

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: P973768

Luminaire Tested: FLR2-22-60HE-L930-CP080

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973768
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: FLR2-22-60HE-L930-CP080
Description: SHAPER SENSE CIRCLE

Light Source:
Ballast/Driver: -

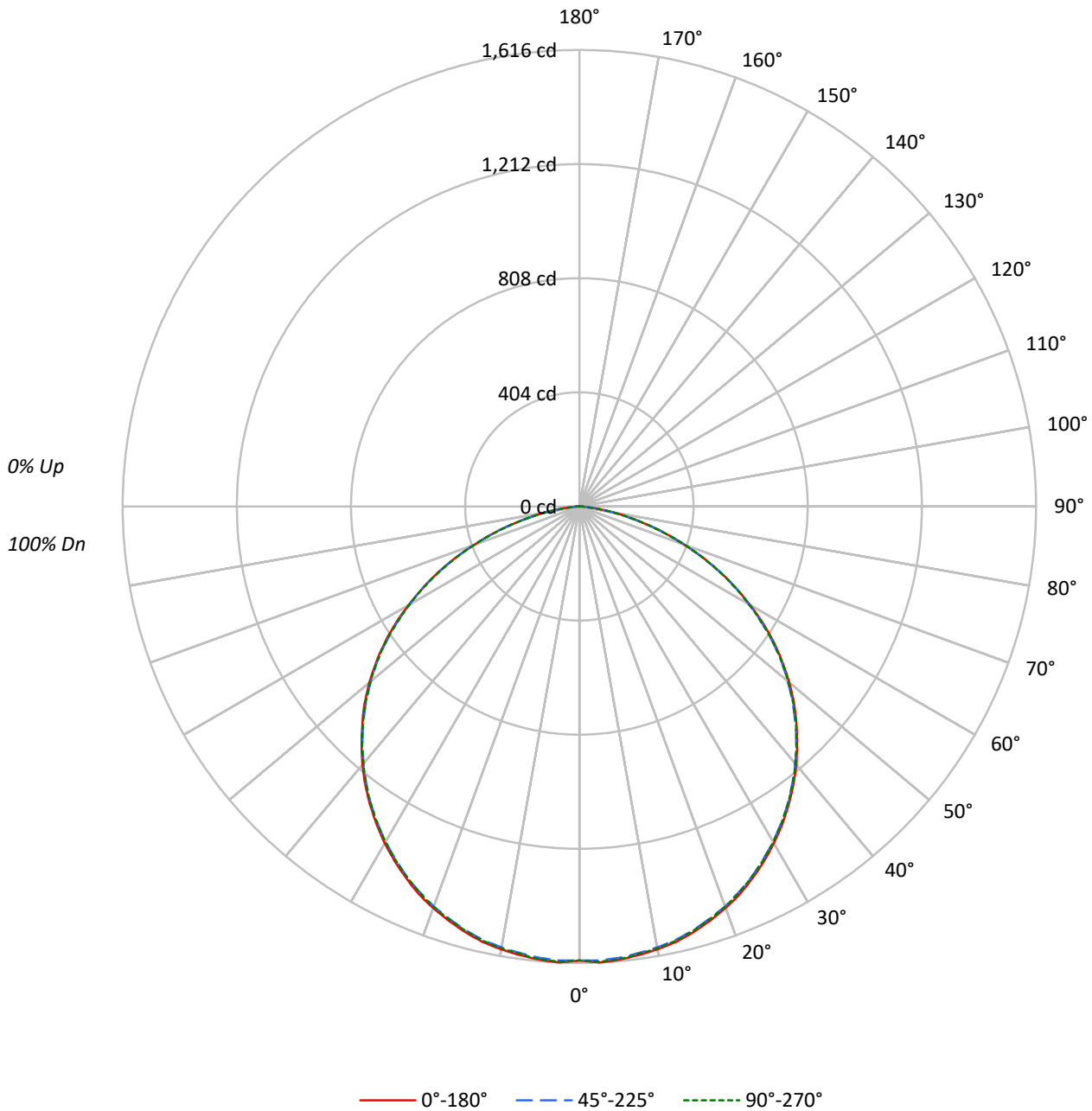
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4494.4 lumens
Efficiency: N/A
Efficacy: 94.8 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): 47.4
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: P973768
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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 | 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 | 63 | 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 | 71 | 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 | 50 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 34 | | | | | | 34 | | | | | | | | | | | | | | |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 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 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 26 | 25 | | | | | | 25 | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4325 | 4325 | 4325 |
| 5° | 4352 | 4333 | 4347 |
| 10° | 4351 | 4332 | 4340 |
| 15° | 4347 | 4328 | 4333 |
| 20° | 4332 | 4315 | 4321 |
| 25° | 4309 | 4291 | 4294 |
| 30° | 4278 | 4260 | 4263 |
| 35° | 4239 | 4223 | 4226 |
| 40° | 4195 | 4174 | 4177 |
| 45° | 4133 | 4114 | 4121 |
| 50° | 4060 | 4031 | 4039 |
| 55° | 3945 | 3912 | 3926 |
| 60° | 3751 | 3735 | 3735 |
| 65° | 3501 | 3495 | 3483 |
| 70° | 3101 | 3116 | 3109 |
| 75° | 2611 | 2591 | 2570 |
| 80° | 1877 | 1846 | 1830 |
| 85° | 982 | 982 | 951 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4133 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 152.2 | 3.4 |
| 10°-20° | 437.6 | 9.7 |
| 20°-30° | 665.1 | 14.8 |
| 30°-40° | 803.9 | 17.9 |
| 40°-50° | 834.4 | 18.6 |
| 50°-60° | 745.9 | 16.6 |
| 60°-70° | 542.4 | 12.1 |
| 70°-80° | 266.7 | 5.9 |
| 80°-90° | 46.3 | 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° | 1254.9 | 27.9 |
| 0°-40° | 2058.7 | 45.8 |
| 0°-60° | 3639.1 | 81.0 |
| 0°-90° | 4494.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4494.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1607 | 1607 | 1607 | 1607 | 1607 | |
| 5° | 1611 | 1592 | 1604 | 1598 | 1609 | 153 |
| 15° | 1560 | 1543 | 1554 | 1550 | 1556 | 440 |
| 25° | 1451 | 1435 | 1445 | 1442 | 1446 | 669 |
| 35° | 1290 | 1282 | 1286 | 1286 | 1286 | 807 |
| 45° | 1086 | 1081 | 1081 | 1083 | 1083 | 838 |
| 55° | 841 | 836 | 834 | 836 | 837 | 749 |
| 65° | 550 | 552 | 549 | 549 | 547 | 542 |
| 75° | 251 | 253 | 249 | 250 | 247 | 267 |
| 85° | 32 | 33 | 32 | 32 | 31 | 46 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P973768
 CATALOG NUMBER: FLR2-22-60HE-L930-CP080

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1607.1 | 1607.1 | 1607.1 | 1607.1 | 1607.1 |
| 2.5° | 1616.1 | 1597.2 | 1609.1 | 1602.2 | 1613.1 |
| 5° | 1611.1 | 1592.2 | 1604.1 | 1598.2 | 1609.1 |
| 7.5° | 1602.2 | 1583.3 | 1595.2 | 1589.3 | 1598.2 |
| 10° | 1592.2 | 1572.4 | 1585.3 | 1579.3 | 1588.3 |
| 12.5° | 1579.3 | 1560.5 | 1572.4 | 1567.4 | 1575.4 |
| 15° | 1560.5 | 1542.6 | 1553.5 | 1549.6 | 1555.5 |
| 17.5° | 1537.6 | 1519.8 | 1530.7 | 1527.7 | 1532.7 |
| 20° | 1512.8 | 1495.9 | 1506.9 | 1503.9 | 1508.9 |
| 22.5° | 1485.0 | 1467.2 | 1477.1 | 1475.1 | 1479.1 |
| 25° | 1451.3 | 1435.4 | 1445.3 | 1442.3 | 1446.3 |
| 27.5° | 1415.5 | 1400.7 | 1408.6 | 1408.6 | 1410.6 |
| 30° | 1376.8 | 1362.9 | 1370.9 | 1370.9 | 1371.9 |
| 32.5° | 1335.1 | 1324.2 | 1329.2 | 1330.2 | 1330.2 |
| 35° | 1290.5 | 1281.5 | 1285.5 | 1286.5 | 1286.5 |
| 37.5° | 1243.8 | 1234.9 | 1237.9 | 1239.8 | 1239.8 |
| 40° | 1194.2 | 1186.2 | 1188.2 | 1190.2 | 1189.2 |
| 42.5° | 1140.6 | 1134.6 | 1135.6 | 1137.6 | 1137.6 |
| 45° | 1086.0 | 1081.0 | 1081.0 | 1083.0 | 1083.0 |
| 47.5° | 1030.4 | 1025.4 | 1023.4 | 1025.4 | 1025.4 |
| 50° | 969.8 | 964.9 | 962.9 | 964.9 | 964.9 |
| 52.5° | 906.3 | 901.3 | 901.3 | 901.3 | 902.3 |
| 55° | 840.8 | 835.8 | 833.8 | 835.8 | 836.8 |
| 57.5° | 771.3 | 769.3 | 766.3 | 767.3 | 764.4 |
| 60° | 696.9 | 696.9 | 693.9 | 695.9 | 693.9 |
| 62.5° | 624.4 | 626.4 | 623.4 | 623.4 | 621.4 |
| 65° | 549.9 | 551.9 | 548.9 | 548.9 | 547.0 |
| 67.5° | 473.5 | 476.5 | 472.5 | 472.5 | 470.5 |
| 70° | 394.1 | 400.0 | 396.1 | 397.1 | 395.1 |
| 72.5° | 322.6 | 325.6 | 321.6 | 321.6 | 319.6 |
| 75° | 251.1 | 253.1 | 249.2 | 250.2 | 247.2 |
| 77.5° | 180.7 | 183.6 | 179.7 | 180.7 | 179.7 |
| 80° | 121.1 | 122.1 | 119.1 | 120.1 | 118.1 |
| 82.5° | 70.5 | 71.5 | 70.5 | 69.5 | 68.5 |
| 85° | 31.8 | 32.8 | 31.8 | 31.8 | 30.8 |
| 87.5° | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)