

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: P835797

Luminaire Tested: **ORLG-24-2-INS-OPL-LD4-5HI-50-120-EDD-90**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P835797  
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-LD4-5HI-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**

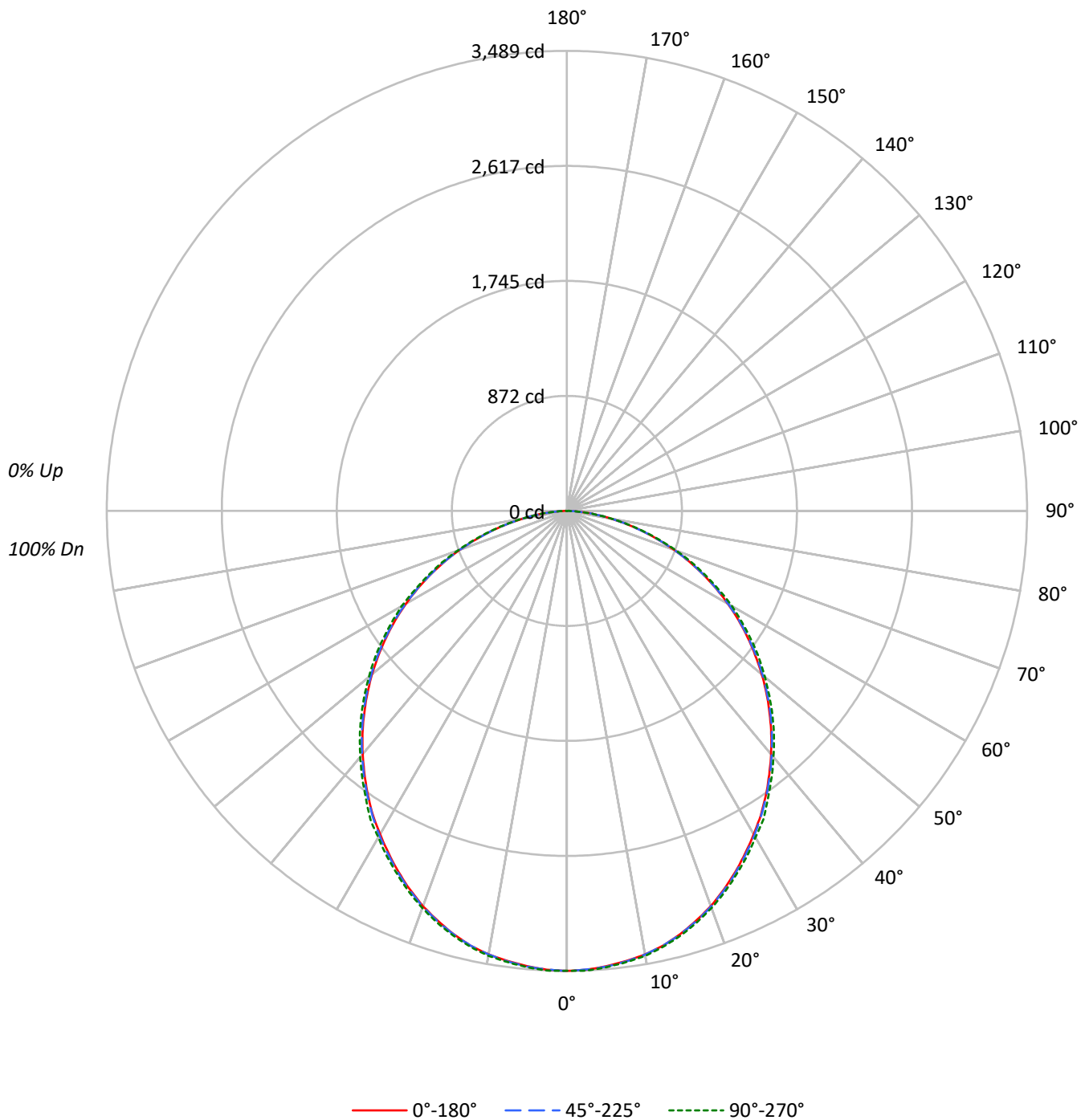
Lumens per Lamp: N/A  
Luminaire Lumens: 9426.4 lumens  
Efficiency: N/A  
Efficacy: 85.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 110  
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

TEST NUMBER: P835797

CATALOG NUMBER: ORLG-24-2-INS-OPL-LD4-5HI-50-120-EDD-90

### Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835797

CATALOG NUMBER: ORLG-24-2-INS-OPL-LD4-5HI-50-120-EDD-90

**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°  | 9387 | 9387 | 9387 |
| 5°  | 9363 | 9371 | 9382 |
| 10° | 9333 | 9335 | 9363 |
| 15° | 9256 | 9262 | 9288 |
| 20° | 9136 | 9146 | 9179 |
| 25° | 8970 | 8992 | 9033 |
| 30° | 8802 | 8831 | 8885 |
| 35° | 8641 | 8663 | 8731 |
| 40° | 8459 | 8487 | 8563 |
| 45° | 8273 | 8309 | 8394 |
| 50° | 8073 | 8110 | 8203 |
| 55° | 7844 | 7882 | 8010 |
| 60° | 7584 | 7615 | 7786 |
| 65° | 7252 | 7275 | 7414 |
| 70° | 6808 | 6814 | 6962 |
| 75° | 6187 | 6166 | 6308 |
| 80° | 5317 | 5294 | 5384 |
| 85° | 4125 | 4060 | 4082 |

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835797

CATALOG NUMBER: ORLG-24-2-INS-OPL-LD4-5HI-50-120-EDD-90

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 329.6  | 3.5       |
| 10°-20°   | 937.7  | 9.9       |
| 20°-30°   | 1396.0 | 14.8      |
| 30°-40°   | 1650.9 | 17.5      |
| 40°-50°   | 1685.3 | 17.9      |
| 50°-60°   | 1504.0 | 16.0      |
| 60°-70°   | 1132.8 | 12.0      |
| 70°-80°   | 631.8  | 6.7       |
| 80°-90°   | 158.3  | 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°    | 2663.3 | 28.3      |
| 0°-40°    | 4314.2 | 45.8      |
| 0°-60°    | 7503.5 | 79.6      |
| 0°-90°    | 9426.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 9426.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 3488 | 3488  | 3488 | 3488  | 3488 |      |
| 5°  | 3466 | 3473  | 3469 | 3470  | 3473 | 329  |
| 15° | 3322 | 3326  | 3324 | 3327  | 3334 | 936  |
| 25° | 3021 | 3025  | 3028 | 3036  | 3042 | 1392 |
| 35° | 2630 | 2628  | 2637 | 2647  | 2658 | 1645 |
| 45° | 2174 | 2173  | 2183 | 2194  | 2206 | 1677 |
| 55° | 1672 | 1670  | 1680 | 1692  | 1707 | 1495 |
| 65° | 1139 | 1135  | 1143 | 1153  | 1164 | 1127 |
| 75° | 595  | 590   | 593  | 596   | 607  | 631  |
| 85° | 134  | 130   | 132  | 130   | 132  | 160  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835797

CATALOG NUMBER: ORLG-24-2-INS-OPL-LD4-5HI-50-120-EDD-90

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 3488.5 | 3488.5 | 3488.5 | 3488.5 | 3488.5 |
| 2.5°  | 3482.7 | 3488.5 | 3481.3 | 3482.7 | 3489.2 |
| 5°    | 3466.1 | 3472.6 | 3469.0 | 3469.7 | 3473.3 |
| 7.5°  | 3443.0 | 3451.7 | 3446.6 | 3448.1 | 3451.7 |
| 10°   | 3415.6 | 3422.1 | 3416.3 | 3419.9 | 3426.4 |
| 12.5° | 3376.6 | 3379.4 | 3376.6 | 3378.0 | 3385.2 |
| 15°   | 3322.4 | 3326.0 | 3324.5 | 3327.4 | 3333.9 |
| 17.5° | 3258.8 | 3263.2 | 3262.4 | 3268.2 | 3273.3 |
| 20°   | 3190.2 | 3190.9 | 3193.8 | 3199.6 | 3205.4 |
| 22.5° | 3109.3 | 3111.5 | 3114.4 | 3122.3 | 3128.1 |
| 25°   | 3021.2 | 3024.8 | 3028.4 | 3036.4 | 3042.1 |
| 27.5° | 2928.0 | 2931.6 | 2936.7 | 2945.4 | 2954.8 |
| 30°   | 2832.7 | 2832.7 | 2842.1 | 2850.7 | 2859.4 |
| 32.5° | 2736.6 | 2733.0 | 2741.7 | 2752.5 | 2773.5 |
| 35°   | 2630.5 | 2627.6 | 2637.0 | 2647.1 | 2657.9 |
| 37.5° | 2520.0 | 2517.8 | 2528.6 | 2539.5 | 2549.6 |
| 40°   | 2408.0 | 2405.1 | 2416.0 | 2426.8 | 2437.6 |
| 42.5° | 2293.2 | 2291.7 | 2301.8 | 2312.7 | 2324.2 |
| 45°   | 2174.0 | 2173.3 | 2183.4 | 2194.2 | 2205.8 |
| 47.5° | 2052.7 | 2051.2 | 2061.3 | 2072.9 | 2083.0 |
| 50°   | 1928.4 | 1927.0 | 1937.1 | 1948.6 | 1959.5 |
| 52.5° | 1800.6 | 1800.6 | 1810.0 | 1820.1 | 1836.7 |
| 55°   | 1672.0 | 1669.9 | 1680.0 | 1691.5 | 1707.4 |
| 57.5° | 1542.0 | 1539.1 | 1548.5 | 1560.1 | 1574.5 |
| 60°   | 1409.1 | 1406.2 | 1414.9 | 1426.5 | 1446.7 |
| 62.5° | 1274.8 | 1270.5 | 1279.1 | 1290.0 | 1302.2 |
| 65°   | 1139.0 | 1134.7 | 1142.6 | 1152.7 | 1164.3 |
| 67.5° | 1002.5 | 997.4  | 1005.4 | 1014.0 | 1024.9 |
| 70°   | 865.3  | 860.2  | 866.0  | 874.7  | 884.8  |
| 72.5° | 728.8  | 723.7  | 728.8  | 732.4  | 744.6  |
| 75°   | 595.1  | 590.1  | 593.0  | 595.9  | 606.7  |
| 77.5° | 465.1  | 460.1  | 465.9  | 467.3  | 473.8  |
| 80°   | 343.1  | 338.0  | 341.6  | 342.3  | 347.4  |
| 82.5° | 231.8  | 227.5  | 232.6  | 229.0  | 233.3  |
| 85°   | 133.6  | 130.0  | 131.5  | 130.0  | 132.2  |
| 87.5° | 52.7   | 49.8   | 50.6   | 47.7   | 47.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)