

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: P315932

Luminaire Tested: **LDA2B10SP8040D010 PINW1MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315932
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-7)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B10SP8040D010 PINW1MB
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj PinHole, White oculus black finish
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1138.6 lumens
Efficiency: N/A
Efficacy: 113.9 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

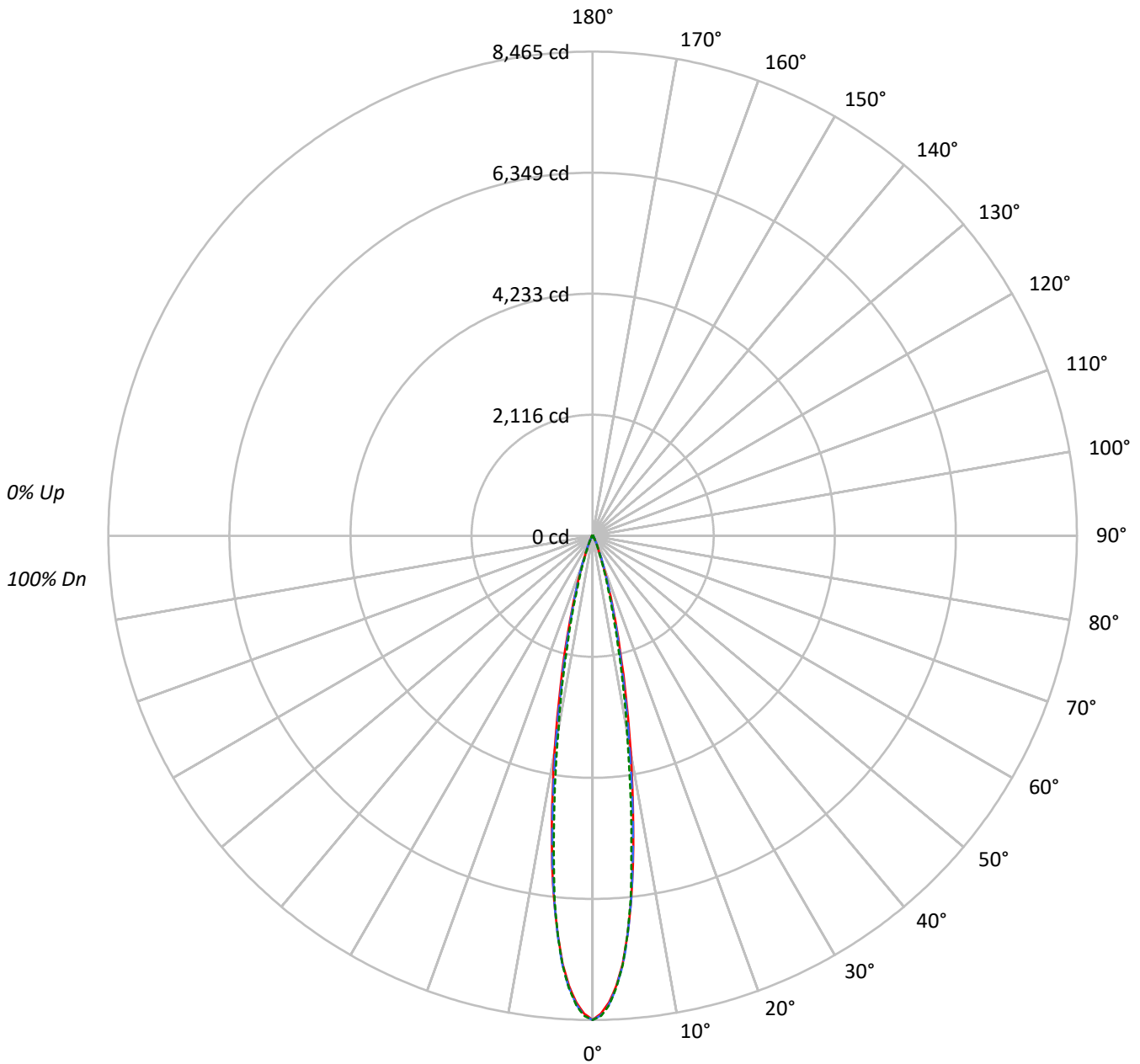
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 111 | 109 | 113 | 111 | 109 | 107 | 107 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 96 | 96 | 98 | 98 | 96 | | | | | | | | | | | | | | | |
| 2 | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 103 | 101 | 99 | 100 | 98 | 97 | 98 | 96 | 95 | 94 | 96 | 94 | 92 | 94 | | | | | | | | | | | | | | | |
| 3 | 108 | 104 | 100 | 97 | 106 | 102 | 99 | 97 | 100 | 97 | 95 | 98 | 95 | 94 | 96 | 94 | 92 | 91 | 96 | 94 | 92 | 91 | | | | | | | | | | | | | | | |
| 4 | 105 | 100 | 96 | 93 | 104 | 99 | 96 | 93 | 97 | 94 | 92 | 95 | 93 | 91 | 94 | 92 | 90 | 89 | 94 | 92 | 90 | 89 | | | | | | | | | | | | | | | |
| 5 | 102 | 97 | 93 | 90 | 101 | 96 | 93 | 90 | 95 | 91 | 89 | 93 | 90 | 88 | 92 | 89 | 88 | 87 | 92 | 89 | 88 | 87 | | | | | | | | | | | | | | | |
| 6 | 100 | 94 | 90 | 88 | 99 | 94 | 90 | 87 | 92 | 89 | 87 | 91 | 88 | 86 | 90 | 88 | 86 | 85 | 90 | 88 | 86 | 85 | | | | | | | | | | | | | | | |
| 7 | 98 | 92 | 88 | 85 | 97 | 91 | 88 | 85 | 90 | 87 | 85 | 89 | 86 | 84 | 88 | 86 | 84 | 83 | 88 | 86 | 84 | 83 | | | | | | | | | | | | | | | |
| 8 | 96 | 90 | 86 | 83 | 95 | 89 | 86 | 83 | 88 | 85 | 83 | 87 | 85 | 82 | 87 | 84 | 82 | 81 | 87 | 84 | 82 | 81 | | | | | | | | | | | | | | | |
| 9 | 94 | 88 | 84 | 81 | 93 | 87 | 84 | 81 | 86 | 83 | 81 | 86 | 83 | 81 | 85 | 82 | 81 | 80 | 85 | 82 | 81 | 80 | | | | | | | | | | | | | | | |
| 10 | 92 | 86 | 82 | 80 | 91 | 85 | 82 | 80 | 85 | 82 | 79 | 84 | 81 | 79 | 84 | 81 | 79 | 78 | 84 | 81 | 79 | 78 | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 4176209 | 4176209 | 4176209 |
| 5° | 3464595 | 3475837 | 3462663 |
| 10° | 1917523 | 1848239 | 1721743 |
| 15° | 776211 | 742398 | 659194 |
| 20° | 260045 | 275743 | 223240 |
| 25° | 98965 | 99292 | 94012 |
| 30° | 44378 | 43638 | 42157 |
| 35° | 21502 | 19153 | 15238 |
| 40° | 14233 | 17969 | 12559 |
| 45° | 3628 | 5861 | 5442 |
| 50° | 998 | 1458 | 1996 |
| 55° | 8946 | 7827 | 12300 |
| 60° | 12827 | 10262 | 16676 |
| 65° | 6070 | 15877 | 15176 |
| 70° | 5626 | 4616 | 5626 |
| 75° | 2478 | 6100 | 17346 |
| 80° | 29548 | 40629 | 36935 |
| 85° | 0 | 18114 | 22077 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 554.4 | 48.7 |
| 10°-20° | 419.9 | 36.9 |
| 20°-30° | 95.5 | 8.4 |
| 30°-40° | 28.2 | 2.5 |
| 40°-50° | 9.4 | 0.8 |
| 50°-60° | 8.3 | 0.7 |
| 60°-70° | 9.9 | 0.9 |
| 70°-80° | 6.3 | 0.6 |
| 80°-90° | 6.6 | 0.6 |
| 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° | 1069.8 | 94.0 |
| 0°-40° | 1098.0 | 96.4 |
| 0°-60° | 1115.7 | 98.0 |
| 0°-90° | 1138.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1138.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 8465 | 8465 | 8465 | 8465 | 8465 | |
| 5° | 6996 | 7051 | 7018 | 6927 | 6992 | 561 |
| 15° | 1520 | 1540 | 1454 | 1317 | 1291 | 442 |
| 25° | 182 | 195 | 182 | 180 | 173 | 95 |
| 35° | 36 | 40 | 32 | 37 | 25 | 28 |
| 45° | 5 | 15 | 8 | 15 | 8 | 8 |
| 55° | 10 | 15 | 9 | 14 | 14 | 4 |
| 65° | 5 | 11 | 14 | 13 | 13 | 5 |
| 75° | 1 | 4 | 3 | 6 | 9 | 3 |
| 85° | 0 | 0 | 3 | 3 | 4 | 4 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P315932

CATALOG NUMBER: LDA2B10SP8040D010 PINW1MB

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 8464.8 | 8464.8 | 8464.8 | 8464.8 | 8464.8 |
| 1° | 8355.7 | 8389.5 | 8386.2 | 8372.6 | 8396.6 |
| 2° | 8163.5 | 8204.4 | 8200.5 | 8170.7 | 8213.5 |
| 3° | 7881.8 | 7918.1 | 7912.3 | 7869.5 | 7916.2 |
| 4° | 7505.3 | 7546.8 | 7530.6 | 7466.3 | 7526.0 |
| 5° | 6995.7 | 7050.8 | 7018.4 | 6926.8 | 6991.8 |
| 6° | 6430.9 | 6477.6 | 6426.3 | 6304.9 | 6368.5 |
| 7° | 5798.5 | 5827.8 | 5760.2 | 5604.4 | 5561.6 |
| 8° | 5108.5 | 5146.8 | 5052.6 | 4870.9 | 4824.1 |
| 9° | 4448.9 | 4461.9 | 4347.6 | 4154.2 | 4095.1 |
| 10° | 3827.6 | 3817.9 | 3689.3 | 3493.3 | 3436.8 |
| 11° | 3238.8 | 3225.8 | 3090.1 | 2909.0 | 2927.2 |
| 12° | 2703.2 | 2728.5 | 2570.8 | 2406.5 | 2409.8 |
| 13° | 2263.1 | 2265.7 | 2130.0 | 1973.5 | 1964.4 |
| 14° | 1852.8 | 1876.8 | 1760.6 | 1620.4 | 1594.4 |
| 15° | 1519.7 | 1540.5 | 1453.5 | 1317.2 | 1290.6 |
| 16° | 1216.6 | 1242.5 | 1180.2 | 1056.9 | 1021.8 |
| 17° | 979.6 | 1012.7 | 971.8 | 868.6 | 828.4 |
| 18° | 783.6 | 808.9 | 799.2 | 692.7 | 659.6 |
| 19° | 618.7 | 653.7 | 656.3 | 567.4 | 527.8 |
| 20° | 495.3 | 527.1 | 525.2 | 456.4 | 425.2 |
| 22.5° | 284.3 | 301.2 | 301.9 | 269.4 | 251.2 |
| 25° | 181.8 | 195.4 | 182.4 | 180.5 | 172.7 |
| 26° | 157.8 | 168.8 | 154.5 | 154.5 | 147.4 |
| 27° | 127.9 | 137.6 | 124.0 | 129.8 | 120.1 |
| 28° | 107.8 | 118.2 | 106.5 | 105.2 | 103.9 |
| 29° | 89.6 | 99.3 | 84.4 | 90.9 | 87.0 |
| 30° | 77.9 | 85.0 | 76.6 | 86.3 | 74.0 |
| 32.5° | 60.4 | 66.2 | 51.3 | 64.9 | 48.7 |
| 35° | 35.7 | 39.6 | 31.8 | 37.0 | 25.3 |
| 37.5° | 37.0 | 38.3 | 34.4 | 38.3 | 35.7 |
| 40° | 22.1 | 22.7 | 27.9 | 27.9 | 19.5 |
| 42.5° | 20.8 | 20.1 | 12.3 | 19.5 | 15.6 |
| 45° | 5.2 | 14.9 | 8.4 | 14.9 | 7.8 |
| 47.5° | 3.9 | 5.2 | 5.2 | 10.4 | 10.4 |
| 50° | 1.3 | 5.2 | 1.9 | 3.9 | 2.6 |
| 52.5° | 0.0 | 12.3 | 2.6 | 9.1 | 7.8 |
| 55° | 10.4 | 14.9 | 9.1 | 13.6 | 14.3 |
| 57.5° | 1.3 | 10.4 | 5.2 | 11.0 | 7.8 |
| 60° | 13.0 | 17.5 | 10.4 | 18.8 | 16.9 |
| 62.5° | 1.3 | 11.7 | 13.6 | 10.4 | 9.1 |
| 65° | 5.2 | 11.0 | 13.6 | 13.0 | 13.0 |
| 67.5° | 6.5 | 11.0 | 8.4 | 8.4 | 11.7 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|------|-------|------|-------|------|
| 75° | 1.3 | 4.5 | 3.2 | 5.8 | 9.1 |
| 77.5° | 1.3 | 5.2 | 4.5 | 10.4 | 7.8 |
| 80° | 10.4 | 11.7 | 14.3 | 18.8 | 13.0 |
| 82.5° | 9.1 | 9.1 | 14.3 | 10.4 | 7.8 |
| 85° | 0.0 | 0.0 | 3.2 | 3.2 | 3.9 |
| 87.5° | 0.0 | 2.6 | 6.5 | 5.2 | 9.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 70° | 3.9 | 1.3 | 3.2 | 3.2 | 3.9 |
| 72.5° | 1.3 | 5.8 | 5.2 | 3.2 | 6.5 |



(END OF REPORT)