

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: P283691

Luminaire Tested: **LDA2B159050D010 EU2B15FL409050 2LBALPINSQ1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P283691
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: LDA2B159050D010 EU2B15FL409050 2LBALPINSQ1MW
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj SQ Pinhole w-lens, MW

Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1050.6 lumens
Efficiency: N/A
Efficacy: 74.5 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

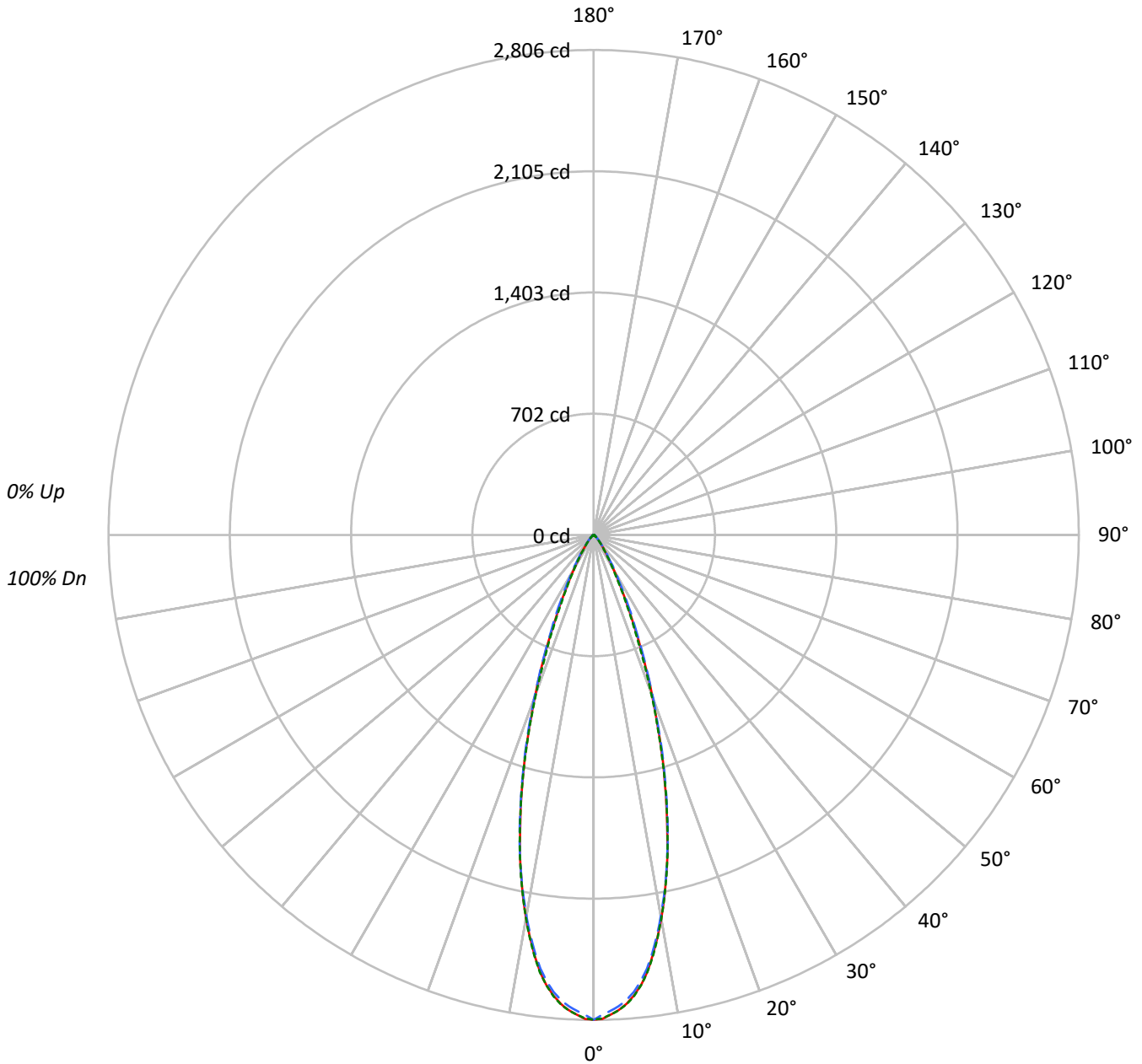
Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1384176 | 1384176 | 1384176 |
| 5° | 1324685 | 1314730 | 1326715 |
| 10° | 1128541 | 1121477 | 1129744 |
| 15° | 831833 | 837247 | 834540 |
| 20° | 519249 | 528857 | 507804 |
| 25° | 268263 | 287806 | 254763 |
| 30° | 128578 | 147435 | 122539 |
| 35° | 66372 | 73479 | 62095 |
| 40° | 37225 | 39093 | 35293 |
| 45° | 22606 | 22606 | 21769 |
| 50° | 11743 | 14506 | 11743 |
| 55° | 6107 | 9634 | 6623 |
| 60° | 7006 | 7006 | 7006 |
| 65° | 7588 | 7588 | 7588 |
| 70° | 9376 | 8511 | 9376 |
| 75° | 8959 | 8959 | 8959 |
| 80° | 8239 | 8239 | 8239 |
| 85° | 6793 | 6793 | 6793 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 241.3 | 23.0 |
| 10°-20° | 443.3 | 42.2 |
| 20°-30° | 240.3 | 22.9 |
| 30°-40° | 77.1 | 7.3 |
| 40°-50° | 26.3 | 2.5 |
| 50°-60° | 9.2 | 0.9 |
| 60°-70° | 6.7 | 0.6 |
| 70°-80° | 4.9 | 0.5 |
| 80°-90° | 1.4 | 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° | 924.9 | 88.0 |
| 0°-40° | 1002.1 | 95.4 |
| 0°-60° | 1037.6 | 98.8 |
| 0°-90° | 1050.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1050.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2806 | 2806 | 2806 | 2806 | 2806 | |
| 5° | 2675 | 2658 | 2655 | 2681 | 2679 | 242 |
| 15° | 1629 | 1642 | 1639 | 1647 | 1634 | 441 |
| 25° | 493 | 515 | 529 | 492 | 468 | 236 |
| 35° | 110 | 115 | 122 | 111 | 103 | 74 |
| 45° | 32 | 33 | 32 | 32 | 31 | 26 |
| 55° | 7 | 9 | 11 | 9 | 8 | 8 |
| 65° | 6 | 7 | 6 | 7 | 6 | 7 |
| 75° | 5 | 5 | 5 | 5 | 5 | 5 |
| 85° | 1 | 1 | 1 | 1 | 1 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P283691

CATALOG NUMBER: LDA2B159050D010 EU2B15FL409050 2LBALPINSQ1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2805.6 | 2805.6 | 2805.6 | 2805.6 | 2805.6 |
| 1° | 2800.9 | 2780.9 | 2777.9 | 2803.8 | 2798.0 |
| 2° | 2778.5 | 2759.6 | 2756.7 | 2782.6 | 2777.3 |
| 3° | 2753.7 | 2736.7 | 2730.8 | 2757.9 | 2754.3 |
| 4° | 2720.7 | 2704.8 | 2699.5 | 2726.6 | 2723.7 |
| 5° | 2674.8 | 2658.3 | 2654.7 | 2681.3 | 2678.9 |
| 6° | 2618.2 | 2604.6 | 2598.1 | 2624.7 | 2620.0 |
| 7° | 2547.5 | 2535.1 | 2528.0 | 2547.5 | 2549.8 |
| 8° | 2455.5 | 2449.6 | 2441.4 | 2460.8 | 2460.8 |
| 9° | 2357.7 | 2352.4 | 2343.5 | 2361.2 | 2361.2 |
| 10° | 2252.7 | 2249.2 | 2238.6 | 2255.1 | 2255.1 |
| 11° | 2137.8 | 2136.0 | 2128.4 | 2141.9 | 2141.9 |
| 12° | 2017.0 | 2021.1 | 2014.0 | 2025.8 | 2021.7 |
| 13° | 1896.1 | 1894.4 | 1895.0 | 1903.8 | 1897.3 |
| 14° | 1759.4 | 1770.0 | 1771.8 | 1777.1 | 1767.1 |
| 15° | 1628.6 | 1642.1 | 1639.2 | 1646.8 | 1633.9 |
| 16° | 1494.8 | 1510.1 | 1509.5 | 1511.3 | 1498.9 |
| 17° | 1369.8 | 1378.6 | 1379.2 | 1377.5 | 1362.1 |
| 18° | 1236.6 | 1249.0 | 1249.0 | 1246.0 | 1227.8 |
| 19° | 1106.3 | 1115.8 | 1122.2 | 1115.8 | 1094.5 |
| 20° | 989.0 | 995.5 | 1007.3 | 990.8 | 967.2 |
| 21° | 876.5 | 882.4 | 892.4 | 872.9 | 847.0 |
| 22° | 768.6 | 776.3 | 785.7 | 763.3 | 736.2 |
| 23° | 667.8 | 685.5 | 689.0 | 658.4 | 635.4 |
| 24° | 575.3 | 595.3 | 601.2 | 570.0 | 545.8 |
| 25° | 492.8 | 515.1 | 528.7 | 492.2 | 468.0 |
| 26° | 421.4 | 443.2 | 459.7 | 423.2 | 400.2 |
| 27° | 359.0 | 381.9 | 399.0 | 364.8 | 343.0 |
| 28° | 305.3 | 327.7 | 345.4 | 313.6 | 292.9 |
| 29° | 265.2 | 278.2 | 295.9 | 269.4 | 250.5 |
| 30° | 225.7 | 239.9 | 258.8 | 231.6 | 215.1 |
| 32.5° | 155.0 | 162.7 | 177.4 | 160.9 | 147.9 |
| 35° | 110.2 | 114.9 | 122.0 | 110.8 | 103.1 |
| 37.5° | 78.4 | 80.7 | 84.9 | 78.4 | 74.3 |
| 40° | 57.8 | 58.9 | 60.7 | 57.2 | 54.8 |
| 42.5° | 43.0 | 43.6 | 43.6 | 42.4 | 41.3 |
| 45° | 32.4 | 33.0 | 32.4 | 32.4 | 31.2 |
| 47.5° | 23.6 | 25.3 | 24.8 | 24.8 | 23.0 |
| 50° | 15.3 | 18.9 | 18.9 | 18.3 | 15.3 |
| 52.5° | 9.4 | 13.0 | 14.7 | 13.0 | 10.0 |
| 55° | 7.1 | 8.8 | 11.2 | 8.8 | 7.7 |
| 57.5° | 7.1 | 7.1 | 8.3 | 7.1 | 7.1 |
| 60° | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 67.5° | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 70° | 6.5 | 6.5 | 5.9 | 6.5 | 6.5 |
| 72.5° | 5.9 | 5.9 | 5.3 | 5.9 | 5.3 |
| 75° | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 |
| 77.5° | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 80° | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 82.5° | 1.8 | 1.8 | 1.8 | 2.4 | 1.8 |
| 85° | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 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° | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |
| 65° | 6.5 | 7.1 | 6.5 | 7.1 | 6.5 |



(END OF REPORT)