LUX-TSI Ltd., Pencoed Technology Park,
Pencoed, Bridgend, CF35 5HZ, UK
Website: www.lux-tsi.com
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Test Report Number: TRN-13455
Test Item: TI-3081

Report Number	TRN-13455
Customer	LED Roadway Lighting
Contact	Huw Convery
Product Type	Street Light
Test Purpose	UMS Energy Performance Test
Sales Order Ref	Q-LUX2014-1849
Works Order Number	WO-3609
Test Item Reference	TI-3081
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	04/04/2014
Analysed by	Steve Hunt
Number of products tested	5

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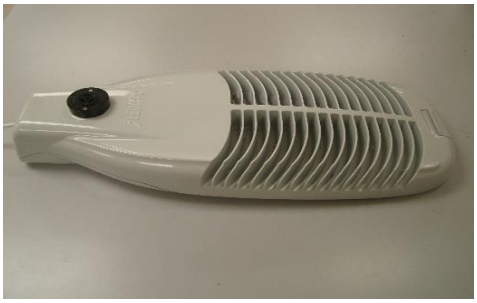
NXT - 60 - 99W

Date: 04/04/2014

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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 Precision Power Analyzer. Kikusui PCR2000M Stable AC Power Supply

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Product Name	NXT - 60 - 99W
Part/Serial Number	N72M2R3HB700GY1GCEXXHPRH3
Type of Product	Street Light
Base Type	N/A
Driver Type	Mains
Driver Model	LRL-66014-SUB-NXTS-525-LF
Operating Orientation	Base Up
Test Orientation	Base Up
Ambient Temperature	25.6°C
Manufacturer	LED Roadway Lighting
Date of Manufacturer	2014
Thermal Management	Passive
Dimmable	Yes
Humidity	<65% RH

Dimension	Sample	Luminous Opening
Diameter/Width	300 mm	198 mm
Length	750 mm	372 mm
Height/Depth	135 mm	0 mm

Test Item	Identifier
TI-3081A	A141001038
TI-3081B	A141001037
TI-3081C	A141001036
TI-3081D	A141001040
TI-3081E	A141001039

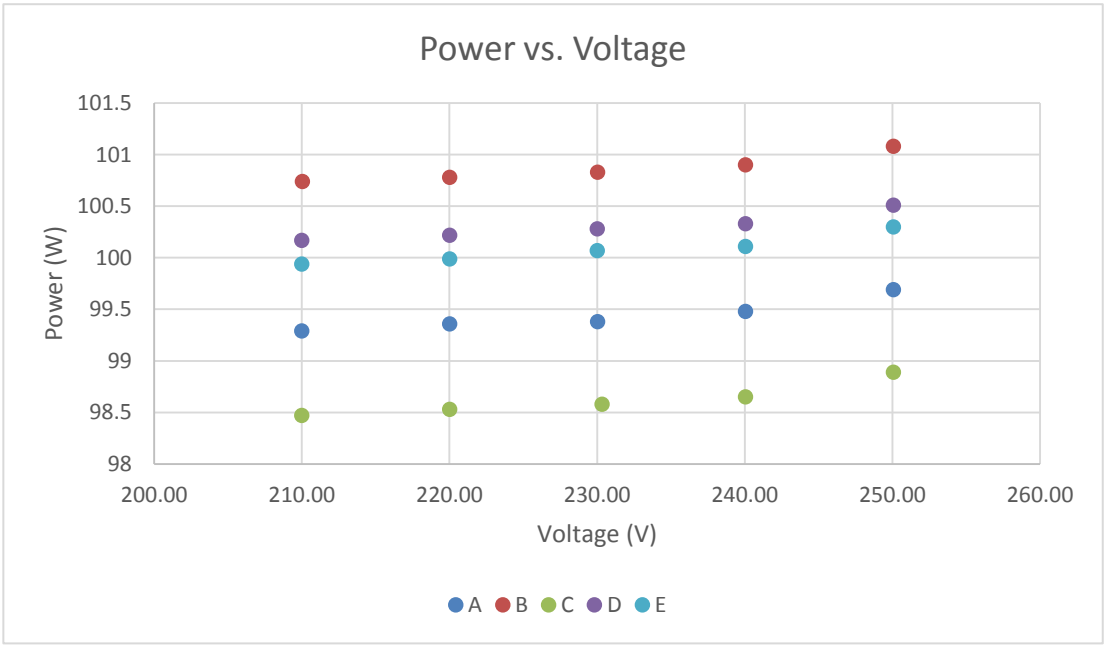
Test Conditions

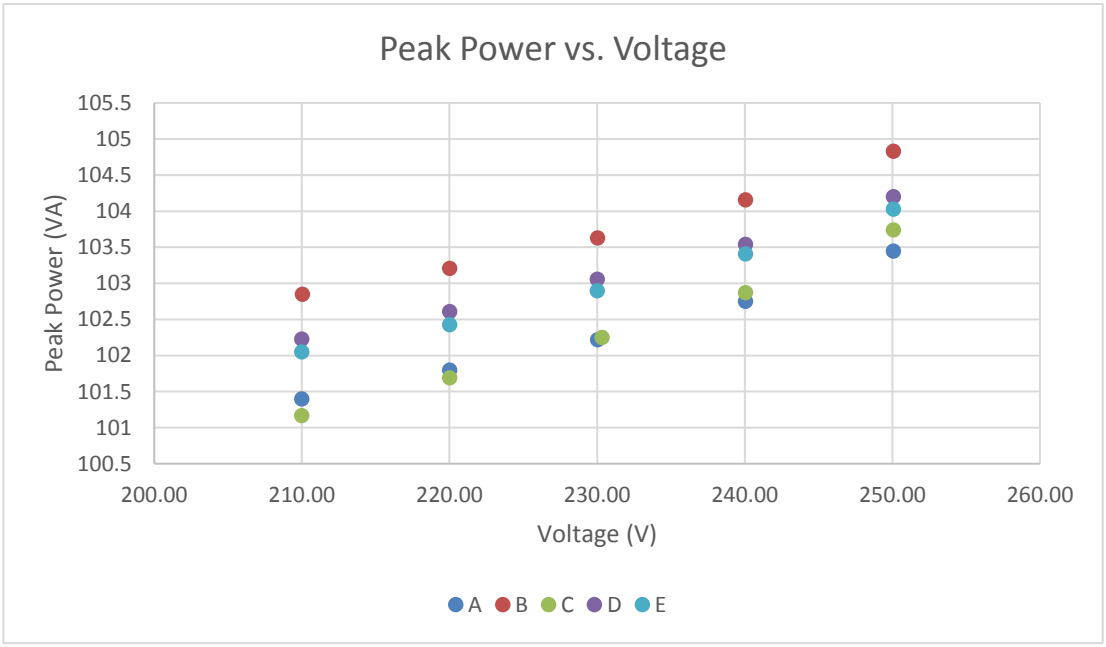
	Before Test	After Test
AC Supply Voltage (V)	250.07V	250.07V
AC Supply Frequency (Hz)	50Hz	50Hz
Voltage RMS Summation of the Harmonic Components (THD)	0.06%	0.06%

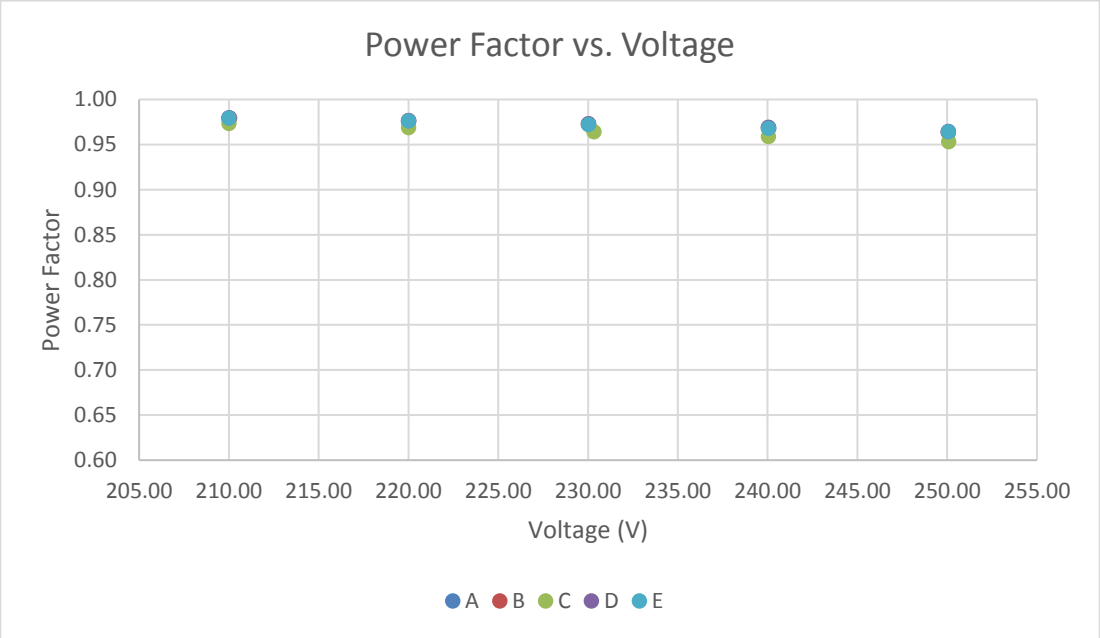
The test items were stabilised according to the electrical power stability of LM79-08. Stabilization is achieved when the difference in electrical power measurement is less than 0.5%. Each test item was stabilised at 250V.

Test Results Summary

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







All 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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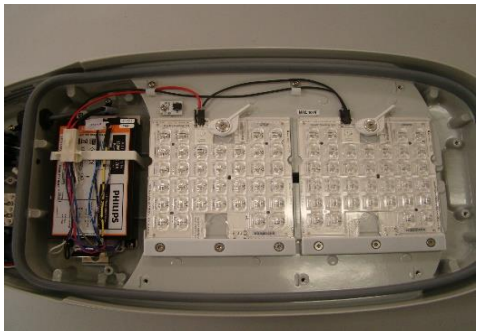
Full Test Results

Test Item	Voltage (V)	Current (mA)	Electrical Power (W)	Ambient Temp (°C)	Peak Power (VA)	Power Factor	Leading / Lagging
A	250.07	413.00	99.69	25.2	103.45	0.964	Leading
B	250.07	419.00	101.08	25.2	104.83	0.964	Leading
C	250.08	414.00	98.89	25.2	103.74	0.953	Leading
D	250.07	416.00	100.51	25.2	104.20	0.965	Leading
E	250.07	416.00	100.30	25.2	104.03	0.964	Leading
A	240.06	428.00	99.48	25	102.75	0.968	Leading
B	240.05	433.00	100.90	25	104.16	0.969	Leading
C	240.05	428.00	98.65	25	102.87	0.959	Leading
D	240.05	431.00	100.33	25	103.54	0.969	Leading
E	240.05	430.00	100.11	25	103.41	0.968	Leading
A	230.03	444.00	99.38	25	102.22	0.972	Leading
B	230.03	450.00	100.83	25	103.63	0.973	Leading
C	230.33	444.00	98.58	25	102.25	0.964	Leading
D	230.02	448.00	100.28	25	103.06	0.973	Leading
E	230.02	447.00	100.07	25	102.90	0.972	Leading
A	220.01	462.00	99.36	25	101.80	0.976	Leading
B	220.01	469.00	100.78	25	103.21	0.977	Leading
C	220.01	462.00	98.53	25	101.69	0.969	Leading
D	220.01	466.00	100.22	25	102.61	0.977	Leading
E	220.01	465.00	99.99	25	102.43	0.976	Leading
A	210.00	482.00	99.29	25	101.40	0.979	Leading
B	210.04	489.00	100.74	25	102.85	0.979	Leading
C	210.00	481.00	98.47	25	101.17	0.973	Leading
D	210.00	486.00	100.17	25	102.23	0.980	Leading
E	210.00	486.00	99.94	25	102.05	0.979	Leading

Test Item Photographs

Product Details



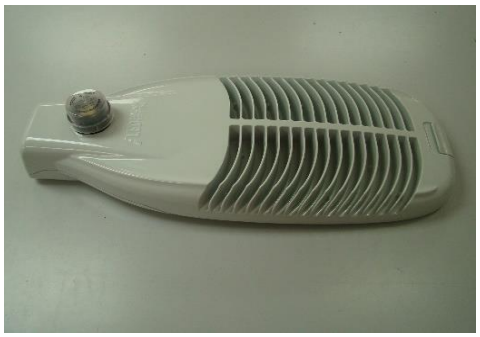
(Driver and LED Module)

(Label fixture)

TI-3081A

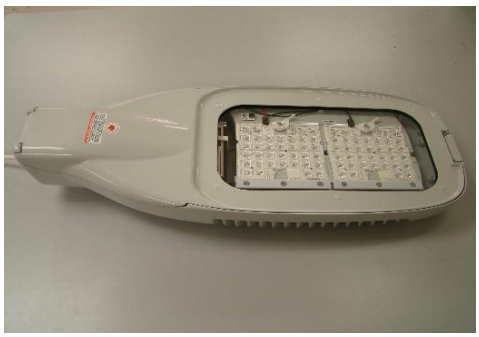
TI-3081B

TI-3081C

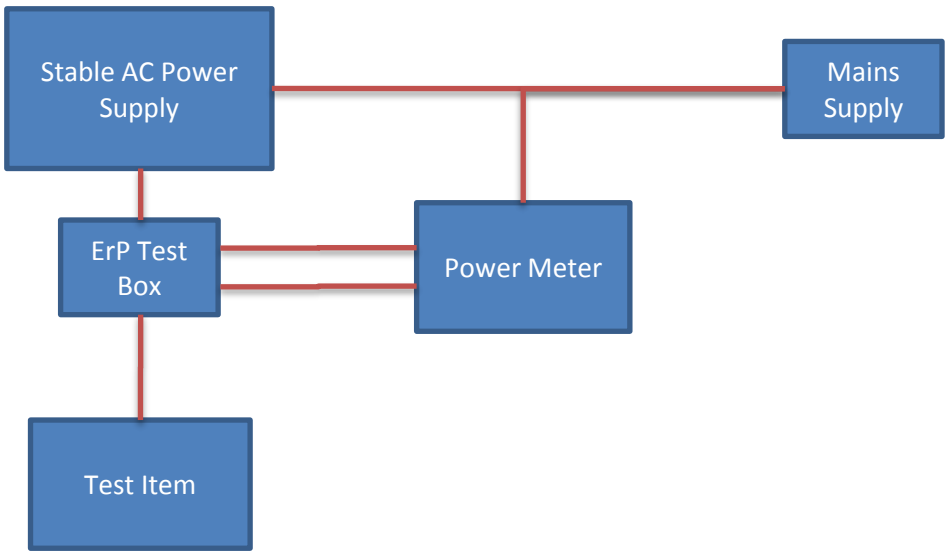



TI-3081D


TI-3081E

Appendix 1: Test item set-up



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