

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: P211931

Luminaire Tested: **LSR4B30D010BZ EC4B30509727 4LBWMW1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P211931  
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 EC4B30509727 4LBWMW1  
Description: PORTFOLIO 4 INCH CYLINDER  
WIDE DISTRIBUTION WITH MATTE WHITE 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: 1820.2 lumens  
Efficiency: N/A  
Efficacy: 65.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.09  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

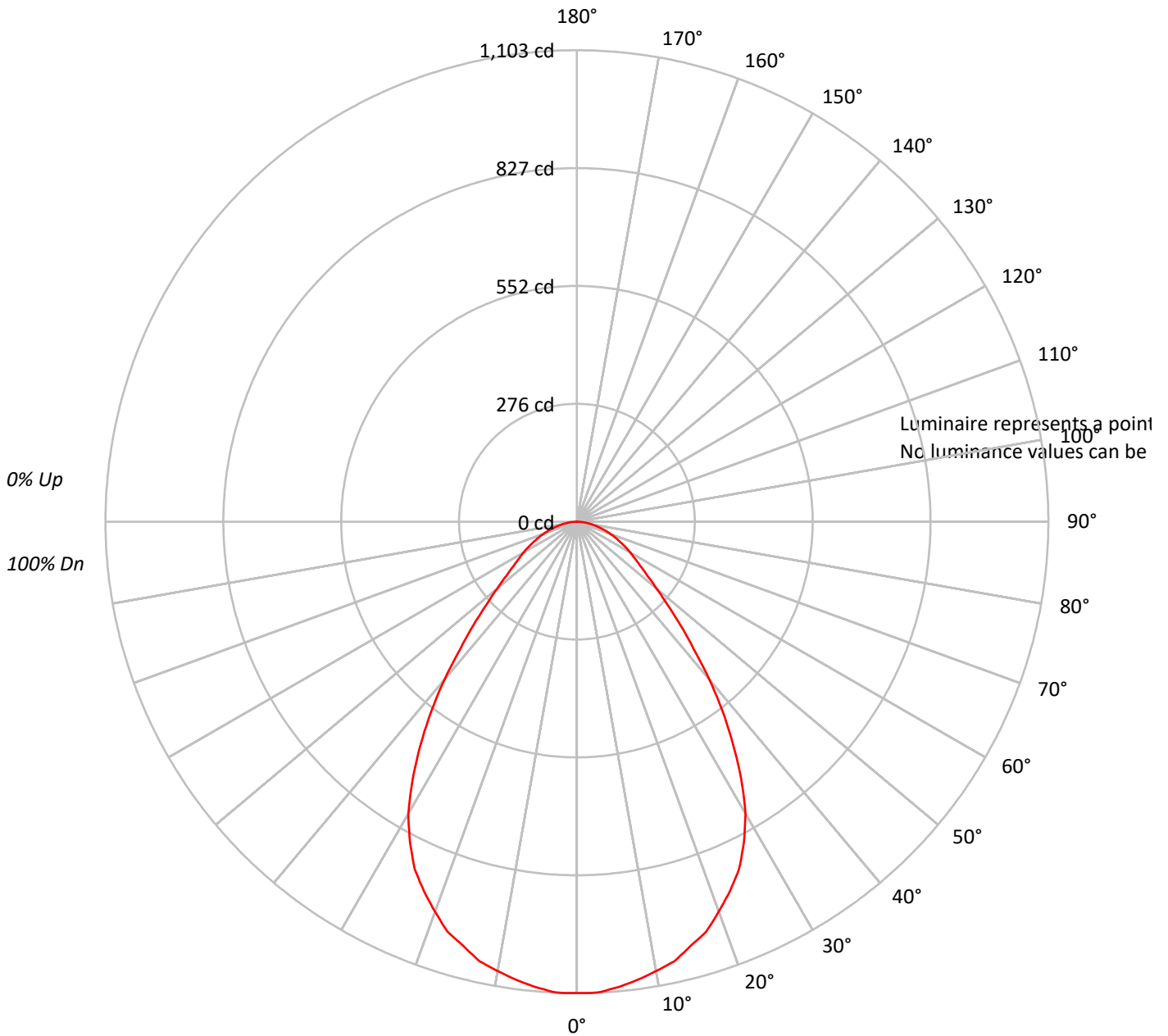
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 103 | 96  | 91  | 86  | 101 | 94  | 89  | 85  | 91  | 87  | 83  | 88  | 84  | 81  | 85  | 82  | 80  | 78  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 96  | 87  | 80  | 75  | 93  | 85  | 79  | 74  | 83  | 77  | 73  | 80  | 76  | 72  | 78  | 74  | 71  | 69  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 89  | 79  | 72  | 66  | 87  | 78  | 71  | 66  | 75  | 69  | 65  | 73  | 68  | 64  | 71  | 67  | 63  | 61  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 83  | 72  | 64  | 59  | 81  | 71  | 64  | 58  | 69  | 63  | 58  | 67  | 62  | 57  | 65  | 61  | 57  | 55  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 78  | 66  | 58  | 53  | 76  | 65  | 58  | 53  | 64  | 57  | 52  | 62  | 56  | 52  | 60  | 55  | 51  | 50  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 73  | 61  | 53  | 48  | 71  | 60  | 53  | 48  | 59  | 52  | 47  | 57  | 51  | 47  | 56  | 51  | 47  | 45  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 68  | 56  | 49  | 44  | 67  | 56  | 49  | 44  | 54  | 48  | 43  | 53  | 47  | 43  | 52  | 47  | 43  | 41  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 64  | 52  | 45  | 40  | 63  | 52  | 45  | 40  | 51  | 44  | 40  | 50  | 44  | 40  | 49  | 43  | 39  | 38  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 61  | 49  | 42  | 37  | 59  | 48  | 41  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 46  | 40  | 36  | 35  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 103.6  | 5.7       |
| 10°-20°   | 289.6  | 15.9      |
| 20°-30°   | 409.3  | 22.5      |
| 30°-40°   | 396.4  | 21.8      |
| 40°-50°   | 267.5  | 14.7      |
| 50°-60°   | 166.0  | 9.1       |
| 60°-70°   | 111.0  | 6.1       |
| 70°-80°   | 60.7   | 3.3       |
| 80°-90°   | 16.1   | 0.9       |
| 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°    | 802.4  | 44.1      |
| 0°-40°    | 1198.9 | 65.9      |
| 0°-60°    | 1632.4 | 89.7      |
| 0°-90°    | 1820.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1820.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1103 |      |
| 5°  | 1094 | 104  |
| 15° | 1027 | 290  |
| 25° | 898  | 409  |
| 35° | 638  | 396  |
| 45° | 342  | 268  |
| 55° | 182  | 166  |
| 65° | 111  | 111  |
| 75° | 57   | 61   |
| 85° | 14   | 16   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1103.0 |
| 2.5°  | 1103.0 |
| 5°    | 1093.5 |
| 7.5°  | 1081.7 |
| 10°   | 1067.5 |
| 12.5° | 1053.4 |
| 15°   | 1027.4 |
| 17.5° | 1006.1 |
| 20°   | 970.7  |
| 22.5° | 935.3  |
| 25°   | 897.5  |
| 27.5° | 845.5  |
| 30°   | 788.8  |
| 32.5° | 715.6  |
| 35°   | 637.7  |
| 37.5° | 559.7  |
| 40°   | 481.8  |
| 42.5° | 403.9  |
| 45°   | 342.5  |
| 47.5° | 285.8  |
| 50°   | 243.3  |
| 52.5° | 207.8  |
| 55°   | 181.9  |
| 57.5° | 160.6  |
| 60°   | 144.1  |
| 62.5° | 127.5  |
| 65°   | 111.0  |
| 67.5° | 96.8   |
| 70°   | 82.7   |
| 72.5° | 70.9   |
| 75°   | 56.7   |
| 77.5° | 44.9   |
| 80°   | 33.1   |
| 82.5° | 23.6   |
| 85°   | 14.2   |
| 87.5° | 4.7    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)