

Report Number	TRN-13459
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-3613
Test Item Reference	TI-3085
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	01/04/2014
Analysed by	Steve Hunt
Number of products tested	5

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NXT - 72 - 135W

Date: 01/04/2014

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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 +15° to Base Down

H45 - Horizontal to -45° only

VBV - 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)

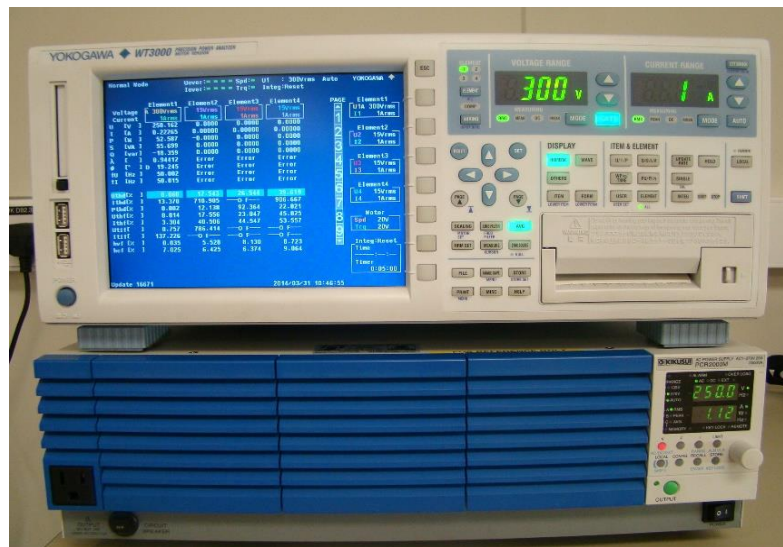
U - Universal Burn (burn can be operated in any position)

Test Conditions

Measurements were made with an ambient temperature of 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



Product Name	NXT - 72 - 135W
Part/Serial Number	N72M2R3HB700GY1GCEXXHPRH3
Type of Product	Street Light
Base Type	N/A
Driver Type	Mains
Driver Model	LRL-66014-SUB-NXTS-600-LF
Operating Orientation	Base Up
Test Orientation	Base Up
Ambient Temperature	25.2°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-3085A	A141001038
TI-3085B	A141001037
TI-3085C	A141001036
TI-3085D	A141001040
TI-3085E	A141001039

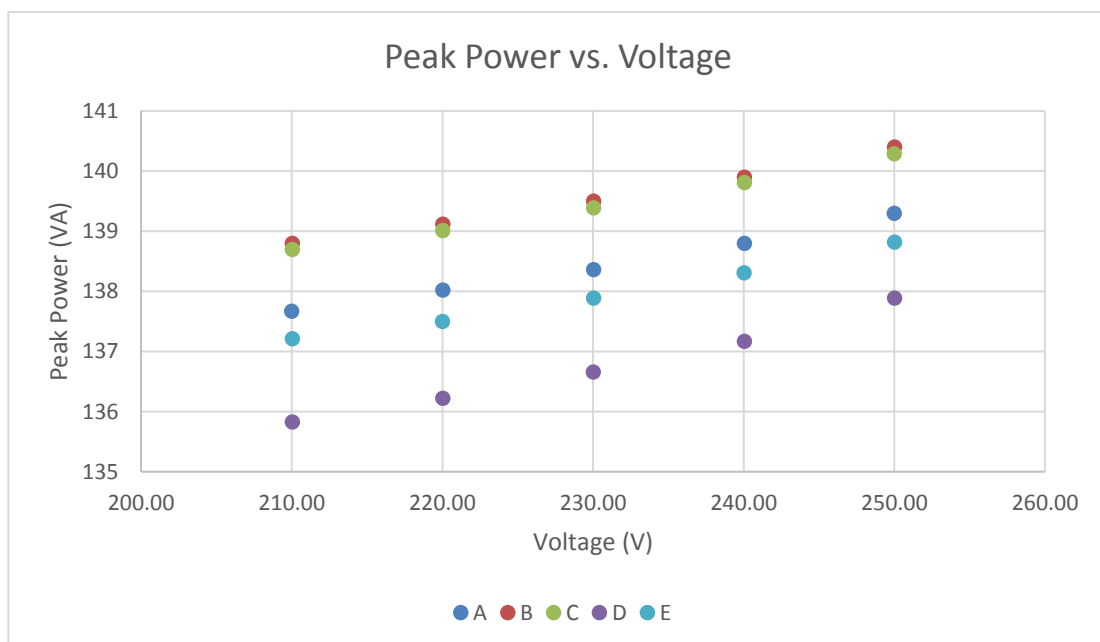
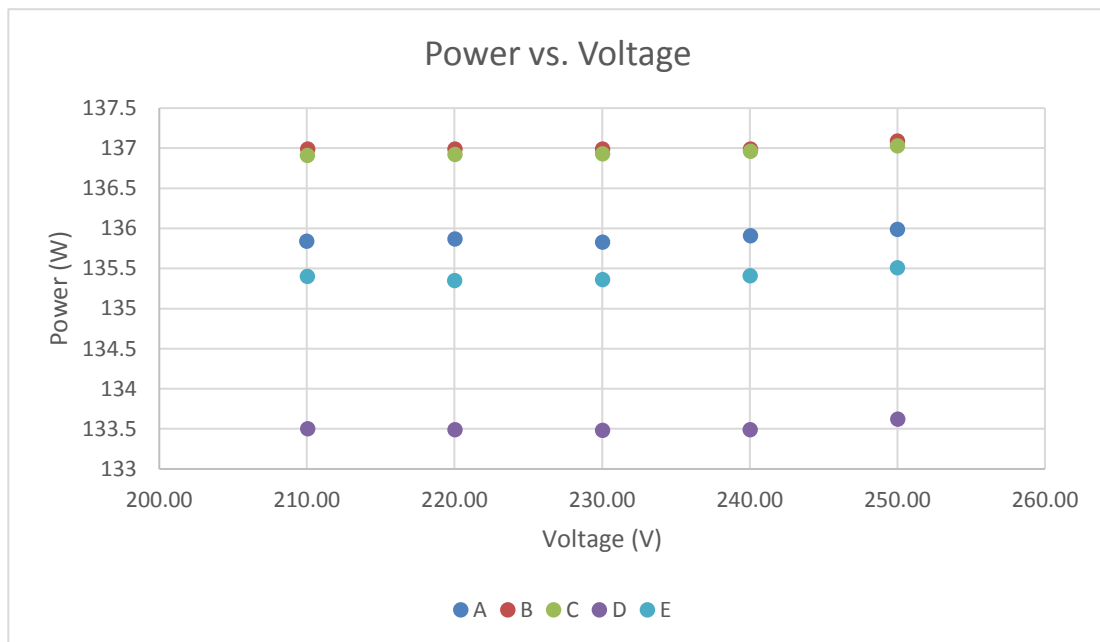
Test Conditions

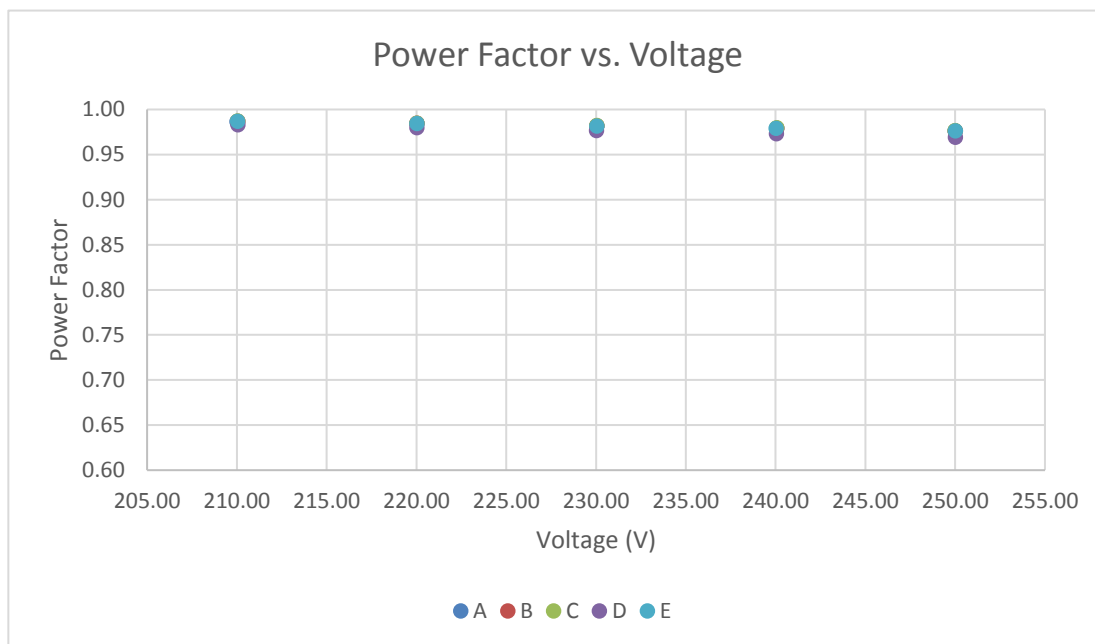
	Before Test	After Test
AC Supply Voltage (V)	250.00V	250.02V
AC Supply Frequency (Hz)	50Hz	50Hz
Voltage RMS Summation of the Harmonic Components (THD)	0.08%	0.06%

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	$\pm 0.0006 \text{ PF}$

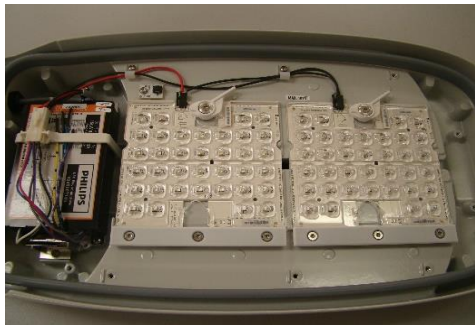
Measurements of power of 0.50W or greater are made with an uncertainty of less than or equal to 2% at the 95% confidence level. Measurements of power less than 0.50W are made with an uncertainty of less than or equal to 0.01W at the 95% confidence level.

Full Test Results

Test Item	Voltage (V)	Current (mA)	Electrical Power (W)	Ambient Temp (°C)	Peak Power (VA)	Power Factor	Leading / Lagging
A	250.00	557.00	135.99	25	139.30	0.976	Leading
B	250.01	561.00	137.09	25	140.40	0.976	Leading
C	250.00	561.00	137.03	25	140.29	0.977	Leading
D	250.02	551.00	133.62	25	137.89	0.969	Leading
E	250.01	555.00	135.51	25	138.82	0.976	Leading
A	240.06	578.00	135.91	25	138.80	0.979	Leading
B	240.06	582.00	136.99	25	139.90	0.979	Leading
C	240.06	582.00	136.96	25	139.81	0.980	Leading
D	240.04	571.00	133.49	25	137.17	0.973	Leading
E	240.03	576.00	135.41	25	138.31	0.979	Leading
A	230.04	601.00	135.83	25.2	138.36	0.982	Leading
B	230.04	606.00	136.99	25.2	139.50	0.982	Leading
C	230.04	605.00	136.93	25.2	139.39	0.982	Leading
D	230.03	594.00	133.48	25.2	136.66	0.977	Leading
E	230.04	599.00	135.36	25.2	137.89	0.982	Leading
A	220.03	627.00	135.87	25.3	138.02	0.984	Leading
B	220.03	632.00	136.99	25.3	139.12	0.985	Leading
C	220.03	631.00	136.92	25.3	139.01	0.985	Leading
D	220.03	619.00	133.49	25.3	136.22	0.980	Leading
E	220.02	624.00	135.35	25.3	137.50	0.984	Leading
A	210.00	655.00	135.84	25.2	137.67	0.987	Leading
B	210.05	660.00	136.99	25.2	138.80	0.987	Leading
C	210.04	660.00	136.91	25.2	138.70	0.987	Leading
D	210.05	646.00	133.50	25.2	135.83	0.983	Leading
E	210.04	653.00	135.40	25.2	137.21	0.987	Leading

Test Item Photographs

Product Details

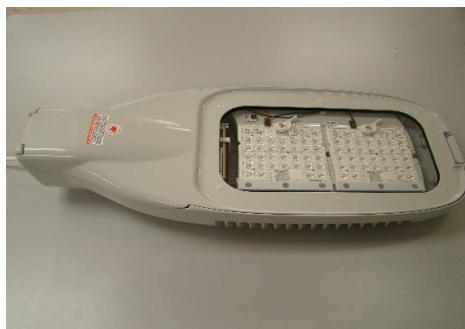


(Driver and LED Module)



(Label fixture)

TI-3085A



TI-3085B



TI-3085C



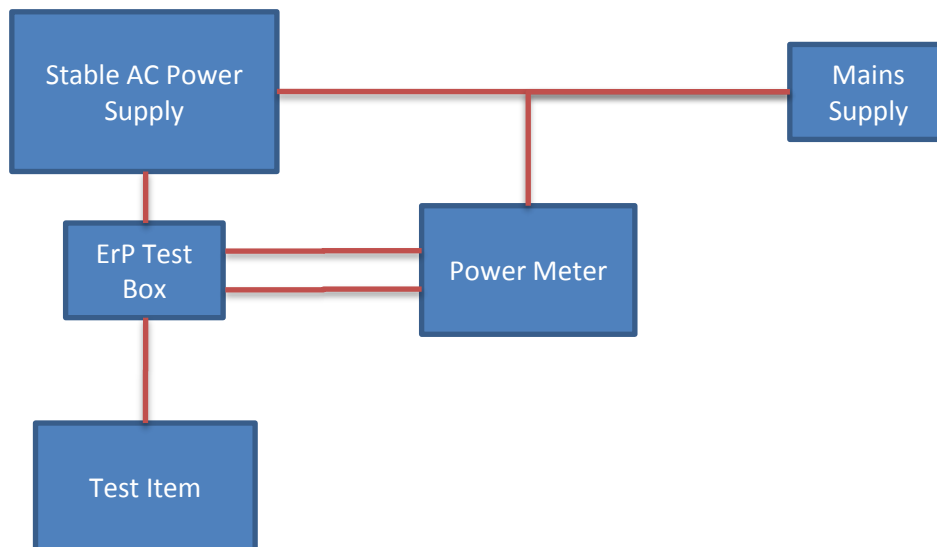
TI-3085D



TI-3085E



Appendix 1: Test item set-up



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