



Test Report: 220403LCP

Testing of Road Light Power for AEMO's NEM Load Table for Unmetered Loads on Road lighting luminaires for Avento Evo 230W

Type of product: LED Streetlight

Model Number: AVENTO EVO 2

Prepared for: Sylvania-Schröder

Description: 230W LED Streetlight. IP66, IK08, Ta 55°C, Class I luminaire. Features die-cast aluminium housing and glass visor optical cover and lens. 7x custom LED boards driven from 1x Inventronics LED driver (model no. EUM-240S105BG).

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

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Conclusions

The Average Load (W) is 225.54W at 0.974 Power Factor.

Tested by:
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08/04/2022

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Date: 11/04/2022



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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	250.006	0.922	224.608	0.974
Min	249.760	0.922	224.560	0.974
Max	250.150	0.923	224.640	0.974
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.07	0.922	224.63	0.974

Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.996	0.919	223.741	0.973
Min	249.190	0.919	223.690	0.973
Max	250.240	0.922	223.770	0.974
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.06	0.919	223.76	0.973

Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.057	0.928	226.080	0.974
Min	249.840	0.927	226.040	0.974
Max	250.370	0.929	226.110	0.974
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.12	0.928	226.10	0.974



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Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.008	0.931	226.797	0.974
Min	249.740	0.931	226.760	0.974
Max	250.270	0.932	226.840	0.974
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.07	0.931	226.82	0.974

Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.001	0.920	223.626	0.973
Min	249.490	0.919	223.610	0.973
Max	250.210	0.921	223.640	0.973
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.06	0.919	223.65	0.973

Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.027	0.922	224.189	0.973
Min	249.750	0.921	224.180	0.973
Max	250.330	0.922	224.200	0.973
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.09	0.921	224.21	0.973



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Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.990	0.929	226.009	0.974
Min	249.690	0.927	225.960	0.973
Max	250.420	0.930	226.070	0.974
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.05	0.928	226.03	0.974

Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.984	0.939	228.766	0.974
Min	249.710	0.938	228.740	0.974
Max	250.260	0.940	228.840	0.975
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.05	0.939	228.79	0.974

Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.000	0.920	223.869	0.973
Min	249.720	0.919	223.830	0.973
Max	250.250	0.921	223.940	0.974
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.06	0.920	223.89	0.973

Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.007	0.934	227.514	0.974
Min	249.760	0.934	227.490	0.974
Max	250.190	0.935	227.550	0.974
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.07	0.934	227.54	0.974

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Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.07	0.922	224.63	0.974
Sample 2	250.06	0.919	223.76	0.973
Sample 3	250.12	0.928	226.10	0.974
Sample 4	250.07	0.931	226.82	0.974
Sample 5	250.06	0.919	223.65	0.973
Sample 6	250.09	0.921	224.21	0.973
Sample 7	250.05	0.928	226.03	0.974
Sample 8	250.05	0.939	228.79	0.974
Sample 9	250.06	0.920	223.89	0.973
Sample 10	250.07	0.934	227.54	0.974
Average	250.07	0.926	225.54	0.974

Table 1. Electrical operating parameters of Avento Evo 230W

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

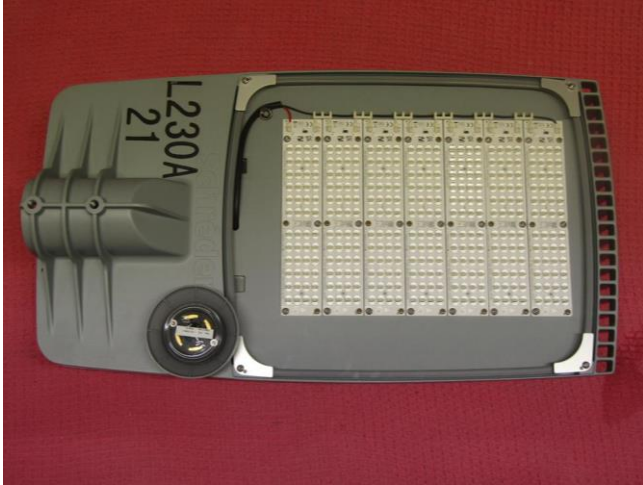


Photo 1. Luminaire.

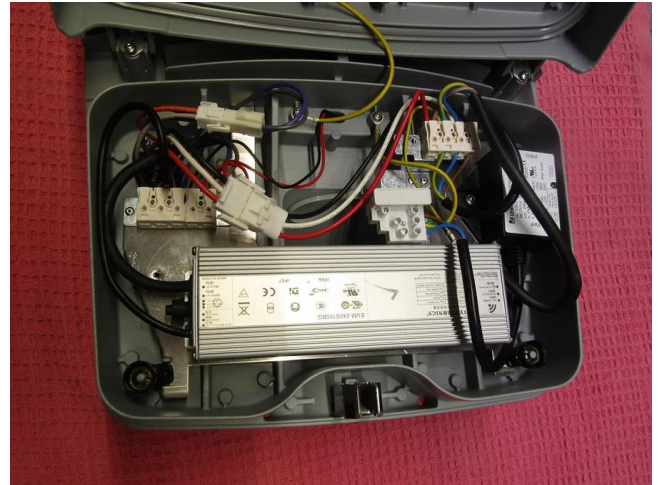


Photo 2. Gear tray.



Photo 3. Luminaire during test.

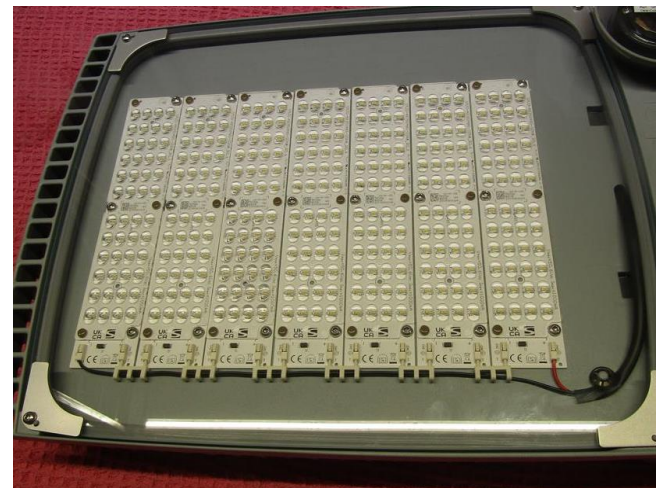


Photo 4. Optics.



Photo 5. LED driver.



Photo 6. Luminaire label.