

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: P281619

Luminaire Tested: **LDA2B058040D010 EU2B05SP158040 2LBAPINSQ1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P281619
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-10)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B058040D010 EU2B05SP158040 2LBAPINSQ1MW
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ PinHole, MW
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 838.2 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 0.3 / 0.3 / 0.29
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

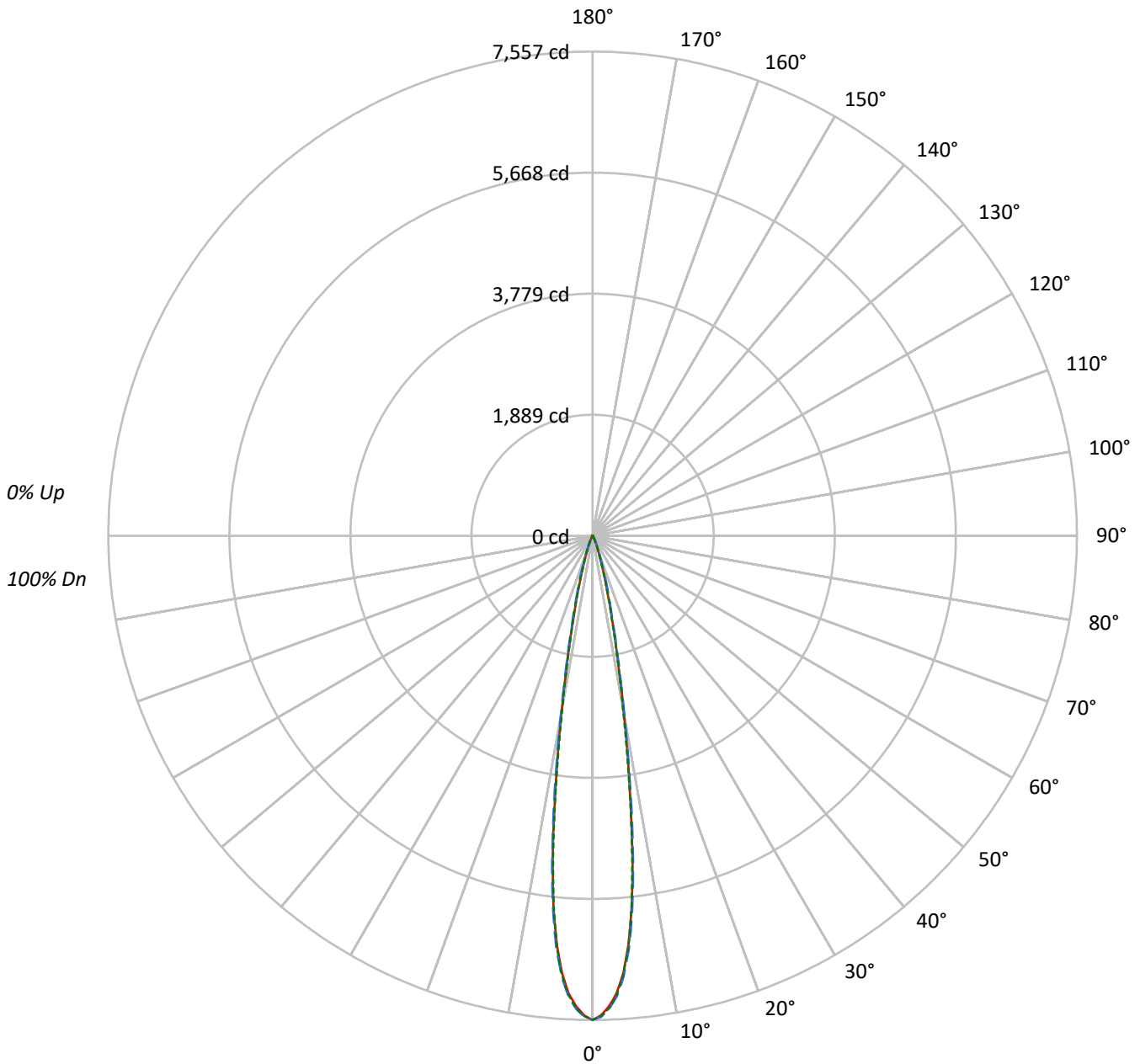
Input Watts (W): 7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 116 | 114 | 112 | 111 | 113 | 112 | 110 | 109 | 108 | 107 | 106 | 104 | 103 | 103 | 101 | 100 | 100 | 98 | | | | | 98 | | | |
| 2 | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 104 | 105 | 103 | 102 | 102 | 101 | 99 | 99 | 98 | 97 | 96 | | | | | 96 | | | |
| 3 | 110 | 106 | 103 | 101 | 108 | 105 | 102 | 100 | 102 | 100 | 98 | 100 | 98 | 97 | 98 | 97 | 95 | 94 | | | | | 94 | | | |
| 4 | 107 | 103 | 100 | 97 | 106 | 102 | 99 | 97 | 100 | 98 | 96 | 98 | 96 | 95 | 97 | 95 | 94 | 93 | | | | | 93 | | | |
| 5 | 105 | 100 | 97 | 95 | 104 | 100 | 96 | 94 | 98 | 95 | 93 | 97 | 94 | 93 | 95 | 93 | 92 | 91 | | | | | 91 | | | |
| 6 | 103 | 98 | 95 | 92 | 102 | 97 | 94 | 92 | 96 | 93 | 91 | 95 | 93 | 91 | 94 | 92 | 90 | 89 | | | | | 89 | | | |
| 7 | 101 | 96 | 93 | 90 | 100 | 95 | 92 | 90 | 94 | 92 | 90 | 93 | 91 | 89 | 93 | 90 | 89 | 88 | | | | | 88 | | | |
| 8 | 99 | 94 | 91 | 89 | 98 | 94 | 91 | 88 | 93 | 90 | 88 | 92 | 90 | 88 | 91 | 89 | 88 | 87 | | | | | 87 | | | |
| 9 | 98 | 92 | 89 | 87 | 97 | 92 | 89 | 87 | 91 | 89 | 87 | 91 | 88 | 86 | 90 | 88 | 86 | 85 | | | | | 85 | | | |
| 10 | 96 | 91 | 88 | 86 | 95 | 90 | 88 | 86 | 90 | 87 | 85 | 89 | 87 | 85 | 89 | 87 | 85 | 84 | | | | | 84 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 3728286 | 3728286 | 3728286 |
| 5° | 3174777 | 3207810 | 3180769 |
| 10° | 1401621 | 1433684 | 1368858 |
| 15° | 425315 | 487781 | 431955 |
| 20° | 127266 | 169688 | 142229 |
| 25° | 49592 | 48829 | 52096 |
| 30° | 22104 | 19939 | 21021 |
| 35° | 4517 | 3915 | 3915 |
| 40° | 0 | 322 | 1224 |
| 45° | 3907 | 3279 | 5861 |
| 50° | 0 | 1075 | 3607 |
| 55° | 0 | 0 | 1634 |
| 60° | 0 | 493 | 1875 |
| 65° | 0 | 0 | 1051 |
| 70° | 0 | 2741 | 5337 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 2830 | 10755 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 489.9 | 58.4 |
| 10°-20° | 279.8 | 33.4 |
| 20°-30° | 53.1 | 6.3 |
| 30°-40° | 9.6 | 1.2 |
| 40°-50° | 2.5 | 0.3 |
| 50°-60° | 1.9 | 0.2 |
| 60°-70° | 0.3 | 0.0 |
| 70°-80° | 0.4 | 0.1 |
| 80°-90° | 0.6 | 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° | 822.8 | 98.2 |
| 0°-40° | 832.4 | 99.3 |
| 0°-60° | 836.8 | 99.8 |
| 0°-90° | 838.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 838.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 7557 | 7557 | 7557 | 7557 | 7557 | |
| 5° | 6410 | 6452 | 6477 | 6466 | 6423 | 487 |
| 15° | 833 | 906 | 955 | 897 | 846 | 265 |
| 25° | 91 | 98 | 90 | 102 | 96 | 48 |
| 35° | 8 | 9 | 6 | 8 | 6 | 10 |
| 45° | 6 | 9 | 5 | 5 | 8 | 3 |
| 55° | 0 | 0 | 0 | 0 | 2 | 1 |
| 65° | 0 | 0 | 0 | 0 | 1 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 2 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P281619

CATALOG NUMBER: LDA2B058040D010 EU2B05SP158040 2LBAPINSQ1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 7556.9 | 7556.9 | 7556.9 | 7556.9 | 7556.9 |
| 1° | 7485.5 | 7493.4 | 7510.2 | 7527.5 | 7500.4 |
| 2° | 7345.4 | 7364.5 | 7388.3 | 7404.2 | 7374.8 |
| 3° | 7149.2 | 7175.9 | 7201.1 | 7204.4 | 7176.8 |
| 4° | 6846.2 | 6878.9 | 6905.5 | 6902.2 | 6867.6 |
| 5° | 6410.5 | 6452.5 | 6477.2 | 6466.0 | 6422.6 |
| 6° | 5834.7 | 5875.3 | 5907.0 | 5874.8 | 5816.4 |
| 7° | 5117.3 | 5164.0 | 5197.7 | 5142.6 | 5071.1 |
| 8° | 4286.1 | 4351.5 | 4385.1 | 4308.0 | 4234.7 |
| 9° | 3498.7 | 3544.0 | 3578.1 | 3494.1 | 3419.3 |
| 10° | 2797.8 | 2880.9 | 2861.8 | 2796.8 | 2732.4 |
| 11° | 2200.5 | 2275.7 | 2278.9 | 2235.0 | 2172.0 |
| 12° | 1722.7 | 1802.1 | 1822.2 | 1788.6 | 1732.6 |
| 13° | 1361.3 | 1420.6 | 1453.8 | 1419.2 | 1366.0 |
| 14° | 1083.4 | 1136.2 | 1178.7 | 1133.9 | 1080.6 |
| 15° | 832.7 | 905.5 | 955.0 | 897.1 | 845.7 |
| 16° | 662.2 | 722.4 | 781.3 | 715.4 | 674.3 |
| 17° | 508.6 | 562.3 | 623.0 | 563.2 | 529.6 |
| 18° | 402.6 | 445.0 | 511.8 | 450.2 | 420.8 |
| 19° | 315.2 | 347.4 | 409.6 | 355.4 | 331.6 |
| 20° | 242.4 | 277.9 | 323.2 | 286.3 | 270.9 |
| 22.5° | 146.6 | 166.3 | 179.3 | 168.1 | 160.2 |
| 25° | 91.1 | 98.1 | 89.7 | 102.3 | 95.7 |
| 26° | 79.4 | 84.5 | 82.7 | 91.1 | 83.1 |
| 27° | 63.5 | 70.0 | 64.9 | 71.5 | 69.1 |
| 28° | 57.9 | 65.8 | 55.6 | 63.5 | 59.8 |
| 29° | 40.6 | 43.9 | 39.7 | 42.5 | 42.5 |
| 30° | 38.8 | 39.7 | 35.0 | 38.3 | 36.9 |
| 32.5° | 30.4 | 28.5 | 23.3 | 24.8 | 23.8 |
| 35° | 7.5 | 9.3 | 6.5 | 7.9 | 6.5 |
| 37.5° | 11.2 | 10.3 | 12.1 | 11.7 | 11.2 |
| 40° | 0.0 | 0.5 | 0.5 | 0.5 | 1.9 |
| 42.5° | 8.4 | 5.1 | 4.7 | 3.3 | 5.6 |
| 45° | 5.6 | 8.9 | 4.7 | 5.1 | 8.4 |
| 47.5° | 0.0 | 0.5 | 0.0 | 0.9 | 0.9 |
| 50° | 0.0 | 0.9 | 1.4 | 1.9 | 4.7 |
| 52.5° | 0.9 | 5.6 | 2.8 | 5.1 | 7.5 |
| 55° | 0.0 | 0.5 | 0.0 | 0.5 | 1.9 |
| 57.5° | 1.9 | 0.9 | 1.9 | 1.9 | 8.4 |
| 60° | 0.0 | 0.9 | 0.5 | 0.5 | 1.9 |
| 62.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 65° | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 |
| 67.5° | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| 80° | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.5 | 0.9 | 1.4 | 0.9 |
| 85° | 0.0 | 0.5 | 0.5 | 0.5 | 1.9 |
| 87.5° | 0.0 | 0.9 | 1.4 | 0.0 | 0.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 70° | 0.0 | 1.4 | 1.9 | 0.0 | 3.7 |
| 72.5° | 0.0 | 2.3 | 0.5 | 0.5 | 0.0 |



(END OF REPORT)