

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: P281778

Luminaire Tested: **LDA2B159027D010 EU2B15SP159027 2LBALSQC1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P281778
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-5)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B159027D010 EU2B15SP159027 2LBALSQC1MW
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ Cast Trim w/lens, MW
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1113.0 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 0.33 / 0.31 / 0.32
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

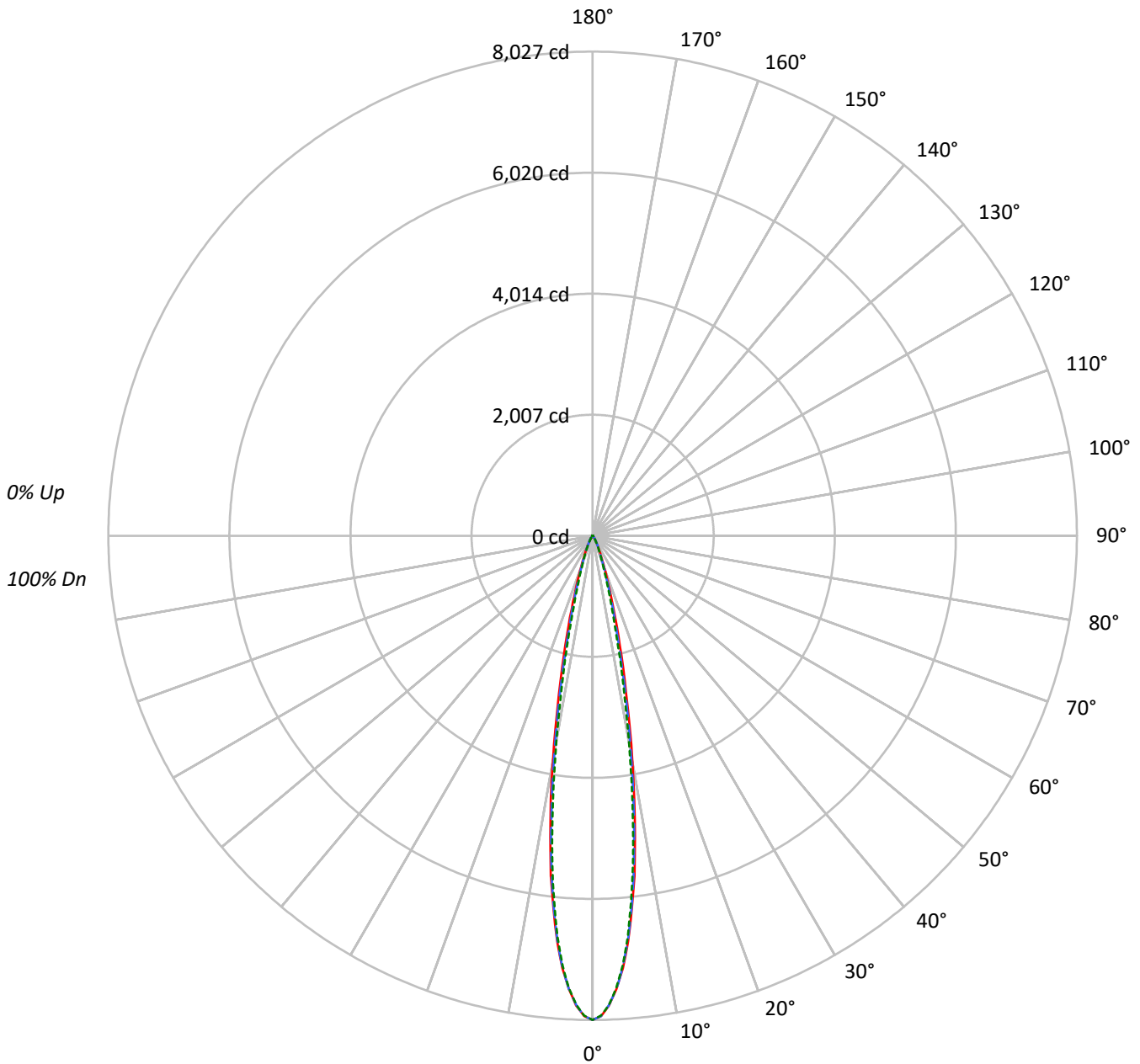
Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 115 | 113 | 111 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 99 | 99 | 97 | | | | | | | | | | | | | | | | | | | |
| 2 | 112 | 108 | 106 | 103 | 110 | 107 | 104 | 102 | 104 | 102 | 100 | 101 | 99 | 98 | 98 | 97 | 96 | 95 | | | | | | | | | | | | | | | | | | | |
| 3 | 109 | 104 | 101 | 98 | 107 | 103 | 100 | 98 | 101 | 98 | 96 | 98 | 96 | 95 | 96 | 95 | 93 | 92 | | | | | | | | | | | | | | | | | | | |
| 4 | 106 | 101 | 97 | 95 | 104 | 100 | 97 | 94 | 98 | 95 | 93 | 96 | 94 | 92 | 94 | 93 | 91 | 90 | | | | | | | | | | | | | | | | | | | |
| 5 | 103 | 98 | 94 | 91 | 102 | 97 | 93 | 91 | 95 | 92 | 90 | 94 | 91 | 89 | 93 | 90 | 89 | 88 | | | | | | | | | | | | | | | | | | | |
| 6 | 101 | 95 | 91 | 88 | 99 | 94 | 91 | 88 | 93 | 90 | 88 | 92 | 89 | 87 | 91 | 88 | 87 | 86 | | | | | | | | | | | | | | | | | | | |
| 7 | 98 | 92 | 89 | 86 | 97 | 92 | 88 | 86 | 91 | 88 | 85 | 90 | 87 | 85 | 89 | 87 | 85 | 84 | | | | | | | | | | | | | | | | | | | |
| 8 | 96 | 90 | 86 | 84 | 95 | 90 | 86 | 84 | 89 | 86 | 83 | 88 | 85 | 83 | 87 | 85 | 83 | 82 | | | | | | | | | | | | | | | | | | | |
| 9 | 94 | 88 | 84 | 82 | 93 | 88 | 84 | 82 | 87 | 84 | 82 | 86 | 83 | 81 | 86 | 83 | 81 | 80 | | | | | | | | | | | | | | | | | | | |
| 10 | 92 | 86 | 83 | 80 | 91 | 86 | 82 | 80 | 85 | 82 | 80 | 85 | 82 | 80 | 84 | 81 | 80 | 79 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 3960215 | 3960215 | 3960215 |
| 5° | 3345983 | 3328105 | 3303590 |
| 10° | 1904498 | 1820635 | 1728055 |
| 15° | 788673 | 698574 | 615371 |
| 20° | 299999 | 262722 | 240566 |
| 25° | 132498 | 127327 | 113173 |
| 30° | 61298 | 67736 | 53949 |
| 35° | 32222 | 38004 | 30235 |
| 40° | 14169 | 16359 | 9467 |
| 45° | 5512 | 4326 | 6279 |
| 50° | 2610 | 2993 | 4298 |
| 55° | 0 | 1978 | 0 |
| 60° | 0 | 0 | 1085 |
| 65° | 0 | 0 | 0 |
| 70° | 0 | 865 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 3125 | 0 | 0 |
| 85° | 31700 | 28870 | 13020 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 536.7 | 48.2 |
| 10°-20° | 410.3 | 36.9 |
| 20°-30° | 114.1 | 10.3 |
| 30°-40° | 37.1 | 3.3 |
| 40°-50° | 8.2 | 0.7 |
| 50°-60° | 2.5 | 0.2 |
| 60°-70° | 1.5 | 0.1 |
| 70°-80° | 0.9 | 0.1 |
| 80°-90° | 1.8 | 0.2 |
| 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° | 1061.1 | 95.3 |
| 0°-40° | 1098.2 | 98.7 |
| 0°-60° | 1108.9 | 99.6 |
| 0°-90° | 1113.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1113.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 8027 | 8027 | 8027 | 8027 | 8027 | |
| 5° | 6756 | 6707 | 6720 | 6670 | 6671 | 546 |
| 15° | 1544 | 1490 | 1368 | 1262 | 1205 | 451 |
| 25° | 243 | 246 | 234 | 220 | 208 | 122 |
| 35° | 54 | 58 | 63 | 48 | 50 | 35 |
| 45° | 8 | 11 | 6 | 6 | 9 | 8 |
| 55° | 0 | 3 | 2 | 1 | 0 | 2 |
| 65° | 0 | 2 | 0 | 0 | 0 | 2 |
| 75° | 0 | 0 | 0 | 1 | 0 | 0 |
| 85° | 6 | 3 | 5 | 3 | 2 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P281778

CATALOG NUMBER: LDA2B159027D010 EU2B15SP159027 2LBALSQC1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 8027.0 | 8027.0 | 8027.0 | 8027.0 | 8027.0 |
| 1° | 7965.6 | 7935.7 | 7964.4 | 7947.5 | 7957.1 |
| 2° | 7792.6 | 7755.4 | 7785.2 | 7761.6 | 7781.3 |
| 3° | 7523.2 | 7494.4 | 7520.9 | 7491.1 | 7506.8 |
| 4° | 7185.6 | 7143.9 | 7170.4 | 7130.4 | 7140.0 |
| 5° | 6756.2 | 6706.6 | 6720.1 | 6670.0 | 6670.6 |
| 6° | 6215.2 | 6180.8 | 6188.7 | 6110.4 | 6104.8 |
| 7° | 5686.1 | 5604.9 | 5596.5 | 5506.9 | 5489.4 |
| 8° | 5043.6 | 4969.8 | 4945.6 | 4840.2 | 4803.0 |
| 9° | 4427.7 | 4335.8 | 4286.2 | 4164.0 | 4120.6 |
| 10° | 3801.6 | 3708.6 | 3634.2 | 3496.2 | 3449.4 |
| 11° | 3222.3 | 3138.3 | 3045.9 | 2898.3 | 2852.6 |
| 12° | 2684.7 | 2618.7 | 2517.3 | 2374.7 | 2326.8 |
| 13° | 2245.7 | 2169.6 | 2060.8 | 1928.4 | 1887.3 |
| 14° | 1865.3 | 1783.6 | 1674.8 | 1561.6 | 1481.5 |
| 15° | 1544.1 | 1490.5 | 1367.7 | 1262.3 | 1204.8 |
| 16° | 1261.8 | 1216.1 | 1110.2 | 1018.9 | 978.3 |
| 17° | 1034.6 | 998.0 | 907.9 | 836.3 | 802.5 |
| 18° | 853.8 | 808.1 | 737.1 | 690.3 | 663.8 |
| 19° | 692.6 | 657.1 | 605.2 | 569.2 | 542.7 |
| 20° | 571.4 | 542.1 | 500.4 | 468.3 | 458.2 |
| 22.5° | 369.1 | 364.0 | 337.0 | 319.5 | 311.1 |
| 25° | 243.4 | 246.3 | 233.9 | 220.3 | 207.9 |
| 26° | 207.9 | 209.6 | 198.4 | 190.5 | 174.7 |
| 27° | 178.1 | 178.6 | 178.6 | 164.0 | 148.8 |
| 28° | 145.4 | 151.6 | 146.0 | 139.2 | 124.5 |
| 29° | 124.5 | 132.4 | 129.6 | 122.9 | 108.8 |
| 30° | 107.6 | 113.3 | 118.9 | 108.2 | 94.7 |
| 32.5° | 75.5 | 80.6 | 86.8 | 81.1 | 69.9 |
| 35° | 53.5 | 58.0 | 63.1 | 47.9 | 50.2 |
| 37.5° | 36.6 | 44.5 | 42.8 | 38.9 | 33.2 |
| 40° | 22.0 | 23.1 | 25.4 | 27.0 | 14.7 |
| 42.5° | 15.8 | 18.6 | 16.9 | 19.2 | 6.8 |
| 45° | 7.9 | 11.3 | 6.2 | 6.2 | 9.0 |
| 47.5° | 5.6 | 9.6 | 3.4 | 3.4 | 1.1 |
| 50° | 3.4 | 7.3 | 3.9 | 1.7 | 5.6 |
| 52.5° | 5.6 | 6.8 | 4.5 | 5.1 | 1.1 |
| 55° | 0.0 | 3.4 | 2.3 | 1.1 | 0.0 |
| 57.5° | 2.3 | 3.9 | 2.3 | 1.1 | 2.3 |
| 60° | 0.0 | 0.0 | 0.0 | 0.6 | 1.1 |
| 62.5° | 0.0 | 1.1 | 0.0 | 1.7 | 2.3 |
| 65° | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 |
| 67.5° | 3.4 | 3.9 | 2.3 | 4.5 | 6.8 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 |
| 77.5° | 0.0 | 5.6 | 1.7 | 1.7 | 2.3 |
| 80° | 1.1 | 0.0 | 0.0 | 0.6 | 0.0 |
| 82.5° | 0.0 | 4.5 | 0.6 | 2.3 | 3.4 |
| 85° | 5.6 | 2.8 | 5.1 | 2.8 | 2.3 |
| 87.5° | 0.0 | 0.6 | 1.1 | 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 | 0.6 | 0.6 | 0.0 |
| 72.5° | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |



(END OF REPORT)