

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: P283616

Luminaire Tested: **LDA2B109730D010 EU2B10FL409730 2LBAPINSQ1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P283616
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: LDA2B109730D010 EU2B10FL409730 2LBAPINSQ1MW
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj SQ PinHole, MW

Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 704.9 lumens
Efficiency: N/A
Efficacy: 70.5 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

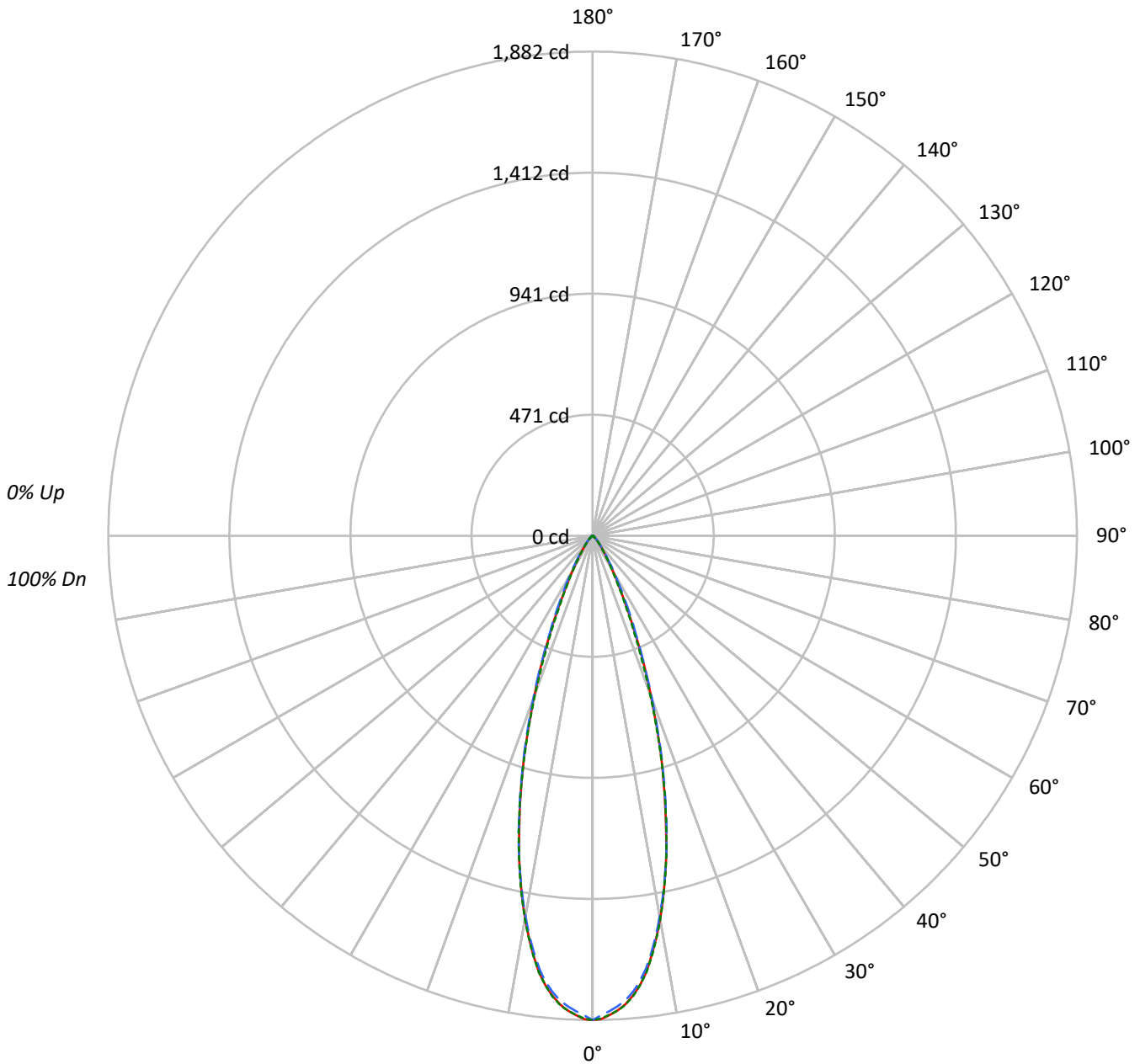
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 928754 | 928754 | 928754 |
| 5° | 888819 | 882133 | 890156 |
| 10° | 757220 | 752461 | 758022 |
| 15° | 558114 | 561740 | 559952 |
| 20° | 348406 | 354864 | 340741 |
| 25° | 179967 | 193086 | 170930 |
| 30° | 86307 | 98897 | 82206 |
| 35° | 44569 | 49327 | 41678 |
| 40° | 24989 | 26212 | 23701 |
| 45° | 15210 | 15210 | 14652 |
| 50° | 7906 | 9748 | 7906 |
| 55° | 4043 | 6451 | 4387 |
| 60° | 4638 | 4638 | 4638 |
| 65° | 5137 | 5137 | 5137 |
| 70° | 6347 | 5770 | 6347 |
| 75° | 6100 | 6100 | 6100 |
| 80° | 5682 | 5682 | 5682 |
| 85° | 4529 | 4529 | 4529 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 161.9 | 23.0 |
| 10°-20° | 297.4 | 42.2 |
| 20°-30° | 161.2 | 22.9 |
| 30°-40° | 51.8 | 7.3 |
| 40°-50° | 17.7 | 2.5 |
| 50°-60° | 6.2 | 0.9 |
| 60°-70° | 4.5 | 0.6 |
| 70°-80° | 3.3 | 0.5 |
| 80°-90° | 1.0 | 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° | 620.6 | 88.0 |
| 0°-40° | 672.3 | 95.4 |
| 0°-60° | 696.2 | 98.8 |
| 0°-90° | 704.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 704.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1882 | 1882 | 1882 | 1882 | 1882 | |
| 5° | 1795 | 1784 | 1781 | 1799 | 1797 | 162 |
| 15° | 1093 | 1102 | 1100 | 1105 | 1096 | 296 |
| 25° | 331 | 346 | 355 | 330 | 314 | 158 |
| 35° | 74 | 77 | 82 | 74 | 69 | 50 |
| 45° | 22 | 22 | 22 | 22 | 21 | 17 |
| 55° | 5 | 6 | 8 | 6 | 5 | 5 |
| 65° | 4 | 5 | 4 | 5 | 4 | 4 |
| 75° | 3 | 3 | 3 | 3 | 3 | 3 |
| 85° | 1 | 1 | 1 | 1 | 1 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P283616

CATALOG NUMBER: LDA2B109730D010 EU2B10FL409730 2LBAPINSQ1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1882.5 | 1882.5 | 1882.5 | 1882.5 | 1882.5 |
| 1° | 1879.3 | 1865.9 | 1863.9 | 1881.3 | 1877.3 |
| 2° | 1864.3 | 1851.6 | 1849.6 | 1867.0 | 1863.5 |
| 3° | 1847.7 | 1836.2 | 1832.2 | 1850.4 | 1848.1 |
| 4° | 1825.5 | 1814.8 | 1811.3 | 1829.5 | 1827.5 |
| 5° | 1794.7 | 1783.6 | 1781.2 | 1799.0 | 1797.4 |
| 6° | 1756.7 | 1747.6 | 1743.3 | 1761.1 | 1757.9 |
| 7° | 1709.2 | 1700.9 | 1696.2 | 1709.2 | 1710.8 |
| 8° | 1647.6 | 1643.6 | 1638.1 | 1651.1 | 1651.1 |
| 9° | 1581.9 | 1578.3 | 1572.4 | 1584.3 | 1584.3 |
| 10° | 1511.5 | 1509.1 | 1502.0 | 1513.1 | 1513.1 |
| 11° | 1434.4 | 1433.2 | 1428.1 | 1437.2 | 1437.2 |
| 12° | 1353.3 | 1356.1 | 1351.3 | 1359.3 | 1356.5 |
| 13° | 1272.2 | 1271.1 | 1271.5 | 1277.4 | 1273.0 |
| 14° | 1180.5 | 1187.6 | 1188.8 | 1192.4 | 1185.6 |
| 15° | 1092.7 | 1101.8 | 1099.8 | 1105.0 | 1096.3 |
| 16° | 1002.9 | 1013.2 | 1012.8 | 1014.0 | 1005.7 |
| 17° | 919.1 | 925.0 | 925.4 | 924.2 | 913.9 |
| 18° | 829.7 | 838.0 | 838.0 | 836.0 | 823.8 |
| 19° | 742.3 | 748.6 | 753.0 | 748.6 | 734.4 |
| 20° | 663.6 | 668.0 | 675.9 | 664.8 | 649.0 |
| 21° | 588.1 | 592.0 | 598.8 | 585.7 | 568.3 |
| 22° | 515.7 | 520.8 | 527.2 | 512.1 | 493.9 |
| 23° | 448.1 | 459.9 | 462.3 | 441.7 | 426.3 |
| 24° | 386.0 | 399.4 | 403.4 | 382.4 | 366.2 |
| 25° | 330.6 | 345.6 | 354.7 | 330.2 | 314.0 |
| 26° | 282.8 | 297.4 | 308.5 | 284.0 | 268.5 |
| 27° | 240.8 | 256.3 | 267.7 | 244.8 | 230.2 |
| 28° | 204.9 | 219.9 | 231.7 | 210.4 | 196.6 |
| 29° | 178.0 | 186.7 | 198.5 | 180.7 | 168.1 |
| 30° | 151.5 | 161.0 | 173.6 | 155.4 | 144.3 |
| 32.5° | 104.0 | 109.2 | 119.0 | 108.0 | 99.3 |
| 35° | 74.0 | 77.1 | 81.9 | 74.3 | 69.2 |
| 37.5° | 52.6 | 54.2 | 56.9 | 52.6 | 49.8 |
| 40° | 38.8 | 39.5 | 40.7 | 38.4 | 36.8 |
| 42.5° | 28.9 | 29.3 | 29.3 | 28.5 | 27.7 |
| 45° | 21.8 | 22.1 | 21.8 | 21.8 | 21.0 |
| 47.5° | 15.8 | 17.0 | 16.6 | 16.6 | 15.4 |
| 50° | 10.3 | 12.7 | 12.7 | 12.3 | 10.3 |
| 52.5° | 6.3 | 8.7 | 9.9 | 8.7 | 6.7 |
| 55° | 4.7 | 5.9 | 7.5 | 5.9 | 5.1 |
| 57.5° | 4.7 | 4.7 | 5.5 | 4.7 | 4.7 |
| 60° | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 67.5° | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 70° | 4.4 | 4.4 | 4.0 | 4.4 | 4.4 |
| 72.5° | 4.0 | 4.0 | 3.6 | 4.0 | 3.6 |
| 75° | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| 77.5° | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 80° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 82.5° | 1.2 | 1.2 | 1.2 | 1.6 | 1.2 |
| 85° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 87.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 62.5° | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 |
| 65° | 4.4 | 4.7 | 4.4 | 4.7 | 4.4 |



(END OF REPORT)