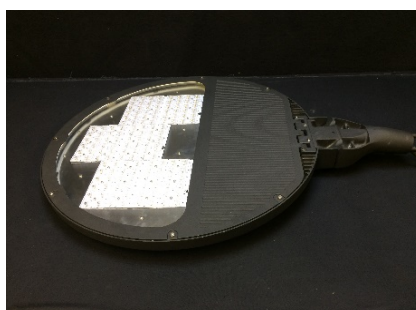


Report Number	SAF-19715a
Customer	Silvaria FSL Ltd
Contact	Melinda Hart
Product Type	LITE
Test Purpose	UMS Energy Performance Test
Sales Order Ref	Q-LUX16-21729
Works Order Number	WO-10362
Test Item Reference	TI-13893
LAB Test Method Reference	TES1012
Test Standards (if applicable)	LM-79-08 and Elexon UMS Charge Code process V4.0
Lab Location Reference	Safety
Tested by	Steve Hunt
Date of Test	23/08/2017
Reviewed by	Menno Schakel
Number of products tested	5

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Signed:



Date: 23 August 2017



London City Smart LED Lantern - Nichia LED  
with Philips Driver

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Product Information		
Product	LITE	
Product Name / Model	London City Smart LED Lantern - Nichia LED with Philips Driver SD-LCS650PH300N319	
Part/Serial Number	See (Identifier) below	
Product Brand	Silvaria FSL	
Manufacturer	Silvaria FSL Ltd	
Category	LITE	
Rated Input Voltage	110 - 277	
Rated output:	80 - 280	
Protection Class	I	
Driver Make/Model	Philips	Xitanium 300W 1.5A
Light Engine Make/Model	Nichia	PFA319LED
Dimmable / Level Tested	Yes	100%
Product Description		
The LED City Smart Lantern is made of a metal frame, of which sits on the inner parts the LED modules and driver along with the electrical connections for termination.		

Test Conditions		
Ambient Temperature	23	(°C)
Humidity	39	(%)
	Before Test	After Test
Voltage	248.71V	248.86V
Frequency	50Hz	50Hz
Total Harmonic Distortion	0.11%	0.11%
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	650 mm	330 mm
Length	870 mm	585 mm
Height / Depth	110 mm	0 mm
Product Test Number	Identifier	Serial Number (if applicable)
Test Item #1	13893A	N/A
Test Item #2	13893B	N/A
Test Item #3	13893C	N/A
Test Item #4	13893D	N/A
Test Item #5	13893E	N/A

### Test Equipment and Description

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

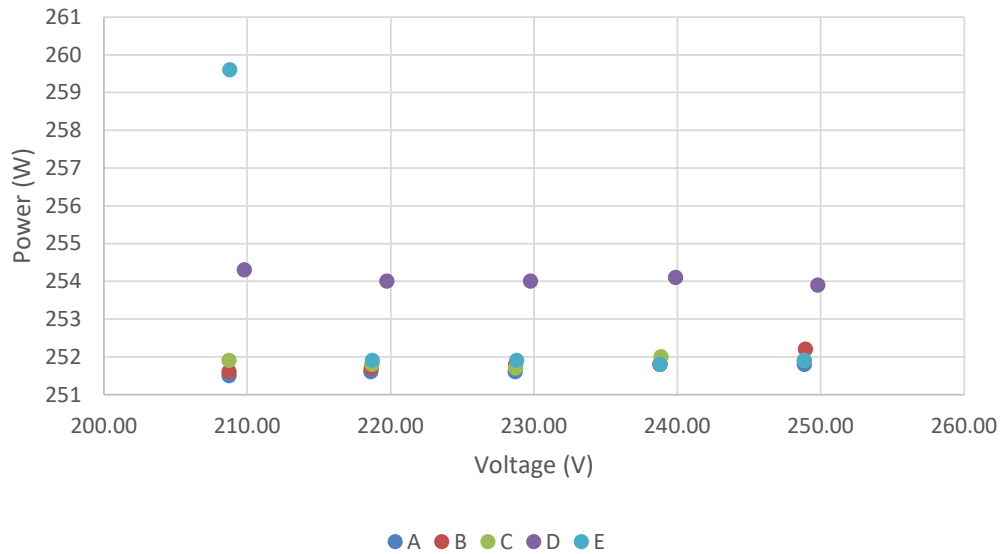


The products under test are connected to the UMS Test system which has full data control and recording using Labview software. This allows full integration of the test equipment used - Kikusui AC Stable Power Supply, Yokogawa Power Analyser, Pico Temperature Logger and a LUX-TSI distribution control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

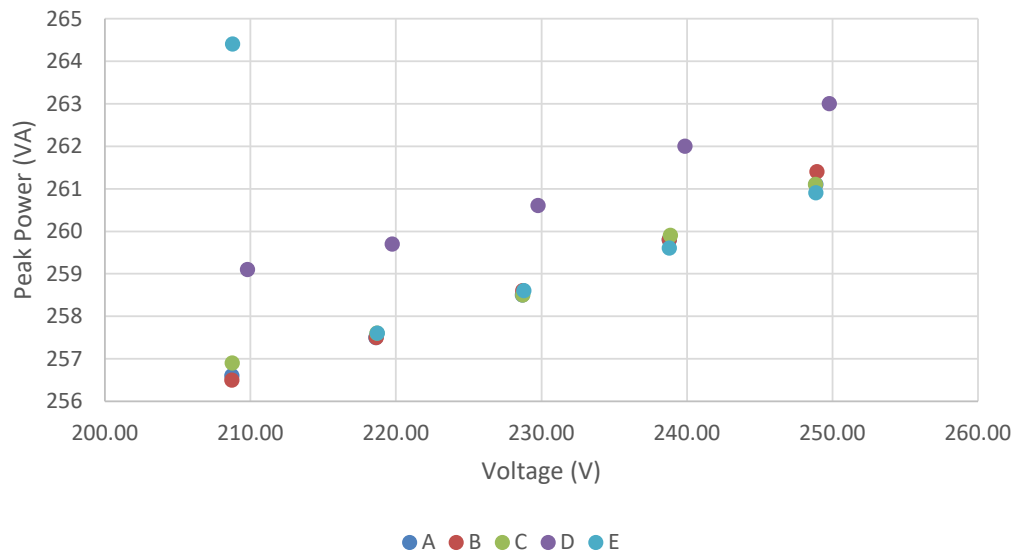
### Test Results Summary

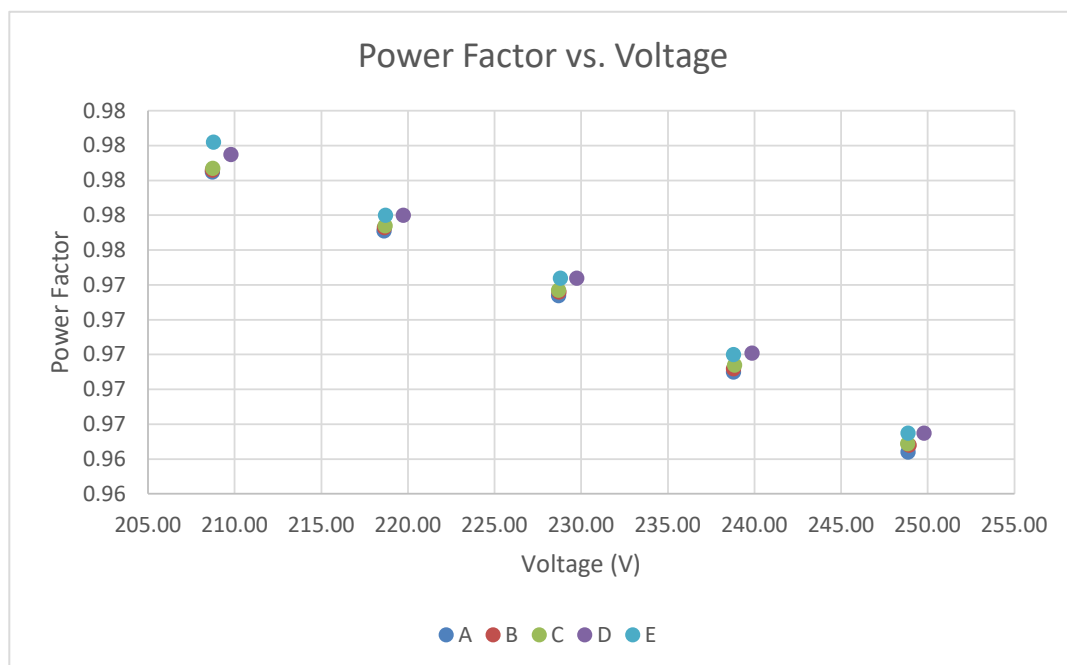
These are the summary graphs of the test results for all products tested. The raw results are on page 6 of this test report.

Power vs. Voltage



Peak Power vs. Voltage





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)	$\pm 0.061 V_{rms}$
Current (200 mA, 50/60Hz)	$\pm 0.07 mA_{rms}$
Current (0.5 A, 50/60Hz)	$\pm 0.16 mA_{rms}$
Current (5 A, 50/60Hz)	$\pm 0.0016 A_{rms}$
Power (300 V, 200 mA, 50/60 Hz)	$\pm 0.032 W_{rms}$
Power (300 V, 0.5 A, 50/60 Hz)	$\pm 0.09 W_{rms}$
Power (300 V, 5 A, 50/60 Hz)	$\pm 0.0009 kW_{rms}$
Frequency (50/60 Hz)	$\pm 0.001 Hz$
Power Factor	$\pm 0.0006 PF$

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.

### Full Test Results

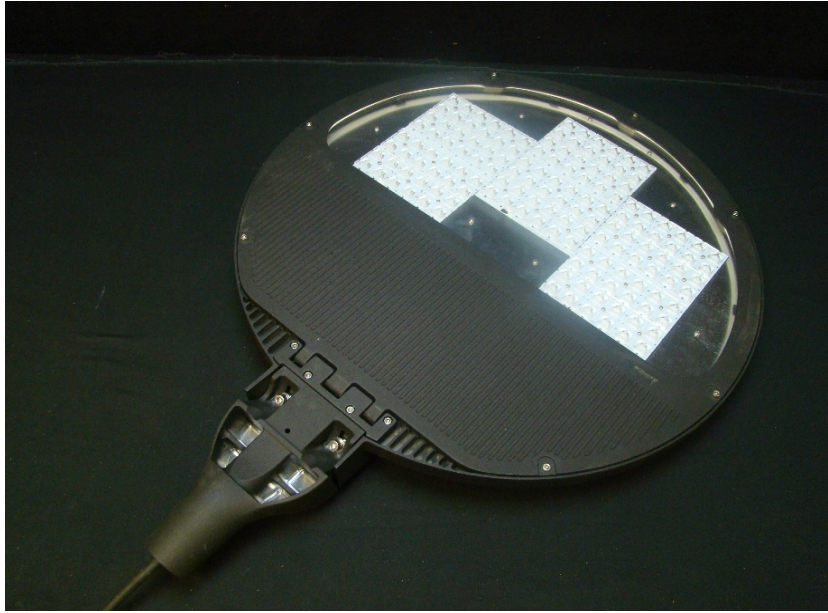
Test Item	Voltage (V)	Current (mA)	Electrical Power (W)	Ambient Temp (°C)	Peak Power (VA)	Power Factor	Leading / Lagging
A	248.85	1049.30	251.80	26.02	261.10	0.964	Lagging
B	248.93	1049.90	252.20	26.28	261.40	0.965	Leading
C	248.84	1049.20	251.90	26.24	261.10	0.965	Leading
D	249.79	1052.90	253.90	23.60	263.00	0.965	Leading
E	248.86	1048.50	251.90	26.41	260.90	0.965	Leading
A	238.79	1088.10	251.80	26.18	259.80	0.969	Lagging
B	238.79	1088.20	251.80	26.32	259.80	0.969	Leading
C	238.85	1088.20	252.00	26.39	259.90	0.969	Leading
D	239.86	1092.20	254.10	23.30	262.00	0.970	Leading
E	238.79	1087.10	251.80	26.49	259.60	0.970	Leading
A	228.69	1130.40	251.60	26.55	258.50	0.973	Leading
B	228.71	1130.60	251.80	26.69	258.60	0.974	Leading
C	228.70	1130.20	251.70	26.46	258.50	0.974	Leading
D	229.75	1134.40	254.00	23.71	260.60	0.974	Leading
E	228.79	1130.20	251.90	26.59	258.60	0.974	Leading
A	218.62	1177.90	251.60	26.82	257.50	0.977	Lagging
B	218.64	1178.00	251.70	26.93	257.50	0.977	Leading
C	218.69	1178.10	251.80	26.92	257.60	0.977	Leading
D	219.73	1182.00	254.00	23.79	259.70	0.978	Leading
E	218.71	1177.70	251.90	26.85	257.60	0.978	Leading
A	208.71	1229.30	251.50	26.95	256.60	0.980	Leading
B	208.72	1229.20	251.60	27.21	256.50	0.981	Leading
C	208.73	1230.70	251.90	27.06	256.90	0.981	Leading
D	209.78	1235.20	254.30	23.87	259.10	0.982	Leading
E	208.77	1266.20	259.60	27.09	264.40	0.982	Leading



### Test Item Photographs

TI-13893

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



Led Module fitment



Driver and terminal fitment



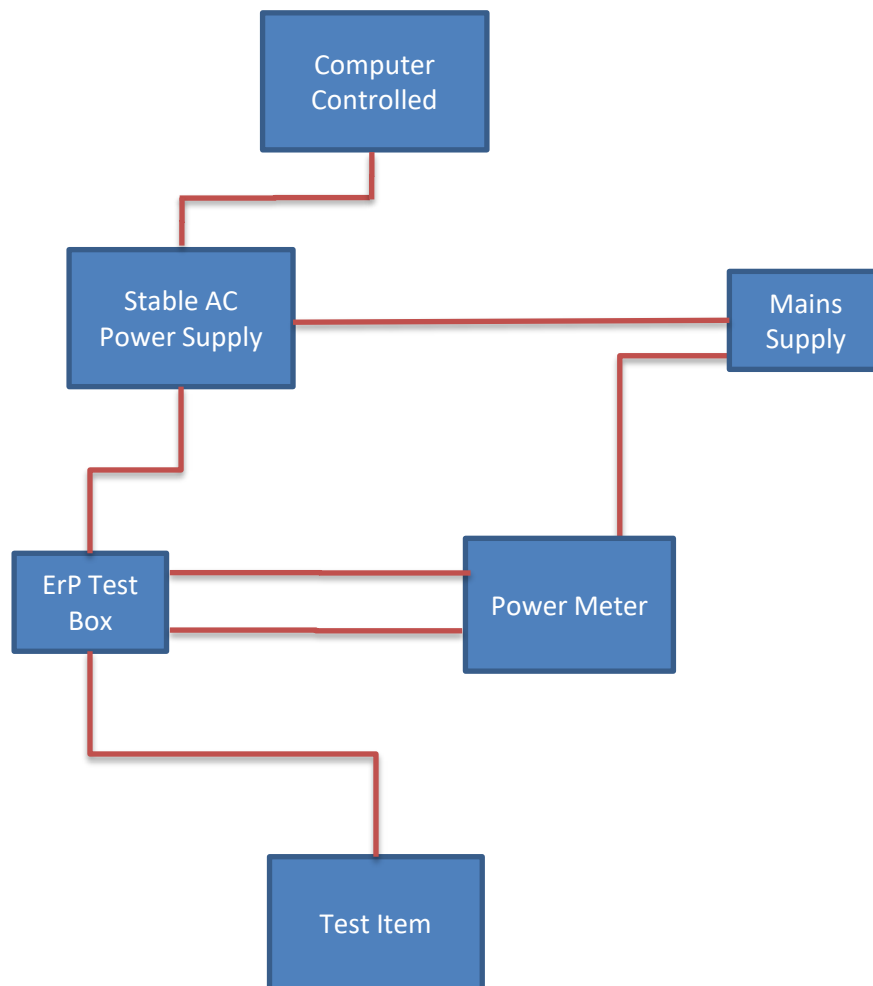
Driver fitted



LED Module(s) fitted



#### Appendix 1: Test item set-up



----- END OF REPORT -----