

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: P212177

Luminaire Tested: **LSR4B30D010BZ EC4B30509050 4LBNI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212177
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: LSR4B30D010BZ EC4B30509050 4LBNI1
Description: PORTFOLIO 4 INCH CYLINDER
NARROW DISTRIBUTION WITH SPECULAR CLEAR TRIM
WATTAGE D010TR-27.4W DE010-27.95W D5LT-27.65W DMX-27.73W DL2-29.56W
DL3-29.67W DLE-29.73W
Light Source: HIGH LUMEN LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1872.1 lumens
Efficiency: N/A
Efficacy: 66.9 lumens/watt
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.54
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

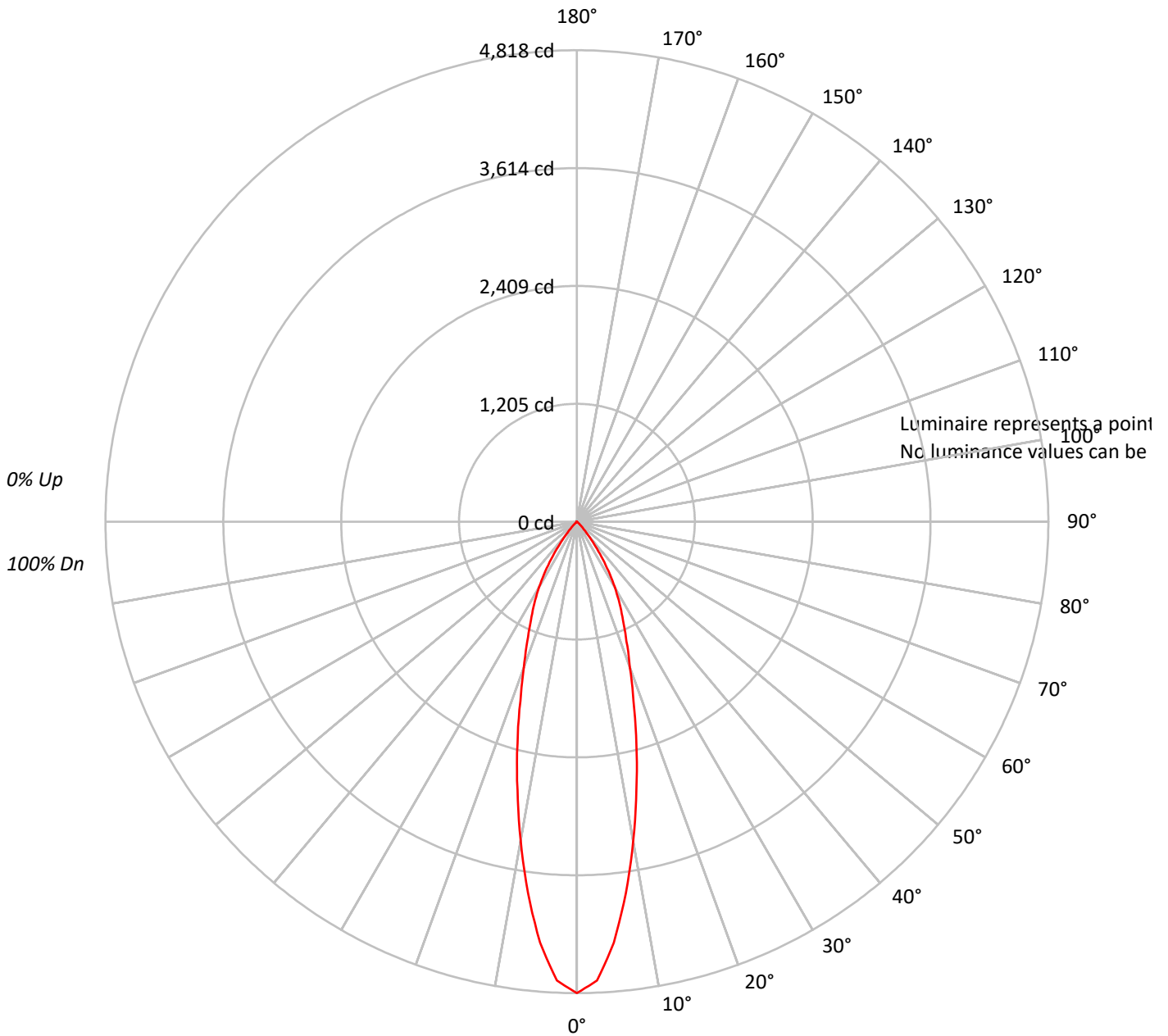
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 95 | 95 | 95 | 95 |
| 2 | 109 | 105 | 102 | 99 | 107 | 103 | 100 | 98 | 100 | 98 | 95 | 97 | 95 | 93 | 95 | 93 | 92 | 90 | 90 | 90 | 90 |
| 3 | 105 | 99 | 95 | 92 | 103 | 98 | 94 | 91 | 95 | 92 | 89 | 93 | 90 | 88 | 91 | 89 | 87 | 85 | 85 | 85 | 85 |
| 4 | 101 | 94 | 89 | 86 | 99 | 93 | 88 | 85 | 91 | 87 | 84 | 89 | 86 | 83 | 87 | 84 | 82 | 81 | 81 | 81 | 81 |
| 5 | 96 | 89 | 84 | 80 | 95 | 88 | 84 | 80 | 87 | 82 | 79 | 85 | 81 | 79 | 83 | 80 | 78 | 77 | 77 | 77 | 77 |
| 6 | 92 | 85 | 80 | 76 | 91 | 84 | 79 | 76 | 83 | 78 | 75 | 81 | 78 | 75 | 80 | 77 | 74 | 73 | 73 | 73 | 73 |
| 7 | 89 | 81 | 76 | 72 | 88 | 80 | 75 | 72 | 79 | 75 | 71 | 78 | 74 | 71 | 77 | 73 | 71 | 69 | 69 | 69 | 69 |
| 8 | 85 | 77 | 72 | 68 | 84 | 77 | 72 | 68 | 76 | 71 | 68 | 75 | 71 | 68 | 74 | 70 | 67 | 66 | 66 | 66 | 66 |
| 9 | 82 | 74 | 69 | 65 | 81 | 73 | 68 | 65 | 72 | 68 | 65 | 72 | 68 | 65 | 71 | 67 | 64 | 63 | 63 | 63 | 63 |
| 10 | 79 | 71 | 66 | 62 | 78 | 70 | 65 | 62 | 69 | 65 | 62 | 69 | 65 | 62 | 68 | 64 | 62 | 61 | 61 | 61 | 61 |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 379.7 | 20.3 |
| 10°-20° | 650.0 | 34.7 |
| 20°-30° | 516.6 | 27.6 |
| 30°-40° | 273.5 | 14.6 |
| 40°-50° | 47.1 | 2.5 |
| 50°-60° | 3.5 | 0.2 |
| 60°-70° | 1.8 | 0.1 |
| 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° | 1546.3 | 82.6 |
| 0°-40° | 1819.7 | 97.2 |
| 0°-60° | 1870.4 | 99.9 |
| 0°-90° | 1872.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1872.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 4818 | |
| 5° | 4319 | 380 |
| 15° | 2350 | 650 |
| 25° | 1113 | 517 |
| 35° | 432 | 273 |
| 45° | 49 | 47 |
| 55° | 3 | 4 |
| 65° | 3 | 2 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 4817.8 |
| 2.5° | 4693.8 |
| 5° | 4319.0 |
| 7.5° | 3828.9 |
| 10° | 3309.9 |
| 12.5° | 2808.2 |
| 15° | 2349.8 |
| 17.5° | 1923.1 |
| 20° | 1582.9 |
| 22.5° | 1323.4 |
| 25° | 1112.9 |
| 27.5° | 942.8 |
| 30° | 772.7 |
| 32.5° | 599.7 |
| 35° | 432.5 |
| 37.5° | 285.4 |
| 40° | 170.1 |
| 42.5° | 98.0 |
| 45° | 49.0 |
| 47.5° | 17.3 |
| 50° | 5.8 |
| 52.5° | 5.8 |
| 55° | 2.9 |
| 57.5° | 2.9 |
| 60° | 2.9 |
| 62.5° | 2.9 |
| 65° | 2.9 |
| 67.5° | 0.0 |
| 70° | 0.0 |
| 72.5° | 0.0 |
| 75° | 0.0 |
| 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)