operating parameters of Parkville II 120W

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. 1086110-0.1°

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Illustration 3: Luminaire

Illustration 2: Setup

Illustration 4: LED driver