

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: P281548

Luminaire Tested: **LDA2B159030D010 EU2B15SP159030 2LBASQC1MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P281548
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: LDA2B159030D010 EU2B15SP159030 2LBASQC1MB
Description: PORTFOLIO 2IN ADJ 1500 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: 1161.2 lumens
Efficiency: N/A
Efficacy: 82.4 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

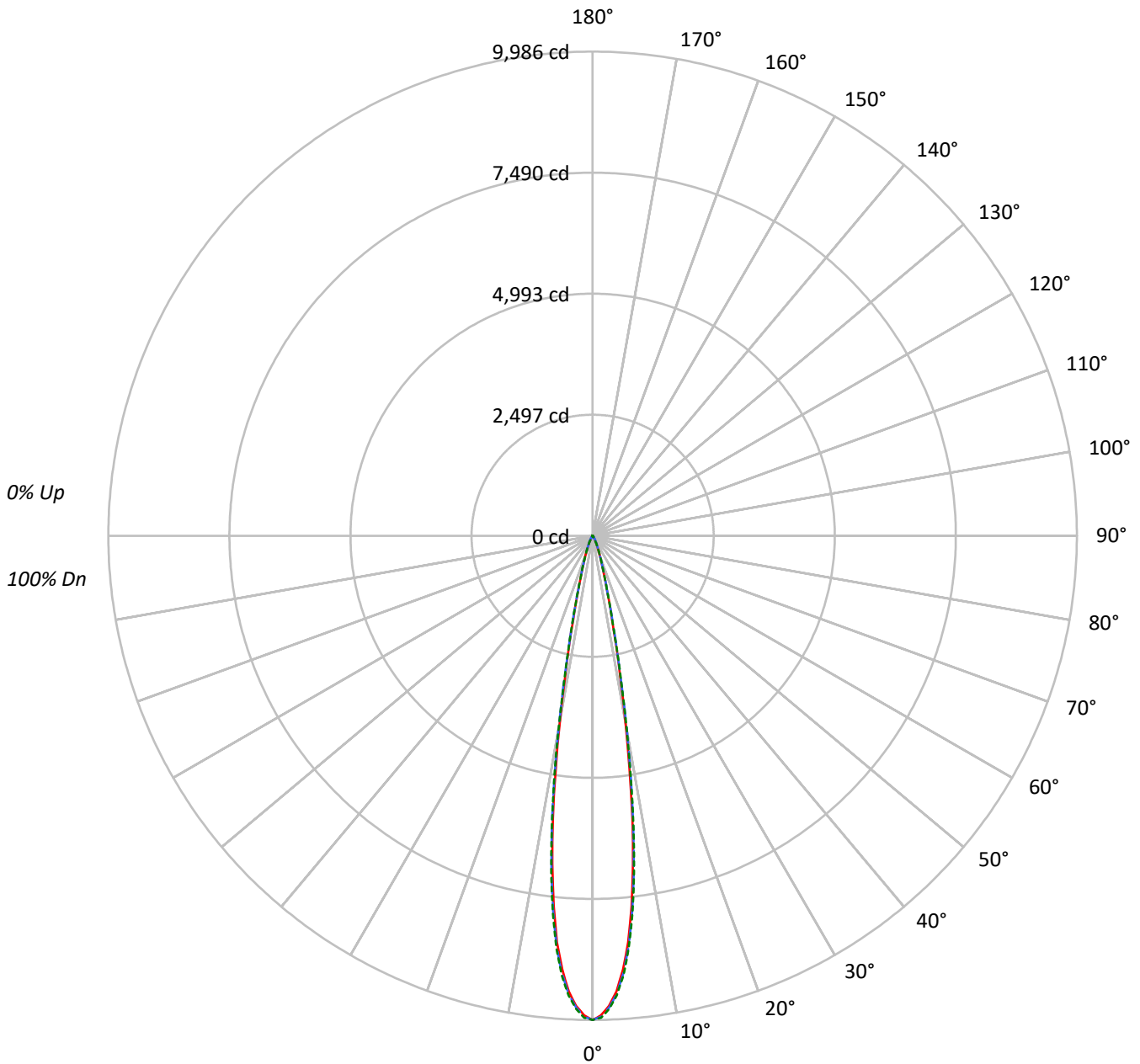
Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 4926464 | 4926464 | 4926464 |
| 5° | 4169628 | 4213259 | 4231583 |
| 10° | 1949786 | 2023679 | 2027587 |
| 15° | 571087 | 579413 | 579106 |
| 20° | 229331 | 229646 | 229908 |
| 25° | 102232 | 112629 | 104681 |
| 30° | 43467 | 59760 | 39593 |
| 35° | 19936 | 27705 | 18550 |
| 40° | 6505 | 10820 | 5796 |
| 45° | 0 | 3907 | 0 |
| 50° | 0 | 0 | 0 |
| 55° | 1892 | 946 | 0 |
| 60° | 0 | 0 | 0 |
| 65° | 0 | 0 | 0 |
| 70° | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 3125 | 0 | 0 |
| 85° | 6227 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 659.9 | 56.8 |
| 10°-20° | 374.0 | 32.2 |
| 20°-30° | 97.7 | 8.4 |
| 30°-40° | 25.2 | 2.2 |
| 40°-50° | 2.5 | 0.2 |
| 50°-60° | 0.8 | 0.1 |
| 60°-70° | 0.1 | 0.0 |
| 70°-80° | 0.8 | 0.1 |
| 80°-90° | 0.2 | 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° | 1131.6 | 97.5 |
| 0°-40° | 1156.8 | 99.6 |
| 0°-60° | 1160.1 | 99.9 |
| 0°-90° | 1161.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1161.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 9986 | 9986 | 9986 | 9986 | 9986 | |
| 5° | 8419 | 8494 | 8507 | 8454 | 8544 | 652 |
| 15° | 1118 | 1133 | 1134 | 1122 | 1134 | 367 |
| 25° | 188 | 204 | 207 | 197 | 192 | 93 |
| 35° | 33 | 35 | 46 | 31 | 31 | 23 |
| 45° | 0 | 2 | 6 | 1 | 0 | 2 |
| 55° | 2 | 3 | 1 | 1 | 0 | 2 |
| 65° | 0 | 0 | 0 | 0 | 0 | 1 |
| 75° | 0 | 1 | 0 | 0 | 0 | 2 |
| 85° | 1 | 0 | 0 | 0 | 0 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P281548

CATALOG NUMBER: LDA2B159030D010 EU2B15SP159030 2LBASQC1MB

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 9985.5 | 9985.5 | 9985.5 | 9985.5 | 9985.5 |
| 1° | 9891.8 | 9931.1 | 9919.3 | 9905.3 | 9944.5 |
| 2° | 9701.2 | 9739.3 | 9735.9 | 9717.4 | 9763.4 |
| 3° | 9407.3 | 9460.6 | 9460.6 | 9433.1 | 9490.3 |
| 4° | 8969.4 | 9050.7 | 9058.6 | 9019.9 | 9091.1 |
| 5° | 8419.3 | 8494.5 | 8507.4 | 8453.5 | 8544.4 |
| 6° | 7674.1 | 7776.7 | 7805.9 | 7743.7 | 7836.7 |
| 7° | 6817.9 | 6925.6 | 6969.9 | 6900.3 | 7004.6 |
| 8° | 5894.4 | 5971.8 | 6025.0 | 5945.4 | 6051.4 |
| 9° | 4861.0 | 4972.5 | 5021.3 | 4943.9 | 5047.1 |
| 10° | 3892.0 | 3994.6 | 4039.5 | 4021.0 | 4047.3 |
| 11° | 3022.9 | 3113.7 | 3144.0 | 3118.8 | 3131.1 |
| 12° | 2366.8 | 2403.3 | 2422.9 | 2406.1 | 2414.5 |
| 13° | 1797.1 | 1845.9 | 1854.9 | 1847.6 | 1851.5 |
| 14° | 1403.5 | 1427.1 | 1437.1 | 1433.8 | 1435.5 |
| 15° | 1118.1 | 1133.2 | 1134.4 | 1121.5 | 1133.8 |
| 16° | 900.5 | 912.3 | 917.4 | 903.9 | 920.2 |
| 17° | 737.9 | 747.5 | 753.1 | 739.6 | 746.3 |
| 18° | 607.3 | 614.6 | 622.4 | 610.6 | 620.7 |
| 19° | 509.7 | 514.2 | 514.7 | 511.4 | 514.2 |
| 20° | 436.8 | 434.6 | 437.4 | 431.2 | 437.9 |
| 22.5° | 287.7 | 293.3 | 300.0 | 292.7 | 295.5 |
| 25° | 187.8 | 203.5 | 206.9 | 197.4 | 192.3 |
| 26° | 154.8 | 174.9 | 183.9 | 168.8 | 152.5 |
| 27° | 128.4 | 143.0 | 154.8 | 134.6 | 121.7 |
| 28° | 112.7 | 125.0 | 136.8 | 117.8 | 102.6 |
| 29° | 94.2 | 106.5 | 126.7 | 104.9 | 95.3 |
| 30° | 76.3 | 85.2 | 104.9 | 79.6 | 69.5 |
| 32.5° | 43.2 | 50.5 | 67.8 | 47.1 | 38.7 |
| 35° | 33.1 | 35.3 | 46.0 | 31.4 | 30.8 |
| 37.5° | 28.6 | 25.8 | 35.9 | 25.8 | 20.7 |
| 40° | 10.1 | 15.1 | 16.8 | 11.2 | 9.0 |
| 42.5° | 4.5 | 4.5 | 7.3 | 2.2 | 2.2 |
| 45° | 0.0 | 2.2 | 5.6 | 0.6 | 0.0 |
| 47.5° | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 |
| 50° | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 |
| 52.5° | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 55° | 2.2 | 2.8 | 1.1 | 0.6 | 0.0 |
| 57.5° | 3.4 | 2.8 | 1.1 | 1.1 | 1.1 |
| 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° | 1.1 | 0.6 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 |
| 77.5° | 5.6 | 1.1 | 1.7 | 1.1 | 2.2 |
| 80° | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.6 | 0.0 | 0.6 | 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° | 2.2 | 1.7 | 0.0 | 0.0 | 2.2 |



(END OF REPORT)