

Light Emission Distribution Laboratory

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Test Report: 170936LCP

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

for Sylvania StreetLED2 31W 4K Model No. JLB99K15L31

Project No: PTR 5434

Type of product: LED Streetlight (Category P)

Prepared for: Gerard Lighting Pty Ltd

Model number: JLB99K15L31

Description: Sylvania StreetLED2 31W 4K. Features 1x Samsung LED module (model number SL-I7T1F33LBWW) made of 14 LH351B Series LED COBs and driven from 1x Philips Xitanium LED Driver (model number 929000736203) set at 640mA.

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 contact Sunil Das, 96 Gow St, Padstow, NSW 2211 Tested by: Alain Yetendje On 30/10/2017 Authorised Signatory

Date: 01/11/2017

Alain Yetendje

The data specified in this report relates to the sample measured under standard conditions specified in the Test Specification, and may not necessarily relate to other similar luminaires or other operating conditions. The tests and measurements covered by this document are traceable to Australian national standards of measurement. This report shall only be reproduced in full unless approved in writing by Light Emission Distribution Laboratory (LEDLab).

Conclusions

Test results are given in following Tables. The Average Load (W) is 30.53W at 0.94 Power Factor.

Results

Time till stabilisation: 3h

Electrical Measurements

Sample 1 Average Min Max Calibration correction (see Newton 4 th calibration report 221983) Instrument impedance correction (N4) Final value	Supply Voltage (Vrms) 250.675 249.400 251.740 0.9998 250.63	Input Current (Arms) 0.130 0.129 0.130 0.9998 0.00024 0.1295	Input Power (W) Power Factor 30.546 0.944 30.539 0.944 30.556 0.944 0.9999 1.0001 0.0576 0.944 30.49 0.944
Sample 2 Average Min	Supply Voltage (Vrms) 250.127 248.960	Input Current (Arms) 0.131 0.130	Input Power (W) Power Factor 30.733 0.944 30.727 0.944
Max Calibration correction (see Newton 4 th calibration report 221983) Instrument impedance correction (N4) Final value	250.590 0.9998 250.08	0.131 0.9998 0.00024 0.1303	30.7390.9440.99991.00010.057630.670.944
Sample 3 Average Min Max	Supply Voltage (Vrms) 250.944 249.550 251.440	Input Current (Arms) 0.130 0.129 0.130	Input Power (W) Power Factor 30.526 0.945 30.520 0.945 30.532 0.945
Calibration correction (see Newton 4 th calibration report 221983) Instrument impedance correction (N4) Final value	0.9998 250.89	0.9998 0.00024 0.1293	0.9999 1.0001 0.0576 30.47 0.945
Sample 4 Average Min Max	Supply Voltage (Vrms) 250.487 249.550 251.410	Input Current (Arms) 0.130 0.130 0.131	Input Power (W) Power Factor 30.676 0.944 30.669 0.944 30.686 0.944
Calibration correction (see Newton 4 th calibration report 221983) Instrument impedance correction (N4) Final value	0.9998 250.44	0.9998 0.00024 0.1299	0.9999 1.0001 0.0576 30.62 0.944

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	Supply	Input		
Sample 5	Voltage	Current	Input Power	Power Factor
eample e	(Vrms)	(Arms)	(W)	
Average	249.764	0.130	30.625	0.945
-				
Min	247.730	0.130	30.614	0.945
Max	250.790	0.131	30.633	0.945
Calibration correction (see Newton $4^{ m th}$ calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	249.71	0.1298	30.56	0.945
	Supply	Input		
Sample 6	Voltage	Current	Input Power	Power Factor
	(Vrms)	(Arms)	(W)	
Average	250.363	0.130	30.558	0.946
Min	249.100	0.130	30.550	0.946
Max	250.970	0.130	30.564	0.946
Calibration correction (see Newton 4^{th} calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.31	0.1296	30.50	0.946
	Supply	Input	la sut Davia	
Sample 7	Voltage	Current	Input Power	Power Factor
•	(Vrms)	(Arms)	(W)	
Average	249.971	0.129	30.413	0.945
Min	249.200	0.129	30.406	0.945
Max	250.690	0.120	30.419	0.945
Calibration correction (see Newton 4 th calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	249.92	0.1289	30.35	0.945
	Supply	Input	Input Power	
Sample 8	Voltage	Current	•	Power Factor
	(Vrms)	(Arms)	(W)	
Average	250.455	0.129	30.379	0.944
Min	248.790	0.129	30.374	0.944
Max	251.190	0.130	30.384	0.944
IVIGA	251.190	0.150	50.564	0.944
Calibration correction (see Newton 4 th calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.41	0.1288	30.32	0.944
Coursely O	Supply	Input	Input Power	
Sample 9	Voltage	Current	(W)	Power Factor
	(Vrms)	(Arms)		
Average	250.338	0.130	30.643	0.944
Min	249.300	0.130	30.636	0.944
Max	250.770	0.131	30.648	0.944
Calibration correction (see Newton 4 th calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)	0.5550	0.00024	0.0576	1.0001
Final value	250.29	0.1298	30.58	0.944
	200.20	0.1200	20.50	0.011

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	1	LEDLab Test	Report: 1709	36LCP
Vol	tage Cur	out Input I rent (V ms)	Power	Factor
250	0.455 0.1	131 30.8	833 0.9	945
249	0.660 0.1	130 30.8	827 0.9	945

0.131

0.9998

0.00024

0.1306

251.230

0.9998

250.40

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30.840

0.9999

0.0576

30.77

0.945

1.0001

0.945

Electrical operating parameters of Sylvania StreetLED2 31W 4K

Calibration correction (see Newton 4th calibration report 221983)

Instrument impedance correction (N4)

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.675	0.130	30.486	0.944
Sample 2	250.077	0.130	30.673	0.944
Sample 3	250.893	0.129	30.466	0.945
Sample 4	250.437	0.130	30.616	0.944
Sample 5	249.714	0.130	30.565	0.945
Sample 6	250.313	0.130	30.498	0.946
Sample 7	249.921	0.129	30.353	0.945
Sample 8	250.405	0.129	30.319	0.944
Sample 9	250.288	0.130	30.583	0.944
Sample 10	250.405	0.131	30.773	0.945
Average	250.31	0.13	30.53	0.94

Illustration 1: Electrical operating parameters of Sylvania StreetLED2 31W 4K Uncertainties

At a Confidence Level of 95% with a Coverage Factor of 2 Supply Voltage: ± 0.07% Supply Current: ± 0.14% Supply Power: ± 0.19% **Power Factor:** ± 0.005 Ambient Temperature: ± 1°C

Test Equipment Used

Sample 10

Average Min

Final value

Max

Power meter: Newton 4th Power Analyser KinetiQ Model PPA2520 SN 133-00467

Power meter integration time (s): 5

Calibration Report: Ausgrid 221983

Luminaire thermometer: AMA S No. 1086110-0.1deg

General Photographs

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Illustration 2: Luminaire



Illustration 4: Geartray



Illustration 3: LED module label



Illustration 6: LED driver



Illustration 5: Setup

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