

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: P281245

Luminaire Tested: **LDA2B158040D010 EU2B15SP158040 2LBALD1B**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P281245
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: LDA2B158040D010 EU2B15SP158040 2LBALD1B
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in
ADJ spun Refl w/lens Self-Flanged, B
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1515.1 lumens
Efficiency: N/A
Efficacy: 107.5 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

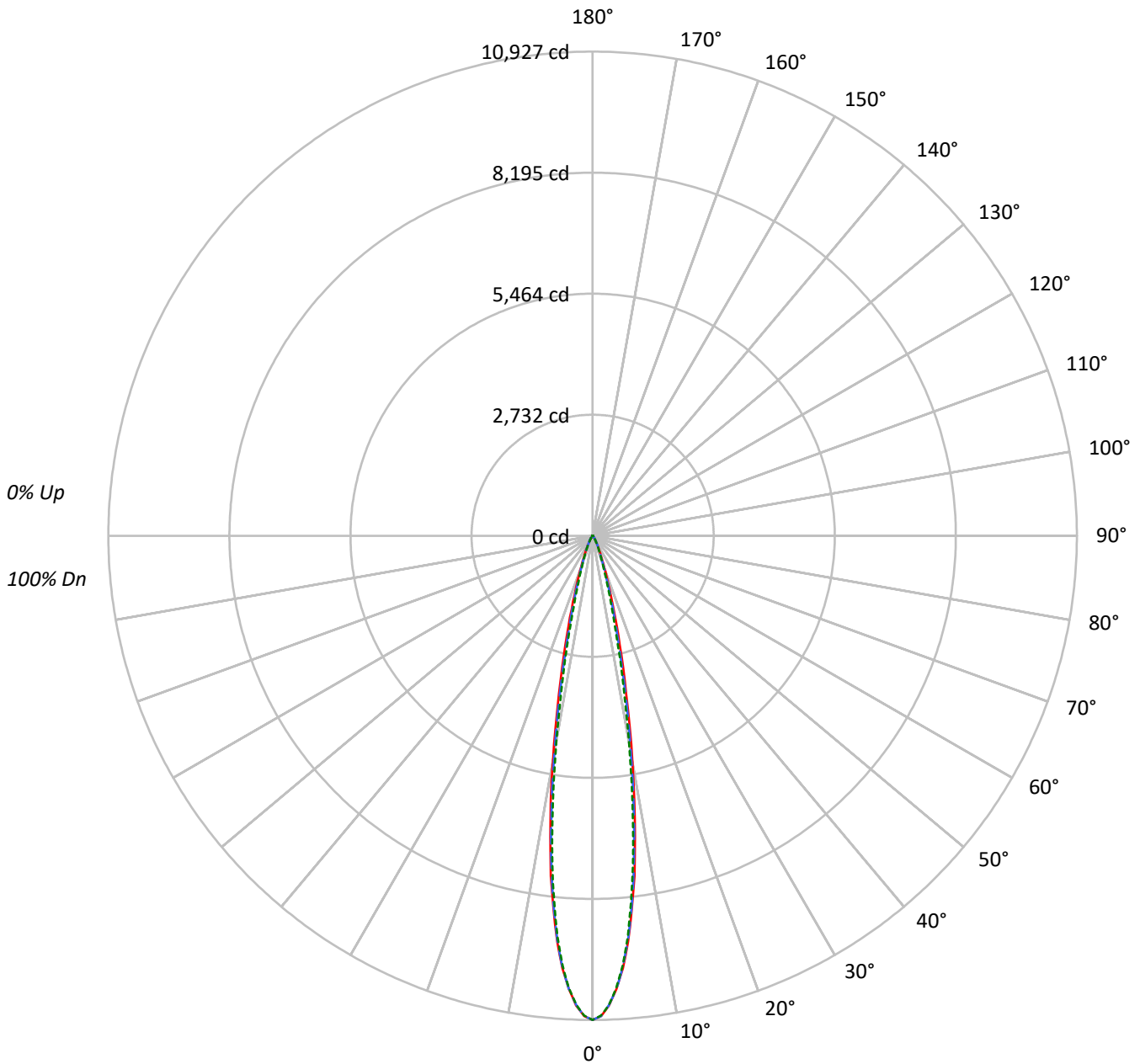
Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P281245

CATALOG NUMBER: LDA2B158040D010 EU2B15SP158040 2LBALD1B

Luminous Intensity Polar Plot





TEST NUMBER: P281245

CATALOG NUMBER: LDA2B158040D010 EU2B15SP158040 2LBALD1B

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|
| RF | 20 | | | | | | | | | 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 | 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° | 5390964 | 5390964 | 5390964 |
| 5° | 4554830 | 4530514 | 4497084 |
| 10° | 2592534 | 2478412 | 2352367 |
| 15° | 1073578 | 950944 | 837707 |
| 20° | 408417 | 357647 | 327458 |
| 25° | 180402 | 173326 | 154110 |
| 30° | 83459 | 92232 | 73432 |
| 35° | 43906 | 51736 | 41136 |
| 40° | 19257 | 22219 | 12816 |
| 45° | 7466 | 5861 | 8582 |
| 50° | 3531 | 4145 | 5910 |
| 55° | 0 | 2666 | 0 |
| 60° | 0 | 0 | 1480 |
| 65° | 0 | 0 | 0 |
| 70° | 0 | 1154 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 4262 | 0 | 0 |
| 85° | 43587 | 39059 | 17548 |



TEST NUMBER: P281245

CATALOG NUMBER: LDA2B158040D010 EU2B15SP158040 2LBALD1B

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 730.6 | 48.2 |
| 10°-20° | 558.5 | 36.9 |
| 20°-30° | 155.3 | 10.3 |
| 30°-40° | 50.5 | 3.3 |
| 40°-50° | 11.1 | 0.7 |
| 50°-60° | 3.4 | 0.2 |
| 60°-70° | 2.0 | 0.1 |
| 70°-80° | 1.2 | 0.1 |
| 80°-90° | 2.5 | 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° | 1444.5 | 95.3 |
| 0°-40° | 1495.0 | 98.7 |
| 0°-60° | 1509.5 | 99.6 |
| 0°-90° | 1515.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1515.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0° | 10927 | 10927 | 10927 | 10927 | 10927 | |
| 5° | 9197 | 9130 | 9148 | 9080 | 9080 | 743 |
| 15° | 2102 | 2029 | 1862 | 1718 | 1640 | 614 |
| 25° | 331 | 335 | 318 | 300 | 283 | 166 |
| 35° | 73 | 79 | 86 | 65 | 68 | 48 |
| 45° | 11 | 15 | 8 | 8 | 12 | 11 |
| 55° | 0 | 5 | 3 | 2 | 0 | 3 |
| 65° | 0 | 3 | 0 | 0 | 0 | 2 |
| 75° | 0 | 0 | 0 | 2 | 0 | 1 |
| 85° | 8 | 4 | 7 | 4 | 3 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P281245

CATALOG NUMBER: LDA2B158040D010 EU2B15SP158040 2LBALD1B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|---------|---------|---------|---------|---------|
| 0° | 10927.0 | 10927.0 | 10927.0 | 10927.0 | 10927.0 |
| 1° | 10843.3 | 10802.7 | 10841.8 | 10818.8 | 10831.8 |
| 2° | 10607.8 | 10557.2 | 10597.9 | 10565.6 | 10592.5 |
| 3° | 10241.1 | 10202.0 | 10238.1 | 10197.4 | 10218.9 |
| 4° | 9781.6 | 9724.9 | 9760.9 | 9706.5 | 9719.5 |
| 5° | 9197.1 | 9129.6 | 9148.0 | 9079.7 | 9080.5 |
| 6° | 8460.6 | 8413.8 | 8424.6 | 8318.0 | 8310.3 |
| 7° | 7740.3 | 7629.8 | 7618.3 | 7496.4 | 7472.6 |
| 8° | 6865.8 | 6765.3 | 6732.3 | 6588.9 | 6538.2 |
| 9° | 6027.3 | 5902.3 | 5834.8 | 5668.3 | 5609.2 |
| 10° | 5175.0 | 5048.5 | 4947.2 | 4759.3 | 4695.6 |
| 11° | 4386.4 | 4272.1 | 4146.3 | 3945.3 | 3883.2 |
| 12° | 3654.6 | 3564.8 | 3426.8 | 3232.7 | 3167.5 |
| 13° | 3057.0 | 2953.4 | 2805.4 | 2625.1 | 2569.1 |
| 14° | 2539.2 | 2428.0 | 2279.9 | 2125.7 | 2016.8 |
| 15° | 2101.9 | 2029.1 | 1861.8 | 1718.4 | 1640.1 |
| 16° | 1717.6 | 1655.5 | 1511.2 | 1387.0 | 1331.7 |
| 17° | 1408.4 | 1358.6 | 1235.8 | 1138.4 | 1092.4 |
| 18° | 1162.2 | 1100.1 | 1003.4 | 939.7 | 903.7 |
| 19° | 942.8 | 894.5 | 823.9 | 774.8 | 738.7 |
| 20° | 777.9 | 738.0 | 681.2 | 637.5 | 623.7 |
| 22.5° | 502.5 | 495.6 | 458.7 | 435.0 | 423.5 |
| 25° | 331.4 | 335.2 | 318.4 | 299.9 | 283.1 |
| 26° | 283.1 | 285.4 | 270.0 | 259.3 | 237.8 |
| 27° | 242.4 | 243.2 | 243.2 | 223.2 | 202.5 |
| 28° | 197.9 | 206.4 | 198.7 | 189.5 | 169.5 |
| 29° | 169.5 | 180.3 | 176.4 | 167.2 | 148.1 |
| 30° | 146.5 | 154.2 | 161.9 | 147.3 | 128.9 |
| 32.5° | 102.8 | 109.7 | 118.1 | 110.5 | 95.1 |
| 35° | 72.9 | 79.0 | 85.9 | 65.2 | 68.3 |
| 37.5° | 49.9 | 60.6 | 58.3 | 52.9 | 45.3 |
| 40° | 29.9 | 31.5 | 34.5 | 36.8 | 19.9 |
| 42.5° | 21.5 | 25.3 | 23.0 | 26.1 | 9.2 |
| 45° | 10.7 | 15.3 | 8.4 | 8.4 | 12.3 |
| 47.5° | 7.7 | 13.0 | 4.6 | 4.6 | 1.5 |
| 50° | 4.6 | 10.0 | 5.4 | 2.3 | 7.7 |
| 52.5° | 7.7 | 9.2 | 6.1 | 6.9 | 1.5 |
| 55° | 0.0 | 4.6 | 3.1 | 1.5 | 0.0 |
| 57.5° | 3.1 | 5.4 | 3.1 | 1.5 | 3.1 |
| 60° | 0.0 | 0.0 | 0.0 | 0.8 | 1.5 |
| 62.5° | 0.0 | 1.5 | 0.0 | 2.3 | 3.1 |
| 65° | 0.0 | 3.1 | 0.0 | 0.0 | 0.0 |
| 67.5° | 4.6 | 5.4 | 3.1 | 6.1 | 9.2 |



TEST NUMBER: P281245

CATALOG NUMBER: LDA2B158040D010 EU2B15SP158040 2LBALD1B

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 |
| 77.5° | 0.0 | 7.7 | 2.3 | 2.3 | 3.1 |
| 80° | 1.5 | 0.0 | 0.0 | 0.8 | 0.0 |
| 82.5° | 0.0 | 6.1 | 0.8 | 3.1 | 4.6 |
| 85° | 7.7 | 3.8 | 6.9 | 3.8 | 3.1 |
| 87.5° | 0.0 | 0.8 | 1.5 | 0.8 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



Report Generated By E9808895 / USPTCWHP6082093





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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 70° | 0.0 | 0.0 | 0.8 | 0.8 | 0.0 |
| 72.5° | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 |



(END OF REPORT)