



Light Emission Distribution Laboratory

Division of Photometry & Electrical Testing Pty. Ltd ABN 11 166 255 134
Unit 4, 140 George St. Hornsby NSW 2077 Australia
Ph: +61 2 9476 3097 E: sales@ledlab.com.au



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Accreditation No. 19541

Test Report: 190609LCP

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

for Sylvania Modular Bourke Hill 22W

Project number: PTR 6268A

Type of product: LED Streetlight

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

Model number: N99E12L22

Description: 22W 4000K Bourke Hill LED Roadway Luminaire with Aeroscreen visor. Features die-cast aluminium body with spun aluminium canopy, 1x Samsung LED module (model number SL-I7T1F53LBWW) driven from a Philips Xitanium LED driver (model number 929000736203) 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 21.55W at .89 Power Factor.

Tested by: David Orwin On 25/06/2019 Authorised Signatory

Date: 25/06/2019

Alain Yetendje

Results

Time till stabilisation: 2h

Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.250	0.096	21.596	0.894
Min	250.230	0.096	21.590	0.894
Max	250.270	0.097	21.601	0.894
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	250.22	0.0962	21.53	0.894
Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.260	0.097	21.599	0.893
Min	250.240	0.097	21.595	0.892
Max	250.280	0.097	21.603	0.893
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	250.23	0.0965	21.54	0.893
Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.253	0.096	21.598	0.895
Min	250.230	0.096	21.596	0.895
Max	250.270	0.096	21.602	0.896
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	250.22	0.0961	21.54	0.895

Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.254	0.097	21.594	0.894
Min	250.230	0.096	21.588	0.894
Max	250.280	0.097	21.597	0.894
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	250.22	0.0963	21.53	0.894
Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.254	0.097	21.580	0.893
Min	250.240	0.096	21.576	0.893
Max	250.280	0.097	21.586	0.894
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	250.22	0.0963	21.52	0.893
Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.259	0.096	21.462	0.892
Min	250.240	0.096	21.457	0.891
Max	250.270	0.096	21.466	0.892
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	250.23	0.0959	21.40	0.892

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	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 7				
Average	250.255	0.097	21.726	0.895
Min	250.240	0.097	21.720	0.895
Max	250.270	0.097	21.730	0.895
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	250.22	0.0968	21.66	0.895
Sample 8				
Average	250.259	0.097	21.726	0.896
Min	250.240	0.097	21.722	0.896
Max	250.290	0.097	21.729	0.896
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	250.23	0.0967	21.66	0.896
Sample 9				
Average	250.260	0.097	21.560	0.890
Min	250.240	0.097	21.555	0.890
Max	250.280	0.097	21.569	0.890
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	250.23	0.0966	21.50	0.890
Sample 10				
Average	250.254	0.097	21.711	0.894
Min	250.240	0.097	21.709	0.894
Max	250.280	0.097	21.718	0.894
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	250.22	0.0968	21.65	0.894

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 Modular Bourke Hill 22W

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.250	0.096	21.534	0.894
Sample 2	250.229	0.096	21.537	0.893
Sample 3	250.221	0.096	21.537	0.895
Sample 4	250.223	0.096	21.532	0.894
Sample 5	250.223	0.096	21.519	0.893
Sample 6	250.227	0.096	21.401	0.892
Sample 7	250.224	0.097	21.665	0.895
Sample 8	250.228	0.097	21.664	0.896
Sample 9	250.229	0.097	21.499	0.890
Sample 10	250.223	0.097	21.650	0.894
Average	250.23	0.10	21.55	0.89

Illustration 1: Electrical operating parameters of Sylvania Modular Bourke Hill 22W

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: Samsung LED module



Illustration 4: Luminaire Setup
(mounted on a pole with spigot)



Illustration 5: LED driver

SYLVANIA
MODULAR-BTCA LED SERIES
NB99E15L22
22W 4K PEBN7 CO #0001
240V 50Hz 0.105A PF >0.9
Optical: IP54 Gear: IP24 IK06
Ta: 40°C I-Table: 170943PH

M/O: 17-Jun-19
Assembled in Australia



Illustration 7: Luminaire label



Illustration 6: LED
module label