

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: P834988

Luminaire Tested: **ORLG-24-4-INS-OPL-LD4-6LO-30-120-EDD**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P834988  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 5/16/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: ORLG-24-4-INS-OPL-LD4-6LO-30-120-EDD  
Description: 2FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

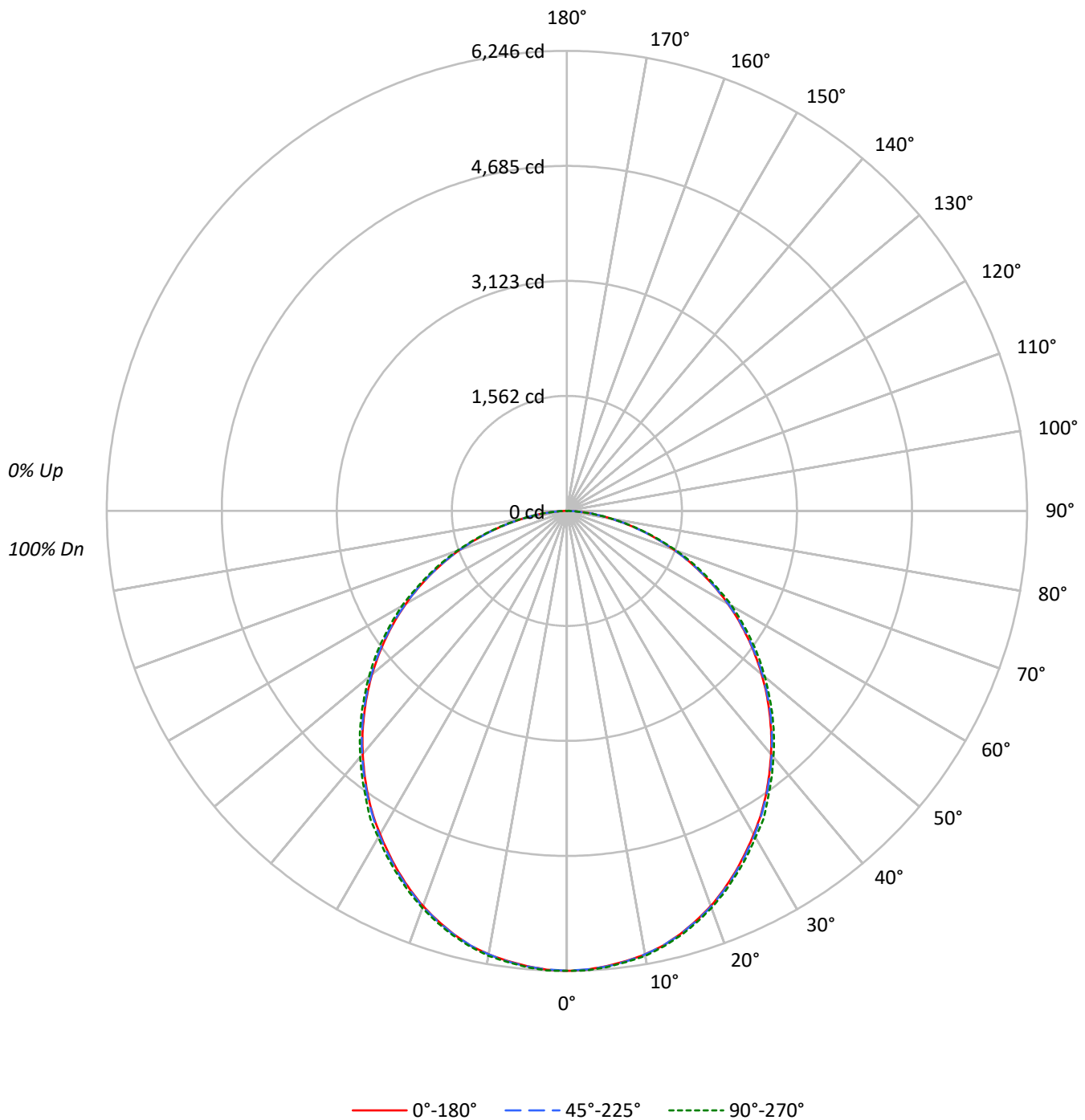
Lumens per Lamp: N/A  
Luminaire Lumens: 16872.5 lumens  
Efficiency: N/A  
Efficacy: 120.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 140.4  
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 | 100 |    |    |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 94  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 84  |    |    |
| 2   | 99  | 91  | 84  | 78  | 96  | 89  | 83  | 77  | 85  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 72  | 70  |    |    |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 65  | 75  | 69  | 64  | 73  | 67  | 62  | 70  | 65  | 61  | 59  |    |    |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  | 65  | 58  | 53  | 62  | 57  | 53  | 51  |    |    |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  | 58  | 52  | 46  | 56  | 51  | 46  | 44  |    |    |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 38  |    |    |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 36  | 48  | 41  | 36  | 47  | 41  | 36  | 34  |    |    |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 30  |    |    |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 27  |    |    |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 26  | 25  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 8402 | 8402 | 8402 |
| 5°  | 8379 | 8386 | 8397 |
| 10° | 8353 | 8354 | 8379 |
| 15° | 8284 | 8289 | 8312 |
| 20° | 8176 | 8185 | 8215 |
| 25° | 8028 | 8047 | 8084 |
| 30° | 7877 | 7904 | 7952 |
| 35° | 7734 | 7753 | 7814 |
| 40° | 7570 | 7595 | 7664 |
| 45° | 7404 | 7436 | 7513 |
| 50° | 7225 | 7258 | 7342 |
| 55° | 7020 | 7054 | 7169 |
| 60° | 6787 | 6815 | 6968 |
| 65° | 6491 | 6511 | 6635 |
| 70° | 6093 | 6098 | 6230 |
| 75° | 5538 | 5518 | 5645 |
| 80° | 4758 | 4738 | 4818 |
| 85° | 3693 | 3633 | 3653 |

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 590.1   | 3.5       |
| 10°-20°   | 1678.4  | 9.9       |
| 20°-30°   | 2498.7  | 14.8      |
| 30°-40°   | 2954.9  | 17.5      |
| 40°-50°   | 3016.5  | 17.9      |
| 50°-60°   | 2692.1  | 16.0      |
| 60°-70°   | 2027.7  | 12.0      |
| 70°-80°   | 1130.8  | 6.7       |
| 80°-90°   | 283.3   | 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°    | 4767.2  | 28.3      |
| 0°-40°    | 7722.1  | 45.8      |
| 0°-60°    | 13430.7 | 79.6      |
| 0°-90°    | 16872.5 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 16872.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 6244 | 6244  | 6244 | 6244  | 6244 |      |
| 5°  | 6204 | 6216  | 6209 | 6211  | 6217 | 589  |
| 15° | 5947 | 5953  | 5951 | 5956  | 5968 | 1676 |
| 25° | 5408 | 5414  | 5421 | 5435  | 5445 | 2491 |
| 35° | 4708 | 4703  | 4720 | 4738  | 4758 | 2944 |
| 45° | 3891 | 3890  | 3908 | 3928  | 3948 | 3002 |
| 55° | 2993 | 2989  | 3007 | 3028  | 3056 | 2675 |
| 65° | 2039 | 2031  | 2045 | 2063  | 2084 | 2016 |
| 75° | 1065 | 1056  | 1061 | 1067  | 1086 | 1129 |
| 85° | 239  | 233   | 235  | 233   | 237  | 287  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 6244.2 | 6244.2 | 6244.2 | 6244.2 | 6244.2 |
| 2.5°  | 6233.9 | 6244.2 | 6231.3 | 6233.9 | 6245.5 |
| 5°    | 6204.1 | 6215.8 | 6209.3 | 6210.6 | 6217.1 |
| 7.5°  | 6162.8 | 6178.3 | 6169.2 | 6171.8 | 6178.3 |
| 10°   | 6113.6 | 6125.3 | 6114.9 | 6121.4 | 6133.0 |
| 12.5° | 6043.8 | 6049.0 | 6043.8 | 6046.4 | 6059.3 |
| 15°   | 5946.9 | 5953.3 | 5950.7 | 5955.9 | 5967.5 |
| 17.5° | 5833.1 | 5840.8 | 5839.6 | 5849.9 | 5858.9 |
| 20°   | 5710.3 | 5711.6 | 5716.7 | 5727.1 | 5737.4 |
| 22.5° | 5565.5 | 5569.4 | 5574.5 | 5588.8 | 5599.1 |
| 25°   | 5407.8 | 5414.2 | 5420.7 | 5434.9 | 5445.3 |
| 27.5° | 5241.0 | 5247.5 | 5256.5 | 5272.0 | 5288.8 |
| 30°   | 5070.3 | 5070.3 | 5087.1 | 5102.7 | 5118.2 |
| 32.5° | 4898.4 | 4891.9 | 4907.5 | 4926.8 | 4964.3 |
| 35°   | 4708.4 | 4703.2 | 4720.0 | 4738.1 | 4757.5 |
| 37.5° | 4510.6 | 4506.7 | 4526.1 | 4545.5 | 4563.6 |
| 40°   | 4310.2 | 4305.0 | 4324.4 | 4343.8 | 4363.2 |
| 42.5° | 4104.6 | 4102.0 | 4120.1 | 4139.5 | 4160.2 |
| 45°   | 3891.3 | 3890.0 | 3908.1 | 3927.5 | 3948.2 |
| 47.5° | 3674.1 | 3671.5 | 3689.6 | 3710.3 | 3728.4 |
| 50°   | 3451.8 | 3449.2 | 3467.3 | 3488.0 | 3507.4 |
| 52.5° | 3222.9 | 3222.9 | 3239.7 | 3257.8 | 3287.6 |
| 55°   | 2992.8 | 2988.9 | 3007.0 | 3027.7 | 3056.2 |
| 57.5° | 2760.1 | 2754.9 | 2771.8 | 2792.4 | 2818.3 |
| 60°   | 2522.2 | 2517.1 | 2532.6 | 2553.3 | 2589.5 |
| 62.5° | 2281.8 | 2274.0 | 2289.5 | 2308.9 | 2330.9 |
| 65°   | 2038.7 | 2031.0 | 2045.2 | 2063.3 | 2084.0 |
| 67.5° | 1794.4 | 1785.4 | 1799.6 | 1815.1 | 1834.5 |
| 70°   | 1548.8 | 1539.7 | 1550.1 | 1565.6 | 1583.7 |
| 72.5° | 1304.4 | 1295.4 | 1304.4 | 1310.9 | 1332.9 |
| 75°   | 1065.3 | 1056.2 | 1061.4 | 1066.6 | 1085.9 |
| 77.5° | 832.6  | 823.5  | 833.9  | 836.4  | 848.1  |
| 80°   | 614.1  | 605.0  | 611.5  | 612.8  | 621.8  |
| 82.5° | 415.0  | 407.2  | 416.3  | 409.8  | 417.6  |
| 85°   | 239.2  | 232.7  | 235.3  | 232.7  | 236.6  |
| 87.5° | 94.4   | 89.2   | 90.5   | 85.3   | 85.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)