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

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

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

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	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.675	0.130	30.546	0.944
Min	249.400	0.129	30.539	0.944
Max	251.740	0.130	30.556	0.944
Calibration correction (see Newton 4th calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.63	0.1295	30.49	0.944

Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.127	0.131	30.733	0.944
Min	248.960	0.130	30.727	0.944
Max	250.590	0.131	30.739	0.944
Calibration correction (see Newton 4th calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.08	0.1303	30.67	0.944

Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.944	0.130	30.526	0.945
Min	249.550	0.129	30.520	0.945
Max	251.440	0.130	30.532	0.945
Calibration correction (see Newton 4th calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.89	0.1293	30.47	0.945

Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.487	0.130	30.676	0.944
Min	249.550	0.130	30.669	0.944
Max	251.410	0.131	30.686	0.944
Calibration correction (see Newton 4th calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.44	0.1299	30.62	0.944

Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
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 4th 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

Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
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 4th 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

Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.971	0.129	30.413	0.945
Min	249.200	0.129	30.406	0.945
Max	250.690	0.130	30.419	0.945
Calibration correction (see Newton 4th 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

Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
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
Calibration correction (see Newton 4th 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

Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
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 4th calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.29	0.1298	30.58	0.944

Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.455	0.131	30.833	0.945
Min	249.660	0.130	30.827	0.945
Max	251.230	0.131	30.840	0.945
Calibration correction (see Newton 4th calibration report 221983)	0.9998	0.9998	0.9999	1.0001
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.40	0.1306	30.77	0.945

Electrical operating parameters of Sylvania StreetLED2 31W 4K

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

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

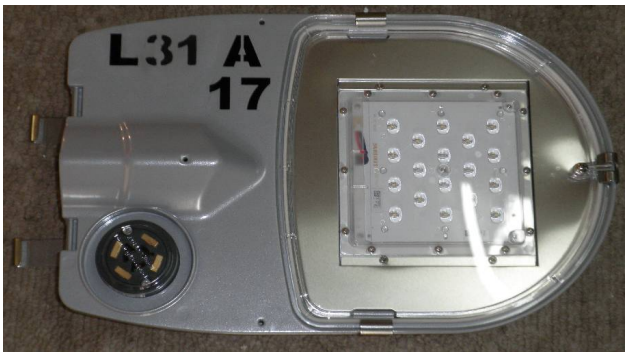

Illustration 2: Luminaire

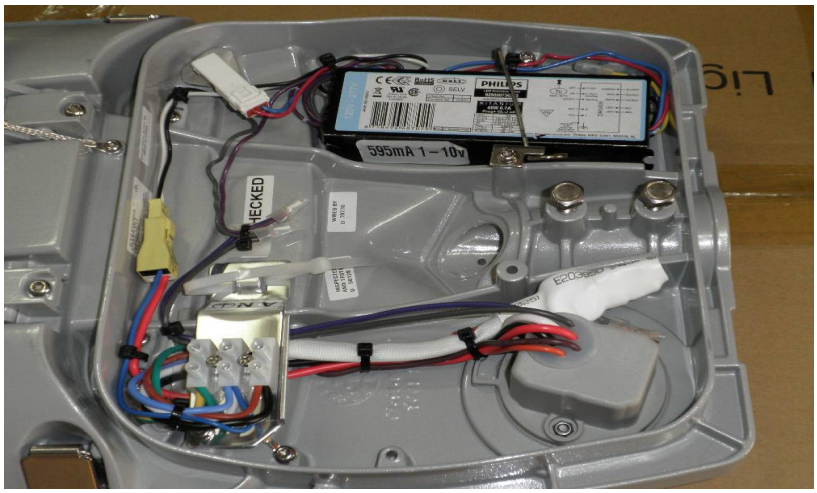

Illustration 4: Geartray

Illustration 3: LED module label

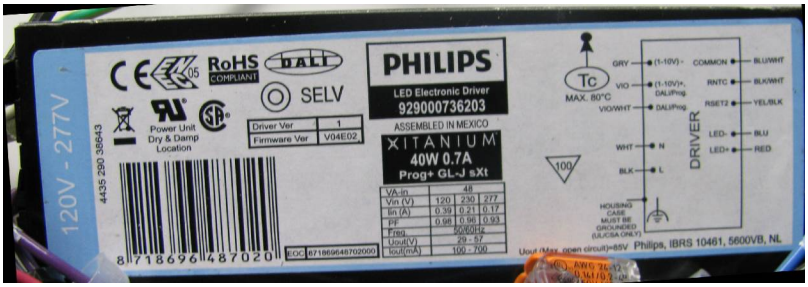

Illustration 6: LED driver

Illustration 5: Setup