

**UMSUG TEST REPORT**

Report Number: TLR 113

Issued on 22/01/2015



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**Customer Details**

Light Efficient Design  
188 S. Northwest Highway  
Cary, IL 60013  
USA

**Customer Reference**

TLR113

**Product Tested**

The following electrical testing was carried out on the below mentioned product.

Product Code Number	LED-8028-DL-E27
Product Description	21W LED Replacement Lamp

Date Received: 17/12/2014

**Test Specification**

Measurement of power consumption in accordance with "Unmetered Supplies Operational Information Document Version 14.0 (17<sup>th</sup> December 2014)".

**Date & Sign**

Date Tested: 14/01/2015

Test Conducted By: Haseeb Mirza (Laboratory Technician)

Signature:

Approved By: Kishan Ram (Laboratory Manager)

Signature:

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## Test Conditions

Tests were performed in the following controlled laboratory conditions.

1. Room ambient @ 20 +/- 2 degrees Celsius
2. Fitting assembly tested in free-air
3. Accuracy of the measurements +/-2%

## Test Equipment Used

Tests were performed using the following equipment.

1. UMSUG Testing Machine
2. VARIAC (within calibration date)
3. Fluke 43B Power Quality Analyser (within calibration date)
4. Fluke i30 Current Clamp Meter (within calibration date)

## Product Illustration

The picture below illustrates the product to be tested.



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## Test Data

The below tables provide the power test analysis on 5 samples of the product.

Sample No.1	Voltage	Watts	VA	Power Factor
	210	20.5	21.3	0.97
	220	20.6	21.5	0.96
	230	20.8	21.7	0.96
	240	21.0	22.1	0.95
	250	21.0	22.3	0.94

Sample No.2	Voltage	Watts	VA	Power Factor
	210	23.1	23.7	0.98
	220	23.2	23.9	0.97
	230	23.3	24.1	0.97
	240	23.5	24.4	0.96
	250	23.6	24.7	0.96

Sample No.3	Voltage	Watts	VA	Power Factor
	210	22.0	22.6	0.97
	220	22.2	22.9	0.97
	230	22.2	23.1	0.96
	240	22.4	23.5	0.95
	250	22.6	23.8	0.95

Sample No.4	Voltage	Watts	VA	Power Factor
	210	22.9	23.5	0.98
	220	23.0	23.7	0.97
	230	23.1	23.9	0.97
	240	23.3	24.3	0.96
	250	23.4	24.5	0.96

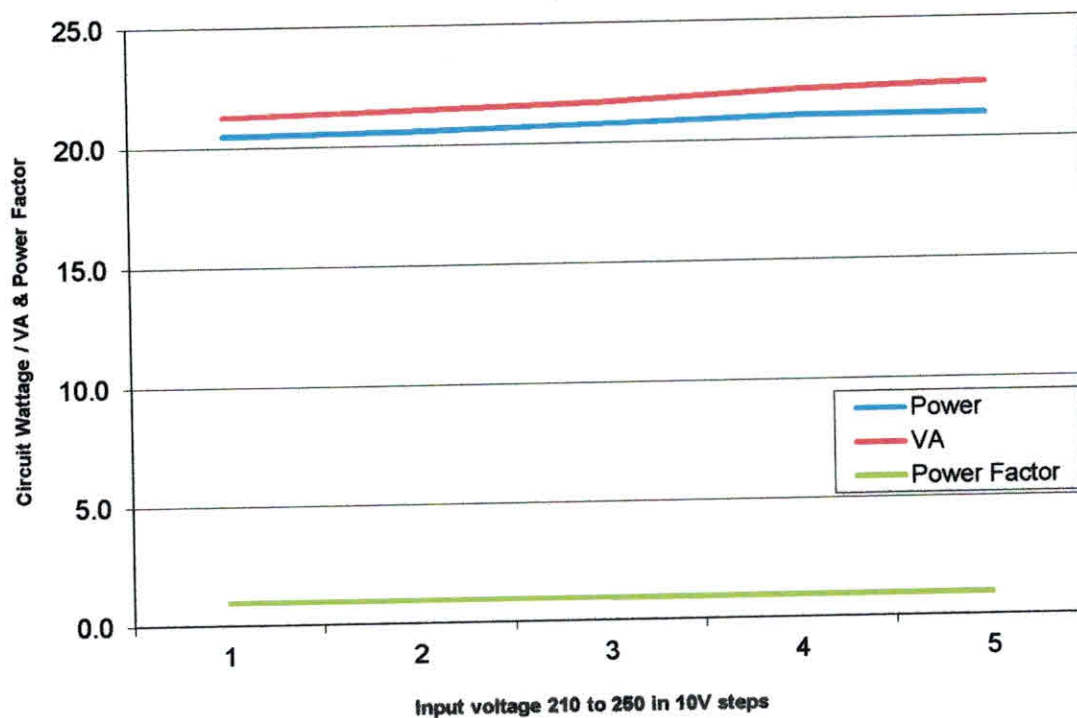
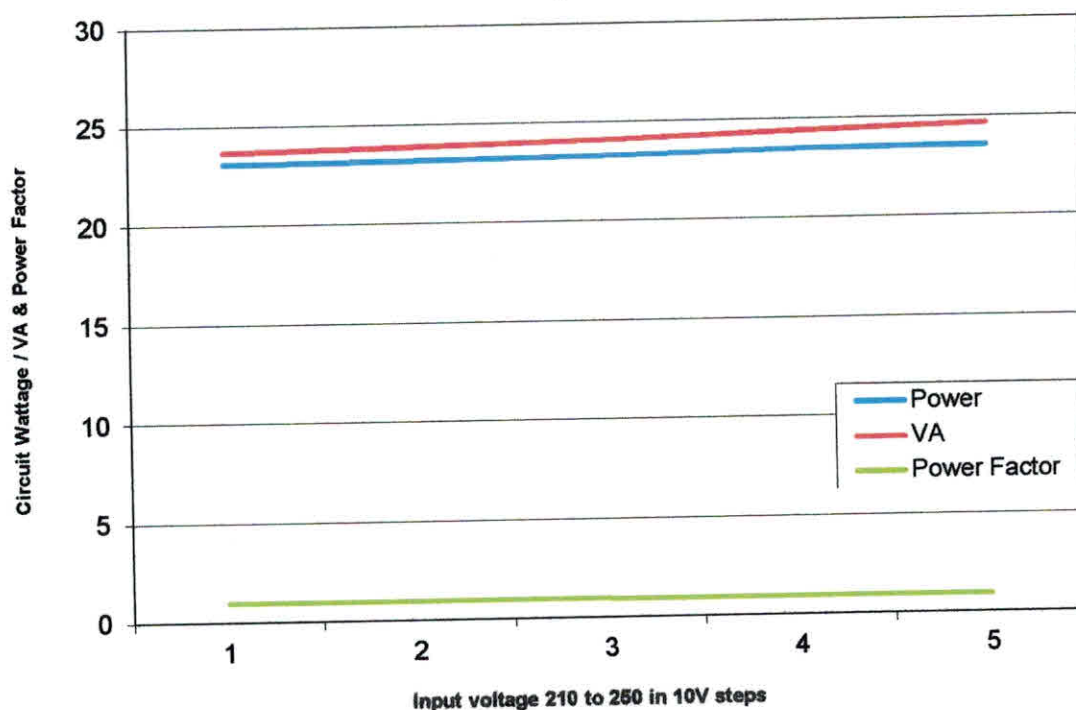
Sample No.5	Voltage	Watts	VA	Power Factor
	210	21.2	21.8	0.97
	220	21.3	22.1	0.96
	230	21.4	22.3	0.96
	240	21.6	22.7	0.95
	250	21.7	23.0	0.94

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## Graphs of Circuit Wattage Vs Circuit Voltage for each of the 5 Product Samples

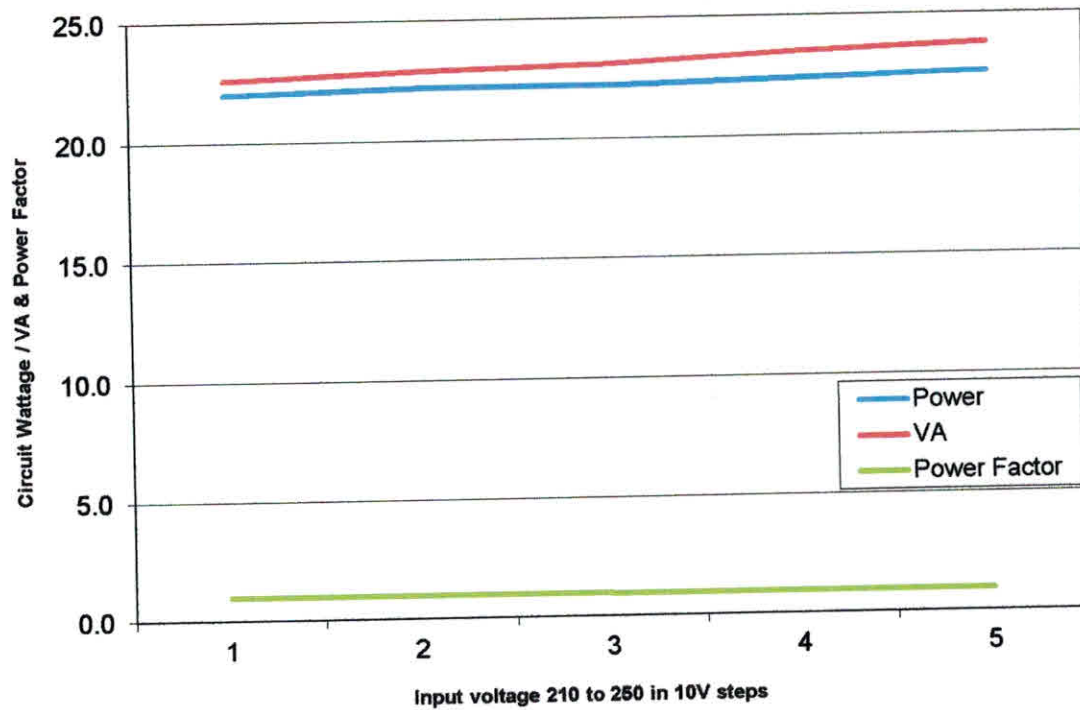
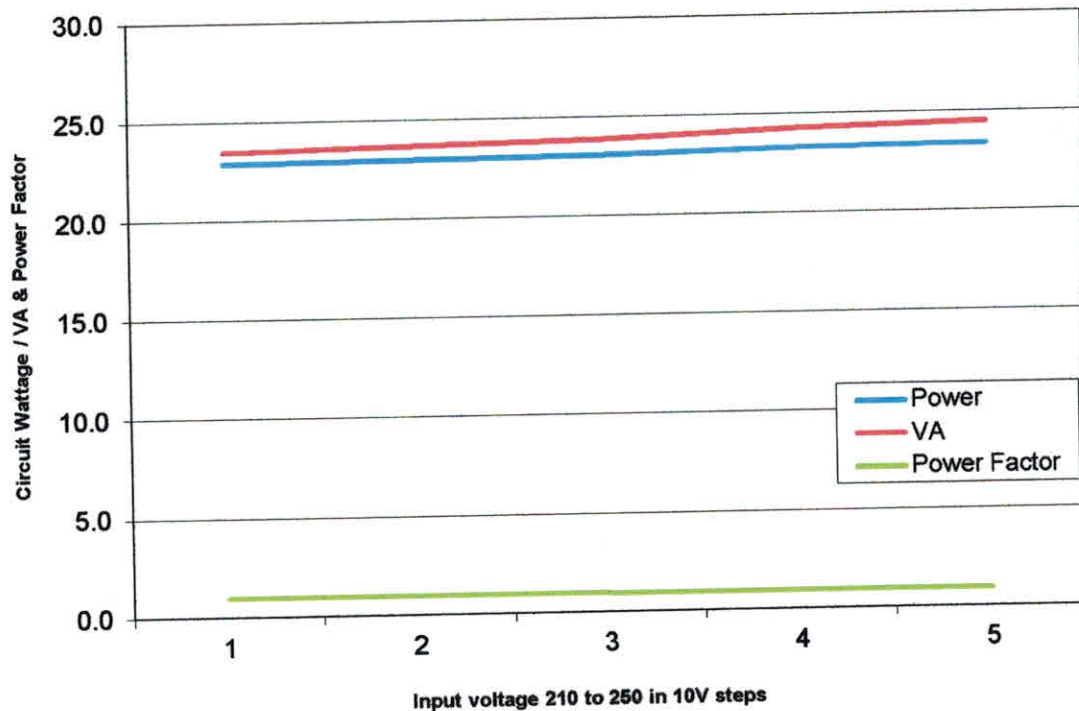
**Sample No. 1****Sample No. 2**



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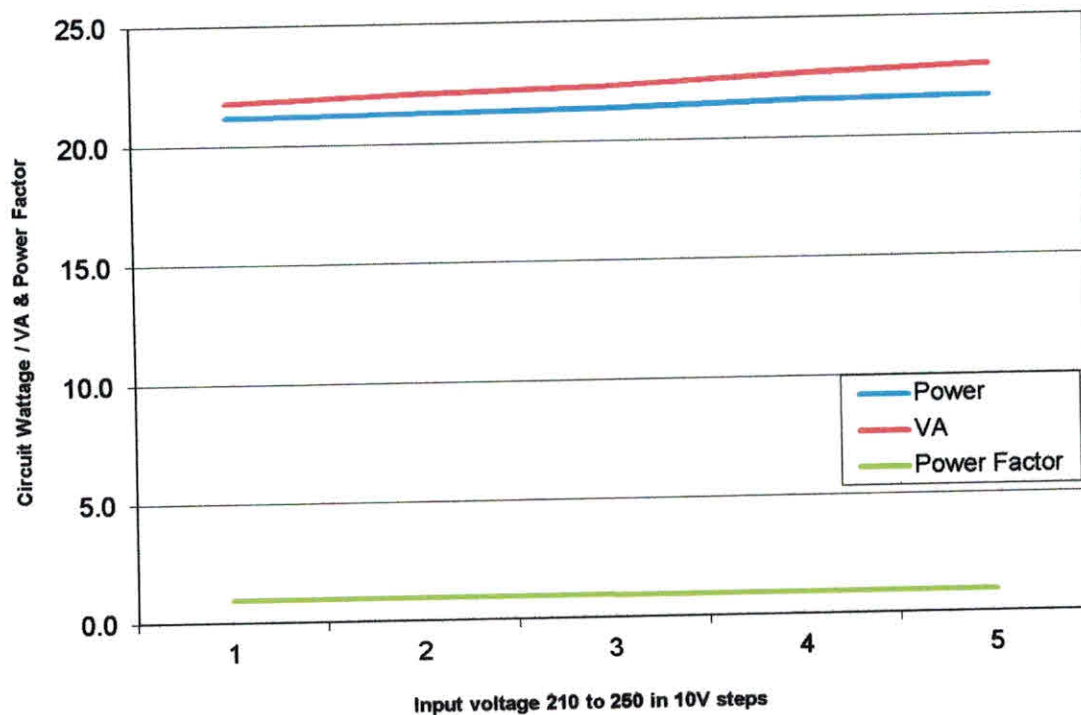
**Sample No. 3****Sample No. 4**

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## Sample No. 5



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END OF TEST REPORT