

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

**Report No** : U10005

**Client:** : Zeta Specialist Lighting  
2 Performance Close  
Telford Road  
Bicester  
Oxfordshire  
OX26 4LB

**Description** : Macro Light Engine

**Manufacturer** : Zeta Specialist Lighting

**Type/Model** : Smartscape macro

**Test Specification** : Measurement of power consumption in accordance with the  
'Unmetered Supplies Operational Information Document' –  
Version 17.0 (15/03/2017)

**Date Testing Started** : 24/07/2017

**Conclusion** : Refer to body of report

**Date of Issue** : 25/07/2017

**Date of Expiry** : 24/07/2022

**Tested by:** N. GABIR  
**Position:** Photometry Technician



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



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## **INTRODUCTION**

Zeta Specialist Lighting has supplied the product identified in table 1 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	Macro Light Engine
Model No.	Smartscape Macro
Number of Samples	Five
Condition on Receipt	Good
Nominal Dimensions	L 530mm x W 210mm x H 110mm
Product Supply Requirement	220-240V AC, 50/60Hz
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 Macro Light Engine**

Operating Mode	150W - Dali code: 254				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	147.93	147.68	148.68	148.13	147.29
220	147.29	147.06	148.05	147.46	146.74
230	146.90	146.66	147.69	147.01	146.39
240	146.74	146.46	147.47	146.77	146.18
250	146.58	146.30	147.31	146.55	146.01
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	149.44	149.18	150.17	149.61	148.77
220	149.06	148.80	149.79	149.20	148.47
230	148.97	148.70	149.72	149.04	148.41
240	149.16	148.83	149.84	149.14	148.54
250	149.38	149.05	150.07	149.31	148.75
Power Factor					
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	0.99	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)			25.4		
PF Leading/Lagging			Leading		

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**Table 3. Wattage and VA results for Macro Light Engine**

Operating Mode	120W - Dali code: 247				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	120.50	120.42	121.00	120.38	119.73
220	120.16	120.05	120.05	120.00	119.38
230	120.01	119.89	120.48	119.81	119.22
240	119.89	119.79	120.37	119.66	119.12
250	119.83	119.72	120.29	119.58	119.03
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	122.21	122.10	122.69	122.07	121.41
220	122.18	122.05	122.05	121.99	121.37
230	122.39	122.25	122.85	122.17	121.57
240	122.68	122.53	123.12	122.40	121.85
250	123.05	122.89	123.45	122.74	122.18
Power Factor					
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	0.99	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)			24.8		
PF Leading/Lagging			Leading		

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**Table 4. Wattage and VA results for Macro Light Engine**

Operating Mode	100W - Dali code: 241				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	101.39	101.38	101.83	101.34	100.51
220	101.38	101.36	101.80	101.34	100.50
230	101.33	101.31	101.76	101.30	100.44
240	101.31	101.28	101.73	101.28	100.43
250	101.41	101.26	101.83	101.40	100.55
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	103.34	103.31	103.75	103.26	102.43
220	103.67	103.62	104.06	103.59	102.75
230	104.01	103.95	104.40	103.94	103.07
240	104.42	104.36	104.82	104.36	103.49
250	105.01	104.82	105.39	104.96	104.08
Power Factor					
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	0.97	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 Macro Light Engine**

Operating Mode	80W - Dali code: 233				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	81.11	81.47	81.40	80.79	80.48
220	81.19	81.55	81.47	80.89	80.57
230	81.30	81.65	81.58	81.03	80.69
240	81.34	81.68	81.62	81.08	80.73
250	81.38	81.72	81.65	81.12	80.76
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	83.40	83.73	83.65	83.05	82.73
220	83.87	84.18	84.11	83.53	83.19
230	84.40	84.70	84.64	84.09	83.73
240	84.93	85.21	85.15	84.62	84.24
250	81.38	81.72	81.65	81.12	80.76
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.97	0.97	0.97	0.97	0.97
220	0.97	0.97	0.97	0.97	0.97
230	0.96	0.96	0.96	0.96	0.96
240	0.96	0.96	0.96	0.96	0.96
250	1.00	1.00	1.00	1.00	1.00
Ambient Temperature During Test (°C)			25.8		
PF Leading/Lagging			Leading		

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**Table 6. Wattage and VA results for Macro Light Engine**

Operating Mode	50W - Dali code: 215				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	50.80	50.44	50.92	50.28	49.82
220	50.91	50.57	51.04	50.41	49.95
230	50.99	50.68	51.13	50.51	50.05
240	51.09	50.79	51.22	50.61	50.15
250	51.16	50.88	51.31	50.70	50.24
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	53.91	53.53	53.99	53.37	52.89
220	54.51	54.15	54.59	53.98	53.49
230	55.14	54.79	55.20	54.61	54.13
240	55.81	55.48	55.89	55.31	54.80
250	56.54	56.21	56.60	56.04	55.53
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.94	0.94	0.94	0.94	0.94
220	0.93	0.93	0.93	0.93	0.93
230	0.92	0.92	0.93	0.92	0.92
240	0.92	0.92	0.92	0.92	0.92
250	0.90	0.91	0.91	0.90	0.90
Ambient Temperature During Test (°C)			25.4		
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;

True Power (W):  $\pm 0.69\%$ , Apparent Power (VA):  $\pm 0.61\%$

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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