

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: P281500

Luminaire Tested: **LDA2B109024D010 EU2B10SP159024 2LBASQC1MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P281500
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-6)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B109024D010 EU2B10SP159024 2LBASQC1MB
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ Cast Trim, MB
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 776.3 lumens
Efficiency: N/A
Efficacy: 77.6 lumens/watt
Spacing Criteria (0/90/45): 0.31 / 0.31 / 0.29
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

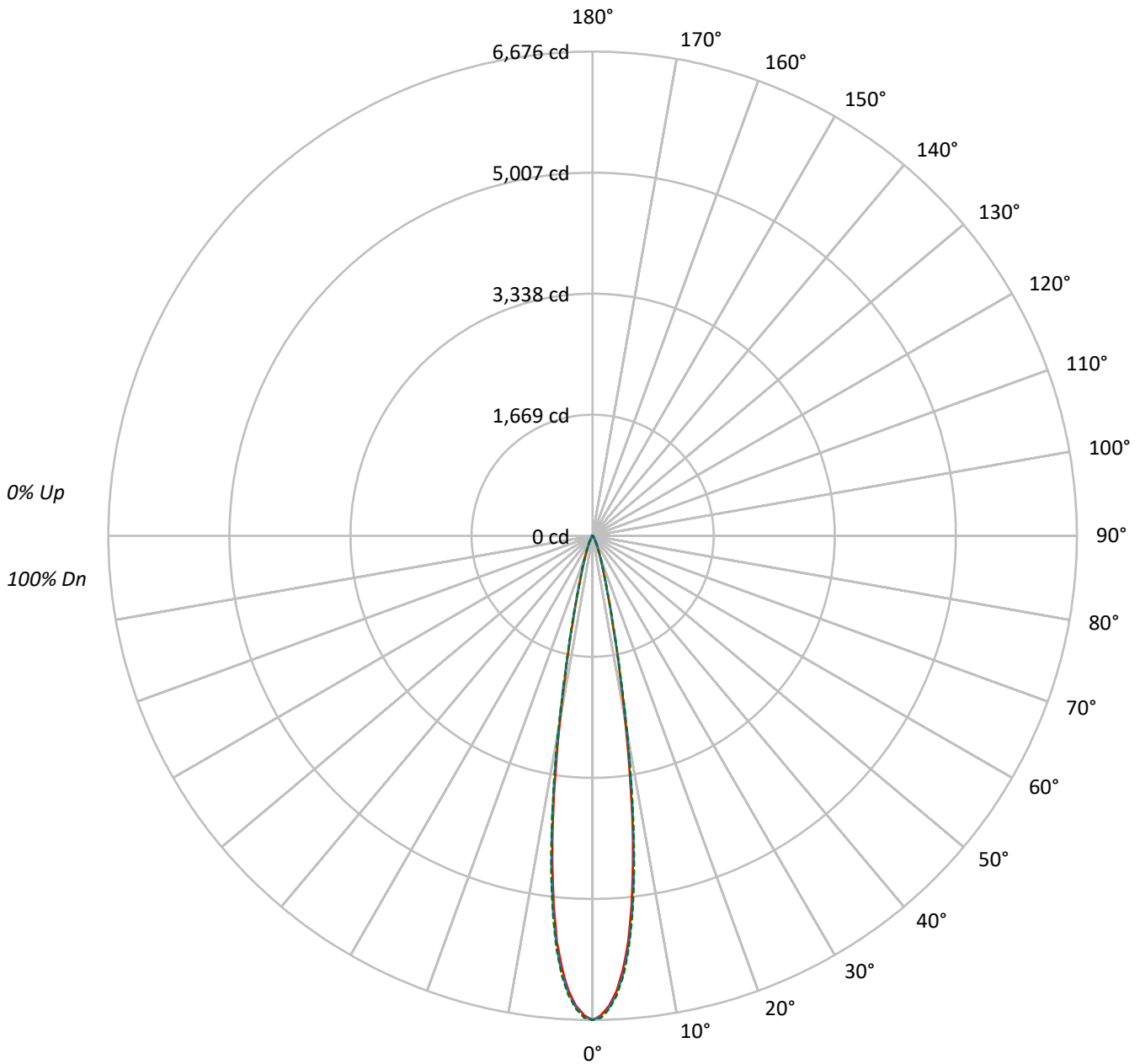
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 3293585 | 3293585 | 3293585 |
| 5° | 2787593 | 2816763 | 2828996 |
| 10° | 1303531 | 1352927 | 1355532 |
| 15° | 381797 | 387365 | 387160 |
| 20° | 153307 | 153517 | 153727 |
| 25° | 68372 | 75286 | 70005 |
| 30° | 29054 | 39935 | 26490 |
| 35° | 13310 | 18490 | 12407 |
| 40° | 4315 | 7213 | 3864 |
| 45° | 0 | 2582 | 0 |
| 50° | 0 | 0 | 0 |
| 55° | 1290 | 602 | 0 |
| 60° | 0 | 0 | 0 |
| 65° | 0 | 0 | 0 |
| 70° | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 1989 | 0 | 0 |
| 85° | 3962 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 441.2 | 56.8 |
| 10°-20° | 250.0 | 32.2 |
| 20°-30° | 65.3 | 8.4 |
| 30°-40° | 16.8 | 2.2 |
| 40°-50° | 1.7 | 0.2 |
| 50°-60° | 0.5 | 0.1 |
| 60°-70° | 0.1 | 0.0 |
| 70°-80° | 0.5 | 0.1 |
| 80°-90° | 0.1 | 0.0 |
| 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° | 756.5 | 97.5 |
| 0°-40° | 773.4 | 99.6 |
| 0°-60° | 775.5 | 99.9 |
| 0°-90° | 776.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 776.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 6676 | 6676 | 6676 | 6676 | 6676 | |
| 5° | 5629 | 5679 | 5688 | 5652 | 5712 | 436 |
| 15° | 748 | 758 | 758 | 750 | 758 | 245 |
| 25° | 126 | 136 | 138 | 132 | 129 | 62 |
| 35° | 22 | 24 | 31 | 21 | 21 | 15 |
| 45° | 0 | 2 | 4 | 0 | 0 | 1 |
| 55° | 2 | 2 | 1 | 0 | 0 | 1 |
| 65° | 0 | 0 | 0 | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 1 |
| 85° | 1 | 0 | 0 | 0 | 0 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 6675.8 | 6675.8 | 6675.8 | 6675.8 | 6675.8 |
| 1° | 6613.2 | 6639.4 | 6631.5 | 6622.2 | 6648.4 |
| 2° | 6485.7 | 6511.2 | 6508.9 | 6496.6 | 6527.3 |
| 3° | 6289.3 | 6324.9 | 6324.9 | 6306.5 | 6344.7 |
| 4° | 5996.5 | 6050.8 | 6056.1 | 6030.2 | 6077.8 |
| 5° | 5628.7 | 5679.0 | 5687.6 | 5651.6 | 5712.3 |
| 6° | 5130.5 | 5199.1 | 5218.6 | 5177.0 | 5239.2 |
| 7° | 4558.1 | 4630.1 | 4659.7 | 4613.2 | 4682.9 |
| 8° | 3940.7 | 3992.4 | 4028.0 | 3974.8 | 4045.6 |
| 9° | 3249.8 | 3324.4 | 3357.0 | 3305.3 | 3374.2 |
| 10° | 2602.0 | 2670.6 | 2700.6 | 2688.2 | 2705.8 |
| 11° | 2020.9 | 2081.7 | 2101.9 | 2085.1 | 2093.3 |
| 12° | 1582.3 | 1606.7 | 1619.8 | 1608.6 | 1614.2 |
| 13° | 1201.5 | 1234.1 | 1240.1 | 1235.2 | 1237.8 |
| 14° | 938.3 | 954.1 | 960.8 | 958.6 | 959.7 |
| 15° | 747.5 | 757.6 | 758.4 | 749.7 | 758.0 |
| 16° | 602.0 | 609.9 | 613.3 | 604.3 | 615.2 |
| 17° | 493.3 | 499.7 | 503.5 | 494.5 | 499.0 |
| 18° | 406.0 | 410.9 | 416.1 | 408.2 | 415.0 |
| 19° | 340.8 | 343.8 | 344.1 | 341.9 | 343.8 |
| 20° | 292.0 | 290.5 | 292.4 | 288.3 | 292.8 |
| 22.5° | 192.3 | 196.1 | 200.6 | 195.7 | 197.6 |
| 25° | 125.6 | 136.1 | 138.3 | 132.0 | 128.6 |
| 26° | 103.5 | 117.0 | 123.0 | 112.8 | 102.0 |
| 27° | 85.8 | 95.6 | 103.5 | 90.0 | 81.3 |
| 28° | 75.3 | 83.6 | 91.5 | 78.7 | 68.6 |
| 29° | 63.0 | 71.2 | 84.7 | 70.1 | 63.7 |
| 30° | 51.0 | 57.0 | 70.1 | 53.2 | 46.5 |
| 32.5° | 28.9 | 33.7 | 45.4 | 31.5 | 25.9 |
| 35° | 22.1 | 23.6 | 30.7 | 21.0 | 20.6 |
| 37.5° | 19.1 | 17.2 | 24.0 | 17.2 | 13.9 |
| 40° | 6.7 | 10.1 | 11.2 | 7.5 | 6.0 |
| 42.5° | 3.0 | 3.0 | 4.9 | 1.5 | 1.5 |
| 45° | 0.0 | 1.5 | 3.7 | 0.4 | 0.0 |
| 47.5° | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 |
| 50° | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 |
| 52.5° | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 55° | 1.5 | 1.9 | 0.7 | 0.4 | 0.0 |
| 57.5° | 2.2 | 1.9 | 0.7 | 0.7 | 0.7 |
| 60° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 62.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 65° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 0.7 | 0.4 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |
| 77.5° | 3.7 | 0.7 | 1.1 | 0.7 | 1.5 |
| 80° | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.4 | 0.0 | 0.4 | 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 | 0.0 | 0.0 | 0.0 |
| 72.5° | 1.5 | 1.1 | 0.0 | 0.0 | 1.5 |



(END OF REPORT)