

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: P281323

Luminaire Tested: **LDA2B15D2WD010 EU2B15SP15D2W 2LBALD1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P281323  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-5)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA2B15D2WD010 EU2B15SP15D2W 2LBALD1H  
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in  
ADJ spun Refl w/lens Self-Flanged, LI  
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): 0.33 / 0.31 / 0.32  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

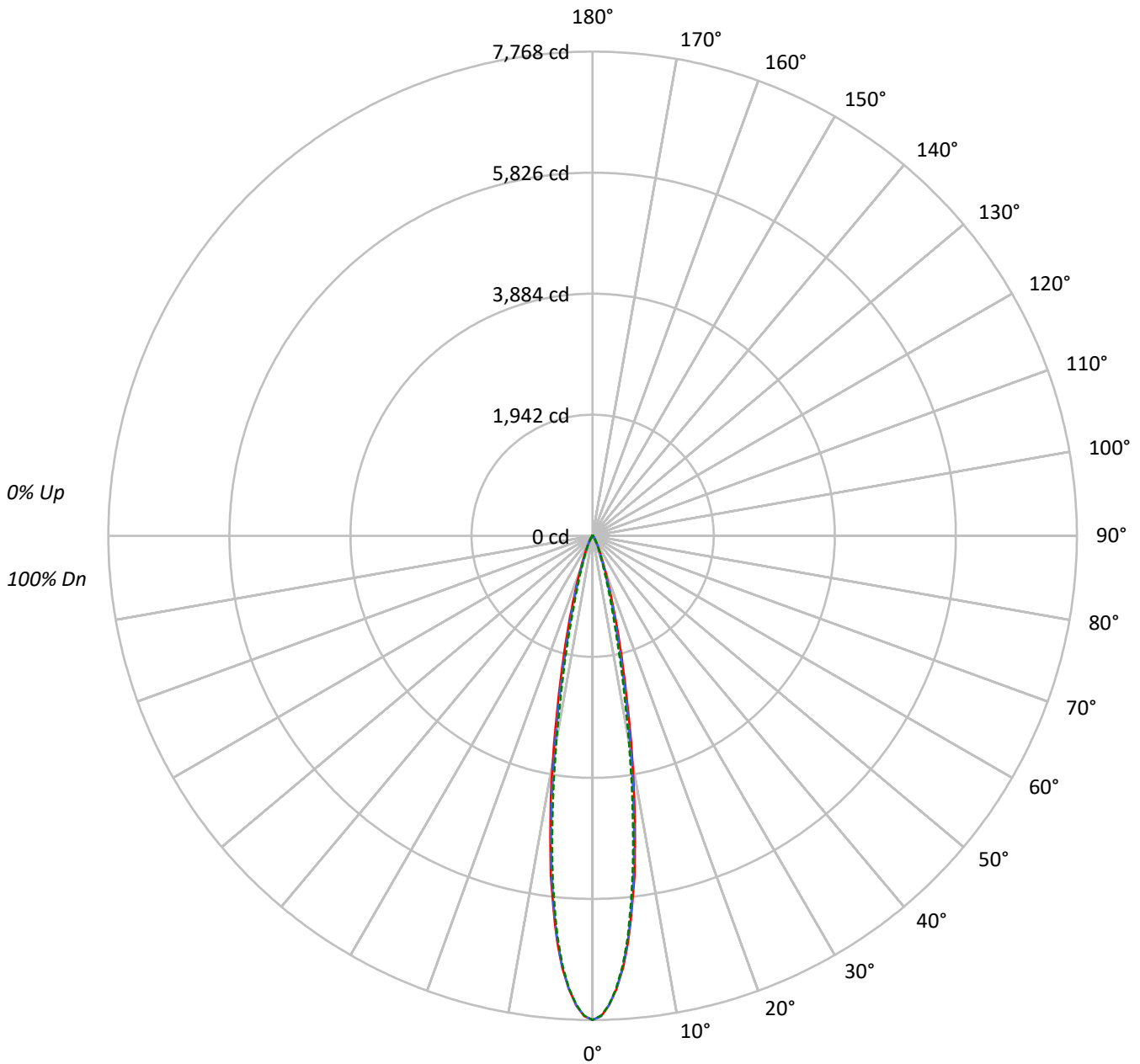
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 115 | 113 | 111 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 99  | 99  | 97  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 112 | 108 | 106 | 103 | 110 | 107 | 104 | 102 | 104 | 102 | 100 | 101 | 99  | 98  | 98  | 97  | 96  | 95  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 109 | 104 | 101 | 98  | 107 | 103 | 100 | 98  | 101 | 98  | 96  | 98  | 96  | 95  | 96  | 95  | 93  | 92  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 106 | 101 | 97  | 95  | 104 | 100 | 97  | 94  | 98  | 95  | 93  | 96  | 94  | 92  | 94  | 93  | 91  | 90  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 103 | 98  | 94  | 91  | 102 | 97  | 93  | 91  | 95  | 92  | 90  | 94  | 91  | 89  | 93  | 90  | 89  | 88  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 101 | 95  | 91  | 88  | 99  | 94  | 91  | 88  | 93  | 90  | 88  | 92  | 89  | 87  | 91  | 88  | 87  | 86  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 98  | 92  | 89  | 86  | 97  | 92  | 88  | 86  | 91  | 88  | 85  | 90  | 87  | 85  | 89  | 87  | 85  | 84  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 96  | 90  | 86  | 84  | 95  | 90  | 86  | 84  | 89  | 86  | 83  | 88  | 85  | 83  | 87  | 85  | 83  | 82  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 94  | 88  | 84  | 82  | 93  | 88  | 84  | 82  | 87  | 84  | 82  | 86  | 83  | 81  | 86  | 83  | 81  | 80  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 92  | 86  | 83  | 80  | 91  | 86  | 82  | 80  | 85  | 82  | 80  | 85  | 82  | 80  | 84  | 81  | 80  | 79  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°      | 45°     | 90°     |
|-----|---------|---------|---------|
| 0°  | 3832188 | 3832188 | 3832188 |
| 5°  | 3237822 | 3220537 | 3196766 |
| 10° | 1842928 | 1761771 | 1672197 |
| 15° | 763186  | 675998  | 595502  |
| 20° | 290286  | 254217  | 232743  |
| 25° | 128252  | 123190  | 109526  |
| 30° | 59361   | 65571   | 52183   |
| 35° | 31198   | 36800   | 29211   |
| 40° | 13718   | 15779   | 9145    |
| 45° | 5303    | 4186    | 6070    |
| 50° | 2533    | 2917    | 4221    |
| 55° | 0       | 1892    | 0       |
| 60° | 0       | 0       | 1085    |
| 65° | 0       | 0       | 0       |
| 70° | 0       | 721     | 0       |
| 75° | 0       | 0       | 0       |
| 80° | 3125    | 0       | 0       |
| 85° | 31134   | 27737   | 12454   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 519.4  | 48.2      |
| 10°-20°   | 397.0  | 36.9      |
| 20°-30°   | 110.4  | 10.3      |
| 30°-40°   | 35.9   | 3.3       |
| 40°-50°   | 7.9    | 0.7       |
| 50°-60°   | 2.4    | 0.2       |
| 60°-70°   | 1.4    | 0.1       |
| 70°-80°   | 0.8    | 0.1       |
| 80°-90°   | 1.7    | 0.2       |
| 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°    | 1026.8 | 95.3      |
| 0°-40°    | 1062.7 | 98.7      |
| 0°-60°    | 1073.0 | 99.6      |
| 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°  | 7768 | 7768  | 7768 | 7768  | 7768 |      |
| 5°  | 6538 | 6490  | 6503 | 6454  | 6455 | 529  |
| 15° | 1494 | 1442  | 1324 | 1222  | 1166 | 436  |
| 25° | 236  | 238   | 226  | 213   | 201  | 118  |
| 35° | 52   | 56    | 61   | 46    | 48   | 34   |
| 45° | 8    | 11    | 6    | 6     | 9    | 8    |
| 55° | 0    | 3     | 2    | 1     | 0    | 2    |
| 65° | 0    | 2     | 0    | 0     | 0    | 2    |
| 75° | 0    | 0     | 0    | 1     | 0    | 0    |
| 85° | 6    | 3     | 5    | 3     | 2    | 2    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 7767.5 | 7767.5 | 7767.5 | 7767.5 | 7767.5 |
| 1°    | 7708.0 | 7679.1 | 7706.9 | 7690.6 | 7699.8 |
| 2°    | 7540.6 | 7504.6 | 7533.5 | 7510.6 | 7529.7 |
| 3°    | 7279.9 | 7252.1 | 7277.8 | 7248.9 | 7264.1 |
| 4°    | 6953.3 | 6912.9 | 6938.6 | 6899.9 | 6909.1 |
| 5°    | 6537.8 | 6489.8 | 6502.9 | 6454.3 | 6454.9 |
| 6°    | 6014.3 | 5981.0 | 5988.6 | 5912.8 | 5907.4 |
| 7°    | 5502.2 | 5423.7 | 5415.5 | 5328.8 | 5311.9 |
| 8°    | 4880.6 | 4809.1 | 4785.7 | 4683.7 | 4647.7 |
| 9°    | 4284.5 | 4195.6 | 4147.7 | 4029.3 | 3987.3 |
| 10°   | 3678.7 | 3588.7 | 3516.7 | 3383.1 | 3337.9 |
| 11°   | 3118.1 | 3036.9 | 2947.4 | 2804.6 | 2760.4 |
| 12°   | 2597.9 | 2534.1 | 2435.9 | 2298.0 | 2251.6 |
| 13°   | 2173.1 | 2099.5 | 1994.2 | 1866.1 | 1826.3 |
| 14°   | 1805.0 | 1725.9 | 1620.7 | 1511.1 | 1433.6 |
| 15°   | 1494.2 | 1442.4 | 1323.5 | 1221.5 | 1165.9 |
| 16°   | 1221.0 | 1176.8 | 1074.3 | 985.9  | 946.7  |
| 17°   | 1001.2 | 965.8  | 878.5  | 809.2  | 776.5  |
| 18°   | 826.2  | 782.0  | 713.3  | 668.0  | 642.4  |
| 19°   | 670.2  | 635.8  | 585.7  | 550.8  | 525.1  |
| 20°   | 552.9  | 524.6  | 484.2  | 453.2  | 443.3  |
| 22.5° | 357.2  | 352.3  | 326.1  | 309.2  | 301.0  |
| 25°   | 235.6  | 238.3  | 226.3  | 213.2  | 201.2  |
| 26°   | 201.2  | 202.9  | 192.0  | 184.3  | 169.0  |
| 27°   | 172.3  | 172.9  | 172.9  | 158.7  | 144.0  |
| 28°   | 140.7  | 146.7  | 141.2  | 134.7  | 120.5  |
| 29°   | 120.5  | 128.1  | 125.4  | 118.9  | 105.2  |
| 30°   | 104.2  | 109.6  | 115.1  | 104.7  | 91.6   |
| 32.5° | 73.1   | 78.0   | 84.0   | 78.5   | 67.6   |
| 35°   | 51.8   | 56.2   | 61.1   | 46.4   | 48.5   |
| 37.5° | 35.4   | 43.1   | 41.4   | 37.6   | 32.2   |
| 40°   | 21.3   | 22.4   | 24.5   | 26.2   | 14.2   |
| 42.5° | 15.3   | 18.0   | 16.4   | 18.5   | 6.5    |
| 45°   | 7.6    | 10.9   | 6.0    | 6.0    | 8.7    |
| 47.5° | 5.5    | 9.3    | 3.3    | 3.3    | 1.1    |
| 50°   | 3.3    | 7.1    | 3.8    | 1.6    | 5.5    |
| 52.5° | 5.5    | 6.5    | 4.4    | 4.9    | 1.1    |
| 55°   | 0.0    | 3.3    | 2.2    | 1.1    | 0.0    |
| 57.5° | 2.2    | 3.8    | 2.2    | 1.1    | 2.2    |
| 60°   | 0.0    | 0.0    | 0.0    | 0.5    | 1.1    |
| 62.5° | 0.0    | 1.1    | 0.0    | 1.6    | 2.2    |
| 65°   | 0.0    | 2.2    | 0.0    | 0.0    | 0.0    |
| 67.5° | 3.3    | 3.8    | 2.2    | 4.4    | 6.5    |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75°   | 0.0 | 0.0   | 0.0 | 1.1   | 0.0 |
| 77.5° | 0.0 | 5.5   | 1.6 | 1.6   | 2.2 |
| 80°   | 1.1 | 0.0   | 0.0 | 0.5   | 0.0 |
| 82.5° | 0.0 | 4.4   | 0.5 | 2.2   | 3.3 |
| 85°   | 5.5 | 2.7   | 4.9 | 2.7   | 2.2 |
| 87.5° | 0.0 | 0.5   | 1.1 | 0.5   | 0.0 |
| 90°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |



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







|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| 70°   | 0.0 | 0.0 | 0.5 | 0.5 | 0.0 |
| 72.5° | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |



(END OF REPORT)