

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: P834443

Luminaire Tested: **ORLG-12-4-INS-OPL-LD4-1STD-50-120-EDD**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P834443  
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-LD4-1STD-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**

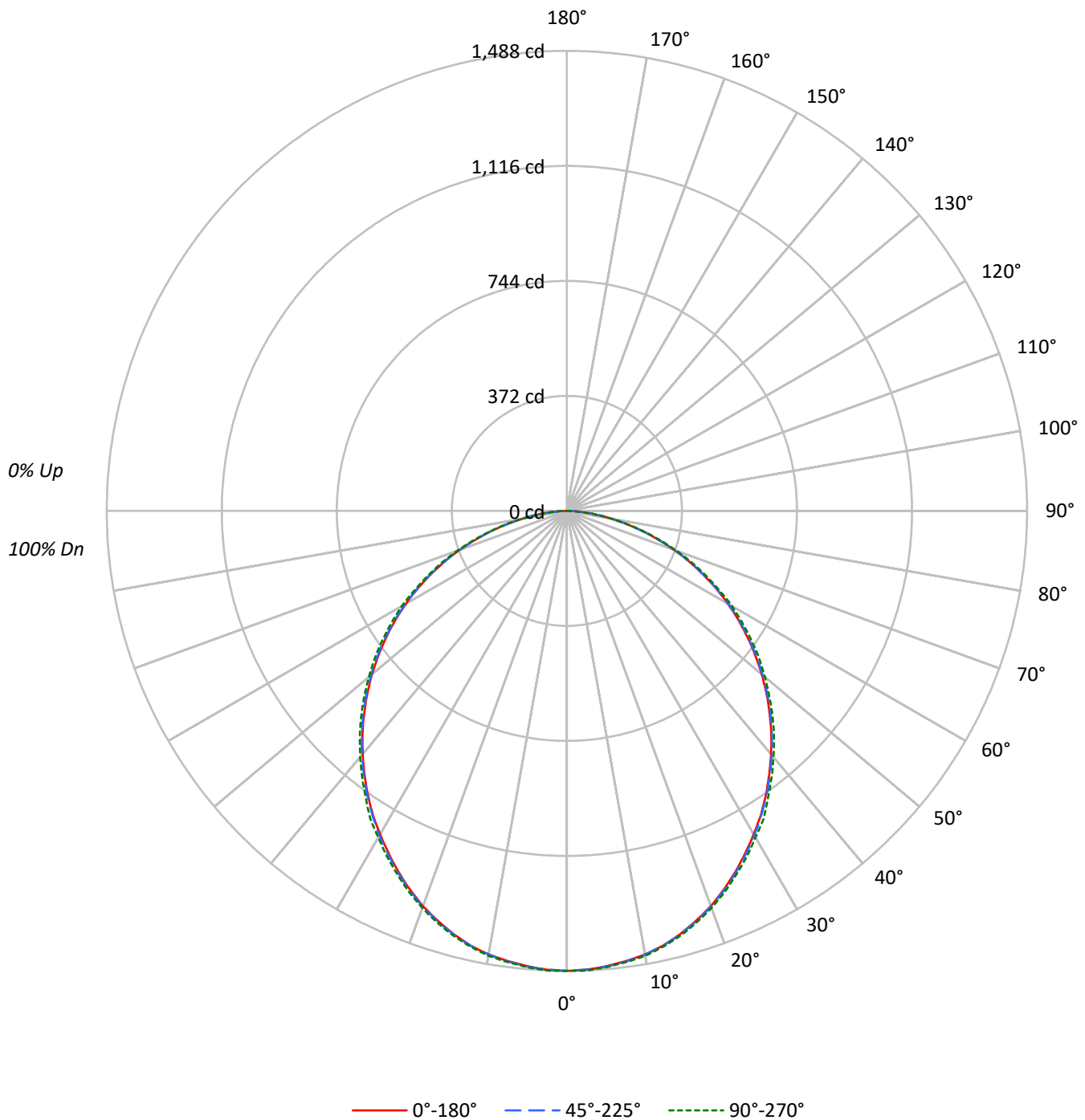
Lumens per Lamp: N/A  
Luminaire Lumens: 4019.9 lumens  
Efficiency: N/A  
Efficacy: 120.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°  | 4003 | 4003 | 4003 |
| 5°  | 3993 | 3996 | 4001 |
| 10° | 3980 | 3981 | 3993 |
| 15° | 3947 | 3950 | 3961 |
| 20° | 3896 | 3900 | 3914 |
| 25° | 3825 | 3835 | 3852 |
| 30° | 3754 | 3766 | 3789 |
| 35° | 3685 | 3694 | 3724 |
| 40° | 3607 | 3619 | 3652 |
| 45° | 3528 | 3543 | 3580 |
| 50° | 3443 | 3458 | 3498 |
| 55° | 3345 | 3361 | 3416 |
| 60° | 3234 | 3247 | 3320 |
| 65° | 3093 | 3103 | 3161 |
| 70° | 2903 | 2906 | 2969 |
| 75° | 2639 | 2629 | 2690 |
| 80° | 2267 | 2258 | 2297 |
| 85° | 1760 | 1732 | 1741 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 140.6  | 3.5       |
| 10°-20°   | 399.9  | 9.9       |
| 20°-30°   | 595.3  | 14.8      |
| 30°-40°   | 704.0  | 17.5      |
| 40°-50°   | 718.7  | 17.9      |
| 50°-60°   | 641.4  | 16.0      |
| 60°-70°   | 483.1  | 12.0      |
| 70°-80°   | 269.4  | 6.7       |
| 80°-90°   | 67.5   | 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°    | 1135.8 | 28.3      |
| 0°-40°    | 1839.8 | 45.8      |
| 0°-60°    | 3199.9 | 79.6      |
| 0°-90°    | 4019.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4019.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1488 | 1488  | 1488 | 1488  | 1488 |      |
| 5°  | 1478 | 1481  | 1479 | 1480  | 1481 | 140  |
| 15° | 1417 | 1418  | 1418 | 1419  | 1422 | 399  |
| 25° | 1288 | 1290  | 1292 | 1295  | 1297 | 594  |
| 35° | 1122 | 1120  | 1124 | 1129  | 1134 | 701  |
| 45° | 927  | 927   | 931  | 936   | 941  | 715  |
| 55° | 713  | 712   | 716  | 721   | 728  | 637  |
| 65° | 486  | 484   | 487  | 492   | 496  | 480  |
| 75° | 254  | 252   | 253  | 254   | 259  | 269  |
| 85° | 57   | 55    | 56   | 55    | 56   | 68   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1487.7 | 1487.7 | 1487.7 | 1487.7 | 1487.7 |
| 2.5°  | 1485.2 | 1487.7 | 1484.6 | 1485.2 | 1488.0 |
| 5°    | 1478.1 | 1480.9 | 1479.4 | 1479.7 | 1481.2 |
| 7.5°  | 1468.3 | 1472.0 | 1469.8 | 1470.4 | 1472.0 |
| 10°   | 1456.6 | 1459.3 | 1456.9 | 1458.4 | 1461.2 |
| 12.5° | 1439.9 | 1441.2 | 1439.9 | 1440.6 | 1443.6 |
| 15°   | 1416.8 | 1418.4 | 1417.8 | 1419.0 | 1421.8 |
| 17.5° | 1389.7 | 1391.6 | 1391.3 | 1393.7 | 1395.9 |
| 20°   | 1360.5 | 1360.8 | 1362.0 | 1364.5 | 1366.9 |
| 22.5° | 1326.0 | 1326.9 | 1328.1 | 1331.5 | 1334.0 |
| 25°   | 1288.4 | 1289.9 | 1291.5 | 1294.9 | 1297.3 |
| 27.5° | 1248.7 | 1250.2 | 1252.4 | 1256.1 | 1260.1 |
| 30°   | 1208.0 | 1208.0 | 1212.0 | 1215.7 | 1219.4 |
| 32.5° | 1167.0 | 1165.5 | 1169.2 | 1173.8 | 1182.8 |
| 35°   | 1121.8 | 1120.5 | 1124.5 | 1128.9 | 1133.5 |
| 37.5° | 1074.6 | 1073.7 | 1078.3 | 1083.0 | 1087.3 |
| 40°   | 1026.9 | 1025.7 | 1030.3 | 1034.9 | 1039.5 |
| 42.5° | 977.9  | 977.3  | 981.6  | 986.2  | 991.2  |
| 45°   | 927.1  | 926.8  | 931.1  | 935.7  | 940.7  |
| 47.5° | 875.4  | 874.7  | 879.1  | 884.0  | 888.3  |
| 50°   | 822.4  | 821.8  | 826.1  | 831.0  | 835.6  |
| 52.5° | 767.9  | 767.9  | 771.9  | 776.2  | 783.3  |
| 55°   | 713.0  | 712.1  | 716.4  | 721.4  | 728.1  |
| 57.5° | 657.6  | 656.4  | 660.4  | 665.3  | 671.5  |
| 60°   | 600.9  | 599.7  | 603.4  | 608.3  | 616.9  |
| 62.5° | 543.6  | 541.8  | 545.5  | 550.1  | 555.3  |
| 65°   | 485.7  | 483.9  | 487.3  | 491.6  | 496.5  |
| 67.5° | 427.5  | 425.4  | 428.7  | 432.4  | 437.1  |
| 70°   | 369.0  | 366.8  | 369.3  | 373.0  | 377.3  |
| 72.5° | 310.8  | 308.6  | 310.8  | 312.3  | 317.6  |
| 75°   | 253.8  | 251.6  | 252.9  | 254.1  | 258.7  |
| 77.5° | 198.4  | 196.2  | 198.7  | 199.3  | 202.1  |
| 80°   | 146.3  | 144.1  | 145.7  | 146.0  | 148.2  |
| 82.5° | 98.9   | 97.0   | 99.2   | 97.6   | 99.5   |
| 85°   | 57.0   | 55.4   | 56.1   | 55.4   | 56.4   |
| 87.5° | 22.5   | 21.3   | 21.6   | 20.3   | 20.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)