

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: P283570

Luminaire Tested: **LDA2B108050D010 EU2B10FL408050 2LBAPINSQ1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P283570
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: LDA2B108050D010 EU2B10FL408050 2LBAPINSQ1MMS
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj SQ PinHole, MMS

Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 984.3 lumens
Efficiency: N/A
Efficacy: 98.4 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

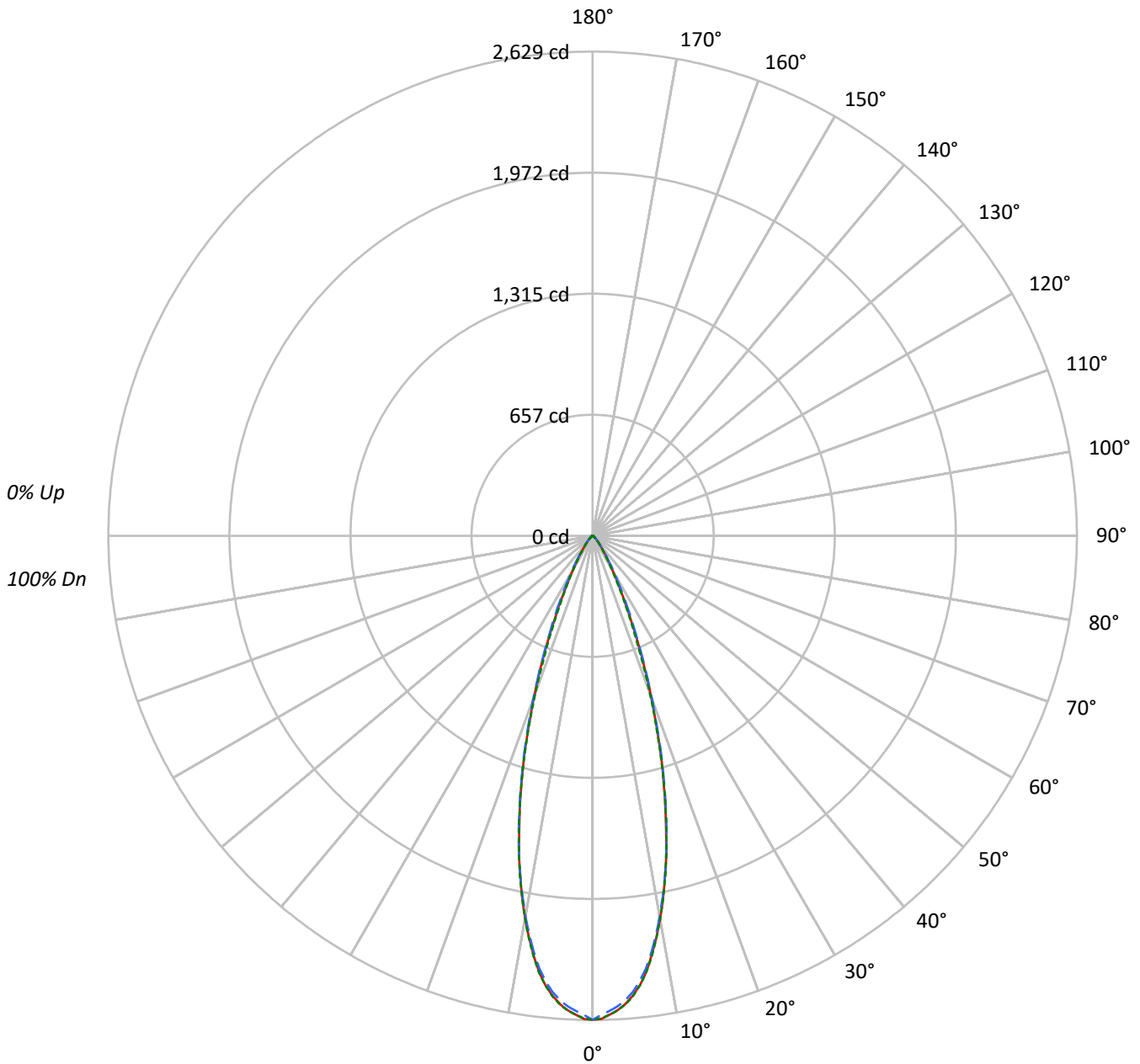
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1296900 | 1296900 | 1296900 |
| 5° | 1241137 | 1231826 | 1243019 |
| 10° | 1057403 | 1050740 | 1058505 |
| 15° | 779326 | 784434 | 781880 |
| 20° | 486540 | 495518 | 475777 |
| 25° | 251333 | 269678 | 238704 |
| 30° | 120488 | 138092 | 114849 |
| 35° | 62216 | 68841 | 58181 |
| 40° | 34842 | 36646 | 33104 |
| 45° | 21211 | 21211 | 20443 |
| 50° | 11052 | 13585 | 11052 |
| 55° | 5677 | 9032 | 6193 |
| 60° | 6512 | 6512 | 6512 |
| 65° | 7121 | 7121 | 7121 |
| 70° | 8799 | 7934 | 8799 |
| 75° | 8387 | 8387 | 8387 |
| 80° | 7955 | 7955 | 7955 |
| 85° | 6227 | 6227 | 6227 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 226.1 | 23.0 |
| 10°-20° | 415.3 | 42.2 |
| 20°-30° | 225.2 | 22.9 |
| 30°-40° | 72.3 | 7.3 |
| 40°-50° | 24.6 | 2.5 |
| 50°-60° | 8.6 | 0.9 |
| 60°-70° | 6.3 | 0.6 |
| 70°-80° | 4.6 | 0.5 |
| 80°-90° | 1.3 | 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° | 866.6 | 88.0 |
| 0°-40° | 938.9 | 95.4 |
| 0°-60° | 972.1 | 98.8 |
| 0°-90° | 984.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 984.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2629 | 2629 | 2629 | 2629 | 2629 | |
| 5° | 2506 | 2491 | 2487 | 2512 | 2510 | 227 |
| 15° | 1526 | 1538 | 1536 | 1543 | 1531 | 414 |
| 25° | 462 | 483 | 495 | 461 | 438 | 221 |
| 35° | 103 | 108 | 114 | 104 | 97 | 70 |
| 45° | 30 | 31 | 30 | 30 | 29 | 24 |
| 55° | 7 | 8 | 10 | 8 | 7 | 7 |
| 65° | 6 | 7 | 6 | 7 | 6 | 6 |
| 75° | 4 | 4 | 4 | 4 | 4 | 5 |
| 85° | 1 | 1 | 1 | 1 | 1 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2628.7 | 2628.7 | 2628.7 | 2628.7 | 2628.7 |
| 1° | 2624.3 | 2605.5 | 2602.7 | 2627.0 | 2621.5 |
| 2° | 2603.3 | 2585.6 | 2582.8 | 2607.1 | 2602.2 |
| 3° | 2580.1 | 2564.1 | 2558.5 | 2583.9 | 2580.6 |
| 4° | 2549.1 | 2534.2 | 2529.3 | 2554.7 | 2551.9 |
| 5° | 2506.1 | 2490.6 | 2487.3 | 2512.1 | 2509.9 |
| 6° | 2453.1 | 2440.4 | 2434.3 | 2459.1 | 2454.7 |
| 7° | 2386.8 | 2375.2 | 2368.6 | 2386.8 | 2389.0 |
| 8° | 2300.6 | 2295.1 | 2287.4 | 2305.6 | 2305.6 |
| 9° | 2209.0 | 2204.0 | 2195.7 | 2212.3 | 2212.3 |
| 10° | 2110.7 | 2107.4 | 2097.4 | 2112.9 | 2112.9 |
| 11° | 2003.0 | 2001.3 | 1994.1 | 2006.8 | 2006.8 |
| 12° | 1889.8 | 1893.6 | 1887.0 | 1898.1 | 1894.2 |
| 13° | 1776.6 | 1774.9 | 1775.5 | 1783.7 | 1777.7 |
| 14° | 1648.4 | 1658.4 | 1660.0 | 1665.0 | 1655.6 |
| 15° | 1525.8 | 1538.5 | 1535.8 | 1543.0 | 1530.8 |
| 16° | 1400.5 | 1414.8 | 1414.3 | 1415.9 | 1404.4 |
| 17° | 1283.4 | 1291.7 | 1292.2 | 1290.6 | 1276.2 |
| 18° | 1158.6 | 1170.2 | 1170.2 | 1167.4 | 1150.3 |
| 19° | 1036.6 | 1045.4 | 1051.5 | 1045.4 | 1025.5 |
| 20° | 926.7 | 932.7 | 943.8 | 928.3 | 906.2 |
| 21° | 821.2 | 826.7 | 836.1 | 817.9 | 793.6 |
| 22° | 720.1 | 727.3 | 736.1 | 715.2 | 689.8 |
| 23° | 625.7 | 642.3 | 645.6 | 616.9 | 595.3 |
| 24° | 539.0 | 557.8 | 563.3 | 534.0 | 511.4 |
| 25° | 461.7 | 482.7 | 495.4 | 461.1 | 438.5 |
| 26° | 394.9 | 415.3 | 430.7 | 396.5 | 375.0 |
| 27° | 336.3 | 357.9 | 373.9 | 341.8 | 321.4 |
| 28° | 286.1 | 307.0 | 323.6 | 293.8 | 274.5 |
| 29° | 248.5 | 260.7 | 277.2 | 252.4 | 234.7 |
| 30° | 211.5 | 224.8 | 242.4 | 217.0 | 201.6 |
| 32.5° | 145.2 | 152.4 | 166.2 | 150.8 | 138.6 |
| 35° | 103.3 | 107.7 | 114.3 | 103.8 | 96.6 |
| 37.5° | 73.4 | 75.7 | 79.5 | 73.4 | 69.6 |
| 40° | 54.1 | 55.2 | 56.9 | 53.6 | 51.4 |
| 42.5° | 40.3 | 40.9 | 40.9 | 39.8 | 38.7 |
| 45° | 30.4 | 30.9 | 30.4 | 30.4 | 29.3 |
| 47.5° | 22.1 | 23.7 | 23.2 | 23.2 | 21.5 |
| 50° | 14.4 | 17.7 | 17.7 | 17.1 | 14.4 |
| 52.5° | 8.8 | 12.1 | 13.8 | 12.1 | 9.4 |
| 55° | 6.6 | 8.3 | 10.5 | 8.3 | 7.2 |
| 57.5° | 6.6 | 6.6 | 7.7 | 6.6 | 6.6 |
| 60° | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 67.5° | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 |
| 70° | 6.1 | 6.1 | 5.5 | 6.1 | 6.1 |
| 72.5° | 5.5 | 5.5 | 5.0 | 5.5 | 5.0 |
| 75° | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 77.5° | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| 80° | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 82.5° | 1.7 | 1.7 | 1.7 | 2.2 | 1.7 |
| 85° | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| 87.5° | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 62.5° | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| 65° | 6.1 | 6.6 | 6.1 | 6.6 | 6.1 |



(END OF REPORT)