

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: P316003

Luminaire Tested: **LDA2B15SPD2WD010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P316003  
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: LDA2B15SPD2WD010 PINW1MMS  
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in  
Adj PinHole, White oculus, matte metallic silver finish  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1077.0 lumens  
Efficiency: N/A  
Efficacy: 76.4 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

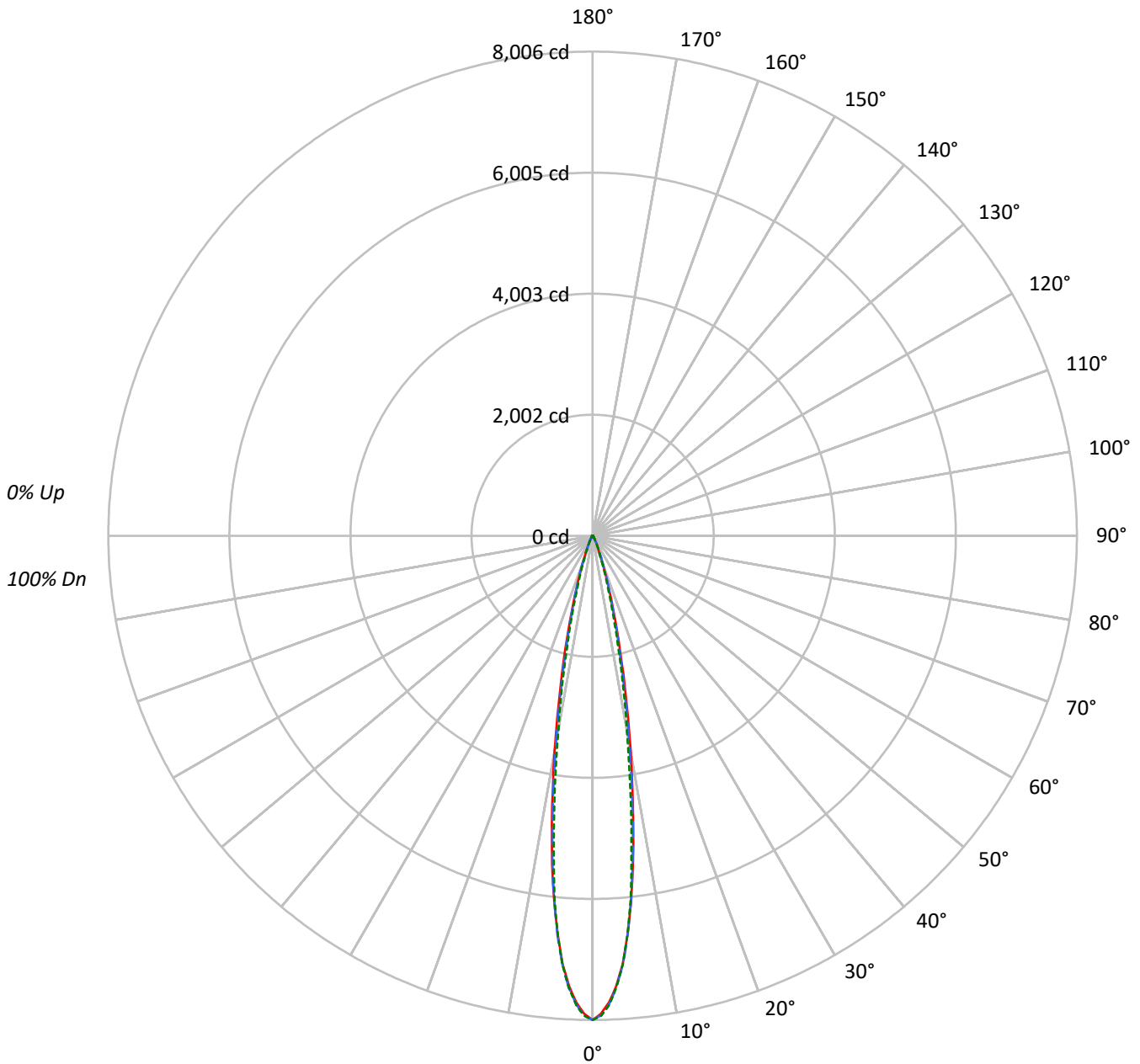
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 103 | 101 | 99  | 100 | 98  | 97  | 98  | 96  | 95  | 94  | 96 | 94 | 92 |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 108 | 104 | 100 | 97  | 106 | 102 | 99  | 97  | 100 | 97  | 95  | 98  | 95  | 94  | 96  | 94  | 92  | 91  | 96 | 94 | 92 |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 105 | 100 | 96  | 93  | 104 | 99  | 96  | 93  | 97  | 94  | 92  | 95  | 93  | 91  | 94  | 92  | 90  | 89  | 94 | 92 | 90 |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 102 | 97  | 93  | 90  | 101 | 96  | 93  | 90  | 95  | 91  | 89  | 93  | 90  | 88  | 92  | 89  | 88  | 87  | 92 | 89 | 88 |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 100 | 94  | 90  | 88  | 99  | 94  | 90  | 87  | 92  | 89  | 87  | 91  | 88  | 86  | 90  | 88  | 86  | 85  | 90 | 88 | 86 |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 98  | 92  | 88  | 85  | 97  | 91  | 88  | 85  | 90  | 87  | 85  | 89  | 86  | 84  | 88  | 86  | 84  | 83  | 88 | 86 | 84 |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 96  | 90  | 86  | 83  | 95  | 89  | 86  | 83  | 88  | 85  | 83  | 87  | 85  | 82  | 87  | 84  | 82  | 81  | 87 | 84 | 82 |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 94  | 88  | 84  | 81  | 93  | 87  | 84  | 81  | 86  | 83  | 81  | 86  | 83  | 81  | 85  | 82  | 81  | 80  | 85 | 82 | 81 |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 92  | 86  | 82  | 80  | 91  | 85  | 82  | 80  | 85  | 82  | 79  | 84  | 81  | 79  | 84  | 81  | 79  | 78  | 84 | 81 | 79 |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°      | 45°     | 90°     |
|-----|---------|---------|---------|
| 0°  | 3950101 | 3950101 | 3950101 |
| 5°  | 3276996 | 3287643 | 3275163 |
| 10° | 1813722 | 1748194 | 1628512 |
| 15° | 734226  | 702201  | 623492  |
| 20° | 245974  | 260832  | 211165  |
| 25° | 93576   | 93903   | 88895   |
| 30° | 41986   | 41302   | 39878   |
| 35° | 20357   | 18129   | 14395   |
| 40° | 13460   | 17003   | 11850   |
| 45° | 3419    | 5582    | 5163    |
| 50° | 921     | 1382    | 1919    |
| 55° | 8429    | 7397    | 11612   |
| 60° | 12137   | 9670    | 15788   |
| 65° | 5720    | 15059   | 14359   |
| 70° | 5337    | 4472    | 5337    |
| 75° | 2287    | 5909    | 16393   |
| 80° | 27843   | 38356   | 34946   |
| 85° | 0       | 17548   | 20945   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 524.4  | 48.7      |
| 10°-20°   | 397.2  | 36.9      |
| 20°-30°   | 90.3   | 8.4       |
| 30°-40°   | 26.7   | 2.5       |
| 40°-50°   | 8.9    | 0.8       |
| 50°-60°   | 7.8    | 0.7       |
| 60°-70°   | 9.4    | 0.9       |
| 70°-80°   | 6.0    | 0.6       |
| 80°-90°   | 6.3    | 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°    | 1011.9 | 94.0      |
| 0°-40°    | 1038.6 | 96.4      |
| 0°-60°    | 1055.3 | 98.0      |
| 0°-90°    | 1077.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1077.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 8006 | 8006  | 8006 | 8006  | 8006 |      |
| 5°  | 6617 | 6669  | 6638 | 6552  | 6613 | 531  |
| 15° | 1438 | 1457  | 1375 | 1246  | 1221 | 418  |
| 25° | 172  | 185   | 172  | 171   | 163  | 90   |
| 35° | 34   | 38    | 30   | 35    | 24   | 27   |
| 45° | 5    | 14    | 8    | 14    | 7    | 7    |
| 55° | 10   | 14    | 9    | 13    | 14   | 4    |
| 65° | 5    | 10    | 13   | 12    | 12   | 5    |
| 75° | 1    | 4     | 3    | 6     | 9    | 3    |
| 85° | 0    | 0     | 3    | 3     | 4    | 4    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 8006.5 | 8006.5 | 8006.5 | 8006.5 | 8006.5 |
| 1°    | 7903.3 | 7935.2 | 7932.2 | 7919.3 | 7942.0 |
| 2°    | 7721.5 | 7760.2 | 7756.5 | 7728.3 | 7768.8 |
| 3°    | 7455.0 | 7489.4 | 7483.9 | 7443.4 | 7487.6 |
| 4°    | 7098.9 | 7138.2 | 7122.8 | 7062.1 | 7118.6 |
| 5°    | 6616.9 | 6669.1 | 6638.4 | 6551.8 | 6613.2 |
| 6°    | 6082.7 | 6126.9 | 6078.4 | 5963.5 | 6023.7 |
| 7°    | 5484.6 | 5512.2 | 5448.4 | 5301.0 | 5260.5 |
| 8°    | 4831.9 | 4868.1 | 4779.1 | 4607.1 | 4562.9 |
| 9°    | 4208.0 | 4220.3 | 4112.2 | 3929.2 | 3873.4 |
| 10°   | 3620.4 | 3611.2 | 3489.6 | 3304.1 | 3250.7 |
| 11°   | 3063.4 | 3051.2 | 2922.8 | 2751.5 | 2768.7 |
| 12°   | 2556.9 | 2580.8 | 2431.6 | 2276.2 | 2279.3 |
| 13°   | 2140.5 | 2143.0 | 2014.7 | 1866.7 | 1858.1 |
| 14°   | 1752.5 | 1775.2 | 1665.3 | 1532.6 | 1508.1 |
| 15°   | 1437.5 | 1457.1 | 1374.8 | 1245.9 | 1220.7 |
| 16°   | 1150.7 | 1175.3 | 1116.3 | 999.7  | 966.5  |
| 17°   | 926.6  | 957.9  | 919.2  | 821.6  | 783.5  |
| 18°   | 741.1  | 765.1  | 755.9  | 655.2  | 623.9  |
| 19°   | 585.2  | 618.3  | 620.8  | 536.7  | 499.2  |
| 20°   | 468.5  | 498.6  | 496.8  | 431.7  | 402.2  |
| 22.5° | 268.9  | 284.9  | 285.5  | 254.8  | 237.6  |
| 25°   | 171.9  | 184.8  | 172.5  | 170.7  | 163.3  |
| 26°   | 149.2  | 159.7  | 146.1  | 146.1  | 139.4  |
| 27°   | 121.0  | 130.2  | 117.3  | 122.8  | 113.6  |
| 28°   | 101.9  | 111.8  | 100.7  | 99.5   | 98.2   |
| 29°   | 84.7   | 93.9   | 79.8   | 86.0   | 82.3   |
| 30°   | 73.7   | 80.4   | 72.5   | 81.7   | 70.0   |
| 32.5° | 57.1   | 62.6   | 48.5   | 61.4   | 46.1   |
| 35°   | 33.8   | 37.5   | 30.1   | 35.0   | 23.9   |
| 37.5° | 35.0   | 36.2   | 32.5   | 36.2   | 33.8   |
| 40°   | 20.9   | 21.5   | 26.4   | 26.4   | 18.4   |
| 42.5° | 19.6   | 19.0   | 11.7   | 18.4   | 14.7   |
| 45°   | 4.9    | 14.1   | 8.0    | 14.1   | 7.4    |
| 47.5° | 3.7    | 4.9    | 4.9    | 9.8    | 9.8    |
| 50°   | 1.2    | 4.9    | 1.8    | 3.7    | 2.5    |
| 52.5° | 0.0    | 11.7   | 2.5    | 8.6    | 7.4    |
| 55°   | 9.8    | 14.1   | 8.6    | 12.9   | 13.5   |
| 57.5° | 1.2    | 9.8    | 4.9    | 10.4   | 7.4    |
| 60°   | 12.3   | 16.6   | 9.8    | 17.8   | 16.0   |
| 62.5° | 1.2    | 11.1   | 12.9   | 9.8    | 8.6    |
| 65°   | 4.9    | 10.4   | 12.9   | 12.3   | 12.3   |
| 67.5° | 6.1    | 10.4   | 8.0    | 8.0    | 11.1   |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45°  | 67.5° | 90°  |
|-------|-----|-------|------|-------|------|
| 75°   | 1.2 | 4.3   | 3.1  | 5.5   | 8.6  |
| 77.5° | 1.2 | 4.9   | 4.3  | 9.8   | 7.4  |
| 80°   | 9.8 | 11.1  | 13.5 | 17.8  | 12.3 |
| 82.5° | 8.6 | 8.6   | 13.5 | 9.8   | 7.4  |
| 85°   | 0.0 | 0.0   | 3.1  | 3.1   | 3.7  |
| 87.5° | 0.0 | 2.5   | 6.1  | 4.9   | 8.6  |
| 90°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |



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







|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| 70°   | 3.7 | 1.2 | 3.1 | 3.1 | 3.7 |
| 72.5° | 1.2 | 5.5 | 4.9 | 3.1 | 6.1 |



(END OF REPORT)