

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: P974265

Luminaire Tested: FLR2-24-20-L935-CA080

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P974265
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-L935-CA080
Description: SHAPER SENSE CIRCLE

Light Source: FLR2-24-20-L935-CA080
Ballast/Driver: -

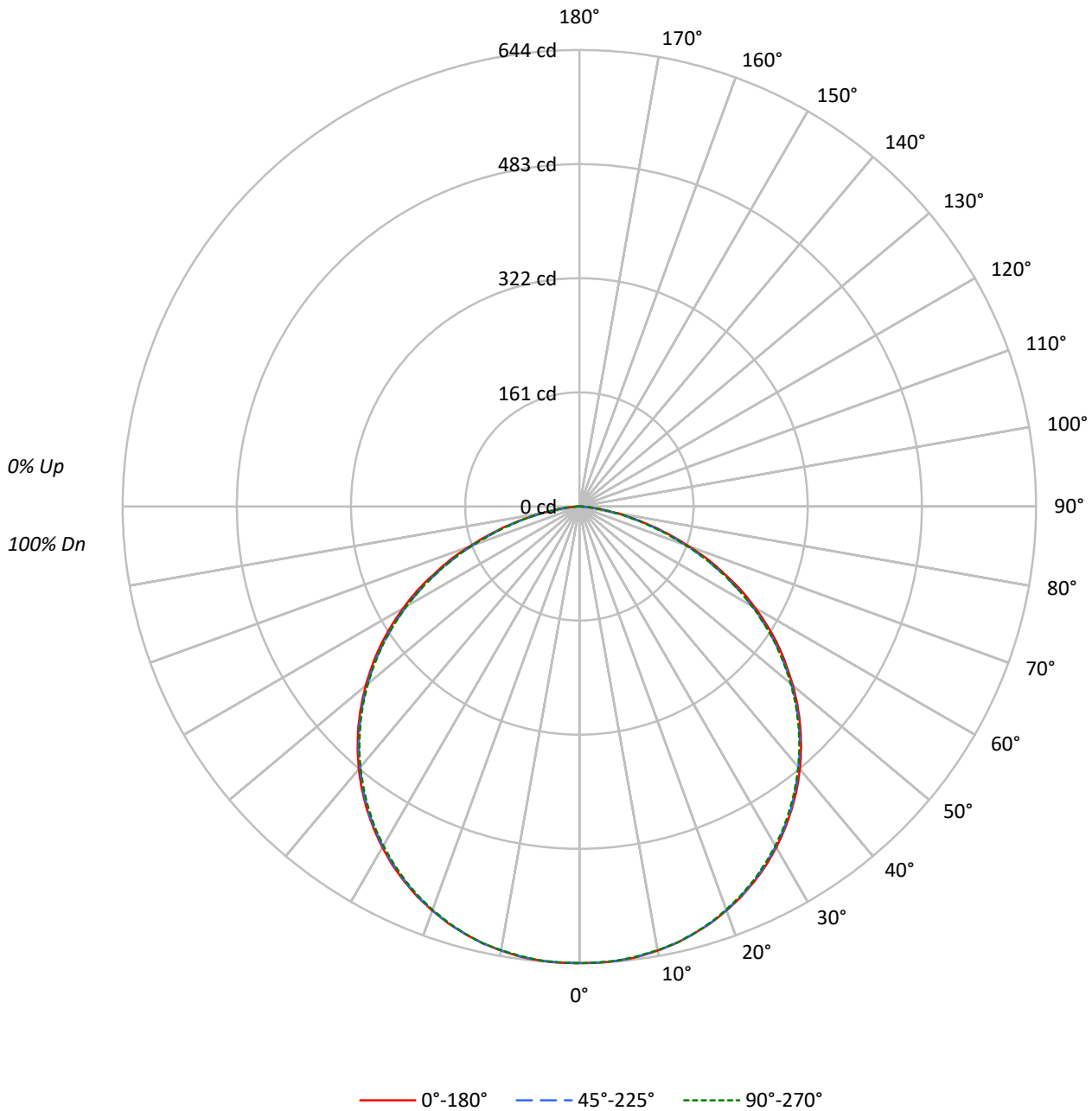
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1820.9 lumens
Efficiency: N/A
Efficacy: 109.0 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 | | | | | | | | | | |
| 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 | 50 | 30 | 10 | 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° | 867 | 867 | 867 |
| 5° | 869 | 869 | 868 |
| 10° | 869 | 869 | 869 |
| 15° | 869 | 869 | 869 |
| 20° | 869 | 868 | 867 |
| 25° | 867 | 865 | 864 |
| 30° | 863 | 861 | 859 |
| 35° | 857 | 855 | 852 |
| 40° | 850 | 844 | 843 |
| 45° | 839 | 834 | 831 |
| 50° | 823 | 817 | 814 |
| 55° | 804 | 792 | 791 |
| 60° | 770 | 756 | 756 |
| 65° | 720 | 704 | 706 |
| 70° | 648 | 628 | 627 |
| 75° | 544 | 523 | 520 |
| 80° | 397 | 378 | 394 |
| 85° | 225 | 207 | 210 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 839 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 61.2 | 3.4 |
| 10°-20° | 176.2 | 9.7 |
| 20°-30° | 268.6 | 14.8 |
| 30°-40° | 325.4 | 17.9 |
| 40°-50° | 338.0 | 18.6 |
| 50°-60° | 302.4 | 16.6 |
| 60°-70° | 220.4 | 12.1 |
| 70°-80° | 109.2 | 6.0 |
| 80°-90° | 19.5 | 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° | 505.9 | 27.8 |
| 0°-40° | 831.4 | 45.7 |
| 0°-60° | 1471.8 | 80.8 |
| 0°-90° | 1820.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1820.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 644 | 644 | 644 | 644 | 644 | |
| 5° | 643 | 643 | 643 | 643 | 643 | 61 |
| 15° | 624 | 624 | 624 | 624 | 624 | 176 |
| 25° | 584 | 583 | 583 | 582 | 582 | 269 |
| 35° | 522 | 521 | 521 | 520 | 519 | 326 |
| 45° | 441 | 440 | 438 | 437 | 437 | 340 |
| 55° | 343 | 340 | 338 | 338 | 337 | 305 |
| 65° | 226 | 224 | 221 | 222 | 222 | 224 |
| 75° | 105 | 103 | 101 | 102 | 100 | 112 |
| 85° | 15 | 13 | 13 | 14 | 14 | 20 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 644.3 | 644.3 | 644.3 | 644.3 | 644.3 |
| 2.5° | 644.3 | 644.0 | 644.0 | 644.3 | 643.8 |
| 5° | 643.1 | 643.3 | 643.1 | 643.1 | 642.6 |
| 7.5° | 640.6 | 640.3 | 640.1 | 640.3 | 639.6 |
| 10° | 636.2 | 636.2 | 635.9 | 636.2 | 635.7 |
| 12.5° | 630.9 | 630.9 | 630.9 | 631.1 | 630.9 |
| 15° | 624.1 | 623.9 | 623.9 | 624.4 | 623.9 |
| 17.5° | 616.3 | 616.1 | 616.1 | 615.8 | 615.4 |
| 20° | 606.6 | 606.6 | 606.3 | 606.1 | 605.4 |
| 22.5° | 596.2 | 595.9 | 595.3 | 595.3 | 594.3 |
| 25° | 583.9 | 583.2 | 582.8 | 582.5 | 581.8 |
| 27.5° | 570.5 | 569.6 | 568.9 | 568.4 | 567.7 |
| 30° | 555.5 | 554.6 | 553.9 | 553.2 | 552.7 |
| 32.5° | 539.3 | 538.8 | 537.7 | 537.5 | 536.5 |
| 35° | 522.0 | 521.3 | 520.6 | 519.7 | 518.7 |
| 37.5° | 503.5 | 502.8 | 501.2 | 500.7 | 500.0 |
| 40° | 483.8 | 482.9 | 480.8 | 480.8 | 480.1 |
| 42.5° | 462.8 | 461.9 | 460.5 | 459.6 | 459.1 |
| 45° | 440.8 | 439.9 | 438.3 | 437.4 | 436.9 |
| 47.5° | 417.5 | 416.8 | 414.9 | 414.2 | 413.6 |
| 50° | 393.2 | 392.3 | 390.2 | 389.7 | 389.1 |
| 52.5° | 367.8 | 367.3 | 364.5 | 364.3 | 363.6 |
| 55° | 342.6 | 340.0 | 337.7 | 337.7 | 337.3 |
| 57.5° | 314.8 | 313.0 | 310.0 | 310.0 | 309.5 |
| 60° | 286.2 | 284.6 | 281.1 | 281.6 | 281.1 |
| 62.5° | 258.2 | 254.7 | 251.5 | 252.9 | 251.7 |
| 65° | 226.3 | 224.5 | 221.0 | 221.9 | 221.7 |
| 67.5° | 197.2 | 193.7 | 190.5 | 192.3 | 191.4 |
| 70° | 164.8 | 163.0 | 159.7 | 161.6 | 159.3 |
| 72.5° | 134.3 | 132.7 | 129.5 | 131.5 | 129.2 |
| 75° | 104.7 | 103.1 | 100.6 | 102.4 | 100.1 |
| 77.5° | 76.7 | 75.6 | 73.3 | 75.1 | 75.6 |
| 80° | 51.3 | 49.9 | 48.8 | 50.4 | 50.9 |
| 82.5° | 30.1 | 29.1 | 28.7 | 28.9 | 30.1 |
| 85° | 14.6 | 13.4 | 13.4 | 13.6 | 13.6 |
| 87.5° | 3.9 | 3.5 | 3.9 | 4.2 | 4.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)