



Test Report

Report No : L14090
Client: : D W Windsor Ltd
Pindar Road
Hoddesdon
Herts, EN11 0DX
Description : Street light 1 and 2, single module driver and rotary switch control driver
Manufacturer : Not Disclosed
Type/Model : 1LX2-113-15, 2LX2-113-15, 3LX2-113-15
Test Specification : Measurement of power consumption in accordance with the "Unmetered Supplies Operational Information" document – Version 12.0 (29/11/12)
Date Tested : 20/02/14
Conclusion : Refer to body of Report
Date of Issued : 26/02/14
Date of Expiry : 26/02/19

Tested by: S.RICHARDS
Position: Photometric Engineer



Approved by: K.GOVINDEN
Position: Technical Manager

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INTRODUCTION

D.W.Windsor has supplied the product identified in table 1 for measurement of power consumption in accordance with the "Unmetered Supplies Operational Information" document – Version 12.0 (29/11/12).

PRODUCT DETAILS

Table 1. Test Sample Details

| | |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Description | Street light 1 and 2, single module driver and rotary switch control driver |
| Model No. | 1LX2-113-15, 2LX2-113-15, 3LX2-113-15 |
| Number of Samples | 5 x Streetlight 1 LED Module 700mA driver 5 x Streetlight 2 LED Modules 700mA driver 5 x 350mA driver (alternative component for use with Streetlight 1 LED Module) 5 x 525mA and 590mA driver (alternative component for use with Streetlight 1 LED Module) 5 x Streetlight 3 LED Modules 700mA driver |
| Condition on Receipt | Good |
| Nominal Dimensions | N/A |
| Product Supply Requirement | N/A |
| Lamp Type and Power | LED |
| Sampling Method: Test samples selected and supplied by client, no sampling method specified by client. | |

RESULTS – 1LX2-113-15 – 700mA 100P with Philips Driver

Table 2. Wattage and VA results for 100%

Watts

| Voltage | Sample Number | | | | |
|---------|---------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 35.16 | 34.94 | 35.40 | 34.66 | 34.67 |
| 220 | 35.10 | 34.85 | 35.35 | 34.64 | 34.65 |
| 230 | 35.08 | 34.84 | 35.32 | 34.62 | 34.63 |
| 240 | 35.06 | 34.66 | 35.30 | 34.62 | 34.63 |
| 250 | 35.05 | 34.68 | 35.30 | 34.59 | 34.60 |

VA

| Voltage | Sample Number | | | | |
|---------|---------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 36.52 | 36.25 | 36.73 | 36.22 | 36.14 |
| 220 | 36.62 | 36.32 | 36.83 | 36.34 | 36.26 |
| 230 | 36.77 | 36.47 | 36.98 | 36.48 | 36.40 |
| 240 | 36.95 | 36.50 | 37.16 | 36.67 | 36.58 |
| 250 | 37.17 | 36.72 | 37.36 | 36.85 | 36.77 |

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RESULTS – 1LX2-113-15 – 700mA 075P with Philips Driver

Table 3. *Wattage and VA results for 75%*

Watts

| Voltage | Sample Number | | | | |
|---------|---------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 25.99 | 25.31 | 25.84 | 25.45 | 25.56 |
| 220 | 26.00 | 25.32 | 25.85 | 25.46 | 25.57 |
| 230 | 26.02 | 25.34 | 25.87 | 25.47 | 25.58 |
| 240 | 26.04 | 25.53 | 25.89 | 25.48 | 25.61 |
| 250 | 26.06 | 25.57 | 25.92 | 25.51 | 25.63 |

VA

| Voltage | Sample Number | | | | |
|---------|---------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 27.53 | 26.80 | 27.35 | 27.13 | 27.22 |
| 220 | 27.72 | 26.99 | 27.54 | 27.31 | 27.39 |
| 230 | 27.94 | 27.20 | 27.76 | 27.54 | 27.56 |
| 240 | 28.19 | 27.62 | 27.99 | 27.78 | 27.81 |
| 250 | 28.48 | 27.90 | 28.29 | 28.04 | 28.07 |

RESULTS – 1LX2-113-15 – 700mA 050P with Philips Driver

Table 4. *Wattage and VA results for 50%*

Watts

| Voltage | Sample Number | | | | |
|---------|---------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 18.19 | 17.89 | 18.26 | 17.88 | 17.96 |
| 220 | 18.22 | 17.92 | 18.29 | 17.91 | 17.99 |
| 230 | 18.26 | 18.05 | 18.33 | 17.95 | 18.03 |
| 240 | 18.30 | 18.05 | 18.37 | 17.99 | 18.07 |
| 250 | 18.34 | 18.28 | 18.41 | 18.03 | 18.12 |

VA

| Voltage | Sample Number | | | | |
|---------|---------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 19.98 | 19.61 | 20.02 | 19.77 | 19.83 |
| 220 | 20.22 | 19.85 | 20.26 | 20.00 | 20.06 |
| 230 | 20.52 | 20.23 | 20.54 | 20.30 | 20.35 |
| 240 | 20.81 | 20.48 | 20.85 | 20.60 | 20.64 |
| 250 | 21.19 | 21.02 | 21.16 | 20.95 | 21.00 |

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RESULTS – 2LX2-113-15 – 700 mA 100P with Philips Driver

Table 5. Wattage and VA results for 100%

Watts

| Voltage | Sample Number | | | | |
|---------|---------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 67.59 | 67.80 | 67.70 | 67.82 | 67.45 |
| 220 | 67.49 | 67.68 | 67.60 | 67.69 | 67.42 |
| 230 | 67.51 | 67.57 | 67.45 | 67.55 | 67.42 |
| 240 | 67.53 | 67.55 | 67.43 | 67.52 | 67.46 |
| 250 | 67.40 | 67.53 | 67.40 | 67.51 | 67.48 |

VA

| Voltage | Sample Number | | | | |
|---------|---------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 69.23 | 69.40 | 69.32 | 69.48 | 69.10 |
| 220 | 69.36 | 69.49 | 69.45 | 69.57 | 69.28 |
| 230 | 69.64 | 69.63 | 69.55 | 69.68 | 69.53 |
| 240 | 69.94 | 69.89 | 69.80 | 69.93 | 69.84 |
| 250 | 70.12 | 70.18 | 70.09 | 70.22 | 70.16 |

RESULTS – 2LX2-113-15 – 700 mA 075P with Philips Driver

Table 6. Wattage and VA results for 75%

Watts

| Voltage | Sample Number | | | | |
|---------|---------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 48.82 | 48.87 | 49.02 | 49.62 | 49.19 |
| 220 | 48.84 | 48.90 | 49.04 | 49.65 | 49.22 |
| 230 | 48.87 | 48.95 | 49.08 | 49.70 | 49.26 |
| 240 | 48.90 | 49.00 | 49.13 | 49.75 | 49.31 |
| 250 | 48.95 | 49.06 | 49.46 | 49.82 | 49.37 |

VA

| Voltage | Sample Number | | | | |
|---------|---------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 50.74 | 50.75 | 50.91 | 51.54 | 51.10 |
| 220 | 51.04 | 51.05 | 51.20 | 51.84 | 51.40 |
| 230 | 51.38 | 51.39 | 51.55 | 52.19 | 51.74 |
| 240 | 51.76 | 51.78 | 51.94 | 52.58 | 52.13 |
| 250 | 52.19 | 52.23 | 52.64 | 53.02 | 52.55 |

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RESULTS – 2LX2-113-15-700mA – 050P with Philips Driver

Table 7. Wattage and VA results for 50%

| Watts | | | | | |
|---------|---------------|-------|-------|-------|-------|
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 34.09 | 33.99 | 34.04 | 34.70 | 34.79 |
| 220 | 34.15 | 34.04 | 34.09 | 34.75 | 34.84 |
| 230 | 34.24 | 34.10 | 34.15 | 34.81 | 34.89 |
| 240 | 34.32 | 34.17 | 34.21 | 34.88 | 34.96 |
| 250 | 34.39 | 34.25 | 34.29 | 34.96 | 35.04 |
| VA | | | | | |
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 36.42 | 36.28 | 36.34 | 37.02 | 37.09 |
| 220 | 36.83 | 36.68 | 36.73 | 37.42 | 37.47 |
| 230 | 37.32 | 37.13 | 37.17 | 37.87 | 37.90 |
| 240 | 37.85 | 37.64 | 37.68 | 38.36 | 38.40 |
| 250 | 38.41 | 38.20 | 38.24 | 38.92 | 38.95 |

RESULTS – 1LX2-113-15-350mA 100H with Harvard Driver

Table 8. Wattage and VA results for 100%

| Watts | | | | | |
|---------|---------------|-------|-------|-------|-------|
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 17.11 | 16.63 | 17.33 | 17.11 | 16.65 |
| 220 | 17.19 | 16.69 | 17.40 | 17.16 | 16.73 |
| 230 | 17.29 | 16.76 | 17.43 | 17.22 | 16.83 |
| 240 | 17.40 | 16.84 | 17.49 | 17.28 | 16.95 |
| 250 | 17.52 | 16.93 | 17.62 | 17.37 | 17.08 |
| VA | | | | | |
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 18.39 | 18.15 | 18.61 | 18.57 | 18.21 |
| 220 | 18.63 | 18.38 | 18.82 | 18.76 | 18.44 |
| 230 | 18.89 | 18.64 | 19.01 | 18.99 | 18.72 |
| 240 | 19.18 | 18.91 | 19.25 | 19.23 | 18.99 |
| 250 | 19.47 | 19.19 | 19.56 | 19.52 | 19.30 |

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RESULTS – 1LX2-113-15-525mA 100H with Harvard Driver

Table 9. Wattage and VA results for 100%

| Watts | | | | | |
|----------------|----------------------|----------|----------|----------|----------|
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 25.91 | 25.73 | 25.94 | 25.61 | 25.30 |
| 220 | 25.97 | 25.78 | 26.00 | 25.68 | 25.36 |
| 230 | 26.03 | 25.84 | 26.07 | 25.74 | 25.43 |
| 240 | 26.09 | 25.90 | 26.14 | 25.80 | 25.51 |
| 250 | 26.16 | 25.98 | 26.22 | 25.87 | 25.59 |
| VA | | | | | |
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 27.65 | 27.64 | 27.65 | 27.42 | 27.59 |
| 220 | 27.88 | 27.88 | 27.88 | 27.67 | 27.86 |
| 230 | 28.14 | 28.14 | 28.13 | 27.92 | 28.15 |
| 240 | 28.41 | 28.41 | 28.40 | 28.19 | 28.45 |
| 250 | 28.71 | 28.71 | 28.68 | 28.48 | 28.78 |

RESULTS – 1LX2-113-15-590mA 100H with Harvard Driver

Table 10. Wattage and VA results for 100%

| Watts | | | | | |
|----------------|----------------------|----------|----------|----------|----------|
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 29.51 | 29.12 | 29.28 | 28.84 | 28.67 |
| 220 | 29.55 | 29.16 | 29.35 | 28.90 | 28.72 |
| 230 | 29.59 | 29.21 | 29.42 | 28.96 | 28.78 |
| 240 | 29.65 | 29.26 | 29.49 | 29.03 | 28.84 |
| 250 | 29.70 | 29.33 | 29.56 | 29.10 | 28.92 |
| VA | | | | | |
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 31.07 | 31.01 | 30.80 | 30.47 | 30.71 |
| 220 | 31.29 | 31.23 | 31.03 | 30.70 | 30.96 |
| 230 | 31.52 | 31.46 | 31.26 | 30.95 | 31.22 |
| 240 | 31.76 | 31.72 | 31.51 | 31.21 | 31.51 |
| 250 | 32.03 | 32.00 | 31.78 | 31.48 | 31.81 |

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RESULTS – 3LX2-113-15-700mA 100P with Philips Driver

Table 11 *Wattage and VA results for 100%*

| Watts | | | | | |
|---------|---------------|--------|--------|--------|--------|
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 101.61 | 99.91 | 100.14 | 101.51 | 100.46 |
| 220 | 101.56 | 99.91 | 100.10 | 101.42 | 100.24 |
| 230 | 101.34 | 99.78 | 99.93 | 101.37 | 100.24 |
| 240 | 101.31 | 99.78 | 99.91 | 101.40 | 100.26 |
| 250 | 101.34 | 99.82 | 99.95 | 101.47 | 100.30 |
| VA | | | | | |
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 103.87 | 102.10 | 102.47 | 103.77 | 102.78 |
| 220 | 104.17 | 102.44 | 102.77 | 104.03 | 102.91 |
| 230 | 104.34 | 102.68 | 102.97 | 104.36 | 103.29 |
| 240 | 104.71 | 103.08 | 103.34 | 104.81 | 103.72 |
| 250 | 105.20 | 103.58 | 103.81 | 105.34 | 104.22 |

RESULTS – 3LX2-113-15-700mA 075P with Philips Driver

Table 12. *Wattage and VA results for 75%*

| Watts | | | | | |
|---------|---------------|-------|-------|-------|-------|
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 71.14 | 70.93 | 71.54 | 72.05 | 71.81 |
| 220 | 71.22 | 70.97 | 71.61 | 72.05 | 71.83 |
| 230 | 71.31 | 71.10 | 71.71 | 72.10 | 71.93 |
| 240 | 71.43 | 71.21 | 71.82 | 72.15 | 72.02 |
| 250 | 71.56 | 71.31 | 71.94 | 72.26 | 72.12 |
| VA | | | | | |
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 73.77 | 73.44 | 74.13 | 74.69 | 74.46 |
| 220 | 74.24 | 73.87 | 74.55 | 75.07 | 74.85 |
| 230 | 74.75 | 74.40 | 75.06 | 75.52 | 75.33 |
| 240 | 75.33 | 74.96 | 75.60 | 76.01 | 75.85 |
| 250 | 75.94 | 75.54 | 76.19 | 76.60 | 76.42 |

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RESULTS – 3LX2-113-15-700mA 50P with Philips Driver

Table 13. *Wattage and VA results for 50%*

| Watts | | | | | |
|---------|---------------|-------|-------|-------|-------|
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 50.73 | 49.16 | 50.19 | 49.77 | 50.76 |
| 220 | 50.85 | 49.28 | 50.32 | 49.88 | 50.86 |
| 230 | 50.99 | 49.43 | 50.46 | 50.01 | 50.98 |
| 240 | 51.15 | 49.59 | 50.61 | 50.16 | 51.11 |
| 250 | 51.32 | 49.76 | 50.78 | 50.33 | 51.27 |
| VA | | | | | |
| Voltage | Sample Number | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 210 | 53.73 | 52.11 | 53.11 | 52.75 | 53.69 |
| 220 | 54.26 | 52.63 | 53.65 | 53.26 | 54.21 |
| 230 | 54.87 | 53.24 | 54.25 | 53.86 | 54.78 |
| 240 | 55.54 | 53.90 | 54.90 | 54.51 | 55.43 |
| 250 | 56.25 | 54.60 | 55.60 | 55.21 | 56.12 |

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DEVIATION(S) FROM TEST STANDARD

No reported deviations from test standard.

MEASUREMENT UNCERTAINTY

Equipment number 280 uncertainty of measurement for AC voltage $\pm 0.01\%$

Equipment number 280 uncertainty of measurement for AC current $\pm 0.03\%$

Equipment number 280 uncertainty of measurement for AC power $\pm 0.08\%$

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ILLUSTRATION



Figure 1. *Image of tested samples*

End