

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: P283509

Luminaire Tested: **LDA2B059035D010 EU2B05FL409035 2LBAPINSQ1MB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P283509  
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: LDA2B059035D010 EU2B05FL409035 2LBAPINSQ1MB  
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj SQ PinHole, MB  
  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 568.0 lumens  
Efficiency: N/A  
Efficacy: 81.1 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

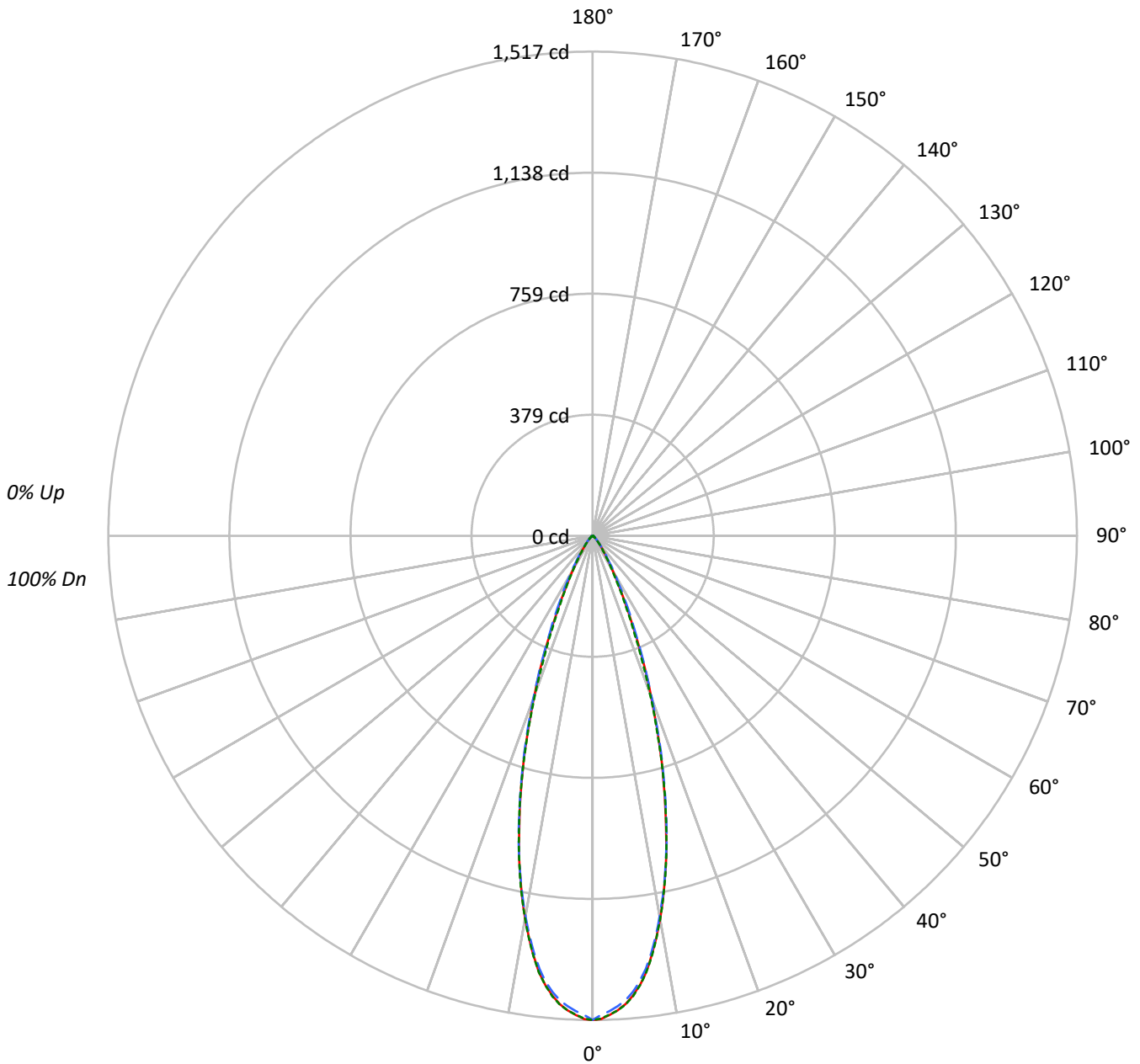
Input Watts (W): 7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |   |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| 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 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 95  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 110 | 106 | 102 | 99  | 108 | 104 | 101 | 98  | 101 | 98  | 96  | 98  | 96  | 94  | 95  | 93  | 92  | 90  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 105 | 100 | 96  | 92  | 104 | 99  | 95  | 92  | 96  | 93  | 90  | 94  | 91  | 89  | 92  | 89  | 88  | 86  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 101 | 95  | 90  | 87  | 100 | 94  | 90  | 86  | 92  | 88  | 85  | 90  | 87  | 84  | 88  | 86  | 83  | 82  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 98  | 91  | 86  | 82  | 96  | 90  | 85  | 82  | 88  | 84  | 81  | 86  | 83  | 80  | 85  | 82  | 80  | 79  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 94  | 87  | 82  | 78  | 93  | 86  | 81  | 78  | 84  | 80  | 77  | 83  | 80  | 77  | 82  | 79  | 76  | 75  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 91  | 83  | 78  | 75  | 89  | 82  | 78  | 74  | 81  | 77  | 74  | 80  | 76  | 74  | 79  | 76  | 73  | 72  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 87  | 80  | 75  | 71  | 86  | 79  | 75  | 71  | 78  | 74  | 71  | 77  | 73  | 71  | 76  | 73  | 70  | 69  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 84  | 77  | 72  | 69  | 83  | 76  | 72  | 68  | 75  | 71  | 68  | 74  | 71  | 68  | 74  | 70  | 68  | 67  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 82  | 74  | 69  | 66  | 81  | 73  | 69  | 66  | 73  | 69  | 66  | 72  | 68  | 65  | 71  | 68  | 65  | 64  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 748479 | 748479 | 748479 |
| 5°  | 716275 | 710926 | 717414 |
| 10° | 610235 | 606427 | 610886 |
| 15° | 449780 | 452692 | 451262 |
| 20° | 280783 | 285981 | 274588 |
| 25° | 145019 | 155634 | 137779 |
| 30° | 69559  | 79699  | 66254  |
| 35° | 35896  | 39751  | 33607  |
| 40° | 20094  | 21124  | 19064  |
| 45° | 12210  | 12210  | 11791  |
| 50° | 6371   | 7829   | 6371   |
| 55° | 3269   | 5247   | 3527   |
| 60° | 3750   | 3750   | 3750   |
| 65° | 4086   | 4086   | 4086   |
| 70° | 5049   | 4616   | 5049   |
| 75° | 4766   | 4766   | 4766   |
| 80° | 4546   | 4546   | 4546   |
| 85° | 3396   | 3396   | 3396   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 130.5  | 23.0      |
| 10°-20°   | 239.7  | 42.2      |
| 20°-30°   | 129.9  | 22.9      |
| 30°-40°   | 41.7   | 7.3       |
| 40°-50°   | 14.2   | 2.5       |
| 50°-60°   | 5.0    | 0.9       |
| 60°-70°   | 3.6    | 0.6       |
| 70°-80°   | 2.6    | 0.5       |
| 80°-90°   | 0.8    | 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°    | 500.1  | 88.0      |
| 0°-40°    | 541.8  | 95.4      |
| 0°-60°    | 561.0  | 98.8      |
| 0°-90°    | 568.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 568.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1517 | 1517  | 1517 | 1517  | 1517 |      |
| 5°  | 1446 | 1437  | 1436 | 1450  | 1449 | 131  |
| 15° | 881  | 888   | 886  | 890   | 884  | 239  |
| 25° | 266  | 279   | 286  | 266   | 253  | 128  |
| 35° | 60   | 62    | 66   | 60    | 56   | 40   |
| 45° | 18   | 18    | 18   | 18    | 17   | 14   |
| 55° | 4    | 5     | 6    | 5     | 4    | 4    |
| 65° | 4    | 4     | 4    | 4     | 4    | 4    |
| 75° | 2    | 2     | 2    | 2     | 2    | 3    |
| 85° | 1    | 1     | 1    | 1     | 1    | 1    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1517.1 | 1517.1 | 1517.1 | 1517.1 | 1517.1 |
| 1°    | 1514.5 | 1503.7 | 1502.1 | 1516.1 | 1512.9 |
| 2°    | 1502.4 | 1492.2 | 1490.6 | 1504.7 | 1501.8 |
| 3°    | 1489.0 | 1479.8 | 1476.6 | 1491.3 | 1489.4 |
| 4°    | 1471.2 | 1462.6 | 1459.7 | 1474.4 | 1472.8 |
| 5°    | 1446.3 | 1437.4 | 1435.5 | 1449.8 | 1448.6 |
| 6°    | 1415.7 | 1408.4 | 1404.9 | 1419.2 | 1416.7 |
| 7°    | 1377.5 | 1370.8 | 1367.0 | 1377.5 | 1378.8 |
| 8°    | 1327.8 | 1324.6 | 1320.1 | 1330.6 | 1330.6 |
| 9°    | 1274.9 | 1272.0 | 1267.2 | 1276.8 | 1276.8 |
| 10°   | 1218.1 | 1216.2 | 1210.5 | 1219.4 | 1219.4 |
| 11°   | 1156.0 | 1155.0 | 1150.9 | 1158.2 | 1158.2 |
| 12°   | 1090.6 | 1092.9 | 1089.0 | 1095.4 | 1093.2 |
| 13°   | 1025.3 | 1024.3 | 1024.7 | 1029.4 | 1025.9 |
| 14°   | 951.4  | 957.1  | 958.1  | 960.9  | 955.5  |
| 15°   | 880.6  | 887.9  | 886.3  | 890.5  | 883.5  |
| 16°   | 808.3  | 816.5  | 816.2  | 817.2  | 810.5  |
| 17°   | 740.7  | 745.5  | 745.8  | 744.8  | 736.5  |
| 18°   | 668.7  | 675.4  | 675.4  | 673.8  | 663.9  |
| 19°   | 598.2  | 603.3  | 606.8  | 603.3  | 591.9  |
| 20°   | 534.8  | 538.3  | 544.7  | 535.8  | 523.0  |
| 21°   | 473.9  | 477.1  | 482.5  | 472.0  | 458.0  |
| 22°   | 415.6  | 419.7  | 424.8  | 412.7  | 398.1  |
| 23°   | 361.1  | 370.7  | 372.6  | 356.0  | 343.6  |
| 24°   | 311.1  | 321.9  | 325.1  | 308.2  | 295.1  |
| 25°   | 266.4  | 278.6  | 285.9  | 266.1  | 253.1  |
| 26°   | 227.9  | 239.7  | 248.6  | 228.8  | 216.4  |
| 27°   | 194.1  | 206.5  | 215.8  | 197.3  | 185.5  |
| 28°   | 165.1  | 177.2  | 186.8  | 169.6  | 158.4  |
| 29°   | 143.4  | 150.4  | 160.0  | 145.7  | 135.5  |
| 30°   | 122.1  | 129.7  | 139.9  | 125.3  | 116.3  |
| 32.5° | 83.8   | 88.0   | 95.9   | 87.0   | 80.0   |
| 35°   | 59.6   | 62.1   | 66.0   | 59.9   | 55.8   |
| 37.5° | 42.4   | 43.7   | 45.9   | 42.4   | 40.2   |
| 40°   | 31.2   | 31.9   | 32.8   | 30.9   | 29.6   |
| 42.5° | 23.3   | 23.6   | 23.6   | 22.9   | 22.3   |
| 45°   | 17.5   | 17.8   | 17.5   | 17.5   | 16.9   |
| 47.5° | 12.7   | 13.7   | 13.4   | 13.4   | 12.4   |
| 50°   | 8.3    | 10.2   | 10.2   | 9.9    | 8.3    |
| 52.5° | 5.1    | 7.0    | 8.0    | 7.0    | 5.4    |
| 55°   | 3.8    | 4.8    | 6.1    | 4.8    | 4.1    |
| 57.5° | 3.8    | 3.8    | 4.5    | 3.8    | 3.8    |
| 60°   | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 67.5° | 3.5 | 3.5   | 3.5 | 3.5   | 3.5 |
| 70°   | 3.5 | 3.5   | 3.2 | 3.5   | 3.5 |
| 72.5° | 3.2 | 3.2   | 2.9 | 3.2   | 2.9 |
| 75°   | 2.5 | 2.5   | 2.5 | 2.5   | 2.5 |
| 77.5° | 1.9 | 1.9   | 1.9 | 1.9   | 1.9 |
| 80°   | 1.6 | 1.6   | 1.6 | 1.6   | 1.6 |
| 82.5° | 1.0 | 1.0   | 1.0 | 1.3   | 1.0 |
| 85°   | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 |
| 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° | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |
| 65°   | 3.5 | 3.8 | 3.5 | 3.8 | 3.5 |



(END OF REPORT)