

Report Number	TRN-13550
Customer	ASD lighting
Contact	John Ryder
Product Type	Street Light
Test Purpose	UMS Energy Performance Test
Sales Order Ref	Q-LUX2014-1891
Works Order Number	WO-3705
Test Item Reference	TI-3205
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	Andrew Boon
Date of Test	23/04/2014
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:




ASD - 24 LED Variant - Streetlight

Date: 24/04/2014

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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-13550
Test Item: TI-3205

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 +15° to Base Down

H45 - Horizontal to -45° only

VBU - Vertical Base Up ±15°

VBD - Vertical Base Down ±15°

HBU - Base Up +/- 90° (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 +/- 75° (bulb should not be operated within 15° of vertical)

U - Universal Burn (burn can be operated in any position)

Test Conditions

Measurements were made with an ambient temperature of 24°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

Product Name	ASD - 24 LED Variant - Streetlight
Part/Serial Number	Not Supplied
Type of Product	Street Light
Base Type	N/A
Driver Type	Mains
Driver Model	TCI DC MAXI JOLLY HV Dimmable AC/DC P/S for LED cod. 122414
Operating Orientation	Base Up
Test Orientation	Base Up
Ambient Temperature	24.3°C
Manufacturer	ASD Lighting
Date of Manufacturer	2014
Thermal Management	Passive
Dimmable	Yes
Humidity	<65% RH

Dimension	Sample	Luminous Opening
Diameter/Width	386 mm	298 mm
Length	730 mm	356 mm
Height/Depth	100 mm	18 mm

Test Item	Identifier
TI-3205A	1
TI-3205B	2
TI-3205C	3
TI-3205D	4
TI-3205E	5

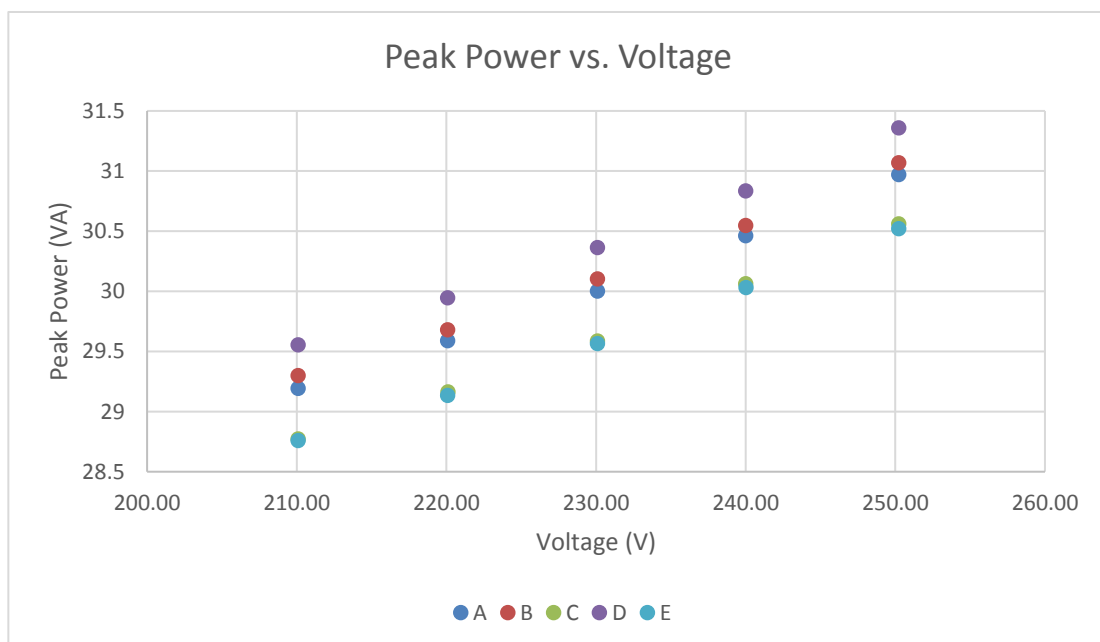
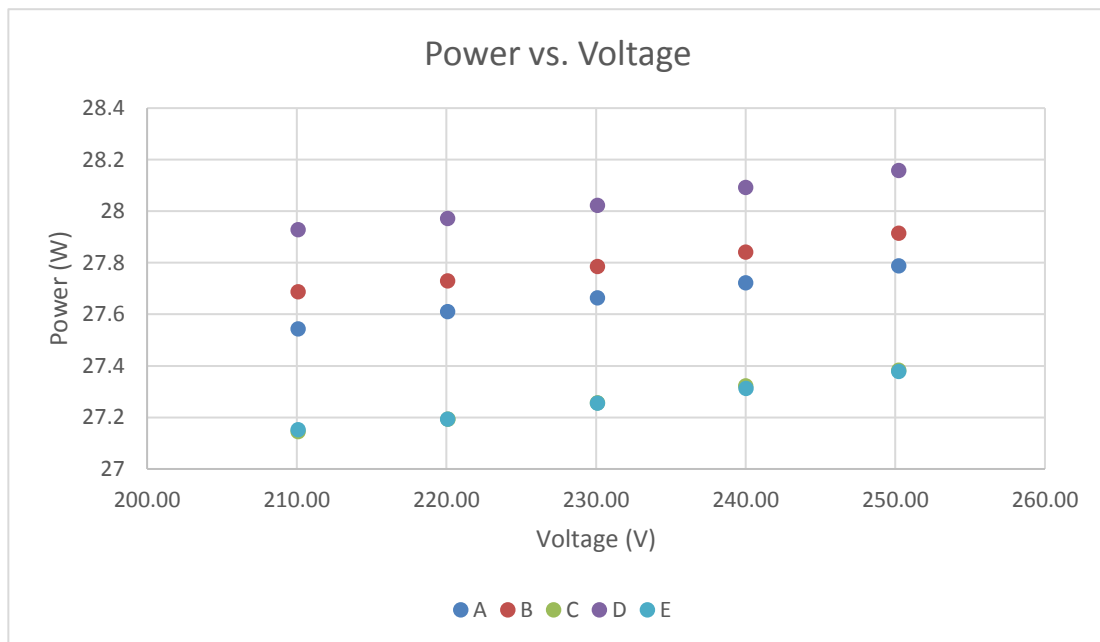
Test Conditions

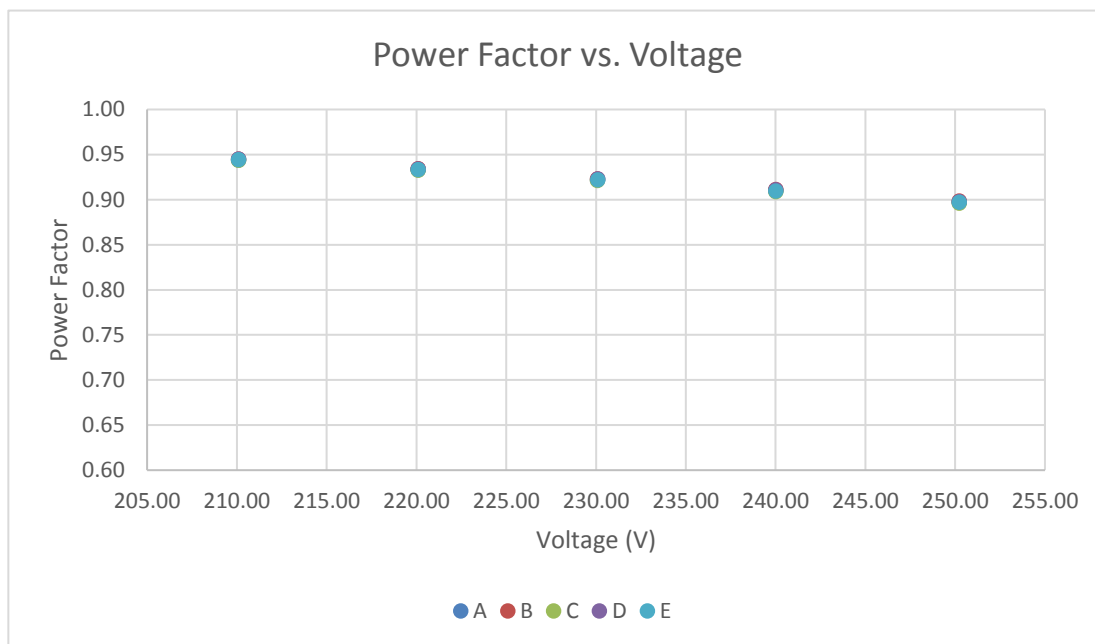
	Before Test	After Test
AC Supply Voltage (V)	250.23V	250.23V
AC Supply Frequency (Hz)	50Hz	50Hz
Voltage RMS Summation of the Harmonic Components (THD)	0.06%	0.06%

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

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





All power factors measured have a leading phase angle.

Measurement Uncertainty

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

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	250.23	123.77	27.79	24.5	30.97	0.897	Leading
B	250.23	124.16	27.92	24.2	31.07	0.899	Leading
C	250.22	122.14	27.38	24.5	30.56	0.896	Leading
D	250.22	125.33	28.16	24.5	31.36	0.898	Leading
E	250.23	121.98	27.38	24.4	30.52	0.897	Leading
A	240.01	126.93	27.72	24.3	30.46	0.910	Leading
B	240.01	127.27	27.84	24.5	30.55	0.911	Leading
C	240.01	125.26	27.32	24.5	30.06	0.909	Leading
D	240.01	128.48	28.09	24.4	30.84	0.911	Leading
E	240.01	125.13	27.31	24.3	30.03	0.909	Leading
A	230.09	130.40	27.66	24.5	30.00	0.922	Leading
B	230.09	130.84	27.79	24.4	30.11	0.923	Leading
C	230.09	128.60	27.26	24.3	29.59	0.921	Leading
D	230.09	131.98	28.02	24.5	30.37	0.923	Leading
E	230.09	128.50	27.26	24.5	29.57	0.922	Leading
A	220.09	134.44	27.61	24.5	29.59	0.933	Leading
B	220.09	134.86	27.73	24.5	29.68	0.934	Leading
C	220.09	132.51	27.19	24.6	29.16	0.932	Leading
D	220.09	136.06	27.97	24.5	29.95	0.934	Leading
E	220.09	132.39	27.19	24.5	29.14	0.933	Leading
A	210.09	138.96	27.54	24.5	29.19	0.944	Leading
B	210.09	139.47	27.69	24.5	29.30	0.945	Leading
C	210.09	136.96	27.15	24.6	28.77	0.943	Leading
D	210.09	140.69	27.93	24.5	29.56	0.945	Leading
E	210.08	136.90	27.15	24.6	28.76	0.944	Leading

Test Item Photographs

Product Details



(Driver and supply fixture)

TI-3205A



TI-3205B



TI-3205C



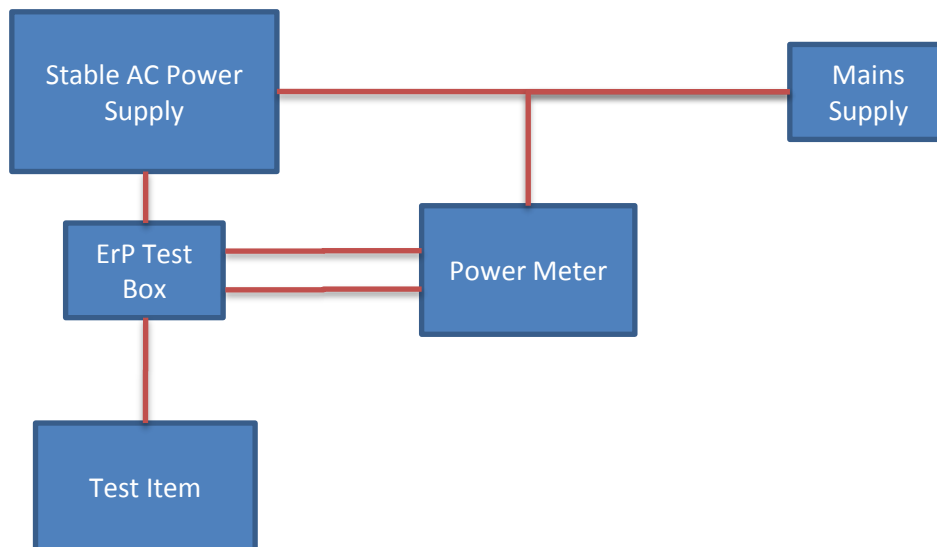
TI-3205D



TI-3205E



Appendix 1: Test item set-up



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