



Test Report: 210539LCP

Testing of Tango G3 Power for AEMO's NEM Load Table for Philips BVP384 LED571 435W PSDP7 LM6 L AU Floodlight

Type of product: Roadlight/Floodlight luminaire

Brand Philips

Model Number: BVP384 LED571 435W PSDP7 LM6 L AU

Prepared for: Signify

Description: Roadlight/Floodlight luminaire. IP66, IK08, Ta 35°C, Class I luminaire provided with cord. Features die cast aluminium housing and polycarbonate optical cover and lens. LED modules driven from 3x Philips LED driver (model no. XiFP 150W 0.3-1.0A SNLDAE 230V S240 sXt set at 800mA).

Test objective

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 Wattmeter for their twenty readings.

Client

Contact Jacek Lipiec, Signify, 65 Epping Rd, North Ryde, NSW 2113

Conclusions

The Average Load (W) is 443.83W at 0.994 Power Factor.

Tested by:
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8/06/2021

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Date: 15/06/2021



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Results

Time till stabilisation: 3h

Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.433	1.787	444.720	0.994
Min	250.200	1.786	444.670	0.994
Max	250.570	1.789	444.760	0.994
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00014	0.99998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.49	1.787	444.71	0.994

Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.028	1.784	443.217	0.994
Min	249.900	1.783	443.190	0.994
Max	250.210	1.785	443.260	0.994
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00014	0.99998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.09	1.784	443.21	0.994

Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.461	1.781	443.230	0.994
Min	250.280	1.780	443.160	0.994
Max	250.580	1.783	443.290	0.994
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00014	0.99998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.52	1.781	443.22	0.994



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Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.212	1.789	444.767	0.994
Min	249.980	1.787	444.750	0.994
Max	250.420	1.790	444.780	0.994
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00014	0.99998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.27	1.789	444.76	0.994

Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.304	1.790	445.209	0.994
Min	250.140	1.789	445.180	0.994
Max	250.440	1.791	445.250	0.994
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00014	0.99998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.37	1.790	445.20	0.994

Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.369	1.776	441.855	0.994
Min	250.130	1.774	441.790	0.993
Max	250.690	1.778	441.910	0.994
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00014	0.99998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.43	1.777	441.85	0.994

Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.215	1.779	442.344	0.994
Min	249.950	1.777	442.290	0.994
Max	250.520	1.781	442.400	0.994
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00014	0.99998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.28	1.779	442.34	0.994

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Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.340	1.782	443.204	0.993
Min	250.140	1.782	443.180	0.993
Max	250.420	1.784	443.230	0.994
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00014	0.99998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.40	1.782	443.20	0.993

Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.183	1.786	444.062	0.994
Min	249.970	1.784	444.030	0.994
Max	250.540	1.788	444.100	0.994
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00014	0.99998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.24	1.787	444.05	0.994

Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.377	1.792	445.725	0.994
Min	250.140	1.789	445.630	0.994
Max	250.700	1.793	445.790	0.994
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	1.00014	0.99998	1.0000
Instrument impedance correction (N4)		0.00024	0.0576	
Final value	250.44	1.792	445.72	0.994



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Table 1. Electrical operating parameters of Philips BVP384 LED571 435W NB PSDP7 LM6 L AU Floodlight.

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	250.49	1.787	444.71	0.994
Sample 2	250.09	1.784	443.21	0.994
Sample 3	250.52	1.781	443.22	0.994
Sample 4	250.27	1.789	444.76	0.994
Sample 5	250.37	1.790	445.20	0.994
Sample 6	250.43	1.777	441.85	0.994
Sample 7	250.28	1.779	442.34	0.994
Sample 8	250.40	1.782	443.20	0.993
Sample 9	250.24	1.787	444.05	0.994
Sample 10	250.44	1.792	445.72	0.994
Average	250.35	1.785	443.83	0.994

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: PlusEs report no. 2020002794

Luminaire thermometer: AMA S No. 1086110-0.1deg

General Photographs



Photo 1. Luminaire.



Photo 2. Luminaire during test.



Photo 3. Luminaire.

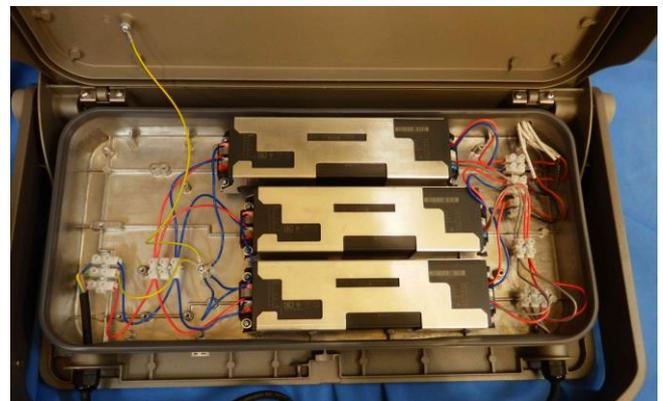


Photo 4. Gear tray.



Photo 5. LED drivers.



Photo 6. Luminaire label.