

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: P211973

Luminaire Tested: **LSR4B30D010BZ EC4B30509030 4LBNH1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P211973  
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 EC4B30509030 4LBNH1  
Description: PORTFOLIO 4 INCH CYLINDER  
NARROW DISTRIBUTION WITH SEMI-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: 1557.5 lumens  
Efficiency: N/A  
Efficacy: 55.6 lumens/watt  
Spacing Criteria (0/90/45): 0.81 / 0.81 / 0.85  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

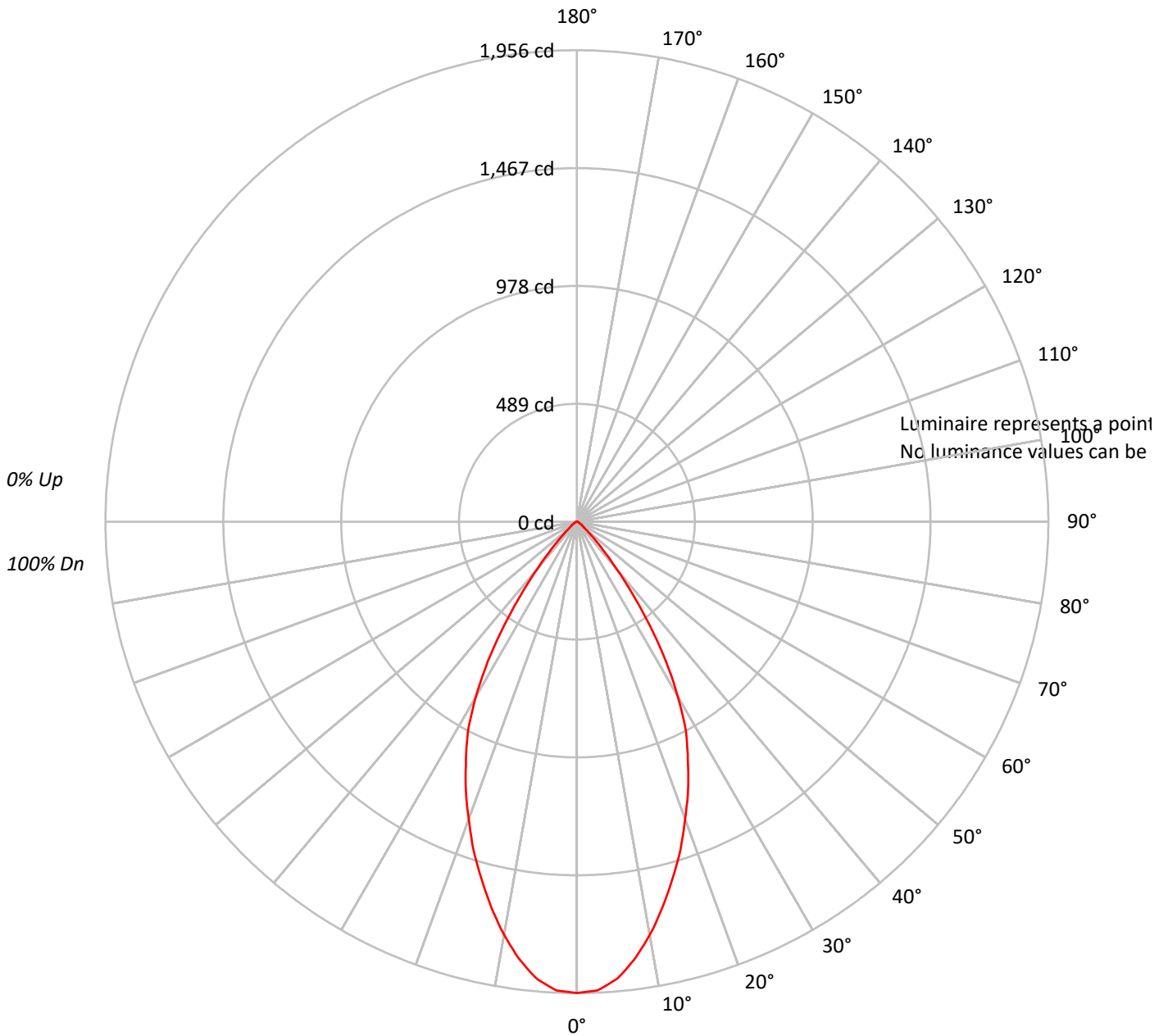
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 113 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 | 101 | 99  | 98  | 97  | 96  | 95  | 93  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 108 | 103 | 99  | 96  | 106 | 101 | 98  | 94  | 98  | 95  | 92  | 95  | 93  | 90  | 92  | 90  | 89  | 87  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 102 | 96  | 91  | 87  | 100 | 95  | 90  | 86  | 92  | 88  | 85  | 90  | 86  | 84  | 87  | 85  | 82  | 81  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 97  | 90  | 84  | 80  | 95  | 89  | 83  | 79  | 86  | 82  | 78  | 84  | 81  | 78  | 83  | 79  | 77  | 75  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 92  | 84  | 78  | 74  | 91  | 83  | 78  | 73  | 81  | 76  | 73  | 80  | 75  | 72  | 78  | 74  | 72  | 70  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 88  | 79  | 73  | 69  | 86  | 78  | 72  | 68  | 77  | 72  | 68  | 75  | 71  | 67  | 74  | 70  | 67  | 65  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 83  | 74  | 68  | 64  | 82  | 73  | 68  | 64  | 72  | 67  | 63  | 71  | 66  | 63  | 70  | 66  | 63  | 61  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 79  | 70  | 64  | 60  | 78  | 69  | 64  | 60  | 68  | 63  | 59  | 67  | 63  | 59  | 66  | 62  | 59  | 58  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 76  | 66  | 60  | 56  | 74  | 65  | 60  | 56  | 65  | 59  | 56  | 64  | 59  | 56  | 63  | 59  | 55  | 54  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 72  | 62  | 57  | 53  | 71  | 62  | 56  | 53  | 61  | 56  | 53  | 60  | 56  | 52  | 60  | 55  | 52  | 51  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 176.4  | 11.3      |
| 10°-20°   | 428.0  | 27.5      |
| 20°-30°   | 496.9  | 31.9      |
| 30°-40°   | 329.0  | 21.1      |
| 40°-50°   | 92.3   | 5.9       |
| 50°-60°   | 23.2   | 1.5       |
| 60°-70°   | 8.7    | 0.6       |
| 70°-80°   | 2.9    | 0.2       |
| 80°-90°   | 0.0    | 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°    | 1101.3 | 70.7      |
| 0°-40°    | 1430.4 | 91.8      |
| 0°-60°    | 1545.9 | 99.3      |
| 0°-90°    | 1557.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1557.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1956 |      |
| 5°  | 1905 | 176  |
| 15° | 1532 | 428  |
| 25° | 1089 | 497  |
| 35° | 528  | 329  |
| 45° | 107  | 92   |
| 55° | 25   | 23   |
| 65° | 8    | 9    |
| 75° | 3    | 3    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1955.5 |
| 2.5°  | 1947.1 |
| 5°    | 1904.8 |
| 7.5°  | 1831.4 |
| 10°   | 1741.1 |
| 12.5° | 1639.5 |
| 15°   | 1532.3 |
| 17.5° | 1427.9 |
| 20°   | 1312.2 |
| 22.5° | 1204.9 |
| 25°   | 1089.2 |
| 27.5° | 979.2  |
| 30°   | 838.1  |
| 32.5° | 688.5  |
| 35°   | 527.7  |
| 37.5° | 378.1  |
| 40°   | 256.8  |
| 42.5° | 166.5  |
| 45°   | 107.2  |
| 47.5° | 64.9   |
| 50°   | 42.3   |
| 52.5° | 31.0   |
| 55°   | 25.4   |
| 57.5° | 19.8   |
| 60°   | 14.1   |
| 62.5° | 11.3   |
| 65°   | 8.5    |
| 67.5° | 5.6    |
| 70°   | 5.6    |
| 72.5° | 2.8    |
| 75°   | 2.8    |
| 77.5° | 2.8    |
| 80°   | 0.0    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)