

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: P211945

Luminaire Tested: **LE\_4B30D010 EC4B30508030 4LBN1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P211945  
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 EC4B30508030 4LBN1LI  
Description: PORTFOLIO 4 INCH CYLINDER  
NARROW DISTRIBUTION WITH 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: 2491.8 lumens  
Efficiency: N/A  
Efficacy: 89.0 lumens/watt  
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.54  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

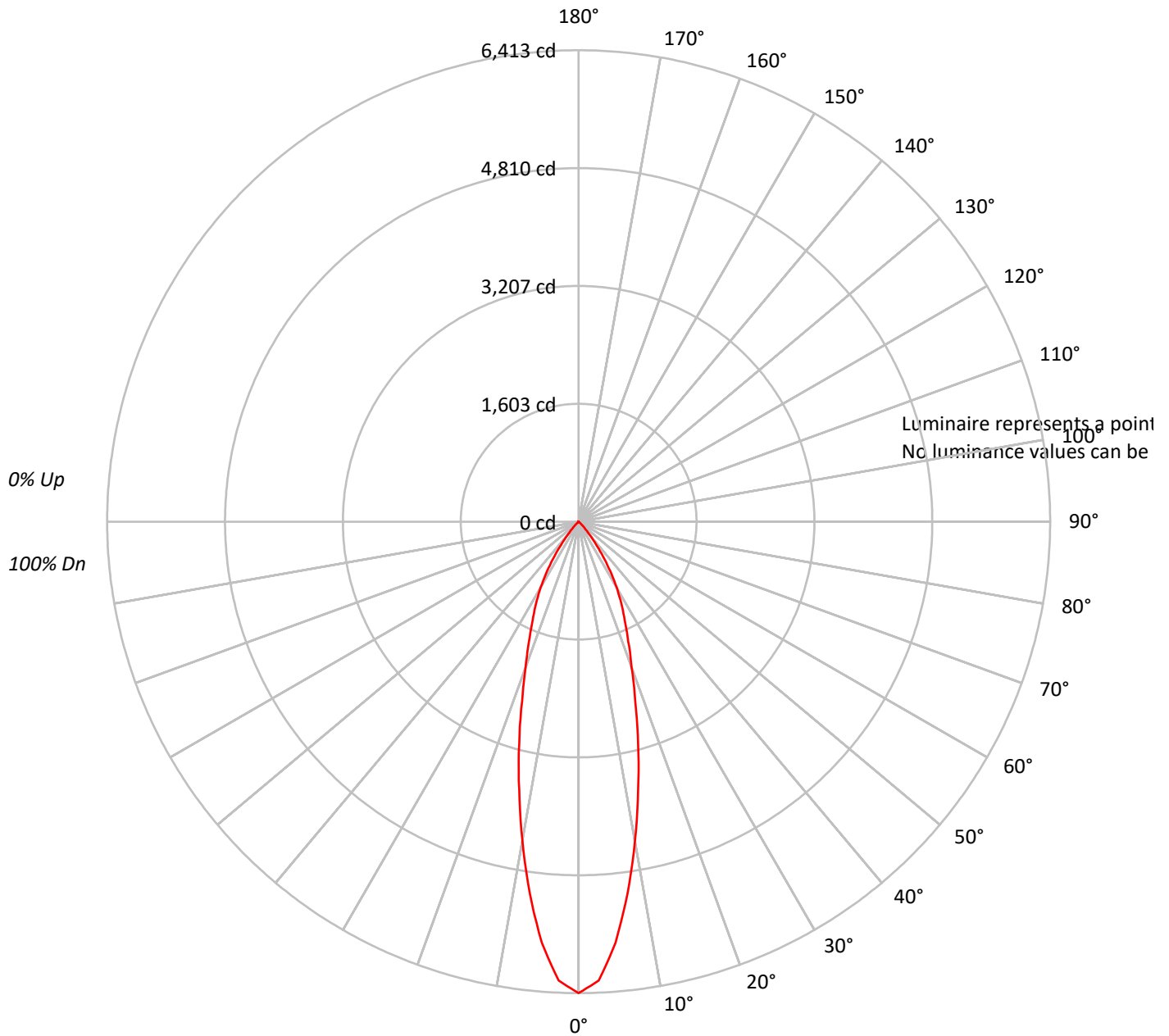
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





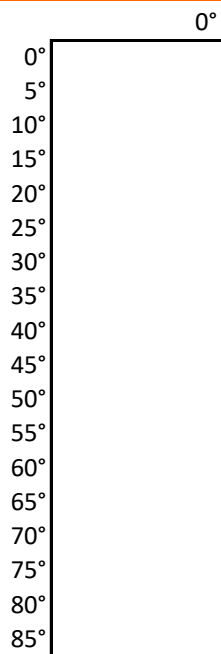
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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |  | 20  |     |     |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |  | 30  |     |     |  | 10  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 |  | 102 | 101 | 100 |  | 99  |
| 2   | 109 | 105 | 102 | 99  | 107 | 103 | 100 | 98  | 100 | 98  | 95  |  | 97  | 95  | 93  |  | 95  |
| 3   | 105 | 99  | 95  | 92  | 103 | 98  | 94  | 91  | 95  | 92  | 89  |  | 93  | 90  | 88  |  | 91  |
| 4   | 101 | 94  | 89  | 86  | 99  | 93  | 88  | 85  | 91  | 87  | 84  |  | 89  | 86  | 83  |  | 87  |
| 5   | 96  | 89  | 84  | 80  | 95  | 88  | 84  | 80  | 87  | 82  | 79  |  | 85  | 81  | 79  |  | 83  |
| 6   | 92  | 85  | 80  | 76  | 91  | 84  | 79  | 76  | 83  | 78  | 75  |  | 81  | 78  | 75  |  | 80  |
| 7   | 89  | 81  | 76  | 72  | 88  | 80  | 75  | 72  | 79  | 75  | 71  |  | 78  | 74  | 71  |  | 77  |
| 8   | 85  | 77  | 72  | 68  | 84  | 77  | 72  | 68  | 76  | 71  | 68  |  | 75  | 71  | 68  |  | 74  |
| 9   | 82  | 74  | 69  | 65  | 81  | 73  | 68  | 65  | 72  | 68  | 65  |  | 72  | 68  | 65  |  | 71  |
| 10  | 79  | 71  | 66  | 62  | 78  | 70  | 65  | 62  | 69  | 65  | 62  |  | 69  | 65  | 62  |  | 68  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 505.4  | 20.3      |
| 10°-20°   | 865.2  | 34.7      |
| 20°-30°   | 687.6  | 27.6      |
| 30°-40°   | 364.0  | 14.6      |
| 40°-50°   | 62.7   | 2.5       |
| 50°-60°   | 4.7    | 0.2       |
| 60°-70°   | 2.3    | 0.1       |
| 70°-80°   | 0.0    | 0.0       |
| 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°    | 2058.1 | 82.6      |
| 0°-40°    | 2422.1 | 97.2      |
| 0°-60°    | 2489.5 | 99.9      |
| 0°-90°    | 2491.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2491.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 6413 |      |
| 5°  | 5749 | 505  |
| 15° | 3128 | 865  |
| 25° | 1481 | 688  |
| 35° | 576  | 364  |
| 45° | 65   | 63   |
| 55° | 4    | 5    |
| 65° | 4    | 2    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 6412.6 |
| 2.5°  | 6247.6 |
| 5°    | 5748.7 |
| 7.5°  | 5096.3 |
| 10°   | 4405.6 |
| 12.5° | 3737.9 |
| 15°   | 3127.6 |
| 17.5° | 2559.7 |
| 20°   | 2106.8 |
| 22.5° | 1761.5 |
| 25°   | 1481.3 |
| 27.5° | 1254.9 |
| 30°   | 1028.5 |
| 32.5° | 798.2  |
| 35°   | 575.6  |
| 37.5° | 379.9  |
| 40°   | 226.4  |
| 42.5° | 130.5  |
| 45°   | 65.2   |
| 47.5° | 23.0   |
| 50°   | 7.7    |
| 52.5° | 7.7    |
| 55°   | 3.8    |
| 57.5° | 3.8    |
| 60°   | 3.8    |
| 62.5° | 3.8    |
| 65°   | 3.8    |
| 67.5° | 0.0    |
| 70°   | 0.0    |
| 72.5° | 0.0    |
| 75°   | 0.0    |
| 77.5° | 0.0    |
| 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)