

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: P212068

Luminaire Tested: **LSR4B30D010BZ EC4B30509035 4LBSLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212068
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 EC4B30509035 4LBSLI1
Description: PORTFOLIO 4 INCH CYLINDER
SHALLOW 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: 2589.1 lumens
Efficiency: N/A
Efficacy: 92.5 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.91 / 1
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

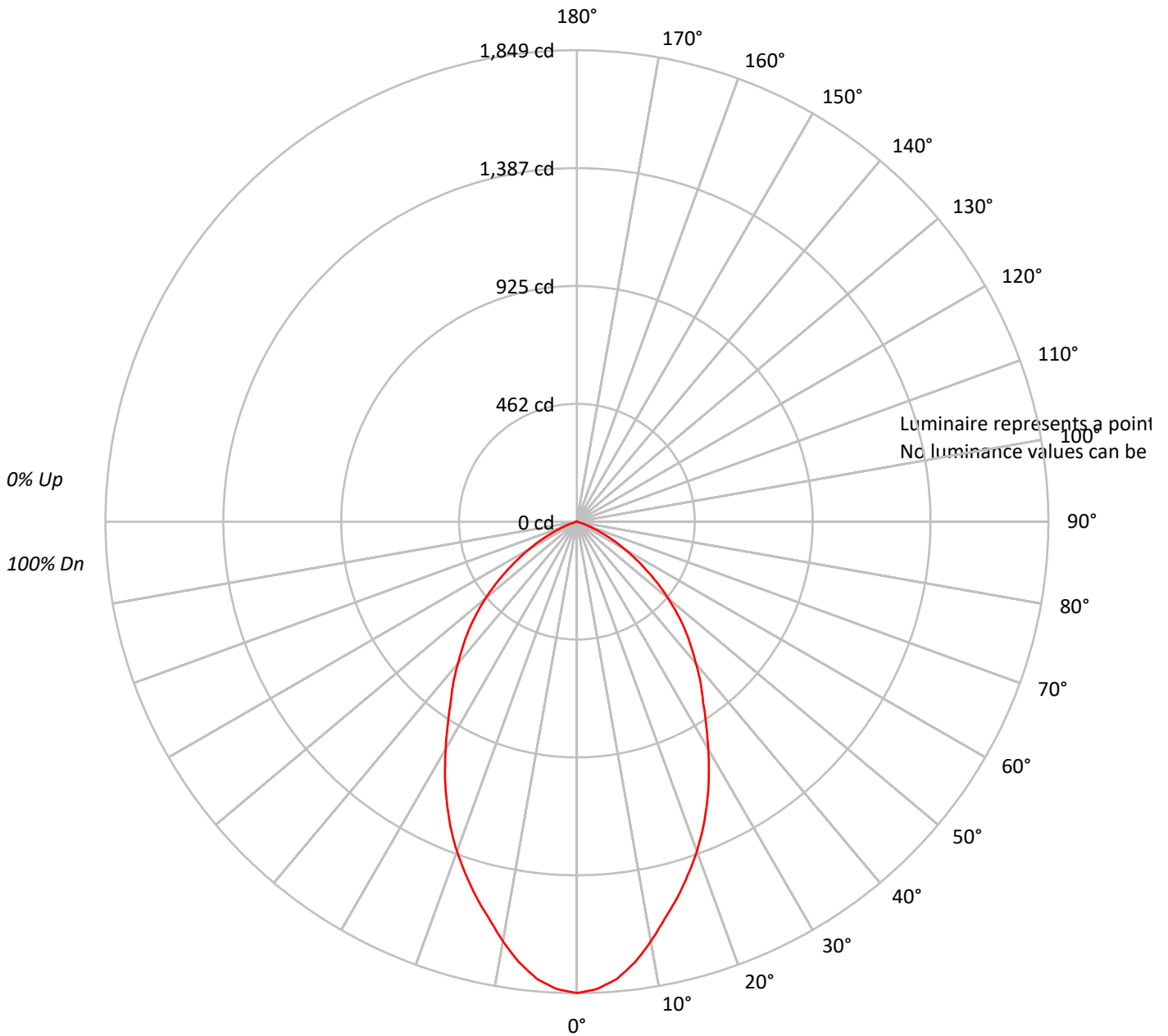
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | |
| 1 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | |
| 2 | 104 | 98 | 93 | 88 | 102 | 96 | 91 | 87 | 93 | 89 | 85 | 90 | 86 | 84 | 87 | 84 | 82 | 80 | | |
| 3 | 97 | 89 | 82 | 77 | 95 | 87 | 81 | 77 | 84 | 79 | 75 | 82 | 78 | 74 | 79 | 76 | 73 | 71 | | |
| 4 | 90 | 81 | 73 | 68 | 88 | 79 | 73 | 68 | 77 | 71 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 63 | | |
| 5 | 84 | 73 | 66 | 61 | 82 | 72 | 65 | 60 | 70 | 64 | 60 | 69 | 63 | 59 | 67 | 62 | 59 | 57 | | |
| 6 | 79 | 67 | 60 | 54 | 77 | 66 | 59 | 54 | 65 | 58 | 54 | 63 | 58 | 53 | 62 | 57 | 53 | 51 | | |
| 7 | 74 | 62 | 54 | 49 | 72 | 61 | 54 | 49 | 60 | 53 | 49 | 58 | 53 | 48 | 57 | 52 | 48 | 46 | | |
| 8 | 69 | 57 | 50 | 45 | 68 | 57 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 44 | 53 | 48 | 44 | 42 | | |
| 9 | 65 | 53 | 46 | 41 | 64 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 44 | 41 | 39 | | |
| 10 | 61 | 50 | 43 | 38 | 60 | 49 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 46 | 41 | 37 | 36 | | |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 167.6 | 6.5 |
| 10°-20° | 427.5 | 16.5 |
| 20°-30° | 554.0 | 21.4 |
| 30°-40° | 542.8 | 21.0 |
| 40°-50° | 460.1 | 17.8 |
| 50°-60° | 301.6 | 11.6 |
| 60°-70° | 121.2 | 4.7 |
| 70°-80° | 13.9 | 0.5 |
| 80°-90° | 0.4 | 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° | 1149.1 | 44.4 |
| 0°-40° | 1691.9 | 65.3 |
| 0°-60° | 2453.6 | 94.8 |
| 0°-90° | 2589.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2589.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1849 | |
| 5° | 1800 | 168 |
| 15° | 1525 | 428 |
| 25° | 1210 | 554 |
| 35° | 863 | 543 |
| 45° | 599 | 460 |
| 55° | 335 | 302 |
| 65° | 118 | 121 |
| 75° | 6 | 14 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 1848.7 |
| 2.5° | 1834.4 |
| 5° | 1800.0 |
| 7.5° | 1742.7 |
| 10° | 1671.0 |
| 12.5° | 1593.6 |
| 15° | 1524.8 |
| 17.5° | 1450.3 |
| 20° | 1375.8 |
| 22.5° | 1295.5 |
| 25° | 1209.5 |
| 27.5° | 1120.7 |
| 30° | 1029.0 |
| 32.5° | 943.0 |
| 35° | 862.7 |
| 37.5° | 796.8 |
| 40° | 725.2 |
| 42.5° | 662.1 |
| 45° | 599.0 |
| 47.5° | 533.1 |
| 50° | 467.2 |
| 52.5° | 401.3 |
| 55° | 335.3 |
| 57.5° | 275.2 |
| 60° | 217.8 |
| 62.5° | 166.2 |
| 65° | 117.5 |
| 67.5° | 77.4 |
| 70° | 45.9 |
| 72.5° | 20.1 |
| 75° | 5.7 |
| 77.5° | 2.9 |
| 80° | 2.9 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)