

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: P281023

Luminaire Tested: **LDA2B058040D010 EU2B05SP158040 2LBALD1WH**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P281023
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: LDA2B058040D010 EU2B05SP158040 2LBALD1WH
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in
ADJ spun Refl w/lens Self-Flanged, WH
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 838.1 lumens
Efficiency: N/A
Efficacy: 119.7 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

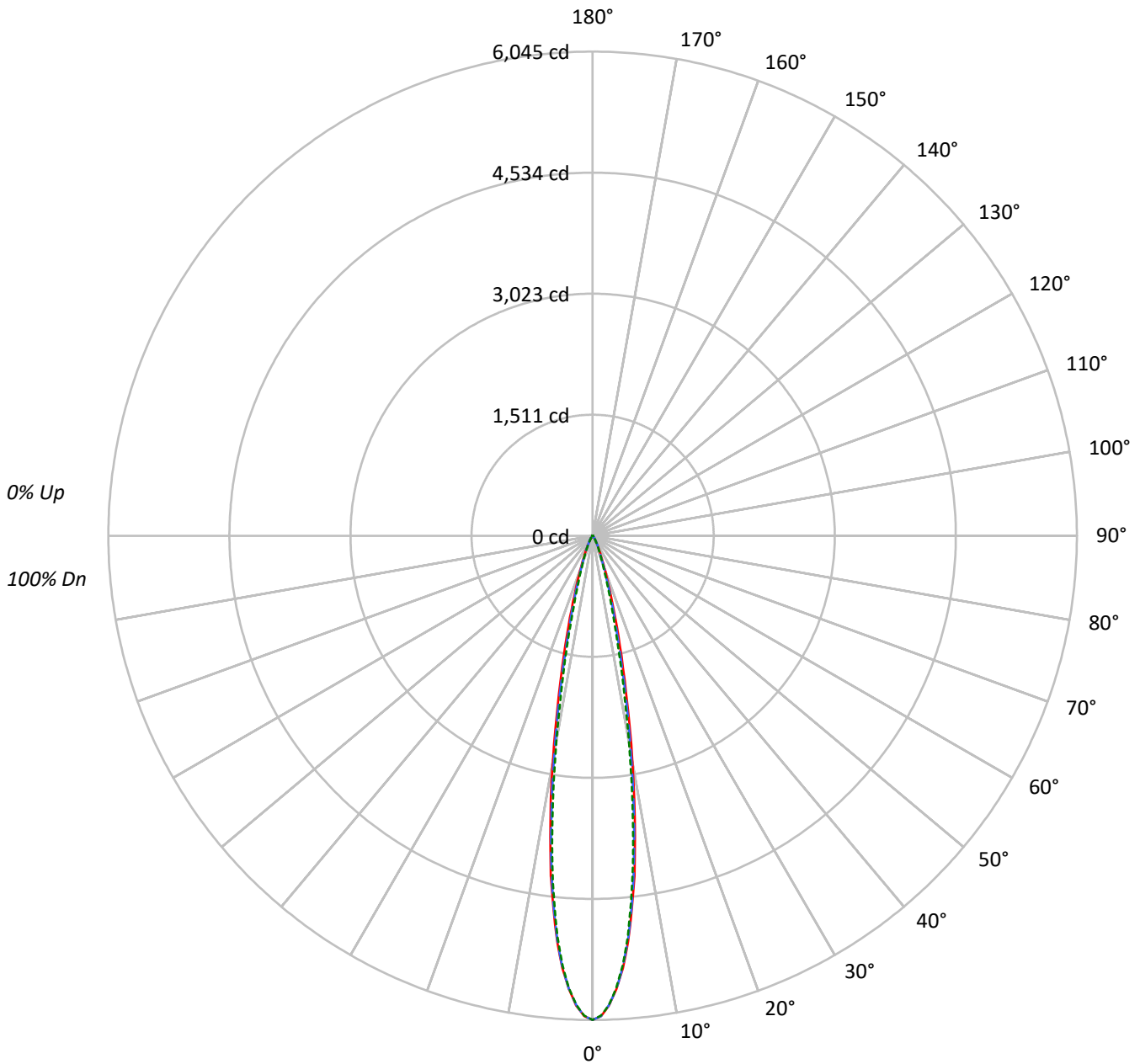
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 89 | 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° | 2982224 | 2982224 | 2982224 |
| 5° | 2519665 | 2506244 | 2487721 |
| 10° | 1434185 | 1371012 | 1301327 |
| 15° | 593918 | 526038 | 463418 |
| 20° | 225918 | 197829 | 181134 |
| 25° | 99782 | 95863 | 85247 |
| 30° | 46201 | 50987 | 40619 |
| 35° | 24272 | 28608 | 22766 |
| 40° | 10691 | 12301 | 7084 |
| 45° | 4117 | 3279 | 4744 |
| 50° | 1919 | 2303 | 3224 |
| 55° | 0 | 1462 | 0 |
| 60° | 0 | 0 | 789 |
| 65° | 0 | 0 | 0 |
| 70° | 0 | 577 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 2273 | 0 | 0 |
| 85° | 23775 | 21511 | 9623 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 404.2 | 48.2 |
| 10°-20° | 309.0 | 36.9 |
| 20°-30° | 85.9 | 10.3 |
| 30°-40° | 27.9 | 3.3 |
| 40°-50° | 6.1 | 0.7 |
| 50°-60° | 1.9 | 0.2 |
| 60°-70° | 1.1 | 0.1 |
| 70°-80° | 0.6 | 0.1 |
| 80°-90° | 1.3 | 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° | 799.1 | 95.3 |
| 0°-40° | 827.0 | 98.7 |
| 0°-60° | 835.0 | 99.6 |
| 0°-90° | 838.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 838.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 6045 | 6045 | 6045 | 6045 | 6045 | |
| 5° | 5088 | 5050 | 5061 | 5023 | 5023 | 411 |
| 15° | 1163 | 1122 | 1030 | 951 | 907 | 339 |
| 25° | 183 | 185 | 176 | 166 | 157 | 92 |
| 35° | 40 | 44 | 48 | 36 | 38 | 27 |
| 45° | 6 | 8 | 5 | 5 | 7 | 6 |
| 55° | 0 | 2 | 2 | 1 | 0 | 2 |
| 65° | 0 | 2 | 0 | 0 | 0 | 1 |
| 75° | 0 | 0 | 0 | 1 | 0 | 0 |
| 85° | 4 | 2 | 4 | 2 | 2 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P281023

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 6044.7 | 6044.7 | 6044.7 | 6044.7 | 6044.7 |
| 1° | 5998.4 | 5976.0 | 5997.6 | 5984.9 | 5992.1 |
| 2° | 5868.2 | 5840.2 | 5862.6 | 5844.8 | 5859.7 |
| 3° | 5665.3 | 5643.7 | 5663.6 | 5641.1 | 5653.0 |
| 4° | 5411.1 | 5379.7 | 5399.7 | 5369.5 | 5376.7 |
| 5° | 5087.7 | 5050.4 | 5060.6 | 5022.8 | 5023.2 |
| 6° | 4680.4 | 4654.5 | 4660.4 | 4601.4 | 4597.2 |
| 7° | 4281.9 | 4220.8 | 4214.4 | 4146.9 | 4133.8 |
| 8° | 3798.1 | 3742.5 | 3724.3 | 3644.9 | 3616.9 |
| 9° | 3334.3 | 3265.1 | 3227.7 | 3135.7 | 3103.0 |
| 10° | 2862.8 | 2792.8 | 2736.7 | 2632.8 | 2597.6 |
| 11° | 2426.5 | 2363.3 | 2293.7 | 2182.5 | 2148.2 |
| 12° | 2021.7 | 1972.0 | 1895.7 | 1788.3 | 1752.2 |
| 13° | 1691.1 | 1633.8 | 1551.9 | 1452.2 | 1421.2 |
| 14° | 1404.7 | 1343.1 | 1261.2 | 1175.9 | 1115.7 |
| 15° | 1162.8 | 1122.5 | 1029.9 | 950.6 | 907.3 |
| 16° | 950.2 | 915.8 | 836.0 | 767.3 | 736.7 |
| 17° | 779.1 | 751.6 | 683.7 | 629.8 | 604.3 |
| 18° | 642.9 | 608.5 | 555.1 | 519.9 | 499.9 |
| 19° | 521.5 | 494.8 | 455.8 | 428.6 | 408.7 |
| 20° | 430.3 | 408.2 | 376.8 | 352.6 | 345.0 |
| 22.5° | 278.0 | 274.1 | 253.8 | 240.6 | 234.3 |
| 25° | 183.3 | 185.4 | 176.1 | 165.9 | 156.6 |
| 26° | 156.6 | 157.9 | 149.4 | 143.4 | 131.6 |
| 27° | 134.1 | 134.5 | 134.5 | 123.5 | 112.0 |
| 28° | 109.5 | 114.2 | 109.9 | 104.8 | 93.8 |
| 29° | 93.8 | 99.7 | 97.6 | 92.5 | 81.9 |
| 30° | 81.1 | 85.3 | 89.5 | 81.5 | 71.3 |
| 32.5° | 56.9 | 60.7 | 65.4 | 61.1 | 52.6 |
| 35° | 40.3 | 43.7 | 47.5 | 36.1 | 37.8 |
| 37.5° | 27.6 | 33.5 | 32.3 | 29.3 | 25.0 |
| 40° | 16.6 | 17.4 | 19.1 | 20.4 | 11.0 |
| 42.5° | 11.9 | 14.0 | 12.7 | 14.4 | 5.1 |
| 45° | 5.9 | 8.5 | 4.7 | 4.7 | 6.8 |
| 47.5° | 4.2 | 7.2 | 2.5 | 2.5 | 0.8 |
| 50° | 2.5 | 5.5 | 3.0 | 1.3 | 4.2 |
| 52.5° | 4.2 | 5.1 | 3.4 | 3.8 | 0.8 |
| 55° | 0.0 | 2.5 | 1.7 | 0.8 | 0.0 |
| 57.5° | 1.7 | 3.0 | 1.7 | 0.8 | 1.7 |
| 60° | 0.0 | 0.0 | 0.0 | 0.4 | 0.8 |
| 62.5° | 0.0 | 0.8 | 0.0 | 1.3 | 1.7 |
| 65° | 0.0 | 1.7 | 0.0 | 0.0 | 0.0 |
| 67.5° | 2.5 | 3.0 | 1.7 | 3.4 | 5.1 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 |
| 77.5° | 0.0 | 4.2 | 1.3 | 1.3 | 1.7 |
| 80° | 0.8 | 0.0 | 0.0 | 0.4 | 0.0 |
| 82.5° | 0.0 | 3.4 | 0.4 | 1.7 | 2.5 |
| 85° | 4.2 | 2.1 | 3.8 | 2.1 | 1.7 |
| 87.5° | 0.0 | 0.4 | 0.8 | 0.4 | 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 | 0.4 | 0.4 | 0.0 |
| 72.5° | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 |



(END OF REPORT)