

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: P835798

Luminaire Tested: **ORLG-24-2-INS-OPL-LD4-6LO-50-120-EDD-90**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P835798  
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-LD4-6LO-50-120-EDD-90  
Description: 2FT x 2FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

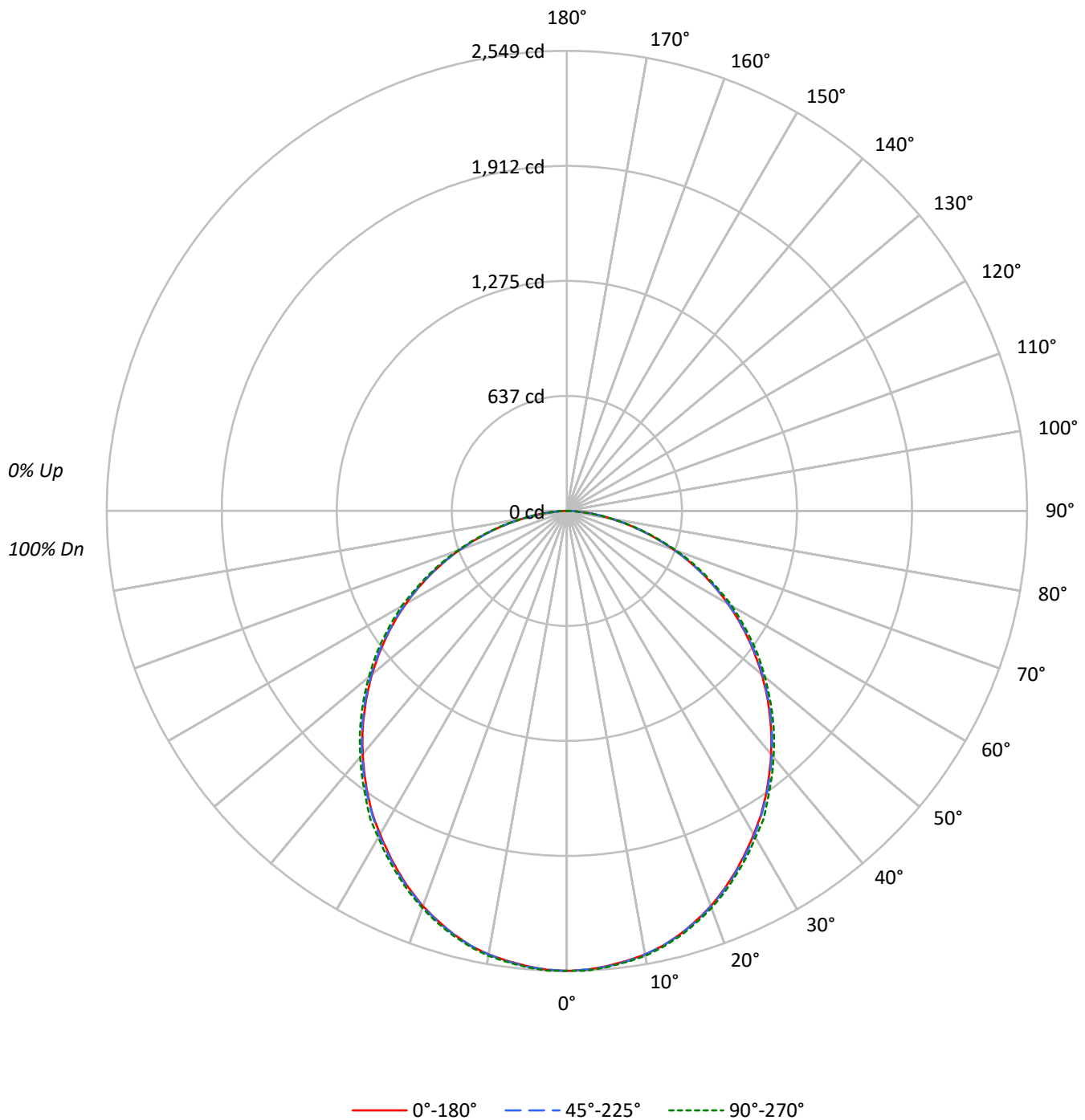
Lumens per Lamp: N/A  
Luminaire Lumens: 6886.4 lumens  
Efficiency: N/A  
Efficacy: 98.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 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  | 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  | 27  | 27  | 27  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 6858 | 6858 | 6858 |
| 5°  | 6840 | 6846 | 6854 |
| 10° | 6818 | 6820 | 6840 |
| 15° | 6762 | 6766 | 6785 |
| 20° | 6674 | 6682 | 6706 |
| 25° | 6553 | 6569 | 6599 |
| 30° | 6430 | 6452 | 6491 |
| 35° | 6313 | 6328 | 6379 |
| 40° | 6180 | 6200 | 6256 |
| 45° | 6044 | 6070 | 6132 |
| 50° | 5898 | 5924 | 5993 |
| 55° | 5731 | 5758 | 5852 |
| 60° | 5540 | 5563 | 5688 |
| 65° | 5298 | 5315 | 5416 |
| 70° | 4973 | 4977 | 5086 |
| 75° | 4521 | 4504 | 4608 |
| 80° | 3883 | 3868 | 3933 |
| 85° | 3013 | 2964 | 2983 |

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 240.8  | 3.5       |
| 10°-20°   | 685.0  | 9.9       |
| 20°-30°   | 1019.8 | 14.8      |
| 30°-40°   | 1206.0 | 17.5      |
| 40°-50°   | 1231.2 | 17.9      |
| 50°-60°   | 1098.8 | 16.0      |
| 60°-70°   | 827.6  | 12.0      |
| 70°-80°   | 461.5  | 6.7       |
| 80°-90°   | 115.6  | 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°    | 1945.7 | 28.3      |
| 0°-40°    | 3151.7 | 45.8      |
| 0°-60°    | 5481.7 | 79.6      |
| 0°-90°    | 6886.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6886.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2548 | 2548  | 2548 | 2548  | 2548 |      |
| 5°  | 2532 | 2537  | 2534 | 2535  | 2538 | 241  |
| 15° | 2427 | 2430  | 2429 | 2431  | 2436 | 684  |
| 25° | 2207 | 2210  | 2212 | 2218  | 2222 | 1017 |
| 35° | 1922 | 1920  | 1926 | 1934  | 1942 | 1202 |
| 45° | 1588 | 1588  | 1595 | 1603  | 1611 | 1225 |
| 55° | 1222 | 1220  | 1227 | 1236  | 1247 | 1092 |
| 65° | 832  | 829   | 835  | 842   | 851  | 823  |
| 75° | 435  | 431   | 433  | 435   | 443  | 461  |
| 85° | 98   | 95    | 96   | 95    | 97   | 117  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2548.5 | 2548.5 | 2548.5 | 2548.5 | 2548.5 |
| 2.5°  | 2544.3 | 2548.5 | 2543.3 | 2544.3 | 2549.1 |
| 5°    | 2532.2 | 2536.9 | 2534.3 | 2534.8 | 2537.5 |
| 7.5°  | 2515.3 | 2521.6 | 2517.9 | 2519.0 | 2521.6 |
| 10°   | 2495.2 | 2500.0 | 2495.8 | 2498.4 | 2503.2 |
| 12.5° | 2466.7 | 2468.9 | 2466.7 | 2467.8 | 2473.1 |
| 15°   | 2427.2 | 2429.8 | 2428.8 | 2430.9 | 2435.6 |
| 17.5° | 2380.7 | 2383.9 | 2383.4 | 2387.6 | 2391.3 |
| 20°   | 2330.6 | 2331.1 | 2333.3 | 2337.5 | 2341.7 |
| 22.5° | 2271.5 | 2273.1 | 2275.2 | 2281.0 | 2285.2 |
| 25°   | 2207.1 | 2209.8 | 2212.4 | 2218.2 | 2222.4 |
| 27.5° | 2139.1 | 2141.7 | 2145.4 | 2151.7 | 2158.6 |
| 30°   | 2069.4 | 2069.4 | 2076.3 | 2082.6 | 2089.0 |
| 32.5° | 1999.3 | 1996.6 | 2002.9 | 2010.9 | 2026.2 |
| 35°   | 1921.7 | 1919.6 | 1926.4 | 1933.8 | 1941.7 |
| 37.5° | 1841.0 | 1839.4 | 1847.3 | 1855.2 | 1862.6 |
| 40°   | 1759.2 | 1757.1 | 1765.0 | 1772.9 | 1780.8 |
| 42.5° | 1675.3 | 1674.2 | 1681.6 | 1689.5 | 1698.0 |
| 45°   | 1588.2 | 1587.7 | 1595.1 | 1603.0 | 1611.4 |
| 47.5° | 1499.6 | 1498.5 | 1505.9 | 1514.3 | 1521.7 |
| 50°   | 1408.8 | 1407.8 | 1415.1 | 1423.6 | 1431.5 |
| 52.5° | 1315.4 | 1315.4 | 1322.3 | 1329.7 | 1341.8 |
| 55°   | 1221.5 | 1219.9 | 1227.3 | 1235.7 | 1247.4 |
| 57.5° | 1126.5 | 1124.4 | 1131.3 | 1139.7 | 1150.3 |
| 60°   | 1029.4 | 1027.3 | 1033.7 | 1042.1 | 1056.9 |
| 62.5° | 931.3  | 928.1  | 934.5  | 942.4  | 951.3  |
| 65°   | 832.1  | 828.9  | 834.7  | 842.1  | 850.6  |
| 67.5° | 732.4  | 728.7  | 734.5  | 740.8  | 748.7  |
| 70°   | 632.1  | 628.4  | 632.6  | 639.0  | 646.4  |
| 72.5° | 532.4  | 528.7  | 532.4  | 535.0  | 544.0  |
| 75°   | 434.8  | 431.1  | 433.2  | 435.3  | 443.2  |
| 77.5° | 339.8  | 336.1  | 340.3  | 341.4  | 346.1  |
| 80°   | 250.6  | 246.9  | 249.6  | 250.1  | 253.8  |
| 82.5° | 169.4  | 166.2  | 169.9  | 167.3  | 170.4  |
| 85°   | 97.6   | 95.0   | 96.0   | 95.0   | 96.6   |
| 87.5° | 38.5   | 36.4   | 36.9   | 34.8   | 34.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)