

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: P281655

Luminaire Tested: **LDA2B108030D010 EU2B10SP158030 2LBAPINSQ1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P281655
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-10)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B108030D010 EU2B10SP158030 2LBAPINSQ1MW
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ PinHole, MW
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1081.9 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 0.3 / 0.3 / 0.29
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

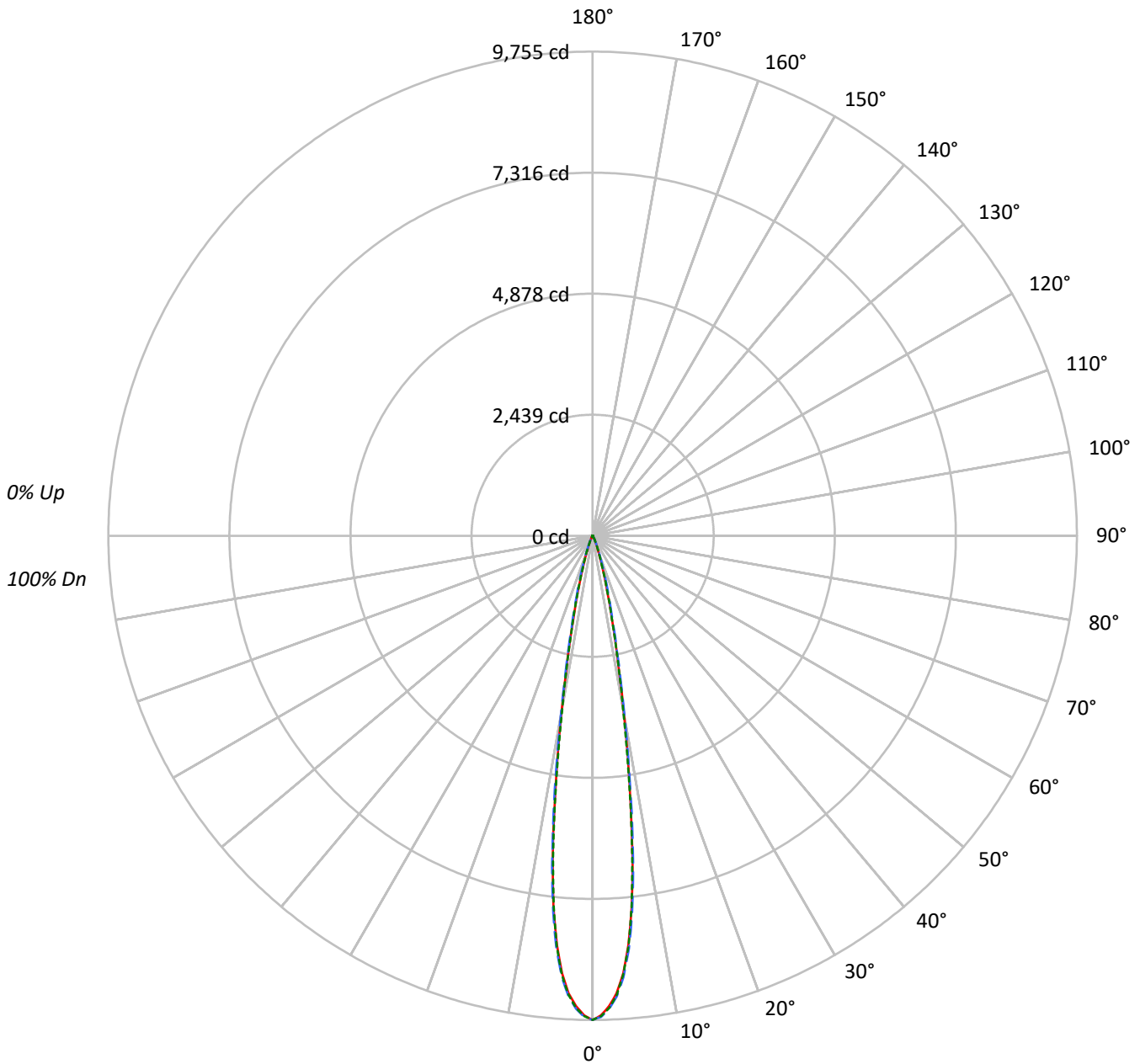
Input Watts (W): 10
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 4812695 | 4812695 | 4812695 |
| 5° | 4098164 | 4140854 | 4105889 |
| 10° | 1809263 | 1850643 | 1766981 |
| 15° | 548971 | 629672 | 557603 |
| 20° | 164280 | 219040 | 183549 |
| 25° | 64017 | 62983 | 67283 |
| 30° | 28484 | 25750 | 27117 |
| 35° | 5782 | 5059 | 5059 |
| 40° | 0 | 386 | 1546 |
| 45° | 5024 | 4186 | 7605 |
| 50° | 0 | 1382 | 4605 |
| 55° | 0 | 0 | 2064 |
| 60° | 0 | 592 | 2368 |
| 65° | 0 | 0 | 1401 |
| 70° | 0 | 3462 | 6924 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 3396 | 13586 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 632.4 | 58.4 |
| 10°-20° | 361.2 | 33.4 |
| 20°-30° | 68.6 | 6.3 |
| 30°-40° | 12.5 | 1.2 |
| 40°-50° | 3.2 | 0.3 |
| 50°-60° | 2.4 | 0.2 |
| 60°-70° | 0.4 | 0.0 |
| 70°-80° | 0.5 | 0.1 |
| 80°-90° | 0.8 | 0.1 |
| 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° | 1062.1 | 98.2 |
| 0°-40° | 1074.5 | 99.3 |
| 0°-60° | 1080.2 | 99.8 |
| 0°-90° | 1081.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1081.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 9755 | 9755 | 9755 | 9755 | 9755 | |
| 5° | 8275 | 8329 | 8361 | 8347 | 8291 | 628 |
| 15° | 1075 | 1169 | 1233 | 1158 | 1092 | 342 |
| 25° | 118 | 127 | 116 | 132 | 124 | 62 |
| 35° | 10 | 12 | 8 | 10 | 8 | 13 |
| 45° | 7 | 12 | 6 | 7 | 11 | 3 |
| 55° | 0 | 1 | 0 | 1 | 2 | 1 |
| 65° | 0 | 0 | 0 | 0 | 1 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 1 | 1 | 1 | 2 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P281655

CATALOG NUMBER: LDA2B108030D010 EU2B10SP158030 2LBAPINSQ1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 9754.9 | 9754.9 | 9754.9 | 9754.9 | 9754.9 |
| 1° | 9662.7 | 9672.9 | 9694.6 | 9716.9 | 9682.0 |
| 2° | 9481.8 | 9506.5 | 9537.3 | 9557.8 | 9519.8 |
| 3° | 9228.6 | 9263.0 | 9295.5 | 9299.8 | 9264.2 |
| 4° | 8837.4 | 8879.6 | 8914.0 | 8909.7 | 8865.1 |
| 5° | 8275.0 | 8329.2 | 8361.2 | 8346.7 | 8290.6 |
| 6° | 7531.7 | 7584.1 | 7625.1 | 7583.5 | 7508.2 |
| 7° | 6605.7 | 6666.0 | 6709.4 | 6638.3 | 6546.1 |
| 8° | 5532.7 | 5617.1 | 5660.5 | 5561.1 | 5466.4 |
| 9° | 4516.4 | 4574.8 | 4618.8 | 4510.3 | 4413.9 |
| 10° | 3611.5 | 3718.8 | 3694.1 | 3610.3 | 3527.1 |
| 11° | 2840.5 | 2937.6 | 2941.8 | 2885.1 | 2803.7 |
| 12° | 2223.8 | 2326.3 | 2352.2 | 2308.8 | 2236.5 |
| 13° | 1757.2 | 1833.8 | 1876.6 | 1832.0 | 1763.3 |
| 14° | 1398.6 | 1466.7 | 1521.5 | 1463.7 | 1394.9 |
| 15° | 1074.8 | 1168.9 | 1232.8 | 1158.0 | 1091.7 |
| 16° | 854.8 | 932.6 | 1008.5 | 923.5 | 870.5 |
| 17° | 656.5 | 725.8 | 804.2 | 727.0 | 683.6 |
| 18° | 519.6 | 574.5 | 660.7 | 581.1 | 543.1 |
| 19° | 406.9 | 448.5 | 528.7 | 458.7 | 428.0 |
| 20° | 312.9 | 358.7 | 417.2 | 369.5 | 349.6 |
| 22.5° | 189.3 | 214.6 | 231.5 | 217.0 | 206.8 |
| 25° | 117.6 | 126.6 | 115.7 | 132.0 | 123.6 |
| 26° | 102.5 | 109.1 | 106.7 | 117.6 | 107.3 |
| 27° | 82.0 | 90.4 | 83.8 | 92.2 | 89.2 |
| 28° | 74.8 | 85.0 | 71.7 | 82.0 | 77.2 |
| 29° | 52.4 | 56.7 | 51.2 | 54.9 | 54.9 |
| 30° | 50.0 | 51.2 | 45.2 | 49.4 | 47.6 |
| 32.5° | 39.2 | 36.8 | 30.1 | 31.9 | 30.7 |
| 35° | 9.6 | 12.1 | 8.4 | 10.2 | 8.4 |
| 37.5° | 14.5 | 13.3 | 15.7 | 15.1 | 14.5 |
| 40° | 0.0 | 0.6 | 0.6 | 0.6 | 2.4 |
| 42.5° | 10.9 | 6.6 | 6.0 | 4.2 | 7.2 |
| 45° | 7.2 | 11.5 | 6.0 | 6.6 | 10.9 |
| 47.5° | 0.0 | 0.6 | 0.0 | 1.2 | 1.2 |
| 50° | 0.0 | 1.2 | 1.8 | 2.4 | 6.0 |
| 52.5° | 1.2 | 7.2 | 3.6 | 6.6 | 9.6 |
| 55° | 0.0 | 0.6 | 0.0 | 0.6 | 2.4 |
| 57.5° | 2.4 | 1.2 | 2.4 | 2.4 | 10.9 |
| 60° | 0.0 | 1.2 | 0.6 | 0.6 | 2.4 |
| 62.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 65° | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 |
| 67.5° | 0.0 | 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 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 |
| 80° | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.6 | 1.2 | 1.8 | 1.2 |
| 85° | 0.0 | 0.6 | 0.6 | 0.6 | 2.4 |
| 87.5° | 0.0 | 1.2 | 1.8 | 0.0 | 1.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 70° | 0.0 | 1.8 | 2.4 | 0.0 | 4.8 |
| 72.5° | 0.0 | 3.0 | 0.6 | 0.6 | 0.0 |



(END OF REPORT)