

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: P834446

Luminaire Tested: **ORLG-12-4-INS-OPL-LD4-2STD-50-120-EDD**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P834446  
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-LD4-2STD-50-120-EDD  
Description: 1FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

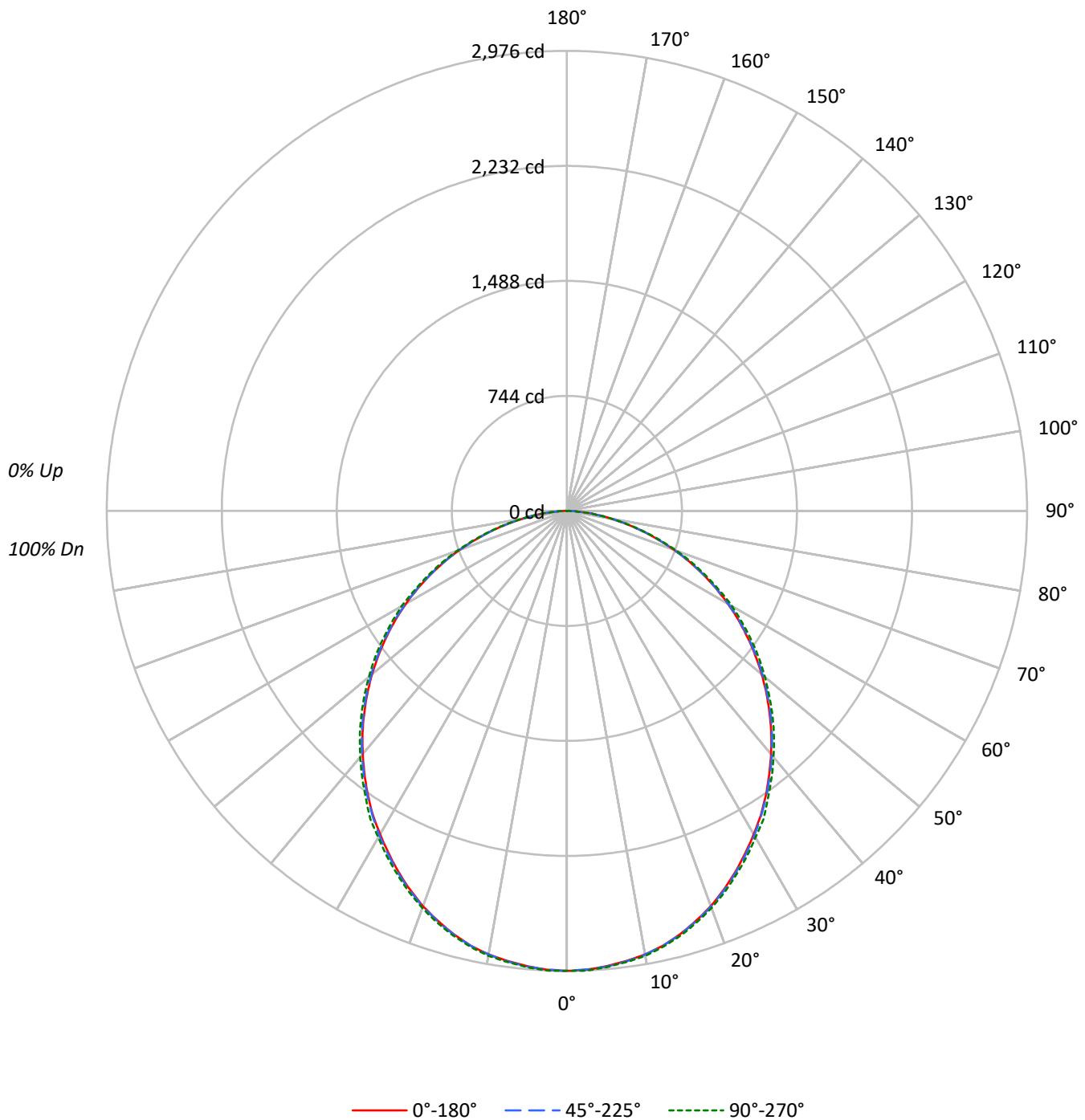
Lumens per Lamp: N/A  
Luminaire Lumens: 8039.8 lumens  
Efficiency: N/A  
Efficacy: 120.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°  | 8007 | 8007 | 8007 |
| 5°  | 7986 | 7992 | 8002 |
| 10° | 7960 | 7962 | 7985 |
| 15° | 7894 | 7899 | 7922 |
| 20° | 7792 | 7801 | 7829 |
| 25° | 7651 | 7669 | 7704 |
| 30° | 7507 | 7532 | 7578 |
| 35° | 7370 | 7388 | 7447 |
| 40° | 7215 | 7239 | 7304 |
| 45° | 7056 | 7087 | 7160 |
| 50° | 6886 | 6917 | 6997 |
| 55° | 6691 | 6723 | 6832 |
| 60° | 6468 | 6495 | 6641 |
| 65° | 6186 | 6205 | 6323 |
| 70° | 5807 | 5811 | 5937 |
| 75° | 5278 | 5258 | 5381 |
| 80° | 4534 | 4516 | 4592 |
| 85° | 3520 | 3461 | 3480 |

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 281.2  | 3.5       |
| 10°-20°   | 799.8  | 9.9       |
| 20°-30°   | 1190.6 | 14.8      |
| 30°-40°   | 1408.0 | 17.5      |
| 40°-50°   | 1437.4 | 17.9      |
| 50°-60°   | 1282.8 | 16.0      |
| 60°-70°   | 966.2  | 12.0      |
| 70°-80°   | 538.8  | 6.7       |
| 80°-90°   | 135.0  | 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°    | 2271.6 | 28.3      |
| 0°-40°    | 3679.6 | 45.8      |
| 0°-60°    | 6399.7 | 79.6      |
| 0°-90°    | 8039.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 8039.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2975 | 2975  | 2975 | 2975  | 2975 |      |
| 5°  | 2956 | 2962  | 2959 | 2959  | 2962 | 281  |
| 15° | 2834 | 2837  | 2836 | 2838  | 2844 | 799  |
| 25° | 2577 | 2580  | 2583 | 2590  | 2595 | 1187 |
| 35° | 2244 | 2241  | 2249 | 2258  | 2267 | 1403 |
| 45° | 1854 | 1854  | 1862 | 1872  | 1881 | 1430 |
| 55° | 1426 | 1424  | 1433 | 1443  | 1456 | 1275 |
| 65° | 972  | 968   | 974  | 983   | 993  | 961  |
| 75° | 508  | 503   | 506  | 508   | 518  | 538  |
| 85° | 114  | 111   | 112  | 111   | 113  | 137  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2975.4 | 2975.4 | 2975.4 | 2975.4 | 2975.4 |
| 2.5°  | 2970.4 | 2975.4 | 2969.2 | 2970.4 | 2976.0 |
| 5°    | 2956.3 | 2961.8 | 2958.7 | 2959.3 | 2962.4 |
| 7.5°  | 2936.6 | 2943.9 | 2939.6 | 2940.9 | 2943.9 |
| 10°   | 2913.1 | 2918.7 | 2913.8 | 2916.8 | 2922.4 |
| 12.5° | 2879.9 | 2882.3 | 2879.9 | 2881.1 | 2887.3 |
| 15°   | 2833.7 | 2836.8 | 2835.5 | 2838.0 | 2843.5 |
| 17.5° | 2779.5 | 2783.2 | 2782.5 | 2787.5 | 2791.8 |
| 20°   | 2720.9 | 2721.6 | 2724.0 | 2729.0 | 2733.9 |
| 22.5° | 2652.0 | 2653.8 | 2656.3 | 2663.0 | 2668.0 |
| 25°   | 2576.8 | 2579.9 | 2583.0 | 2589.7 | 2594.7 |
| 27.5° | 2497.3 | 2500.4 | 2504.7 | 2512.1 | 2520.1 |
| 30°   | 2416.0 | 2416.0 | 2424.0 | 2431.4 | 2438.8 |
| 32.5° | 2334.1 | 2331.0 | 2338.4 | 2347.6 | 2365.5 |
| 35°   | 2243.5 | 2241.1 | 2249.1 | 2257.7 | 2266.9 |
| 37.5° | 2149.3 | 2147.4 | 2156.7 | 2165.9 | 2174.5 |
| 40°   | 2053.8 | 2051.3 | 2060.6 | 2069.8 | 2079.1 |
| 42.5° | 1955.9 | 1954.6 | 1963.2 | 1972.5 | 1982.3 |
| 45°   | 1854.2 | 1853.6 | 1862.2 | 1871.5 | 1881.3 |
| 47.5° | 1750.7 | 1749.5 | 1758.1 | 1768.0 | 1776.6 |
| 50°   | 1644.8 | 1643.5 | 1652.2 | 1662.0 | 1671.3 |
| 52.5° | 1535.7 | 1535.7 | 1543.7 | 1552.4 | 1566.5 |
| 55°   | 1426.1 | 1424.2 | 1432.9 | 1442.7 | 1456.3 |
| 57.5° | 1315.2 | 1312.7 | 1320.7 | 1330.6 | 1342.9 |
| 60°   | 1201.8 | 1199.4 | 1206.8 | 1216.6 | 1233.9 |
| 62.5° | 1087.3 | 1083.6 | 1091.0 | 1100.2 | 1110.7 |
| 65°   | 971.5  | 967.8  | 974.5  | 983.2  | 993.0  |
| 67.5° | 855.0  | 850.7  | 857.5  | 864.9  | 874.1  |
| 70°   | 738.0  | 733.7  | 738.6  | 746.0  | 754.6  |
| 72.5° | 621.6  | 617.2  | 621.6  | 624.6  | 635.1  |
| 75°   | 507.6  | 503.3  | 505.7  | 508.2  | 517.5  |
| 77.5° | 396.7  | 392.4  | 397.3  | 398.6  | 404.1  |
| 80°   | 292.6  | 288.3  | 291.4  | 292.0  | 296.3  |
| 82.5° | 197.7  | 194.0  | 198.4  | 195.3  | 199.0  |
| 85°   | 114.0  | 110.9  | 112.1  | 110.9  | 112.7  |
| 87.5° | 45.0   | 42.5   | 43.1   | 40.7   | 40.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)