



Test Report: 210945LCP

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

For Seligo Avenue II 18W

Type of product: LED Streetlight

Model Number: Seligo Avenue II 18W

Prepared for: Sylvania Schröder

Description: Sylvania Seligo Avenue II LED streetlight. Features die-cast aluminium body with powder coated finish, polycarbonate diffuser, Custom board with 24x Samsung LH351C LEDs and 4x lens assemblies driven from a Samsung driver (model number SL-LU70140D1WW) set at 460mA.

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

Conclusions

The Average Load (W) is 17.90W at 0.932 Power Factor.

Tested by:
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Authorised Signatory

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Date: 26/10/2021



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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	249.947	0.078	18.182	0.934
Min	249.590	0.078	18.181	0.934
Max	250.130	0.078	18.184	0.935
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	250.01	0.078	18.18	0.934

Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.963	0.075	17.525	0.932
Min	249.580	0.075	17.522	0.932
Max	250.190	0.075	17.527	0.933
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	250.02	0.075	17.53	0.932

Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.054	0.077	17.925	0.931
Min	249.840	0.077	17.922	0.931
Max	250.340	0.077	17.931	0.931
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	250.12	0.077	17.93	0.931



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Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.929	0.077	17.897	0.931
Min	249.720	0.077	17.894	0.931
Max	250.240	0.077	17.902	0.932
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	0.077	17.90	0.931

Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.084	0.076	17.720	0.931
Min	249.920	0.076	17.717	0.931
Max	250.320	0.076	17.724	0.931
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	250.15	0.076	17.72	0.931

Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.908	0.078	18.141	0.932
Min	249.740	0.078	18.140	0.932
Max	250.070	0.078	18.143	0.932
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	249.97	0.078	18.14	0.932

Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.976	0.078	18.084	0.932
Min	249.790	0.078	18.080	0.932
Max	250.120	0.078	18.087	0.933
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	250.04	0.078	18.09	0.932

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Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.992	0.078	18.125	0.932
Min	249.850	0.078	18.122	0.932
Max	250.240	0.078	18.128	0.932
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	250.05	0.078	18.13	0.932

Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.927	0.077	17.880	0.931
Min	249.750	0.077	17.877	0.931
Max	250.050	0.077	17.882	0.931
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	0.077	17.88	0.931

Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.981	0.075	17.488	0.932
Min	249.180	0.075	17.485	0.932
Max	250.190	0.075	17.491	0.933
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	250.04	0.075	17.49	0.932



Table 1. Electrical operating parameters of Seligo Avenue II 18W

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.01	0.078	18.18	0.934
Sample 2	250.02	0.075	17.53	0.932
Sample 3	250.12	0.077	17.93	0.931
Sample 4	249.99	0.077	17.90	0.931
Sample 5	250.15	0.076	17.72	0.931
Sample 6	249.97	0.078	18.14	0.932
Sample 7	250.04	0.078	18.09	0.932
Sample 8	250.05	0.078	18.13	0.932
Sample 9	249.99	0.077	17.88	0.931
Sample 10	250.04	0.075	17.49	0.932
Average	250.04	0.077	17.90	0.932

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: 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.