

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: P315869

Luminaire Tested: **LDA2B20WFL9730D010 PIN1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315869
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1809-951-61)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B20WFL9730D010 PIN1MMS
Description: PORTFOLIO 2IN ADJ 2000 LUMEN LED LUMINAIRE WITH WIDE FLOOD OPTIC AND
2in Adj PinHole, Black oculus, matte metallic silver finish
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1231.7 lumens
Efficiency: N/A
Efficacy: 59.8 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.68 / 0.68
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

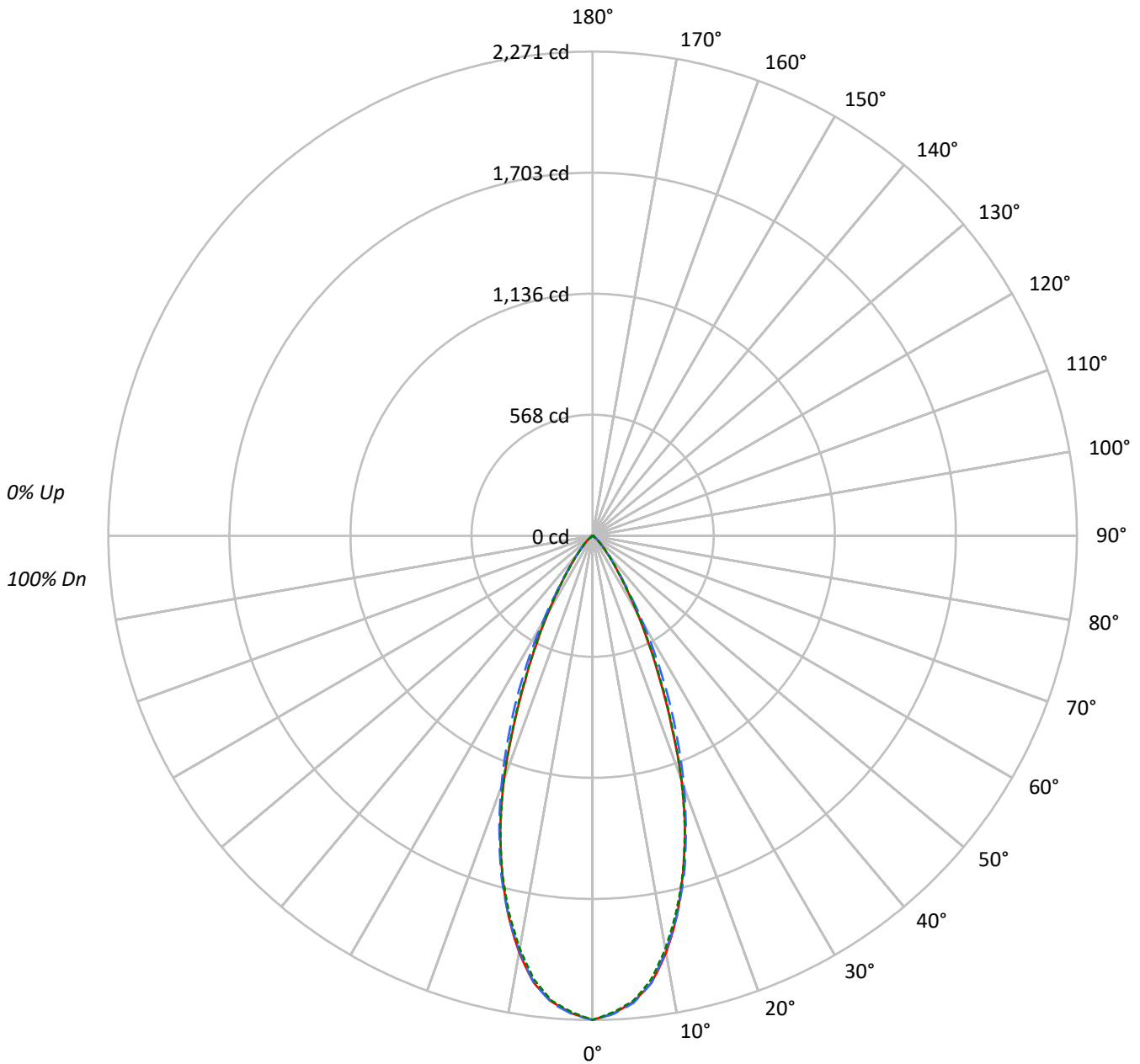
Input Watts (W): 20.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | | | | | | | | | | | | | | | | | |
| 1 | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 94 | | | | | | | | | | | | | | | | | | | |
| 2 | 109 | 104 | 101 | 98 | 107 | 103 | 99 | 96 | 100 | 97 | 94 | 97 | 94 | 92 | 94 | 92 | 90 | 89 | | | | | | | | | | | | | | | | | | | |
| 3 | 104 | 98 | 94 | 90 | 102 | 97 | 93 | 89 | 94 | 91 | 88 | 92 | 89 | 87 | 90 | 87 | 85 | 84 | | | | | | | | | | | | | | | | | | | |
| 4 | 100 | 93 | 88 | 84 | 98 | 92 | 87 | 83 | 90 | 86 | 82 | 88 | 84 | 81 | 86 | 83 | 81 | 79 | | | | | | | | | | | | | | | | | | | |
| 5 | 95 | 88 | 82 | 79 | 94 | 87 | 82 | 78 | 85 | 81 | 78 | 84 | 80 | 77 | 82 | 79 | 76 | 75 | | | | | | | | | | | | | | | | | | | |
| 6 | 91 | 83 | 78 | 74 | 90 | 82 | 77 | 74 | 81 | 77 | 73 | 80 | 76 | 73 | 78 | 75 | 72 | 71 | | | | | | | | | | | | | | | | | | | |
| 7 | 87 | 79 | 74 | 70 | 86 | 78 | 73 | 70 | 77 | 73 | 69 | 76 | 72 | 69 | 75 | 71 | 69 | 67 | | | | | | | | | | | | | | | | | | | |
| 8 | 84 | 75 | 70 | 66 | 83 | 75 | 70 | 66 | 74 | 69 | 66 | 73 | 69 | 66 | 72 | 68 | 65 | 64 | | | | | | | | | | | | | | | | | | | |
| 9 | 81 | 72 | 67 | 63 | 80 | 71 | 66 | 63 | 71 | 66 | 63 | 70 | 66 | 63 | 69 | 65 | 62 | 61 | | | | | | | | | | | | | | | | | | | |
| 10 | 77 | 69 | 64 | 60 | 76 | 68 | 63 | 60 | 68 | 63 | 60 | 67 | 63 | 60 | 66 | 62 | 60 | 58 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 1120326 | 1120326 | 1120326 |
| 5° | 1086620 | 1089245 | 1084342 |
| 10° | 994631 | 990673 | 984712 |
| 15° | 836634 | 844398 | 835306 |
| 20° | 639795 | 656806 | 638745 |
| 25° | 406314 | 458083 | 414207 |
| 30° | 236305 | 266784 | 240464 |
| 35° | 124914 | 132864 | 125335 |
| 40° | 65949 | 68912 | 65949 |
| 45° | 36840 | 38235 | 37328 |
| 50° | 17270 | 21798 | 17270 |
| 55° | 6279 | 11956 | 6795 |
| 60° | 7203 | 7203 | 7203 |
| 65° | 7705 | 8522 | 7705 |
| 70° | 9520 | 8511 | 9520 |
| 75° | 8769 | 8769 | 8769 |
| 80° | 9376 | 7387 | 9376 |
| 85° | 7359 | 7359 | 7359 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 202.7 | 16.5 |
| 10°-20° | 451.3 | 36.6 |
| 20°-30° | 364.5 | 29.6 |
| 30°-40° | 144.1 | 11.7 |
| 40°-50° | 44.2 | 3.6 |
| 50°-60° | 11.4 | 0.9 |
| 60°-70° | 6.9 | 0.6 |
| 70°-80° | 5.0 | 0.4 |
| 80°-90° | 1.5 | 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° | 1018.5 | 82.7 |
| 0°-40° | 1162.6 | 94.4 |
| 0°-60° | 1218.2 | 98.9 |
| 0°-90° | 1231.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1231.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2271 | 2271 | 2271 | 2271 | 2271 | |
| 5° | 2194 | 2198 | 2199 | 2195 | 2190 | 203 |
| 15° | 1638 | 1643 | 1653 | 1647 | 1635 | 450 |
| 25° | 746 | 782 | 842 | 796 | 761 | 347 |
| 35° | 207 | 213 | 221 | 214 | 208 | 139 |
| 45° | 53 | 54 | 55 | 54 | 54 | 43 |
| 55° | 7 | 10 | 14 | 10 | 8 | 9 |
| 65° | 7 | 7 | 7 | 7 | 7 | 7 |
| 75° | 5 | 5 | 5 | 5 | 5 | 5 |
| 85° | 1 | 1 | 1 | 1 | 1 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2270.8 | 2270.8 | 2270.8 | 2270.8 | 2270.8 |
| 2.5° | 2242.4 | 2243.7 | 2245.7 | 2243.0 | 2236.4 |
| 5° | 2194.1 | 2198.1 | 2199.4 | 2194.8 | 2189.5 |
| 7.5° | 2114.9 | 2110.3 | 2114.2 | 2106.3 | 2099.7 |
| 10° | 1985.4 | 1979.5 | 1977.5 | 1965.6 | 1965.6 |
| 12.5° | 1825.6 | 1823.6 | 1824.9 | 1819.0 | 1809.7 |
| 15° | 1638.0 | 1642.6 | 1653.2 | 1646.6 | 1635.4 |
| 17.5° | 1439.2 | 1445.8 | 1455.1 | 1453.1 | 1437.9 |
| 20° | 1218.6 | 1237.8 | 1251.0 | 1238.4 | 1216.6 |
| 22.5° | 967.6 | 1008.6 | 1042.2 | 1015.8 | 980.2 |
| 25° | 746.4 | 782.0 | 841.5 | 796.5 | 760.9 |
| 27.5° | 566.0 | 591.8 | 646.0 | 601.7 | 577.3 |
| 30° | 414.8 | 430.6 | 468.3 | 439.2 | 422.1 |
| 32.5° | 296.6 | 307.8 | 323.6 | 306.5 | 297.9 |
| 35° | 207.4 | 213.3 | 220.6 | 214.0 | 208.1 |
| 37.5° | 146.0 | 147.9 | 153.2 | 147.9 | 145.3 |
| 40° | 102.4 | 103.0 | 107.0 | 103.7 | 102.4 |
| 42.5° | 74.0 | 74.0 | 76.0 | 74.6 | 74.0 |
| 45° | 52.8 | 53.5 | 54.8 | 54.2 | 53.5 |
| 47.5° | 37.6 | 39.0 | 39.0 | 39.6 | 37.0 |
| 50° | 22.5 | 27.7 | 28.4 | 27.7 | 22.5 |
| 52.5° | 11.9 | 16.5 | 20.5 | 16.5 | 11.9 |
| 55° | 7.3 | 9.9 | 13.9 | 9.9 | 7.9 |
| 57.5° | 7.3 | 7.3 | 9.2 | 7.9 | 7.3 |
| 60° | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| 62.5° | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| 65° | 6.6 | 7.3 | 7.3 | 7.3 | 6.6 |
| 67.5° | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| 70° | 6.6 | 6.6 | 5.9 | 6.6 | 6.6 |
| 72.5° | 5.9 | 5.9 | 5.3 | 5.9 | 5.9 |
| 75° | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 |
| 77.5° | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 80° | 3.3 | 3.3 | 2.6 | 3.3 | 3.3 |
| 82.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 85° | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 87.5° | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







(END OF REPORT)