

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: P974193

Luminaire Tested: FLR2-24-20-L835-CP250

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P974193
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: FLR2-24-20-L835-CP250
Description: SHAPER SENSE CIRCLE

Light Source: FLR2-24-20-L835-CP250
Ballast/Driver: -

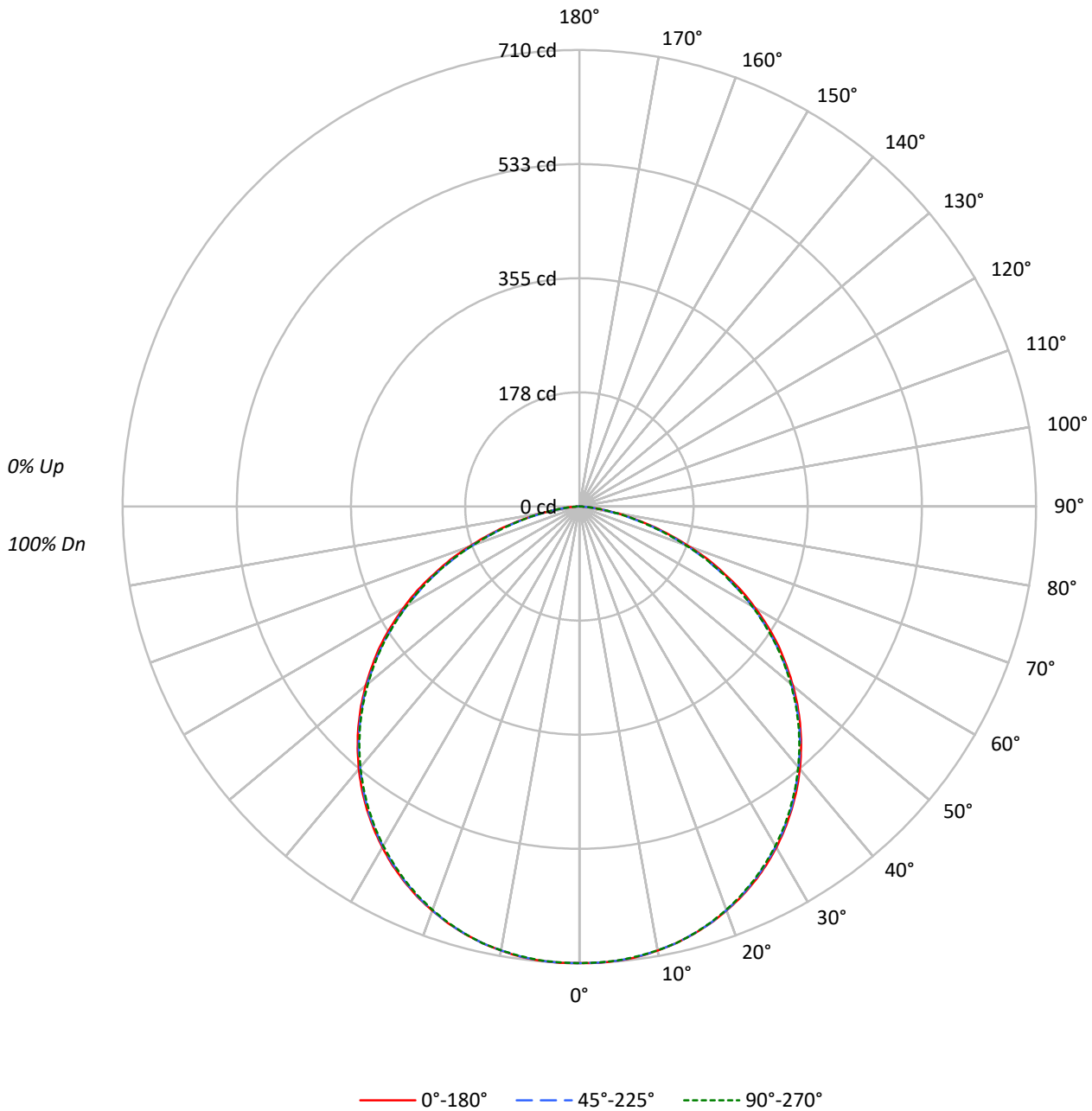
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2007.9 lumens
Efficiency: N/A
Efficacy: 120.2 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): 16.7
Input Voltage (V): 120
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

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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 | |
| RW | 70 | 50 | 30 | 10 | 70 | 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 | 100 | 97 | 106 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 89 | 87 | 85 |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 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 | 57 | 53 | 51 |
| 5 | 76 | 64 | 55 | 48 | 74 | 62 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 56 | 51 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 41 | 38 |
| 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 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 39 | 32 | 27 | 38 | 31 | 27 | 38 | 31 | 26 | 37 | 31 | 26 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|-----|-----|
| 0° | 956 | 956 | 956 |
| 5° | 958 | 958 | 957 |
| 10° | 958 | 958 | 958 |
| 15° | 959 | 958 | 958 |
| 20° | 958 | 957 | 956 |
| 25° | 956 | 954 | 953 |
| 30° | 952 | 949 | 947 |
| 35° | 945 | 943 | 940 |
| 40° | 937 | 931 | 930 |
| 45° | 925 | 920 | 917 |
| 50° | 908 | 901 | 898 |
| 55° | 886 | 874 | 872 |
| 60° | 849 | 834 | 834 |
| 65° | 795 | 776 | 778 |
| 70° | 715 | 693 | 691 |
| 75° | 600 | 577 | 574 |
| 80° | 439 | 417 | 435 |
| 85° | 249 | 228 | 232 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 925 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 67.4 | 3.4 |
| 10°-20° | 194.3 | 9.7 |
| 20°-30° | 296.2 | 14.8 |
| 30°-40° | 358.9 | 17.9 |
| 40°-50° | 372.8 | 18.6 |
| 50°-60° | 333.5 | 16.6 |
| 60°-70° | 243.0 | 12.1 |
| 70°-80° | 120.4 | 6.0 |
| 80°-90° | 21.5 | 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° | 557.9 | 27.8 |
| 0°-40° | 916.7 | 45.7 |
| 0°-60° | 1623.0 | 80.8 |
| 0°-90° | 2007.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2007.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 710 | 710 | 710 | 710 | 710 | |
| 5° | 709 | 709 | 709 | 709 | 709 | 67 |
| 15° | 688 | 688 | 688 | 688 | 688 | 194 |
| 25° | 644 | 643 | 643 | 642 | 642 | 297 |
| 35° | 576 | 575 | 574 | 573 | 572 | 360 |
| 45° | 486 | 485 | 483 | 482 | 482 | 375 |
| 55° | 378 | 375 | 372 | 372 | 372 | 337 |
| 65° | 250 | 248 | 244 | 245 | 244 | 247 |
| 75° | 116 | 114 | 111 | 113 | 110 | 123 |
| 85° | 16 | 15 | 15 | 15 | 15 | 22 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P974193
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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 710.4 | 710.4 | 710.4 | 710.4 | 710.4 |
| 2.5° | 710.4 | 710.2 | 710.2 | 710.4 | 709.9 |
| 5° | 709.1 | 709.4 | 709.1 | 709.1 | 708.6 |
| 7.5° | 706.3 | 706.1 | 705.8 | 706.1 | 705.3 |
| 10° | 701.5 | 701.5 | 701.2 | 701.5 | 701.0 |
| 12.5° | 695.6 | 695.6 | 695.6 | 695.9 | 695.6 |
| 15° | 688.2 | 688.0 | 688.0 | 688.5 | 688.0 |
| 17.5° | 679.6 | 679.3 | 679.3 | 679.1 | 678.6 |
| 20° | 668.9 | 668.9 | 668.6 | 668.4 | 667.6 |
| 22.5° | 657.4 | 657.1 | 656.4 | 656.4 | 655.4 |
| 25° | 643.9 | 643.1 | 642.6 | 642.4 | 641.6 |
| 27.5° | 629.1 | 628.1 | 627.3 | 626.8 | 626.0 |
| 30° | 612.5 | 611.5 | 610.8 | 610.0 | 609.5 |
| 32.5° | 594.7 | 594.2 | 592.9 | 592.7 | 591.6 |
| 35° | 575.6 | 574.8 | 574.0 | 573.0 | 572.0 |
| 37.5° | 555.2 | 554.4 | 552.6 | 552.1 | 551.4 |
| 40° | 533.5 | 532.5 | 530.2 | 530.2 | 529.4 |
| 42.5° | 510.3 | 509.3 | 507.8 | 506.7 | 506.2 |
| 45° | 486.1 | 485.1 | 483.3 | 482.3 | 481.8 |
| 47.5° | 460.4 | 459.6 | 457.6 | 456.8 | 456.0 |
| 50° | 433.6 | 432.6 | 430.3 | 429.8 | 429.0 |
| 52.5° | 405.6 | 405.0 | 402.0 | 401.7 | 401.0 |
| 55° | 377.8 | 375.0 | 372.4 | 372.4 | 371.9 |
| 57.5° | 347.2 | 345.1 | 341.8 | 341.8 | 341.3 |
| 60° | 315.6 | 313.8 | 310.0 | 310.5 | 310.0 |
| 62.5° | 284.7 | 280.9 | 277.3 | 278.9 | 277.6 |
| 65° | 249.6 | 247.5 | 243.7 | 244.7 | 244.5 |
| 67.5° | 217.4 | 213.6 | 210.0 | 212.1 | 211.1 |
| 70° | 181.7 | 179.7 | 176.1 | 178.2 | 175.6 |
| 72.5° | 148.1 | 146.3 | 142.7 | 145.0 | 142.5 |
| 75° | 115.5 | 113.7 | 110.9 | 112.9 | 110.4 |
| 77.5° | 84.6 | 83.4 | 80.8 | 82.8 | 83.4 |
| 80° | 56.6 | 55.1 | 53.8 | 55.6 | 56.1 |
| 82.5° | 33.1 | 32.1 | 31.6 | 31.9 | 33.1 |
| 85° | 16.1 | 14.8 | 14.8 | 15.0 | 15.0 |
| 87.5° | 4.3 | 3.8 | 4.3 | 4.6 | 4.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)