

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: P974105

Luminaire Tested: FLR2-24-20-L830-CA125

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P974105
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-L830-CA125
Description: SHAPER SENSE CIRCLE

Light Source: FLR2-24-20-L830-CA125
Ballast/Driver: -

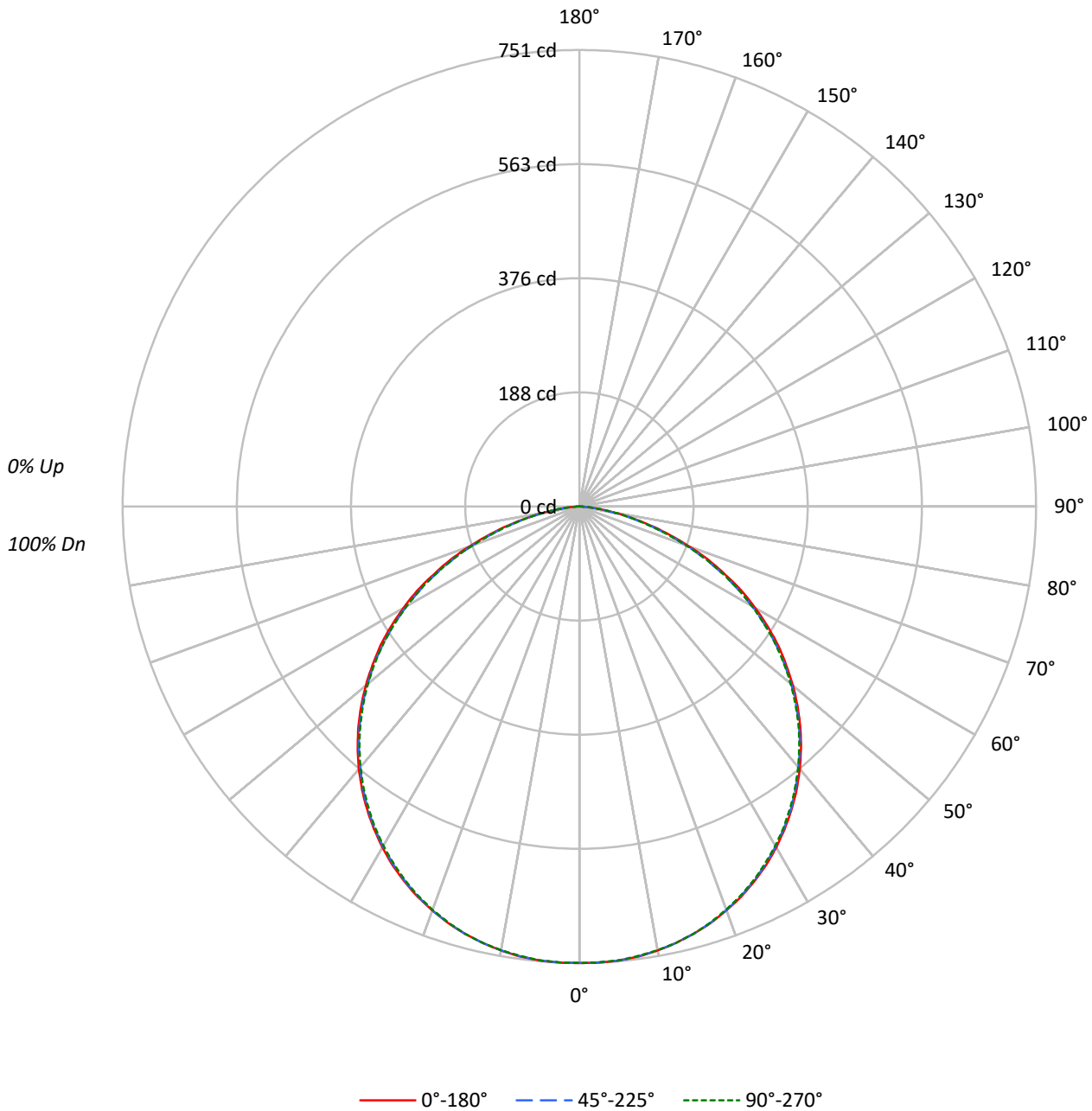
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2123.0 lumens
Efficiency: N/A
Efficacy: 127.1 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





TEST NUMBER: P974105
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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° | 1011 | 1011 | 1011 |
| 5° | 1013 | 1013 | 1012 |
| 10° | 1013 | 1013 | 1013 |
| 15° | 1014 | 1013 | 1013 |
| 20° | 1013 | 1012 | 1011 |
| 25° | 1011 | 1009 | 1007 |
| 30° | 1006 | 1003 | 1001 |
| 35° | 1000 | 997 | 993 |
| 40° | 991 | 985 | 983 |
| 45° | 978 | 972 | 969 |
| 50° | 960 | 952 | 949 |
| 55° | 937 | 924 | 922 |
| 60° | 898 | 882 | 882 |
| 65° | 840 | 820 | 823 |
| 70° | 756 | 733 | 731 |
| 75° | 635 | 609 | 607 |
| 80° | 463 | 441 | 459 |
| 85° | 262 | 241 | 245 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 978 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 71.3 | 3.4 |
| 10°-20° | 205.4 | 9.7 |
| 20°-30° | 313.2 | 14.8 |
| 30°-40° | 379.4 | 17.9 |
| 40°-50° | 394.1 | 18.6 |
| 50°-60° | 352.6 | 16.6 |
| 60°-70° | 257.0 | 12.1 |
| 70°-80° | 127.3 | 6.0 |
| 80°-90° | 22.7 | 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° | 589.9 | 27.8 |
| 0°-40° | 969.3 | 45.7 |
| 0°-60° | 1716.1 | 80.8 |
| 0°-90° | 2123.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2123.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 751 | 751 | 751 | 751 | 751 | |
| 5° | 750 | 750 | 750 | 750 | 749 | 71 |
| 15° | 728 | 728 | 728 | 728 | 728 | 205 |
| 25° | 681 | 680 | 680 | 679 | 678 | 314 |
| 35° | 609 | 608 | 607 | 606 | 605 | 381 |
| 45° | 514 | 513 | 511 | 510 | 509 | 396 |
| 55° | 399 | 396 | 394 | 394 | 393 | 356 |
| 65° | 264 | 262 | 258 | 259 | 258 | 262 |
| 75° | 122 | 120 | 117 | 119 | 117 | 130 |
| 85° | 17 | 16 | 16 | 16 | 16 | 24 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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 CATALOG NUMBER: FLR2-24-20-L830-CA125

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 751.2 | 751.2 | 751.2 | 751.2 | 751.2 |
| 2.5° | 751.2 | 750.9 | 750.9 | 751.2 | 750.6 |
| 5° | 749.8 | 750.1 | 749.8 | 749.8 | 749.3 |
| 7.5° | 746.9 | 746.6 | 746.3 | 746.6 | 745.8 |
| 10° | 741.7 | 741.7 | 741.5 | 741.7 | 741.2 |
| 12.5° | 735.5 | 735.5 | 735.5 | 735.8 | 735.5 |
| 15° | 727.7 | 727.5 | 727.5 | 728.0 | 727.5 |
| 17.5° | 718.6 | 718.3 | 718.3 | 718.0 | 717.5 |
| 20° | 707.2 | 707.2 | 707.0 | 706.7 | 705.9 |
| 22.5° | 695.1 | 694.8 | 694.0 | 694.0 | 693.0 |
| 25° | 680.8 | 680.0 | 679.5 | 679.2 | 678.4 |
| 27.5° | 665.2 | 664.1 | 663.3 | 662.8 | 662.0 |
| 30° | 647.7 | 646.6 | 645.8 | 645.0 | 644.4 |
| 32.5° | 628.8 | 628.3 | 626.9 | 626.7 | 625.6 |
| 35° | 608.6 | 607.8 | 607.0 | 605.9 | 604.8 |
| 37.5° | 587.0 | 586.2 | 584.3 | 583.8 | 583.0 |
| 40° | 564.1 | 563.0 | 560.6 | 560.6 | 559.8 |
| 42.5° | 539.6 | 538.5 | 536.9 | 535.8 | 535.3 |
| 45° | 514.0 | 512.9 | 511.0 | 510.0 | 509.4 |
| 47.5° | 486.8 | 486.0 | 483.8 | 483.0 | 482.2 |
| 50° | 458.5 | 457.4 | 455.0 | 454.4 | 453.6 |
| 52.5° | 428.8 | 428.3 | 425.0 | 424.8 | 424.0 |
| 55° | 399.4 | 396.5 | 393.8 | 393.8 | 393.2 |
| 57.5° | 367.1 | 364.9 | 361.4 | 361.4 | 360.9 |
| 60° | 333.7 | 331.8 | 327.7 | 328.3 | 327.7 |
| 62.5° | 301.1 | 297.0 | 293.2 | 294.9 | 293.5 |
| 65° | 263.9 | 261.7 | 257.7 | 258.7 | 258.5 |
| 67.5° | 229.9 | 225.9 | 222.1 | 224.2 | 223.2 |
| 70° | 192.2 | 190.0 | 186.2 | 188.4 | 185.7 |
| 72.5° | 156.6 | 154.7 | 150.9 | 153.4 | 150.7 |
| 75° | 122.1 | 120.2 | 117.2 | 119.4 | 116.7 |
| 77.5° | 89.5 | 88.1 | 85.4 | 87.6 | 88.1 |
| 80° | 59.8 | 58.2 | 56.9 | 58.8 | 59.3 |
| 82.5° | 35.0 | 34.0 | 33.4 | 33.7 | 35.0 |
| 85° | 17.0 | 15.6 | 15.6 | 15.9 | 15.9 |
| 87.5° | 4.6 | 4.0 | 4.6 | 4.9 | 5.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)