

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: P687873

Luminaire Tested: FLR-MC-22-L3C3 (LOW)-35-CA08

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P687873  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2303-938-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/22/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR-MC-22-L3C3 (LOW)-35-CA08  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 3500K Luminaire at Low Lumen setting for Medical/Cleanroom  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

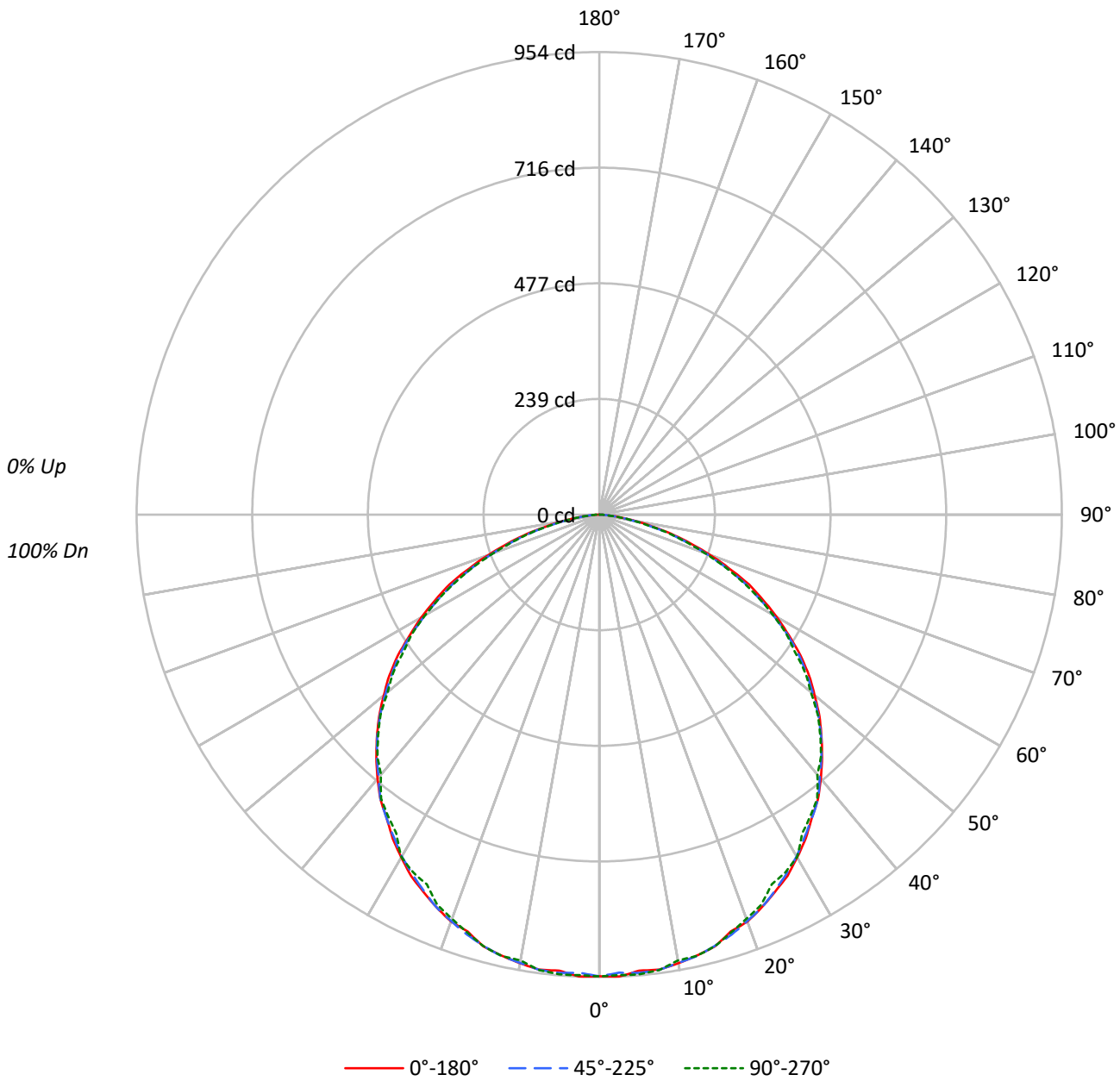
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2675.3 lumens  
Efficiency: N/A  
Efficacy: 121.6 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22  
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: 24 FT



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### Luminous Intensity Polar Plot



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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| RF  | 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  | 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 | 105 | 101 | 97  | 107 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |    |    |
| 2   | 99  | 91  | 85  | 79  | 97  | 90  | 83  | 78  | 86  | 81  | 76  | 83  | 78  | 75  | 80  | 76  | 73  | 71  |    |    |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  | 73  | 68  | 63  | 70  | 66  | 62  | 60  |    |    |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |    |    |
| 5   | 76  | 64  | 55  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 57  | 51  | 46  | 44  |    |    |
| 6   | 70  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 41  | 39  |    |    |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 37  | 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  | 39  | 32  | 27  | 38  | 31  | 27  | 38  | 31  | 27  | 37  | 31  | 26  | 25  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2563 | 2563 | 2563 |
| 5°  | 2551 | 2564 | 2571 |
| 10° | 2568 | 2566 | 2551 |
| 15° | 2569 | 2566 | 2568 |
| 20° | 2558 | 2555 | 2542 |
| 25° | 2548 | 2542 | 2498 |
| 30° | 2537 | 2529 | 2535 |
| 35° | 2510 | 2511 | 2494 |
| 40° | 2498 | 2486 | 2459 |
| 45° | 2466 | 2463 | 2453 |
| 50° | 2427 | 2409 | 2383 |
| 55° | 2377 | 2355 | 2310 |
| 60° | 2274 | 2225 | 2225 |
| 65° | 2171 | 2082 | 2060 |
| 70° | 1910 | 1835 | 1812 |
| 75° | 1595 | 1515 | 1529 |
| 80° | 1141 | 1072 | 1066 |
| 85° | 593  | 550  | 580  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 2472 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.3   | 3.4       |
| 10°-20°   | 259.5  | 9.7       |
| 20°-30°   | 394.8  | 14.8      |
| 30°-40°   | 478.4  | 17.9      |
| 40°-50°   | 498.1  | 18.6      |
| 50°-60°   | 446.0  | 16.7      |
| 60°-70°   | 323.8  | 12.1      |
| 70°-80°   | 157.2  | 5.9       |
| 80°-90°   | 27.1   | 1.0       |
| 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°    | 744.6  | 27.8      |
| 0°-40°    | 1223.0 | 45.7      |
| 0°-60°    | 2167.2 | 81.0      |
| 0°-90°    | 2675.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2675.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 952 | 952   | 952 | 952   | 952 |      |
| 5°  | 944 | 950   | 949 | 947   | 952 | 90   |
| 15° | 922 | 920   | 921 | 914   | 922 | 259  |
| 25° | 858 | 860   | 856 | 855   | 841 | 396  |
| 35° | 764 | 768   | 764 | 767   | 759 | 479  |
| 45° | 648 | 650   | 647 | 644   | 645 | 500  |
| 55° | 507 | 503   | 502 | 496   | 492 | 451  |
| 65° | 341 | 332   | 327 | 326   | 324 | 332  |
| 75° | 153 | 150   | 146 | 146   | 147 | 163  |
| 85° | 19  | 20    | 18  | 18    | 19  | 28   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 952.4 | 952.4 | 952.4 | 952.4 | 952.4 |
| 2.5°  | 953.9 | 953.4 | 945.7 | 949.1 | 951.0 |
| 5°    | 944.2 | 950.0 | 949.1 | 947.1 | 951.9 |
| 7.5°  | 946.7 | 944.2 | 947.1 | 946.7 | 947.6 |
| 10°   | 939.9 | 937.5 | 939.0 | 939.4 | 933.7 |
| 12.5° | 931.7 | 930.3 | 932.7 | 934.6 | 932.2 |
| 15°   | 922.1 | 920.2 | 921.2 | 914.4 | 921.7 |
| 17.5° | 901.9 | 906.7 | 908.2 | 904.3 | 903.9 |
| 20°   | 893.3 | 891.8 | 892.3 | 890.9 | 887.5 |
| 22.5° | 876.9 | 882.7 | 876.9 | 874.1 | 871.6 |
| 25°   | 858.2 | 860.1 | 856.3 | 854.8 | 841.4 |
| 27.5° | 840.4 | 839.9 | 835.6 | 835.6 | 831.7 |
| 30°   | 816.4 | 813.0 | 814.0 | 810.1 | 815.9 |
| 32.5° | 792.3 | 792.8 | 788.5 | 789.9 | 779.3 |
| 35°   | 764.0 | 768.3 | 764.4 | 766.8 | 759.1 |
| 37.5° | 740.9 | 738.0 | 740.9 | 737.0 | 738.5 |
| 40°   | 711.1 | 710.1 | 707.7 | 708.7 | 700.0 |
| 42.5° | 680.3 | 678.9 | 678.4 | 676.5 | 676.9 |
| 45°   | 648.1 | 649.5 | 647.1 | 643.8 | 644.7 |
| 47.5° | 615.9 | 617.3 | 613.0 | 608.7 | 611.5 |
| 50°   | 579.8 | 580.8 | 575.5 | 574.0 | 569.2 |
| 52.5° | 545.7 | 541.4 | 538.5 | 536.1 | 535.6 |
| 55°   | 506.7 | 502.9 | 501.9 | 496.2 | 492.3 |
| 57.5° | 463.5 | 462.5 | 459.6 | 455.3 | 457.2 |
| 60°   | 422.6 | 418.8 | 413.5 | 412.5 | 413.5 |
| 62.5° | 380.8 | 376.4 | 369.7 | 371.6 | 369.7 |
| 65°   | 340.9 | 331.7 | 326.9 | 326.0 | 323.6 |
| 67.5° | 289.9 | 283.2 | 279.3 | 277.9 | 278.9 |
| 70°   | 242.8 | 242.3 | 233.2 | 231.7 | 230.3 |
| 72.5° | 197.1 | 193.3 | 188.0 | 187.5 | 187.0 |
| 75°   | 153.4 | 150.0 | 145.7 | 146.2 | 147.1 |
| 77.5° | 110.6 | 107.2 | 103.4 | 104.8 | 102.9 |
| 80°   | 73.6  | 72.6  | 69.2  | 68.8  | 68.8  |
| 82.5° | 43.8  | 41.8  | 39.9  | 39.9  | 40.4  |
| 85°   | 19.2  | 19.7  | 17.8  | 17.8  | 18.8  |
| 87.5° | 4.8   | 5.3   | 4.8   | 4.8   | 4.8   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)