

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: P974006

Luminaire Tested: FLR2-22-45HE-L850-CA080

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P974006
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-L850-CA080
Description: SHAPER SENSE CIRCLE

Light Source:
Ballast/Driver: -

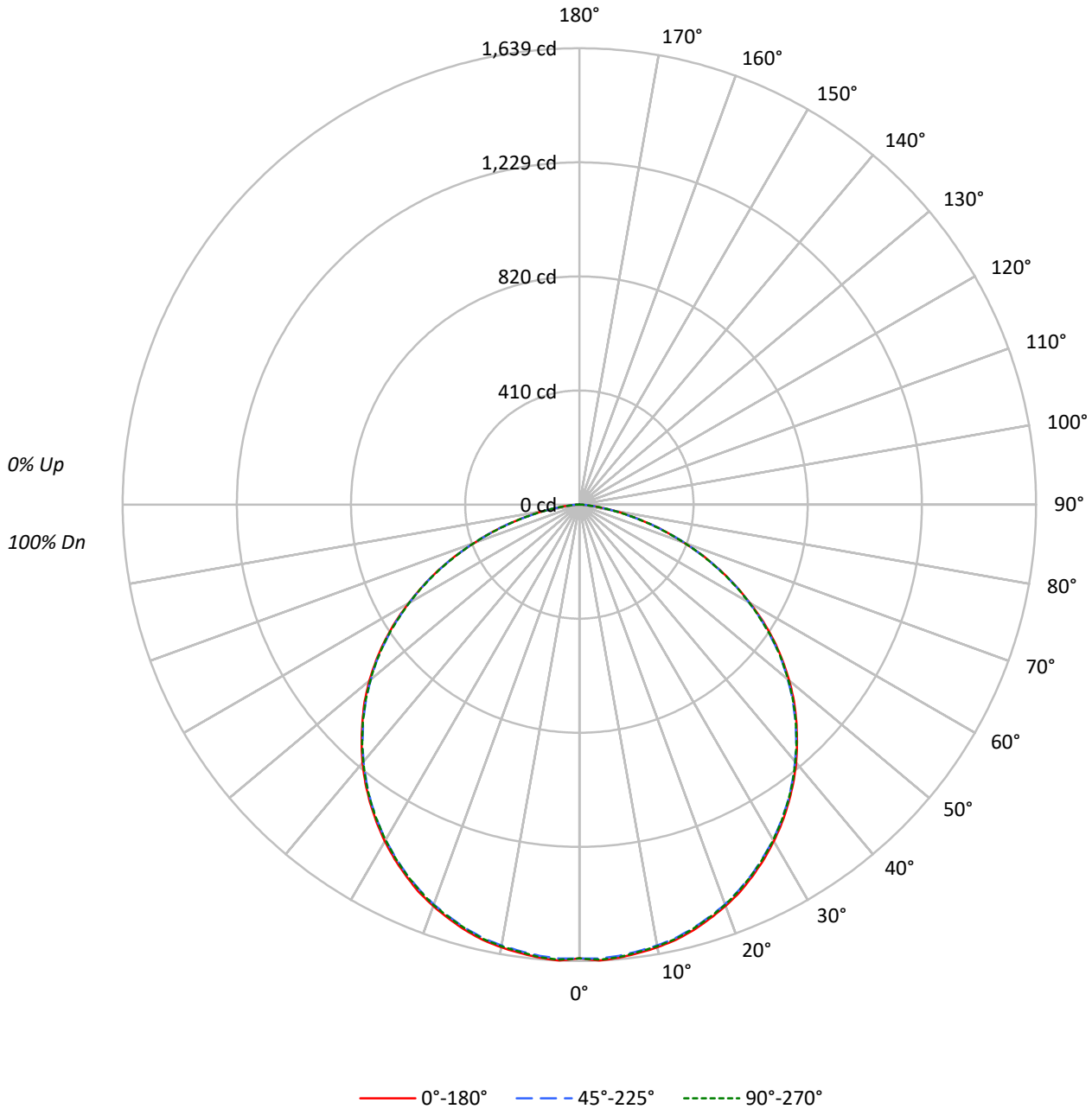
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4557.5 lumens
Efficiency: N/A
Efficacy: 125.9 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: P974006
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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° | 4385 | 4385 | 4385 |
| 5° | 4413 | 4394 | 4408 |
| 10° | 4412 | 4392 | 4401 |
| 15° | 4408 | 4389 | 4394 |
| 20° | 4393 | 4376 | 4381 |
| 25° | 4370 | 4352 | 4355 |
| 30° | 4338 | 4319 | 4323 |
| 35° | 4299 | 4282 | 4286 |
| 40° | 4254 | 4233 | 4236 |
| 45° | 4191 | 4172 | 4179 |
| 50° | 4117 | 4088 | 4096 |
| 55° | 4000 | 3967 | 3981 |
| 60° | 3803 | 3787 | 3787 |
| 65° | 3551 | 3545 | 3531 |
| 70° | 3144 | 3160 | 3152 |
| 75° | 2648 | 2627 | 2606 |
| 80° | 1903 | 1872 | 1857 |
| 85° | 994 | 994 | 963 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4191 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 154.3 | 3.4 |
| 10°-20° | 443.8 | 9.7 |
| 20°-30° | 674.4 | 14.8 |
| 30°-40° | 815.1 | 17.9 |
| 40°-50° | 846.1 | 18.6 |
| 50°-60° | 756.4 | 16.6 |
| 60°-70° | 550.0 | 12.1 |
| 70°-80° | 270.4 | 5.9 |
| 80°-90° | 46.9 | 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° | 1272.5 | 27.9 |
| 0°-40° | 2087.7 | 45.8 |
| 0°-60° | 3690.2 | 81.0 |
| 0°-90° | 4557.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4557.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1630 | 1630 | 1630 | 1630 | 1630 | |
| 5° | 1634 | 1615 | 1627 | 1621 | 1632 | 155 |
| 15° | 1582 | 1564 | 1575 | 1571 | 1577 | 447 |
| 25° | 1472 | 1456 | 1466 | 1463 | 1467 | 678 |
| 35° | 1309 | 1300 | 1304 | 1305 | 1305 | 819 |
| 45° | 1101 | 1096 | 1096 | 1098 | 1098 | 849 |
| 55° | 853 | 848 | 846 | 848 | 849 | 760 |
| 65° | 558 | 560 | 557 | 557 | 555 | 550 |
| 75° | 255 | 257 | 253 | 254 | 251 | 270 |
| 85° | 32 | 33 | 32 | 32 | 31 | 47 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P974006
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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1629.7 | 1629.7 | 1629.7 | 1629.7 | 1629.7 |
| 2.5° | 1638.8 | 1619.6 | 1631.7 | 1624.7 | 1635.7 |
| 5° | 1633.7 | 1614.6 | 1626.7 | 1620.6 | 1631.7 |
| 7.5° | 1624.7 | 1605.5 | 1617.6 | 1611.6 | 1620.6 |
| 10° | 1614.6 | 1594.5 | 1607.5 | 1601.5 | 1610.6 |
| 12.5° | 1601.5 | 1582.4 | 1594.5 | 1589.4 | 1597.5 |
| 15° | 1582.4 | 1564.3 | 1575.3 | 1571.3 | 1577.4 |
| 17.5° | 1559.2 | 1541.1 | 1552.2 | 1549.2 | 1554.2 |
| 20° | 1534.1 | 1517.0 | 1528.0 | 1525.0 | 1530.0 |
| 22.5° | 1505.9 | 1487.8 | 1497.8 | 1495.8 | 1499.8 |
| 25° | 1471.7 | 1455.6 | 1465.6 | 1462.6 | 1466.6 |
| 27.5° | 1435.4 | 1420.3 | 1428.4 | 1428.4 | 1430.4 |
| 30° | 1396.2 | 1382.1 | 1390.1 | 1390.1 | 1391.1 |
| 32.5° | 1353.9 | 1342.8 | 1347.8 | 1348.9 | 1348.9 |
| 35° | 1308.6 | 1299.5 | 1303.6 | 1304.6 | 1304.6 |
| 37.5° | 1261.3 | 1252.2 | 1255.2 | 1257.2 | 1257.2 |
| 40° | 1210.9 | 1202.9 | 1204.9 | 1206.9 | 1205.9 |
| 42.5° | 1156.6 | 1150.5 | 1151.6 | 1153.6 | 1153.6 |
| 45° | 1101.2 | 1096.2 | 1096.2 | 1098.2 | 1098.2 |
| 47.5° | 1044.9 | 1039.8 | 1037.8 | 1039.8 | 1039.8 |
| 50° | 983.5 | 978.4 | 976.4 | 978.4 | 978.4 |
| 52.5° | 919.0 | 914.0 | 914.0 | 914.0 | 915.0 |
| 55° | 852.6 | 847.6 | 845.5 | 847.6 | 848.6 |
| 57.5° | 782.1 | 780.1 | 777.1 | 778.1 | 775.1 |
| 60° | 706.6 | 706.6 | 703.6 | 705.6 | 703.6 |
| 62.5° | 633.2 | 635.2 | 632.1 | 632.1 | 630.1 |
| 65° | 557.7 | 559.7 | 556.7 | 556.7 | 554.6 |
| 67.5° | 480.2 | 483.2 | 479.1 | 479.1 | 477.1 |
| 70° | 399.6 | 405.7 | 401.6 | 402.6 | 400.6 |
| 72.5° | 327.1 | 330.2 | 326.1 | 326.1 | 324.1 |
| 75° | 254.7 | 256.7 | 252.7 | 253.7 | 250.6 |
| 77.5° | 183.2 | 186.2 | 182.2 | 183.2 | 182.2 |
| 80° | 122.8 | 123.8 | 120.8 | 121.8 | 119.8 |
| 82.5° | 71.5 | 72.5 | 71.5 | 70.5 | 69.5 |
| 85° | 32.2 | 33.2 | 32.2 | 32.2 | 31.2 |
| 87.5° | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)