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

Test Report: 216222

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

for GreenVision Road Lighting LED luminaire 125W 4000K (BRP372 type)

Type of product: Category V Luminaire

Prepared for: Philips Lighting Australia

Model number: BRP372 LED152/NW 125W220-240VDW1PSRP1ANZ

Description: 125W 4000K Category V LED luminaire. Features an integral LED module made off 168 individual LEDs, a glass flat visor, high-pressure die-cast aluminium and powered from a Philips Xitanium driver model number 9290 009 628.

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 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:

Philips Lighting Australia contact Jacek Lipiec, 65 Epping Road, North Ryde NSW, 2113

Tested by: Alain Yetendje On 05/09/2016 Authorised Signatory Date: 12/09/2016

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Conclusions

Test results are given in following Tables.
The Average Load (Watts) is 123.29W at 0.977 Power Factor.

Results

Time till stabilisation: 7h

Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.142	0.504	123.157	0.977
Min	250.020	0.504	123.170	0.977
Max	250.340	0.504	123.150	0.977
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	250.09	0.5037	123.09	0.977

Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.905	0.504	123.031	0.977
Min	249.710	0.504	123.040	0.977
Max	250.060	0.504	123.020	0.977
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	249.85	0.5037	122.96	0.977

Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.201	0.504	123.127	0.977
Min	249.980	0.503	123.140	0.977
Max	250.330	0.504	123.110	0.977
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	250.15	0.5032	123.06	0.977

Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.936	0.507	123.761	0.977
Min	249.750	0.507	123.770	0.977
Max	250.070	0.507	123.740	0.977
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	249.89	0.5064	123.69	0.977

Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.981	0.505	123.184	0.976
Min	249.810	0.504	123.190	0.976
Max	250.160	0.505	123.170	0.976
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	249.93	0.5043	123.12	0.977

Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.935	0.505	123.396	0.978
Min	249.430	0.504	123.410	0.978
Max	250.170	0.506	123.380	0.978
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	249.89	0.5046	123.33	0.978

Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.972	0.505	123.527	0.978
Min	249.650	0.505	123.550	0.978
Max	250.260	0.506	123.520	0.978
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	0.5051	123.46	0.978

Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.114	0.504	123.323	0.978
Min	249.940	0.504	123.340	0.977
Max	250.300	0.505	123.300	0.978
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	250.06	0.5041	123.25	0.978

Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.908	0.507	123.941	0.978
Min	249.790	0.507	123.950	0.978
Max	250.070	0.507	123.930	0.978
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	249.86	0.5068	123.87	0.978

Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.939	0.504	123.137	0.978
Min	249.660	0.503	123.150	0.978
Max	250.210	0.504	123.120	0.978
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	249.89	0.5035	123.07	0.978

Electrical operating parameters of GreenVision Road Lighting LED luminaire 125W 4000K (BRP372 type)

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.09	0.504	123.089	0.977
Sample 2	249.85	0.504	122.963	0.977
Sample 3	250.15	0.503	123.059	0.977
Sample 4	249.89	0.506	123.693	0.977
Sample 5	249.93	0.504	123.116	0.976
Sample 6	249.89	0.505	123.328	0.978
Sample 7	249.92	0.505	123.459	0.978
Sample 8	250.06	0.504	123.255	0.978
Sample 9	249.86	0.507	123.873	0.978
Sample 10	249.89	0.504	123.070	0.978
Average	**249.95**	**0.505**	**123.290**	**0.977**

Illustration 1: Electrical operating parameters of GreenVision LED Luminaire BRP372 125W 4000K

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: ± 0.05
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

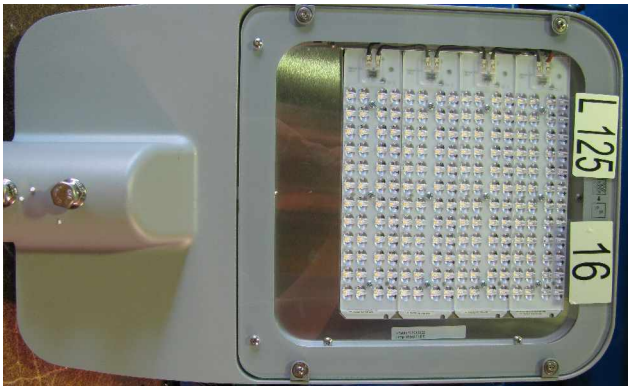

Illustration 2: Optical opening

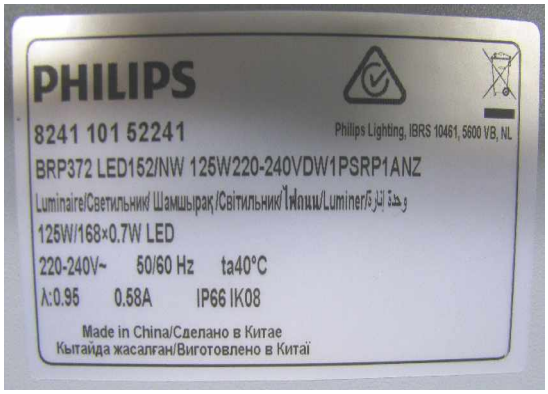

Illustration 3: Luminaire label

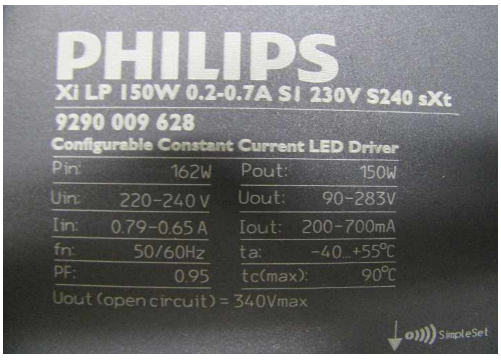

Illustration 5: LED driver marking

Illustration 4: Setup