

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: P281225

Luminaire Tested: **LDA2B158027D010 EU2B15SP158027 2LBALD1GPH**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P281225
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-5)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B158027D010 EU2B15SP158027 2LBALD1GPH
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in
ADJ spun Refl w/lens Self-Flanged, GPH
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1412.4 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Spacing Criteria (0/90/45): 0.33 / 0.31 / 0.32
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

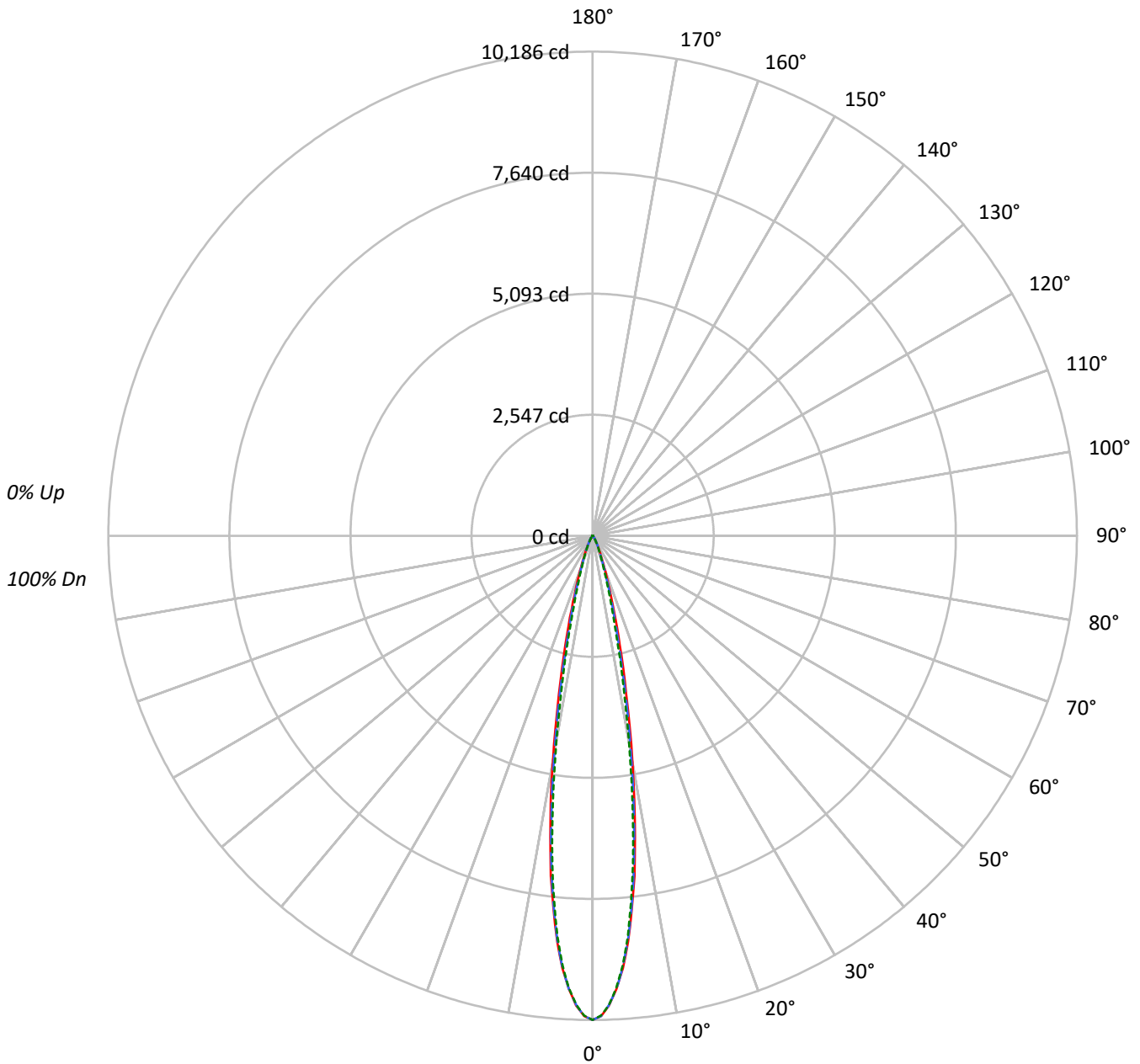
Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | | 100 | | | | | | | | | | | | | | | |
| 1 | 115 | 113 | 111 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 99 | 99 | 97 | | | | 97 | | | | | | | | | | | | | | | |
| 2 | 112 | 108 | 106 | 103 | 110 | 107 | 104 | 102 | 104 | 102 | 100 | 101 | 99 | 98 | 98 | 97 | 96 | 95 | | | | 95 | | | | | | | | | | | | | | | |
| 3 | 109 | 104 | 101 | 98 | 107 | 103 | 100 | 98 | 101 | 98 | 96 | 98 | 96 | 95 | 96 | 95 | 93 | 92 | | | | 92 | | | | | | | | | | | | | | | |
| 4 | 106 | 101 | 97 | 95 | 104 | 100 | 97 | 94 | 98 | 95 | 93 | 96 | 94 | 92 | 94 | 93 | 91 | 90 | | | | 90 | | | | | | | | | | | | | | | |
| 5 | 103 | 98 | 94 | 91 | 102 | 97 | 93 | 91 | 95 | 92 | 90 | 94 | 91 | 89 | 93 | 90 | 89 | 88 | | | | 88 | | | | | | | | | | | | | | | |
| 6 | 101 | 95 | 91 | 88 | 99 | 94 | 91 | 88 | 93 | 90 | 88 | 92 | 89 | 87 | 91 | 88 | 87 | 86 | | | | 86 | | | | | | | | | | | | | | | |
| 7 | 98 | 92 | 89 | 86 | 97 | 92 | 88 | 86 | 91 | 88 | 85 | 90 | 87 | 85 | 89 | 87 | 85 | 84 | | | | 84 | | | | | | | | | | | | | | | |
| 8 | 96 | 90 | 86 | 84 | 95 | 90 | 86 | 84 | 89 | 86 | 83 | 88 | 85 | 83 | 87 | 85 | 83 | 82 | | | | 82 | | | | | | | | | | | | | | | |
| 9 | 94 | 88 | 84 | 82 | 93 | 88 | 84 | 82 | 87 | 84 | 82 | 86 | 83 | 81 | 86 | 83 | 81 | 80 | | | | 80 | | | | | | | | | | | | | | | |
| 10 | 92 | 86 | 83 | 80 | 91 | 86 | 82 | 80 | 85 | 82 | 80 | 85 | 82 | 80 | 84 | 81 | 80 | 79 | | | | 79 | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 5025383 | 5025383 | 5025383 |
| 5° | 4245945 | 4223312 | 4192112 |
| 10° | 2416742 | 2310336 | 2192858 |
| 15° | 1000794 | 886485 | 780910 |
| 20° | 380695 | 333391 | 305249 |
| 25° | 168154 | 161567 | 143658 |
| 30° | 77819 | 85965 | 68419 |
| 35° | 40895 | 48243 | 38305 |
| 40° | 17969 | 20738 | 11979 |
| 45° | 6977 | 5512 | 7954 |
| 50° | 3300 | 3838 | 5526 |
| 55° | 0 | 2494 | 0 |
| 60° | 0 | 0 | 1381 |
| 65° | 0 | 0 | 0 |
| 70° | 0 | 1010 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 3978 | 0 | 0 |
| 85° | 40757 | 36228 | 16416 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 681.1 | 48.2 |
| 10°-20° | 520.7 | 36.9 |
| 20°-30° | 144.8 | 10.3 |
| 30°-40° | 47.1 | 3.3 |
| 40°-50° | 10.4 | 0.7 |
| 50°-60° | 3.2 | 0.2 |
| 60°-70° | 1.8 | 0.1 |
| 70°-80° | 1.1 | 0.1 |
| 80°-90° | 2.3 | 0.2 |
| 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° | 1346.5 | 95.3 |
| 0°-40° | 1393.6 | 98.7 |
| 0°-60° | 1407.1 | 99.6 |
| 0°-90° | 1412.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1412.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0° | 10186 | 10186 | 10186 | 10186 | 10186 | |
| 5° | 8573 | 8510 | 8528 | 8464 | 8465 | 693 |
| 15° | 1959 | 1892 | 1736 | 1602 | 1529 | 572 |
| 25° | 309 | 312 | 297 | 280 | 264 | 155 |
| 35° | 68 | 74 | 80 | 61 | 64 | 45 |
| 45° | 10 | 14 | 8 | 8 | 11 | 10 |
| 55° | 0 | 4 | 3 | 1 | 0 | 3 |
| 65° | 0 | 3 | 0 | 0 | 0 | 2 |
| 75° | 0 | 0 | 0 | 1 | 0 | 1 |
| 85° | 7 | 4 | 6 | 4 | 3 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|---------|---------|---------|---------|---------|
| 0° | 10186.0 | 10186.0 | 10186.0 | 10186.0 | 10186.0 |
| 1° | 10108.1 | 10070.1 | 10106.6 | 10085.2 | 10097.3 |
| 2° | 9888.5 | 9841.3 | 9879.2 | 9849.2 | 9874.2 |
| 3° | 9546.7 | 9510.2 | 9543.8 | 9505.9 | 9526.0 |
| 4° | 9118.3 | 9065.4 | 9099.0 | 9048.3 | 9060.4 |
| 5° | 8573.4 | 8510.5 | 8527.7 | 8464.0 | 8464.7 |
| 6° | 7886.9 | 7843.3 | 7853.3 | 7753.9 | 7746.8 |
| 7° | 7215.4 | 7112.5 | 7101.7 | 6988.0 | 6965.9 |
| 8° | 6400.2 | 6306.5 | 6275.8 | 6142.1 | 6094.9 |
| 9° | 5618.6 | 5502.0 | 5439.1 | 5283.9 | 5228.9 |
| 10° | 4824.1 | 4706.1 | 4611.7 | 4436.5 | 4377.2 |
| 11° | 4089.0 | 3982.4 | 3865.2 | 3677.8 | 3619.9 |
| 12° | 3406.8 | 3323.1 | 3194.4 | 3013.5 | 2952.7 |
| 13° | 2849.7 | 2753.2 | 2615.1 | 2447.1 | 2394.9 |
| 14° | 2367.0 | 2263.3 | 2125.3 | 1981.6 | 1880.0 |
| 15° | 1959.4 | 1891.5 | 1735.6 | 1601.8 | 1528.9 |
| 16° | 1601.1 | 1543.2 | 1408.8 | 1292.9 | 1241.4 |
| 17° | 1312.9 | 1266.5 | 1152.0 | 1061.2 | 1018.3 |
| 18° | 1083.4 | 1025.5 | 935.4 | 876.0 | 842.4 |
| 19° | 878.9 | 833.8 | 768.0 | 722.3 | 688.6 |
| 20° | 725.1 | 687.9 | 635.0 | 594.3 | 581.4 |
| 22.5° | 468.4 | 462.0 | 427.6 | 405.5 | 394.7 |
| 25° | 308.9 | 312.5 | 296.8 | 279.6 | 263.9 |
| 26° | 263.9 | 266.0 | 251.7 | 241.7 | 221.7 |
| 27° | 226.0 | 226.7 | 226.7 | 208.1 | 188.8 |
| 28° | 184.5 | 192.4 | 185.2 | 176.6 | 158.0 |
| 29° | 158.0 | 168.1 | 164.5 | 155.9 | 138.0 |
| 30° | 136.6 | 143.7 | 150.9 | 137.3 | 120.1 |
| 32.5° | 95.8 | 102.3 | 110.1 | 103.0 | 88.7 |
| 35° | 67.9 | 73.7 | 80.1 | 60.8 | 63.6 |
| 37.5° | 46.5 | 56.5 | 54.3 | 49.3 | 42.2 |
| 40° | 27.9 | 29.3 | 32.2 | 34.3 | 18.6 |
| 42.5° | 20.0 | 23.6 | 21.5 | 24.3 | 8.6 |
| 45° | 10.0 | 14.3 | 7.9 | 7.9 | 11.4 |
| 47.5° | 7.2 | 12.2 | 4.3 | 4.3 | 1.4 |
| 50° | 4.3 | 9.3 | 5.0 | 2.1 | 7.2 |
| 52.5° | 7.2 | 8.6 | 5.7 | 6.4 | 1.4 |
| 55° | 0.0 | 4.3 | 2.9 | 1.4 | 0.0 |
| 57.5° | 2.9 | 5.0 | 2.9 | 1.4 | 2.9 |
| 60° | 0.0 | 0.0 | 0.0 | 0.7 | 1.4 |
| 62.5° | 0.0 | 1.4 | 0.0 | 2.1 | 2.9 |
| 65° | 0.0 | 2.9 | 0.0 | 0.0 | 0.0 |
| 67.5° | 4.3 | 5.0 | 2.9 | 5.7 | 8.6 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 |
| 77.5° | 0.0 | 7.2 | 2.1 | 2.1 | 2.9 |
| 80° | 1.4 | 0.0 | 0.0 | 0.7 | 0.0 |
| 82.5° | 0.0 | 5.7 | 0.7 | 2.9 | 4.3 |
| 85° | 7.2 | 3.6 | 6.4 | 3.6 | 2.9 |
| 87.5° | 0.0 | 0.7 | 1.4 | 0.7 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 70° | 0.0 | 0.0 | 0.7 | 0.7 | 0.0 |
| 72.5° | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 |



(END OF REPORT)