

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: P835734

Luminaire Tested: **ORLG-24-2-INS-OPL-LD4-2HI-30-120-EDD-90**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P835734  
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-LD4-2HI-30-120-EDD-90  
Description: 2FT x 2FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

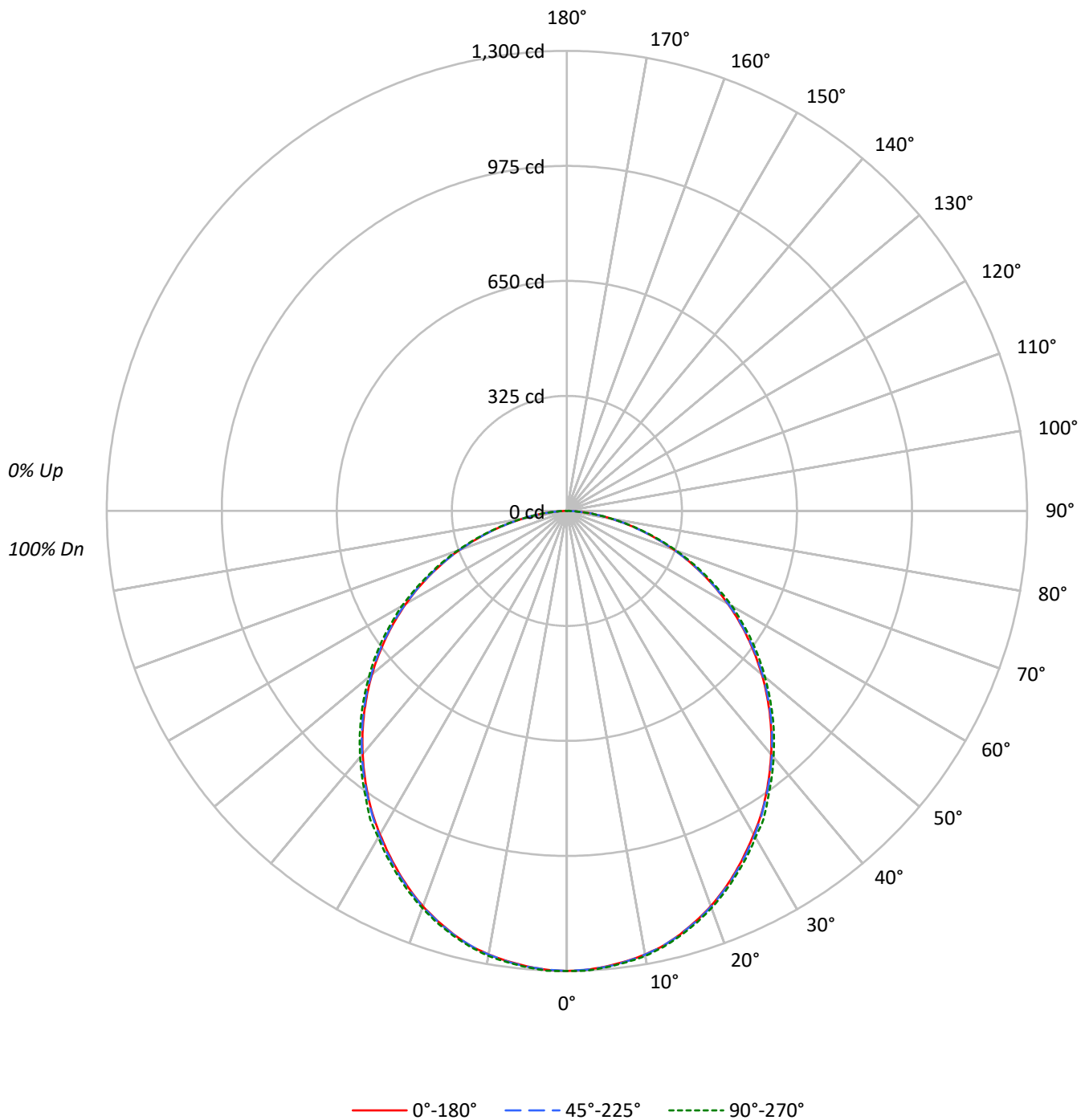
Lumens per Lamp: N/A  
Luminaire Lumens: 3513.4 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 44  
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°  | 3499 | 3499 | 3499 |
| 5°  | 3490 | 3493 | 3497 |
| 10° | 3478 | 3479 | 3490 |
| 15° | 3450 | 3452 | 3462 |
| 20° | 3405 | 3409 | 3421 |
| 25° | 3344 | 3351 | 3367 |
| 30° | 3281 | 3292 | 3312 |
| 35° | 3221 | 3229 | 3254 |
| 40° | 3153 | 3163 | 3191 |
| 45° | 3084 | 3097 | 3129 |
| 50° | 3009 | 3023 | 3057 |
| 55° | 2924 | 2938 | 2986 |
| 60° | 2827 | 2838 | 2902 |
| 65° | 2703 | 2712 | 2763 |
| 70° | 2537 | 2540 | 2595 |
| 75° | 2306 | 2298 | 2351 |
| 80° | 1982 | 1973 | 2007 |
| 85° | 1538 | 1513 | 1522 |

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 122.9  | 3.5       |
| 10°-20°   | 349.5  | 9.9       |
| 20°-30°   | 520.3  | 14.8      |
| 30°-40°   | 615.3  | 17.5      |
| 40°-50°   | 628.1  | 17.9      |
| 50°-60°   | 560.6  | 16.0      |
| 60°-70°   | 422.2  | 12.0      |
| 70°-80°   | 235.5  | 6.7       |
| 80°-90°   | 59.0   | 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°    | 992.7  | 28.3      |
| 0°-40°    | 1608.0 | 45.8      |
| 0°-60°    | 2796.7 | 79.6      |
| 0°-90°    | 3513.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3513.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1300 | 1300  | 1300 | 1300  | 1300 |      |
| 5°  | 1292 | 1294  | 1293 | 1293  | 1295 | 123  |
| 15° | 1238 | 1240  | 1239 | 1240  | 1243 | 349  |
| 25° | 1126 | 1127  | 1129 | 1132  | 1134 | 519  |
| 35° | 980  | 979   | 983  | 987   | 991  | 613  |
| 45° | 810  | 810   | 814  | 818   | 822  | 625  |
| 55° | 623  | 622   | 626  | 630   | 636  | 557  |
| 65° | 424  | 423   | 426  | 430   | 434  | 420  |
| 75° | 222  | 220   | 221  | 222   | 226  | 235  |
| 85° | 50   | 48    | 49   | 48    | 49   | 60   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1300.2 | 1300.2 | 1300.2 | 1300.2 | 1300.2 |
| 2.5°  | 1298.1 | 1300.2 | 1297.5 | 1298.1 | 1300.5 |
| 5°    | 1291.9 | 1294.3 | 1293.0 | 1293.2 | 1294.6 |
| 7.5°  | 1283.3 | 1286.5 | 1284.6 | 1285.2 | 1286.5 |
| 10°   | 1273.0 | 1275.5 | 1273.3 | 1274.7 | 1277.1 |
| 12.5° | 1258.5 | 1259.6 | 1258.5 | 1259.0 | 1261.7 |
| 15°   | 1238.3 | 1239.7 | 1239.1 | 1240.2 | 1242.6 |
| 17.5° | 1214.6 | 1216.2 | 1216.0 | 1218.1 | 1220.0 |
| 20°   | 1189.0 | 1189.3 | 1190.4 | 1192.5 | 1194.7 |
| 22.5° | 1158.9 | 1159.7 | 1160.8 | 1163.7 | 1165.9 |
| 25°   | 1126.1 | 1127.4 | 1128.7 | 1131.7 | 1133.9 |
| 27.5° | 1091.3 | 1092.7 | 1094.6 | 1097.8 | 1101.3 |
| 30°   | 1055.8 | 1055.8 | 1059.3 | 1062.5 | 1065.8 |
| 32.5° | 1020.0 | 1018.6 | 1021.9 | 1025.9 | 1033.7 |
| 35°   | 980.4  | 979.3  | 982.8  | 986.6  | 990.6  |
| 37.5° | 939.2  | 938.4  | 942.5  | 946.5  | 950.3  |
| 40°   | 897.5  | 896.4  | 900.5  | 904.5  | 908.5  |
| 42.5° | 854.7  | 854.2  | 857.9  | 862.0  | 866.3  |
| 45°   | 810.3  | 810.0  | 813.8  | 817.8  | 822.1  |
| 47.5° | 765.1  | 764.5  | 768.3  | 772.6  | 776.4  |
| 50°   | 718.8  | 718.2  | 722.0  | 726.3  | 730.3  |
| 52.5° | 671.1  | 671.1  | 674.6  | 678.4  | 684.6  |
| 55°   | 623.2  | 622.4  | 626.2  | 630.5  | 636.4  |
| 57.5° | 574.7  | 573.7  | 577.2  | 581.5  | 586.9  |
| 60°   | 525.2  | 524.1  | 527.4  | 531.7  | 539.2  |
| 62.5° | 475.1  | 473.5  | 476.7  | 480.8  | 485.4  |
| 65°   | 424.5  | 422.9  | 425.9  | 429.6  | 433.9  |
| 67.5° | 373.6  | 371.8  | 374.7  | 378.0  | 382.0  |
| 70°   | 322.5  | 320.6  | 322.8  | 326.0  | 329.8  |
| 72.5° | 271.6  | 269.7  | 271.6  | 273.0  | 277.5  |
| 75°   | 221.8  | 219.9  | 221.0  | 222.1  | 226.1  |
| 77.5° | 173.4  | 171.5  | 173.6  | 174.2  | 176.6  |
| 80°   | 127.9  | 126.0  | 127.3  | 127.6  | 129.5  |
| 82.5° | 86.4   | 84.8   | 86.7   | 85.3   | 87.0   |
| 85°   | 49.8   | 48.5   | 49.0   | 48.5   | 49.3   |
| 87.5° | 19.7   | 18.6   | 18.8   | 17.8   | 17.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)