

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: P314729

Luminaire Tested: **LDA2B05SP9035D010 PIN1MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P314729
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-8)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B05SP9035D010 PIN1MB
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj PinHole, Black oculus black finish
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 666.9 lumens
Efficiency: N/A
Efficacy: 95.3 lumens/watt
Spacing Criteria (0/90/45): 0.32 / 0.3 / 0.32
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

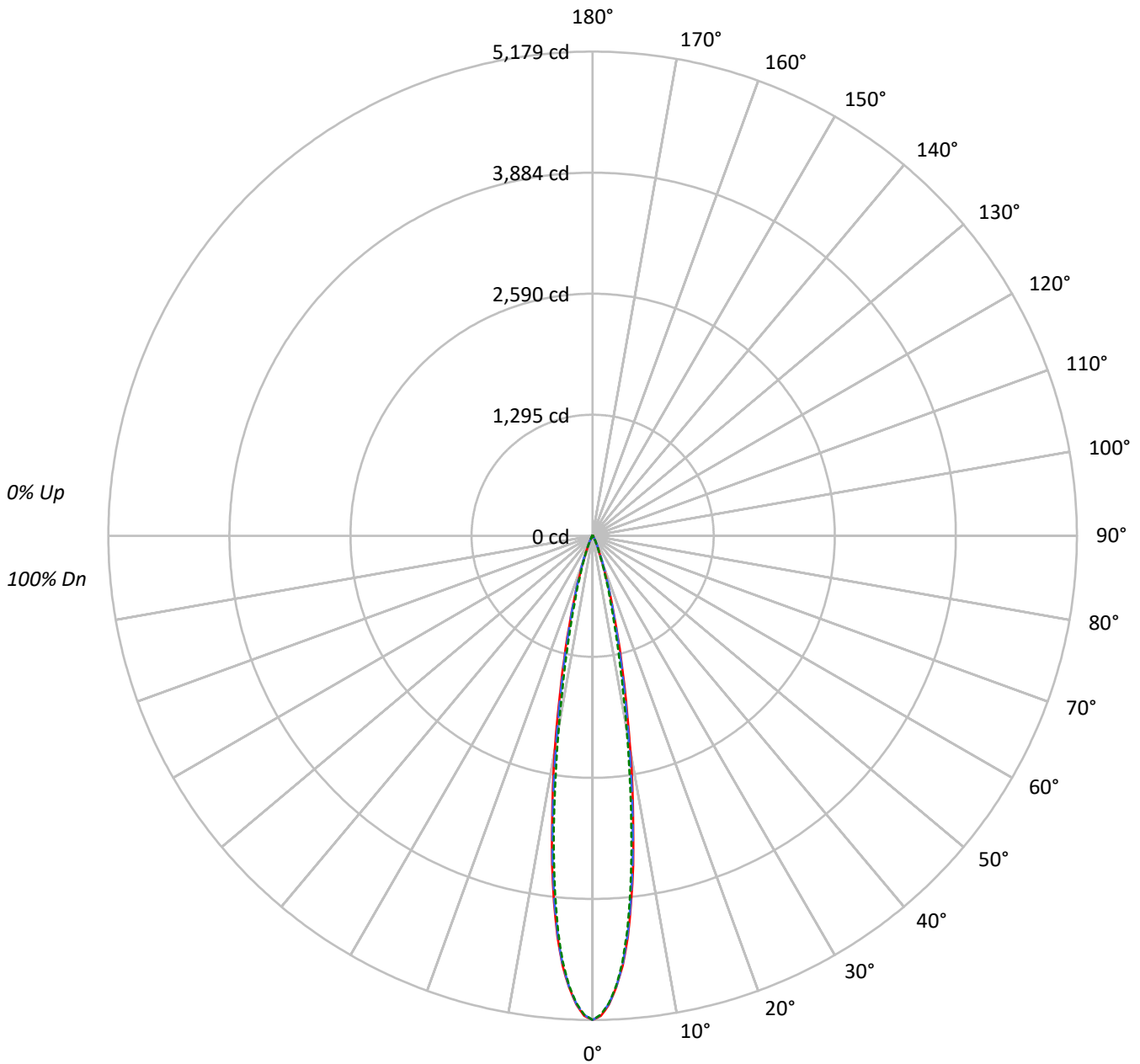
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | | 100 | | | | | | | | | | | | | | | |
| 1 | 115 | 113 | 112 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 100 | 99 | 97 | | | | 97 | | | | | | | | | | | | | | | |
| 2 | 112 | 109 | 106 | 104 | 110 | 107 | 105 | 103 | 104 | 102 | 101 | 101 | 100 | 98 | 99 | 98 | 96 | 95 | | | | 95 | | | | | | | | | | | | | | | |
| 3 | 109 | 105 | 102 | 99 | 107 | 104 | 101 | 98 | 101 | 99 | 97 | 99 | 97 | 95 | 97 | 95 | 94 | 93 | | | | 93 | | | | | | | | | | | | | | | |
| 4 | 106 | 102 | 98 | 96 | 105 | 101 | 97 | 95 | 99 | 96 | 94 | 97 | 95 | 93 | 95 | 93 | 92 | 91 | | | | 91 | | | | | | | | | | | | | | | |
| 5 | 104 | 99 | 95 | 92 | 103 | 98 | 95 | 92 | 96 | 93 | 91 | 95 | 92 | 91 | 94 | 92 | 90 | 89 | | | | 89 | | | | | | | | | | | | | | | |
| 6 | 101 | 96 | 92 | 90 | 100 | 95 | 92 | 90 | 94 | 91 | 89 | 93 | 90 | 88 | 92 | 90 | 88 | 87 | | | | 87 | | | | | | | | | | | | | | | |
| 7 | 99 | 94 | 90 | 88 | 98 | 93 | 90 | 87 | 92 | 89 | 87 | 91 | 89 | 87 | 90 | 88 | 86 | 85 | | | | 85 | | | | | | | | | | | | | | | |
| 8 | 97 | 92 | 88 | 86 | 96 | 91 | 88 | 85 | 90 | 87 | 85 | 89 | 87 | 85 | 89 | 86 | 85 | 84 | | | | 84 | | | | | | | | | | | | | | | |
| 9 | 95 | 90 | 86 | 84 | 95 | 89 | 86 | 84 | 88 | 86 | 83 | 88 | 85 | 83 | 87 | 85 | 83 | 82 | | | | 82 | | | | | | | | | | | | | | | |
| 10 | 93 | 88 | 84 | 82 | 93 | 87 | 84 | 82 | 87 | 84 | 82 | 86 | 84 | 82 | 86 | 83 | 82 | 81 | | | | 81 | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 2554973 | 2554973 | 2554973 |
| 5° | 2134561 | 2124359 | 2099201 |
| 10° | 1162958 | 1117670 | 1046131 |
| 15° | 461068 | 449321 | 385730 |
| 20° | 154935 | 165540 | 136821 |
| 25° | 53783 | 58084 | 51606 |
| 30° | 19654 | 21477 | 21021 |
| 35° | 12648 | 14816 | 11202 |
| 40° | 6634 | 7922 | 8179 |
| 45° | 6070 | 4675 | 4396 |
| 50° | 3684 | 2456 | 1842 |
| 55° | 0 | 0 | 0 |
| 60° | 2368 | 2368 | 789 |
| 65° | 1868 | 467 | 0 |
| 70° | 0 | 1731 | 2308 |
| 75° | 0 | 3812 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 2264 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 338.6 | 50.8 |
| 10°-20° | 252.0 | 37.8 |
| 20°-30° | 55.7 | 8.4 |
| 30°-40° | 12.4 | 1.9 |
| 40°-50° | 5.1 | 0.8 |
| 50°-60° | 0.9 | 0.1 |
| 60°-70° | 0.9 | 0.1 |
| 70°-80° | 0.7 | 0.1 |
| 80°-90° | 0.7 | 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° | 646.4 | 96.9 |
| 0°-40° | 658.7 | 98.8 |
| 0°-60° | 664.7 | 99.7 |
| 0°-90° | 666.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 666.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 5179 | 5179 | 5179 | 5179 | 5179 | |
| 5° | 4310 | 4292 | 4290 | 4273 | 4239 | 344 |
| 15° | 903 | 900 | 880 | 798 | 755 | 265 |
| 25° | 99 | 110 | 107 | 99 | 95 | 54 |
| 35° | 21 | 21 | 25 | 20 | 19 | 12 |
| 45° | 9 | 7 | 7 | 7 | 6 | 5 |
| 55° | 0 | 0 | 0 | 0 | 0 | 1 |
| 65° | 2 | 1 | 0 | 0 | 0 | 2 |
| 75° | 0 | 0 | 2 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 1 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: LDA2B05SP9035D010 PIN1MB

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 5178.7 | 5178.7 | 5178.7 | 5178.7 | 5178.7 |
| 1° | 5136.3 | 5115.3 | 5125.6 | 5131.5 | 5122.8 |
| 2° | 5016.5 | 4991.1 | 5007.4 | 5009.0 | 5000.3 |
| 3° | 4838.0 | 4826.5 | 4831.7 | 4833.7 | 4816.2 |
| 4° | 4609.6 | 4592.9 | 4596.5 | 4592.1 | 4570.7 |
| 5° | 4310.1 | 4292.3 | 4289.5 | 4273.2 | 4238.7 |
| 6° | 3944.0 | 3933.7 | 3915.1 | 3887.3 | 3841.3 |
| 7° | 3551.8 | 3543.4 | 3511.3 | 3461.3 | 3408.2 |
| 8° | 3121.8 | 3121.8 | 3075.4 | 3006.4 | 2945.7 |
| 9° | 2714.9 | 2699.8 | 2640.7 | 2557.4 | 2498.7 |
| 10° | 2321.4 | 2301.2 | 2231.0 | 2146.5 | 2088.2 |
| 11° | 1949.0 | 1927.6 | 1860.2 | 1773.7 | 1719.8 |
| 12° | 1627.4 | 1615.9 | 1563.5 | 1468.3 | 1414.4 |
| 13° | 1355.7 | 1340.6 | 1294.6 | 1204.5 | 1158.5 |
| 14° | 1118.9 | 1099.8 | 1063.0 | 980.5 | 935.6 |
| 15° | 902.7 | 899.9 | 879.7 | 797.6 | 755.2 |
| 16° | 737.7 | 736.1 | 717.1 | 637.0 | 619.5 |
| 17° | 592.2 | 600.5 | 594.9 | 521.2 | 501.3 |
| 18° | 460.9 | 477.5 | 481.5 | 414.9 | 395.0 |
| 19° | 370.8 | 386.7 | 393.5 | 335.1 | 318.5 |
| 20° | 295.1 | 310.2 | 315.3 | 271.7 | 260.6 |
| 22.5° | 167.4 | 187.6 | 188.4 | 165.8 | 154.3 |
| 25° | 98.8 | 110.3 | 106.7 | 98.8 | 94.8 |
| 26° | 82.9 | 94.0 | 88.4 | 86.1 | 82.9 |
| 27° | 69.8 | 77.3 | 73.0 | 69.0 | 71.8 |
| 28° | 57.9 | 63.1 | 58.7 | 59.9 | 55.5 |
| 29° | 46.0 | 54.7 | 48.4 | 49.6 | 46.0 |
| 30° | 34.5 | 42.4 | 37.7 | 39.7 | 36.9 |
| 32.5° | 25.8 | 28.2 | 25.0 | 28.2 | 28.2 |
| 35° | 21.0 | 21.0 | 24.6 | 19.8 | 18.6 |
| 37.5° | 9.5 | 7.5 | 8.3 | 6.7 | 7.9 |
| 40° | 10.3 | 11.5 | 12.3 | 10.3 | 12.7 |
| 42.5° | 7.1 | 9.5 | 9.5 | 6.3 | 11.1 |
| 45° | 8.7 | 7.1 | 6.7 | 6.7 | 6.3 |
| 47.5° | 4.0 | 2.8 | 3.2 | 3.6 | 5.6 |
| 50° | 4.8 | 2.0 | 3.2 | 4.8 | 2.4 |
| 52.5° | 1.6 | 0.0 | 2.0 | 0.0 | 0.8 |
| 55° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 57.5° | 0.0 | 0.0 | 0.4 | 0.8 | 0.0 |
| 60° | 2.4 | 2.8 | 2.4 | 1.6 | 0.8 |
| 62.5° | 4.0 | 0.8 | 1.2 | 1.6 | 0.0 |
| 65° | 1.6 | 0.8 | 0.4 | 0.0 | 0.0 |
| 67.5° | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 |
| 77.5° | 0.8 | 0.0 | 1.6 | 0.0 | 0.0 |
| 80° | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 2.0 | 1.6 | 0.0 |
| 85° | 0.0 | 0.4 | 0.4 | 1.2 | 0.0 |
| 87.5° | 0.0 | 1.2 | 1.6 | 0.4 | 0.8 |
| 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 | 1.2 | 0.8 | 1.6 |
| 72.5° | 0.0 | 0.4 | 1.6 | 2.4 | 0.8 |



(END OF REPORT)