

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: P283537

Luminaire Tested: **LDA2B059730D010 EU2B05FL409730 2LBALPINSQ1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P283537
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: LDA2B059730D010 EU2B05FL409730 2LBALPINSQ1MMS
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj SQ Pinhole w-lens, MMS

Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 478.9 lumens
Efficiency: N/A
Efficacy: 68.4 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

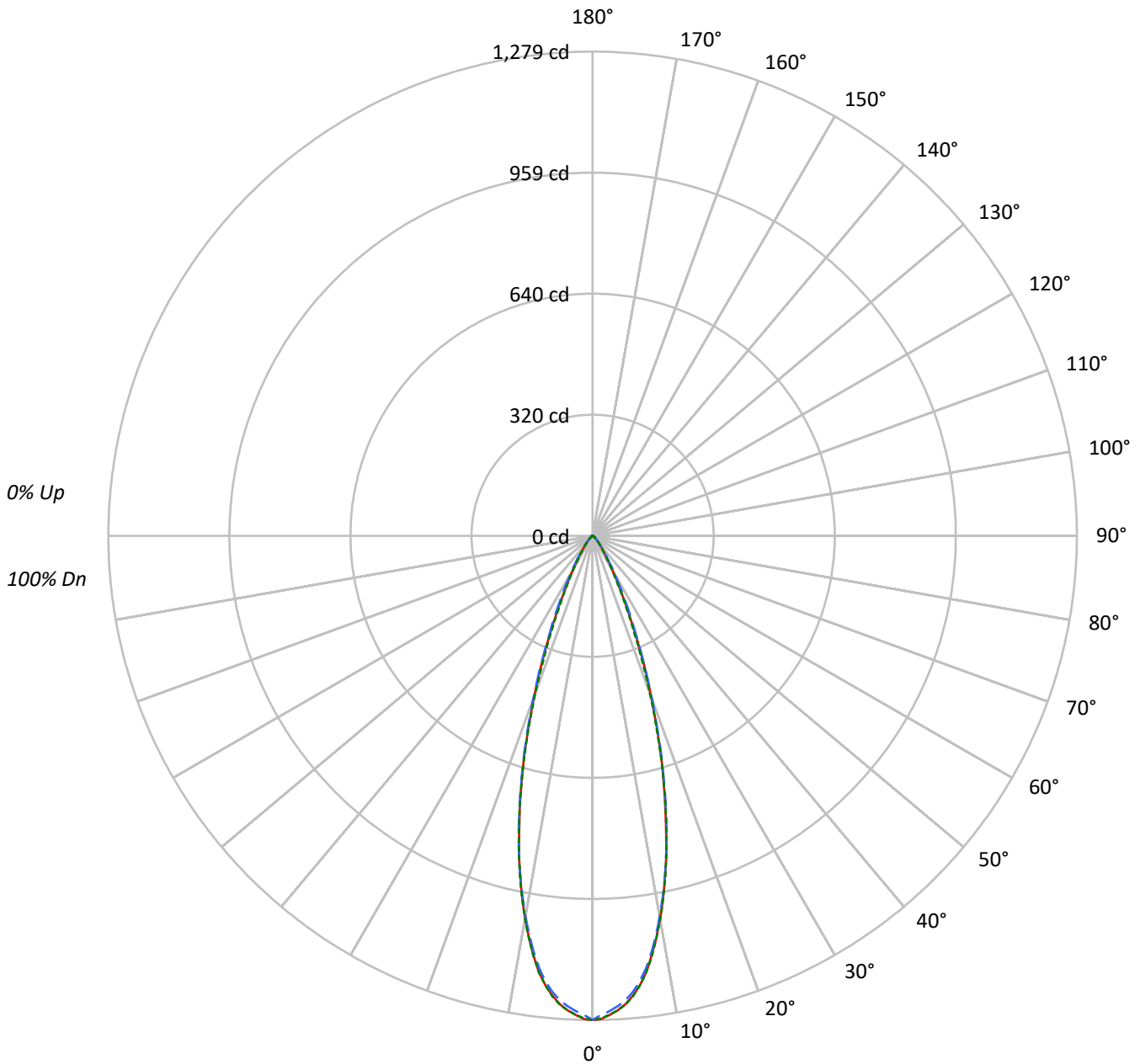
Input Watts (W): 7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|---|--|---|
| RF | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | |
| RC | 80 | | | | | 70 | | | | | 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 | 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 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 95 | | | | | 95 | | | |
| 2 | 110 | 106 | 102 | 99 | 108 | 104 | 101 | 98 | 101 | 98 | 96 | 98 | 96 | 94 | 95 | 93 | 92 | 90 | | | | | 90 | | | |
| 3 | 105 | 100 | 96 | 92 | 104 | 99 | 95 | 92 | 96 | 93 | 90 | 94 | 91 | 89 | 92 | 89 | 88 | 86 | | | | | 86 | | | |
| 4 | 101 | 95 | 90 | 87 | 100 | 94 | 90 | 86 | 92 | 88 | 85 | 90 | 87 | 84 | 88 | 86 | 83 | 82 | | | | | 82 | | | |
| 5 | 98 | 91 | 86 | 82 | 96 | 90 | 85 | 82 | 88 | 84 | 81 | 86 | 83 | 80 | 85 | 82 | 80 | 79 | | | | | 79 | | | |
| 6 | 94 | 87 | 82 | 78 | 93 | 86 | 81 | 78 | 84 | 80 | 77 | 83 | 80 | 77 | 82 | 79 | 76 | 75 | | | | | 75 | | | |
| 7 | 91 | 83 | 78 | 75 | 89 | 82 | 78 | 74 | 81 | 77 | 74 | 80 | 76 | 74 | 79 | 76 | 73 | 72 | | | | | 72 | | | |
| 8 | 87 | 80 | 75 | 71 | 86 | 79 | 75 | 71 | 78 | 74 | 71 | 77 | 73 | 71 | 76 | 73 | 70 | 69 | | | | | 69 | | | |
| 9 | 84 | 77 | 72 | 69 | 83 | 76 | 72 | 68 | 75 | 71 | 68 | 74 | 71 | 68 | 74 | 70 | 68 | 67 | | | | | 67 | | | |
| 10 | 82 | 74 | 69 | 66 | 81 | 73 | 69 | 66 | 73 | 69 | 66 | 72 | 68 | 65 | 71 | 68 | 65 | 64 | | | | | 64 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 631059 | 631059 | 631059 |
| 5° | 603903 | 599397 | 604844 |
| 10° | 514499 | 511293 | 515050 |
| 15° | 379244 | 381695 | 380469 |
| 20° | 236734 | 241091 | 231536 |
| 25° | 122264 | 131192 | 116167 |
| 30° | 58621 | 67223 | 55886 |
| 35° | 30295 | 33487 | 28307 |
| 40° | 16938 | 17840 | 16101 |
| 45° | 10326 | 10326 | 9908 |
| 50° | 5373 | 6601 | 5373 |
| 55° | 2752 | 4387 | 3011 |
| 60° | 3158 | 3158 | 3158 |
| 65° | 3502 | 3502 | 3502 |
| 70° | 4327 | 3895 | 4327 |
| 75° | 4003 | 4003 | 4003 |
| 80° | 3694 | 3694 | 3694 |
| 85° | 2830 | 2830 | 2830 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 110.0 | 23.0 |
| 10°-20° | 202.1 | 42.2 |
| 20°-30° | 109.6 | 22.9 |
| 30°-40° | 35.2 | 7.3 |
| 40°-50° | 12.0 | 2.5 |
| 50°-60° | 4.2 | 0.9 |
| 60°-70° | 3.1 | 0.6 |
| 70°-80° | 2.2 | 0.5 |
| 80°-90° | 0.6 | 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° | 421.7 | 88.0 |
| 0°-40° | 456.9 | 95.4 |
| 0°-60° | 473.0 | 98.8 |
| 0°-90° | 478.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 478.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1279 | 1279 | 1279 | 1279 | 1279 | |
| 5° | 1219 | 1212 | 1210 | 1222 | 1221 | 110 |
| 15° | 742 | 749 | 747 | 751 | 745 | 201 |
| 25° | 225 | 235 | 241 | 224 | 213 | 108 |
| 35° | 50 | 52 | 56 | 50 | 47 | 34 |
| 45° | 15 | 15 | 15 | 15 | 14 | 12 |
| 55° | 3 | 4 | 5 | 4 | 4 | 4 |
| 65° | 3 | 3 | 3 | 3 | 3 | 3 |
| 75° | 2 | 2 | 2 | 2 | 2 | 2 |
| 85° | 0 | 0 | 0 | 0 | 0 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P283537

CATALOG NUMBER: LDA2B059730D010 EU2B05FL409730 2LBALPINSQ1MMS

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1279.1 | 1279.1 | 1279.1 | 1279.1 | 1279.1 |
| 1° | 1277.0 | 1267.8 | 1266.5 | 1278.3 | 1275.6 |
| 2° | 1266.7 | 1258.1 | 1256.8 | 1268.6 | 1266.2 |
| 3° | 1255.5 | 1247.7 | 1245.0 | 1257.3 | 1255.7 |
| 4° | 1240.4 | 1233.2 | 1230.7 | 1243.1 | 1241.8 |
| 5° | 1219.4 | 1211.9 | 1210.3 | 1222.4 | 1221.3 |
| 6° | 1193.7 | 1187.5 | 1184.5 | 1196.6 | 1194.5 |
| 7° | 1161.4 | 1155.8 | 1152.5 | 1161.4 | 1162.5 |
| 8° | 1119.5 | 1116.8 | 1113.0 | 1121.9 | 1121.9 |
| 9° | 1074.9 | 1072.5 | 1068.4 | 1076.5 | 1076.5 |
| 10° | 1027.0 | 1025.4 | 1020.6 | 1028.1 | 1028.1 |
| 11° | 974.6 | 973.8 | 970.3 | 976.5 | 976.5 |
| 12° | 919.6 | 921.4 | 918.2 | 923.6 | 921.7 |
| 13° | 864.5 | 863.7 | 863.9 | 868.0 | 865.0 |
| 14° | 802.1 | 807.0 | 807.8 | 810.2 | 805.6 |
| 15° | 742.5 | 748.7 | 747.3 | 750.8 | 744.9 |
| 16° | 681.5 | 688.5 | 688.2 | 689.0 | 683.4 |
| 17° | 624.5 | 628.5 | 628.8 | 628.0 | 621.0 |
| 18° | 563.8 | 569.4 | 569.4 | 568.1 | 559.7 |
| 19° | 504.4 | 508.7 | 511.6 | 508.7 | 499.0 |
| 20° | 450.9 | 453.9 | 459.2 | 451.7 | 441.0 |
| 21° | 399.6 | 402.3 | 406.8 | 398.0 | 386.2 |
| 22° | 350.4 | 353.9 | 358.2 | 348.0 | 335.6 |
| 23° | 304.5 | 312.5 | 314.1 | 300.2 | 289.7 |
| 24° | 262.3 | 271.4 | 274.1 | 259.9 | 248.8 |
| 25° | 224.6 | 234.9 | 241.0 | 224.4 | 213.4 |
| 26° | 192.1 | 202.1 | 209.6 | 192.9 | 182.5 |
| 27° | 163.7 | 174.1 | 181.9 | 166.3 | 156.4 |
| 28° | 139.2 | 149.4 | 157.5 | 143.0 | 133.6 |
| 29° | 120.9 | 126.8 | 134.9 | 122.8 | 114.2 |
| 30° | 102.9 | 109.4 | 118.0 | 105.6 | 98.1 |
| 32.5° | 70.7 | 74.2 | 80.9 | 73.4 | 67.4 |
| 35° | 50.3 | 52.4 | 55.6 | 50.5 | 47.0 |
| 37.5° | 35.7 | 36.8 | 38.7 | 35.7 | 33.9 |
| 40° | 26.3 | 26.9 | 27.7 | 26.1 | 25.0 |
| 42.5° | 19.6 | 19.9 | 19.9 | 19.3 | 18.8 |
| 45° | 14.8 | 15.0 | 14.8 | 14.8 | 14.2 |
| 47.5° | 10.7 | 11.6 | 11.3 | 11.3 | 10.5 |
| 50° | 7.0 | 8.6 | 8.6 | 8.3 | 7.0 |
| 52.5° | 4.3 | 5.9 | 6.7 | 5.9 | 4.6 |
| 55° | 3.2 | 4.0 | 5.1 | 4.0 | 3.5 |
| 57.5° | 3.2 | 3.2 | 3.8 | 3.2 | 3.2 |
| 60° | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 67.5° | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 70° | 3.0 | 3.0 | 2.7 | 3.0 | 3.0 |
| 72.5° | 2.7 | 2.7 | 2.4 | 2.7 | 2.4 |
| 75° | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| 77.5° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 80° | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 82.5° | 0.8 | 0.8 | 0.8 | 1.1 | 0.8 |
| 85° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 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° | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| 65° | 3.0 | 3.2 | 3.0 | 3.2 | 3.0 |



(END OF REPORT)