

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: P283659

Luminaire Tested: **LDA2B159024D010 EU2B15FL409024 2LBAPINSQ1MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P283659
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1809-951-15)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B159024D010 EU2B15FL409024 2LBAPINSQ1MB
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj SQ PinHole, MB

Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 879.9 lumens
Efficiency: N/A
Efficacy: 62.4 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 0.55 / 0.55
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

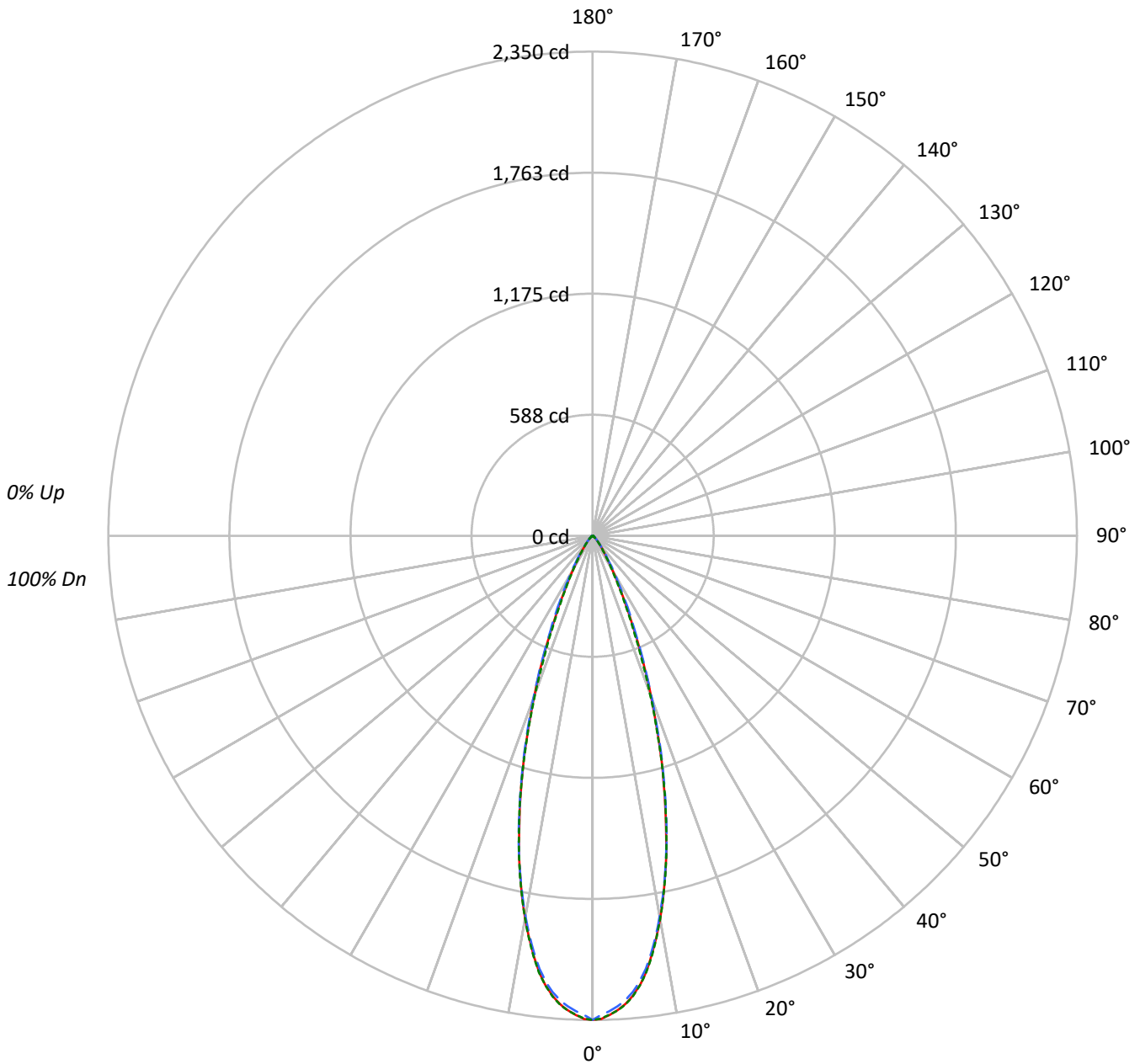
Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 95 | | | | | | | | | | | | | | | | | | | |
| 2 | 110 | 106 | 102 | 99 | 108 | 104 | 101 | 98 | 101 | 98 | 96 | 98 | 96 | 94 | 95 | 93 | 92 | 90 | | | | | | | | | | | | | | | | | | | |
| 3 | 105 | 100 | 96 | 92 | 104 | 99 | 95 | 92 | 96 | 93 | 90 | 94 | 91 | 89 | 92 | 89 | 88 | 86 | | | | | | | | | | | | | | | | | | | |
| 4 | 101 | 95 | 90 | 87 | 100 | 94 | 90 | 86 | 92 | 88 | 85 | 90 | 87 | 84 | 88 | 86 | 83 | 82 | | | | | | | | | | | | | | | | | | | |
| 5 | 98 | 91 | 86 | 82 | 96 | 90 | 85 | 82 | 88 | 84 | 81 | 86 | 83 | 80 | 85 | 82 | 80 | 79 | | | | | | | | | | | | | | | | | | | |
| 6 | 94 | 87 | 82 | 78 | 93 | 86 | 81 | 78 | 84 | 80 | 77 | 83 | 80 | 77 | 82 | 79 | 76 | 75 | | | | | | | | | | | | | | | | | | | |
| 7 | 91 | 83 | 78 | 75 | 89 | 82 | 78 | 74 | 81 | 77 | 74 | 80 | 76 | 74 | 79 | 76 | 73 | 72 | | | | | | | | | | | | | | | | | | | |
| 8 | 87 | 80 | 75 | 71 | 86 | 79 | 74 | 71 | 78 | 74 | 71 | 77 | 73 | 71 | 76 | 73 | 70 | 69 | | | | | | | | | | | | | | | | | | | |
| 9 | 84 | 77 | 72 | 69 | 83 | 76 | 72 | 68 | 75 | 71 | 68 | 74 | 71 | 68 | 74 | 70 | 68 | 67 | | | | | | | | | | | | | | | | | | | |
| 10 | 82 | 74 | 69 | 66 | 81 | 73 | 69 | 66 | 73 | 69 | 66 | 72 | 68 | 65 | 71 | 68 | 65 | 64 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 1159351 | 1159351 | 1159351 |
| 5° | 1109500 | 1101180 | 1111184 |
| 10° | 945235 | 939324 | 946237 |
| 15° | 696684 | 701230 | 698983 |
| 20° | 434930 | 442963 | 425322 |
| 25° | 224659 | 241045 | 213391 |
| 30° | 107727 | 123451 | 102657 |
| 35° | 55591 | 61553 | 52037 |
| 40° | 31171 | 32717 | 29561 |
| 45° | 18978 | 18978 | 18280 |
| 50° | 9824 | 12127 | 9824 |
| 55° | 5075 | 8085 | 5505 |
| 60° | 5822 | 5822 | 5822 |
| 65° | 6304 | 6304 | 6304 |
| 70° | 7789 | 7068 | 7789 |
| 75° | 7434 | 7434 | 7434 |
| 80° | 7103 | 7103 | 7103 |
| 85° | 5661 | 5661 | 5661 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 202.1 | 23.0 |
| 10°-20° | 371.3 | 42.2 |
| 20°-30° | 201.3 | 22.9 |
| 30°-40° | 64.6 | 7.3 |
| 40°-50° | 22.0 | 2.5 |
| 50°-60° | 7.7 | 0.9 |
| 60°-70° | 5.6 | 0.6 |
| 70°-80° | 4.1 | 0.5 |
| 80°-90° | 1.2 | 0.1 |
| 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° | 774.7 | 88.0 |
| 0°-40° | 839.3 | 95.4 |
| 0°-60° | 869.0 | 98.8 |
| 0°-90° | 879.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 879.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2350 | 2350 | 2350 | 2350 | 2350 | |
| 5° | 2240 | 2226 | 2224 | 2246 | 2244 | 203 |
| 15° | 1364 | 1375 | 1373 | 1379 | 1368 | 370 |
| 25° | 413 | 432 | 443 | 412 | 392 | 198 |
| 35° | 92 | 96 | 102 | 93 | 86 | 62 |
| 45° | 27 | 28 | 27 | 27 | 26 | 22 |
| 55° | 6 | 7 | 9 | 7 | 6 | 6 |
| 65° | 5 | 6 | 5 | 6 | 5 | 6 |
| 75° | 4 | 4 | 4 | 4 | 4 | 4 |
| 85° | 1 | 1 | 1 | 1 | 1 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P283659

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2349.9 | 2349.9 | 2349.9 | 2349.9 | 2349.9 |
| 1° | 2345.9 | 2329.1 | 2326.7 | 2348.4 | 2343.5 |
| 2° | 2327.2 | 2311.4 | 2308.9 | 2330.6 | 2326.2 |
| 3° | 2306.4 | 2292.1 | 2287.2 | 2309.9 | 2306.9 |
| 4° | 2278.8 | 2265.5 | 2261.0 | 2283.7 | 2281.3 |
| 5° | 2240.3 | 2226.5 | 2223.5 | 2245.7 | 2243.7 |
| 6° | 2192.9 | 2181.5 | 2176.1 | 2198.3 | 2194.4 |
| 7° | 2133.6 | 2123.3 | 2117.4 | 2133.6 | 2135.6 |
| 8° | 2056.6 | 2051.7 | 2044.8 | 2061.1 | 2061.1 |
| 9° | 1974.7 | 1970.2 | 1962.8 | 1977.6 | 1977.6 |
| 10° | 1886.8 | 1883.8 | 1875.0 | 1888.8 | 1888.8 |
| 11° | 1790.5 | 1789.1 | 1782.6 | 1794.0 | 1794.0 |
| 12° | 1689.3 | 1692.8 | 1686.9 | 1696.7 | 1693.3 |
| 13° | 1588.1 | 1586.7 | 1587.2 | 1594.6 | 1589.1 |
| 14° | 1473.6 | 1482.5 | 1484.0 | 1488.4 | 1480.0 |
| 15° | 1364.0 | 1375.4 | 1372.9 | 1379.3 | 1368.5 |
| 16° | 1251.9 | 1264.8 | 1264.3 | 1265.8 | 1255.4 |
| 17° | 1147.3 | 1154.7 | 1155.2 | 1153.7 | 1140.9 |
| 18° | 1035.7 | 1046.1 | 1046.1 | 1043.6 | 1028.3 |
| 19° | 926.6 | 934.5 | 939.9 | 934.5 | 916.7 |
| 20° | 828.4 | 833.8 | 843.7 | 829.9 | 810.1 |
| 21° | 734.1 | 739.0 | 747.4 | 731.1 | 709.4 |
| 22° | 643.7 | 650.2 | 658.1 | 639.3 | 616.6 |
| 23° | 559.3 | 574.1 | 577.1 | 551.4 | 532.2 |
| 24° | 481.8 | 498.6 | 503.5 | 477.4 | 457.1 |
| 25° | 412.7 | 431.5 | 442.8 | 412.2 | 392.0 |
| 26° | 353.0 | 371.2 | 385.1 | 354.5 | 335.2 |
| 27° | 300.6 | 319.9 | 334.2 | 305.6 | 287.3 |
| 28° | 255.7 | 274.5 | 289.3 | 262.6 | 245.4 |
| 29° | 222.2 | 233.0 | 247.8 | 225.6 | 209.8 |
| 30° | 189.1 | 200.9 | 216.7 | 194.0 | 180.2 |
| 32.5° | 129.8 | 136.3 | 148.6 | 134.8 | 123.9 |
| 35° | 92.3 | 96.3 | 102.2 | 92.8 | 86.4 |
| 37.5° | 65.7 | 67.6 | 71.1 | 65.7 | 62.2 |
| 40° | 48.4 | 49.4 | 50.8 | 47.9 | 45.9 |
| 42.5° | 36.0 | 36.5 | 36.5 | 35.5 | 34.6 |
| 45° | 27.2 | 27.6 | 27.2 | 27.2 | 26.2 |
| 47.5° | 19.7 | 21.2 | 20.7 | 20.7 | 19.3 |
| 50° | 12.8 | 15.8 | 15.8 | 15.3 | 12.8 |
| 52.5° | 7.9 | 10.9 | 12.3 | 10.9 | 8.4 |
| 55° | 5.9 | 7.4 | 9.4 | 7.4 | 6.4 |
| 57.5° | 5.9 | 5.9 | 6.9 | 5.9 | 5.9 |
| 60° | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 67.5° | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| 70° | 5.4 | 5.4 | 4.9 | 5.4 | 5.4 |
| 72.5° | 4.9 | 4.9 | 4.4 | 4.9 | 4.4 |
| 75° | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 77.5° | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 80° | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 82.5° | 1.5 | 1.5 | 1.5 | 2.0 | 1.5 |
| 85° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 87.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 62.5° | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 |
| 65° | 5.4 | 5.9 | 5.4 | 5.9 | 5.4 |



(END OF REPORT)