



## Light Emission Distribution Laboratory

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

# Test Report: 190606LCP

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

for Sylvania Kensington 17W

Project number: PTR 6269

Type of product: LED Streetlight

Prepared for: GLG, 96-112 Gow St, Padstow NSW 2211 Australia

Model number: LF99Z01L17

Description: 17W 4000K Kensington LED heritage style Roadway Luminaire. Features die-cast aluminium body, glass windows, 1x Samsung LED module (model number SL-I7T1F33LBWW) 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: GLG, 96-112 Gow St, Padstow NSW 2211 Australia contact Swati Dhembre

## Conclusion

**The Average Load (W) is 16.50W at .97 Power Factor.**

Tested by: David Orwin On 20/06/2019 Authorised Signatory

Date: 24/06/2019

Alain Yetendje

## Results

Time till stabilisation: 2h

## Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.253	0.069	16.746	0.973
Min	250.230	0.069	16.741	0.973
Max	250.270	0.069	16.750	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	250.22	0.0685	16.69	0.973
Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.279	0.068	16.544	0.973
Min	250.265	0.068	16.536	0.972
Max	250.295	0.068	16.548	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	250.25	0.0677	16.48	0.973
Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.279	0.067	16.427	0.973
Min	250.255	0.067	16.421	0.973
Max	250.295	0.068	16.431	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	250.25	0.0672	16.37	0.973

Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.281	0.068	16.531	0.972
Min	250.265	0.068	16.525	0.972
Max	250.295	0.068	16.535	0.972
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	250.25	0.0677	16.47	0.972
Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.284	0.069	16.897	0.974
Min	250.265	0.069	16.891	0.974
Max	250.295	0.069	16.901	0.974
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	250.25	0.0691	16.84	0.974
Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.281	0.067	16.298	0.973
Min	250.265	0.067	16.293	0.973
Max	250.295	0.067	16.303	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	250.25	0.0667	16.24	0.973

## LEDLab Test Report: 190606LCP

	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
<b>Sample 7</b>				
Average	250.278	0.068	16.525	0.972
Min	250.265	0.068	16.519	0.972
Max	250.295	0.068	16.530	0.972
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	250.25	0.0677	16.46	0.972
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
<b>Sample 8</b>				
Average	250.281	0.067	16.294	0.972
Min	250.265	0.067	16.287	0.972
Max	250.295	0.067	16.299	0.972
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	250.25	0.0667	16.23	0.972
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
<b>Sample 9</b>				
Average	250.277	0.069	16.739	0.975
Min	250.265	0.069	16.734	0.974
Max	250.295	0.069	16.742	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	250.25	0.0684	16.68	0.975
	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
<b>Sample 10</b>				
Average	250.280	0.068	16.640	0.973
Min	250.265	0.068	16.525	0.972
Max	250.295	0.069	16.742	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	250.25	0.0681	16.58	0.973

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 Kensington 17W

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.253	0.069	16.686	0.973
Sample 2	250.247	0.068	16.483	0.973
Sample 3	250.248	0.067	16.367	0.973
Sample 4	250.250	0.068	16.470	0.972
Sample 5	250.252	0.069	16.836	0.974
Sample 6	250.249	0.067	16.238	0.973
Sample 7	250.247	0.068	16.465	0.972
Sample 8	250.249	0.067	16.233	0.972
Sample 9	250.246	0.068	16.678	0.975
Sample 10	250.249	0.068	16.580	0.973
<b>Average</b>	<b>250.25</b>	<b>0.07</b>	<b>16.50</b>	<b>0.97</b>

*Illustration 1: Electrical operating parameters of Sylvania Kensington 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

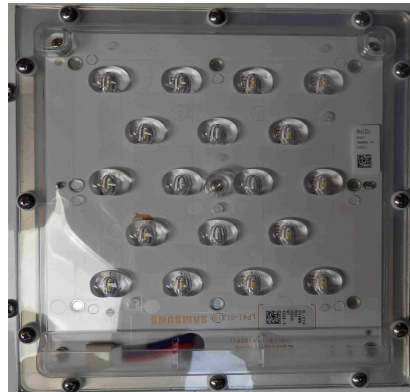


Illustration 3: Samsung LED module



Illustration 5: Luminaire Setup (mounted on a pole with spigot)



Illustration 4: LED driver



Illustration 6: LED module label

**SYLVANIA**  
KENSINGTON  
**LF99Z01L17**  
17W LED 4K PECD 0001  
240V 50Hz 0.1A PF 0.9  
Optical: IP54 Gear: IP24 IK07  
Ta: 40°C

M/O: 18-Jun-19  
Assembled in Australia



Illustration 7: Luminaire label