

## T e s t R e p o r t

**Report No** : Cer1561-080518A  
**Client:** : DW Windsor Ltd  
Pindar Road  
Hoddesdon  
Herts  
EN11 0DX  
**Description** : Streetlight - LED module with 16 LEDs  
**Manufacturer** : DW Windsor Ltd  
**Type/Model** : Sephora 450- 16LED  
**Test Specification** : Measurement of power consumption in accordance with the  
'Unmetered Supplies Operational Information Document' –  
Version 17.0 (15/03/2017)  
**Date Testing Started** : 11/04/2018  
**Conclusion** : Refer to body of report  
**Date of Issue** : 13/06/2018  
**Date of Expiry** : 12/06/2023

**Checked by:** **A. BOROBY**  
**Position:** Technical Lead –  
Product Safety



**Approved by:** **T. MALIK**  
**Position:** Operations Manager



## **INTRODUCTION**

The products identified in Table 1 was tested at the premises of DW Windsor Ltd for measurement of power consumption in accordance with the “Unmetered Supplies Operational Information” document – Version 17.0 (15/03/2017).

## **PRODUCT DETAILS**

**Table 1. Test Sample Details**

Product Description	Streetlight - LED module with 16 LEDs
Model No.	Sephora 450- 16LED
Number of Samples	Five
Condition on Receipt	Good
Nominal Dimensions	105mm x 621mm x 488mm
Product Supply Requirement	240V AC @ 50Hz
Lamp Type and Power	LED, Variable Power
Sampling Method: Test samples selected and supplied by client, no sampling method specified by client.	

The customer has declared that the equipment load does not vary with ambient temperature.

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## RESULTS

Table 2. *Wattage and VA results for Sephora 450- 16 LED*

<b>Operating Mode</b>	800mA @ 100% light output				
<b>Watts</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	148.50	148.23	147.52	148.10	147.79
220	148.24	147.88	147.30	147.83	147.54
230	147.94	147.68	147.07	147.68	147.62
240	147.93	147.54	147.11	147.60	147.28
250	147.92	147.48	146.94	147.59	147.38
<b>VA</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	149.91	149.68	149.07	149.69	149.28
220	150.08	149.63	149.20	149.64	149.42
230	150.02	149.80	149.34	149.79	149.79
240	150.32	150.07	149.63	150.08	149.84
250	150.88	150.38	149.86	150.39	150.38
<b>Power Factor</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	0.99	0.99	0.99	0.99	0.99
220	0.99	0.99	0.99	0.99	0.99
230	0.99	0.99	0.98	0.99	0.99
240	0.98	0.98	0.98	0.98	0.98
250	0.98	0.98	0.98	0.98	0.98
Ambient Temperature During Test (°C)		25.0			
PF Leading/Lagging		Leading			

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This page is to be read in conjunction with the first page of this report

**Table 3. Wattage and VA results for Sephora 450- 16 LED**

<b>Operating Mode</b>	800mA @ 90% light output				
<b>Watts</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	131.75	131.40	131.46	131.40	131.44
220	131.69	131.34	131.36	131.41	131.40
230	131.52	131.11	131.34	131.25	131.28
240	131.37	131.06	131.29	131.10	131.10
250	131.34	131.04	131.18	131.07	131.09
<b>VA</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	133.36	133.16	133.16	133.16	133.16
220	133.63	133.40	133.38	133.41	133.41
230	133.72	133.48	133.74	133.51	133.51
240	134.05	133.79	134.04	133.80	133.79
250	134.42	134.16	134.41	134.18	134.16
<b>Power Factor</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	0.99	0.99	0.99	0.99	0.99
220	0.99	0.98	0.98	0.99	0.98
230	0.98	0.98	0.98	0.98	0.98
240	0.98	0.98	0.98	0.98	0.98
250	0.98	0.98	0.98	0.98	0.98
Ambient Temperature During Test (°C)		24.6			
PF Leading/Lagging		Leading			

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**Table 4. Wattage and VA results for Sephora 450- 16 LED**

<b>Operating Mode</b>	800mA @ 80% light output				
<b>Watts</b>					
<b>Voltage</b>	<b>Sample Number</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
210	118.03	117.92	117.20	117.87	116.94
220	117.89	117.65	116.98	117.66	116.77
230	117.81	117.55	116.70	117.63	116.93
240	117.81	117.50	116.70	117.03	116.80
250	117.82	117.49	116.62	117.53	116.95
<b>VA</b>					
<b>Voltage</b>	<b>Sample Number</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
210	119.76	119.76	118.91	119.75	118.71
220	120.01	119.78	119.12	119.80	118.91
230	120.20	119.95	119.26	120.20	119.27
240	120.63	120.39	119.65	119.91	119.66
250	121.19	120.93	119.92	120.93	120.18
<b>Power Factor</b>					
<b>Voltage</b>	<b>Sample Number</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
210	0.99	0.98	0.99	0.98	0.99
220	0.98	0.98	0.98	0.98	0.98
230	0.98	0.98	0.98	0.98	0.98
240	0.98	0.98	0.98	0.98	0.98
250	0.97	0.97	0.97	0.97	0.97
Ambient Temperature During Test (°C)		24.1			
PF Leading/Lagging		Leading			

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Table 5. Wattage and VA results for Sephora 450- 16 LED

Operating Mode	800mA @ 70% light output				
<b>Watts</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	101.32	101.30	101.21	101.03	101.21
220	101.25	101.10	101.25	100.87	101.21
230	101.20	101.01	101.17	100.84	101.19
240	101.23	101.03	101.23	100.90	101.14
250	101.19	100.99	101.03	100.88	101.17
<b>VA</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	103.21	103.19	103.19	103.01	103.20
220	103.53	103.56	103.55	103.10	103.54
230	103.86	103.87	103.87	103.64	103.88
240	104.34	104.32	104.57	104.10	104.33
250	104.94	104.70	104.69	104.71	104.94
<b>Power Factor</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	0.98	0.98	0.98	0.98	0.98
220	0.98	0.98	0.98	0.98	0.98
230	0.97	0.97	0.97	0.97	0.97
240	0.97	0.97	0.97	0.97	0.97
250	0.96	0.96	0.97	0.96	0.96
Ambient Temperature During Test (°C)		23.8			
PF Leading/Lagging		Leading			

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**Table 6. Wattage and VA results for Sephora 450- 16 LED**

Operating Mode	800mA @ 60% light output				
<b>Watts</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	85.83	86.46	85.51	86.07	84.72
220	85.83	86.48	85.41	86.06	84.69
230	85.59	86.44	85.42	86.02	84.64
240	85.78	86.41	85.43	86.01	84.64
250	85.61	85.98	85.48	86.05	84.69
<b>VA</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	88.11	88.74	87.70	88.32	86.84
220	88.39	89.07	88.16	88.61	87.28
230	88.50	89.42	88.50	89.18	87.58
240	89.23	89.95	88.98	89.71	88.27
250	89.48	89.98	89.72	90.22	88.72
<b>Power Factor</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	0.97	0.97	0.98	0.97	0.98
220	0.97	0.97	0.97	0.97	0.97
230	0.97	0.97	0.97	0.96	0.97
240	0.96	0.96	0.96	0.96	0.96
250	0.96	0.96	0.95	0.95	0.95
Ambient Temperature During Test (°C)		24.0			
PF Leading/Lagging		Leading			

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**Table 7. Wattage and VA results for Sephora 450- 16 LED**

<b>Operating Mode</b>	800mA @ 50% light output				
<b>Watts</b>					
<b>Voltage</b>	<b>Sample Number</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
210	71.95	71.96	71.97	71.95	72.41
220	71.94	71.94	71.99	71.91	72.39
230	72.19	72.07	72.15	72.05	72.52
240	72.09	72.07	72.13	72.01	72.07
250	72.12	72.08	72.15	72.03	72.58
<b>VA</b>					
<b>Voltage</b>	<b>Sample Number</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
210	74.49	74.50	74.50	74.50	74.92
220	74.77	74.77	74.99	74.77	75.22
230	75.64	75.65	75.64	75.65	75.87
240	76.05	76.06	76.29	76.05	76.05
250	76.75	76.73	76.74	76.73	77.23
<b>Power Factor</b>					
<b>Voltage</b>	<b>Sample Number</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
210	0.97	0.97	0.97	0.97	0.97
220	0.96	0.96	0.96	0.96	0.96
230	0.95	0.95	0.95	0.95	0.96
240	0.95	0.95	0.95	0.95	0.95
250	0.94	0.94	0.94	0.94	0.94
Ambient Temperature During Test (°C)		24.0			
PF Leading/Lagging		Leading			

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**Table 8. Wattage and VA results for Sephora 450- 16 LED**

Operating Mode	800mA @ 40% light output				
<b>Watts</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	57.16	57.52	57.81	57.34	57.11
220	57.19	57.47	57.82	57.74	56.87
230	57.13	57.60	57.79	57.58	56.84
240	57.24	57.62	57.85	57.37	56.90
250	57.27	57.67	57.93	57.43	56.96
<b>VA</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	60.02	60.44	60.88	60.24	60.04
220	60.71	60.93	61.37	61.14	60.27
230	61.17	61.63	61.85	61.63	60.70
240	61.90	62.39	62.39	61.90	61.43
250	62.50	63.00	63.25	62.75	62.25
<b>Power Factor</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	0.95	0.95	0.95	0.95	0.95
220	0.94	0.94	0.94	0.94	0.94
230	0.93	0.93	0.93	0.93	0.94
240	0.92	0.92	0.93	0.93	0.93
250	0.92	0.92	0.92	0.92	0.92
Ambient Temperature During Test (°C)		24.0			
PF Leading/Lagging		Leading			

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**Table 9. Wattage and VA results for Sephora 450- 16 LED**

Operating Mode	800mA @ 30% light output				
<b>Watts</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	44.37	44.26	44.12	44.17	44.69
220	44.44	44.18	44.17	44.25	44.75
230	44.48	44.23	44.14	44.22	44.81
240	44.52	44.30	44.29	44.35	44.68
250	44.58	44.37	44.35	44.40	44.52
<b>VA</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	47.86	47.86	47.65	47.65	48.07
220	48.40	48.40	48.17	48.40	48.62
230	48.99	48.98	48.76	48.98	49.45
240	49.68	49.68	49.68	49.68	49.91
250	50.50	50.51	50.51	50.51	50.51
<b>Power Factor</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	0.93	0.92	0.93	0.93	0.93
220	0.92	0.91	0.92	0.91	0.92
230	0.91	0.90	0.91	0.90	0.91
240	0.90	0.89	0.89	0.89	0.90
250	0.88	0.88	0.88	0.88	0.88
Ambient Temperature During Test (°C)		24.0			
PF Leading/Lagging		Leading			

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Table 10. Wattage and VA results for Sephora 450- 16 LED

Operating Mode	800mA @ 20% light output				
<b>Watts</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	30.83	30.81	30.57	30.76	30.76
220	31.09	31.07	30.87	31.03	30.96
230	31.21	31.17	31.03	31.17	31.01
240	31.32	31.27	31.13	31.28	31.15
250	31.23	31.35	31.23	31.37	31.21
<b>VA</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	35.06	35.27	34.85	35.06	35.06
220	35.86	35.86	35.86	36.08	35.86
230	36.80	36.80	36.57	36.80	36.57
240	37.68	37.68	37.44	37.68	37.45
250	38.26	38.75	38.50	38.75	38.26
<b>Power Factor</b>					
Voltage	Sample Number				
	1	2	3	4	5
210	0.88	0.87	0.88	0.88	0.88
220	0.87	0.87	0.86	0.86	0.86
230	0.85	0.85	0.85	0.85	0.85
240	0.83	0.83	0.83	0.83	0.83
250	0.82	0.81	0.81	0.81	0.82
Ambient Temperature During Test (°C)		24.0			
PF Leading/Lagging		Leading			

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### **DEVIATION(S) FROM TEST STANDARD**

No reported deviations from test standard.

### **MEASUREMENT UNCERTAINTY**

The following expanded uncertainties apply to the measurements shown in the results;

For power range 5W to 50W

True Power (W):  $\pm 0.25\%$ , Apparent Power (VA):  $\pm 0.39\%$

For power range 50W to 100W

True Power (W):  $\pm 0.25\%$ , Apparent Power (VA):  $\pm 0.39\%$

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k=2$ , providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

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**ILLUSTRATION**



**Figure 1. *Product image***

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**End**