

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: P315960

Luminaire Tested: **LDA2B10SPD2WD010 PINW1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315960
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-7)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B10SPD2WD010 PINW1MW
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj PinHole, Black oculus, matte white finish
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 809.4 lumens
Efficiency: N/A
Efficacy: 80.9 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

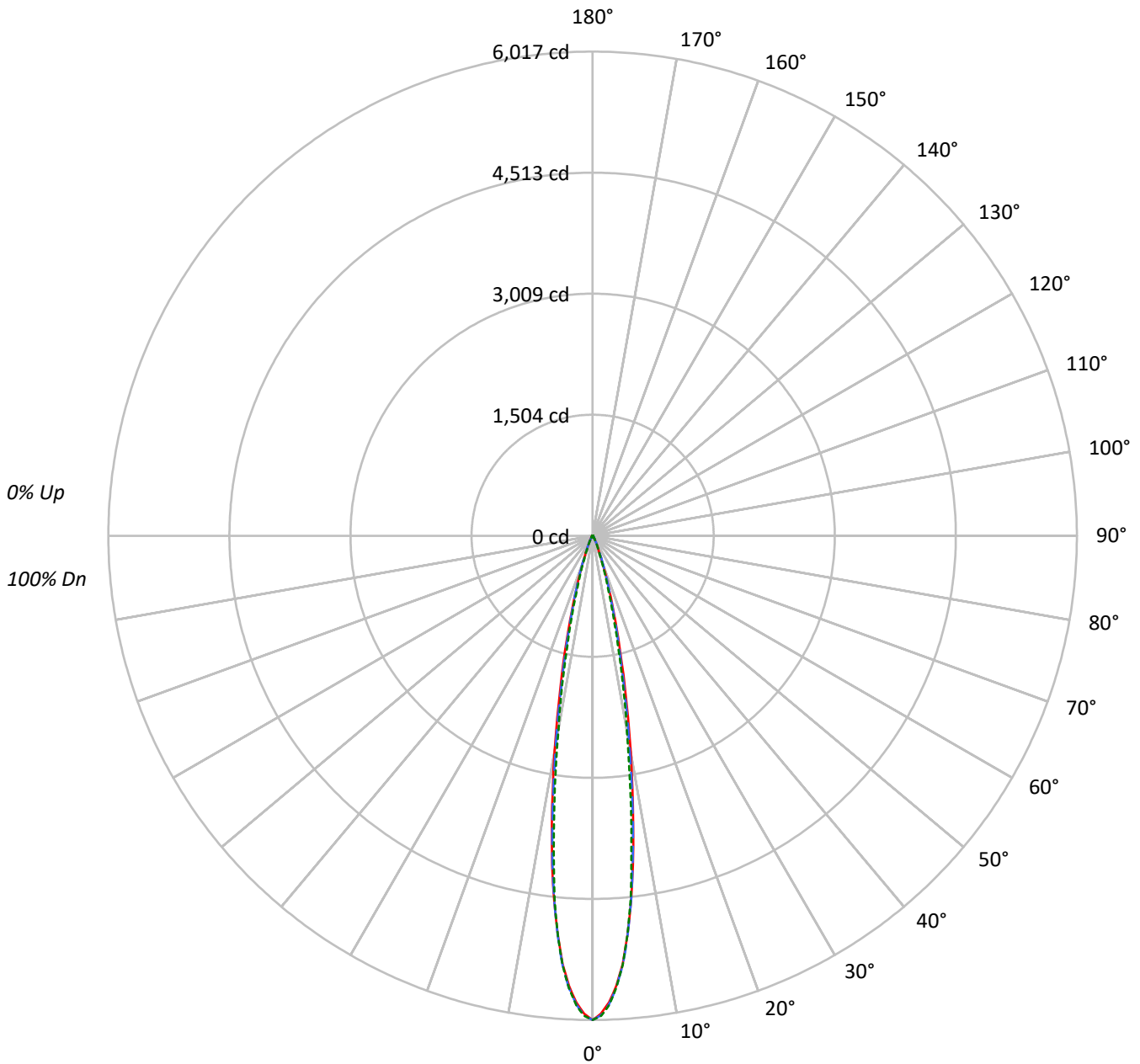
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 111 | 109 | 113 | 111 | 109 | 107 | 107 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 96 | 98 | 99 | 98 | 96 | | | | | | | | | | | | | | | |
| 2 | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 103 | 101 | 99 | 100 | 98 | 97 | 98 | 96 | 95 | 94 | 98 | 96 | 95 | 94 | | | | | | | | | | | | | | | |
| 3 | 108 | 104 | 100 | 97 | 106 | 102 | 99 | 97 | 100 | 97 | 95 | 98 | 95 | 94 | 96 | 94 | 92 | 91 | 96 | 94 | 92 | 91 | | | | | | | | | | | | | | | |
| 4 | 105 | 100 | 96 | 93 | 104 | 99 | 96 | 93 | 97 | 94 | 92 | 95 | 93 | 91 | 94 | 92 | 90 | 89 | 94 | 92 | 90 | 89 | | | | | | | | | | | | | | | |
| 5 | 102 | 97 | 93 | 90 | 101 | 96 | 93 | 90 | 95 | 91 | 89 | 93 | 90 | 88 | 92 | 89 | 88 | 87 | 92 | 89 | 88 | 87 | | | | | | | | | | | | | | | |
| 6 | 100 | 94 | 90 | 88 | 99 | 94 | 90 | 87 | 92 | 89 | 87 | 91 | 88 | 86 | 90 | 88 | 86 | 85 | 90 | 88 | 86 | 85 | | | | | | | | | | | | | | | |
| 7 | 98 | 92 | 88 | 85 | 97 | 91 | 88 | 85 | 90 | 87 | 85 | 89 | 86 | 84 | 88 | 86 | 84 | 83 | 88 | 86 | 84 | 83 | | | | | | | | | | | | | | | |
| 8 | 96 | 90 | 86 | 83 | 95 | 89 | 86 | 83 | 88 | 85 | 83 | 87 | 85 | 82 | 87 | 84 | 82 | 81 | 87 | 84 | 82 | 81 | | | | | | | | | | | | | | | |
| 9 | 94 | 88 | 84 | 81 | 93 | 87 | 84 | 81 | 86 | 83 | 81 | 86 | 83 | 81 | 85 | 82 | 81 | 80 | 85 | 82 | 81 | 80 | | | | | | | | | | | | | | | |
| 10 | 92 | 86 | 82 | 80 | 91 | 85 | 82 | 80 | 85 | 82 | 79 | 84 | 81 | 79 | 84 | 81 | 79 | 78 | 84 | 81 | 79 | 78 | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 2968657 | 2968657 | 2968657 |
| 5° | 2462811 | 2470784 | 2461424 |
| 10° | 1363097 | 1313851 | 1223926 |
| 15° | 551780 | 527723 | 468576 |
| 20° | 184861 | 195992 | 158715 |
| 25° | 70332 | 70604 | 66848 |
| 30° | 31561 | 31048 | 29965 |
| 35° | 15298 | 13612 | 10841 |
| 40° | 10111 | 12752 | 8888 |
| 45° | 2582 | 4186 | 3837 |
| 50° | 691 | 1075 | 1382 |
| 55° | 6365 | 5591 | 8774 |
| 60° | 9078 | 7302 | 11841 |
| 65° | 4319 | 11324 | 10740 |
| 70° | 4039 | 3318 | 4039 |
| 75° | 1716 | 4384 | 12390 |
| 80° | 21025 | 28980 | 26139 |
| 85° | 0 | 13020 | 15850 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 394.1 | 48.7 |
| 10°-20° | 298.5 | 36.9 |
| 20°-30° | 67.9 | 8.4 |
| 30°-40° | 20.1 | 2.5 |
| 40°-50° | 6.7 | 0.8 |
| 50°-60° | 5.9 | 0.7 |
| 60°-70° | 7.1 | 0.9 |
| 70°-80° | 4.5 | 0.6 |
| 80°-90° | 4.7 | 0.6 |
| 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° | 760.5 | 94.0 |
| 0°-40° | 780.5 | 96.4 |
| 0°-60° | 793.1 | 98.0 |
| 0°-90° | 809.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 809.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 6017 | 6017 | 6017 | 6017 | 6017 | |
| 5° | 4973 | 5012 | 4989 | 4924 | 4970 | 399 |
| 15° | 1080 | 1095 | 1033 | 936 | 917 | 314 |
| 25° | 129 | 139 | 130 | 128 | 123 | 68 |
| 35° | 25 | 28 | 23 | 26 | 18 | 20 |
| 45° | 4 | 11 | 6 | 11 | 6 | 6 |
| 55° | 7 | 11 | 6 | 10 | 10 | 3 |
| 65° | 4 | 8 | 10 | 9 | 9 | 4 |
| 75° | 1 | 3 | 2 | 4 | 6 | 2 |
| 85° | 0 | 0 | 2 | 2 | 3 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: LDA2B10SPD2WD010 PINW1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 6017.2 | 6017.2 | 6017.2 | 6017.2 | 6017.2 |
| 1° | 5939.7 | 5963.7 | 5961.4 | 5951.7 | 5968.7 |
| 2° | 5803.1 | 5832.1 | 5829.4 | 5808.2 | 5838.6 |
| 3° | 5602.8 | 5628.6 | 5624.5 | 5594.0 | 5627.3 |
| 4° | 5335.1 | 5364.7 | 5353.1 | 5307.4 | 5349.9 |
| 5° | 4972.9 | 5012.1 | 4989.0 | 4924.0 | 4970.1 |
| 6° | 4571.4 | 4604.6 | 4568.2 | 4481.9 | 4527.1 |
| 7° | 4121.9 | 4142.7 | 4094.7 | 3983.9 | 3953.5 |
| 8° | 3631.4 | 3658.6 | 3591.7 | 3462.5 | 3429.2 |
| 9° | 3162.5 | 3171.7 | 3090.5 | 2953.0 | 2911.0 |
| 10° | 2720.9 | 2713.9 | 2622.6 | 2483.2 | 2443.1 |
| 11° | 2302.3 | 2293.1 | 2196.6 | 2067.9 | 2080.8 |
| 12° | 1921.6 | 1939.6 | 1827.4 | 1710.7 | 1713.0 |
| 13° | 1608.7 | 1610.6 | 1514.1 | 1402.9 | 1396.4 |
| 14° | 1317.1 | 1334.1 | 1251.5 | 1151.8 | 1133.4 |
| 15° | 1080.3 | 1095.1 | 1033.2 | 936.3 | 917.4 |
| 16° | 864.8 | 883.3 | 839.0 | 751.3 | 726.4 |
| 17° | 696.4 | 719.9 | 690.8 | 617.5 | 588.8 |
| 18° | 557.0 | 575.0 | 568.1 | 492.4 | 468.9 |
| 19° | 439.8 | 464.7 | 466.6 | 403.3 | 375.2 |
| 20° | 352.1 | 374.7 | 373.3 | 324.4 | 302.3 |
| 22.5° | 202.1 | 214.1 | 214.6 | 191.5 | 178.6 |
| 25° | 129.2 | 138.9 | 129.7 | 128.3 | 122.8 |
| 26° | 112.1 | 120.0 | 109.8 | 109.8 | 104.8 |
| 27° | 90.9 | 97.8 | 88.1 | 92.3 | 85.4 |
| 28° | 76.6 | 84.0 | 75.7 | 74.8 | 73.8 |
| 29° | 63.7 | 70.6 | 60.0 | 64.6 | 61.8 |
| 30° | 55.4 | 60.5 | 54.5 | 61.4 | 52.6 |
| 32.5° | 42.9 | 47.1 | 36.5 | 46.1 | 34.6 |
| 35° | 25.4 | 28.2 | 22.6 | 26.3 | 18.0 |
| 37.5° | 26.3 | 27.2 | 24.5 | 27.2 | 25.4 |
| 40° | 15.7 | 16.2 | 19.8 | 19.8 | 13.8 |
| 42.5° | 14.8 | 14.3 | 8.8 | 13.8 | 11.1 |
| 45° | 3.7 | 10.6 | 6.0 | 10.6 | 5.5 |
| 47.5° | 2.8 | 3.7 | 3.7 | 7.4 | 7.4 |
| 50° | 0.9 | 3.7 | 1.4 | 2.8 | 1.8 |
| 52.5° | 0.0 | 8.8 | 1.8 | 6.5 | 5.5 |
| 55° | 7.4 | 10.6 | 6.5 | 9.7 | 10.2 |
| 57.5° | 0.9 | 7.4 | 3.7 | 7.8 | 5.5 |
| 60° | 9.2 | 12.5 | 7.4 | 13.4 | 12.0 |
| 62.5° | 0.9 | 8.3 | 9.7 | 7.4 | 6.5 |
| 65° | 3.7 | 7.8 | 9.7 | 9.2 | 9.2 |
| 67.5° | 4.6 | 7.8 | 6.0 | 6.0 | 8.3 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|------|-------|-----|
| 75° | 0.9 | 3.2 | 2.3 | 4.2 | 6.5 |
| 77.5° | 0.9 | 3.7 | 3.2 | 7.4 | 5.5 |
| 80° | 7.4 | 8.3 | 10.2 | 13.4 | 9.2 |
| 82.5° | 6.5 | 6.5 | 10.2 | 7.4 | 5.5 |
| 85° | 0.0 | 0.0 | 2.3 | 2.3 | 2.8 |
| 87.5° | 0.0 | 1.8 | 4.6 | 3.7 | 6.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 70° | 2.8 | 0.9 | 2.3 | 2.3 | 2.8 |
| 72.5° | 0.9 | 4.2 | 3.7 | 2.3 | 4.6 |



(END OF REPORT)