

T e s t R e p o r t

Report No : Cer1561-220517C
Client: : DW Windsor Ltd
Pindar Road
Hoddesdon
Herts
EN11 0DX
Description : Street Lights - CoB LED module CX2 1210
Manufacturer : DW Windsor Ltd
Type/Model : CoB LED Engine CX2
Test Specification : Measurement of power consumption in accordance with the
'Unmetered Supplies Operational Information Document' –
Version 16.0 (15/06/2016)
Date Testing Started : 11/05/2017
Conclusion : Refer to body of report
Date of Issue : 02/06/2017
Date of Expiry : 01/06/2022

Reviewed by: J. ADAMS
Position: Accreditation &
Certification Officer



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 16.0 (15/06/2016).

PRODUCT DETAILS

Table 1. Test Sample Details

Product Description	Street Lights - CoB LED module CX2 1210
Model No.	CoB LED Engine CX2
Number of Samples	Five
Condition on Receipt	Good
Nominal Dimensions	440mm x 440mm x 833mm
Product Supply Requirement	240V AC 50 Hz
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 Street Lights - CoB LED module CX2 1210

Operating Mode	1000mA Drive Current @ 100% light output				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	39.84	39.42	40.10	39.43	39.97
220	39.79	39.38	40.07	39.39	39.91
230	39.75	39.30	40.02	39.36	39.86
240	39.70	39.27	39.95	39.30	39.83
250	39.65	39.24	39.93	39.27	39.80
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	40.31	39.89	40.51	39.89	40.31
220	40.26	39.83	40.48	39.82	40.48
230	40.25	39.79	40.71	40.01	40.48
240	40.32	39.84	40.56	40.08	40.55
250	40.50	40.00	40.75	40.00	40.51
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	0.98	0.98	0.98
240	0.98	0.99	0.98	0.98	0.98
250	0.98	0.98	0.98	0.98	0.98
Ambient Temperature During Test (°C)			24.0		
PF Leading/Lagging			Leading		

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Table 3. Wattage and VA results for Street Lights - CoB LED module CX2 1210

Operating Mode	1000mA Drive Current @ 80% light output				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	31.56	31.24	31.72	31.24	31.63
220	31.52	31.20	31.69	31.22	31.61
230	31.48	31.16	31.65	31.18	31.56
240	31.45	31.14	31.61	31.16	31.55
250	31.45	31.12	31.60	31.15	31.53
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	32.12	31.70	32.33	31.70	32.12
220	32.12	31.68	32.34	31.90	32.12
230	32.20	31.74	32.43	31.97	32.20
240	32.16	31.92	32.40	31.92	32.40
250	32.25	32.00	32.51	32.00	32.25
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.98	0.99	0.98	0.99	0.98
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	0.97
250	0.98	0.97	0.97	0.97	0.98
Ambient Temperature During Test (°C)			24.0		
PF Leading/Lagging			Leading		

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Table 4. Wattage and VA results for Street Lights - CoB LED module CX2 1210

Operating Mode	Drive Current 1000mA @ 60% light output				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	23.20	22.97	23.28	23.01	23.27
220	23.20	22.96	23.27	23.00	23.26
230	23.18	22.95	23.26	22.99	23.25
240	23.18	22.95	23.25	22.98	23.25
250	23.20	22.95	23.27	22.99	23.25
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	23.93	23.51	23.93	23.72	23.93
220	23.98	23.75	23.98	23.76	23.98
230	24.15	23.92	24.15	23.92	24.15
240	24.23	24.00	24.23	24.00	24.23
250	24.25	24.00	24.50	24.00	24.25
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.97	0.98	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	0.96	0.96	0.95	0.96	0.96
Ambient Temperature During Test (°C)			25.0		
PF Leading/Lagging			Leading		

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Table 5. Wattage and VA results for Street Lights - CoB LED module CX2 1210

Operating Mode	1000mA Drive Current @ 40% light output				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	15.58	15.44	15.63	15.47	15.61
220	15.61	15.45	15.64	15.48	15.64
230	15.61	15.47	15.65	15.50	15.65
240	15.63	15.48	15.66	15.51	15.66
250	15.64	15.50	15.68	15.53	15.68
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	16.39	16.39	16.60	16.39	16.39
220	16.73	16.51	16.73	16.51	16.51
230	16.79	16.56	16.80	16.80	16.79
240	17.05	16.80	17.04	16.80	17.04
250	17.26	17.00	17.26	17.01	17.26
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.95	0.94	0.94	0.94	0.95
220	0.93	0.94	0.93	0.94	0.95
230	0.93	0.93	0.93	0.92	0.93
240	0.92	0.92	0.92	0.92	0.92
250	0.91	0.91	0.91	0.91	0.91
Ambient Temperature During Test (°C)			25.0		
PF Leading/Lagging			Leading		

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Table 6. Wattage and VA results for Street Lights - CoB LED module CX2 1210

Operating Mode	1000mA Drive Current @ 20% light output				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	8.61	8.52	8.62	8.55	8.51
220	8.64	8.56	8.65	8.58	8.60
230	8.67	8.58	8.69	8.60	8.64
240	8.71	8.62	8.72	8.64	8.70
250	8.74	8.66	8.76	8.68	8.73
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	10.08	9.87	10.08	9.87	9.87
220	10.35	10.13	10.35	10.13	10.13
230	10.59	10.36	10.59	10.58	10.36
240	10.81	10.80	10.81	10.81	10.56
250	11.26	11.01	11.26	11.01	11.01
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.85	0.86	0.86	0.87	0.86
220	0.83	0.85	0.84	0.85	0.85
230	0.82	0.83	0.82	0.81	0.83
240	0.81	0.80	0.81	0.80	0.82
250	0.78	0.79	0.78	0.79	0.79
Ambient Temperature During Test (°C)			26.0		
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): $\pm 0.36\%$

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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