

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P315936

Luminaire Tested: **LDA2B10SP9024D010 PINW1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315936  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-7)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA2B10SP9024D010 PINW1MW  
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj PinHole, Black oculus, matte white finish  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 776.3 lumens  
Efficiency: N/A  
Efficacy: 77.6 lumens/watt  
Spacing Criteria (0/90/45): 0.32 / 0.3 / 0.32  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

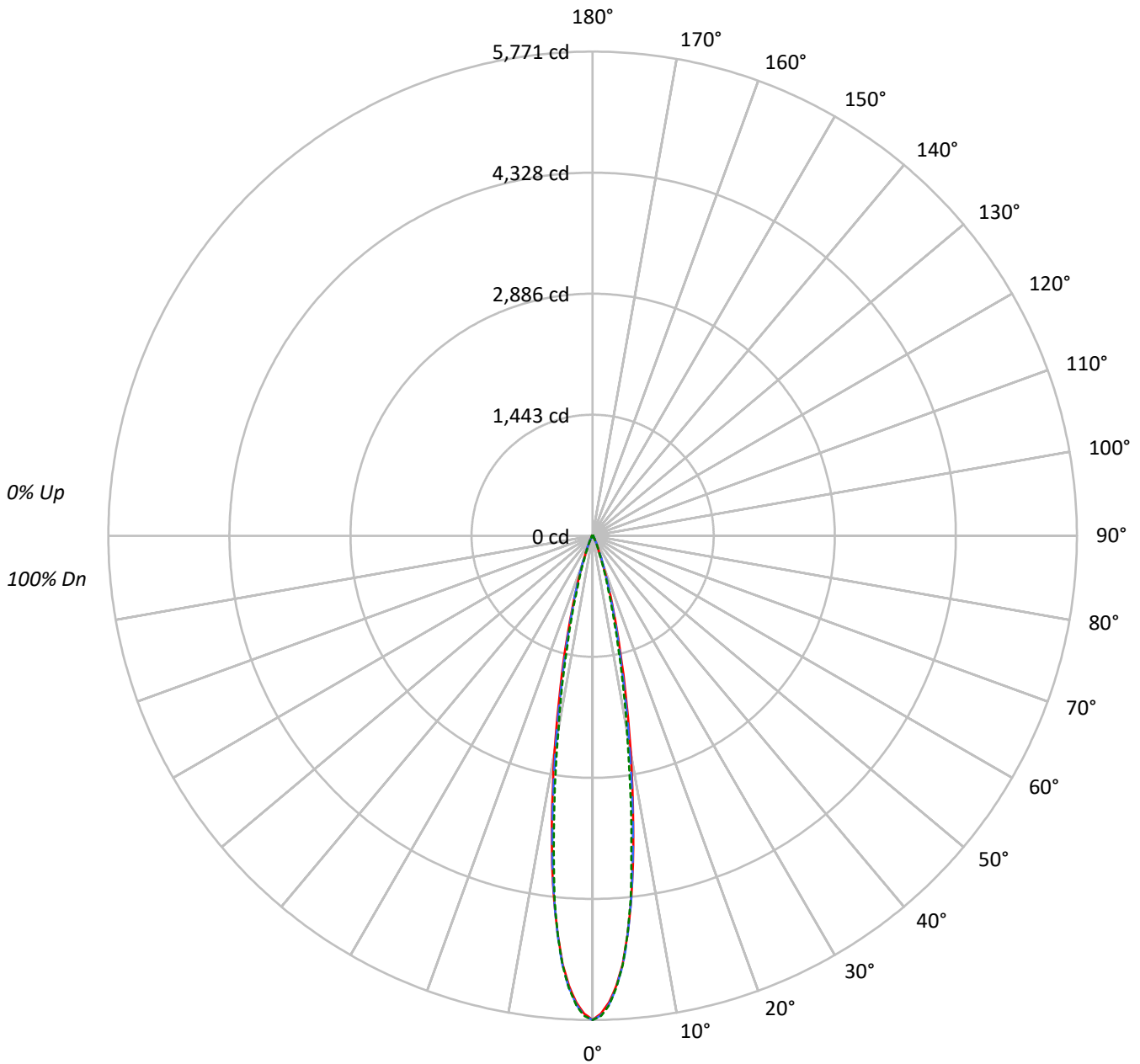
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |    |     |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 50  |     |     |     |     |     |     |     |     | 30 |    |    |     |  |  |  |  |  | 10 |  |  |  |  |  |  |  |  | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 0  |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |    | 100 |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 115 | 113 | 111 | 109 | 113 | 111 | 109 | 107 | 107 | 105 | 104 | 103 | 102 | 101 | 100 | 99  | 98  | 96  | 96 | 98 | 96 | 96  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 103 | 101 | 99  | 100 | 98  | 97  | 98  | 96  | 95  | 94  | 96 | 94 | 92 | 94  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 108 | 104 | 100 | 97  | 106 | 102 | 99  | 97  | 100 | 97  | 95  | 98  | 95  | 94  | 96  | 94  | 92  | 91  | 96 | 94 | 92 | 91  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 105 | 100 | 96  | 93  | 104 | 99  | 96  | 93  | 97  | 94  | 92  | 95  | 93  | 91  | 94  | 92  | 90  | 89  | 94 | 92 | 90 | 89  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 102 | 97  | 93  | 90  | 101 | 96  | 93  | 90  | 95  | 91  | 89  | 93  | 90  | 88  | 92  | 89  | 88  | 87  | 92 | 89 | 88 | 87  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 100 | 94  | 90  | 88  | 99  | 94  | 90  | 87  | 92  | 89  | 87  | 91  | 88  | 86  | 90  | 88  | 86  | 85  | 90 | 88 | 86 | 85  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 98  | 92  | 88  | 85  | 97  | 91  | 88  | 85  | 90  | 87  | 85  | 89  | 86  | 84  | 88  | 86  | 84  | 83  | 88 | 86 | 84 | 83  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 96  | 90  | 86  | 83  | 95  | 89  | 86  | 83  | 88  | 85  | 83  | 87  | 85  | 82  | 87  | 84  | 82  | 81  | 87 | 84 | 82 | 81  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 94  | 88  | 84  | 81  | 93  | 87  | 84  | 81  | 86  | 83  | 81  | 86  | 83  | 81  | 85  | 82  | 81  | 80  | 85 | 82 | 81 | 80  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 92  | 86  | 82  | 80  | 91  | 85  | 82  | 80  | 85  | 82  | 79  | 84  | 81  | 79  | 84  | 81  | 79  | 78  | 84 | 81 | 79 | 78  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°      | 45°     | 90°     |
|-----|---------|---------|---------|
| 0°  | 2847191 | 2847191 | 2847191 |
| 5°  | 2362028 | 2369704 | 2360740 |
| 10° | 1307338 | 1260097 | 1173829 |
| 15° | 529204  | 506169  | 449423  |
| 20° | 177301  | 188011  | 152205  |
| 25° | 67447   | 67719   | 64072   |
| 30° | 30250   | 29738   | 28769   |
| 35° | 14635   | 13070   | 10420   |
| 40° | 9661    | 12237   | 8566    |
| 45° | 2442    | 4047    | 3698    |
| 50° | 691     | 998     | 1382    |
| 55° | 6107    | 5333    | 8343    |
| 60° | 8782    | 7006    | 11347   |
| 65° | 4086    | 10857   | 10390   |
| 70° | 3895    | 3173    | 3895    |
| 75° | 1716    | 4194    | 11818   |
| 80° | 20172   | 27559   | 25286   |
| 85° | 0       | 12454   | 15284   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 378.0  | 48.7      |
| 10°-20°   | 286.3  | 36.9      |
| 20°-30°   | 65.1   | 8.4       |
| 30°-40°   | 19.2   | 2.5       |
| 40°-50°   | 6.4    | 0.8       |
| 50°-60°   | 5.6    | 0.7       |
| 60°-70°   | 6.8    | 0.9       |
| 70°-80°   | 4.3    | 0.6       |
| 80°-90°   | 4.5    | 0.6       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 729.4  | 94.0      |
| 0°-40°    | 748.6  | 96.4      |
| 0°-60°    | 760.7  | 98.0      |
| 0°-90°    | 776.3  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 776.3  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 5771 | 5771  | 5771 | 5771  | 5771 |      |
| 5°  | 4769 | 4807  | 4785 | 4722  | 4767 | 382  |
| 15° | 1036 | 1050  | 991  | 898   | 880  | 301  |
| 25° | 124  | 133   | 124  | 123   | 118  | 65   |
| 35° | 24   | 27    | 22   | 25    | 17   | 19   |
| 45° | 4    | 10    | 6    | 10    | 5    | 5    |
| 55° | 7    | 10    | 6    | 9     | 10   | 3    |
| 65° | 4    | 8     | 9    | 9     | 9    | 4    |
| 75° | 1    | 3     | 2    | 4     | 6    | 2    |
| 85° | 0    | 0     | 2    | 2     | 3    | 3    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 5771.0 | 5771.0 | 5771.0 | 5771.0 | 5771.0 |
| 1°    | 5696.7 | 5719.7 | 5717.5 | 5708.2 | 5724.6 |
| 2°    | 5565.7 | 5593.6 | 5590.9 | 5570.5 | 5599.8 |
| 3°    | 5373.6 | 5398.4 | 5394.4 | 5365.2 | 5397.0 |
| 4°    | 5116.9 | 5145.2 | 5134.1 | 5090.3 | 5131.0 |
| 5°    | 4769.4 | 4807.1 | 4784.9 | 4722.5 | 4766.8 |
| 6°    | 4384.4 | 4416.2 | 4381.3 | 4298.5 | 4341.9 |
| 7°    | 3953.3 | 3973.2 | 3927.2 | 3820.9 | 3791.7 |
| 8°    | 3482.8 | 3508.9 | 3444.7 | 3320.8 | 3288.9 |
| 9°    | 3033.1 | 3042.0 | 2964.1 | 2832.2 | 2791.9 |
| 10°   | 2609.6 | 2602.9 | 2515.3 | 2381.6 | 2343.1 |
| 11°   | 2208.1 | 2199.3 | 2106.8 | 1983.3 | 1995.7 |
| 12°   | 1843.0 | 1860.2 | 1752.7 | 1640.7 | 1642.9 |
| 13°   | 1542.9 | 1544.7 | 1452.2 | 1345.5 | 1339.3 |
| 14°   | 1263.2 | 1279.6 | 1200.3 | 1104.7 | 1087.0 |
| 15°   | 1036.1 | 1050.3 | 991.0  | 898.0  | 879.9  |
| 16°   | 829.4  | 847.1  | 804.6  | 720.5  | 696.6  |
| 17°   | 667.9  | 690.5  | 662.6  | 592.2  | 564.8  |
| 18°   | 534.2  | 551.5  | 544.8  | 472.3  | 449.7  |
| 19°   | 421.8  | 445.7  | 447.5  | 386.8  | 359.8  |
| 20°   | 337.7  | 359.4  | 358.1  | 311.1  | 289.9  |
| 22.5° | 193.9  | 205.4  | 205.8  | 183.7  | 171.3  |
| 25°   | 123.9  | 133.2  | 124.4  | 123.0  | 117.7  |
| 26°   | 107.6  | 115.1  | 105.3  | 105.3  | 100.5  |
| 27°   | 87.2   | 93.8   | 84.5   | 88.5   | 81.9   |
| 28°   | 73.5   | 80.6   | 72.6   | 71.7   | 70.8   |
| 29°   | 61.1   | 67.7   | 57.5   | 62.0   | 59.3   |
| 30°   | 53.1   | 58.0   | 52.2   | 58.9   | 50.5   |
| 32.5° | 41.2   | 45.1   | 35.0   | 44.3   | 33.2   |
| 35°   | 24.3   | 27.0   | 21.7   | 25.2   | 17.3   |
| 37.5° | 25.2   | 26.1   | 23.5   | 26.1   | 24.3   |
| 40°   | 15.0   | 15.5   | 19.0   | 19.0   | 13.3   |
| 42.5° | 14.2   | 13.7   | 8.4    | 13.3   | 10.6   |
| 45°   | 3.5    | 10.2   | 5.8    | 10.2   | 5.3    |
| 47.5° | 2.7    | 3.5    | 3.5    | 7.1    | 7.1    |
| 50°   | 0.9    | 3.5    | 1.3    | 2.7    | 1.8    |
| 52.5° | 0.0    | 8.4    | 1.8    | 6.2    | 5.3    |
| 55°   | 7.1    | 10.2   | 6.2    | 9.3    | 9.7    |
| 57.5° | 0.9    | 7.1    | 3.5    | 7.5    | 5.3    |
| 60°   | 8.9    | 12.0   | 7.1    | 12.8   | 11.5   |
| 62.5° | 0.9    | 8.0    | 9.3    | 7.1    | 6.2    |
| 65°   | 3.5    | 7.5    | 9.3    | 8.9    | 8.9    |
| 67.5° | 4.4    | 7.5    | 5.8    | 5.8    | 8.0    |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75°   | 0.9 | 3.1   | 2.2 | 4.0   | 6.2 |
| 77.5° | 0.9 | 3.5   | 3.1 | 7.1   | 5.3 |
| 80°   | 7.1 | 8.0   | 9.7 | 12.8  | 8.9 |
| 82.5° | 6.2 | 6.2   | 9.7 | 7.1   | 5.3 |
| 85°   | 0.0 | 0.0   | 2.2 | 2.2   | 2.7 |
| 87.5° | 0.0 | 1.8   | 4.4 | 3.5   | 6.2 |
| 90°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |



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— 0°-180°    - - 45°-225°    - - - - 90°-270°







|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| 70°   | 2.7 | 0.9 | 2.2 | 2.2 | 2.7 |
| 72.5° | 0.9 | 4.0 | 3.5 | 2.2 | 4.4 |



(END OF REPORT)