

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: P212412

Luminaire Tested: **LSR4B40D010BZ EC4B30508035 4LBPSMW1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P212412  
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: LSR4B40D010BZ EC4B30508035 4LBPSMW1  
Description: PORTFOLIO 4 INCH CYLINDER  
SHALLOW DISTRIBUTION WITH PLASTIC MATTE WHITE TRIM  
WATTAGE D010TR-43.02W DE010-42.54W D5LT-42.539W DMX-41.87W DL2-41.57W  
DL3-44.71W DLE-39.33W  
Light Source: HIGH LUMEN LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4466.0 lumens  
Efficiency: N/A  
Efficacy: 106.8 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

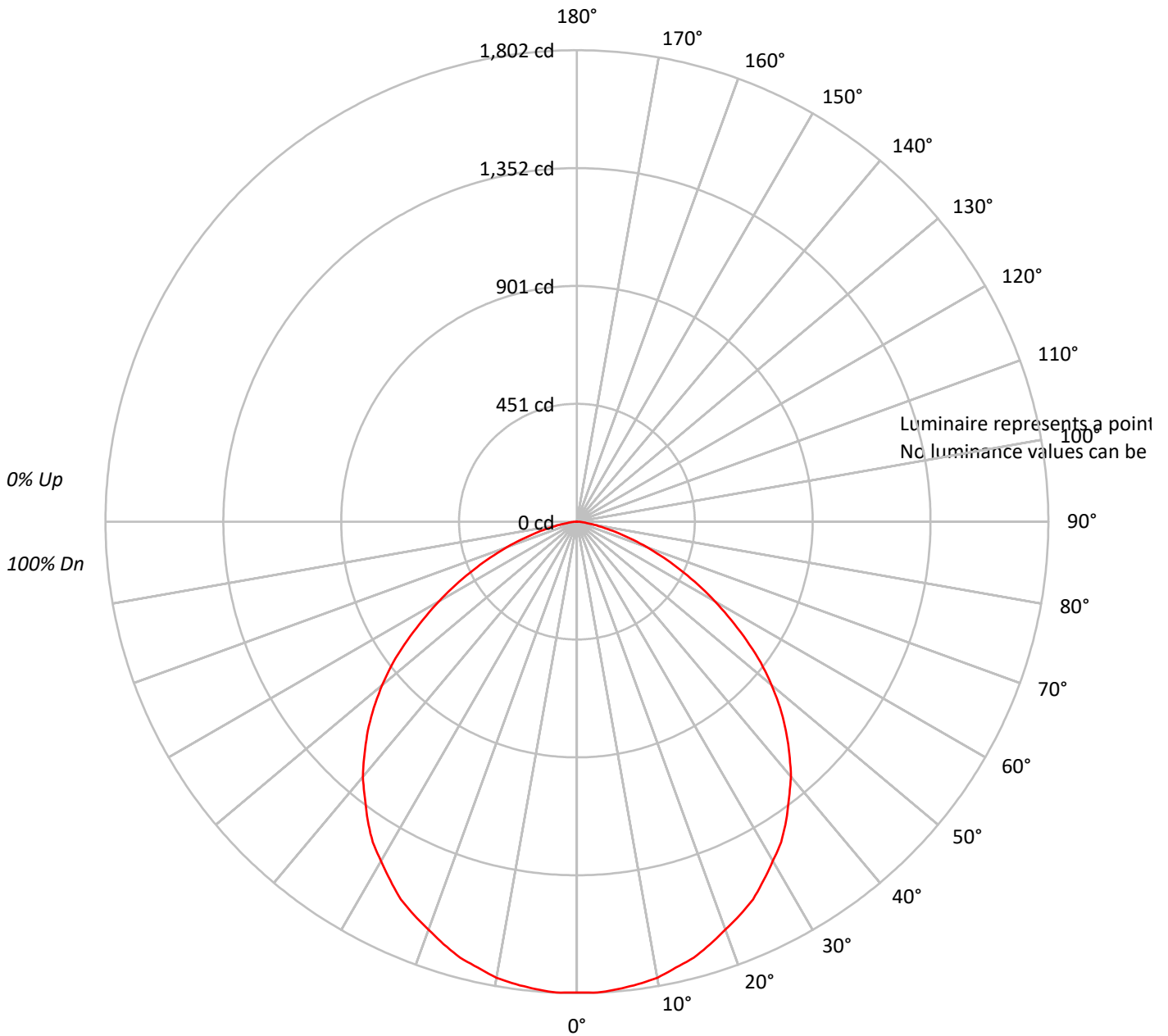
Input Watts (W): 41.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 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°    | 170.5  | 3.8       |
| 10°-20°   | 486.0  | 10.9      |
| 20°-30°   | 731.9  | 16.4      |
| 30°-40°   | 870.9  | 19.5      |
| 40°-50°   | 869.3  | 19.5      |
| 50°-60°   | 707.0  | 15.8      |
| 60°-70°   | 434.9  | 9.7       |
| 70°-80°   | 168.5  | 3.8       |
| 80°-90°   | 27.0   | 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°    | 1388.4 | 31.1      |
| 0°-40°    | 2259.3 | 50.6      |
| 0°-60°    | 3835.6 | 85.9      |
| 0°-90°    | 4466.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4466.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1799 |      |
| 5°  | 1794 | 170  |
| 15° | 1725 | 486  |
| 25° | 1593 | 732  |
| 35° | 1394 | 871  |
| 45° | 1130 | 869  |
| 55° | 791  | 707  |
| 65° | 437  | 435  |
| 75° | 154  | 168  |
| 85° | 21   | 27   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1799.4 |
| 2.5°  | 1802.0 |
| 5°    | 1794.1 |
| 7.5°  | 1783.5 |
| 10°   | 1770.3 |
| 12.5° | 1746.5 |
| 15°   | 1725.3 |
| 17.5° | 1693.5 |
| 20°   | 1659.1 |
| 22.5° | 1627.4 |
| 25°   | 1593.0 |
| 27.5° | 1545.4 |
| 30°   | 1497.7 |
| 32.5° | 1452.7 |
| 35°   | 1394.5 |
| 37.5° | 1331.0 |
| 40°   | 1272.8 |
| 42.5° | 1201.4 |
| 45°   | 1129.9 |
| 47.5° | 1053.2 |
| 50°   | 971.1  |
| 52.5° | 886.5  |
| 55°   | 791.2  |
| 57.5° | 698.6  |
| 60°   | 608.6  |
| 62.5° | 521.3  |
| 65°   | 436.6  |
| 67.5° | 357.2  |
| 70°   | 283.1  |
| 72.5° | 214.3  |
| 75°   | 153.5  |
| 77.5° | 100.6  |
| 80°   | 60.9   |
| 82.5° | 37.0   |
| 85°   | 21.2   |
| 87.5° | 10.6   |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)