

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: P284106

Luminaire Tested: **LDA2B209040D010 EU2B20WFL559040 2LBALPINSQ1MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P284106
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1809-951-61)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B209040D010 EU2B20WFL559040 2LBALPINSQ1MB
Description: PORTFOLIO 2IN ADJ 2000 LUMEN LED LUMINAIRE WITH WIDE FLOOD OPTIC AND
2in Adj SQ Pinhole w-lens, MB

Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1422.6 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.68 / 0.68
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

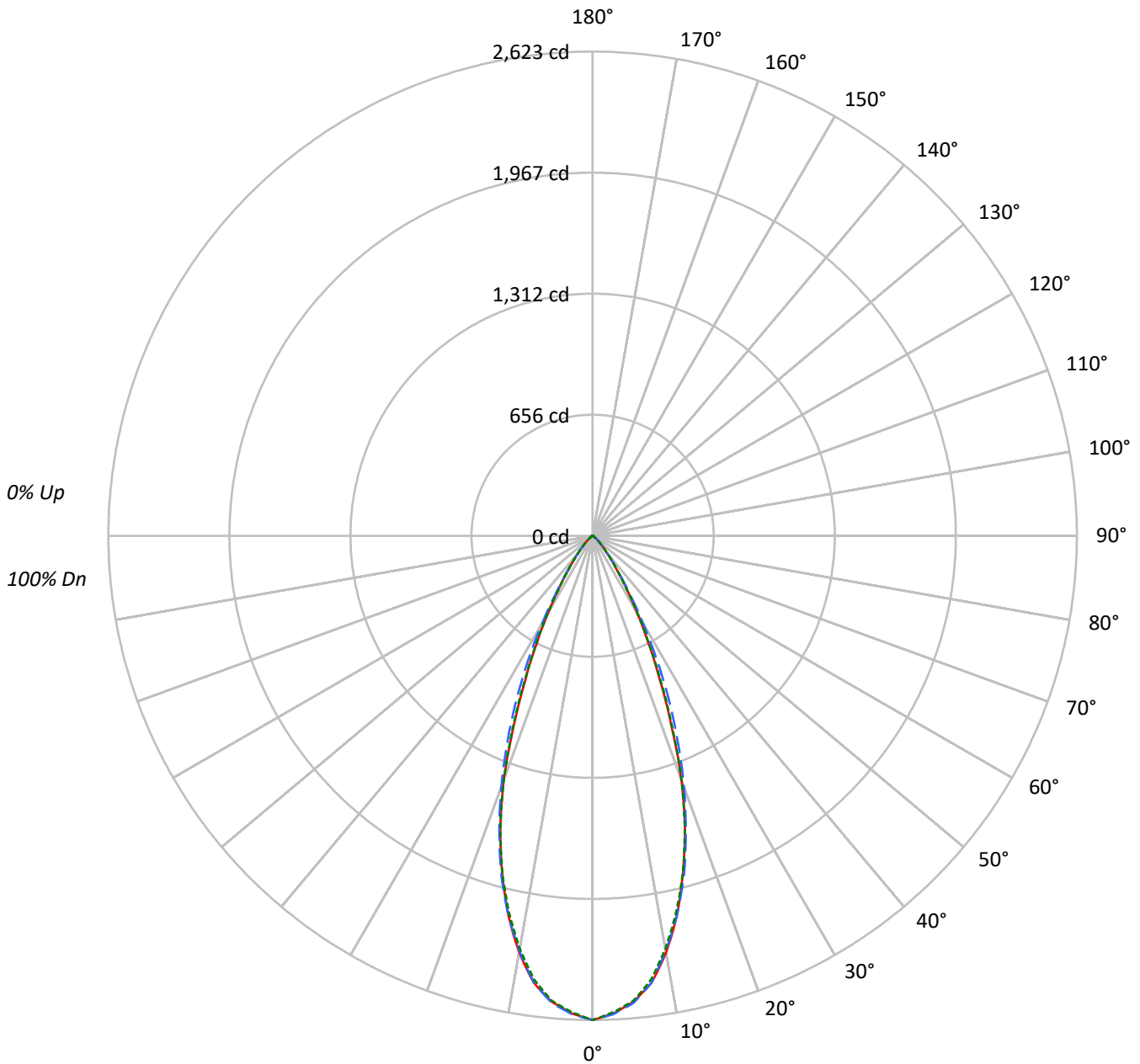
Input Watts (W): 20.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|---|--|---|
| RF | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | |
| RC | 80 | | | | | 70 | | | | | 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 | 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 | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 94 | | | | | 94 | | | |
| 2 | 109 | 104 | 101 | 98 | 107 | 103 | 99 | 96 | 100 | 97 | 94 | 97 | 94 | 92 | 94 | 92 | 90 | 89 | | | | | 89 | | | |
| 3 | 104 | 98 | 94 | 90 | 102 | 97 | 93 | 89 | 94 | 91 | 88 | 92 | 89 | 87 | 90 | 87 | 85 | 84 | | | | | 84 | | | |
| 4 | 100 | 93 | 88 | 84 | 98 | 92 | 87 | 83 | 90 | 86 | 82 | 88 | 84 | 81 | 86 | 83 | 81 | 79 | | | | | 79 | | | |
| 5 | 95 | 88 | 82 | 79 | 94 | 87 | 82 | 78 | 85 | 81 | 78 | 84 | 80 | 77 | 82 | 79 | 76 | 75 | | | | | 75 | | | |
| 6 | 91 | 83 | 78 | 74 | 90 | 82 | 77 | 74 | 81 | 77 | 73 | 80 | 76 | 73 | 78 | 75 | 72 | 71 | | | | | 71 | | | |
| 7 | 87 | 79 | 74 | 70 | 86 | 78 | 73 | 70 | 77 | 73 | 69 | 76 | 72 | 69 | 75 | 71 | 69 | 67 | | | | | 67 | | | |
| 8 | 84 | 75 | 70 | 66 | 83 | 75 | 70 | 66 | 74 | 69 | 66 | 73 | 69 | 66 | 72 | 68 | 65 | 64 | | | | | 64 | | | |
| 9 | 81 | 72 | 67 | 63 | 80 | 71 | 66 | 63 | 71 | 66 | 63 | 70 | 66 | 63 | 69 | 65 | 62 | 61 | | | | | 61 | | | |
| 10 | 77 | 69 | 64 | 60 | 76 | 68 | 63 | 60 | 68 | 63 | 60 | 67 | 63 | 60 | 66 | 62 | 60 | 58 | | | | | 58 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 1294039 | 1294039 | 1294039 |
| 5° | 1255152 | 1258173 | 1252528 |
| 10° | 1148881 | 1144322 | 1137458 |
| 15° | 966369 | 975358 | 964836 |
| 20° | 739025 | 758661 | 737817 |
| 25° | 469297 | 529122 | 478442 |
| 30° | 272936 | 308143 | 277721 |
| 35° | 144307 | 153462 | 144729 |
| 40° | 76190 | 79603 | 76190 |
| 45° | 42561 | 44166 | 43119 |
| 50° | 19879 | 25175 | 19879 |
| 55° | 7225 | 13762 | 7913 |
| 60° | 8288 | 8288 | 8288 |
| 65° | 8872 | 9806 | 8872 |
| 70° | 10963 | 9953 | 10963 |
| 75° | 10103 | 10103 | 10103 |
| 80° | 10796 | 8808 | 10796 |
| 85° | 8491 | 8491 | 8491 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 234.1 | 16.5 |
| 10°-20° | 521.3 | 36.6 |
| 20°-30° | 421.0 | 29.6 |
| 30°-40° | 166.4 | 11.7 |
| 40°-50° | 51.1 | 3.6 |
| 50°-60° | 13.2 | 0.9 |
| 60°-70° | 8.0 | 0.6 |
| 70°-80° | 5.8 | 0.4 |
| 80°-90° | 1.7 | 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° | 1176.5 | 82.7 |
| 0°-40° | 1342.9 | 94.4 |
| 0°-60° | 1407.1 | 98.9 |
| 0°-90° | 1422.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1422.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2623 | 2623 | 2623 | 2623 | 2623 | |
| 5° | 2534 | 2539 | 2540 | 2535 | 2529 | 235 |
| 15° | 1892 | 1897 | 1910 | 1902 | 1889 | 520 |
| 25° | 862 | 903 | 972 | 920 | 879 | 401 |
| 35° | 240 | 246 | 255 | 247 | 240 | 160 |
| 45° | 61 | 62 | 63 | 63 | 62 | 50 |
| 55° | 8 | 11 | 16 | 11 | 9 | 11 |
| 65° | 8 | 8 | 8 | 8 | 8 | 8 |
| 75° | 5 | 5 | 5 | 5 | 5 | 6 |
| 85° | 2 | 2 | 2 | 2 | 2 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P284106

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2622.9 | 2622.9 | 2622.9 | 2622.9 | 2622.9 |
| 2.5° | 2590.1 | 2591.6 | 2593.9 | 2590.9 | 2583.2 |
| 5° | 2534.4 | 2539.0 | 2540.5 | 2535.2 | 2529.1 |
| 7.5° | 2442.9 | 2437.5 | 2442.1 | 2433.0 | 2425.3 |
| 10° | 2293.3 | 2286.5 | 2284.2 | 2270.5 | 2270.5 |
| 12.5° | 2108.7 | 2106.4 | 2108.0 | 2101.1 | 2090.4 |
| 15° | 1892.0 | 1897.4 | 1909.6 | 1902.0 | 1889.0 |
| 17.5° | 1662.4 | 1670.0 | 1680.7 | 1678.4 | 1660.9 |
| 20° | 1407.6 | 1429.7 | 1445.0 | 1430.5 | 1405.3 |
| 22.5° | 1117.7 | 1165.0 | 1203.9 | 1173.4 | 1132.2 |
| 25° | 862.1 | 903.3 | 972.0 | 920.1 | 878.9 |
| 27.5° | 653.8 | 683.6 | 746.1 | 695.0 | 666.8 |
| 30° | 479.1 | 497.4 | 540.9 | 507.3 | 487.5 |
| 32.5° | 342.6 | 355.5 | 373.8 | 354.0 | 344.1 |
| 35° | 239.6 | 246.4 | 254.8 | 247.2 | 240.3 |
| 37.5° | 168.6 | 170.9 | 177.0 | 170.9 | 167.8 |
| 40° | 118.3 | 119.0 | 123.6 | 119.8 | 118.3 |
| 42.5° | 85.4 | 85.4 | 87.7 | 86.2 | 85.4 |
| 45° | 61.0 | 61.8 | 63.3 | 62.6 | 61.8 |
| 47.5° | 43.5 | 45.0 | 45.0 | 45.8 | 42.7 |
| 50° | 25.9 | 32.0 | 32.8 | 32.0 | 25.9 |
| 52.5° | 13.7 | 19.1 | 23.7 | 19.1 | 13.7 |
| 55° | 8.4 | 11.4 | 16.0 | 11.4 | 9.2 |
| 57.5° | 8.4 | 8.4 | 10.7 | 9.2 | 8.4 |
| 60° | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| 62.5° | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| 65° | 7.6 | 8.4 | 8.4 | 8.4 | 7.6 |
| 67.5° | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 |
| 70° | 7.6 | 7.6 | 6.9 | 7.6 | 7.6 |
| 72.5° | 6.9 | 6.9 | 6.1 | 6.9 | 6.9 |
| 75° | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 |
| 77.5° | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 |
| 80° | 3.8 | 3.8 | 3.1 | 3.8 | 3.8 |
| 82.5° | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| 85° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 87.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







(END OF REPORT)