

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: P210715

Luminaire Tested: **LSR4B10D010BZ EC4B10208027 4LBCSMB1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P210715  
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 EC4B10208027 4LBSCMB1  
Description: PORTFOLIO 4 INCH CYLINDER  
SHALLOW DISTRIBUTION WITH CAST MATTE METALLIC SILVER 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: 1003.6 lumens  
Efficiency: N/A  
Efficacy: 101.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.23 / 1.33  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

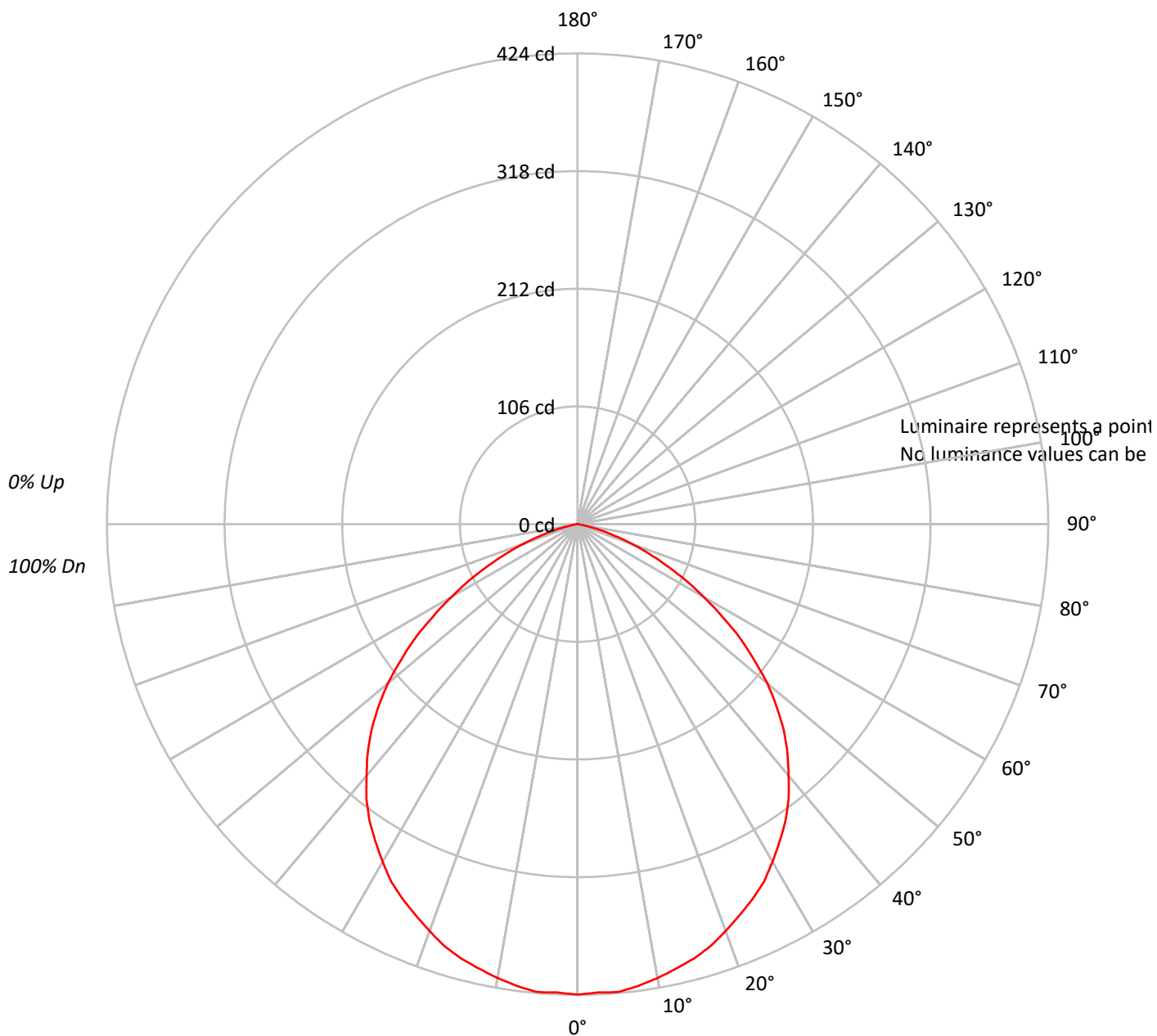
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RW  | 70  | 50  | 30  | 10  |  | 70  | 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 |
| 1   | 111 | 107 | 103 | 100 |  | 108 | 104 | 101 | 98  |  | 100 | 98  | 95  |  | 96  | 94  | 92  |  | 93  | 91  | 90  |
| 2   | 102 | 95  | 89  | 84  |  | 99  | 93  | 87  | 83  |  | 89  | 85  | 81  |  | 86  | 82  | 79  |  | 83  | 80  | 77  |
| 3   | 93  | 84  | 77  | 71  |  | 91  | 83  | 76  | 70  |  | 80  | 74  | 69  |  | 77  | 72  | 68  |  | 74  | 70  | 67  |
| 4   | 86  | 75  | 67  | 61  |  | 84  | 74  | 66  | 61  |  | 71  | 65  | 60  |  | 69  | 63  | 59  |  | 67  | 62  | 58  |
| 5   | 79  | 67  | 59  | 53  |  | 77  | 66  | 59  | 53  |  | 64  | 57  | 52  |  | 62  | 56  | 52  |  | 61  | 55  | 51  |
| 6   | 74  | 61  | 53  | 47  |  | 72  | 60  | 52  | 46  |  | 58  | 51  | 46  |  | 57  | 50  | 46  |  | 55  | 50  | 45  |
| 7   | 68  | 55  | 47  | 41  |  | 67  | 55  | 47  | 41  |  | 53  | 46  | 41  |  | 52  | 45  | 41  |  | 50  | 45  | 40  |
| 8   | 64  | 51  | 43  | 37  |  | 62  | 50  | 42  | 37  |  | 49  | 42  | 37  |  | 48  | 41  | 37  |  | 46  | 41  | 36  |
| 9   | 60  | 47  | 39  | 33  |  | 58  | 46  | 39  | 33  |  | 45  | 38  | 33  |  | 44  | 38  | 33  |  | 43  | 37  | 33  |
| 10  | 56  | 43  | 35  | 30  |  | 55  | 43  | 35  | 30  |  | 42  | 35  | 30  |  | 41  | 34  | 30  |  | 40  | 34  | 30  |

**AVERAGE LUMINANCE (cd/sqm):**





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 40.1   | 4.0       |
| 10°-20°   | 114.2  | 11.4      |
| 20°-30°   | 171.7  | 17.1      |
| 30°-40°   | 203.7  | 20.3      |
| 40°-50°   | 201.6  | 20.1      |
| 50°-60°   | 158.3  | 15.8      |
| 60°-70°   | 88.8   | 8.8       |
| 70°-80°   | 24.9   | 2.5       |
| 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°    | 325.9  | 32.5      |
| 0°-40°    | 529.6  | 52.8      |
| 0°-60°    | 889.5  | 88.6      |
| 0°-90°    | 1003.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1003.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 424 |      |
| 5°  | 423 | 40   |
| 15° | 405 | 114  |
| 25° | 373 | 172  |
| 35° | 327 | 204  |
| 45° | 263 | 202  |
| 55° | 178 | 158  |
| 65° | 88  | 89   |
| 75° | 22  | 25   |
| 85° | 0   | 0    |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    |
|-------|-------|
| 0°    | 423.8 |
| 2.5°  | 422.3 |
| 5°    | 423.1 |
| 7.5°  | 419.5 |
| 10°   | 415.1 |
| 12.5° | 410.1 |
| 15°   | 405.1 |
| 17.5° | 398.6 |
| 20°   | 390.0 |
| 22.5° | 381.3 |
| 25°   | 372.7 |
| 27.5° | 363.3 |
| 30°   | 351.1 |
| 32.5° | 338.9 |
| 35°   | 326.6 |
| 37.5° | 312.3 |
| 40°   | 295.7 |
| 42.5° | 279.9 |
| 45°   | 262.6 |
| 47.5° | 243.2 |
| 50°   | 223.0 |
| 52.5° | 200.0 |
| 55°   | 178.4 |
| 57.5° | 154.0 |
| 60°   | 130.9 |
| 62.5° | 110.1 |
| 65°   | 88.5  |
| 67.5° | 69.8  |
| 70°   | 51.8  |
| 72.5° | 35.3  |
| 75°   | 21.6  |
| 77.5° | 10.8  |
| 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)