Light Emission Distribution Laboratory
Division of Photometry & Electrical Testing Pty. Ltd ABN 11 166 255 134
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Accredited for compliance with ISO/IEC 17025 – Testing. Accreditation No. 19541

Test Report: 221223LCP

Testing of Road Light Power for AEMO's NEM Load Table for Unmetered Loads on Road lighting luminaires

for GreenVision Xceed Gen2 240W LED Streetlight

Type of product: LED Streetlight

Model Number: BRP383 LED307/NW 240W 220-240V DWV P7 HP

Prepared for: Signify

Description: 240W LED Streetlight. 220-240V~, 50/60Hz, PF: 0.95, 1.1A, IP66, IK08, Ta 40°C, Class I luminaire. Features die-cast aluminium housing and polycarbonate optical cover and lens. 4x custom LED board driven from 2x Philips LED driver (model no. Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt).

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_v2_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 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 Australia Ltd, 65 Epping Rd, North Ryde NSW 2113, Australia.

Conclusions

The Average Load (W) is 234.32W at 0.970 Power Factor.

Tested by:	10/01/2023	Authorised Signatory	Date: 11/01/2023
Adrian Gagla		David Ford	

The data specified in this report relates to the sample measured as received from the client 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). The test was performed at Hornsby Laboratory, Unit 4, 140 George St., Hornsby, NSW 2077, Australia.

Results

Time till stabilisation: 2h

Electrical Measurements

Sample 1	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.906	0.967	234.453	0.970
Min	249.770	0.966	234.360	0.970
Max	250.080	0.968	234.530	0.970
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**249.97**	**0.967**	**234.48**	**0.970**

Sample 2	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.989	0.965	233.917	0.970
Min	249.740	0.964	233.840	0.970
Max	250.200	0.966	233.980	0.970
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.05**	**0.965**	**233.94**	**0.970**

Sample 3	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.985	0.961	233.225	0.971
Min	249.800	0.961	233.160	0.970
Max	250.220	0.962	233.280	0.971
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.05**	**0.961**	**233.25**	**0.971**

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Sample 4	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.070	0.965	234.331	0.971
Min	249.900	0.964	234.280	0.971
Max	250.240	0.966	234.370	0.971
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.13**	**0.965**	**234.35**	**0.971**

Sample 5	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.988	0.963	233.765	0.971
Min	249.610	0.961	233.720	0.971
Max	250.550	0.965	233.790	0.971
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.05**	**0.963**	**233.79**	**0.971**

Sample 6	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.084	0.967	234.312	0.969
Min	249.960	0.966	234.270	0.969
Max	250.290	0.967	234.360	0.969
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.15**	**0.966**	**234.33**	**0.969**

Sample 7	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.072	0.967	234.696	0.970
Min	249.700	0.967	234.630	0.970
Max	250.280	0.969	234.840	0.970
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.13**	**0.967**	**234.72**	**0.970**

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Sample 8	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.040	0.970	235.377	0.971
Min	249.750	0.969	235.300	0.971
Max	250.240	0.971	235.420	0.971
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.10**	**0.969**	**235.40**	**0.971**

Sample 9	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	249.947	0.967	234.363	0.970
Min	249.780	0.967	234.320	0.970
Max	250.060	0.968	234.450	0.970
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.01**	**0.967**	**234.39**	**0.970**

Sample 10	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Average	250.019	0.968	234.496	0.969
Min	249.780	0.966	234.410	0.969
Max	250.420	0.969	234.530	0.969
Calibration correction (see Newton 4th calibration report 2020002794)	1.00025	0.99962	1.00010	1.0000
Instrument impedance correction (N4)	0.000	0.00024	0.0576	
Final value	**250.08**	**0.967**	**234.52**	**0.969**

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Table 1. Electrical operating parameters of BRP383 LED307/NW 240W 220-240V DWV P7 HP

Sample No.	Supply Voltage (Vrms)	Input Current (Arms)	Input Power (W)	Power Factor
Sample 1	249.97	0.967	234.48	0.970
Sample 2	250.05	0.965	233.94	0.970
Sample 3	250.05	0.961	233.25	0.971
Sample 4	250.13	0.965	234.35	0.971
Sample 5	250.05	0.963	233.79	0.971
Sample 6	250.15	0.966	234.33	0.969
Sample 7	250.13	0.967	234.72	0.970
Sample 8	250.10	0.969	235.40	0.971
Sample 9	250.01	0.967	234.39	0.970
Sample 10	250.08	0.967	234.52	0.969
Average	**250.07**	**0.966**	**234.32**	**0.970**

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: PlusEs report no. 2020002794
Luminaire thermometer: AMA S No. 1086110-0.1deg

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General Photographs

Photo 1. Luminaire.

Photo 2. Luminaire.

Photo 3. LED board.

Photo 4. Gear tray.

Photo 5. LED driver.

Photo 6. Luminaire label.

Photo 7. Luminaire during test.

Photo 8. Marking.

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