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

Test Report: 210327LCP

Testing of Parkville II 150W Power for AEMO's NEM Load Table and other tests on optical systems

for Parkville II 150W

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 150W

Description: Parkville II 150W 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 2.75A.

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 150.7W at .98 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		250.139	0.625	153.592	0.982
Min		249.180	0.625	153.560	0.981
Max		250.490	0.628	153.630	0.982
Calibration correction (see Newton 4th calibr		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.20	0.6250	153.55	0.982

Sample 2		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		249.881	0.621	152.666	0.984
Min		249.100	0.620	152.620	0.984
Max		250.360	0.623	152.690	0.984
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		249.94	0.6205	152.62	0.984

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Sample 3		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.266	0.615	151.066	0.981
Min		249.720	0.615	151.040	0.981
Max		250.620	0.617	151.100	0.981
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.33	0.6148	151.02	0.981

Sample 4		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.163	0.613	150.570	0.981
Min		249.430	0.612	150.550	0.981
Max		250.990	0.615	150.580	0.981
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	0.6130	150.53	0.981

Sample 5		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.301	0.613	150.319	0.980
Min		249.820	0.612	150.290	0.980
Max		250.830	0.614	150.330	0.980
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	0.6122	150.28	0.980

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Sample 6		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.113	0.612	150.212	0.981
Min		249.150	0.611	150.170	0.980
Max		250.660	0.615	150.240	0.981
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.17	0.6119	150.17	0.981

Sample 7		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.138	0.610	150.118	0.983
Min		249.690	0.610	150.080	0.983
Max		250.440	0.611	150.160	0.983
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.20	0.6098	150.07	0.983

Sample 8		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		249.956	0.610	149.894	0.983
Min		249.110	0.608	149.840	0.983
Max		250.750	0.612	149.950	0.984
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	0.6093	149.85	0.983

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Sample 9		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.303	0.609	149.702	0.982
Min		249.520	0.607	149.630	0.981
Max		251.140	0.611	149.780	0.982
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	0.6088	149.66	0.982

Sample 10		Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average		250.075	0.607	149.339	0.984
Min		249.090	0.606	149.300	0.984
Max		250.570	0.609	149.380	0.984
Calibration correction (see Newton 4th c		1.00025	0.99958	1.00010	1.0000
Instrument impedance correction (N4)			0.00024	0.0576	
Final value		250.14	0.6065	149.30	0.984

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Electrical operating parameters of Parkville II LED Streetlight 150W				
Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.139	0.625	153.549	0.982
Sample 2	249.881	0.620	152.623	0.984
Sample 3	250.266	0.615	151.023	0.981
Sample 4	250.163	0.613	150.527	0.981
Sample 5	250.301	0.612	150.276	0.980
Sample 6	250.113	0.612	150.168	0.981
Sample 7	250.138	0.610	150.075	0.983
Sample 8	249.956	0.609	149.850	0.983
Sample 9	250.303	0.609	149.659	0.982
Sample 10	250.075	0.607	149.296	0.984
Average	250.13	**0.61**	**150.70**	**0.98**

Illustration 1: Electrical operating parameters of Parkville II 150W

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