

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P835585

Luminaire Tested: **ORLG-24-2-INS-OPL-LD4-1LO-20-120-EDD**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P835585  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 5/16/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: ORLG-24-2-INS-OPL-LD4-1LO-20-120-EDD  
Description: 2FT x 2FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 2000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

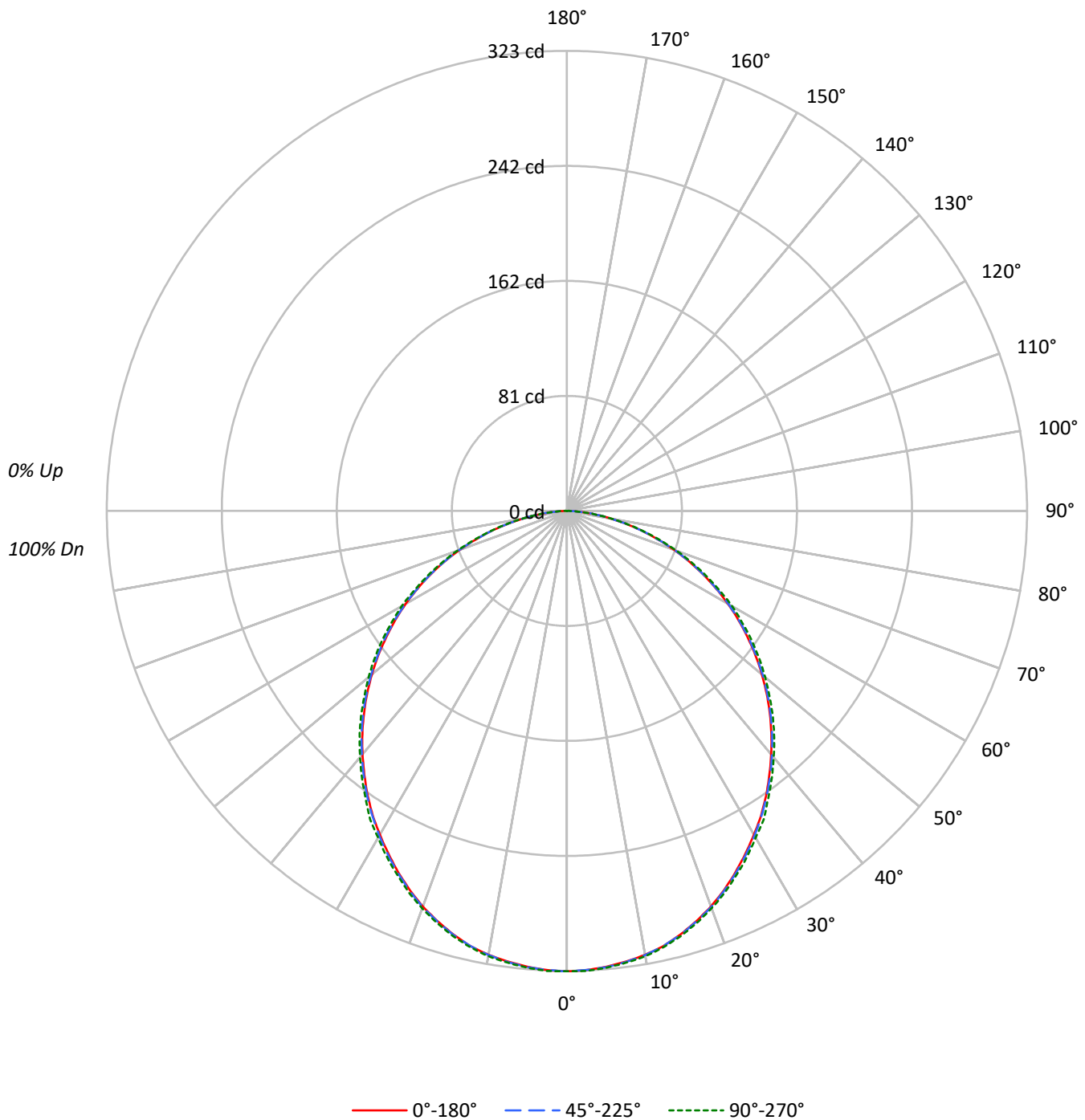
Lumens per Lamp: N/A  
Luminaire Lumens: 873.5 lumens  
Efficiency: N/A  
Efficacy: 74.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
Input Voltage (V): 120  
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: 28.75 FT

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### Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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  | 30  | 10  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 94  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 86  | 86  | 84  |
| 2   | 99  | 91  | 84  | 78  | 96  | 89  | 83  | 77  | 85  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 72  | 72  | 72  | 70  |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 65  | 75  | 69  | 64  | 73  | 67  | 62  | 70  | 65  | 61  | 61  | 61  | 59  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  | 65  | 58  | 53  | 62  | 57  | 53  | 53  | 53  | 51  |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  | 58  | 52  | 46  | 56  | 51  | 46  | 46  | 46  | 44  |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 40  | 40  | 38  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 36  | 48  | 41  | 36  | 47  | 41  | 36  | 36  | 36  | 34  |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 32  | 32  | 30  |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 29  | 29  | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 26  | 26  | 26  | 25  |

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

|     | 0°  | 45° | 90° |
|-----|-----|-----|-----|
| 0°  | 870 | 870 | 870 |
| 5°  | 868 | 868 | 870 |
| 10° | 865 | 865 | 868 |
| 15° | 858 | 858 | 861 |
| 20° | 847 | 848 | 851 |
| 25° | 831 | 833 | 837 |
| 30° | 816 | 818 | 823 |
| 35° | 801 | 803 | 809 |
| 40° | 784 | 787 | 794 |
| 45° | 767 | 770 | 778 |
| 50° | 748 | 751 | 760 |
| 55° | 727 | 730 | 742 |
| 60° | 703 | 706 | 722 |
| 65° | 672 | 674 | 687 |
| 70° | 631 | 632 | 645 |
| 75° | 574 | 572 | 584 |
| 80° | 493 | 491 | 499 |
| 85° | 383 | 377 | 377 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 30.5   | 3.5       |
| 10°-20°   | 86.9   | 9.9       |
| 20°-30°   | 129.4  | 14.8      |
| 30°-40°   | 153.0  | 17.5      |
| 40°-50°   | 156.2  | 17.9      |
| 50°-60°   | 139.4  | 16.0      |
| 60°-70°   | 105.0  | 12.0      |
| 70°-80°   | 58.6   | 6.7       |
| 80°-90°   | 14.7   | 1.7       |
| 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°    | 246.8  | 28.3      |
| 0°-40°    | 399.8  | 45.8      |
| 0°-60°    | 695.3  | 79.6      |
| 0°-90°    | 873.5  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 873.5  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 323 | 323   | 323 | 323   | 323 |      |
| 5°  | 321 | 322   | 322 | 322   | 322 | 31   |
| 15° | 308 | 308   | 308 | 308   | 309 | 87   |
| 25° | 280 | 280   | 281 | 281   | 282 | 129  |
| 35° | 244 | 244   | 244 | 245   | 246 | 152  |
| 45° | 202 | 201   | 202 | 203   | 204 | 155  |
| 55° | 155 | 155   | 156 | 157   | 158 | 139  |
| 65° | 106 | 105   | 106 | 107   | 108 | 104  |
| 75° | 55  | 55    | 55  | 55    | 56  | 58   |
| 85° | 12  | 12    | 12  | 12    | 12  | 15   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 323.3 | 323.3 | 323.3 | 323.3 | 323.3 |
| 2.5°  | 322.7 | 323.3 | 322.6 | 322.7 | 323.3 |
| 5°    | 321.2 | 321.8 | 321.5 | 321.5 | 321.9 |
| 7.5°  | 319.1 | 319.9 | 319.4 | 319.5 | 319.9 |
| 10°   | 316.5 | 317.1 | 316.6 | 316.9 | 317.5 |
| 12.5° | 312.9 | 313.2 | 312.9 | 313.0 | 313.7 |
| 15°   | 307.9 | 308.2 | 308.1 | 308.4 | 309.0 |
| 17.5° | 302.0 | 302.4 | 302.3 | 302.9 | 303.3 |
| 20°   | 295.6 | 295.7 | 296.0 | 296.5 | 297.0 |
| 22.5° | 288.1 | 288.3 | 288.6 | 289.3 | 289.9 |
| 25°   | 280.0 | 280.3 | 280.6 | 281.4 | 281.9 |
| 27.5° | 271.3 | 271.7 | 272.1 | 272.9 | 273.8 |
| 30°   | 262.5 | 262.5 | 263.4 | 264.2 | 265.0 |
| 32.5° | 253.6 | 253.3 | 254.1 | 255.1 | 257.0 |
| 35°   | 243.8 | 243.5 | 244.4 | 245.3 | 246.3 |
| 37.5° | 233.5 | 233.3 | 234.3 | 235.3 | 236.3 |
| 40°   | 223.1 | 222.9 | 223.9 | 224.9 | 225.9 |
| 42.5° | 212.5 | 212.4 | 213.3 | 214.3 | 215.4 |
| 45°   | 201.5 | 201.4 | 202.3 | 203.3 | 204.4 |
| 47.5° | 190.2 | 190.1 | 191.0 | 192.1 | 193.0 |
| 50°   | 178.7 | 178.6 | 179.5 | 180.6 | 181.6 |
| 52.5° | 166.9 | 166.9 | 167.7 | 168.7 | 170.2 |
| 55°   | 154.9 | 154.7 | 155.7 | 156.8 | 158.2 |
| 57.5° | 142.9 | 142.6 | 143.5 | 144.6 | 145.9 |
| 60°   | 130.6 | 130.3 | 131.1 | 132.2 | 134.1 |
| 62.5° | 118.1 | 117.7 | 118.5 | 119.5 | 120.7 |
| 65°   | 105.6 | 105.1 | 105.9 | 106.8 | 107.9 |
| 67.5° | 92.9  | 92.4  | 93.2  | 94.0  | 95.0  |
| 70°   | 80.2  | 79.7  | 80.3  | 81.1  | 82.0  |
| 72.5° | 67.5  | 67.1  | 67.5  | 67.9  | 69.0  |
| 75°   | 55.2  | 54.7  | 55.0  | 55.2  | 56.2  |
| 77.5° | 43.1  | 42.6  | 43.2  | 43.3  | 43.9  |
| 80°   | 31.8  | 31.3  | 31.7  | 31.7  | 32.2  |
| 82.5° | 21.5  | 21.1  | 21.6  | 21.2  | 21.6  |
| 85°   | 12.4  | 12.0  | 12.2  | 12.0  | 12.2  |
| 87.5° | 4.9   | 4.6   | 4.7   | 4.4   | 4.4   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)