

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: P282467

Luminaire Tested: **LDA2B059024D010 EU2B05SP159024 2LBALPINSQ1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P282467
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: LDA2B059024D010 EU2B05SP159024 2LBALPINSQ1MW
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ Pinhole w-lens, MW
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 571.4 lumens
Efficiency: N/A
Efficacy: 81.6 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

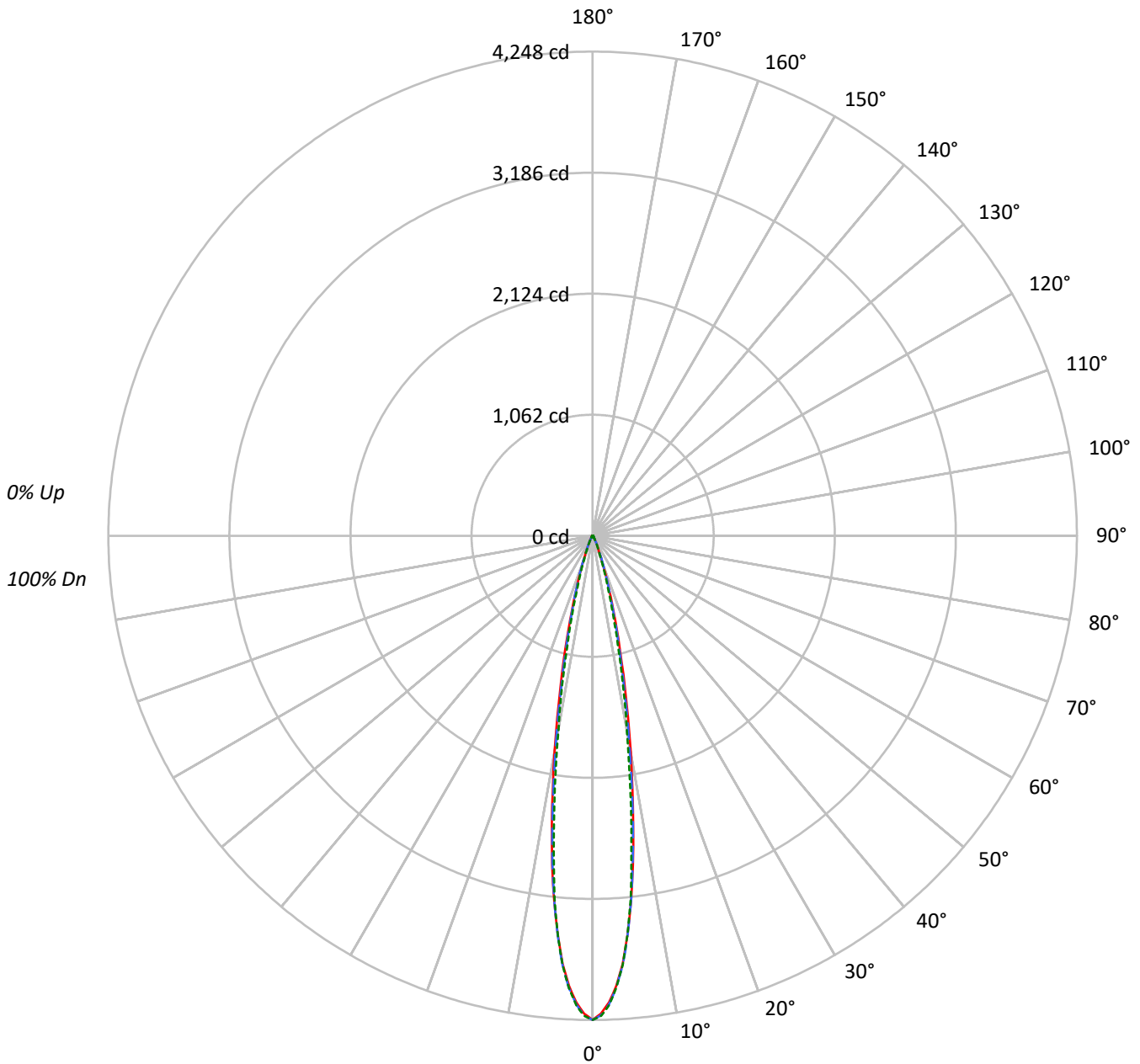
Input Watts (W): 7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | | 100 | | | | | | | | | | | | | | | |
| 1 | 115 | 113 | 111 | 109 | 113 | 111 | 109 | 107 | 107 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 96 | 96 | 98 | 96 | 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° | 2095752 | 2095752 | 2095752 |
| 5° | 1738661 | 1744307 | 1737671 |
| 10° | 962268 | 927501 | 864028 |
| 15° | 389561 | 372553 | 330823 |
| 20° | 130521 | 138396 | 112040 |
| 25° | 49646 | 49809 | 47196 |
| 30° | 22275 | 21876 | 21135 |
| 35° | 10781 | 9637 | 7649 |
| 40° | 7149 | 9017 | 6312 |
| 45° | 1814 | 2930 | 2721 |
| 50° | 537 | 768 | 998 |
| 55° | 4473 | 3957 | 6193 |
| 60° | 6414 | 5131 | 8387 |
| 65° | 3035 | 7938 | 7588 |
| 70° | 2885 | 2308 | 2885 |
| 75° | 1334 | 3050 | 8769 |
| 80° | 14774 | 20456 | 18468 |
| 85° | 0 | 9057 | 11321 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 278.2 | 48.7 |
| 10°-20° | 210.7 | 36.9 |
| 20°-30° | 47.9 | 8.4 |
| 30°-40° | 14.2 | 2.5 |
| 40°-50° | 4.7 | 0.8 |
| 50°-60° | 4.2 | 0.7 |
| 60°-70° | 5.0 | 0.9 |
| 70°-80° | 3.2 | 0.6 |
| 80°-90° | 3.3 | 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° | 536.9 | 94.0 |
| 0°-40° | 551.0 | 96.4 |
| 0°-60° | 559.9 | 98.0 |
| 0°-90° | 571.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 571.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 4248 | 4248 | 4248 | 4248 | 4248 | |
| 5° | 3511 | 3538 | 3522 | 3476 | 3509 | 281 |
| 15° | 763 | 773 | 729 | 661 | 648 | 222 |
| 25° | 91 | 98 | 92 | 91 | 87 | 48 |
| 35° | 18 | 20 | 16 | 19 | 13 | 14 |
| 45° | 3 | 8 | 4 | 8 | 4 | 4 |
| 55° | 5 | 8 | 5 | 7 | 7 | 2 |
| 65° | 3 | 6 | 7 | 6 | 6 | 3 |
| 75° | 1 | 2 | 2 | 3 | 5 | 2 |
| 85° | 0 | 0 | 2 | 2 | 2 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P282467

CATALOG NUMBER: LDA2B059024D010 EU2B05SP159024 2LBALPINSQ1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 4247.9 | 4247.9 | 4247.9 | 4247.9 | 4247.9 |
| 1° | 4193.2 | 4210.1 | 4208.5 | 4201.6 | 4213.7 |
| 2° | 4096.7 | 4117.3 | 4115.3 | 4100.3 | 4121.8 |
| 3° | 3955.3 | 3973.6 | 3970.7 | 3949.2 | 3972.6 |
| 4° | 3766.4 | 3787.2 | 3779.1 | 3746.8 | 3776.8 |
| 5° | 3510.7 | 3538.3 | 3522.1 | 3476.1 | 3508.7 |
| 6° | 3227.2 | 3250.7 | 3224.9 | 3164.0 | 3195.9 |
| 7° | 2909.9 | 2924.6 | 2890.7 | 2812.5 | 2791.0 |
| 8° | 2563.6 | 2582.8 | 2535.6 | 2444.4 | 2420.9 |
| 9° | 2232.6 | 2239.1 | 2181.8 | 2084.7 | 2055.0 |
| 10° | 1920.8 | 1915.9 | 1851.4 | 1753.0 | 1724.7 |
| 11° | 1625.3 | 1618.8 | 1550.7 | 1459.8 | 1469.0 |
| 12° | 1356.6 | 1369.3 | 1290.1 | 1207.7 | 1209.3 |
| 13° | 1135.7 | 1137.0 | 1068.9 | 990.4 | 985.8 |
| 14° | 929.8 | 941.8 | 883.5 | 813.2 | 800.1 |
| 15° | 762.7 | 773.1 | 729.4 | 661.0 | 647.7 |
| 16° | 610.5 | 623.6 | 592.3 | 530.4 | 512.8 |
| 17° | 491.6 | 508.2 | 487.7 | 435.9 | 415.7 |
| 18° | 393.2 | 405.9 | 401.0 | 347.6 | 331.0 |
| 19° | 310.5 | 328.1 | 329.4 | 284.7 | 264.9 |
| 20° | 248.6 | 264.5 | 263.6 | 229.0 | 213.4 |
| 22.5° | 142.7 | 151.2 | 151.5 | 135.2 | 126.1 |
| 25° | 91.2 | 98.1 | 91.5 | 90.6 | 86.7 |
| 26° | 79.2 | 84.7 | 77.5 | 77.5 | 74.0 |
| 27° | 64.2 | 69.1 | 62.2 | 65.2 | 60.3 |
| 28° | 54.1 | 59.3 | 53.4 | 52.8 | 52.1 |
| 29° | 45.0 | 49.8 | 42.4 | 45.6 | 43.7 |
| 30° | 39.1 | 42.7 | 38.4 | 43.3 | 37.1 |
| 32.5° | 30.3 | 33.2 | 25.7 | 32.6 | 24.4 |
| 35° | 17.9 | 19.9 | 16.0 | 18.6 | 12.7 |
| 37.5° | 18.6 | 19.2 | 17.3 | 19.2 | 17.9 |
| 40° | 11.1 | 11.4 | 14.0 | 14.0 | 9.8 |
| 42.5° | 10.4 | 10.1 | 6.2 | 9.8 | 7.8 |
| 45° | 2.6 | 7.5 | 4.2 | 7.5 | 3.9 |
| 47.5° | 2.0 | 2.6 | 2.6 | 5.2 | 5.2 |
| 50° | 0.7 | 2.6 | 1.0 | 2.0 | 1.3 |
| 52.5° | 0.0 | 6.2 | 1.3 | 4.6 | 3.9 |
| 55° | 5.2 | 7.5 | 4.6 | 6.8 | 7.2 |
| 57.5° | 0.7 | 5.2 | 2.6 | 5.5 | 3.9 |
| 60° | 6.5 | 8.8 | 5.2 | 9.4 | 8.5 |
| 62.5° | 0.7 | 5.9 | 6.8 | 5.2 | 4.6 |
| 65° | 2.6 | 5.5 | 6.8 | 6.5 | 6.5 |
| 67.5° | 3.3 | 5.5 | 4.2 | 4.2 | 5.9 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75° | 0.7 | 2.3 | 1.6 | 2.9 | 4.6 |
| 77.5° | 0.7 | 2.6 | 2.3 | 5.2 | 3.9 |
| 80° | 5.2 | 5.9 | 7.2 | 9.4 | 6.5 |
| 82.5° | 4.6 | 4.6 | 7.2 | 5.2 | 3.9 |
| 85° | 0.0 | 0.0 | 1.6 | 1.6 | 2.0 |
| 87.5° | 0.0 | 1.3 | 3.3 | 2.6 | 4.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 70° | 2.0 | 0.7 | 1.6 | 1.6 | 2.0 |
| 72.5° | 0.7 | 2.9 | 2.6 | 1.6 | 3.3 |



(END OF REPORT)