



## Light Emission Distribution Laboratory

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Accreditation No. 19541

# Test Report: 181077LCP

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

for Sylvania StreetLED MKIII 17W

Project number: PTR 5955

Type of product: LED Streetlight

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

Model number: JLC99E03L17

Description: LED Streetlight 17W 4000K. Features die-cast aluminium body, an acrylic Standard visor, 1x Samsung LED module (model number SL-B7T1N30LBWW) driven from a Samsung LED driver (model number PSDV180101U) set at 350mA.

## 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 Sunil Das

## Conclusion

**The Average Load (W) is 16.91W at .98 Power Factor.**

Tested by: David Orwin On 23/10/2018 Authorised Signatory

Date: 24/10/2018

Alain Yetendje

## Results

Time till stabilisation: 3h

## Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.356	0.069	16.796	0.973
Min	250.030	0.069	16.793	0.973
Max	250.770	0.069	16.802	0.973
Calibration correction (see Newton 4 <sup>th</sup> calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.32	0.0687	16.74	0.973
Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.158	0.070	17.047	0.976
Min	249.000	0.070	17.041	0.976
Max	251.270	0.070	17.051	0.976
Calibration correction (see Newton 4 <sup>th</sup> calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.13	0.0696	16.99	0.976
Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.293	0.069	16.924	0.977
Min	249.640	0.069	16.919	0.977
Max	250.560	0.069	16.927	0.977
Calibration correction (see Newton 4 <sup>th</sup> calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.26	0.0690	16.86	0.977

Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.163	0.069	16.973	0.977
Min	249.790	0.069	16.970	0.977
Max	250.530	0.070	16.979	0.977
Calibration correction (see Newton 4 <sup>th</sup> calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.13	0.0692	16.91	0.977
Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.296	0.070	17.122	0.976
Min	249.770	0.070	17.119	0.976
Max	250.740	0.070	17.127	0.977
Calibration correction (see Newton 4 <sup>th</sup> calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.27	0.0698	17.06	0.976
Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.564	0.070	17.042	0.976
Min	250.240	0.070	17.037	0.976
Max	250.970	0.070	17.046	0.976
Calibration correction (see Newton 4 <sup>th</sup> calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.53	0.0695	16.98	0.976

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	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
<b>Sample 7</b>				
Average	250.388	0.069	16.947	0.975
Min	250.220	0.069	16.945	0.975
Max	250.600	0.069	16.948	0.975
Calibration correction (see Newton 4 <sup>th</sup> calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.36	0.0692	16.89	0.975
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
<b>Sample 8</b>				
Average	250.326	0.069	16.803	0.976
Min	249.890	0.069	16.801	0.976
Max	250.520	0.069	16.806	0.976
Calibration correction (see Newton 4 <sup>th</sup> calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.29	0.0685	16.74	0.976
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
<b>Sample 9</b>				
Average	250.351	0.070	17.106	0.975
Min	249.350	0.070	17.103	0.975
Max	250.560	0.070	17.111	0.975
Calibration correction (see Newton 4 <sup>th</sup> calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.32	0.0698	17.05	0.975
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
<b>Sample 10</b>				
Average	250.183	0.070	16.975	0.975
Min	249.750	0.069	16.972	0.975
Max	250.560	0.070	16.978	0.975
Calibration correction (see Newton 4 <sup>th</sup> calibration report NC17.36115)	0.9999	0.9999	0.9998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.15	0.0693	16.91	0.975

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

This report only applies to the items tested and shall only be reproduced in full unless approved in writing by Light Emission Distribution Laboratory (LEDLab).

## Electrical operating parameters of Sylvania StreetLED MKIII 17W

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.356	0.069	16.736	0.973
Sample 2	250.127	0.070	16.986	0.976
Sample 3	250.261	0.069	16.863	0.977
Sample 4	250.132	0.069	16.913	0.977
Sample 5	250.265	0.070	17.062	0.976
Sample 6	250.533	0.069	16.982	0.976
Sample 7	250.356	0.069	16.886	0.975
Sample 8	250.295	0.069	16.743	0.976
Sample 9	250.320	0.070	17.046	0.975
Sample 10	250.152	0.069	16.914	0.975
<b>Average</b>	<b>250.28</b>	<b>0.07</b>	<b>16.91</b>	<b>0.98</b>

*Illustration 1: Electrical operating parameters of Sylvania StreetLED MKIII 17W*

## 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:**  $\pm 0.005$ **Ambient Temperature:**  $\pm 1^{\circ}\text{C}$ 

## Test Equipment Used

*Power meter:* Newton 4<sup>th</sup> 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 5: Setup

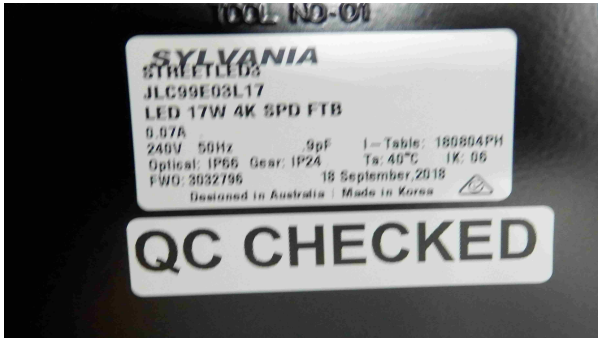


Illustration 7: Luminaire label



Illustration 3: Surge protector



Illustration 4: LED driver

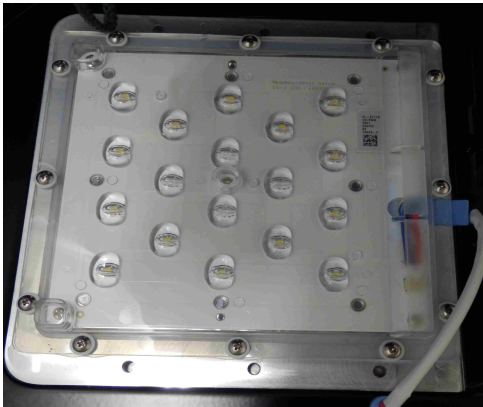


Illustration 6: LED module