

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: P834411

Luminaire Tested: **ORLG-12-4-INS-OPL-LD4-2HI-27-120-EDD**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P834411  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 5/16/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: ORLG-12-4-INS-OPL-LD4-2HI-27-120-EDD  
Description: 1FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 2700K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

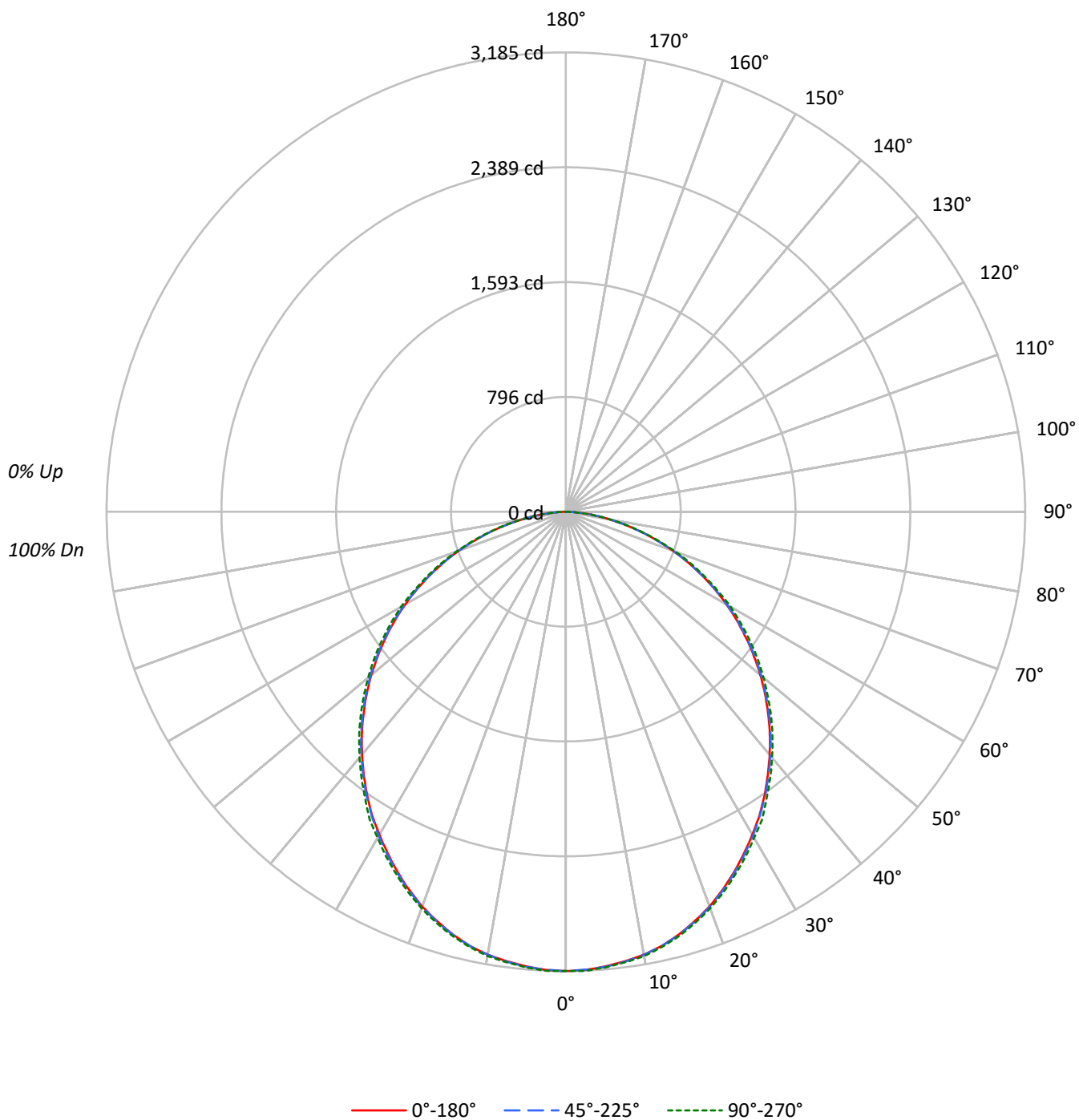
Lumens per Lamp: N/A  
Luminaire Lumens: 8604.3 lumens  
Efficiency: N/A  
Efficacy: 97.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 8569 | 8569 | 8569 |
| 5°  | 8547 | 8554 | 8564 |
| 10° | 8519 | 8521 | 8546 |
| 15° | 8449 | 8454 | 8478 |
| 20° | 8339 | 8348 | 8379 |
| 25° | 8188 | 8208 | 8245 |
| 30° | 8034 | 8061 | 8110 |
| 35° | 7888 | 7907 | 7970 |
| 40° | 7721 | 7747 | 7816 |
| 45° | 7552 | 7585 | 7662 |
| 50° | 7369 | 7402 | 7488 |
| 55° | 7160 | 7195 | 7312 |
| 60° | 6922 | 6951 | 7107 |
| 65° | 6620 | 6641 | 6767 |
| 70° | 6214 | 6220 | 6354 |
| 75° | 5648 | 5628 | 5758 |
| 80° | 4854 | 4832 | 4914 |
| 85° | 3767 | 3705 | 3724 |

Classified

Scaled Data Report

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 300.9  | 3.5       |
| 10°-20°   | 855.9  | 9.9       |
| 20°-30°   | 1274.2 | 14.8      |
| 30°-40°   | 1506.9 | 17.5      |
| 40°-50°   | 1538.3 | 17.9      |
| 50°-60°   | 1372.9 | 16.0      |
| 60°-70°   | 1034.0 | 12.0      |
| 70°-80°   | 576.7  | 6.7       |
| 80°-90°   | 144.5  | 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°    | 2431.1 | 28.3      |
| 0°-40°    | 3938.0 | 45.8      |
| 0°-60°    | 6849.2 | 79.6      |
| 0°-90°    | 8604.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 8604.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 3184 | 3184  | 3184 | 3184  | 3184 |      |
| 5°  | 3164 | 3170  | 3166 | 3167  | 3170 | 301  |
| 15° | 3033 | 3036  | 3035 | 3037  | 3043 | 855  |
| 25° | 2758 | 2761  | 2764 | 2772  | 2777 | 1270 |
| 35° | 2401 | 2398  | 2407 | 2416  | 2426 | 1502 |
| 45° | 1984 | 1984  | 1993 | 2003  | 2013 | 1531 |
| 55° | 1526 | 1524  | 1534 | 1544  | 1558 | 1364 |
| 65° | 1040 | 1036  | 1043 | 1052  | 1063 | 1028 |
| 75° | 543  | 539   | 541  | 544   | 554  | 576  |
| 85° | 122  | 119   | 120  | 119   | 121  | 146  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 3184.3 | 3184.3 | 3184.3 | 3184.3 | 3184.3 |
| 2.5°  | 3179.0 | 3184.3 | 3177.7 | 3179.0 | 3185.0 |
| 5°    | 3163.9 | 3169.8 | 3166.5 | 3167.2 | 3170.5 |
| 7.5°  | 3142.8 | 3150.7 | 3146.1 | 3147.4 | 3150.7 |
| 10°   | 3117.7 | 3123.7 | 3118.4 | 3121.7 | 3127.6 |
| 12.5° | 3082.1 | 3084.8 | 3082.1 | 3083.4 | 3090.0 |
| 15°   | 3032.7 | 3036.0 | 3034.6 | 3037.3 | 3043.2 |
| 17.5° | 2974.7 | 2978.6 | 2978.0 | 2983.2 | 2987.8 |
| 20°   | 2912.0 | 2912.7 | 2915.3 | 2920.6 | 2925.9 |
| 22.5° | 2838.2 | 2840.2 | 2842.8 | 2850.1 | 2855.3 |
| 25°   | 2757.8 | 2761.0 | 2764.3 | 2771.6 | 2776.9 |
| 27.5° | 2672.7 | 2676.0 | 2680.6 | 2688.5 | 2697.1 |
| 30°   | 2585.7 | 2585.7 | 2594.3 | 2602.2 | 2610.1 |
| 32.5° | 2498.0 | 2494.7 | 2502.6 | 2512.5 | 2531.6 |
| 35°   | 2401.1 | 2398.4 | 2407.0 | 2416.2 | 2426.1 |
| 37.5° | 2300.2 | 2298.2 | 2308.1 | 2318.0 | 2327.2 |
| 40°   | 2198.0 | 2195.4 | 2205.3 | 2215.2 | 2225.1 |
| 42.5° | 2093.2 | 2091.9 | 2101.1 | 2111.0 | 2121.6 |
| 45°   | 1984.4 | 1983.8 | 1993.0 | 2002.9 | 2013.4 |
| 47.5° | 1873.7 | 1872.3 | 1881.6 | 1892.1 | 1901.4 |
| 50°   | 1760.3 | 1758.9 | 1768.2 | 1778.7 | 1788.6 |
| 52.5° | 1643.6 | 1643.6 | 1652.1 | 1661.4 | 1676.5 |
| 55°   | 1526.2 | 1524.2 | 1533.5 | 1544.0 | 1558.5 |
| 57.5° | 1407.6 | 1404.9 | 1413.5 | 1424.0 | 1437.2 |
| 60°   | 1286.2 | 1283.6 | 1291.5 | 1302.1 | 1320.5 |
| 62.5° | 1163.6 | 1159.7 | 1167.6 | 1177.5 | 1188.7 |
| 65°   | 1039.7 | 1035.7 | 1043.0 | 1052.2 | 1062.8 |
| 67.5° | 915.1  | 910.5  | 917.7  | 925.6  | 935.5  |
| 70°   | 789.8  | 785.2  | 790.5  | 798.4  | 807.6  |
| 72.5° | 665.2  | 660.6  | 665.2  | 668.5  | 679.7  |
| 75°   | 543.2  | 538.6  | 541.3  | 543.9  | 553.8  |
| 77.5° | 424.6  | 420.0  | 425.2  | 426.6  | 432.5  |
| 80°   | 313.2  | 308.5  | 311.8  | 312.5  | 317.1  |
| 82.5° | 211.6  | 207.7  | 212.3  | 209.0  | 212.9  |
| 85°   | 122.0  | 118.7  | 120.0  | 118.7  | 120.6  |
| 87.5° | 48.1   | 45.5   | 46.1   | 43.5   | 43.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)