

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: P210772

Luminaire Tested: **LSR4B10D010BZ EC4B10209027 4LBWWH1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P210772  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35168)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LSR4B10D010BZ EC4B10209027 4LBWWH1  
Description: PORTFOLIO 4 INCH CYLINDER  
WIDE DISTRIBUTION WITH WHEAT 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: 764.5 lumens  
Efficiency: N/A  
Efficacy: 55.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.16  
Luminous Opening: Circular (Dia: 0.35' x H: 0')  
CIE Type: Direct

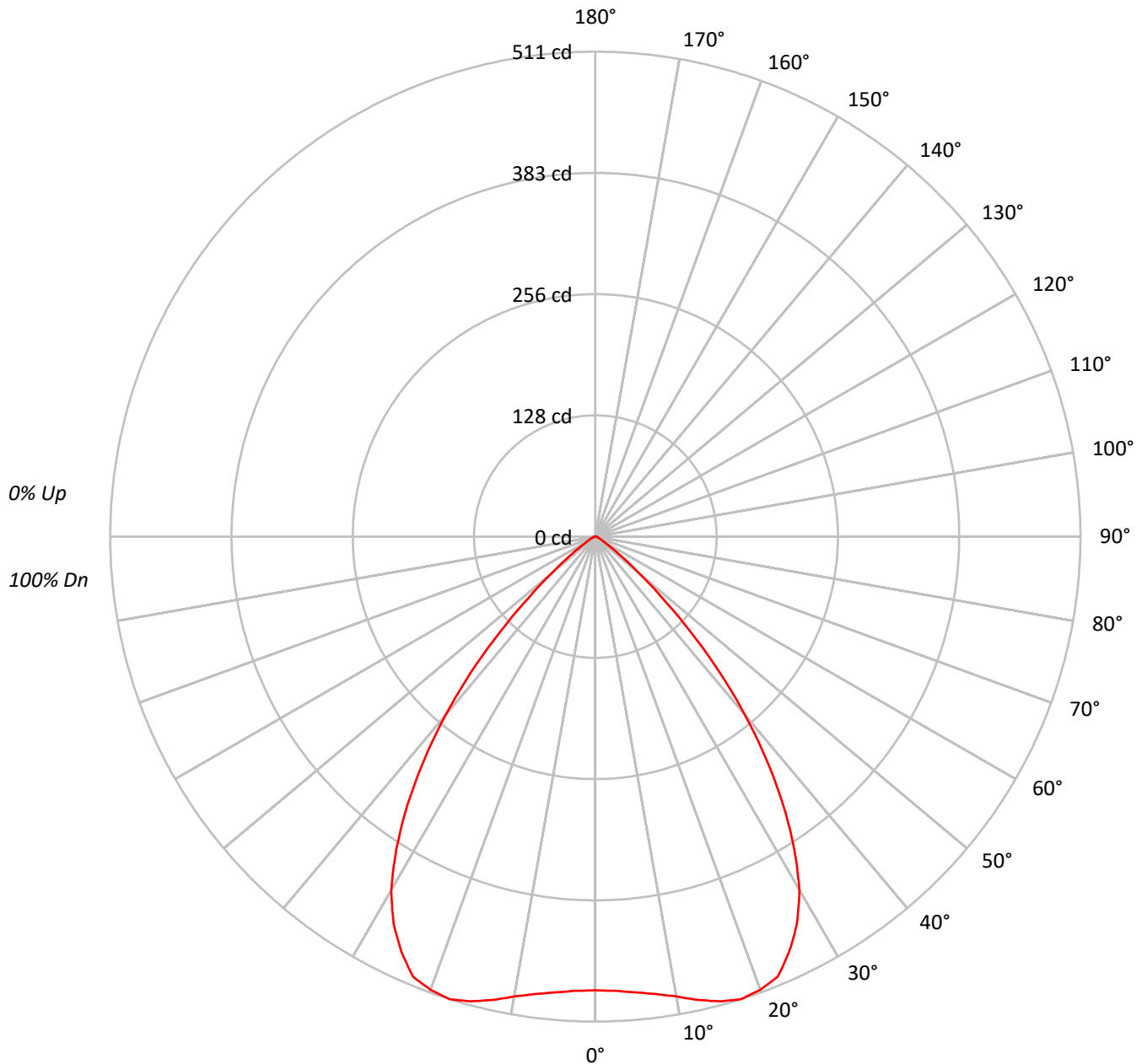
Input Watts (W): 13.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 100 |  | 100 | 98  | 97  |  | 96  |
| 2   | 106 | 101 | 96  | 92  | 104 | 99  | 95  | 91  | 96  | 92  | 89  |  | 93  | 90  | 87  |  | 90  |
| 3   | 100 | 93  | 87  | 82  | 98  | 91  | 86  | 82  | 88  | 84  | 80  |  | 86  | 82  | 79  |  | 84  |
| 4   | 94  | 85  | 79  | 74  | 92  | 84  | 78  | 74  | 82  | 77  | 73  |  | 80  | 75  | 72  |  | 78  |
| 5   | 88  | 79  | 72  | 67  | 86  | 78  | 71  | 67  | 76  | 70  | 66  |  | 74  | 69  | 65  |  | 72  |
| 6   | 83  | 73  | 66  | 61  | 81  | 72  | 65  | 61  | 70  | 64  | 60  |  | 69  | 64  | 60  |  | 67  |
| 7   | 78  | 67  | 60  | 56  | 76  | 67  | 60  | 55  | 65  | 59  | 55  |  | 64  | 59  | 55  |  | 63  |
| 8   | 73  | 62  | 56  | 51  | 72  | 62  | 55  | 51  | 61  | 55  | 51  |  | 60  | 54  | 50  |  | 59  |
| 9   | 69  | 58  | 51  | 47  | 68  | 58  | 51  | 47  | 57  | 51  | 47  |  | 56  | 50  | 47  |  | 55  |
| 10  | 65  | 54  | 48  | 43  | 64  | 54  | 48  | 43  | 53  | 47  | 43  |  | 52  | 47  | 43  |  | 51  |

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

|     |       |
|-----|-------|
|     | 0°    |
| 0°  | 52227 |
| 5°  | 52865 |
| 10° | 54586 |
| 15° | 57349 |
| 20° | 59067 |
| 25° | 58229 |
| 30° | 54250 |
| 35° | 46017 |
| 40° | 34944 |
| 45° | 21787 |
| 50° | 10369 |
| 55° | 4000  |
| 60° | 1967  |
| 65° | 1293  |
| 70° | 958   |
| 75° | 844   |
| 80° | 629   |
| 85° | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 46.3   | 6.1       |
| 10°-20°   | 143.3  | 18.7      |
| 20°-30°   | 220.4  | 28.8      |
| 30°-40°   | 212.6  | 27.8      |
| 40°-50°   | 110.9  | 14.5      |
| 50°-60°   | 23.3   | 3.1       |
| 60°-70°   | 5.4    | 0.7       |
| 70°-80°   | 2.1    | 0.3       |
| 80°-90°   | 0.1    | 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°    | 410.0  | 53.6      |
| 0°-40°    | 622.6  | 81.4      |
| 0°-60°    | 756.8  | 99.0      |
| 0°-90°    | 764.5  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 764.5  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 478 |      |
| 5°  | 482 | 46   |
| 15° | 507 | 143  |
| 25° | 483 | 220  |
| 35° | 345 | 213  |
| 45° | 141 | 111  |
| 55° | 21  | 23   |
| 65° | 5   | 5    |
| 75° | 2   | 2    |
| 85° | 0   | 0    |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°  |
|-------|-----|
| 0°    | 478 |
| 2.5°  | 479 |
| 5°    | 482 |
| 7.5°  | 486 |
| 10°   | 492 |
| 12.5° | 500 |
| 15°   | 507 |
| 17.5° | 511 |
| 20°   | 508 |
| 22.5° | 502 |
| 25°   | 483 |
| 27.5° | 460 |
| 30°   | 430 |
| 32.5° | 390 |
| 35°   | 345 |
| 37.5° | 296 |
| 40°   | 245 |
| 42.5° | 194 |
| 45°   | 141 |
| 47.5° | 95  |
| 50°   | 61  |
| 52.5° | 37  |
| 55°   | 21  |
| 57.5° | 13  |
| 60°   | 9   |
| 62.5° | 7   |
| 65°   | 5   |
| 67.5° | 4   |
| 70°   | 3   |
| 72.5° | 3   |
| 75°   | 2   |
| 77.5° | 1   |
| 80°   | 1   |
| 82.5° | 0   |
| 85°   | 0   |
| 87.5° | 0   |
| 90°   | 0   |



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— 0°-180°







(END OF REPORT)