LUX-TSI Ltd., Pencoed Technology Park,
Pencoed, Bridgend, CF35 5HZ, UK
Website: www.lux-tsi.com
E-mail: info@lux-tsi.com

Test Report Number: TRN-13788
Test Item: TI-3393

Report Number	TRN-13788
Customer	Brilliant Way
Contact	Jarek Dabrowski
Product Type	Street Light
Test Purpose	UMS Energy Performance Test
Sales Order Ref	Q-LUX2014-1998
Works Order Number	WO-3943
Test Item Reference	TI-3393
LAB Test Method Reference	TES-2012
Test Standards	LM-79-08 and UMS charge code process v4.0
Lab Location Reference	LUX-EPC
Tested by	Steve Hunt
Date of Test	19/06/2014
Analysed by	Steve Hunt
Number of products tested	5

Address: LUX-TSI Ltd.,
Pencoed Technology Park,
Pencoed, Bridgend,
CF35 5HZ, UK
Telephone: +44 (0) 1656 864618
Authorised by: David Chan
Email: dchan@lux-tsi.com
Signed:


Brilliant Way - LED Streetlight - High

Date: 19/06/2014

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Nomenclature

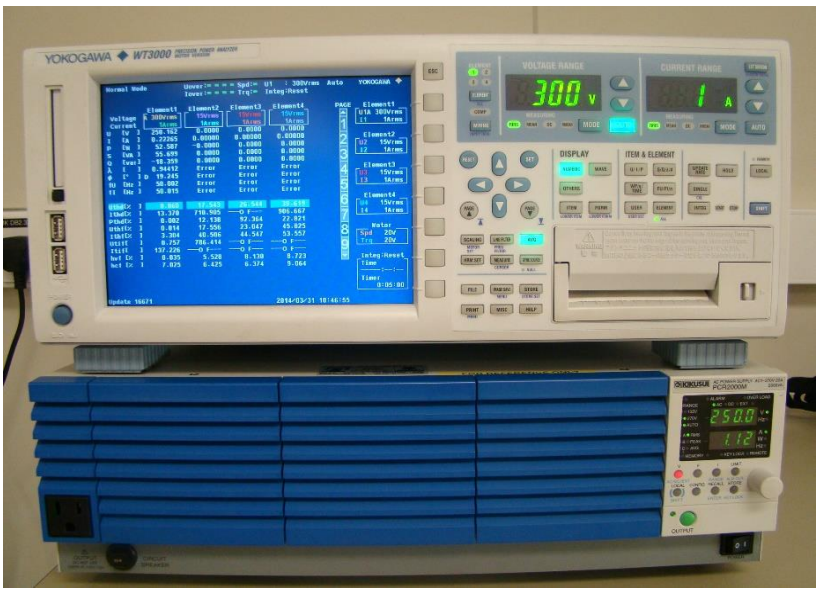
Lamp Orientation described below relates to the position in which a lamp is designed to operate for maximum performance and safety, these include:
BD - Base Down (bulb is vertically positioned with the metal base at the bottom, glass up)
BU - Base Up (bulb is vertically positioned with the metal base at the top, glass hanging down)
HBD - Horizontal +15º to Base Down
H45 - Horizontal to -45º only
VBU - Vertical Base Up ±15º
VBD - Vertical Base Down ±15º
HBU - Base Up +/- 90º (bulb can be operated in a base up or horizontal position)
HOR - Horizontal Burn (bulb is positioned with the metal base parallel to the ground)
H75 - Horizontal +/- 75º (bulb should not be operated within 15º of vertical)
U - Universal Burn (burn can be operated in any position)

Test Conditions

Measurements were made with an ambient temperature of 25°C +/- 1°C. Measurements were taken only after sufficient time for thermal stabilisation has been allowed.

Test Equipment

Yokogawa WT3000 Power Analyzer. Kikusui PCR2000M Stable AC Power Supply



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Product Name	Brilliant Way - LED Streetlight - High
Part/Serial Number	See (Identifier) below
Type of Product	Street Light
Base Type	N/A
Driver Type	Mains
Driver Model	Not supplied
Light Engine Model	Not supplied
Operating Orientation	Base Up
Test Orientation	Base Up
Ambient Temperature	25.0°C
Manufacturer	Brilliant Way
Date of Manufacturer	2014
Thermal Management	Passive
Dimmable	Yes
Humidity	<65% RH

Dimension	Sample	Luminous Opening
Diameter/Width	80 mm	50 mm
Length	620 mm	165 mm
Height/Depth	80 mm	0 mm

Test Item	Identifier
TI-3393A	4005
TI-3393B	4001
TI-3393C	4002
TI-3393D	4003
TI-3393E	4004

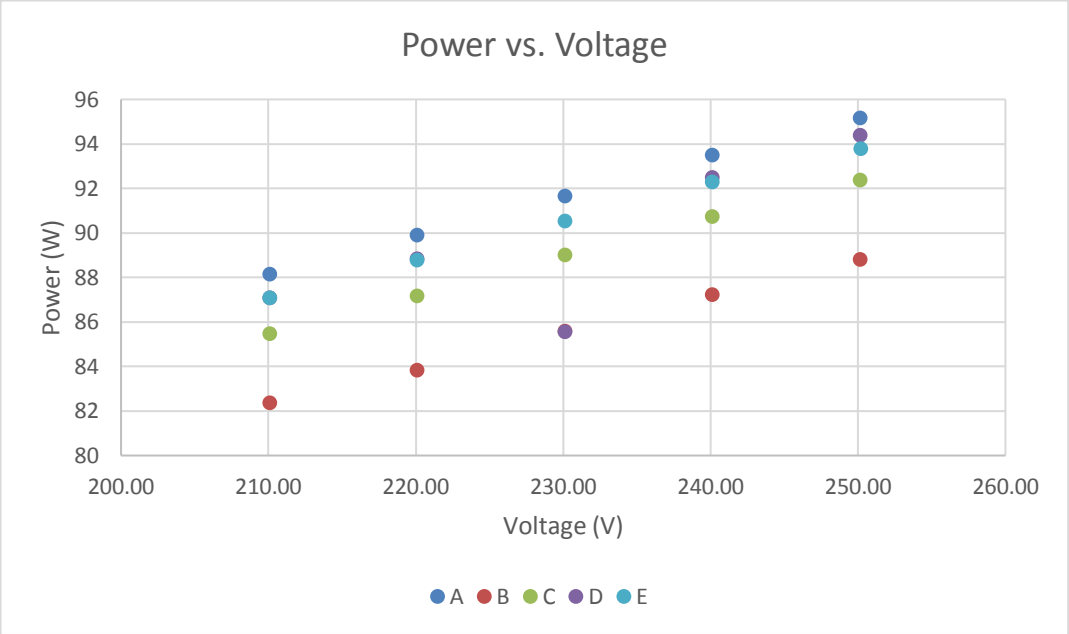
Test Conditions

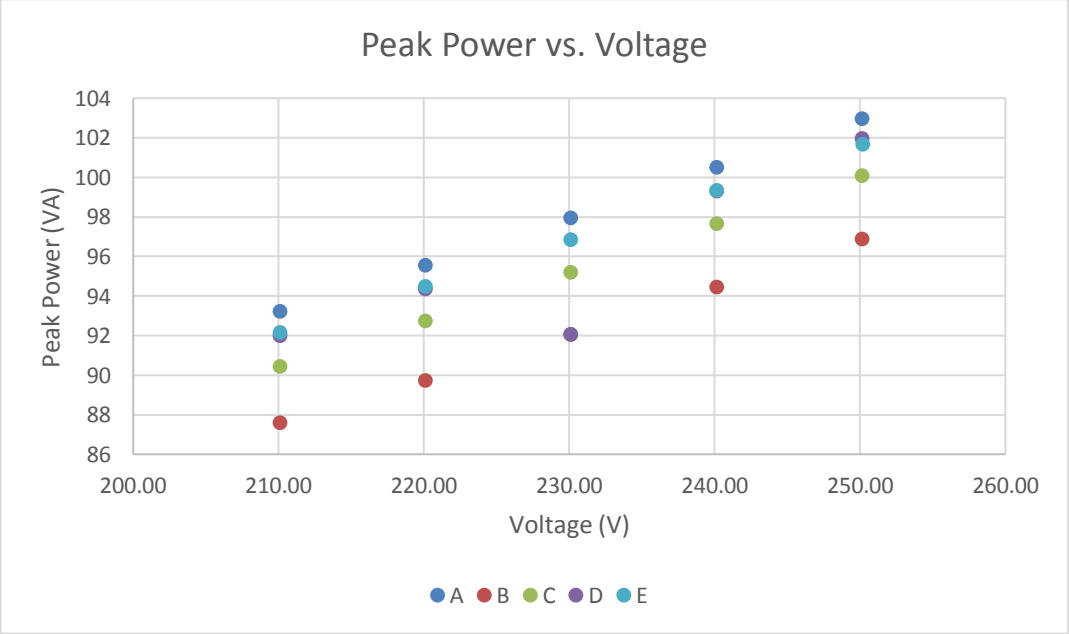
	Before Test	After Test
AC Supply Voltage (V)	250.14	250.14V
AC Supply Frequency (Hz)	50Hz	50Hz
Voltage RMS Summation of the Harmonic Components (THD)	0.05%	0.05%

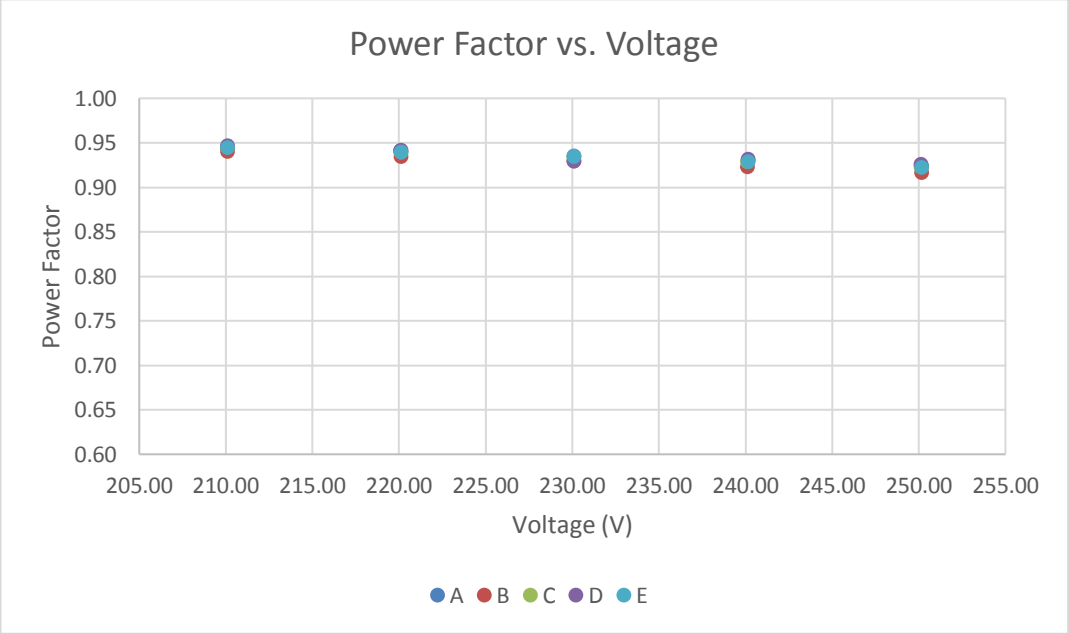
The test items were stabilised according to the electrical power stability of LM79-08. Stabilization is achieved when the difference in electrical power measurement is less than 0.5%. Each test item was stabilised at 250V.

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)	± 0.061 V_{rms}
Current (200 mA, 50/60Hz)	± 0.07 mA_{rms}
Current (0.5 A, 50/60Hz)	± 0.16 mA_{rms}
Current (5 A, 50/60Hz)	± 0.0016 A_{rms}
Power (300 V, 200 mA, 50/60 Hz)	± 0.032 W_{rms}
Power (300 V, 0.5 A, 50/60 Hz)	± 0.09 W_{rms}
Power (300 V, 5 A, 50/60 Hz)	± 0.0009 kW_{rms}
Frequency (50/60 Hz)	± 0.001 Hz
Power Factor	± 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.

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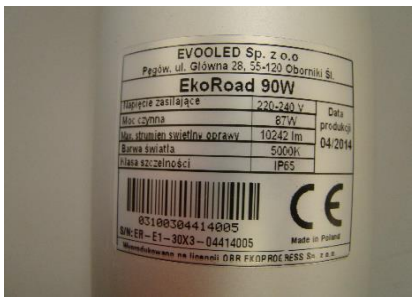
Full Test Results

Test Item	Voltage (V)	Current (mA)	Electrical Power (W)	Ambient Temp (°C)	Peak Power (VA)	Power Factor	Leading / Lagging
A	250.15	411.64	95.15	25	102.97	0.924	Leading
B	250.16	387.26	88.81	25	96.87	0.917	Leading
C	250.14	400.03	92.35	25	100.06	0.923	Leading
D	250.14	407.57	94.38	25	101.95	0.926	Leading
E	250.17	406.41	93.77	25	101.66	0.922	Leading
A	240.13	418.49	93.49	25	100.49	0.930	Leading
B	240.12	393.35	87.21	25	94.45	0.923	Leading
C	240.12	406.68	90.73	25	97.65	0.929	Leading
D	240.13	413.55	92.49	25	99.30	0.931	Leading
E	240.13	413.70	92.27	25	99.34	0.929	Leading
A	230.10	425.70	91.65	25	97.95	0.936	Leading
B	230.11	400.04	85.57	25	92.05	0.930	Leading
C	230.10	413.70	88.99	25	95.19	0.935	Leading
D	230.11	400.01	85.56	25	92.04	0.930	Leading
E	230.11	420.86	90.51	25	96.84	0.935	Leading
A	220.09	434.13	89.88	25	95.54	0.941	Leading
B	220.10	407.70	83.83	25	89.73	0.934	Leading
C	220.10	421.33	87.15	25	92.73	0.940	Leading
D	220.10	428.58	88.83	25	94.33	0.942	Leading
E	220.10	429.23	88.78	25	94.47	0.940	Leading
A	210.08	443.74	88.14	25	93.22	0.946	Leading
B	210.09	416.90	82.35	25	87.58	0.940	Leading
C	210.09	430.42	85.45	25	90.42	0.945	Leading
D	210.08	437.81	87.06	25	91.97	0.947	Leading
E	210.08	438.71	87.06	25	92.16	0.945	Leading

Test Item Photographs

Product Details



(Rating Label)

(Light Engine)

TI-3393A

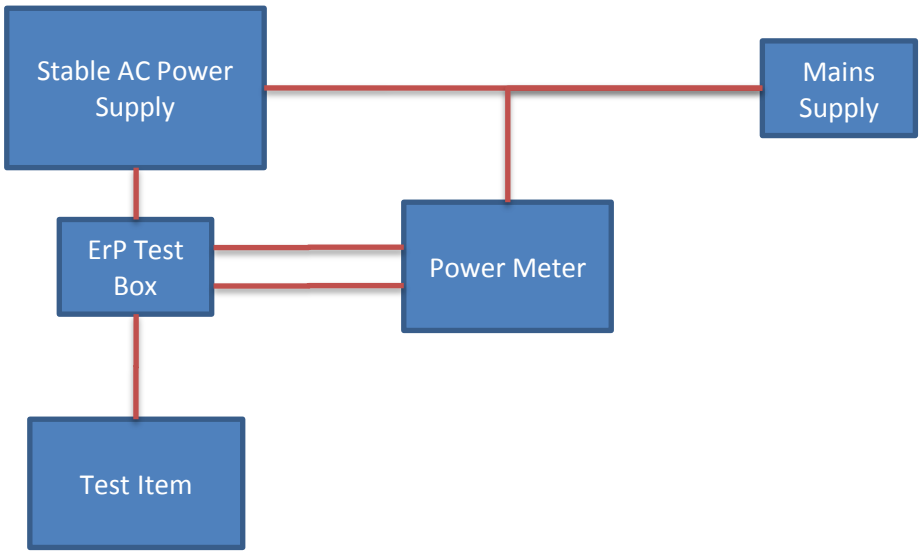
TI-3393B

TI-3393C

TI-3393D

TI-3393E

Appendix 1: Test item set-up



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