

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: P834970

Luminaire Tested: **ORLG-24-4-INS-OPL-LD4-6LO-27-120-EDD**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P834970  
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-27-120-EDD  
Description: 2FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 2700K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

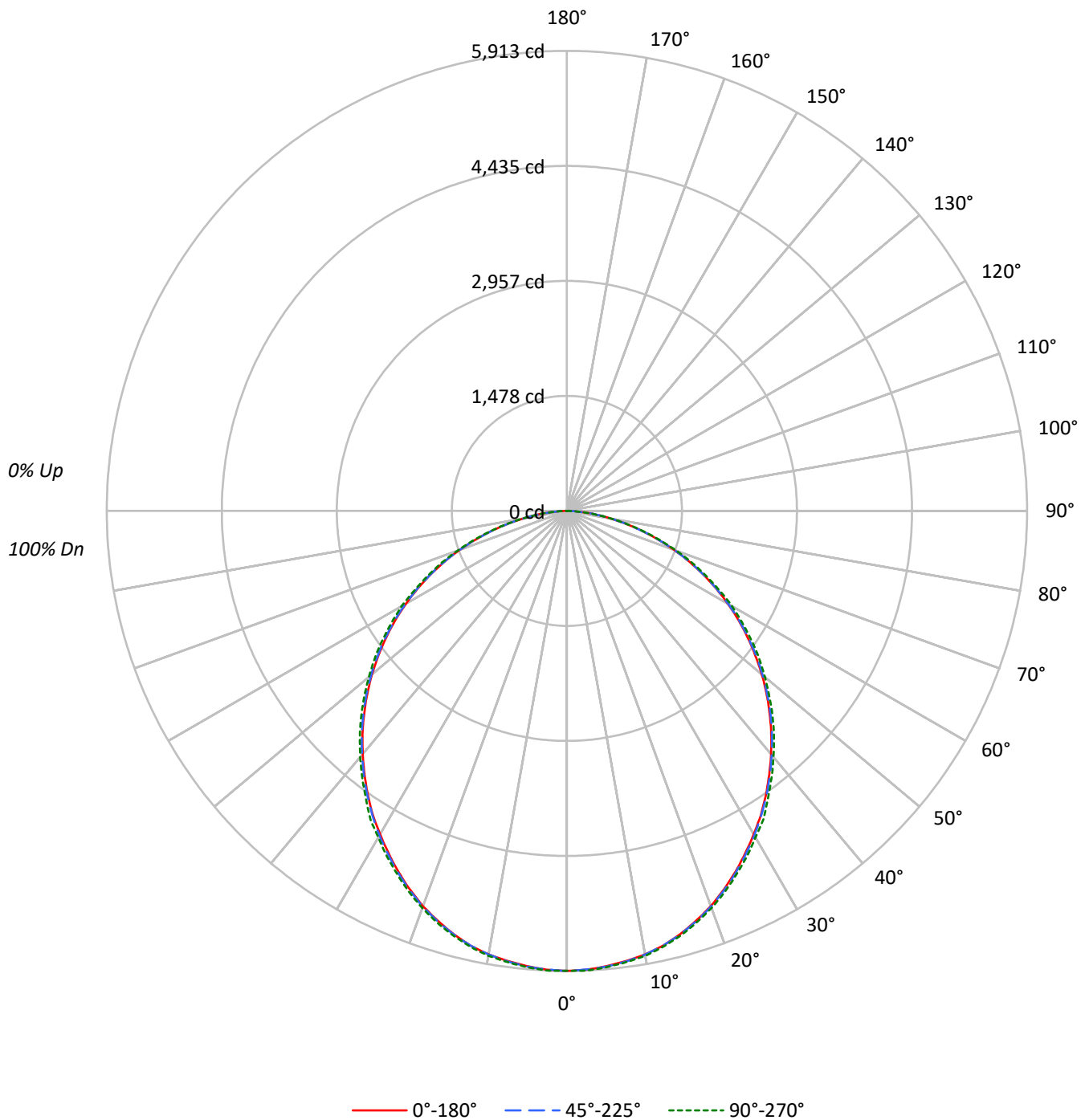
Lumens per Lamp: N/A  
Luminaire Lumens: 15975.0 lumens  
Efficiency: N/A  
Efficacy: 113.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P834970

CATALOG NUMBER: ORLG-24-4-INS-OPL-LD4-6LO-27-120-EDD

### Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834970

CATALOG NUMBER: ORLG-24-4-INS-OPL-LD4-6LO-27-120-EDD

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|-----|-----|--|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |  | 20  |     |     |  | 20  |     |     |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |  | 30  |     |     |  | 10  |     |     |  | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 0   |
| 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°  | 7955 | 7955 | 7955 |
| 5°  | 7934 | 7940 | 7950 |
| 10° | 7908 | 7910 | 7934 |
| 15° | 7843 | 7848 | 7870 |
| 20° | 7741 | 7750 | 7778 |
| 25° | 7601 | 7619 | 7654 |
| 30° | 7458 | 7483 | 7529 |
| 35° | 7322 | 7340 | 7399 |
| 40° | 7168 | 7191 | 7256 |
| 45° | 7011 | 7041 | 7113 |
| 50° | 6841 | 6872 | 6951 |
| 55° | 6647 | 6679 | 6788 |
| 60° | 6426 | 6453 | 6597 |
| 65° | 6145 | 6165 | 6282 |
| 70° | 5769 | 5773 | 5899 |
| 75° | 5243 | 5224 | 5345 |
| 80° | 4505 | 4486 | 4562 |
| 85° | 3495 | 3440 | 3458 |

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834970

CATALOG NUMBER: ORLG-24-4-INS-OPL-LD4-6LO-27-120-EDD

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 558.7   | 3.5       |
| 10°-20°   | 1589.2  | 9.9       |
| 20°-30°   | 2365.8  | 14.8      |
| 30°-40°   | 2797.7  | 17.5      |
| 40°-50°   | 2856.1  | 17.9      |
| 50°-60°   | 2548.9  | 16.0      |
| 60°-70°   | 1919.8  | 12.0      |
| 70°-80°   | 1070.6  | 6.7       |
| 80°-90°   | 268.2   | 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°    | 4513.6  | 28.3      |
| 0°-40°    | 7311.3  | 45.8      |
| 0°-60°    | 12716.3 | 79.6      |
| 0°-90°    | 15975.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 15975.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 5912 | 5912  | 5912 | 5912  | 5912 |      |
| 5°  | 5874 | 5885  | 5879 | 5880  | 5886 | 558  |
| 15° | 5630 | 5637  | 5634 | 5639  | 5650 | 1587 |
| 25° | 5120 | 5126  | 5132 | 5146  | 5156 | 2359 |
| 35° | 4458 | 4453  | 4469 | 4486  | 4504 | 2788 |
| 45° | 3684 | 3683  | 3700 | 3719  | 3738 | 2842 |
| 55° | 2834 | 2830  | 2847 | 2867  | 2894 | 2533 |
| 65° | 1930 | 1923  | 1936 | 1954  | 1973 | 1909 |
| 75° | 1009 | 1000  | 1005 | 1010  | 1028 | 1069 |
| 85° | 226  | 220   | 223  | 220   | 224  | 272  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834970

CATALOG NUMBER: ORLG-24-4-INS-OPL-LD4-6LO-27-120-EDD

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 5912.1 | 5912.1 | 5912.1 | 5912.1 | 5912.1 |
| 2.5°  | 5902.3 | 5912.1 | 5899.8 | 5902.3 | 5913.3 |
| 5°    | 5874.1 | 5885.1 | 5879.0 | 5880.2 | 5886.4 |
| 7.5°  | 5834.9 | 5849.6 | 5841.1 | 5843.5 | 5849.6 |
| 10°   | 5788.4 | 5799.5 | 5789.7 | 5795.8 | 5806.8 |
| 12.5° | 5722.3 | 5727.2 | 5722.3 | 5724.8 | 5737.0 |
| 15°   | 5630.5 | 5636.7 | 5634.2 | 5639.1 | 5650.1 |
| 17.5° | 5522.8 | 5530.2 | 5528.9 | 5538.7 | 5547.3 |
| 20°   | 5406.5 | 5407.8 | 5412.7 | 5422.5 | 5432.2 |
| 22.5° | 5269.4 | 5273.1 | 5278.0 | 5291.5 | 5301.3 |
| 25°   | 5120.1 | 5126.2 | 5132.4 | 5145.8 | 5155.6 |
| 27.5° | 4962.2 | 4968.3 | 4976.9 | 4991.6 | 5007.5 |
| 30°   | 4800.6 | 4800.6 | 4816.6 | 4831.2 | 4845.9 |
| 32.5° | 4637.8 | 4631.7 | 4646.4 | 4664.8 | 4700.3 |
| 35°   | 4457.9 | 4453.0 | 4468.9 | 4486.1 | 4504.4 |
| 37.5° | 4270.6 | 4267.0 | 4285.3 | 4303.7 | 4320.8 |
| 40°   | 4080.9 | 4076.0 | 4094.4 | 4112.7 | 4131.1 |
| 42.5° | 3886.3 | 3883.8 | 3901.0 | 3919.3 | 3938.9 |
| 45°   | 3684.3 | 3683.1 | 3700.2 | 3718.6 | 3738.2 |
| 47.5° | 3478.7 | 3476.2 | 3493.4 | 3513.0 | 3530.1 |
| 50°   | 3268.2 | 3265.7 | 3282.8 | 3302.4 | 3320.8 |
| 52.5° | 3051.5 | 3051.5 | 3067.4 | 3084.6 | 3112.7 |
| 55°   | 2833.6 | 2830.0 | 2847.1 | 2866.7 | 2893.6 |
| 57.5° | 2613.3 | 2608.4 | 2624.3 | 2643.9 | 2668.4 |
| 60°   | 2388.1 | 2383.2 | 2397.9 | 2417.5 | 2451.7 |
| 62.5° | 2160.4 | 2153.1 | 2167.8 | 2186.1 | 2206.9 |
| 65°   | 1930.3 | 1923.0 | 1936.4 | 1953.6 | 1973.1 |
| 67.5° | 1699.0 | 1690.4 | 1703.8 | 1718.5 | 1736.9 |
| 70°   | 1466.4 | 1457.8 | 1467.6 | 1482.3 | 1499.4 |
| 72.5° | 1235.0 | 1226.5 | 1235.0 | 1241.2 | 1262.0 |
| 75°   | 1008.6 | 1000.0 | 1004.9 | 1009.8 | 1028.2 |
| 77.5° | 788.3  | 779.7  | 789.5  | 791.9  | 803.0  |
| 80°   | 581.4  | 572.8  | 579.0  | 580.2  | 588.8  |
| 82.5° | 392.9  | 385.6  | 394.1  | 388.0  | 395.4  |
| 85°   | 226.4  | 220.3  | 222.8  | 220.3  | 224.0  |
| 87.5° | 89.4   | 84.5   | 85.7   | 80.8   | 80.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)