

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: P314763

Luminaire Tested: **LDA2B10SP9027D010 PIN1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P314763
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-8)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B10SP9027D010 PIN1MW
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in
Adj PinHole, Black oculus, matte white finish
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 836.5 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 0.32 / 0.3 / 0.32
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

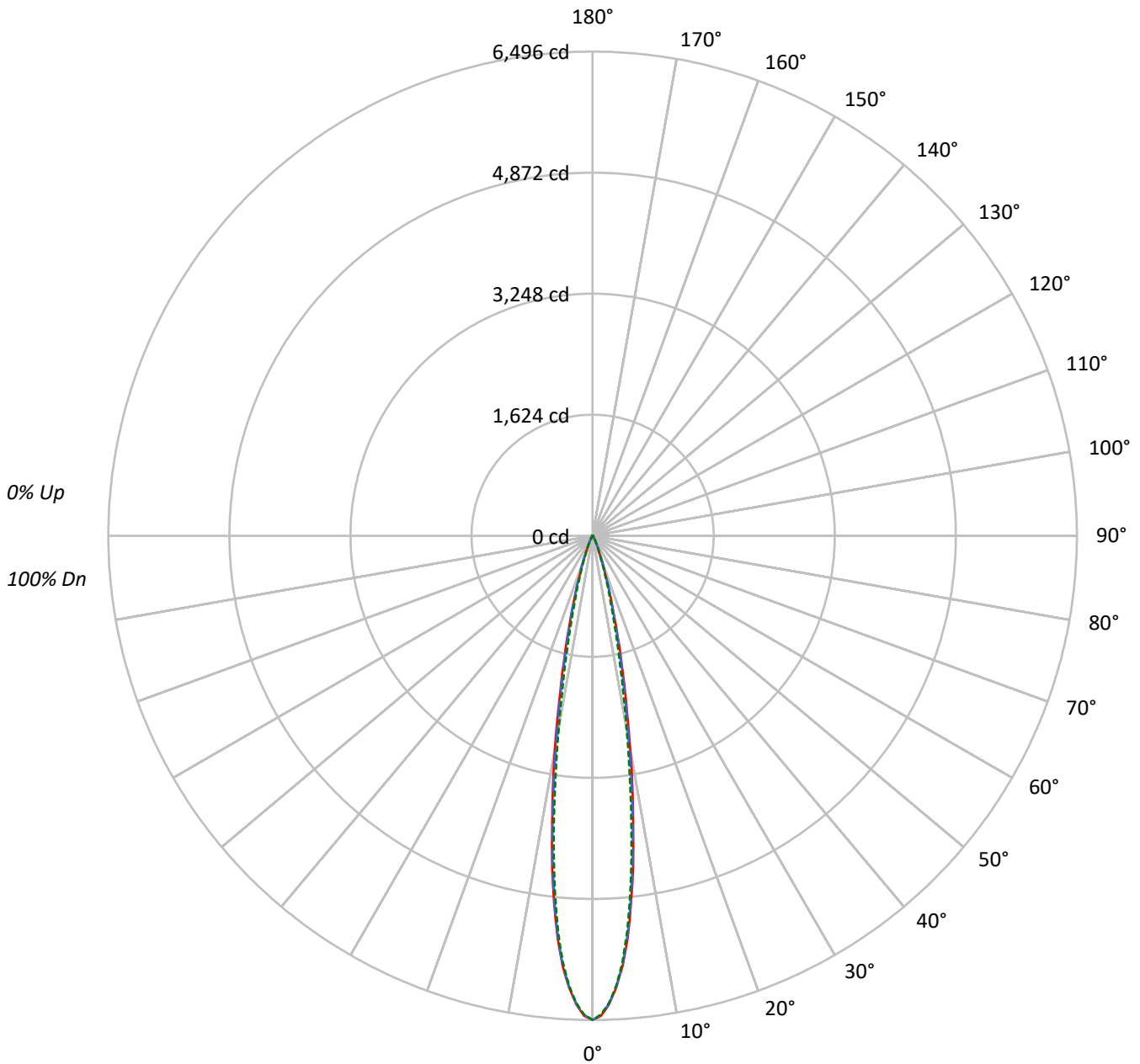
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 3204730 | 3204730 | 3204730 |
| 5° | 2677401 | 2664623 | 2633076 |
| 10° | 1458732 | 1401922 | 1312198 |
| 15° | 578340 | 563579 | 483797 |
| 20° | 194312 | 207647 | 171631 |
| 25° | 67447 | 72836 | 64725 |
| 30° | 24667 | 26946 | 26376 |
| 35° | 15900 | 18550 | 14093 |
| 40° | 8308 | 9918 | 10240 |
| 45° | 7605 | 5931 | 5582 |
| 50° | 4605 | 3070 | 2303 |
| 55° | 0 | 0 | 0 |
| 60° | 2960 | 2960 | 987 |
| 65° | 2335 | 584 | 0 |
| 70° | 0 | 2164 | 2885 |
| 75° | 0 | 4766 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 2830 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 424.7 | 50.8 |
| 10°-20° | 316.1 | 37.8 |
| 20°-30° | 69.9 | 8.4 |
| 30°-40° | 15.5 | 1.9 |
| 40°-50° | 6.4 | 0.8 |
| 50°-60° | 1.1 | 0.1 |
| 60°-70° | 1.1 | 0.1 |
| 70°-80° | 0.9 | 0.1 |
| 80°-90° | 0.8 | 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° | 810.7 | 96.9 |
| 0°-40° | 826.3 | 98.8 |
| 0°-60° | 833.7 | 99.7 |
| 0°-90° | 836.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 836.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 6496 | 6496 | 6496 | 6496 | 6496 | |
| 5° | 5406 | 5384 | 5380 | 5360 | 5317 | 431 |
| 15° | 1132 | 1129 | 1103 | 1000 | 947 | 333 |
| 25° | 124 | 138 | 134 | 124 | 119 | 67 |
| 35° | 26 | 26 | 31 | 25 | 23 | 15 |
| 45° | 11 | 9 | 8 | 8 | 8 | 7 |
| 55° | 0 | 0 | 0 | 0 | 0 | 1 |
| 65° | 2 | 1 | 0 | 0 | 0 | 2 |
| 75° | 0 | 0 | 2 | 0 | 0 | 1 |
| 85° | 0 | 0 | 0 | 2 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: LDA2B10SP9027D010 PIN1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 6495.7 | 6495.7 | 6495.7 | 6495.7 | 6495.7 |
| 1° | 6442.5 | 6416.1 | 6429.1 | 6436.5 | 6425.6 |
| 2° | 6292.3 | 6260.4 | 6280.8 | 6282.8 | 6271.9 |
| 3° | 6068.4 | 6054.0 | 6060.4 | 6062.9 | 6041.0 |
| 4° | 5781.8 | 5760.9 | 5765.4 | 5759.9 | 5733.1 |
| 5° | 5406.2 | 5383.8 | 5380.4 | 5360.0 | 5316.7 |
| 6° | 4947.0 | 4934.1 | 4910.7 | 4875.9 | 4818.2 |
| 7° | 4455.0 | 4444.6 | 4404.3 | 4341.6 | 4274.9 |
| 8° | 3915.8 | 3915.8 | 3857.5 | 3771.0 | 3694.9 |
| 9° | 3405.3 | 3386.4 | 3312.3 | 3207.8 | 3134.2 |
| 10° | 2911.8 | 2886.4 | 2798.4 | 2692.4 | 2619.3 |
| 11° | 2444.7 | 2417.8 | 2333.2 | 2224.8 | 2157.1 |
| 12° | 2041.2 | 2026.8 | 1961.1 | 1841.7 | 1774.1 |
| 13° | 1700.4 | 1681.5 | 1623.8 | 1510.9 | 1453.2 |
| 14° | 1403.4 | 1379.5 | 1333.3 | 1229.8 | 1173.6 |
| 15° | 1132.3 | 1128.8 | 1103.4 | 1000.5 | 947.2 |
| 16° | 925.3 | 923.3 | 899.5 | 799.0 | 777.1 |
| 17° | 742.8 | 753.2 | 746.2 | 653.7 | 628.8 |
| 18° | 578.1 | 599.0 | 604.0 | 520.4 | 495.5 |
| 19° | 465.2 | 485.1 | 493.5 | 420.4 | 399.5 |
| 20° | 370.1 | 389.0 | 395.5 | 340.8 | 326.9 |
| 22.5° | 209.9 | 235.3 | 236.3 | 208.0 | 193.5 |
| 25° | 123.9 | 138.3 | 133.8 | 123.9 | 118.9 |
| 26° | 104.0 | 117.9 | 110.9 | 108.0 | 104.0 |
| 27° | 87.6 | 97.0 | 91.5 | 86.6 | 90.0 |
| 28° | 72.6 | 79.1 | 73.6 | 75.1 | 69.6 |
| 29° | 57.7 | 68.7 | 60.7 | 62.2 | 57.7 |
| 30° | 43.3 | 53.2 | 47.3 | 49.7 | 46.3 |
| 32.5° | 32.3 | 35.3 | 31.3 | 35.3 | 35.3 |
| 35° | 26.4 | 26.4 | 30.8 | 24.9 | 23.4 |
| 37.5° | 11.9 | 9.5 | 10.4 | 8.5 | 9.9 |
| 40° | 12.9 | 14.4 | 15.4 | 12.9 | 15.9 |
| 42.5° | 9.0 | 11.9 | 11.9 | 8.0 | 13.9 |
| 45° | 10.9 | 9.0 | 8.5 | 8.5 | 8.0 |
| 47.5° | 5.0 | 3.5 | 4.0 | 4.5 | 7.0 |
| 50° | 6.0 | 2.5 | 4.0 | 6.0 | 3.0 |
| 52.5° | 2.0 | 0.0 | 2.5 | 0.0 | 1.0 |
| 55° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 57.5° | 0.0 | 0.0 | 0.5 | 1.0 | 0.0 |
| 60° | 3.0 | 3.5 | 3.0 | 2.0 | 1.0 |
| 62.5° | 5.0 | 1.0 | 1.5 | 2.0 | 0.0 |
| 65° | 2.0 | 1.0 | 0.5 | 0.0 | 0.0 |
| 67.5° | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| 77.5° | 1.0 | 0.0 | 2.0 | 0.0 | 0.0 |
| 80° | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 2.5 | 2.0 | 0.0 |
| 85° | 0.0 | 0.5 | 0.5 | 1.5 | 0.0 |
| 87.5° | 0.0 | 1.5 | 2.0 | 0.5 | 1.0 |
| 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 | 1.5 | 1.0 | 2.0 |
| 72.5° | 0.0 | 0.5 | 2.0 | 3.0 | 1.0 |



(END OF REPORT)