



Light Emission Distribution Laboratory

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Accreditation No. 19541

Test Report: 180307LCP

Testing of Road Light Power for AEMO's NEM Load Table and other tests on optical systems

for RoadLED MIDI 60W

Type of product: LED Streetlight

Prepared for: Gerard Lighting Pty Ltd, 96-112 Gow St, Padstow NSW 2211 Australia

Model number: RoadLED MIDI 60W

Description: Sylvania RoadLED MIDI 60W with Aero Screen Visor 4K. Die cast powder coated aluminium body. One Samsung panels with 38 LH351B 4k chips. Inventronics driver EUD-096S105DVA set at 0.945 Amp.

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 Watt-meter for their twenty readings.

Client: Gerard Lighting Pty Ltd, 96-112 Gow St, Padstow NSW 2211 Australia contact Elizabeth Fernandes

Conclusion

The Average Load (W) is 59.27 W at 0.95 Power Factor.

Tested by: David Orwin

On 5/03/2018

Authorised Signatory
David Ford

Date: 15/03/2018

Results

Time till stabilisation: 8h

Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.641	0.248	59.411	0.955
Min	249.950	0.247	59.405	0.955
Max	251.620	0.249	59.422	0.955
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.61	0.2479	59.34	0.955
Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.726	0.251	59.834	0.954
Min	249.150	0.251	59.819	0.954
Max	250.170	0.252	59.841	0.954
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	249.69	0.2509	59.77	0.954
Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.220	0.252	60.164	0.955
Min	249.560	0.251	60.144	0.955
Max	251.170	0.252	60.182	0.955
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.19	0.2515	60.10	0.955

Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.045	0.246	58.527	0.953
Min	249.520	0.245	58.523	0.953
Max	250.370	0.246	58.533	0.954
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.01	0.2452	58.46	0.953
Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.286	0.251	59.947	0.953
Min	249.490	0.250	59.931	0.953
Max	251.180	0.252	59.966	0.954
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.26	0.2510	59.88	0.953
Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.438	0.245	58.552	0.952
Min	249.140	0.244	58.538	0.952
Max	252.430	0.247	58.571	0.953
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.41	0.2452	58.48	0.952

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Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.295	0.244	58.171	0.952
Min	249.780	0.243	58.163	0.952
Max	251.310	0.245	58.176	0.952
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.26	0.2439	58.10	0.952
Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.563	0.249	59.643	0.954
Min	249.930	0.249	59.635	0.954
Max	251.350	0.250	59.653	0.954
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.53	0.2492	59.58	0.954
Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.119	0.248	59.218	0.955
Min	249.590	0.247	59.208	0.954
Max	250.920	0.248	59.229	0.955
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.09	0.2478	59.15	0.955
Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.475	0.251	59.947	0.954
Min	249.750	0.250	59.931	0.954
Max	251.570	0.251	59.964	0.955
Calibration correction (see Newton 4 th calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.44	0.2505	59.88	0.954

The tests and measurements covered by this document are traceable to Australian national standards of measurement.

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Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.641	0.248	59.343	0.955
Sample 2	249.694	0.251	59.766	0.954
Sample 3	250.188	0.251	60.096	0.955
Sample 4	250.014	0.245	58.459	0.953
Sample 5	250.255	0.251	59.879	0.953
Sample 6	250.407	0.245	58.484	0.952
Sample 7	250.263	0.244	58.103	0.952
Sample 8	250.532	0.249	59.575	0.954
Sample 9	250.088	0.248	59.150	0.955
Sample 10	250.443	0.251	59.879	0.954
Average	250.25	0.25	59.27	0.95

Illustration 1: Electrical operating parameters of RoadLED MIDI 60W

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: Ausgrid NC17.36115

Luminaire thermometer: AMA S No. 1086110-0.1deg



Illustration 2: Luminaire

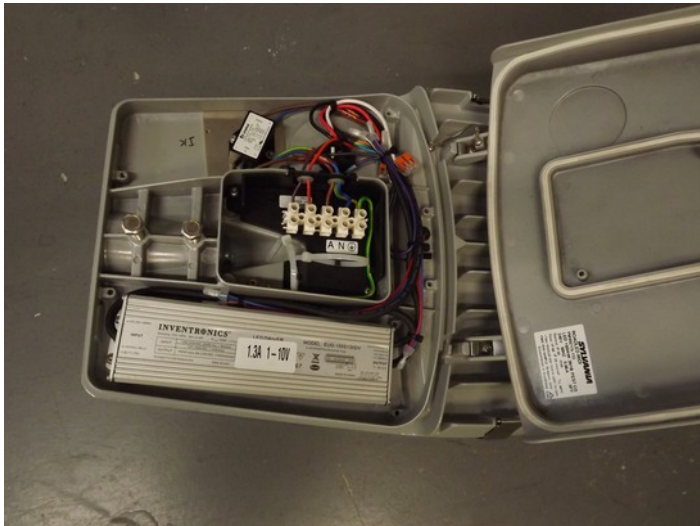


Illustration 3: Control gear

Illustration 4: Luminaire label



Illustration 5: Surge protector



Illustration 6: LED driver



Illustration 7: Setup