

Report Number	SAF-21302
Customer	NET LED Ltd
Contact	Hayley Sewell
Product Type	Street Light
Test Purpose	UMS Energy Performance Test
Sales Order Ref	Q-LUX18-22510
Works Order Number	WO-11949
Test Item Reference	TI-15185
LAB Test Method Reference	TES-201012
Test Standards (if applicable)	LM-79-08 and Elexon UMS Charge Code process V4.0
Lab Location Reference	Safety Lab
Tested by	Mike Sewell
Date of Test	29/06/2018
Reviewed by	Steve Hunt
Number of products tested	5

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Signed:




NET-15-20-04 Wyton LED streetlight 100W

Date: 29 June 2018

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Product Information		
Product	Street Light	
Product Name / Model	NET-15-20-04 Wyton LED streetlight 100W	
Part/Serial Number	See (Identifier) below	
Product Brand	NETLED	
Manufacturer	NETLED	
Category	LITE	
Rated Input Voltage	110-240V	
Rated output:	120V / 350 - 1050mA	
Protection Class	I	
Driver Make/Model	MeanWell	ELG-100-36A
Light Engine Make/Model	Leyond	LYD-MD-3030-5C12B-V3.0
Dimmable / Level Tested	Yes	100%
Product Description		
The streetlights are made of a cast metal frame housing the LED module. The driver being situated within a removable cover on the housing for the connection of the fixed wiring.		

Test Conditions			
Ambient Temperature			23 (°C)
Humidity			39 (%)
	Before Test		After Test
Voltage	249.55V		249.6V
Frequency	50Hz		50Hz
Total Harmonic Distortion	0.09%		0.09%
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.			
Measurements were made with an ambient temperature of 23°C +/- 2°C. Measurements were taken only after sufficient time for thermal stabilisation has been allowed.			

Product Specifications / TI Ref Numbers			
Dimension	Sample		Luminous opening
Diameter / Width	290 mm		235 mm
Length	440 mm		150 mm
Height / Depth	110 mm		5 mm
Product Test Number	Identifier		Serial Number (if applicable)
Test Item #1	15185A		N/A
Test Item #2	15185B		N/A
Test Item #3	15185C		N/A
Test Item #4	15185D		N/A
Test Item #5	15185E		N/A

Test Equipment and Description

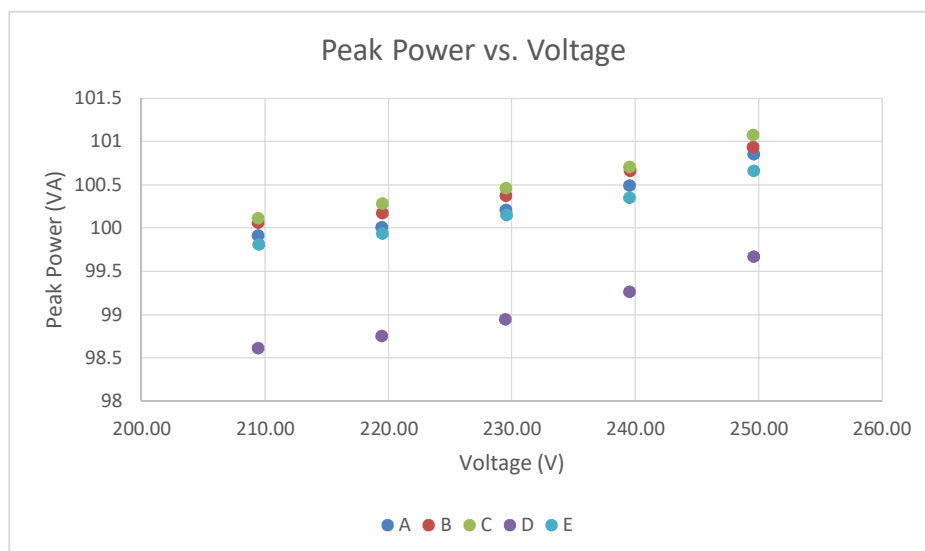
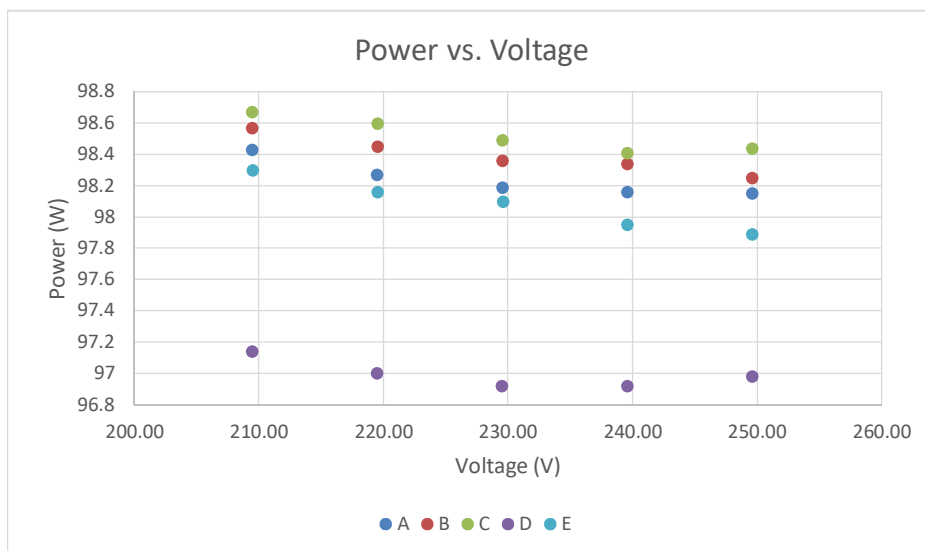
Yokogawa WT210 Power Analyser, Kikusui PCR2000M Stable AC Power Supply with PC control and data recording

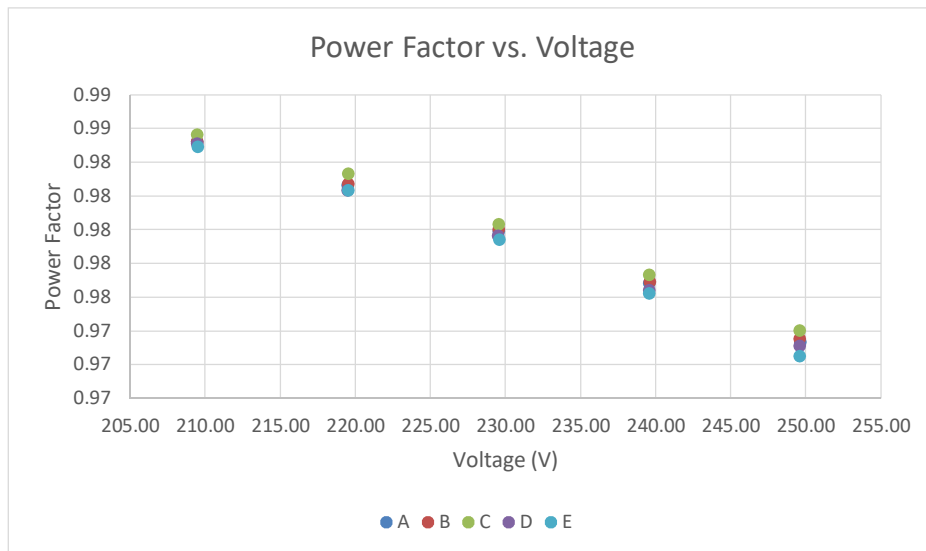


The products under test are connected to the UMS Test system which has full data control and recording using Labview software. This allows full integration of the test equipment used - Kikusui AC Stable Power Supply, Yokogawa Power Analyser, Pico Temperature Logger and a LUX-TSI distribution control panel

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 Lagging phase angle and therefore the driver has inductive properties.

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	249.61	404.00	98.15	25.78	100.85	0.973	Lagging
B	249.58	404.40	98.25	25.84	100.93	0.974	Lagging
C	249.59	404.90	98.44	25.62	101.07	0.974	Leading
D	249.60	399.30	96.98	25.72	99.67	0.973	Leading
E	249.60	403.30	97.89	25.53	100.66	0.973	Leading
A	239.57	419.50	98.16	25.96	100.49	0.977	Lagging
B	239.58	420.20	98.34	26.12	100.66	0.977	Lagging
C	239.55	420.40	98.41	26.01	100.70	0.977	Leading
D	239.56	414.30	96.92	25.92	99.26	0.976	Leading
E	239.56	418.90	97.95	26.03	100.35	0.976	Leading
A	229.52	436.60	98.19	25.84	100.21	0.980	Lagging
B	229.52	437.30	98.36	25.83	100.37	0.980	Lagging
C	229.52	437.70	98.49	25.80	100.46	0.980	Leading
D	229.50	431.10	96.92	25.84	98.94	0.980	Leading
E	229.57	436.30	98.10	25.92	100.15	0.979	Leading
A	219.47	455.70	98.27	26.06	100.01	0.983	Lagging
B	219.50	456.40	98.45	26.00	100.17	0.983	Lagging
C	219.53	456.80	98.60	25.99	100.28	0.983	Leading
D	219.47	449.90	97.00	26.05	98.75	0.982	Leading
E	219.50	455.20	98.16	25.88	99.93	0.982	Leading
A	209.47	476.90	98.43	26.00	99.91	0.985	Lagging
B	209.45	477.70	98.57	25.91	100.06	0.985	Lagging
C	209.45	478.00	98.67	26.01	100.11	0.986	Leading
D	209.45	470.80	97.14	26.03	98.61	0.985	Leading
E	209.50	476.40	98.30	25.85	99.81	0.985	Leading

Test Item Photographs

TI-15185

Images of Product(s) under test includes (where possible) labelling, Driver and Light engine details



Top View



Bottom View

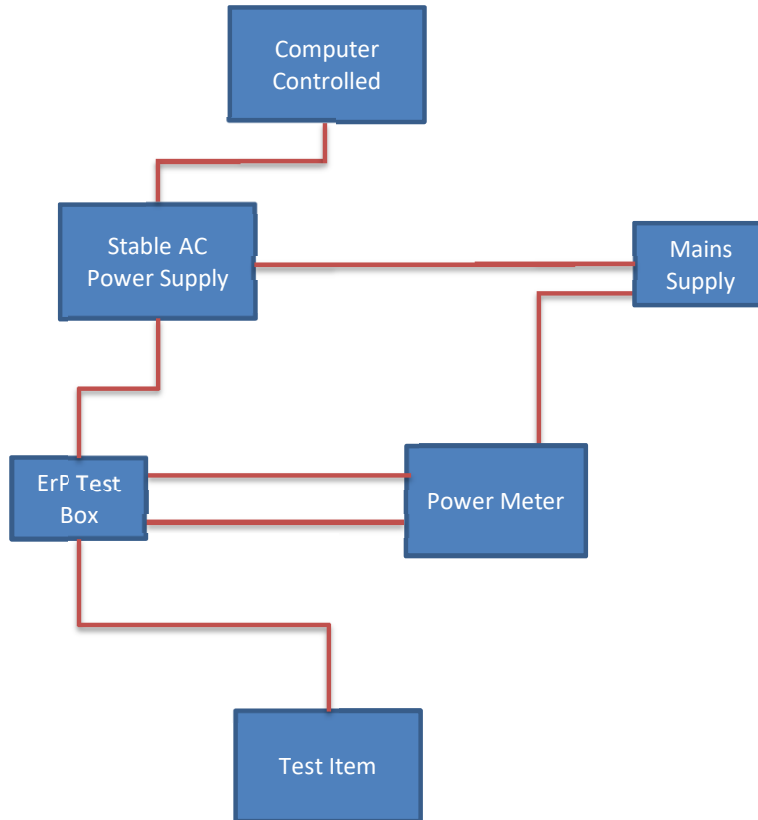


Installed Driver



Installed LED Modules

Appendix 1: Test item set-up



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