

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: P282327

Luminaire Tested: **LDA2B159030D010 EU2B15NFL259030 2LBAPINSQ1MB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P282327  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1809-951-26)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA2B159030D010 EU2B15NFL259030 2LBAPINSQ1MB  
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH NARROW FLOOD OPTIC AND 2in Adj SQ PinHole, MB  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1053.4 lumens  
Efficiency: N/A  
Efficacy: 74.7 lumens/watt  
Spacing Criteria (0/90/45): 0.33 / 0.3 / 0.32  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

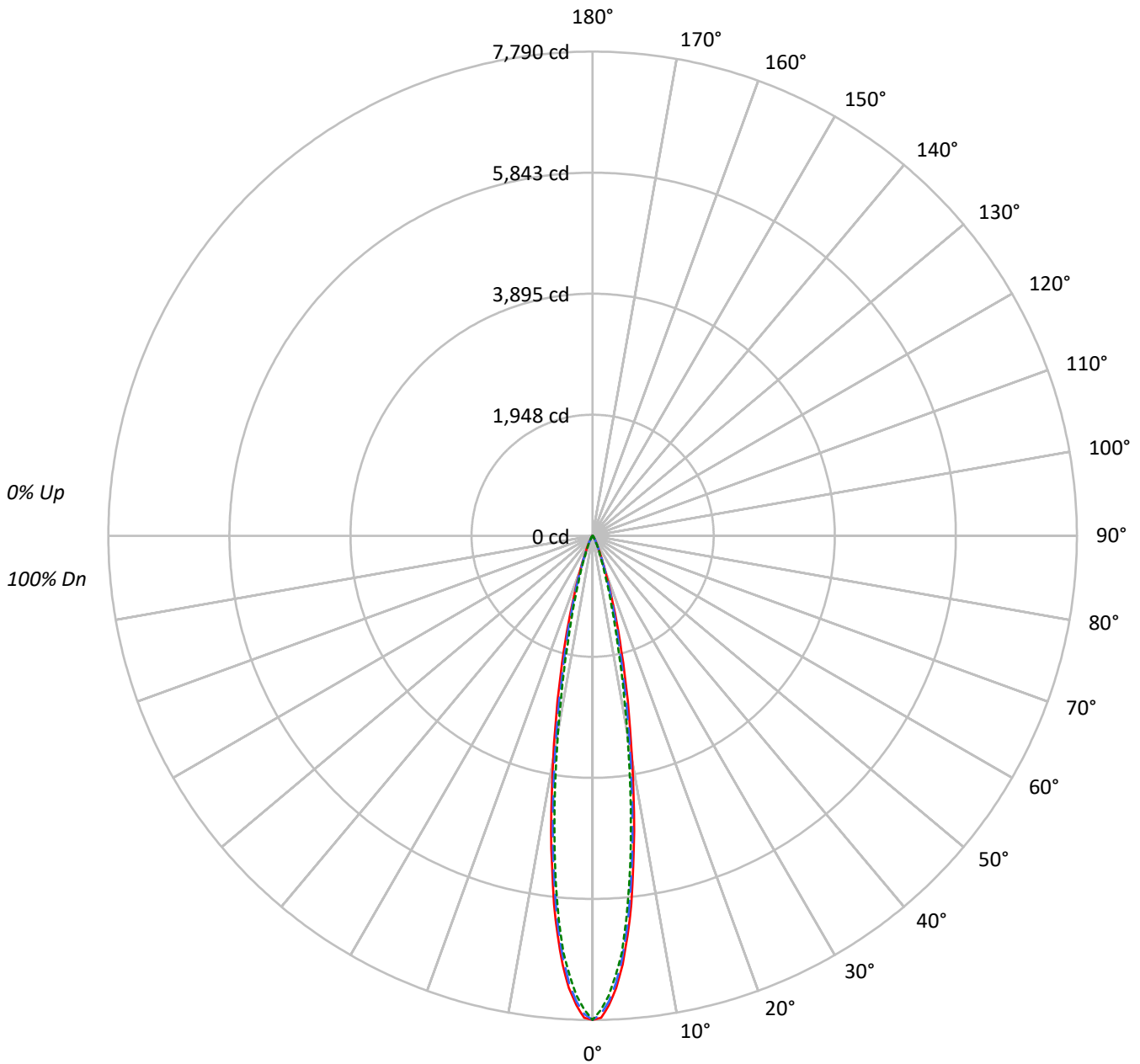
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

|     | 0°      | 45°     | 90°     |
|-----|---------|---------|---------|
| 0°  | 3843042 | 3843042 | 3843042 |
| 5°  | 3197806 | 3139218 | 3075827 |
| 10° | 1831706 | 1718837 | 1604165 |
| 15° | 814671  | 723551  | 606330  |
| 20° | 295536  | 277896  | 220143  |
| 25° | 113500  | 105933  | 91235   |
| 30° | 48936   | 45518   | 40391   |
| 35° | 23128   | 23128   | 19153   |
| 40° | 11593   | 11979   | 9661    |
| 45° | 6698    | 6279    | 5861    |
| 50° | 4605    | 4145    | 4145    |
| 55° | 3613    | 2580    | 3097    |
| 60° | 2960    | 1776    | 2368    |
| 65° | 2101    | 1401    | 2101    |
| 70° | 1731    | 865     | 1731    |
| 75° | 1144    | 1144    | 1144    |
| 80° | 0       | 0       | 0       |
| 85° | 0       | 0       | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 506.6  | 48.1      |
| 10°-20°   | 410.0  | 38.9      |
| 20°-30°   | 98.9   | 9.4       |
| 30°-40°   | 25.2   | 2.4       |
| 40°-50°   | 7.5    | 0.7       |
| 50°-60°   | 3.2    | 0.3       |
| 60°-70°   | 1.5    | 0.1       |
| 70°-80°   | 0.5    | 0.0       |
| 80°-90°   | 0.0    | 0.0       |
| 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°    | 1015.5 | 96.4      |
| 0°-40°    | 1040.7 | 98.8      |
| 0°-60°    | 1051.4 | 99.8      |
| 0°-90°    | 1053.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1053.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 7790 | 7790  | 7790 | 7790  | 7790 |      |
| 5°  | 6457 | 6398  | 6339 | 6283  | 6211 | 522  |
| 15° | 1595 | 1557  | 1417 | 1276  | 1187 | 455  |
| 25° | 208  | 210   | 195  | 177   | 168  | 108  |
| 35° | 38   | 39    | 38   | 35    | 32   | 27   |
| 45° | 10   | 10    | 9    | 8     | 8    | 8    |
| 55° | 4    | 4     | 3    | 3     | 4    | 4    |
| 65° | 2    | 2     | 1    | 1     | 2    | 2    |
| 75° | 1    | 1     | 1    | 1     | 1    | 1    |
| 85° | 0    | 0     | 0    | 0     | 0    | 0    |
| 90° | 0    | 0     | 0    | 0     | 0    | 0    |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 7789.5 | 7789.5 | 7789.5 | 7789.5 | 7789.5 |
| 1°    | 7754.7 | 7700.6 | 7694.0 | 7727.7 | 7628.5 |
| 2°    | 7556.4 | 7518.0 | 7495.8 | 7515.6 | 7403.3 |
| 3°    | 7284.3 | 7247.1 | 7206.8 | 7207.4 | 7081.8 |
| 4°    | 6913.6 | 6884.2 | 6816.3 | 6795.9 | 6723.2 |
| 5°    | 6457.0 | 6397.6 | 6338.7 | 6283.4 | 6210.7 |
| 6°    | 5952.4 | 5875.5 | 5791.4 | 5709.1 | 5634.6 |
| 7°    | 5358.8 | 5307.8 | 5196.6 | 5084.3 | 5021.2 |
| 8°    | 4800.7 | 4718.4 | 4588.7 | 4448.1 | 4394.6 |
| 9°    | 4200.6 | 4141.7 | 3992.7 | 3829.3 | 3775.8 |
| 10°   | 3656.3 | 3595.0 | 3431.0 | 3248.9 | 3202.1 |
| 11°   | 3145.6 | 3087.9 | 2917.3 | 2726.3 | 2676.4 |
| 12°   | 2713.7 | 2632.0 | 2436.1 | 2270.3 | 2221.6 |
| 13°   | 2283.5 | 2227.6 | 2042.0 | 1878.0 | 1783.7 |
| 14°   | 1917.6 | 1871.4 | 1703.2 | 1559.0 | 1459.3 |
| 15°   | 1595.0 | 1557.2 | 1416.6 | 1276.0 | 1187.1 |
| 16°   | 1308.5 | 1285.0 | 1173.9 | 1038.1 | 965.4  |
| 17°   | 1061.6 | 1039.9 | 969.0  | 844.1  | 782.8  |
| 18°   | 857.3  | 854.3  | 795.4  | 687.3  | 632.6  |
| 19°   | 705.3  | 704.1  | 650.0  | 559.3  | 514.3  |
| 20°   | 562.9  | 570.7  | 529.3  | 450.0  | 419.3  |
| 21°   | 459.0  | 463.2  | 430.1  | 370.1  | 342.4  |
| 22°   | 373.7  | 376.7  | 355.1  | 305.8  | 290.8  |
| 23°   | 306.4  | 308.2  | 290.2  | 253.5  | 240.3  |
| 24°   | 252.3  | 253.5  | 237.3  | 211.5  | 200.1  |
| 25°   | 208.5  | 209.7  | 194.6  | 176.6  | 167.6  |
| 26°   | 173.0  | 174.2  | 161.0  | 148.4  | 139.4  |
| 27°   | 143.6  | 146.0  | 132.8  | 125.0  | 115.3  |
| 28°   | 122.6  | 123.2  | 111.1  | 106.3  | 97.3   |
| 29°   | 100.3  | 103.9  | 93.7   | 89.5   | 82.9   |
| 30°   | 85.9   | 87.7   | 79.9   | 76.9   | 70.9   |
| 32.5° | 57.1   | 58.3   | 54.7   | 52.3   | 47.5   |
| 35°   | 38.4   | 39.0   | 38.4   | 34.8   | 31.8   |
| 37.5° | 26.4   | 26.4   | 27.0   | 22.8   | 21.6   |
| 40°   | 18.0   | 18.0   | 18.6   | 15.6   | 15.0   |
| 42.5° | 13.2   | 13.2   | 12.6   | 10.8   | 10.8   |
| 45°   | 9.6    | 9.6    | 9.0    | 8.4    | 8.4    |
| 47.5° | 7.8    | 7.2    | 6.6    | 6.6    | 6.6    |
| 50°   | 6.0    | 6.0    | 5.4    | 4.8    | 5.4    |
| 52.5° | 4.8    | 4.8    | 4.2    | 4.2    | 4.2    |
| 55°   | 4.2    | 3.6    | 3.0    | 3.0    | 3.6    |
| 57.5° | 3.0    | 3.0    | 2.4    | 2.4    | 3.0    |
| 60°   | 3.0    | 2.4    | 1.8    | 2.4    | 2.4    |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 67.5° | 1.8 | 1.2   | 1.2 | 1.2   | 1.2 |
| 70°   | 1.2 | 1.2   | 0.6 | 0.6   | 1.2 |
| 72.5° | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 |
| 75°   | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 |
| 77.5° | 0.6 | 0.6   | 0.0 | 0.0   | 0.6 |
| 80°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 82.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 85°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 87.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 90°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |



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







|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| 62.5° | 2.4 | 1.8 | 1.8 | 1.8 | 1.8 |
| 65°   | 1.8 | 1.8 | 1.2 | 1.2 | 1.8 |



(END OF REPORT)