

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: P225227

Luminaire Tested: **LD2B10D010 EU2B10FL409730 2LBDSQLC*MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P225227
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14838)
Test Lab: INNOVATION CENTER (G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD2B10D010 EU2B10FL409730 2LBDSQLC*MB
Description: 1000 Lumen, 2inch Portfolio LED Downlight
FLOOD OPTIC
LENSED SQUARE CAST TRIM WITH MATTE BLACK FINISH
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 661.8 lumens
Efficiency: N/A
Efficacy: 64.3 lumens/watt
Spacing Criteria (0/90/45): 0.6 / 0.61 / 0.59
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
CIE Type: Direct

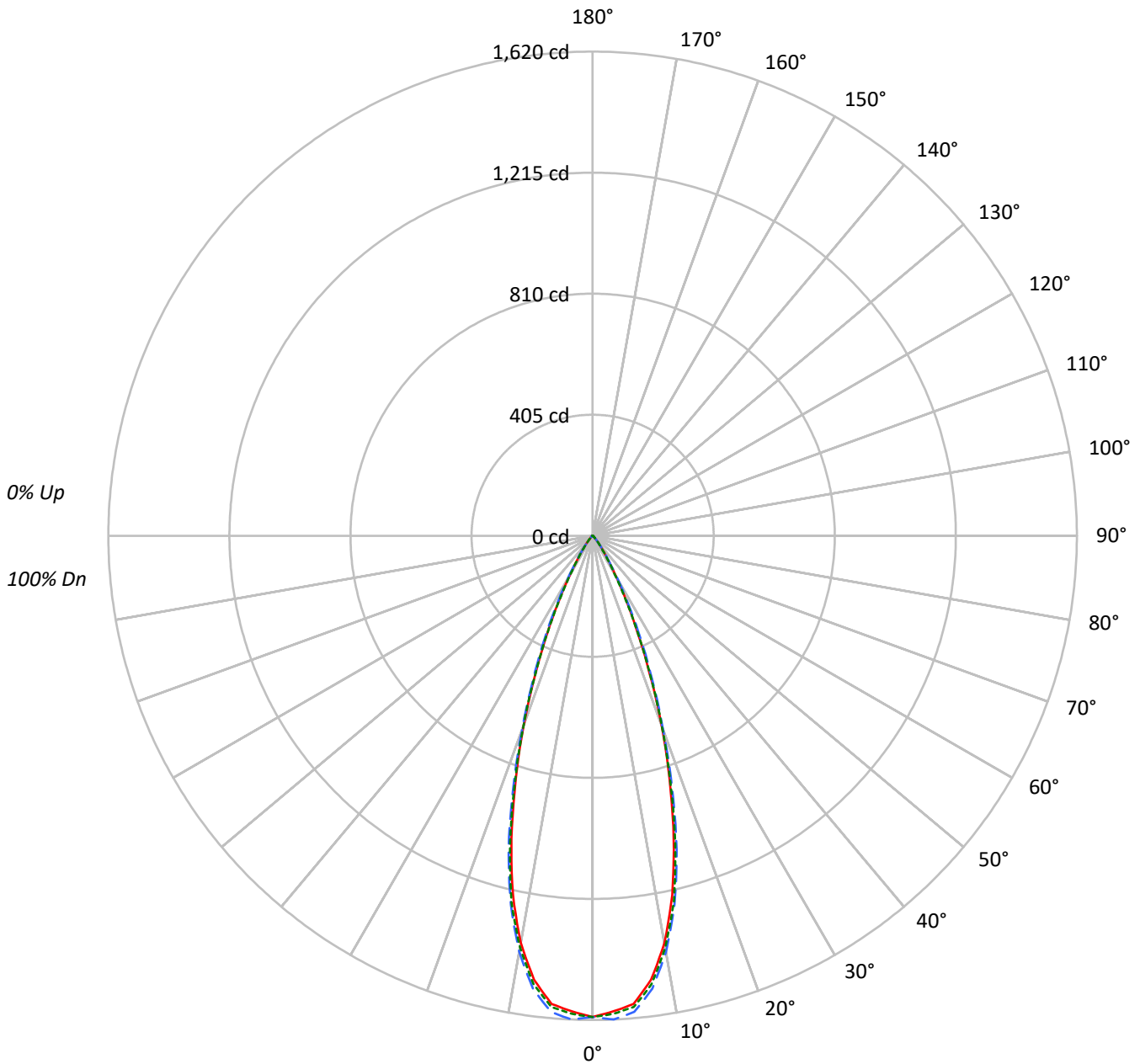
Input Watts (W): 10.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 115 | 112 | 110 | 108 | 112 | 110 | 108 | 107 | 106 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | | | | | | | | | | | | | | | | | | | |
| 2 | 110 | 106 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 99 | 97 | 98 | 97 | 95 | 96 | 94 | 93 | 91 | | | | | | | | | | | | | | | | | | | |
| 3 | 106 | 101 | 97 | 94 | 104 | 99 | 96 | 93 | 97 | 94 | 91 | 95 | 92 | 90 | 92 | 90 | 89 | 87 | | | | | | | | | | | | | | | | | | | |
| 4 | 102 | 96 | 92 | 88 | 100 | 95 | 91 | 88 | 93 | 89 | 87 | 91 | 88 | 86 | 89 | 87 | 85 | 83 | | | | | | | | | | | | | | | | | | | |
| 5 | 98 | 92 | 87 | 84 | 97 | 91 | 86 | 83 | 89 | 85 | 82 | 88 | 84 | 82 | 86 | 83 | 81 | 80 | | | | | | | | | | | | | | | | | | | |
| 6 | 95 | 88 | 83 | 79 | 93 | 87 | 82 | 79 | 86 | 82 | 79 | 84 | 81 | 78 | 83 | 80 | 78 | 77 | | | | | | | | | | | | | | | | | | | |
| 7 | 91 | 84 | 79 | 76 | 90 | 83 | 79 | 76 | 82 | 78 | 75 | 81 | 78 | 75 | 80 | 77 | 75 | 73 | | | | | | | | | | | | | | | | | | | |
| 8 | 88 | 81 | 76 | 73 | 87 | 80 | 76 | 73 | 79 | 75 | 72 | 78 | 75 | 72 | 77 | 74 | 72 | 71 | | | | | | | | | | | | | | | | | | | |
| 9 | 85 | 78 | 73 | 70 | 84 | 77 | 73 | 70 | 76 | 72 | 69 | 76 | 72 | 69 | 75 | 71 | 69 | 68 | | | | | | | | | | | | | | | | | | | |
| 10 | 82 | 75 | 70 | 67 | 82 | 74 | 70 | 67 | 74 | 70 | 67 | 73 | 69 | 67 | 72 | 69 | 66 | 65 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 623666 | 623666 | 623666 |
| 5° | 611350 | 621849 | 615200 |
| 10° | 544042 | 555724 | 550060 |
| 15° | 420339 | 435497 | 427918 |
| 20° | 277290 | 283226 | 278774 |
| 25° | 151253 | 161639 | 152022 |
| 30° | 68074 | 75320 | 65256 |
| 35° | 29365 | 30216 | 26811 |
| 40° | 12287 | 12742 | 11377 |
| 45° | 4930 | 5423 | 5423 |
| 50° | 2169 | 2712 | 2712 |
| 55° | 1216 | 1216 | 1823 |
| 60° | 697 | 697 | 697 |
| 65° | 0 | 0 | 0 |
| 70° | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 145.5 | 22.0 |
| 10°-20° | 289.7 | 43.8 |
| 20°-30° | 171.1 | 25.9 |
| 30°-40° | 44.5 | 6.7 |
| 40°-50° | 8.8 | 1.3 |
| 50°-60° | 1.9 | 0.3 |
| 60°-70° | 0.2 | 0.0 |
| 70°-80° | 0.0 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 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° | 606.4 | 91.6 |
| 0°-40° | 650.9 | 98.4 |
| 0°-60° | 661.6 | 100.0 |
| 0°-90° | 661.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 661.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1610 | 1610 | 1610 | 1610 | 1610 | |
| 5° | 1572 | 1585 | 1599 | 1588 | 1582 | 144 |
| 15° | 1048 | 1072 | 1086 | 1070 | 1067 | 284 |
| 25° | 354 | 366 | 378 | 364 | 356 | 167 |
| 35° | 62 | 65 | 64 | 63 | 57 | 43 |
| 45° | 9 | 11 | 10 | 10 | 10 | 8 |
| 55° | 2 | 2 | 2 | 2 | 3 | 2 |
| 65° | 0 | 0 | 0 | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1610.1 | 1610.1 | 1610.1 | 1610.1 | 1610.1 |
| 2.5° | 1593.0 | 1609.2 | 1620.0 | 1611.0 | 1601.1 |
| 5° | 1572.3 | 1584.9 | 1599.3 | 1588.5 | 1582.2 |
| 7.5° | 1498.4 | 1517.3 | 1528.1 | 1522.7 | 1512.8 |
| 10° | 1383.2 | 1397.6 | 1412.9 | 1407.5 | 1398.5 |
| 12.5° | 1231.0 | 1250.8 | 1265.2 | 1252.6 | 1254.4 |
| 15° | 1048.2 | 1071.6 | 1086.0 | 1069.8 | 1067.1 |
| 17.5° | 854.6 | 872.6 | 882.5 | 872.6 | 865.4 |
| 20° | 672.7 | 683.5 | 687.1 | 682.6 | 676.3 |
| 22.5° | 497.1 | 508.8 | 519.6 | 508.8 | 500.7 |
| 25° | 353.9 | 365.6 | 378.2 | 363.8 | 355.7 |
| 27.5° | 238.6 | 245.8 | 256.6 | 243.1 | 231.4 |
| 30° | 152.2 | 160.3 | 168.4 | 158.5 | 145.9 |
| 32.5° | 96.4 | 101.8 | 102.7 | 100.9 | 90.0 |
| 35° | 62.1 | 64.8 | 63.9 | 63.0 | 56.7 |
| 37.5° | 39.6 | 39.6 | 40.5 | 39.6 | 36.0 |
| 40° | 24.3 | 26.1 | 25.2 | 24.3 | 22.5 |
| 42.5° | 14.4 | 16.2 | 15.3 | 15.3 | 14.4 |
| 45° | 9.0 | 10.8 | 9.9 | 9.9 | 9.9 |
| 47.5° | 6.3 | 7.2 | 6.3 | 6.3 | 7.2 |
| 50° | 3.6 | 4.5 | 4.5 | 4.5 | 4.5 |
| 52.5° | 2.7 | 2.7 | 2.7 | 2.7 | 3.6 |
| 55° | 1.8 | 1.8 | 1.8 | 1.8 | 2.7 |
| 57.5° | 1.8 | 1.8 | 0.9 | 0.9 | 1.8 |
| 60° | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 62.5° | 0.9 | 0.0 | 0.0 | 0.0 | 0.9 |
| 65° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







(END OF REPORT)