

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: P283520

Luminaire Tested: **LDA2B059050D010 EU2B05FL409050 2LBAPINSQ1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P283520
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1809-951-15)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B059050D010 EU2B05FL409050 2LBAPINSQ1MW
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj SQ PinHole, MW

Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 615.7 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 0.55 / 0.55
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

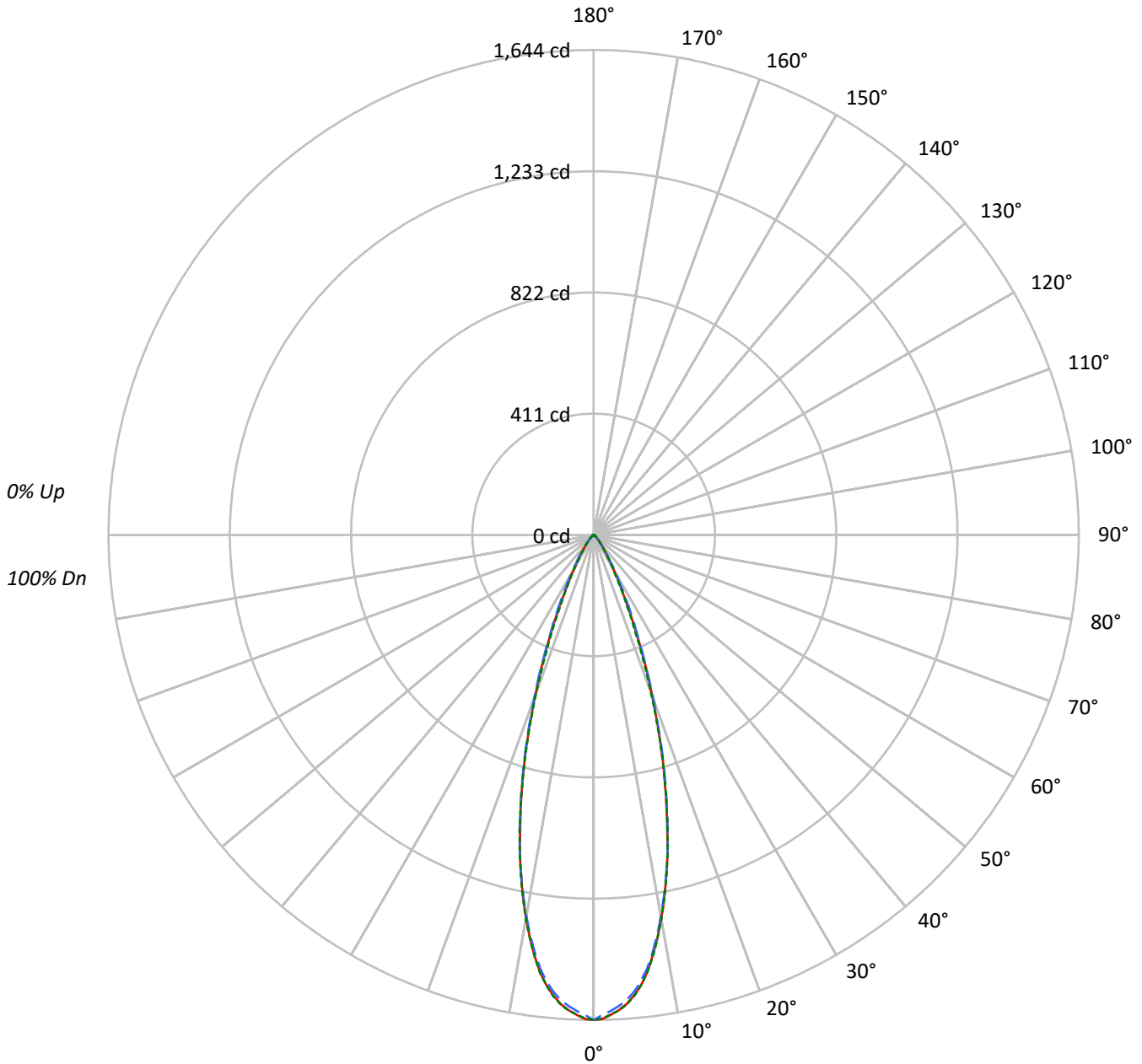
Input Watts (W): 7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 95 | | | | | | | | | | | | | | | | | | | |
| 2 | 110 | 106 | 102 | 99 | 108 | 104 | 101 | 98 | 101 | 98 | 96 | 98 | 96 | 94 | 95 | 93 | 92 | 90 | | | | | | | | | | | | | | | | | | | |
| 3 | 105 | 100 | 96 | 92 | 104 | 99 | 95 | 92 | 96 | 93 | 90 | 94 | 91 | 89 | 92 | 89 | 88 | 86 | | | | | | | | | | | | | | | | | | | |
| 4 | 101 | 95 | 90 | 87 | 100 | 94 | 90 | 86 | 92 | 88 | 85 | 90 | 87 | 84 | 88 | 86 | 83 | 82 | | | | | | | | | | | | | | | | | | | |
| 5 | 98 | 91 | 86 | 82 | 96 | 90 | 85 | 82 | 88 | 84 | 81 | 86 | 83 | 80 | 85 | 82 | 80 | 79 | | | | | | | | | | | | | | | | | | | |
| 6 | 94 | 87 | 82 | 78 | 93 | 86 | 81 | 78 | 84 | 80 | 77 | 83 | 80 | 77 | 82 | 79 | 76 | 75 | | | | | | | | | | | | | | | | | | | |
| 7 | 91 | 83 | 78 | 75 | 89 | 82 | 78 | 74 | 81 | 77 | 74 | 80 | 76 | 74 | 79 | 76 | 73 | 72 | | | | | | | | | | | | | | | | | | | |
| 8 | 87 | 80 | 75 | 71 | 86 | 79 | 74 | 71 | 78 | 74 | 71 | 77 | 73 | 71 | 76 | 73 | 70 | 69 | | | | | | | | | | | | | | | | | | | |
| 9 | 84 | 77 | 72 | 69 | 83 | 76 | 72 | 68 | 75 | 71 | 68 | 74 | 71 | 68 | 74 | 70 | 68 | 67 | | | | | | | | | | | | | | | | | | | |
| 10 | 82 | 74 | 69 | 66 | 81 | 73 | 69 | 66 | 73 | 69 | 66 | 72 | 68 | 65 | 71 | 68 | 65 | 64 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 811235 | 811235 | 811235 |
| 5° | 776348 | 770554 | 777537 |
| 10° | 661434 | 657276 | 662136 |
| 15° | 487526 | 490693 | 489109 |
| 20° | 304357 | 309975 | 297636 |
| 25° | 157212 | 168699 | 149319 |
| 30° | 75369 | 86421 | 71837 |
| 35° | 38908 | 43063 | 36438 |
| 40° | 21833 | 22928 | 20674 |
| 45° | 13257 | 13257 | 12768 |
| 50° | 6908 | 8520 | 6908 |
| 55° | 3527 | 5677 | 3871 |
| 60° | 4046 | 4046 | 4046 |
| 65° | 4436 | 4436 | 4436 |
| 70° | 5481 | 5049 | 5481 |
| 75° | 5337 | 5337 | 5337 |
| 80° | 4830 | 4830 | 4830 |
| 85° | 3962 | 3962 | 3962 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 141.4 | 23.0 |
| 10°-20° | 259.8 | 42.2 |
| 20°-30° | 140.9 | 22.9 |
| 30°-40° | 45.2 | 7.3 |
| 40°-50° | 15.4 | 2.5 |
| 50°-60° | 5.4 | 0.9 |
| 60°-70° | 3.9 | 0.6 |
| 70°-80° | 2.9 | 0.5 |
| 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° | 542.1 | 88.0 |
| 0°-40° | 587.3 | 95.4 |
| 0°-60° | 608.1 | 98.8 |
| 0°-90° | 615.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 615.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1644 | 1644 | 1644 | 1644 | 1644 | |
| 5° | 1568 | 1558 | 1556 | 1571 | 1570 | 142 |
| 15° | 954 | 962 | 961 | 965 | 958 | 259 |
| 25° | 289 | 302 | 310 | 288 | 274 | 138 |
| 35° | 65 | 67 | 72 | 65 | 60 | 44 |
| 45° | 19 | 19 | 19 | 19 | 18 | 15 |
| 55° | 4 | 5 | 7 | 5 | 4 | 5 |
| 65° | 4 | 4 | 4 | 4 | 4 | 4 |
| 75° | 3 | 3 | 3 | 3 | 3 | 3 |
| 85° | 1 | 1 | 1 | 1 | 1 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P283520

CATALOG NUMBER: LDA2B059050D010 EU2B05FL409050 2LBAPINSQ1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 |
| 1° | 1641.6 | 1629.8 | 1628.1 | 1643.3 | 1639.8 |
| 2° | 1628.4 | 1617.4 | 1615.6 | 1630.8 | 1627.7 |
| 3° | 1613.9 | 1603.9 | 1600.4 | 1616.3 | 1614.3 |
| 4° | 1594.6 | 1585.2 | 1582.1 | 1598.0 | 1596.3 |
| 5° | 1567.6 | 1558.0 | 1555.9 | 1571.4 | 1570.0 |
| 6° | 1534.5 | 1526.5 | 1522.7 | 1538.3 | 1535.5 |
| 7° | 1493.0 | 1485.8 | 1481.6 | 1493.0 | 1494.4 |
| 8° | 1439.1 | 1435.7 | 1430.8 | 1442.2 | 1442.2 |
| 9° | 1381.8 | 1378.7 | 1373.5 | 1383.9 | 1383.9 |
| 10° | 1320.3 | 1318.2 | 1312.0 | 1321.7 | 1321.7 |
| 11° | 1252.9 | 1251.9 | 1247.4 | 1255.3 | 1255.3 |
| 12° | 1182.1 | 1184.5 | 1180.4 | 1187.3 | 1184.9 |
| 13° | 1111.3 | 1110.3 | 1110.6 | 1115.8 | 1112.0 |
| 14° | 1031.2 | 1037.4 | 1038.4 | 1041.5 | 1035.6 |
| 15° | 954.5 | 962.4 | 960.7 | 965.2 | 957.6 |
| 16° | 876.0 | 885.0 | 884.7 | 885.7 | 878.5 |
| 17° | 802.8 | 808.0 | 808.3 | 807.3 | 798.3 |
| 18° | 724.7 | 732.0 | 732.0 | 730.3 | 719.6 |
| 19° | 648.4 | 653.9 | 657.7 | 653.9 | 641.5 |
| 20° | 579.7 | 583.5 | 590.4 | 580.7 | 566.9 |
| 21° | 513.7 | 517.1 | 523.0 | 511.6 | 496.4 |
| 22° | 450.5 | 455.0 | 460.5 | 447.4 | 431.5 |
| 23° | 391.4 | 401.8 | 403.8 | 385.9 | 372.4 |
| 24° | 337.2 | 348.9 | 352.4 | 334.0 | 319.9 |
| 25° | 288.8 | 301.9 | 309.9 | 288.4 | 274.3 |
| 26° | 247.0 | 259.8 | 269.4 | 248.0 | 234.6 |
| 27° | 210.4 | 223.8 | 233.9 | 213.8 | 201.0 |
| 28° | 178.9 | 192.1 | 202.4 | 183.8 | 171.7 |
| 29° | 155.5 | 163.1 | 173.4 | 157.9 | 146.8 |
| 30° | 132.3 | 140.6 | 151.7 | 135.8 | 126.1 |
| 32.5° | 90.9 | 95.3 | 104.0 | 94.3 | 86.7 |
| 35° | 64.6 | 67.4 | 71.5 | 64.9 | 60.5 |
| 37.5° | 45.9 | 47.3 | 49.7 | 45.9 | 43.5 |
| 40° | 33.9 | 34.5 | 35.6 | 33.5 | 32.1 |
| 42.5° | 25.2 | 25.6 | 25.6 | 24.9 | 24.2 |
| 45° | 19.0 | 19.3 | 19.0 | 19.0 | 18.3 |
| 47.5° | 13.8 | 14.9 | 14.5 | 14.5 | 13.5 |
| 50° | 9.0 | 11.1 | 11.1 | 10.7 | 9.0 |
| 52.5° | 5.5 | 7.6 | 8.6 | 7.6 | 5.9 |
| 55° | 4.1 | 5.2 | 6.6 | 5.2 | 4.5 |
| 57.5° | 4.1 | 4.1 | 4.8 | 4.1 | 4.1 |
| 60° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 67.5° | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |
| 70° | 3.8 | 3.8 | 3.5 | 3.8 | 3.8 |
| 72.5° | 3.5 | 3.5 | 3.1 | 3.5 | 3.1 |
| 75° | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 77.5° | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| 80° | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 82.5° | 1.0 | 1.0 | 1.0 | 1.4 | 1.0 |
| 85° | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 87.5° | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 62.5° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 65° | 3.8 | 4.1 | 3.8 | 4.1 | 3.8 |



(END OF REPORT)