

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: P973850

Luminaire Tested: FLR2-22-45HE-L935-CP080

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973850
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-2)
Test Lab: INNOVATION CENTER
Issue Date: 3/13/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR2-22-45HE-L935-CP080
Description: SHAPER SENSE CIRCLE

Light Source:
Ballast/Driver: -

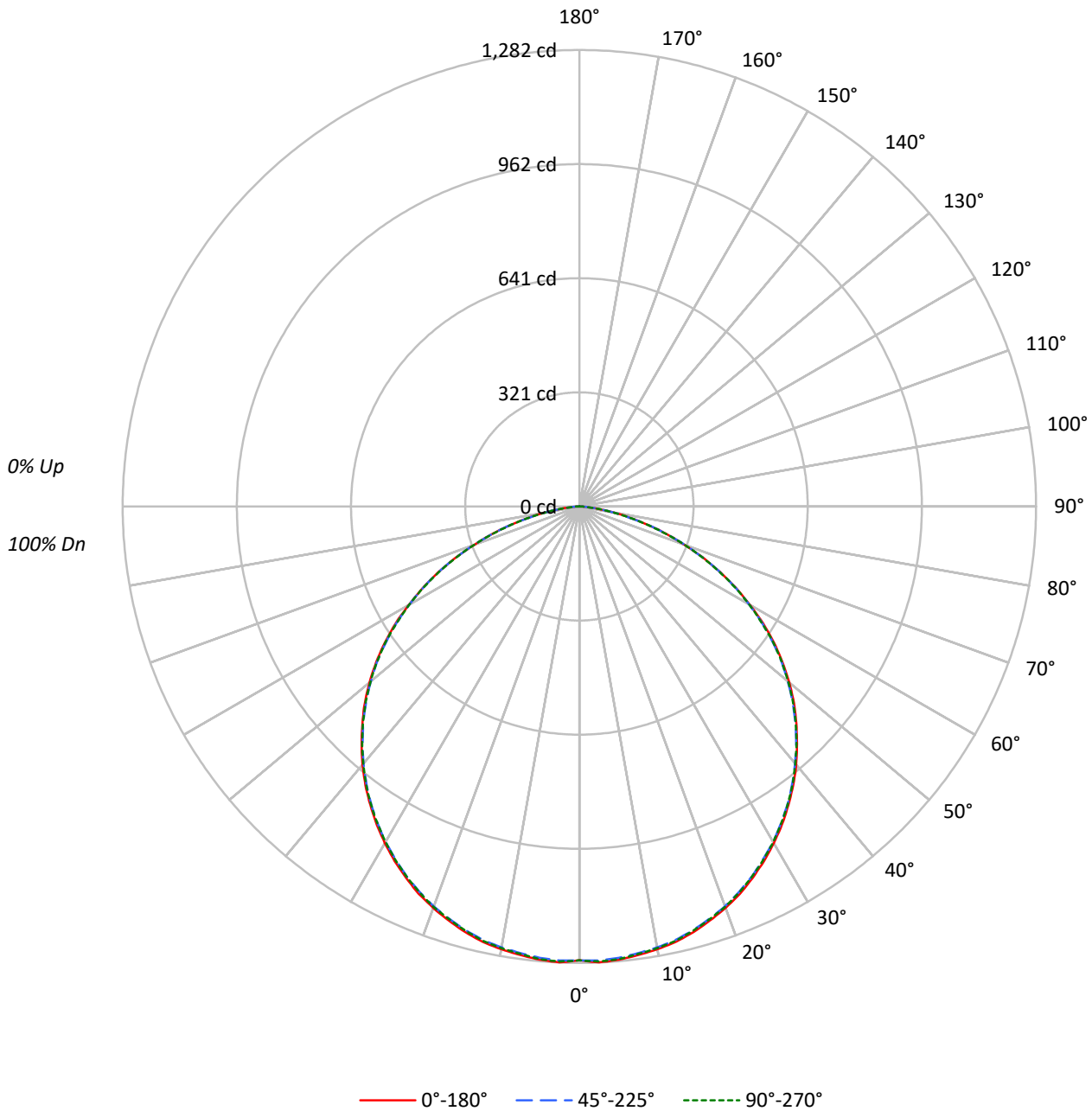
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3564.7 lumens
Efficiency: N/A
Efficacy: 98.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 36.2
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: P973850
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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 | 0 |
| 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 | 63 | 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 | 71 | 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 | 50 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 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 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 26 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3430 | 3430 | 3430 |
| 5° | 3452 | 3437 | 3448 |
| 10° | 3451 | 3436 | 3442 |
| 15° | 3448 | 3433 | 3437 |
| 20° | 3436 | 3423 | 3427 |
| 25° | 3418 | 3404 | 3406 |
| 30° | 3393 | 3379 | 3381 |
| 35° | 3362 | 3349 | 3352 |
| 40° | 3327 | 3310 | 3313 |
| 45° | 3278 | 3263 | 3269 |
| 50° | 3220 | 3197 | 3204 |
| 55° | 3129 | 3103 | 3114 |
| 60° | 2975 | 2962 | 2962 |
| 65° | 2777 | 2772 | 2762 |
| 70° | 2460 | 2471 | 2466 |
| 75° | 2071 | 2054 | 2038 |
| 80° | 1489 | 1464 | 1452 |
| 85° | 778 | 778 | 753 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3278 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 120.7 | 3.4 |
| 10°-20° | 347.1 | 9.7 |
| 20°-30° | 527.5 | 14.8 |
| 30°-40° | 637.6 | 17.9 |
| 40°-50° | 661.8 | 18.6 |
| 50°-60° | 591.6 | 16.6 |
| 60°-70° | 430.2 | 12.1 |
| 70°-80° | 211.5 | 5.9 |
| 80°-90° | 36.7 | 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° | 995.3 | 27.9 |
| 0°-40° | 1632.9 | 45.8 |
| 0°-60° | 2886.3 | 81.0 |
| 0°-90° | 3564.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3564.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1275 | 1275 | 1275 | 1275 | 1275 | |
| 5° | 1278 | 1263 | 1272 | 1268 | 1276 | 121 |
| 15° | 1238 | 1224 | 1232 | 1229 | 1234 | 349 |
| 25° | 1151 | 1138 | 1146 | 1144 | 1147 | 531 |
| 35° | 1024 | 1016 | 1020 | 1020 | 1020 | 640 |
| 45° | 861 | 857 | 857 | 859 | 859 | 664 |
| 55° | 667 | 663 | 661 | 663 | 664 | 594 |
| 65° | 436 | 438 | 435 | 435 | 434 | 430 |
| 75° | 199 | 201 | 198 | 198 | 196 | 211 |
| 85° | 25 | 26 | 25 | 25 | 24 | 37 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P973850
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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1274.7 | 1274.7 | 1274.7 | 1274.7 | 1274.7 |
| 2.5° | 1281.8 | 1266.8 | 1276.3 | 1270.7 | 1279.4 |
| 5° | 1277.8 | 1262.9 | 1272.3 | 1267.6 | 1276.3 |
| 7.5° | 1270.7 | 1255.8 | 1265.2 | 1260.5 | 1267.6 |
| 10° | 1262.9 | 1247.1 | 1257.4 | 1252.6 | 1259.7 |
| 12.5° | 1252.6 | 1237.7 | 1247.1 | 1243.2 | 1249.5 |
| 15° | 1237.7 | 1223.5 | 1232.2 | 1229.0 | 1233.7 |
| 17.5° | 1219.6 | 1205.4 | 1214.1 | 1211.7 | 1215.6 |
| 20° | 1199.9 | 1186.5 | 1195.2 | 1192.8 | 1196.7 |
| 22.5° | 1177.8 | 1163.7 | 1171.5 | 1170.0 | 1173.1 |
| 25° | 1151.1 | 1138.5 | 1146.3 | 1144.0 | 1147.1 |
| 27.5° | 1122.7 | 1110.9 | 1117.2 | 1117.2 | 1118.8 |
| 30° | 1092.0 | 1081.0 | 1087.3 | 1087.3 | 1088.1 |
| 32.5° | 1059.0 | 1050.3 | 1054.2 | 1055.0 | 1055.0 |
| 35° | 1023.5 | 1016.4 | 1019.6 | 1020.4 | 1020.4 |
| 37.5° | 986.5 | 979.4 | 981.8 | 983.4 | 983.4 |
| 40° | 947.2 | 940.9 | 942.4 | 944.0 | 943.2 |
| 42.5° | 904.6 | 899.9 | 900.7 | 902.3 | 902.3 |
| 45° | 861.3 | 857.4 | 857.4 | 859.0 | 859.0 |
| 47.5° | 817.2 | 813.3 | 811.7 | 813.3 | 813.3 |
| 50° | 769.2 | 765.3 | 763.7 | 765.3 | 765.3 |
| 52.5° | 718.8 | 714.9 | 714.9 | 714.9 | 715.7 |
| 55° | 666.9 | 662.9 | 661.4 | 662.9 | 663.7 |
| 57.5° | 611.8 | 610.2 | 607.8 | 608.6 | 606.2 |
| 60° | 552.7 | 552.7 | 550.3 | 551.9 | 550.3 |
| 62.5° | 495.2 | 496.8 | 494.4 | 494.4 | 492.9 |
| 65° | 436.2 | 437.8 | 435.4 | 435.4 | 433.8 |
| 67.5° | 375.6 | 377.9 | 374.8 | 374.8 | 373.2 |
| 70° | 312.6 | 317.3 | 314.1 | 314.9 | 313.4 |
| 72.5° | 255.9 | 258.2 | 255.1 | 255.1 | 253.5 |
| 75° | 199.2 | 200.8 | 197.6 | 198.4 | 196.0 |
| 77.5° | 143.3 | 145.7 | 142.5 | 143.3 | 142.5 |
| 80° | 96.1 | 96.8 | 94.5 | 95.3 | 93.7 |
| 82.5° | 55.9 | 56.7 | 55.9 | 55.1 | 54.3 |
| 85° | 25.2 | 26.0 | 25.2 | 25.2 | 24.4 |
| 87.5° | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)