

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: P282458

Luminaire Tested: **LDA2B058035D010 EU2B05SP158035 2LBALPINSQ1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P282458
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: LDA2B058035D010 EU2B05SP158035 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: 805.2 lumens
Efficiency: N/A
Efficacy: 115.0 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

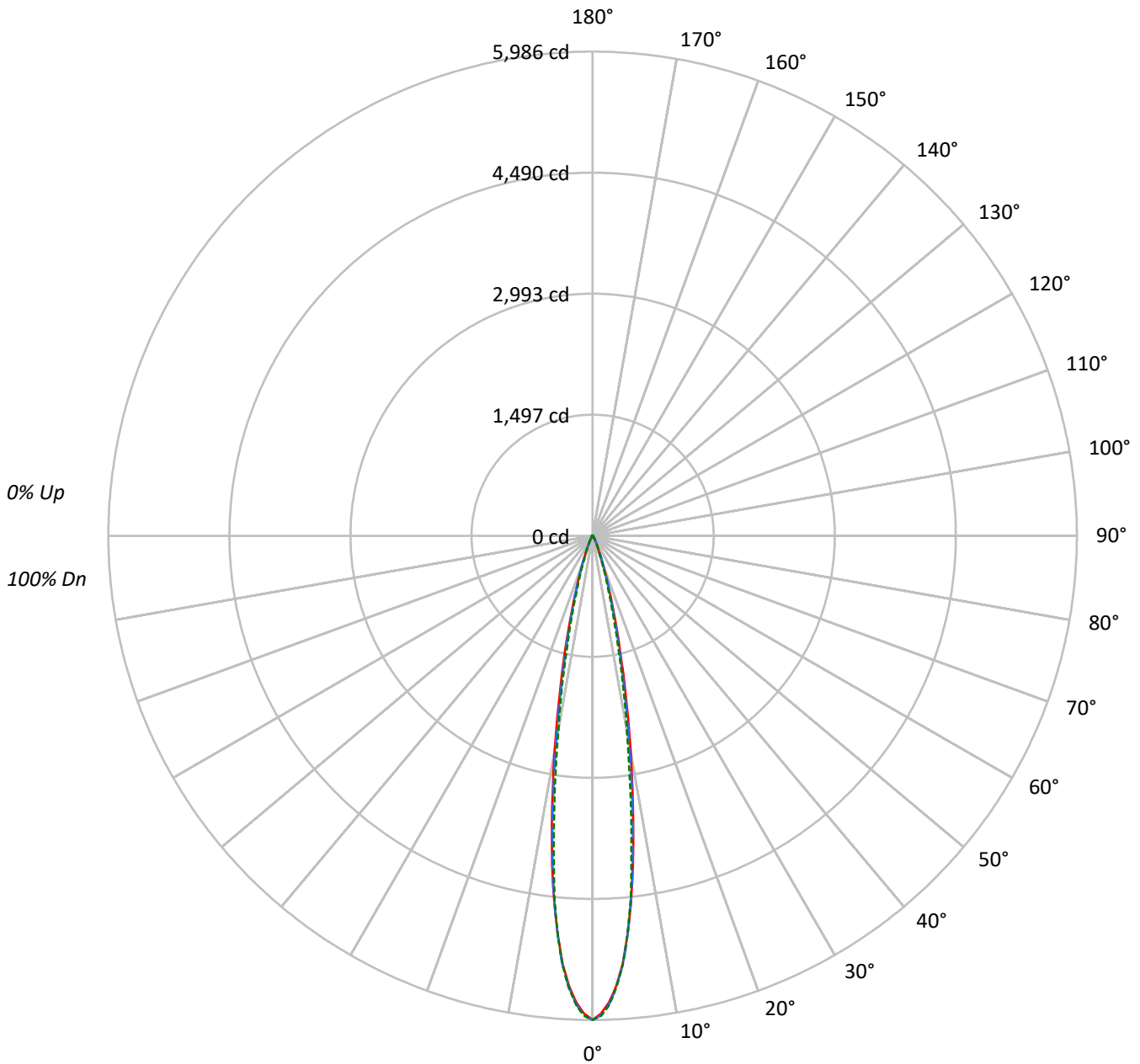
Input Watts (W): 7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 2953214 | 2953214 | 2953214 |
| 5° | 2449984 | 2457908 | 2448597 |
| 10° | 1355983 | 1306988 | 1217514 |
| 15° | 548920 | 525016 | 466125 |
| 20° | 183916 | 194994 | 157875 |
| 25° | 69951 | 70223 | 66467 |
| 30° | 31390 | 30877 | 29795 |
| 35° | 15178 | 13551 | 10781 |
| 40° | 10047 | 12688 | 8888 |
| 45° | 2582 | 4186 | 3837 |
| 50° | 691 | 1075 | 1382 |
| 55° | 6279 | 5505 | 8688 |
| 60° | 9078 | 7203 | 11742 |
| 65° | 4319 | 11207 | 10740 |
| 70° | 4039 | 3318 | 4039 |
| 75° | 1716 | 4384 | 12200 |
| 80° | 20740 | 28696 | 26139 |
| 85° | 0 | 13020 | 15850 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 392.0 | 48.7 |
| 10°-20° | 297.0 | 36.9 |
| 20°-30° | 67.5 | 8.4 |
| 30°-40° | 20.0 | 2.5 |
| 40°-50° | 6.7 | 0.8 |
| 50°-60° | 5.8 | 0.7 |
| 60°-70° | 7.0 | 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° | 756.5 | 94.0 |
| 0°-40° | 776.5 | 96.4 |
| 0°-60° | 789.0 | 98.0 |
| 0°-90° | 805.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 805.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 5986 | 5986 | 5986 | 5986 | 5986 | |
| 5° | 4947 | 4986 | 4963 | 4898 | 4944 | 397 |
| 15° | 1075 | 1089 | 1028 | 932 | 913 | 312 |
| 25° | 128 | 138 | 129 | 128 | 122 | 67 |
| 35° | 25 | 28 | 22 | 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 | |



TEST NUMBER: P282458

CATALOG NUMBER: LDA2B058035D010 EU2B05SP158035 2LBALPINSQ1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 5985.9 | 5985.9 | 5985.9 | 5985.9 | 5985.9 |
| 1° | 5908.7 | 5932.6 | 5930.3 | 5920.7 | 5937.7 |
| 2° | 5772.8 | 5801.8 | 5799.0 | 5777.9 | 5808.2 |
| 3° | 5573.6 | 5599.3 | 5595.2 | 5564.9 | 5597.9 |
| 4° | 5307.3 | 5336.7 | 5325.3 | 5279.8 | 5322.0 |
| 5° | 4947.0 | 4986.0 | 4963.0 | 4898.3 | 4944.2 |
| 6° | 4547.6 | 4580.6 | 4544.4 | 4458.5 | 4503.5 |
| 7° | 4100.4 | 4121.1 | 4073.4 | 3963.2 | 3932.9 |
| 8° | 3612.4 | 3639.5 | 3573.0 | 3444.4 | 3411.4 |
| 9° | 3146.0 | 3155.2 | 3074.4 | 2937.6 | 2895.8 |
| 10° | 2706.7 | 2699.8 | 2608.9 | 2470.3 | 2430.3 |
| 11° | 2290.3 | 2281.1 | 2185.2 | 2057.1 | 2070.0 |
| 12° | 1911.6 | 1929.5 | 1817.9 | 1701.8 | 1704.1 |
| 13° | 1600.3 | 1602.2 | 1506.2 | 1395.6 | 1389.2 |
| 14° | 1310.2 | 1327.2 | 1245.0 | 1145.8 | 1127.5 |
| 15° | 1074.7 | 1089.4 | 1027.9 | 931.5 | 912.6 |
| 16° | 860.3 | 878.7 | 834.6 | 747.4 | 722.6 |
| 17° | 692.7 | 716.2 | 687.2 | 614.2 | 585.8 |
| 18° | 554.1 | 572.0 | 565.1 | 489.8 | 466.4 |
| 19° | 437.5 | 462.3 | 464.1 | 401.2 | 373.2 |
| 20° | 350.3 | 372.8 | 371.4 | 322.7 | 300.7 |
| 22.5° | 201.1 | 213.0 | 213.5 | 190.5 | 177.7 |
| 25° | 128.5 | 138.2 | 129.0 | 127.6 | 122.1 |
| 26° | 111.6 | 119.4 | 109.3 | 109.3 | 104.2 |
| 27° | 90.4 | 97.3 | 87.7 | 91.8 | 84.9 |
| 28° | 76.2 | 83.6 | 75.3 | 74.4 | 73.5 |
| 29° | 63.4 | 70.2 | 59.7 | 64.3 | 61.5 |
| 30° | 55.1 | 60.1 | 54.2 | 61.1 | 52.3 |
| 32.5° | 42.7 | 46.8 | 36.3 | 45.9 | 34.4 |
| 35° | 25.2 | 28.0 | 22.5 | 26.2 | 17.9 |
| 37.5° | 26.2 | 27.1 | 24.3 | 27.1 | 25.2 |
| 40° | 15.6 | 16.1 | 19.7 | 19.7 | 13.8 |
| 42.5° | 14.7 | 14.2 | 8.7 | 13.8 | 11.0 |
| 45° | 3.7 | 10.6 | 6.0 | 10.6 | 5.5 |
| 47.5° | 2.8 | 3.7 | 3.7 | 7.3 | 7.3 |
| 50° | 0.9 | 3.7 | 1.4 | 2.8 | 1.8 |
| 52.5° | 0.0 | 8.7 | 1.8 | 6.4 | 5.5 |
| 55° | 7.3 | 10.6 | 6.4 | 9.6 | 10.1 |
| 57.5° | 0.9 | 7.3 | 3.7 | 7.8 | 5.5 |
| 60° | 9.2 | 12.4 | 7.3 | 13.3 | 11.9 |
| 62.5° | 0.9 | 8.3 | 9.6 | 7.3 | 6.4 |
| 65° | 3.7 | 7.8 | 9.6 | 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 | 4.1 | 6.4 |
| 77.5° | 0.9 | 3.7 | 3.2 | 7.3 | 5.5 |
| 80° | 7.3 | 8.3 | 10.1 | 13.3 | 9.2 |
| 82.5° | 6.4 | 6.4 | 10.1 | 7.3 | 5.5 |
| 85° | 0.0 | 0.0 | 2.3 | 2.3 | 2.8 |
| 87.5° | 0.0 | 1.8 | 4.6 | 3.7 | 6.4 |
| 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 | 4.1 | 3.7 | 2.3 | 4.6 |



(END OF REPORT)