

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: P210909

Luminaire Tested: **LSR4B10D010BZ EC4B10208035 4LBSMW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P210909
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 EC4B10208035 4LBSMW1
Description: PORTFOLIO 4 INCH CYLINDER
SHALLOW DISTRIBUTION WITH MATTE WHITE 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: 1126.9 lumens
Efficiency: N/A
Efficacy: 113.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.34
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

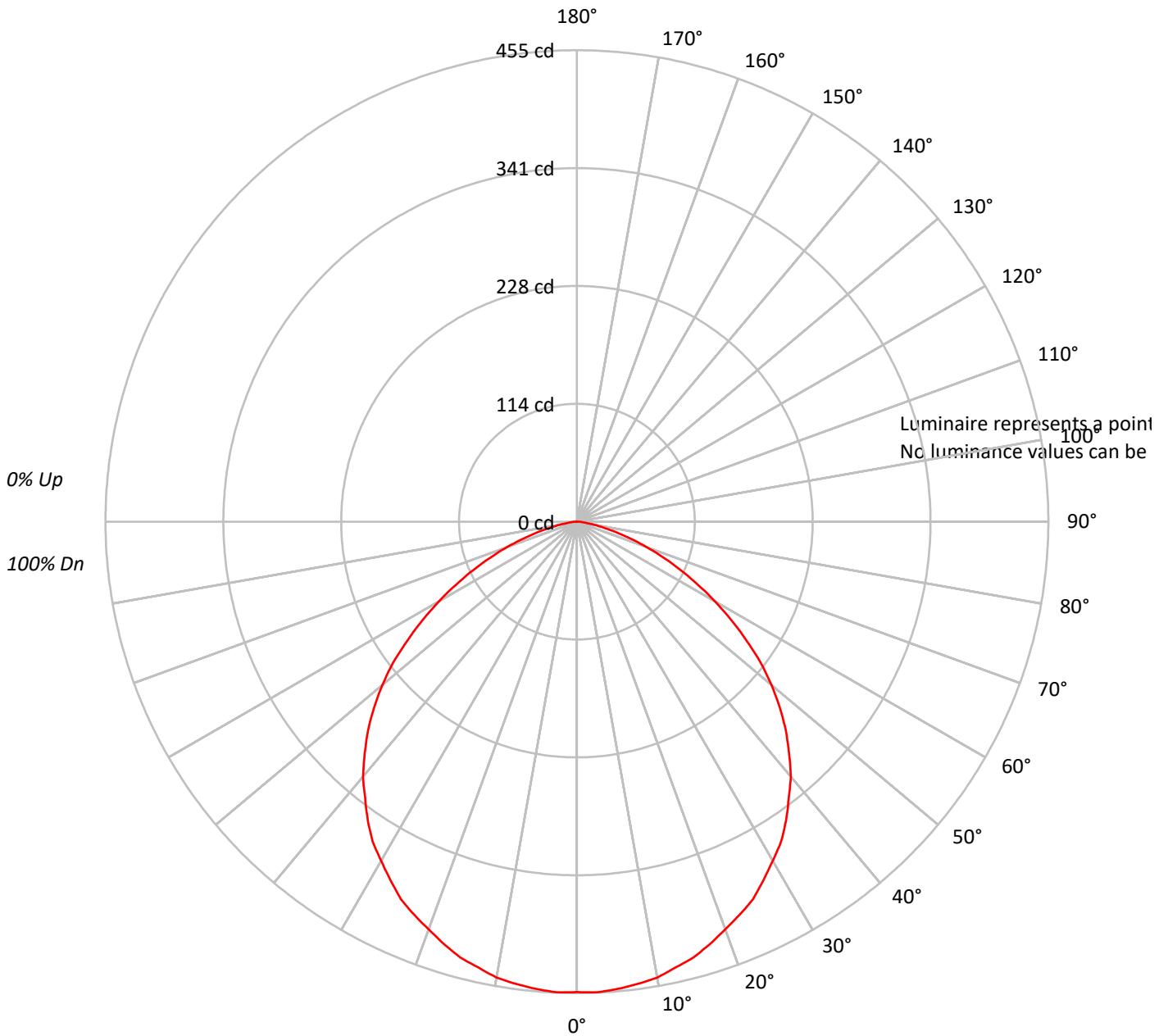
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| 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 | 110 | 106 | 102 | 99 | 107 | 104 | 100 | 97 | 99 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 88 | 86 | | | | | | | | | | | | | | | | | | | |
| 2 | 101 | 93 | 87 | 82 | 98 | 92 | 86 | 81 | 88 | 83 | 79 | 85 | 81 | 77 | 82 | 79 | 76 | 74 | | | | | | | | | | | | | | | | | | | |
| 3 | 93 | 83 | 75 | 69 | 90 | 81 | 74 | 69 | 78 | 72 | 67 | 76 | 70 | 66 | 73 | 69 | 65 | 63 | | | | | | | | | | | | | | | | | | | |
| 4 | 85 | 74 | 66 | 59 | 83 | 72 | 65 | 59 | 70 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 56 | 54 | | | | | | | | | | | | | | | | | | | |
| 5 | 78 | 66 | 58 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 51 | 61 | 55 | 50 | 59 | 54 | 49 | 47 | | | | | | | | | | | | | | | | | | | |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 44 | 55 | 49 | 44 | 54 | 48 | 44 | 42 | | | | | | | | | | | | | | | | | | | |
| 7 | 67 | 54 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | | | | | | | | | | | | | | | |
| 8 | 63 | 50 | 41 | 36 | 61 | 49 | 41 | 36 | 48 | 41 | 35 | 46 | 40 | 35 | 45 | 39 | 35 | 33 | | | | | | | | | | | | | | | | | | | |
| 9 | 59 | 46 | 38 | 32 | 57 | 45 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 32 | 42 | 36 | 32 | 30 | | | | | | | | | | | | | | | | | | | |
| 10 | 55 | 42 | 34 | 29 | 54 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 27 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 43.0 | 3.8 |
| 10°-20° | 122.6 | 10.9 |
| 20°-30° | 184.7 | 16.4 |
| 30°-40° | 219.8 | 19.5 |
| 40°-50° | 219.3 | 19.5 |
| 50°-60° | 178.4 | 15.8 |
| 60°-70° | 109.7 | 9.7 |
| 70°-80° | 42.5 | 3.8 |
| 80°-90° | 6.8 | 0.6 |
| 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° | 350.3 | 31.1 |
| 0°-40° | 570.1 | 50.6 |
| 0°-60° | 967.8 | 85.9 |
| 0°-90° | 1126.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1126.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 454 | |
| 5° | 453 | 43 |
| 15° | 435 | 123 |
| 25° | 402 | 185 |
| 35° | 352 | 220 |
| 45° | 285 | 219 |
| 55° | 200 | 178 |
| 65° | 110 | 110 |
| 75° | 39 | 43 |
| 85° | 5 | 7 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 454.0 |
| 2.5° | 454.7 |
| 5° | 452.7 |
| 7.5° | 450.0 |
| 10° | 446.7 |
| 12.5° | 440.7 |
| 15° | 435.3 |
| 17.5° | 427.3 |
| 20° | 418.6 |
| 22.5° | 410.6 |
| 25° | 402.0 |
| 27.5° | 389.9 |
| 30° | 377.9 |
| 32.5° | 366.6 |
| 35° | 351.9 |
| 37.5° | 335.8 |
| 40° | 321.2 |
| 42.5° | 303.1 |
| 45° | 285.1 |
| 47.5° | 265.7 |
| 50° | 245.0 |
| 52.5° | 223.7 |
| 55° | 199.6 |
| 57.5° | 176.3 |
| 60° | 153.6 |
| 62.5° | 131.5 |
| 65° | 110.2 |
| 67.5° | 90.1 |
| 70° | 71.4 |
| 72.5° | 54.1 |
| 75° | 38.7 |
| 77.5° | 25.4 |
| 80° | 15.4 |
| 82.5° | 9.3 |
| 85° | 5.3 |
| 87.5° | 2.7 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)