

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: P973177

Luminaire Tested: FLR2-14-70HE-L935-CP375

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973177
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: FLR2-14-70HE-L935-CP375
Description: 1*4 FLR-2.0 7000 Lumen High Efficacy at 3500CCT & 90 CRI Clear Polycarbonate (0.375" thickness)

Light Source:
Ballast/Driver: -

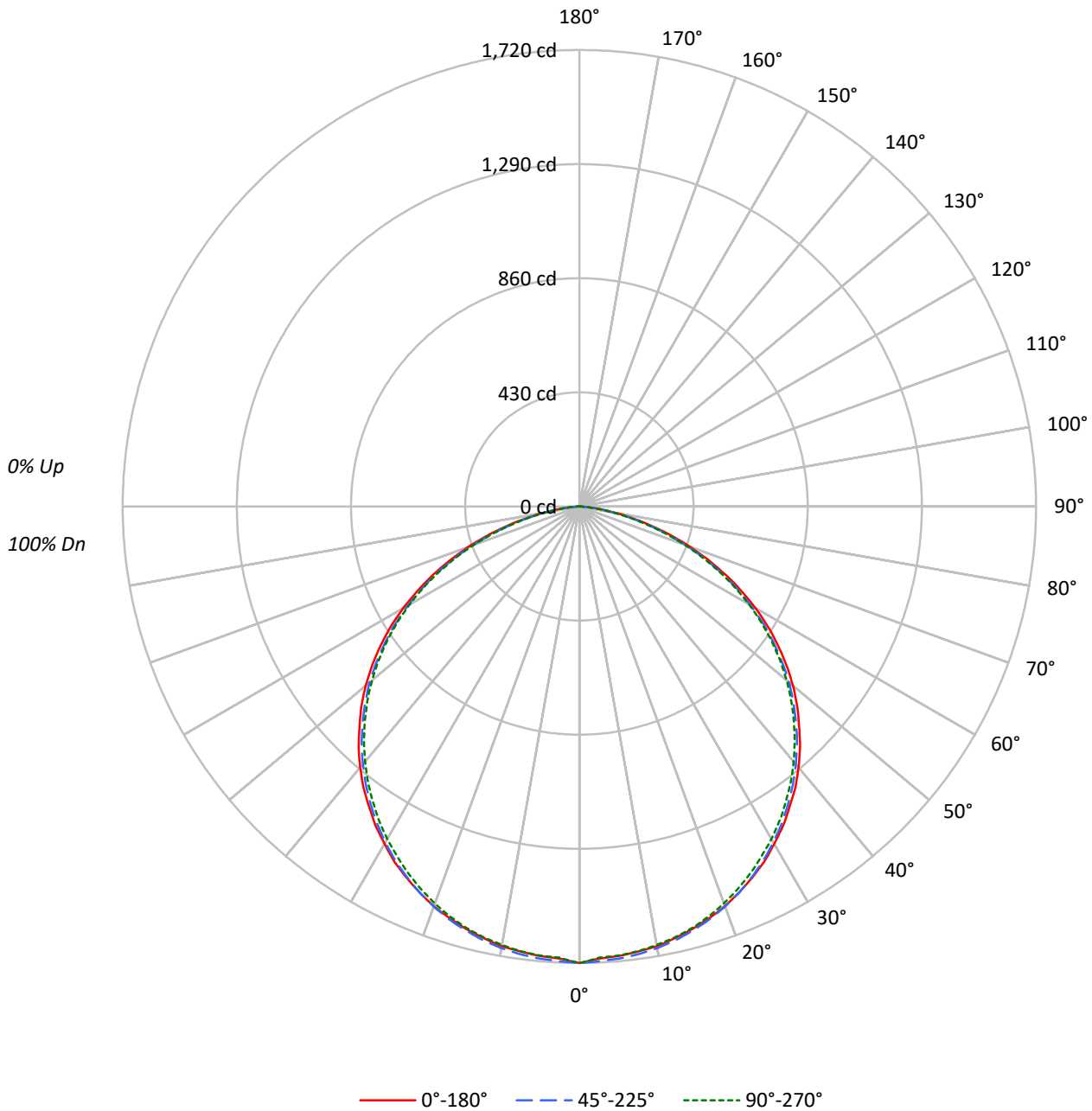
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4815.0 lumens
Efficiency: N/A
Efficacy: 91.7 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): 52.5
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 | | | | | | | | | 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 | 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° | 4630 | 4630 | 4630 |
| 5° | 4593 | 4620 | 4588 |
| 10° | 4598 | 4617 | 4584 |
| 15° | 4590 | 4608 | 4581 |
| 20° | 4590 | 4594 | 4558 |
| 25° | 4579 | 4571 | 4529 |
| 30° | 4560 | 4540 | 4496 |
| 35° | 4536 | 4501 | 4456 |
| 40° | 4510 | 4455 | 4410 |
| 45° | 4455 | 4393 | 4347 |
| 50° | 4397 | 4317 | 4266 |
| 55° | 4286 | 4186 | 4146 |
| 60° | 4120 | 4005 | 3970 |
| 65° | 3859 | 3745 | 3705 |
| 70° | 3479 | 3339 | 3311 |
| 75° | 2917 | 2769 | 2740 |
| 80° | 2118 | 1976 | 1920 |
| 85° | 1121 | 988 | 902 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4455 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 163.0 | 3.4 |
| 10°-20° | 468.0 | 9.7 |
| 20°-30° | 710.9 | 14.8 |
| 30°-40° | 860.0 | 17.9 |
| 40°-50° | 893.8 | 18.6 |
| 50°-60° | 800.2 | 16.6 |
| 60°-70° | 583.7 | 12.1 |
| 70°-80° | 287.4 | 6.0 |
| 80°-90° | 48.1 | 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° | 1341.9 | 27.9 |
| 0°-40° | 2201.8 | 45.7 |
| 0°-60° | 3895.9 | 80.9 |
| 0°-90° | 4815.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4815.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1720 | 1720 | 1720 | 1720 | 1720 | |
| 5° | 1700 | 1719 | 1710 | 1727 | 1698 | 162 |
| 15° | 1648 | 1663 | 1654 | 1668 | 1644 | 465 |
| 25° | 1542 | 1550 | 1540 | 1547 | 1525 | 711 |
| 35° | 1381 | 1384 | 1370 | 1376 | 1356 | 865 |
| 45° | 1171 | 1169 | 1154 | 1156 | 1142 | 904 |
| 55° | 914 | 906 | 892 | 890 | 884 | 815 |
| 65° | 606 | 599 | 588 | 584 | 582 | 599 |
| 75° | 281 | 276 | 266 | 264 | 264 | 299 |
| 85° | 36 | 35 | 32 | 28 | 29 | 52 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P973177
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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1720.4 | 1720.4 | 1720.4 | 1720.4 | 1720.4 |
| 2.5° | 1705.4 | 1724.6 | 1715.4 | 1732.5 | 1701.8 |
| 5° | 1700.4 | 1718.9 | 1710.4 | 1726.8 | 1698.3 |
| 7.5° | 1691.9 | 1711.1 | 1701.8 | 1717.5 | 1690.5 |
| 10° | 1682.6 | 1699.7 | 1689.7 | 1705.4 | 1677.6 |
| 12.5° | 1666.2 | 1683.3 | 1674.1 | 1688.3 | 1662.7 |
| 15° | 1647.7 | 1662.7 | 1654.1 | 1668.4 | 1644.2 |
| 17.5° | 1626.4 | 1640.6 | 1631.3 | 1644.2 | 1620.0 |
| 20° | 1602.9 | 1614.3 | 1604.3 | 1615.0 | 1591.5 |
| 22.5° | 1573.7 | 1584.4 | 1573.7 | 1580.8 | 1560.1 |
| 25° | 1542.3 | 1550.2 | 1539.5 | 1546.6 | 1525.3 |
| 27.5° | 1508.9 | 1513.1 | 1502.5 | 1508.2 | 1486.1 |
| 30° | 1467.6 | 1472.6 | 1461.2 | 1468.3 | 1446.9 |
| 32.5° | 1427.7 | 1430.5 | 1417.7 | 1423.4 | 1404.2 |
| 35° | 1380.7 | 1383.5 | 1370.0 | 1375.7 | 1356.5 |
| 37.5° | 1335.8 | 1335.1 | 1320.9 | 1324.4 | 1308.1 |
| 40° | 1283.9 | 1283.1 | 1268.2 | 1271.0 | 1255.4 |
| 42.5° | 1230.5 | 1227.6 | 1213.4 | 1214.8 | 1200.5 |
| 45° | 1170.6 | 1169.2 | 1154.3 | 1156.4 | 1142.2 |
| 47.5° | 1113.0 | 1108.7 | 1093.7 | 1094.4 | 1082.3 |
| 50° | 1050.3 | 1043.9 | 1031.1 | 1029.7 | 1019.0 |
| 52.5° | 983.4 | 976.2 | 962.0 | 960.6 | 952.7 |
| 55° | 913.6 | 905.8 | 892.2 | 890.1 | 883.7 |
| 57.5° | 841.7 | 831.7 | 821.0 | 816.7 | 811.8 |
| 60° | 765.5 | 756.2 | 744.1 | 739.8 | 737.7 |
| 62.5° | 686.4 | 677.2 | 667.9 | 663.6 | 660.8 |
| 65° | 606.0 | 598.8 | 588.2 | 583.9 | 581.8 |
| 67.5° | 524.1 | 517.7 | 507.7 | 502.7 | 502.0 |
| 70° | 442.2 | 435.8 | 424.4 | 421.5 | 420.8 |
| 72.5° | 360.3 | 354.6 | 343.9 | 341.1 | 341.1 |
| 75° | 280.6 | 275.6 | 266.3 | 263.5 | 263.5 |
| 77.5° | 205.1 | 200.8 | 193.7 | 190.1 | 190.1 |
| 80° | 136.7 | 133.9 | 127.5 | 124.6 | 123.9 |
| 82.5° | 79.0 | 77.6 | 71.9 | 69.1 | 70.5 |
| 85° | 36.3 | 34.9 | 32.0 | 28.5 | 29.2 |
| 87.5° | 9.3 | 8.5 | 6.4 | 5.0 | 6.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)