

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: P211031

Luminaire Tested: **LSR4B10D010BZ EC4B10208050 4LBWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P211031
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35319)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LSR4B10D010BZ EC4B10208050 4LBWLI1
Description: PORTFOLIO 4 INCH CYLINDER
WIDE DISTRIBUTION WITH SPECULAR CLEAR TRIM
WATTAGE D010TR-10.05W DE010-10.58W D5LT-10.2W DMX-10.6W DL2-11.8W
DL3-11.1W DLE-11.39W
Light Source: HIGH LUMEN LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1101.4 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.18
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

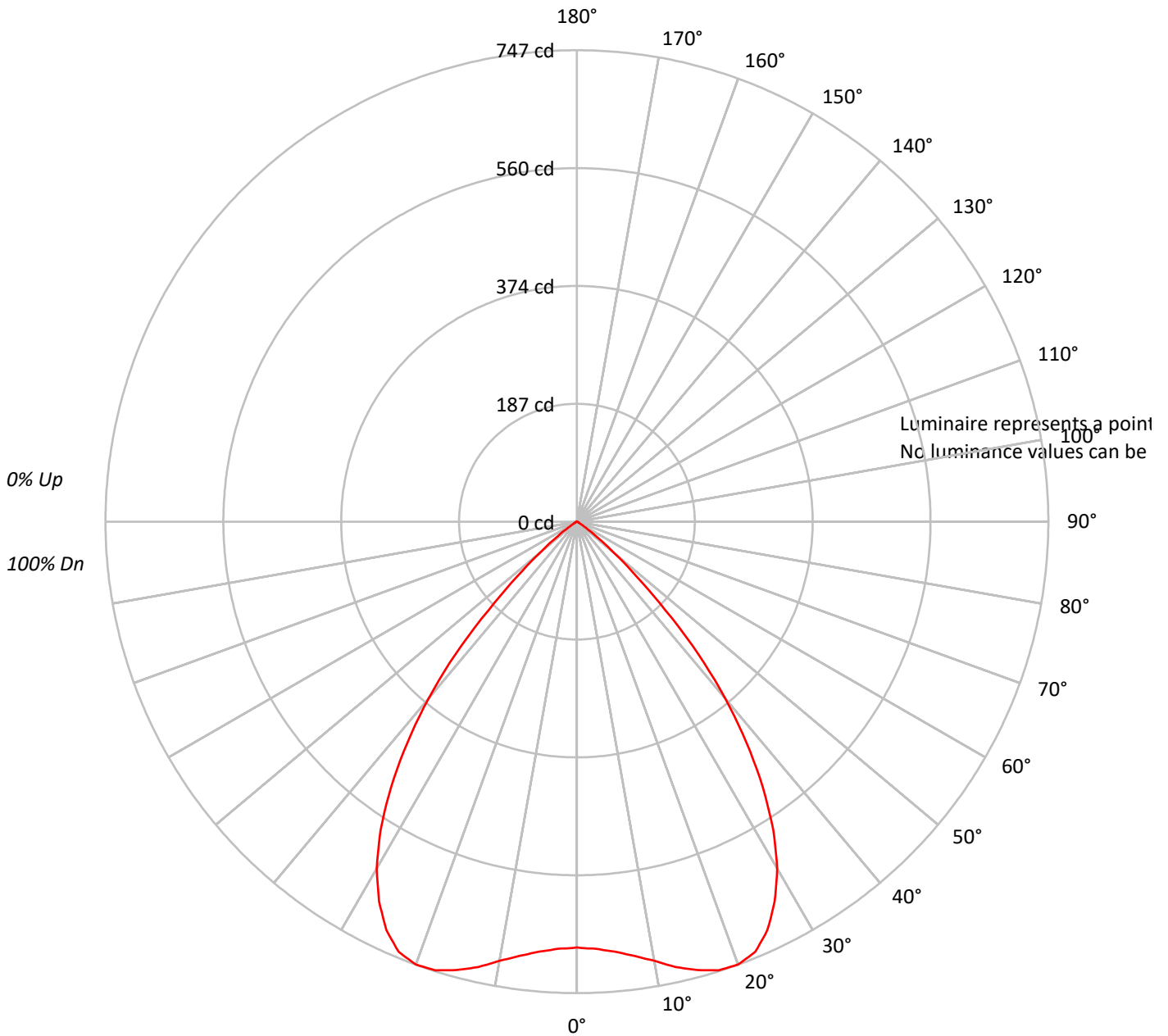
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | 100 | 100 | 100 |
| 1 | 113 | 110 | 107 | 105 | 110 | 108 | 105 | 103 | 104 | 102 | 100 | 100 | 98 | 97 | 96 | 95 | 94 | 92 | 92 | 92 | 92 |
| 2 | 106 | 101 | 97 | 93 | 104 | 99 | 95 | 92 | 96 | 93 | 90 | 93 | 90 | 88 | 90 | 88 | 86 | 84 | 84 | 84 | 84 |
| 3 | 100 | 93 | 87 | 83 | 98 | 92 | 86 | 82 | 89 | 85 | 81 | 86 | 83 | 80 | 84 | 81 | 78 | 77 | 77 | 77 | 77 |
| 4 | 94 | 86 | 79 | 75 | 92 | 84 | 79 | 74 | 82 | 77 | 73 | 80 | 76 | 72 | 78 | 75 | 72 | 70 | 70 | 70 | 70 |
| 5 | 88 | 79 | 72 | 68 | 87 | 78 | 72 | 67 | 76 | 71 | 67 | 74 | 70 | 66 | 73 | 69 | 65 | 64 | 64 | 64 | 64 |
| 6 | 83 | 73 | 66 | 62 | 82 | 72 | 66 | 61 | 71 | 65 | 61 | 69 | 64 | 60 | 68 | 63 | 60 | 58 | 58 | 58 | 58 |
| 7 | 78 | 68 | 61 | 56 | 77 | 67 | 61 | 56 | 66 | 60 | 56 | 64 | 59 | 55 | 63 | 59 | 55 | 54 | 54 | 54 | 54 |
| 8 | 74 | 63 | 56 | 52 | 72 | 62 | 56 | 51 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 49 | 49 | 49 | 49 |
| 9 | 69 | 59 | 52 | 48 | 68 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 45 | 45 | 45 | 45 |
| 10 | 66 | 55 | 48 | 44 | 65 | 54 | 48 | 44 | 53 | 48 | 44 | 53 | 47 | 44 | 52 | 47 | 43 | 42 | 42 | 42 | 42 |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 66.0 | 6.0 |
| 10°-20° | 208.3 | 18.9 |
| 20°-30° | 324.9 | 29.5 |
| 30°-40° | 316.1 | 28.7 |
| 40°-50° | 157.9 | 14.3 |
| 50°-60° | 24.4 | 2.2 |
| 60°-70° | 2.9 | 0.3 |
| 70°-80° | 0.9 | 0.1 |
| 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° | 599.2 | 54.4 |
| 0°-40° | 915.3 | 83.1 |
| 0°-60° | 1097.6 | 99.7 |
| 0°-90° | 1101.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1101.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 675 | |
| 5° | 684 | 66 |
| 15° | 735 | 208 |
| 25° | 714 | 325 |
| 35° | 513 | 316 |
| 45° | 198 | 158 |
| 55° | 20 | 24 |
| 65° | 2 | 3 |
| 75° | 1 | 1 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 674.8 |
| 2.5° | 677.4 |
| 5° | 683.7 |
| 7.5° | 693.8 |
| 10° | 706.4 |
| 12.5° | 722.8 |
| 15° | 735.4 |
| 17.5° | 745.5 |
| 20° | 746.7 |
| 22.5° | 737.9 |
| 25° | 714.0 |
| 27.5° | 678.6 |
| 30° | 634.5 |
| 32.5° | 579.0 |
| 35° | 513.4 |
| 37.5° | 441.5 |
| 40° | 365.8 |
| 42.5° | 285.1 |
| 45° | 198.0 |
| 47.5° | 127.4 |
| 50° | 76.9 |
| 52.5° | 41.6 |
| 55° | 20.2 |
| 57.5° | 8.8 |
| 60° | 5.0 |
| 62.5° | 3.8 |
| 65° | 2.5 |
| 67.5° | 2.5 |
| 70° | 1.3 |
| 72.5° | 1.3 |
| 75° | 1.3 |
| 77.5° | 0.0 |
| 80° | 0.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)