

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: P973463

Luminaire Tested: FLR2-14-42-L850-CP187

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973463
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-1)
Test Lab: INNOVATION CENTER
Issue Date: 3/13/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR2-14-42-L850-CP187
Description: 1*4 FLR-2.0 4200 LUMEN at 5000 CCT & 80CRI with Clear Polycarbonate (0.187" thickness)

Light Source:
Ballast/Driver: -

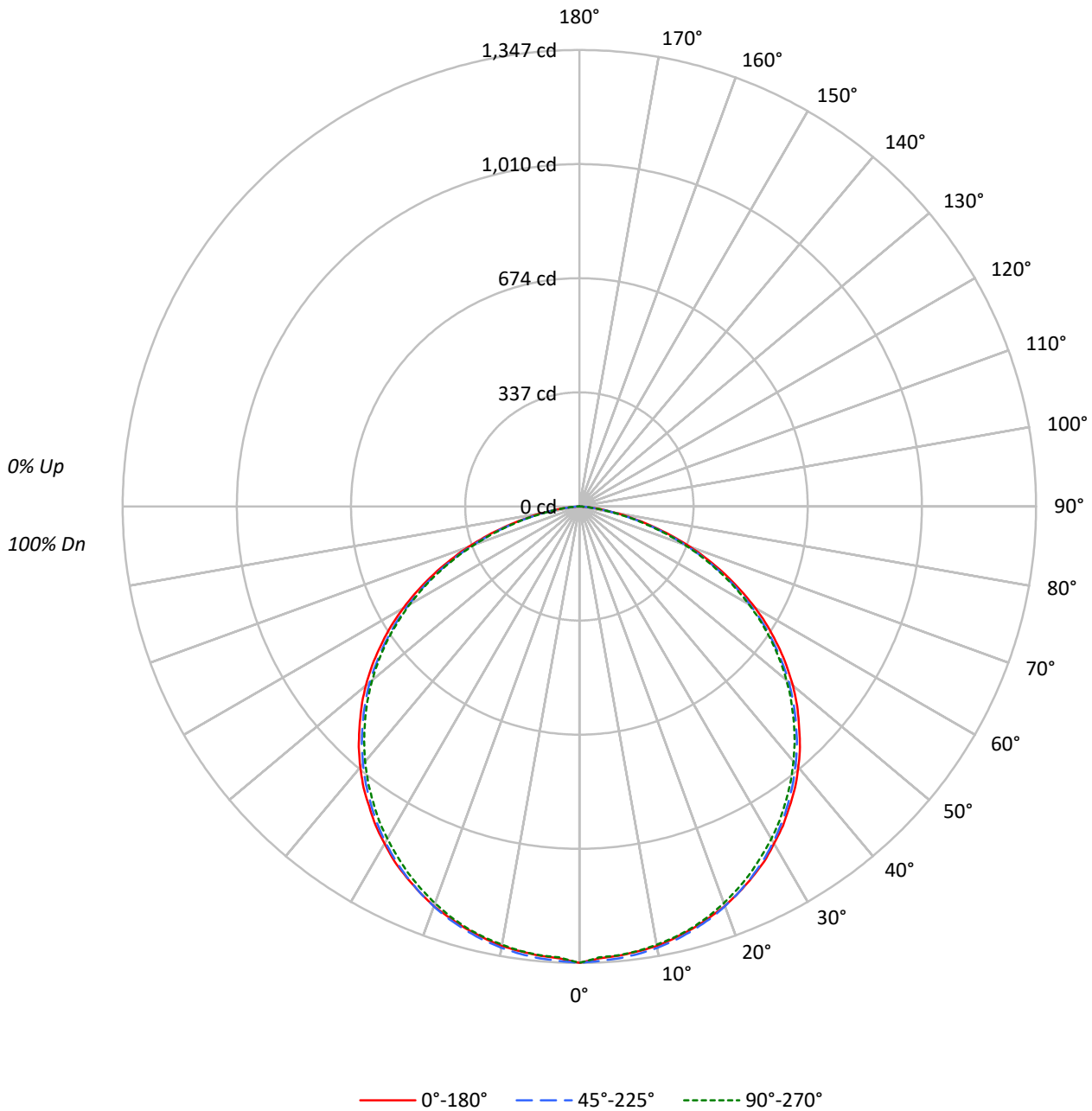
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3769.0 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.25 / 1.38
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.7
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 | | | | | | | | | 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 | 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 | 101 | 97 | 107 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 89 | 87 | 85 | | | 85 | | | | | | | | | | | | | | | | |
| 2 | 99 | 91 | 85 | 79 | 97 | 90 | 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 | 58 | 53 | 51 | | | 51 | | | | | | | | | | | | | | | | |
| 5 | 76 | 64 | 55 | 48 | 74 | 62 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 57 | 51 | 46 | 44 | | | 44 | | | | | | | | | | | | | | | | |
| 6 | 70 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 41 | 39 | | | 39 | | | | | | | | | | | | | | | | |
| 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 | 40 | 34 | 29 | 27 | | | 27 | | | | | | | | | | | | | | | | |
| 10 | 53 | 40 | 32 | 27 | 52 | 39 | 32 | 27 | 38 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 26 | 25 | | | 25 | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3624 | 3624 | 3624 |
| 5° | 3595 | 3616 | 3591 |
| 10° | 3599 | 3614 | 3588 |
| 15° | 3593 | 3607 | 3585 |
| 20° | 3593 | 3596 | 3568 |
| 25° | 3585 | 3578 | 3545 |
| 30° | 3570 | 3554 | 3519 |
| 35° | 3551 | 3523 | 3488 |
| 40° | 3530 | 3487 | 3452 |
| 45° | 3487 | 3438 | 3402 |
| 50° | 3442 | 3379 | 3339 |
| 55° | 3355 | 3277 | 3245 |
| 60° | 3225 | 3135 | 3108 |
| 65° | 3020 | 2932 | 2900 |
| 70° | 2723 | 2614 | 2592 |
| 75° | 2283 | 2168 | 2144 |
| 80° | 1658 | 1547 | 1503 |
| 85° | 877 | 775 | 707 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3487 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 127.6 | 3.4 |
| 10°-20° | 366.3 | 9.7 |
| 20°-30° | 556.5 | 14.8 |
| 30°-40° | 673.2 | 17.9 |
| 40°-50° | 699.6 | 18.6 |
| 50°-60° | 626.4 | 16.6 |
| 60°-70° | 456.9 | 12.1 |
| 70°-80° | 225.0 | 6.0 |
| 80°-90° | 37.6 | 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° | 1050.4 | 27.9 |
| 0°-40° | 1723.5 | 45.7 |
| 0°-60° | 3049.6 | 80.9 |
| 0°-90° | 3769.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3769.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1347 | 1347 | 1347 | 1347 | 1347 | |
| 5° | 1331 | 1346 | 1339 | 1352 | 1329 | 127 |
| 15° | 1290 | 1302 | 1295 | 1306 | 1287 | 364 |
| 25° | 1207 | 1213 | 1205 | 1211 | 1194 | 557 |
| 35° | 1081 | 1083 | 1072 | 1077 | 1062 | 677 |
| 45° | 916 | 915 | 904 | 905 | 894 | 708 |
| 55° | 715 | 709 | 698 | 697 | 692 | 638 |
| 65° | 474 | 469 | 460 | 457 | 455 | 469 |
| 75° | 220 | 216 | 208 | 206 | 206 | 234 |
| 85° | 28 | 27 | 25 | 22 | 23 | 41 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P973463
 CATALOG NUMBER: FLR2-14-42-L850-CP187

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1346.6 | 1346.6 | 1346.6 | 1346.6 | 1346.6 |
| 2.5° | 1334.9 | 1350.0 | 1342.7 | 1356.1 | 1332.1 |
| 5° | 1331.0 | 1345.5 | 1338.8 | 1351.7 | 1329.4 |
| 7.5° | 1324.3 | 1339.4 | 1332.1 | 1344.4 | 1323.2 |
| 10° | 1317.1 | 1330.5 | 1322.7 | 1334.9 | 1313.2 |
| 12.5° | 1304.3 | 1317.7 | 1310.4 | 1321.6 | 1301.5 |
| 15° | 1289.8 | 1301.5 | 1294.8 | 1306.0 | 1287.0 |
| 17.5° | 1273.1 | 1284.2 | 1277.0 | 1287.0 | 1268.0 |
| 20° | 1254.7 | 1263.6 | 1255.8 | 1264.1 | 1245.8 |
| 22.5° | 1231.8 | 1240.2 | 1231.8 | 1237.4 | 1221.2 |
| 25° | 1207.3 | 1213.4 | 1205.1 | 1210.6 | 1193.9 |
| 27.5° | 1181.1 | 1184.4 | 1176.1 | 1180.5 | 1163.3 |
| 30° | 1148.8 | 1152.7 | 1143.8 | 1149.3 | 1132.6 |
| 32.5° | 1117.6 | 1119.8 | 1109.8 | 1114.2 | 1099.2 |
| 35° | 1080.8 | 1083.0 | 1072.4 | 1076.9 | 1061.8 |
| 37.5° | 1045.7 | 1045.1 | 1033.9 | 1036.7 | 1023.9 |
| 40° | 1005.0 | 1004.4 | 992.7 | 994.9 | 982.7 |
| 42.5° | 963.2 | 960.9 | 949.8 | 950.9 | 939.7 |
| 45° | 916.3 | 915.2 | 903.5 | 905.2 | 894.0 |
| 47.5° | 871.2 | 867.8 | 856.1 | 856.7 | 847.2 |
| 50° | 822.1 | 817.1 | 807.1 | 806.0 | 797.6 |
| 52.5° | 769.7 | 764.2 | 753.0 | 751.9 | 745.8 |
| 55° | 715.1 | 709.0 | 698.4 | 696.7 | 691.7 |
| 57.5° | 658.8 | 651.0 | 642.7 | 639.3 | 635.4 |
| 60° | 599.2 | 591.9 | 582.5 | 579.1 | 577.4 |
| 62.5° | 537.3 | 530.1 | 522.8 | 519.5 | 517.3 |
| 65° | 474.3 | 468.8 | 460.4 | 457.1 | 455.4 |
| 67.5° | 410.2 | 405.2 | 397.4 | 393.5 | 393.0 |
| 70° | 346.1 | 341.1 | 332.2 | 330.0 | 329.4 |
| 72.5° | 282.0 | 277.6 | 269.2 | 267.0 | 267.0 |
| 75° | 219.6 | 215.7 | 208.5 | 206.2 | 206.2 |
| 77.5° | 160.5 | 157.2 | 151.6 | 148.8 | 148.8 |
| 80° | 107.0 | 104.8 | 99.8 | 97.5 | 97.0 |
| 82.5° | 61.9 | 60.8 | 56.3 | 54.1 | 55.2 |
| 85° | 28.4 | 27.3 | 25.1 | 22.3 | 22.9 |
| 87.5° | 7.2 | 6.7 | 5.0 | 3.9 | 5.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)