

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: P834502

Luminaire Tested: **ORLG-12-4-INS-OPL-LD4-3LO-50-120-EDD-90**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P834502  
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-LD4-3LO-50-120-EDD-90  
Description: 1FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

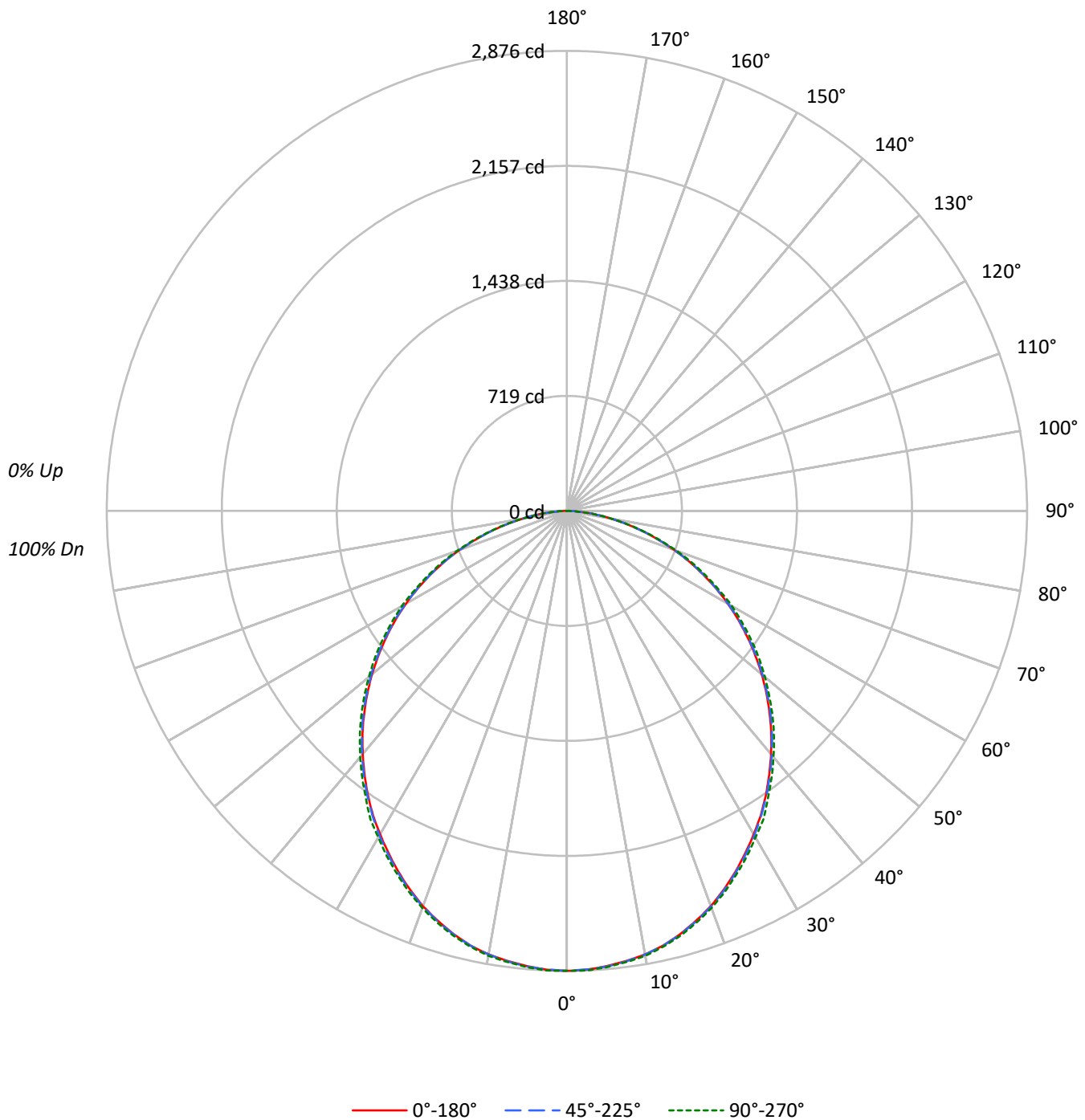
Lumens per Lamp: N/A  
Luminaire Lumens: 7769.5 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°  | 7737 | 7737 | 7737 |
| 5°  | 7717 | 7724 | 7733 |
| 10° | 7693 | 7694 | 7717 |
| 15° | 7629 | 7634 | 7655 |
| 20° | 7530 | 7538 | 7566 |
| 25° | 7394 | 7411 | 7445 |
| 30° | 7255 | 7279 | 7323 |
| 35° | 7122 | 7140 | 7197 |
| 40° | 6972 | 6995 | 7058 |
| 45° | 6819 | 6849 | 6919 |
| 50° | 6654 | 6684 | 6761 |
| 55° | 6465 | 6496 | 6602 |
| 60° | 6251 | 6276 | 6417 |
| 65° | 5978 | 5997 | 6110 |
| 70° | 5611 | 5616 | 5737 |
| 75° | 5100 | 5081 | 5200 |
| 80° | 4382 | 4364 | 4437 |
| 85° | 3399 | 3344 | 3362 |

Classified

Scaled Data Report

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 271.7  | 3.5       |
| 10°-20°   | 772.9  | 9.9       |
| 20°-30°   | 1150.6 | 14.8      |
| 30°-40°   | 1360.7 | 17.5      |
| 40°-50°   | 1389.1 | 17.9      |
| 50°-60°   | 1239.7 | 16.0      |
| 60°-70°   | 933.7  | 12.0      |
| 70°-80°   | 520.7  | 6.7       |
| 80°-90°   | 130.5  | 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°    | 2195.2 | 28.3      |
| 0°-40°    | 3555.9 | 45.8      |
| 0°-60°    | 6184.6 | 79.6      |
| 0°-90°    | 7769.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7769.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2875 | 2875  | 2875 | 2875  | 2875 |      |
| 5°  | 2857 | 2862  | 2859 | 2860  | 2863 | 271  |
| 15° | 2738 | 2741  | 2740 | 2743  | 2748 | 772  |
| 25° | 2490 | 2493  | 2496 | 2503  | 2507 | 1147 |
| 35° | 2168 | 2166  | 2174 | 2182  | 2191 | 1356 |
| 45° | 1792 | 1791  | 1800 | 1808  | 1818 | 1382 |
| 55° | 1378 | 1376  | 1385 | 1394  | 1407 | 1232 |
| 65° | 939  | 935   | 942  | 950   | 960  | 929  |
| 75° | 490  | 486   | 489  | 491   | 500  | 520  |
| 85° | 110  | 107   | 108  | 107   | 109  | 132  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2875.3 | 2875.3 | 2875.3 | 2875.3 | 2875.3 |
| 2.5°  | 2870.6 | 2875.3 | 2869.4 | 2870.6 | 2875.9 |
| 5°    | 2856.9 | 2862.2 | 2859.3 | 2859.8 | 2862.8 |
| 7.5°  | 2837.8 | 2845.0 | 2840.8 | 2842.0 | 2845.0 |
| 10°   | 2815.2 | 2820.6 | 2815.8 | 2818.8 | 2824.1 |
| 12.5° | 2783.1 | 2785.4 | 2783.1 | 2784.2 | 2790.2 |
| 15°   | 2738.4 | 2741.4 | 2740.2 | 2742.6 | 2747.9 |
| 17.5° | 2686.0 | 2689.6 | 2689.0 | 2693.8 | 2697.9 |
| 20°   | 2629.5 | 2630.1 | 2632.4 | 2637.2 | 2642.0 |
| 22.5° | 2562.8 | 2564.6 | 2567.0 | 2573.5 | 2578.3 |
| 25°   | 2490.2 | 2493.1 | 2496.1 | 2502.7 | 2507.4 |
| 27.5° | 2413.4 | 2416.3 | 2420.5 | 2427.7 | 2435.4 |
| 30°   | 2334.8 | 2334.8 | 2342.5 | 2349.7 | 2356.8 |
| 32.5° | 2255.6 | 2252.6 | 2259.8 | 2268.7 | 2286.0 |
| 35°   | 2168.1 | 2165.7 | 2173.5 | 2181.8 | 2190.7 |
| 37.5° | 2077.0 | 2075.2 | 2084.2 | 2093.1 | 2101.4 |
| 40°   | 1984.7 | 1982.4 | 1991.3 | 2000.2 | 2009.2 |
| 42.5° | 1890.1 | 1888.9 | 1897.2 | 1906.2 | 1915.7 |
| 45°   | 1791.9 | 1791.3 | 1799.6 | 1808.5 | 1818.1 |
| 47.5° | 1691.9 | 1690.7 | 1699.0 | 1708.5 | 1716.9 |
| 50°   | 1589.5 | 1588.3 | 1596.6 | 1606.1 | 1615.1 |
| 52.5° | 1484.1 | 1484.1 | 1491.8 | 1500.2 | 1513.9 |
| 55°   | 1378.1 | 1376.3 | 1384.7 | 1394.2 | 1407.3 |
| 57.5° | 1271.0 | 1268.6 | 1276.3 | 1285.9 | 1297.8 |
| 60°   | 1161.4 | 1159.1 | 1166.2 | 1175.7 | 1192.4 |
| 62.5° | 1050.7 | 1047.1 | 1054.3 | 1063.2 | 1073.3 |
| 65°   | 938.8  | 935.2  | 941.8  | 950.1  | 959.6  |
| 67.5° | 826.3  | 822.1  | 828.7  | 835.8  | 844.7  |
| 70°   | 713.2  | 709.0  | 713.8  | 720.9  | 729.2  |
| 72.5° | 600.7  | 596.5  | 600.7  | 603.6  | 613.8  |
| 75°   | 490.5  | 486.4  | 488.7  | 491.1  | 500.1  |
| 77.5° | 383.4  | 379.2  | 384.0  | 385.2  | 390.5  |
| 80°   | 282.8  | 278.6  | 281.6  | 282.2  | 286.3  |
| 82.5° | 191.1  | 187.5  | 191.7  | 188.7  | 192.3  |
| 85°   | 110.1  | 107.2  | 108.3  | 107.2  | 108.9  |
| 87.5° | 43.5   | 41.1   | 41.7   | 39.3   | 39.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)