

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: P212124

Luminaire Tested: **LE\_4B30D010 EC4B30509040 4LBS1GPH**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P212124  
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 EC4B30509040 4LBS1GPH  
Description: PORTFOLIO 4 INCH CYLINDER  
SHALLOW DISTRIBUTION WITH GRAPHITE HAZE 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: 2646.7 lumens  
Efficiency: N/A  
Efficacy: 94.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.16 / 1.26  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

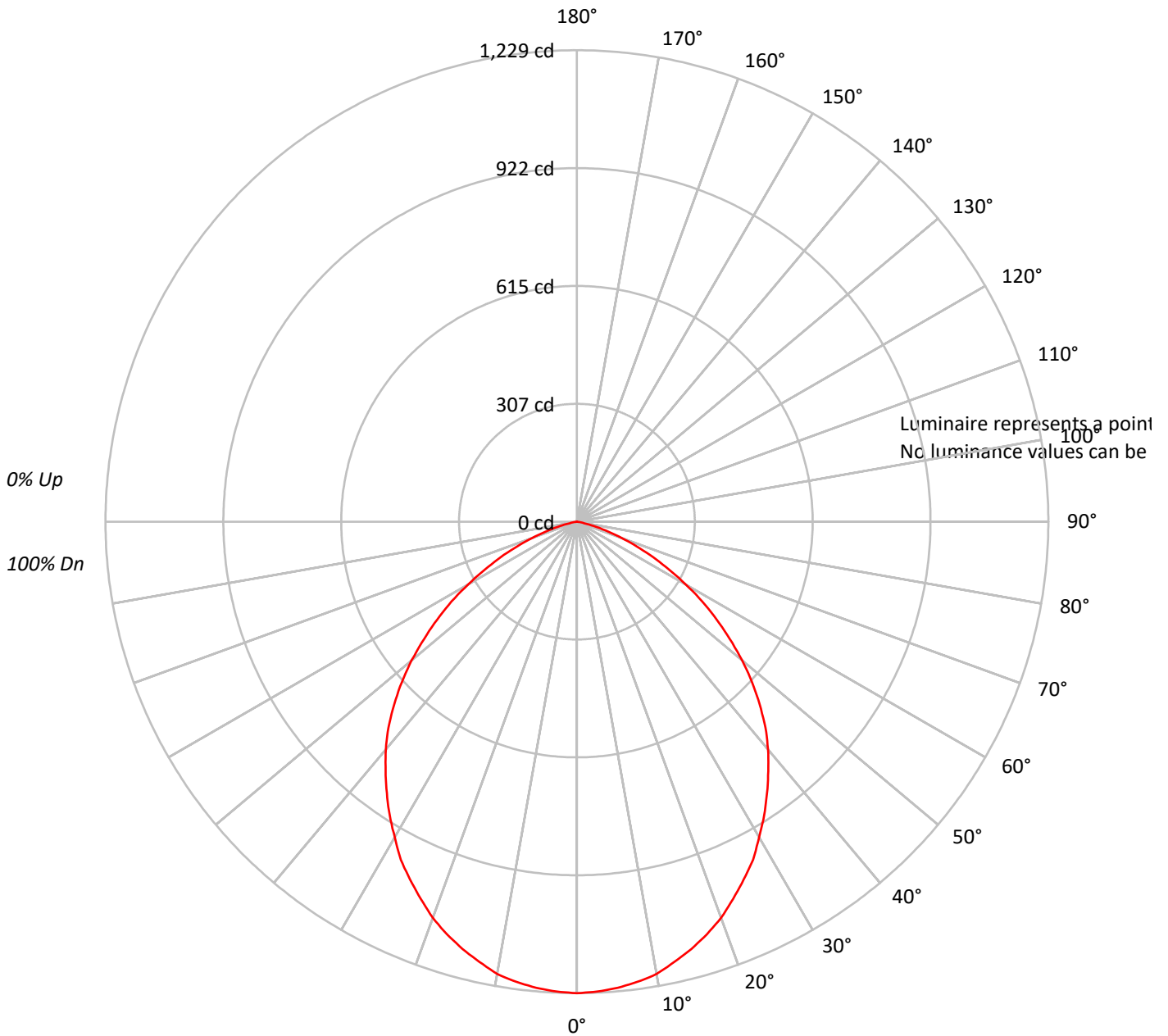
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 103 | 100 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 91  | 90  | 88  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 102 | 95  | 89  | 84  | 100 | 93  | 88  | 83  | 90  | 85  | 82  | 87  | 83  | 80  | 84  | 81  | 78  | 76  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 94  | 85  | 78  | 72  | 92  | 83  | 77  | 71  | 80  | 75  | 70  | 78  | 73  | 69  | 75  | 71  | 68  | 66  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 87  | 76  | 68  | 62  | 85  | 75  | 67  | 62  | 72  | 66  | 61  | 70  | 65  | 60  | 68  | 63  | 59  | 57  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 80  | 68  | 60  | 54  | 78  | 67  | 60  | 54  | 65  | 59  | 53  | 63  | 58  | 53  | 62  | 56  | 52  | 50  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 74  | 62  | 54  | 48  | 73  | 61  | 53  | 48  | 59  | 52  | 47  | 58  | 52  | 47  | 56  | 51  | 47  | 45  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 69  | 57  | 48  | 43  | 68  | 56  | 48  | 43  | 54  | 47  | 42  | 53  | 47  | 42  | 52  | 46  | 42  | 40  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 65  | 52  | 44  | 38  | 63  | 51  | 44  | 38  | 50  | 43  | 38  | 49  | 42  | 38  | 48  | 42  | 38  | 36  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 60  | 48  | 40  | 35  | 59  | 47  | 40  | 35  | 46  | 39  | 35  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 57  | 44  | 37  | 32  | 56  | 44  | 36  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 30  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 115.7  | 4.4       |
| 10°-20°   | 324.9  | 12.3      |
| 20°-30°   | 473.8  | 17.9      |
| 30°-40°   | 540.3  | 20.4      |
| 40°-50°   | 518.3  | 19.6      |
| 50°-60°   | 397.0  | 15.0      |
| 60°-70°   | 217.8  | 8.2       |
| 70°-80°   | 57.9   | 2.2       |
| 80°-90°   | 0.9    | 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°    | 914.4  | 34.6      |
| 0°-40°    | 1454.8 | 55.0      |
| 0°-60°    | 2370.1 | 89.5      |
| 0°-90°    | 2646.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2646.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1229 |      |
| 5°  | 1220 | 116  |
| 15° | 1153 | 325  |
| 25° | 1029 | 474  |
| 35° | 864  | 540  |
| 45° | 673  | 518  |
| 55° | 445  | 397  |
| 65° | 219  | 218  |
| 75° | 51   | 58   |
| 85° | 0    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1229.3 |
| 2.5°  | 1226.1 |
| 5°    | 1219.7 |
| 7.5°  | 1210.2 |
| 10°   | 1197.5 |
| 12.5° | 1175.3 |
| 15°   | 1153.0 |
| 17.5° | 1127.6 |
| 20°   | 1099.0 |
| 22.5° | 1064.1 |
| 25°   | 1029.2 |
| 27.5° | 994.2  |
| 30°   | 949.7  |
| 32.5° | 908.4  |
| 35°   | 864.0  |
| 37.5° | 819.5  |
| 40°   | 775.0  |
| 42.5° | 727.4  |
| 45°   | 673.4  |
| 47.5° | 619.4  |
| 50°   | 562.3  |
| 52.5° | 501.8  |
| 55°   | 444.7  |
| 57.5° | 387.6  |
| 60°   | 327.1  |
| 62.5° | 270.0  |
| 65°   | 219.1  |
| 67.5° | 168.3  |
| 70°   | 123.9  |
| 72.5° | 82.6   |
| 75°   | 50.8   |
| 77.5° | 22.3   |
| 80°   | 6.4    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)