

Report Number	SAF-19321
Customer	Powerlite Lighting Solutions
Contact	Chris Thompson
Product Type	Street Light (Gear Tray)
Test Purpose	UMS Energy Performance Test
Sales Order Ref	Q-LUX16-21514
Works Order Number	WO-9968
Test Item Reference	TI-13378
LAB Test Method Reference	TES1012
Test Standards (if applicable)	LM-79-08 and Elexon UMS Charge Code process V4.0
Lab Location Reference	Safety
Tested by	Steve Hunt
Date of Test	24/05/2017
Reviewed by	Menno Schakel
Number of products tested	5

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Date: 24 May 2017



LPD2X12 - 24

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Product Information		
Product	Street Light (Gear Tray)	
Product Name / Model	LPD2X12 - 24	
Part/Serial Number	See (Identifier) below	
Product Brand	Powerlite	
Manufacturer	Powerlite	
Category	LITE	
Rated Input Voltage	220-240V	
Rated output:	120V / 350 - 1050mA	
Protection Class	I	
Driver Make/Model	Tridonic	LCA 60W 350-1050mA one4all C PRE OTD
Light Engine Make/Model	Powerlite	SP-PC 350 - 700mA
Dimmable / Level Tested	Yes	60%
Product Description		
The Streetlight Gear tray are made from a sheet metal frame, of which on the outside fits the LED modules and on the inner side sits the driver and the electrical connections for termination.		

Test Conditions		
Ambient Temperature	23	(°C)
Humidity	39	(%)
	Before Test	After Test
Voltage	249.54V	249.91V
Frequency	50Hz	50Hz
Total Harmonic Distortion	0.07%	0.07%
The test items were stabilised according to the electrical power stability of LM79-08. Stabilization is achieved when the difference in electrical power measurement is less than 0.5%. Each test item was stabilised at 250V. Measurements were made with an ambient temperature of 23°C +/- 2°C. Measurements were taken only after sufficient time for thermal stabilisation has been allowed.		

Product Specifications / TI Ref Numbers		
Dimension	Sample	Luminous opening
Diameter / Width	318 mm	145 mm
Length	550 mm	173 mm
Height / Depth	50 mm	0 mm
Product Test Number	Identifier	Serial Number (if applicable)
Test Item #1	13378A	N/A
Test Item #2	13378B	N/A
Test Item #3	13378C	N/A
Test Item #4	13378D	N/A
Test Item #5	13378E	N/A

Test Equipment and Description

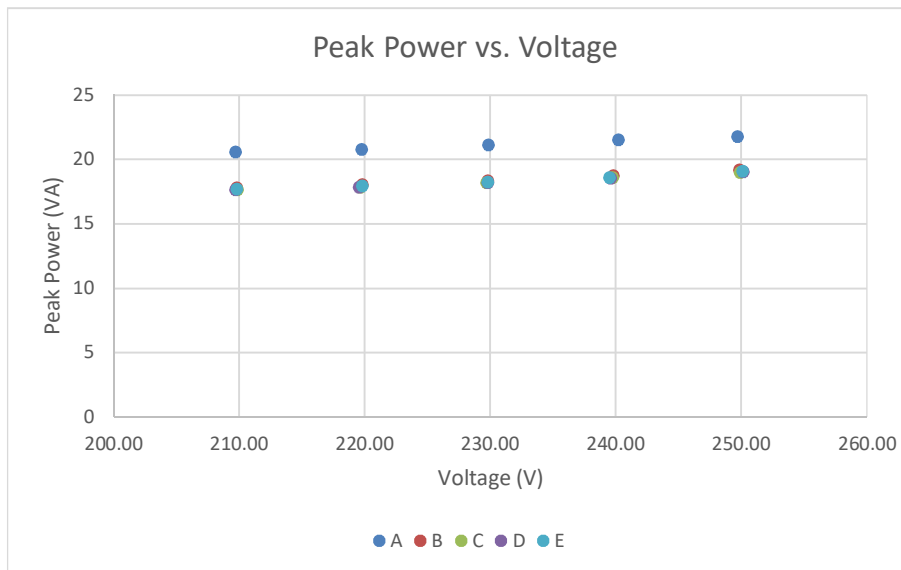
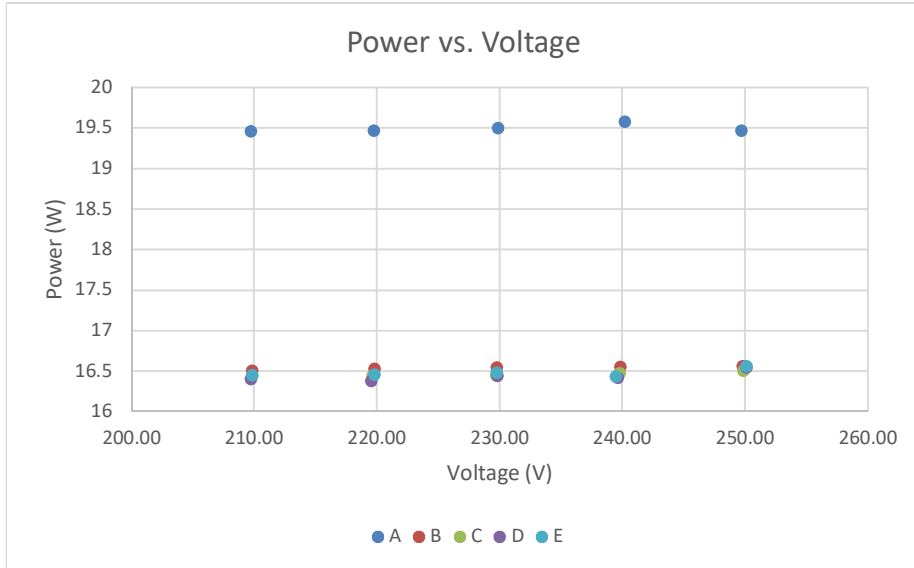
Yokogawa WT210 Power Analyser, Kikusui PCR2000M Stable AC Power Supply with PC control and data recording

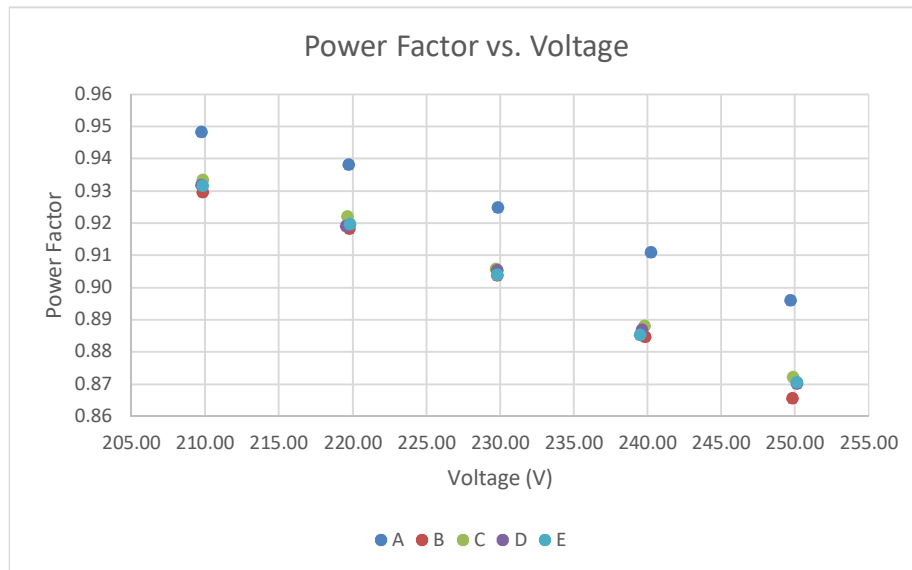


The products under test are connected to the UMS Test system which has full data control and recording using Labview software. This allows full integration of the test equipment used - Kikusui AC Stable Power Supply, Yokogawa Power Analyser, Pico Temperature Logger and a LUX-TSI distribution control panel

Test Results Summary

These are the summary graphs of the test results for all products tested. The raw results are on page 6 of this test report.





Power factors measured have a Leading phase angle and therefore the driver has capacitive properties.

Measurement Uncertainty

Parameter	Uncertainty
Voltage (300 V, 50/60 Hz)	$\pm 0.061 V_{rms}$
Current (200 mA, 50/60Hz)	$\pm 0.07 mA_{rms}$
Current (0.5 A, 50/60Hz)	$\pm 0.16 mA_{rms}$
Current (5 A, 50/60Hz)	$\pm 0.0016 A_{rms}$
Power (300 V, 200 mA, 50/60)	$\pm 0.032 W_{rms}$
Power (300 V, 0.5 A, 50/60 Hz)	$\pm 0.09 W_{rms}$
Power (300 V, 5 A, 50/60 Hz)	$\pm 0.0009 kW_{rms}$
Frequency (50/60 Hz)	$\pm 0.001 Hz$
Power Factor	$\pm 0.0006 PF$

Measurements of power of 0.50W or greater are made with an uncertainty of less than or equal to 2% at the 95% confidence level. Measurements of power less than 0.50W are made with an uncertainty of less than or equal to 0.01W at the 95% confidence level.

Full Test Results

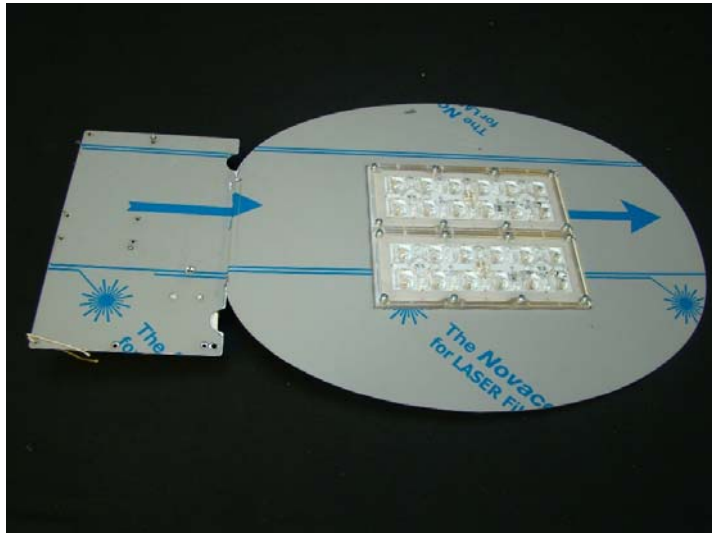
Test Item	Voltage (V)	Current (mA)	Electrical Power (W)	Ambient Temp (°C)	Peak Power (VA)	Power Factor	Leading / Lagging
A	249.75	87.01	19.47	24.64	21.73	0.896	Leading
B	249.87	76.57	16.56	24.81	19.13	0.865	Leading
C	249.93	75.73	16.50	24.50	18.93	0.872	Leading
D	250.19	76.00	16.54	24.62	19.01	0.870	Leading
E	250.16	76.06	16.56	24.66	19.03	0.870	Leading
A	240.27	89.46	19.58	24.74	21.50	0.911	Leading
B	239.87	78.02	16.55	24.52	18.71	0.885	Leading
C	239.82	77.33	16.47	24.80	18.55	0.888	Leading
D	239.66	77.25	16.42	24.83	18.51	0.887	Leading
E	239.54	77.47	16.43	24.69	18.56	0.885	Leading
A	229.91	91.73	19.50	24.48	21.09	0.925	Leading
B	229.85	79.62	16.54	24.75	18.30	0.904	Leading
C	229.77	79.05	16.45	24.53	18.16	0.905	Leading
D	229.87	79.03	16.44	24.73	18.17	0.905	Leading
E	229.85	79.32	16.48	24.69	18.23	0.904	Leading
A	219.79	94.42	19.47	24.72	20.75	0.938	Leading
B	219.84	81.90	16.53	24.92	18.00	0.918	Leading
C	219.71	81.17	16.44	24.73	17.83	0.922	Leading
D	219.62	81.18	16.38	24.60	17.83	0.919	Leading
E	219.85	81.41	16.46	24.67	17.90	0.920	Leading
A	209.77	97.86	19.46	24.59	20.53	0.948	Leading
B	209.88	84.60	16.50	24.48	17.76	0.929	Leading
C	209.89	83.96	16.44	24.39	17.62	0.933	Leading
D	209.77	83.92	16.40	24.52	17.61	0.932	Leading
E	209.87	84.14	16.45	24.35	17.66	0.932	Leading

Note: A has a different type iselect plug 350mA fitted compared to B-E

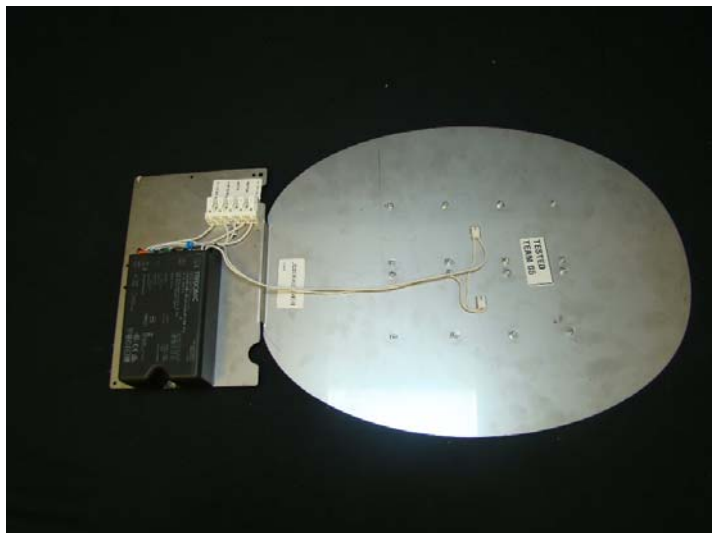
Test Item Photographs

TI-13378

Images of Product(s) under test includes (where possible) labelling, Driver and Light engine details



Led Module fitment



Driver and terminal fitment

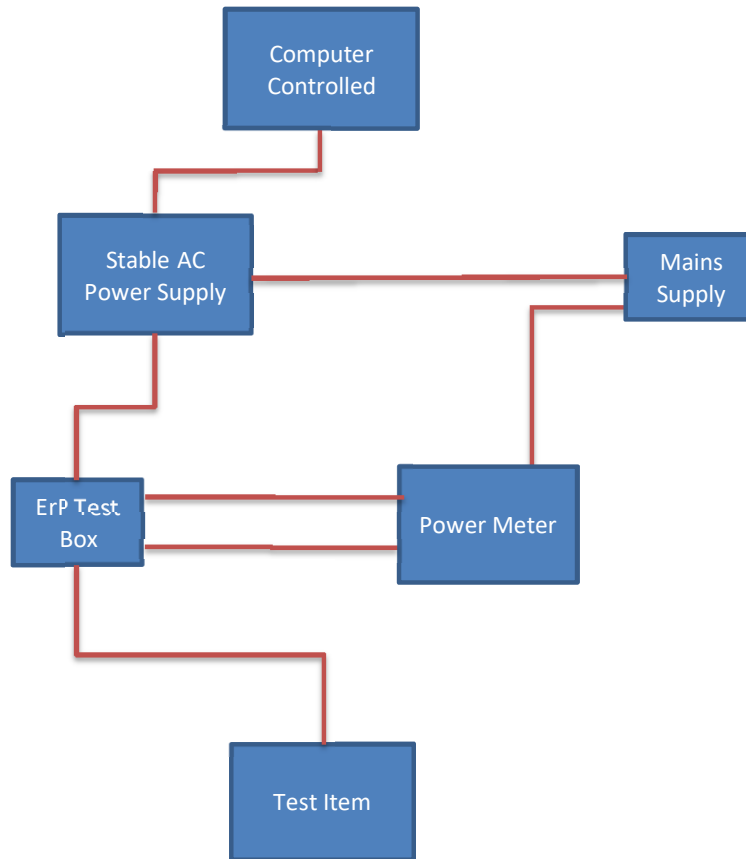


Driver fitted



LED Module(s) fitted

Appendix 1: Test item set-up



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