

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: P281471

Luminaire Tested: **LDA2B059040D010 EU2B05SP159040 2LBASQC1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P281471
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: LDA2B059040D010 EU2B05SP159040 2LBASQC1MMS
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ Cast Trim, MMS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 681.1 lumens
Efficiency: N/A
Efficacy: 97.3 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

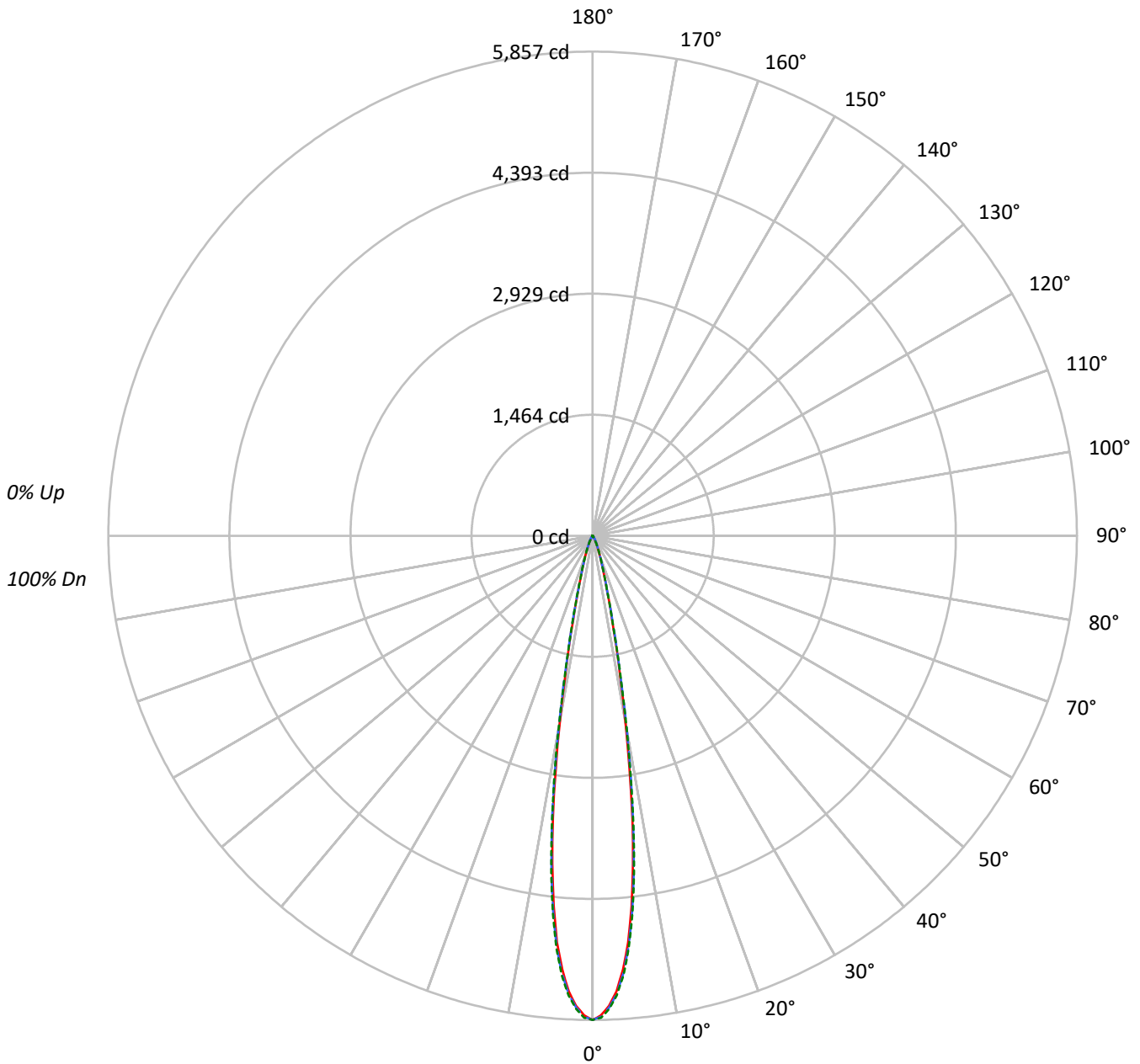
Input Watts (W): 7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | |
| 1 | 116 | 114 | 112 | 111 | 113 | 112 | 110 | 109 | 108 | 107 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 98 | 98 | 98 | | | | | | | | | | | | | | | | |
| 2 | 113 | 109 | 107 | 105 | 111 | 108 | 105 | 103 | 105 | 103 | 101 | 102 | 100 | 99 | 99 | 98 | 97 | 96 | 96 | 96 | 96 | | | | | | | | | | | | | | | | |
| 3 | 110 | 106 | 103 | 100 | 108 | 104 | 102 | 99 | 102 | 100 | 98 | 100 | 98 | 96 | 98 | 96 | 95 | 94 | 94 | 94 | 94 | | | | | | | | | | | | | | | | |
| 4 | 107 | 103 | 99 | 97 | 106 | 102 | 99 | 96 | 100 | 97 | 95 | 98 | 96 | 94 | 96 | 95 | 93 | 92 | 92 | 92 | 92 | | | | | | | | | | | | | | | | |
| 5 | 105 | 100 | 96 | 94 | 103 | 99 | 96 | 93 | 97 | 95 | 93 | 96 | 94 | 92 | 95 | 93 | 91 | 90 | 90 | 90 | 90 | | | | | | | | | | | | | | | | |
| 6 | 103 | 97 | 94 | 91 | 101 | 97 | 94 | 91 | 96 | 93 | 91 | 94 | 92 | 90 | 93 | 91 | 90 | 89 | 89 | 89 | 89 | | | | | | | | | | | | | | | | |
| 7 | 100 | 95 | 92 | 89 | 100 | 95 | 91 | 89 | 94 | 91 | 89 | 93 | 90 | 88 | 92 | 90 | 88 | 87 | 87 | 87 | 87 | | | | | | | | | | | | | | | | |
| 8 | 99 | 93 | 90 | 88 | 98 | 93 | 90 | 87 | 92 | 89 | 87 | 91 | 89 | 87 | 90 | 88 | 86 | 86 | 86 | 86 | 86 | | | | | | | | | | | | | | | | |
| 9 | 97 | 91 | 88 | 86 | 96 | 91 | 88 | 86 | 90 | 88 | 86 | 90 | 87 | 85 | 89 | 87 | 85 | 84 | 84 | 84 | 84 | | | | | | | | | | | | | | | | |
| 10 | 95 | 90 | 87 | 84 | 94 | 89 | 86 | 84 | 89 | 86 | 84 | 88 | 86 | 84 | 88 | 85 | 84 | 83 | 83 | 83 | 83 | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 2889423 | 2889423 | 2889423 |
| 5° | 2445576 | 2471131 | 2481878 |
| 10° | 1143570 | 1186904 | 1189209 |
| 15° | 334960 | 339812 | 339659 |
| 20° | 134511 | 134669 | 134879 |
| 25° | 59989 | 66086 | 61404 |
| 30° | 25465 | 35036 | 23243 |
| 35° | 11684 | 16262 | 10901 |
| 40° | 3800 | 6376 | 3413 |
| 45° | 0 | 2302 | 0 |
| 50° | 0 | 0 | 0 |
| 55° | 1118 | 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° | 387.0 | 56.8 |
| 10°-20° | 219.4 | 32.2 |
| 20°-30° | 57.3 | 8.4 |
| 30°-40° | 14.8 | 2.2 |
| 40°-50° | 1.5 | 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° | 663.7 | 97.5 |
| 0°-40° | 678.5 | 99.6 |
| 0°-60° | 680.4 | 99.9 |
| 0°-90° | 681.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 681.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 5857 | 5857 | 5857 | 5857 | 5857 | |
| 5° | 4938 | 4982 | 4990 | 4958 | 5011 | 382 |
| 15° | 656 | 665 | 665 | 658 | 665 | 215 |
| 25° | 110 | 119 | 121 | 116 | 113 | 55 |
| 35° | 19 | 21 | 27 | 18 | 18 | 13 |
| 45° | 0 | 1 | 3 | 0 | 0 | 1 |
| 55° | 1 | 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° | 5856.6 | 5856.6 | 5856.6 | 5856.6 | 5856.6 |
| 1° | 5801.7 | 5824.7 | 5817.8 | 5809.6 | 5832.6 |
| 2° | 5689.9 | 5712.2 | 5710.3 | 5699.4 | 5726.4 |
| 3° | 5517.5 | 5548.8 | 5548.8 | 5532.7 | 5566.2 |
| 4° | 5260.7 | 5308.4 | 5313.0 | 5290.3 | 5332.1 |
| 5° | 4938.1 | 4982.1 | 4989.7 | 4958.1 | 5011.4 |
| 6° | 4501.0 | 4561.2 | 4578.3 | 4541.8 | 4596.4 |
| 7° | 3998.8 | 4061.9 | 4087.9 | 4047.1 | 4108.3 |
| 8° | 3457.1 | 3502.5 | 3533.8 | 3487.1 | 3549.2 |
| 9° | 2851.0 | 2916.5 | 2945.1 | 2899.7 | 2960.2 |
| 10° | 2282.7 | 2342.9 | 2369.2 | 2358.4 | 2373.8 |
| 11° | 1773.0 | 1826.2 | 1844.0 | 1829.2 | 1836.4 |
| 12° | 1388.2 | 1409.6 | 1421.1 | 1411.2 | 1416.1 |
| 13° | 1054.0 | 1082.7 | 1087.9 | 1083.6 | 1085.9 |
| 14° | 823.2 | 837.0 | 842.9 | 840.9 | 841.9 |
| 15° | 655.8 | 664.7 | 665.3 | 657.8 | 665.0 |
| 16° | 528.2 | 535.1 | 538.0 | 530.1 | 539.7 |
| 17° | 432.8 | 438.4 | 441.7 | 433.8 | 437.7 |
| 18° | 356.2 | 360.4 | 365.1 | 358.1 | 364.1 |
| 19° | 298.9 | 301.6 | 301.9 | 299.9 | 301.6 |
| 20° | 256.2 | 254.9 | 256.5 | 252.9 | 256.9 |
| 22.5° | 168.7 | 172.0 | 175.9 | 171.7 | 173.3 |
| 25° | 110.2 | 119.4 | 121.4 | 115.8 | 112.8 |
| 26° | 90.8 | 102.6 | 107.9 | 99.0 | 89.5 |
| 27° | 75.3 | 83.9 | 90.8 | 78.9 | 71.4 |
| 28° | 66.1 | 73.3 | 80.2 | 69.1 | 60.2 |
| 29° | 55.3 | 62.5 | 74.3 | 61.5 | 55.9 |
| 30° | 44.7 | 50.0 | 61.5 | 46.7 | 40.8 |
| 32.5° | 25.3 | 29.6 | 39.8 | 27.6 | 22.7 |
| 35° | 19.4 | 20.7 | 27.0 | 18.4 | 18.1 |
| 37.5° | 16.8 | 15.1 | 21.0 | 15.1 | 12.2 |
| 40° | 5.9 | 8.9 | 9.9 | 6.6 | 5.3 |
| 42.5° | 2.6 | 2.6 | 4.3 | 1.3 | 1.3 |
| 45° | 0.0 | 1.3 | 3.3 | 0.3 | 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° | 1.3 | 1.6 | 0.7 | 0.3 | 0.0 |
| 57.5° | 2.0 | 1.6 | 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 | 0.3 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| 77.5° | 3.3 | 0.7 | 1.0 | 0.7 | 1.3 |
| 80° | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.3 | 0.0 | 0.3 | 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° | 1.3 | 1.0 | 0.0 | 0.0 | 1.3 |



(END OF REPORT)