

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: P212165

Luminaire Tested: **LE\_4B30D010 EC4B30509050 4LBCSM1B**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P212165  
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: LE\_4B30D010 EC4B30509050 4LBCSM1B  
Description: PORTFOLIO 4 INCH CYLINDER  
SHALLOW DISTRIBUTION WITH CAST MATTE METALLIC SILVER 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: 2882.5 lumens  
Efficiency: N/A  
Efficacy: 102.9 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

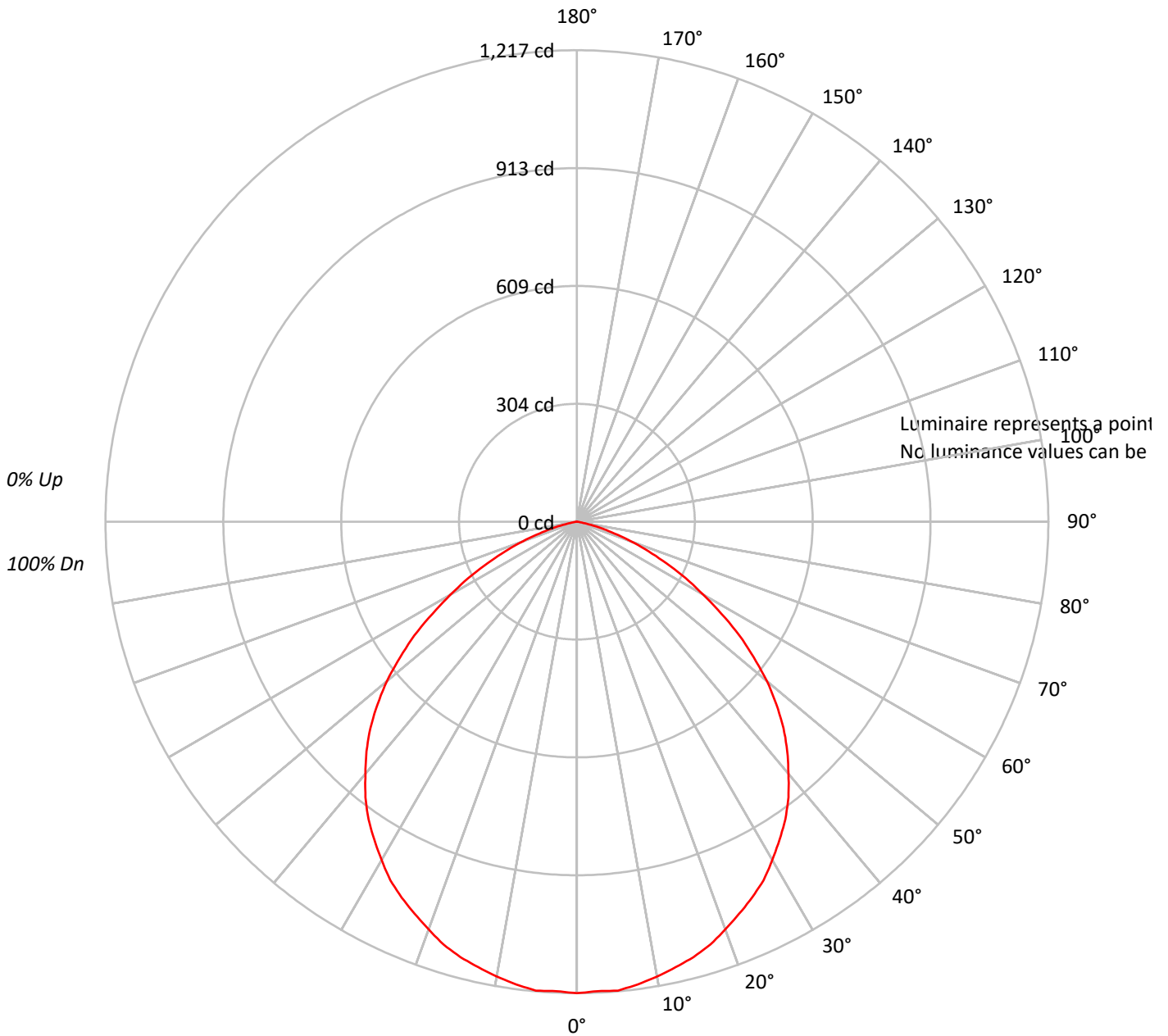
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |    |    | 20 |     |
| RC  | 80  |     |     |     | 70  |     |     |     | 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 |    |    |    | 100 |
| 1   | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 98  | 95  | 96  | 94  | 92  | 93  | 91  | 90  | 88  |    |    |    | 88  |
| 2   | 102 | 95  | 89  | 84  | 99  | 93  | 87  | 83  | 89  | 85  | 81  | 86  | 82  | 79  | 83  | 80  | 77  | 75  |    |    |    | 75  |
| 3   | 93  | 84  | 77  | 71  | 91  | 83  | 76  | 70  | 80  | 74  | 69  | 77  | 72  | 68  | 74  | 70  | 67  | 65  |    |    |    | 65  |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 66  | 61  | 71  | 65  | 60  | 69  | 63  | 59  | 67  | 62  | 58  | 56  |    |    |    | 56  |
| 5   | 79  | 67  | 59  | 53  | 77  | 66  | 59  | 53  | 64  | 57  | 52  | 62  | 56  | 52  | 61  | 55  | 51  | 49  |    |    |    | 49  |
| 6   | 74  | 61  | 53  | 47  | 72  | 60  | 52  | 46  | 58  | 51  | 46  | 57  | 50  | 46  | 55  | 50  | 45  | 43  |    |    |    | 43  |
| 7   | 68  | 55  | 47  | 41  | 67  | 55  | 47  | 41  | 53  | 46  | 41  | 52  | 45  | 41  | 50  | 45  | 40  | 39  |    |    |    | 39  |
| 8   | 64  | 51  | 43  | 37  | 62  | 50  | 42  | 37  | 49  | 42  | 37  | 48  | 41  | 37  | 46  | 41  | 36  | 35  |    |    |    | 35  |
| 9   | 60  | 47  | 39  | 33  | 58  | 46  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 31  |    |    |    | 31  |
| 10  | 56  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 34  | 30  | 40  | 34  | 30  | 28  |    |    |    | 28  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 115.1  | 4.0       |
| 10°-20°   | 328.0  | 11.4      |
| 20°-30°   | 493.0  | 17.1      |
| 30°-40°   | 585.0  | 20.3      |
| 40°-50°   | 578.9  | 20.1      |
| 50°-60°   | 454.7  | 15.8      |
| 60°-70°   | 255.0  | 8.8       |
| 70°-80°   | 71.6   | 2.5       |
| 80°-90°   | 1.1    | 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°    | 936.2  | 32.5      |
| 0°-40°    | 1521.2 | 52.8      |
| 0°-60°    | 2554.9 | 88.6      |
| 0°-90°    | 2882.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2882.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1217 |      |
| 5°  | 1215 | 115  |
| 15° | 1164 | 328  |
| 25° | 1070 | 493  |
| 35° | 938  | 585  |
| 45° | 754  | 579  |
| 55° | 512  | 455  |
| 65° | 254  | 255  |
| 75° | 62   | 72   |
| 85° | 0    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1217.2 |
| 2.5°  | 1213.0 |
| 5°    | 1215.1 |
| 7.5°  | 1204.8 |
| 10°   | 1192.4 |
| 12.5° | 1177.9 |
| 15°   | 1163.5 |
| 17.5° | 1144.8 |
| 20°   | 1120.1 |
| 22.5° | 1095.3 |
| 25°   | 1070.4 |
| 27.5° | 1043.5 |
| 30°   | 1008.5 |
| 32.5° | 973.4  |
| 35°   | 938.2  |
| 37.5° | 896.9  |
| 40°   | 849.4  |
| 42.5° | 803.9  |
| 45°   | 754.2  |
| 47.5° | 698.4  |
| 50°   | 640.7  |
| 52.5° | 574.5  |
| 55°   | 512.5  |
| 57.5° | 442.2  |
| 60°   | 376.1  |
| 62.5° | 316.2  |
| 65°   | 254.2  |
| 67.5° | 200.4  |
| 70°   | 148.8  |
| 72.5° | 101.3  |
| 75°   | 61.9   |
| 77.5° | 31.0   |
| 80°   | 8.2    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)