LUX-TSI Ltd., Pencoed Technology Park,
Pencoed, Bridgend, CF35 5HZ, UK
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Test Report Number: TRN-13454
Test Item: TI-3080

Report Number	TRN-13454
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-3608
Test Item Reference	TI-3080
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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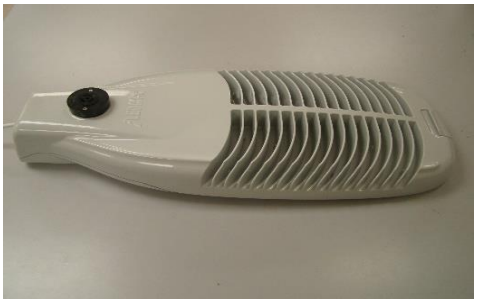
NXT - 60 - 84W

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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Test Item: TI-3080

Product Name	NXT - 60 - 84W
Part/Serial Number	N72M2R3HB700GY1GCEXXHPRH3
Type of Product	Street Light
Base Type	N/A
Driver Type	Mains
Driver Model	LRL-66014-SUB-NXTS-450-LF
Operating Orientation	Base Up
Test Orientation	Base Up
Ambient Temperature	25.0°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-3080A	A141001038
TI-3080B	A141001037
TI-3080C	A141001036
TI-3080D	A141001040
TI-3080E	A141001039

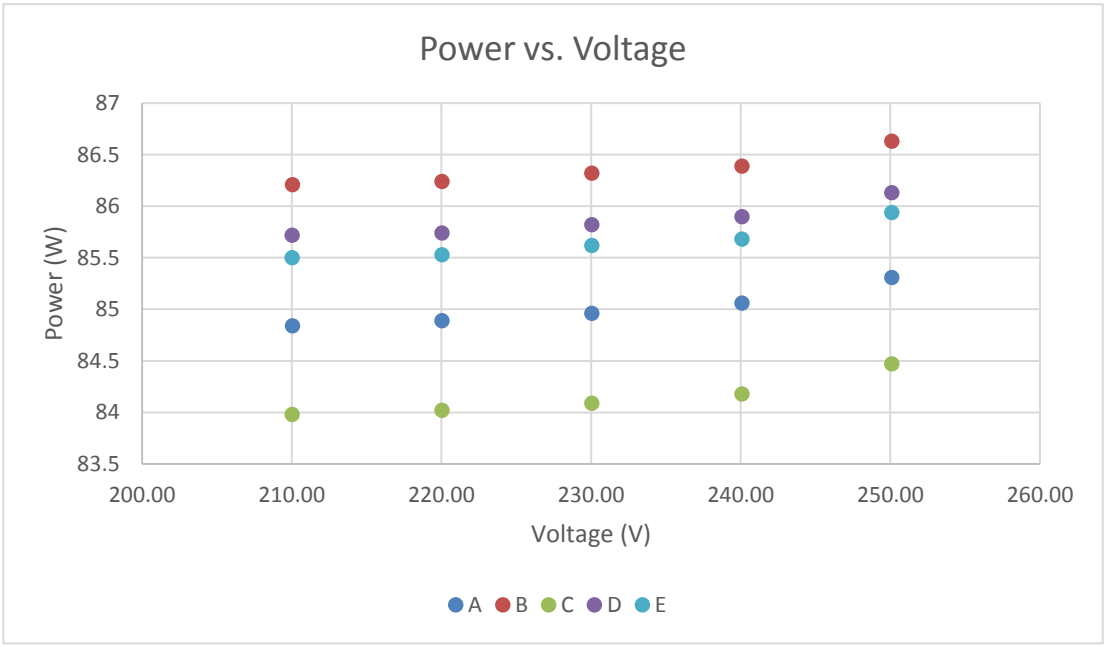
Test Conditions

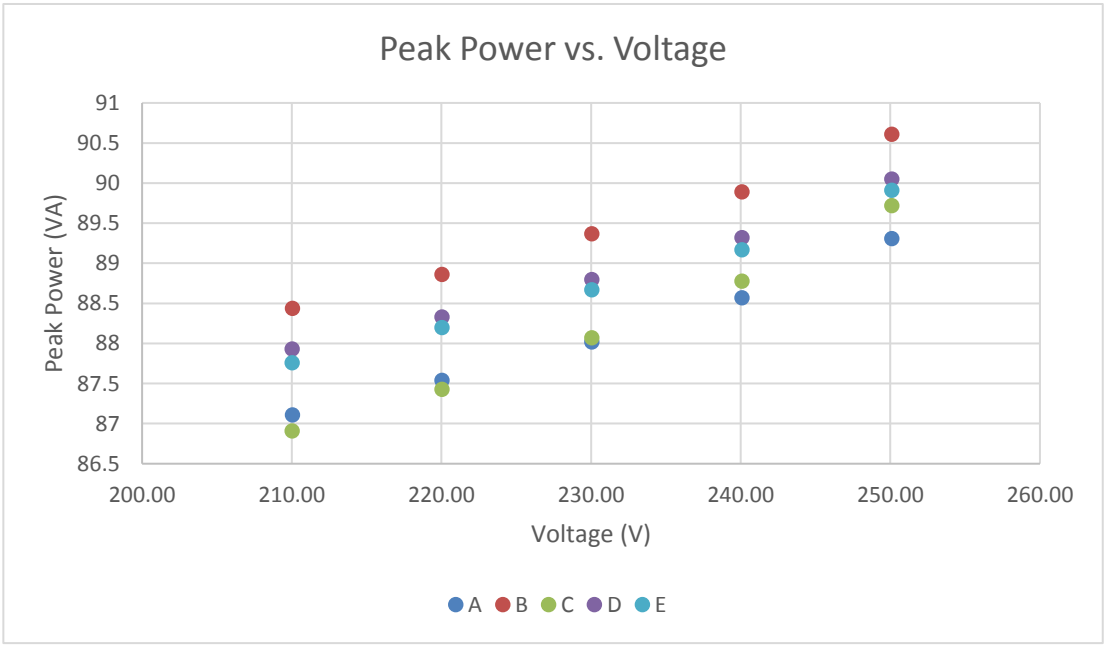
	Before Test	After Test
AC Supply Voltage (V)	250.07V	250.07V
AC Supply Frequency (Hz)	50Hz	50Hz
Voltage RMS Summation of the Harmonic Components (THD)	0.06%	0.06%

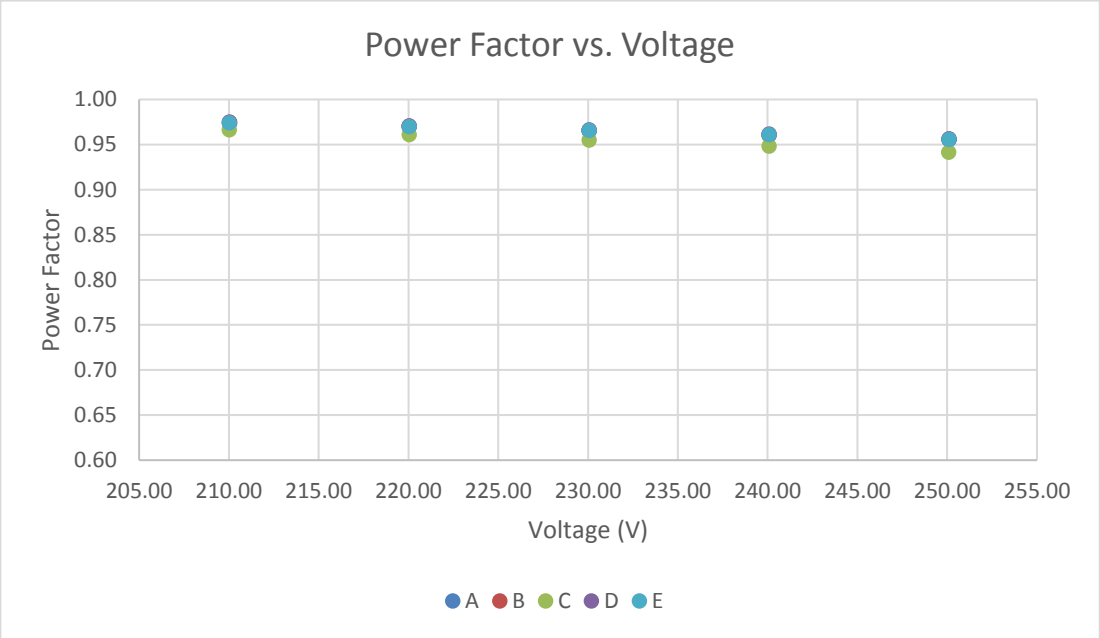
The test items were stabilised according to the electrical power stability of LM79-08. Stabilization is achieved when the difference in electrical power measurement is less than 0.5%. Each test item was stabilised at 250V.

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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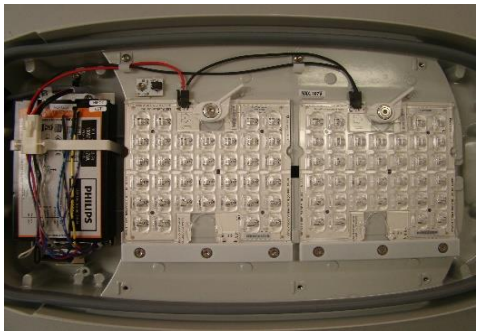
Full Test Results

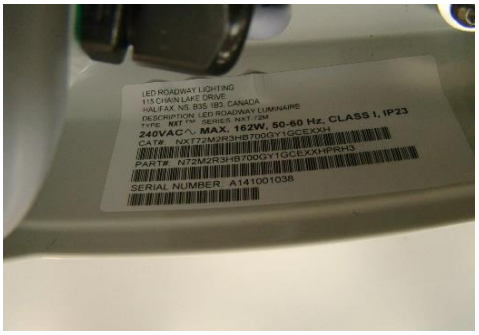
Test Item	Voltage (V)	Current (mA)	Electrical Power (W)	Ambient Temp (°C)	Peak Power (VA)	Power Factor	Leading / Lagging
A	250.10	357.00	85.31	25	89.31	0.955	Leading
B	250.10	362.00	86.63	25	90.61	0.956	Leading
C	250.09	358.00	84.47	25	89.72	0.942	Leading
D	250.10	360.00	86.13	25	90.05	0.956	Leading
E	250.10	359.00	85.94	25	89.91	0.956	Leading
A	240.09	368.00	85.06	25	88.57	0.960	Leading
B	240.09	374.00	86.39	25	89.89	0.961	Leading
C	240.09	369.00	84.18	25	88.78	0.948	Leading
D	240.09	372.00	85.90	25	89.32	0.962	Leading
E	240.09	371.00	85.68	25	89.17	0.961	Leading
A	230.06	382.00	84.96	25.1	88.02	0.965	Leading
B	230.06	388.00	86.32	25.1	89.37	0.966	Leading
C	230.06	382.00	84.09	25.1	88.07	0.955	Leading
D	230.06	386.00	85.82	25.1	88.80	0.966	Leading
E	230.06	385.00	85.62	25.1	88.67	0.966	Leading
A	220.05	397.00	84.89	25	87.54	0.970	Leading
B	220.05	403.00	86.24	25	88.86	0.971	Leading
C	220.05	397.00	84.02	25	87.43	0.961	Leading
D	220.04	401.00	85.74	25	88.33	0.971	Leading
E	220.05	400.00	85.53	25	88.20	0.970	Leading
A	210.04	414.00	84.84	25	87.11	0.974	Leading
B	210.04	421.00	86.21	25	88.44	0.975	Leading
C	210.03	413.00	83.98	25	86.91	0.966	Leading
D	210.03	418.00	85.72	25	87.93	0.975	Leading
E	210.03	417.00	85.50	25	87.76	0.974	Leading

Test Item Photographs

Product Details



(Driver and LED Module)

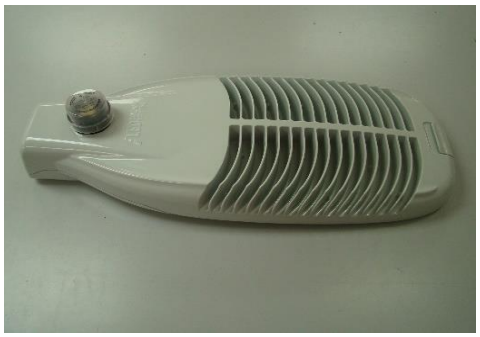


(Label fixture)

TI-3080A

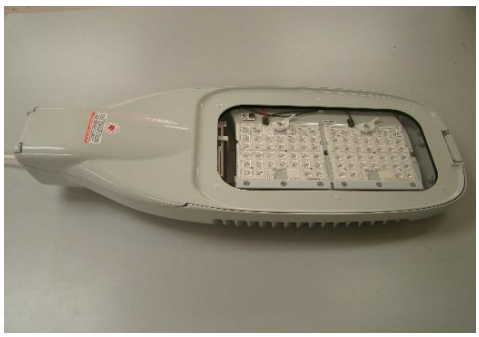
TI-3080B

TI-3080C

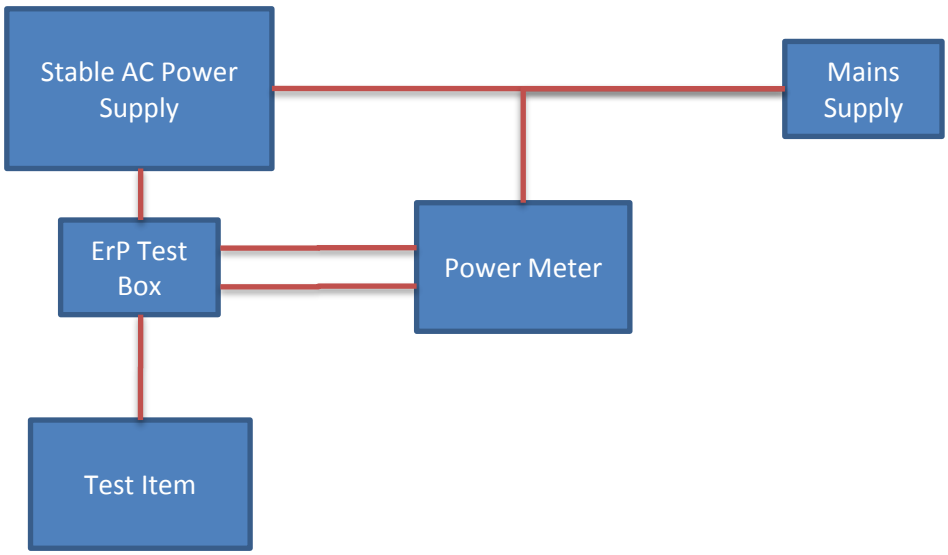



TI-3080D


TI-3080E

Appendix 1: Test item set-up



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