

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: P973068

Luminaire Tested: FLR2-14-80HE-L830-CP250

Issue Date: 3/13/2025

Test Information

Test Method: LM-79-2019
Report Number: P973068
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: FLR2-14-80HE-L830-CP250
Description: 1*4 FLR-2.0 8000 Lumen High Efficacy at 3000CCT & 80CRI with Clear Polycarbonate (0.250" thickness)

Light Source:
Ballast/Driver: -

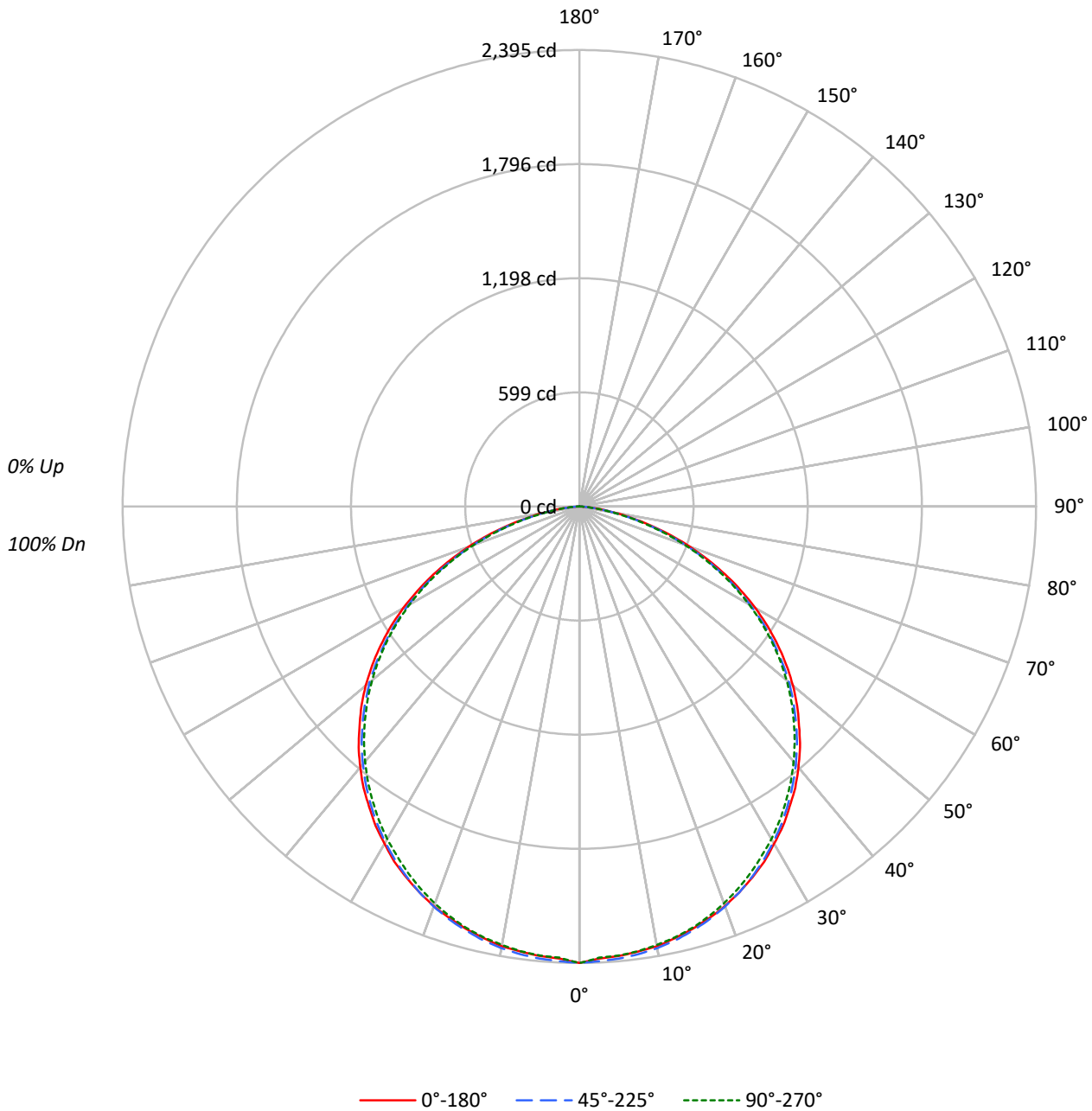
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6704.4 lumens
Efficiency: N/A
Efficacy: 108.3 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): 61.9
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

TEST NUMBER: P973068
CATALOG NUMBER: FLR2-14-80HE-L830-CP250

Luminous Intensity Polar Plot





TEST NUMBER: P973068
 CATALOG NUMBER: FLR2-14-80HE-L830-CP250

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 | 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° | 6446 | 6446 | 6446 |
| 5° | 6395 | 6433 | 6388 |
| 10° | 6402 | 6429 | 6383 |
| 15° | 6392 | 6416 | 6378 |
| 20° | 6391 | 6397 | 6346 |
| 25° | 6376 | 6365 | 6306 |
| 30° | 6349 | 6322 | 6260 |
| 35° | 6316 | 6267 | 6205 |
| 40° | 6280 | 6203 | 6140 |
| 45° | 6203 | 6116 | 6052 |
| 50° | 6122 | 6010 | 5940 |
| 55° | 5968 | 5828 | 5773 |
| 60° | 5736 | 5576 | 5528 |
| 65° | 5372 | 5215 | 5158 |
| 70° | 4844 | 4649 | 4611 |
| 75° | 4061 | 3855 | 3814 |
| 80° | 2951 | 2751 | 2673 |
| 85° | 1562 | 1377 | 1257 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6203 cd/sqm



TEST NUMBER: P973068
 CATALOG NUMBER: FLR2-14-80HE-L830-CP250

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 226.9 | 3.4 |
| 10°-20° | 651.6 | 9.7 |
| 20°-30° | 989.9 | 14.8 |
| 30°-40° | 1197.4 | 17.9 |
| 40°-50° | 1244.5 | 18.6 |
| 50°-60° | 1114.2 | 16.6 |
| 60°-70° | 812.7 | 12.1 |
| 70°-80° | 400.2 | 6.0 |
| 80°-90° | 66.9 | 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° | 1868.4 | 27.9 |
| 0°-40° | 3065.8 | 45.7 |
| 0°-60° | 5424.6 | 80.9 |
| 0°-90° | 6704.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6704.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2395 | 2395 | 2395 | 2395 | 2395 | |
| 5° | 2368 | 2393 | 2382 | 2404 | 2365 | 225 |
| 15° | 2294 | 2315 | 2303 | 2323 | 2289 | 648 |
| 25° | 2148 | 2158 | 2144 | 2154 | 2124 | 990 |
| 35° | 1922 | 1926 | 1908 | 1916 | 1889 | 1204 |
| 45° | 1630 | 1628 | 1607 | 1610 | 1590 | 1259 |
| 55° | 1272 | 1261 | 1242 | 1239 | 1230 | 1135 |
| 65° | 844 | 834 | 819 | 813 | 810 | 833 |
| 75° | 391 | 384 | 371 | 367 | 367 | 416 |
| 85° | 51 | 49 | 45 | 40 | 41 | 73 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P973068
 CATALOG NUMBER: FLR2-14-80HE-L830-CP250

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2395.4 | 2395.4 | 2395.4 | 2395.4 | 2395.4 |
| 2.5° | 2374.6 | 2401.4 | 2388.5 | 2412.3 | 2369.6 |
| 5° | 2367.6 | 2393.4 | 2381.5 | 2404.3 | 2364.7 |
| 7.5° | 2355.8 | 2382.5 | 2369.6 | 2391.4 | 2353.8 |
| 10° | 2342.9 | 2366.7 | 2352.8 | 2374.6 | 2335.9 |
| 12.5° | 2320.1 | 2343.9 | 2331.0 | 2350.8 | 2315.1 |
| 15° | 2294.3 | 2315.1 | 2303.2 | 2323.0 | 2289.3 |
| 17.5° | 2264.5 | 2284.4 | 2271.5 | 2289.3 | 2255.6 |
| 20° | 2231.8 | 2247.7 | 2233.8 | 2248.7 | 2216.0 |
| 22.5° | 2191.2 | 2206.0 | 2191.2 | 2201.1 | 2172.3 |
| 25° | 2147.5 | 2158.4 | 2143.6 | 2153.5 | 2123.7 |
| 27.5° | 2100.9 | 2106.9 | 2092.0 | 2099.9 | 2069.2 |
| 30° | 2043.4 | 2050.4 | 2034.5 | 2044.4 | 2014.7 |
| 32.5° | 1987.9 | 1991.9 | 1974.0 | 1982.0 | 1955.2 |
| 35° | 1922.5 | 1926.4 | 1907.6 | 1915.5 | 1888.8 |
| 37.5° | 1860.0 | 1859.0 | 1839.2 | 1844.1 | 1821.3 |
| 40° | 1787.6 | 1786.6 | 1765.8 | 1769.8 | 1748.0 |
| 42.5° | 1713.3 | 1709.3 | 1689.5 | 1691.5 | 1671.6 |
| 45° | 1630.0 | 1628.0 | 1607.2 | 1610.2 | 1590.3 |
| 47.5° | 1549.7 | 1543.7 | 1522.9 | 1523.9 | 1507.0 |
| 50° | 1462.4 | 1453.5 | 1435.7 | 1433.7 | 1418.8 |
| 52.5° | 1369.2 | 1359.3 | 1339.5 | 1337.5 | 1326.6 |
| 55° | 1272.1 | 1261.2 | 1242.3 | 1239.3 | 1230.4 |
| 57.5° | 1171.9 | 1158.0 | 1143.2 | 1137.2 | 1130.3 |
| 60° | 1065.8 | 1052.9 | 1036.1 | 1030.1 | 1027.2 |
| 62.5° | 955.8 | 942.9 | 930.0 | 924.1 | 920.1 |
| 65° | 843.7 | 833.8 | 819.0 | 813.0 | 810.0 |
| 67.5° | 729.7 | 720.8 | 706.9 | 700.0 | 699.0 |
| 70° | 615.7 | 606.8 | 590.9 | 587.0 | 586.0 |
| 72.5° | 501.7 | 493.8 | 478.9 | 474.9 | 474.9 |
| 75° | 390.6 | 383.7 | 370.8 | 366.8 | 366.8 |
| 77.5° | 285.5 | 279.6 | 269.7 | 264.7 | 264.7 |
| 80° | 190.4 | 186.4 | 177.5 | 173.5 | 172.5 |
| 82.5° | 110.1 | 108.1 | 100.1 | 96.2 | 98.2 |
| 85° | 50.6 | 48.6 | 44.6 | 39.7 | 40.7 |
| 87.5° | 12.9 | 11.9 | 8.9 | 6.9 | 8.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)