

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P974721

Luminaire Tested: FLR2-24-72HE-L835-CA080

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P974721  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/13/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR2-24-72HE-L835-CA080  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

**Summary**

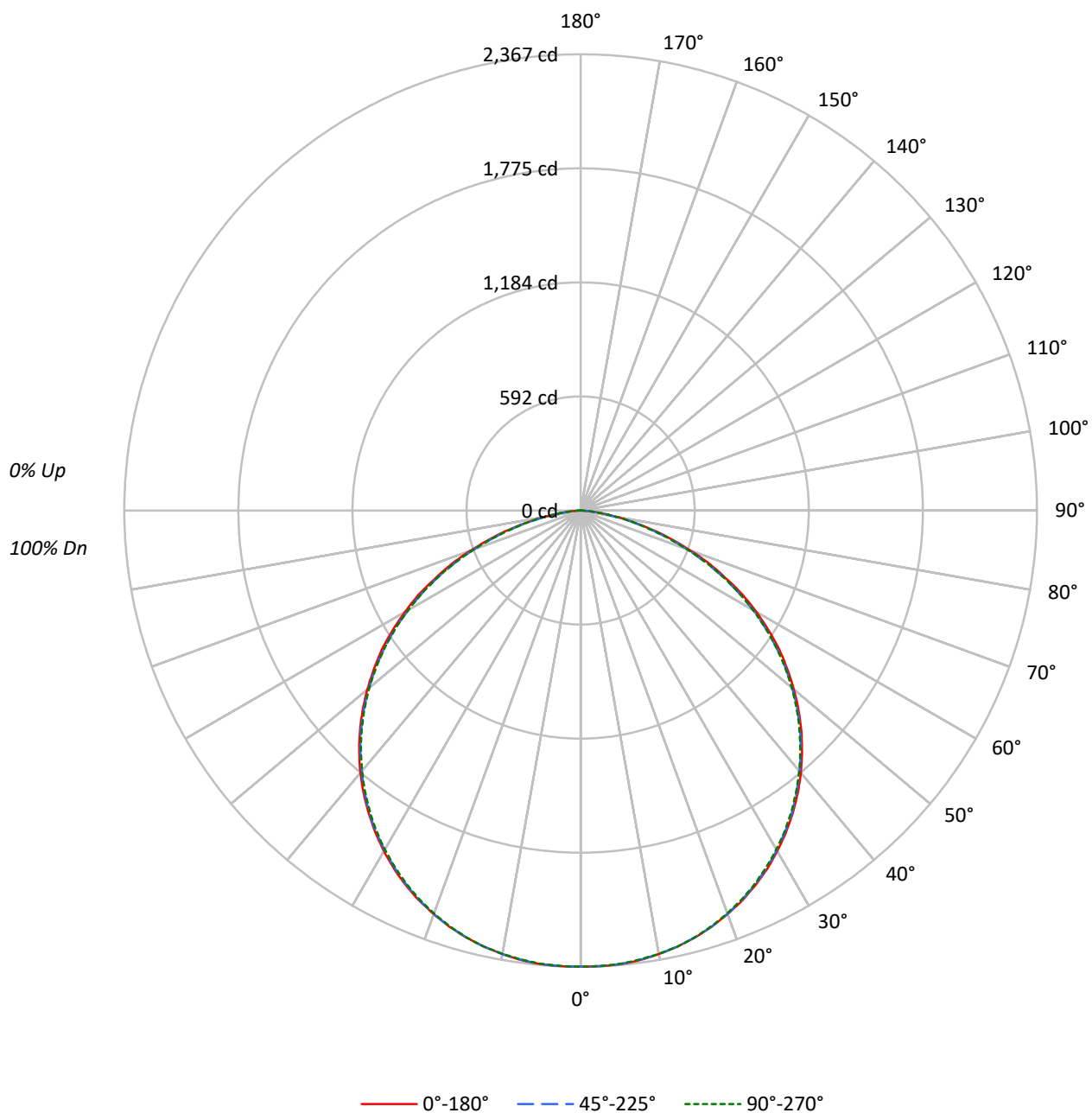
Lumens per Lamp: N/A  
Luminaire Lumens: 6689.2 lumens  
Efficiency: N/A  
Efficacy: 124.8 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 53.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor:  
Total Harmonic Distortion (THDi):  
Frequency (hertz): 60  
Stabilization Time: HR  
Operation Time: HR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P974721

CATALOG NUMBER: FLR2-24-72HE-L835-CA080

### Luminous Intensity Polar Plot



TEST NUMBER: P974721

CATALOG NUMBER: FLR2-24-72HE-L835-CA080

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |     |    | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     |     | 50  |     |     |     |     | 30  |     |     |     |    | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    | 100 |
| 1   | 109 | 105 | 100 | 97  | 106 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |    | 85  |
| 2   | 99  | 91  | 85  | 79  | 97  | 89  | 83  | 78  | 86  | 81  | 76  | 83  | 78  | 75  | 80  | 76  | 73  | 71  |    | 71  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  | 73  | 68  | 63  | 70  | 66  | 62  | 60  |    | 60  |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 57  | 53  | 51  |    | 51  |
| 5   | 76  | 64  | 55  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 56  | 51  | 46  | 44  |    | 44  |
| 6   | 70  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 41  | 38  |    | 38  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 34  |    | 34  |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 30  |    | 30  |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  | 41  | 34  | 29  | 39  | 33  | 29  | 27  |    | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 31  | 27  | 38  | 31  | 26  | 37  | 31  | 26  | 25  |    | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3185 | 3185 | 3185 |
| 5°  | 3191 | 3191 | 3189 |
| 10° | 3193 | 3192 | 3191 |
| 15° | 3194 | 3193 | 3193 |
| 20° | 3191 | 3189 | 3185 |
| 25° | 3185 | 3178 | 3173 |
| 30° | 3171 | 3161 | 3155 |
| 35° | 3150 | 3141 | 3130 |
| 40° | 3122 | 3103 | 3098 |
| 45° | 3082 | 3064 | 3054 |
| 50° | 3024 | 3001 | 2992 |
| 55° | 2952 | 2910 | 2906 |
| 60° | 2829 | 2779 | 2779 |
| 65° | 2647 | 2585 | 2593 |
| 70° | 2382 | 2308 | 2302 |
| 75° | 2000 | 1920 | 1912 |
| 80° | 1461 | 1389 | 1447 |
| 85° | 826  | 761  | 773  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3082 cd/sqm

TEST NUMBER: P974721

CATALOG NUMBER: FLR2-24-72HE-L835-CA080

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 224.7  | 3.4       |
| 10°-20°   | 647.2  | 9.7       |
| 20°-30°   | 986.8  | 14.8      |
| 30°-40°   | 1195.5 | 17.9      |
| 40°-50°   | 1241.8 | 18.6      |
| 50°-60°   | 1110.9 | 16.6      |
| 60°-70°   | 809.6  | 12.1      |
| 70°-80°   | 401.0  | 6.0       |
| 80°-90°   | 71.7   | 1.1       |
| 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°    | 1858.6 | 27.8      |
| 0°-40°    | 3054.1 | 45.7      |
| 0°-60°    | 5406.9 | 80.8      |
| 0°-90°    | 6689.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6689.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2367 | 2367  | 2367 | 2367  | 2367 |      |
| 5°  | 2362 | 2363  | 2362 | 2362  | 2361 | 225  |
| 15° | 2293 | 2292  | 2292 | 2294  | 2292 | 647  |
| 25° | 2145 | 2143  | 2141 | 2140  | 2138 | 989  |
| 35° | 1918 | 1915  | 1912 | 1909  | 1906 | 1199 |
| 45° | 1620 | 1616  | 1610 | 1607  | 1605 | 1248 |
| 55° | 1258 | 1249  | 1241 | 1241  | 1239 | 1121 |
| 65° | 831  | 825   | 812  | 815   | 814  | 824  |
| 75° | 385  | 379   | 369  | 376   | 368  | 410  |
| 85° | 54   | 49    | 49   | 50    | 50   | 74   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

TEST NUMBER: P974721

CATALOG NUMBER: FLR2-24-72HE-L835-CA080

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2366.8 | 2366.8 | 2366.8 | 2366.8 | 2366.8 |
| 2.5°  | 2366.8 | 2365.9 | 2365.9 | 2366.8 | 2365.1 |
| 5°    | 2362.5 | 2363.4 | 2362.5 | 2362.5 | 2360.8 |
| 7.5°  | 2353.2 | 2352.3 | 2351.5 | 2352.3 | 2349.8 |
| 10°   | 2337.0 | 2337.0 | 2336.2 | 2337.0 | 2335.3 |
| 12.5° | 2317.5 | 2317.5 | 2317.5 | 2318.4 | 2317.5 |
| 15°   | 2292.9 | 2292.0 | 2292.0 | 2293.7 | 2292.0 |
| 17.5° | 2264.0 | 2263.2 | 2263.2 | 2262.3 | 2260.6 |
| 20°   | 2228.3 | 2228.3 | 2227.5 | 2226.6 | 2224.1 |
| 22.5° | 2190.1 | 2189.3 | 2186.7 | 2186.7 | 2183.3 |
| 25°   | 2145.1 | 2142.6 | 2140.9 | 2140.0 | 2137.5 |
| 27.5° | 2095.9 | 2092.5 | 2089.9 | 2088.2 | 2085.7 |
| 30°   | 2040.7 | 2037.3 | 2034.7 | 2032.2 | 2030.5 |
| 32.5° | 1981.2 | 1979.5 | 1975.3 | 1974.4 | 1971.0 |
| 35°   | 1917.5 | 1915.0 | 1912.4 | 1909.0 | 1905.6 |
| 37.5° | 1849.6 | 1847.0 | 1841.1 | 1839.4 | 1836.9 |
| 40°   | 1777.4 | 1774.0 | 1766.4 | 1766.4 | 1763.8 |
| 42.5° | 1700.1 | 1696.7 | 1691.6 | 1688.2 | 1686.5 |
| 45°   | 1619.5 | 1616.1 | 1610.1 | 1606.7 | 1605.0 |
| 47.5° | 1533.7 | 1531.1 | 1524.3 | 1521.8 | 1519.3 |
| 50°   | 1444.5 | 1441.1 | 1433.5 | 1431.8 | 1429.2 |
| 52.5° | 1351.1 | 1349.4 | 1339.2 | 1338.4 | 1335.8 |
| 55°   | 1258.5 | 1249.2 | 1240.7 | 1240.7 | 1239.0 |
| 57.5° | 1156.6 | 1149.8 | 1138.8 | 1138.8 | 1137.1 |
| 60°   | 1051.3 | 1045.4 | 1032.6 | 1034.3 | 1032.6 |
| 62.5° | 948.6  | 935.8  | 923.9  | 929.0  | 924.8  |
| 65°   | 831.4  | 824.6  | 811.9  | 815.2  | 814.4  |
| 67.5° | 724.4  | 711.6  | 699.8  | 706.5  | 703.2  |
| 70°   | 605.5  | 598.7  | 586.8  | 593.6  | 585.1  |
| 72.5° | 493.4  | 487.5  | 475.6  | 483.2  | 474.7  |
| 75°   | 384.7  | 378.8  | 369.4  | 376.2  | 367.7  |
| 77.5° | 281.9  | 277.7  | 269.2  | 276.0  | 277.7  |
| 80°   | 188.5  | 183.4  | 179.2  | 185.1  | 186.8  |
| 82.5° | 110.4  | 107.0  | 105.3  | 106.2  | 110.4  |
| 85°   | 53.5   | 49.3   | 49.3   | 50.1   | 50.1   |
| 87.5° | 14.4   | 12.7   | 14.4   | 15.3   | 16.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)