

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: P688255

Luminaire Tested: FLR-WL-14-40-40-CP187

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688255
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-13)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-WL-14-40-40-CP187
Description: Fail-Safe - FLR Fully Luminous Recessed 1X4 4000K Luminaire for Wet location
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

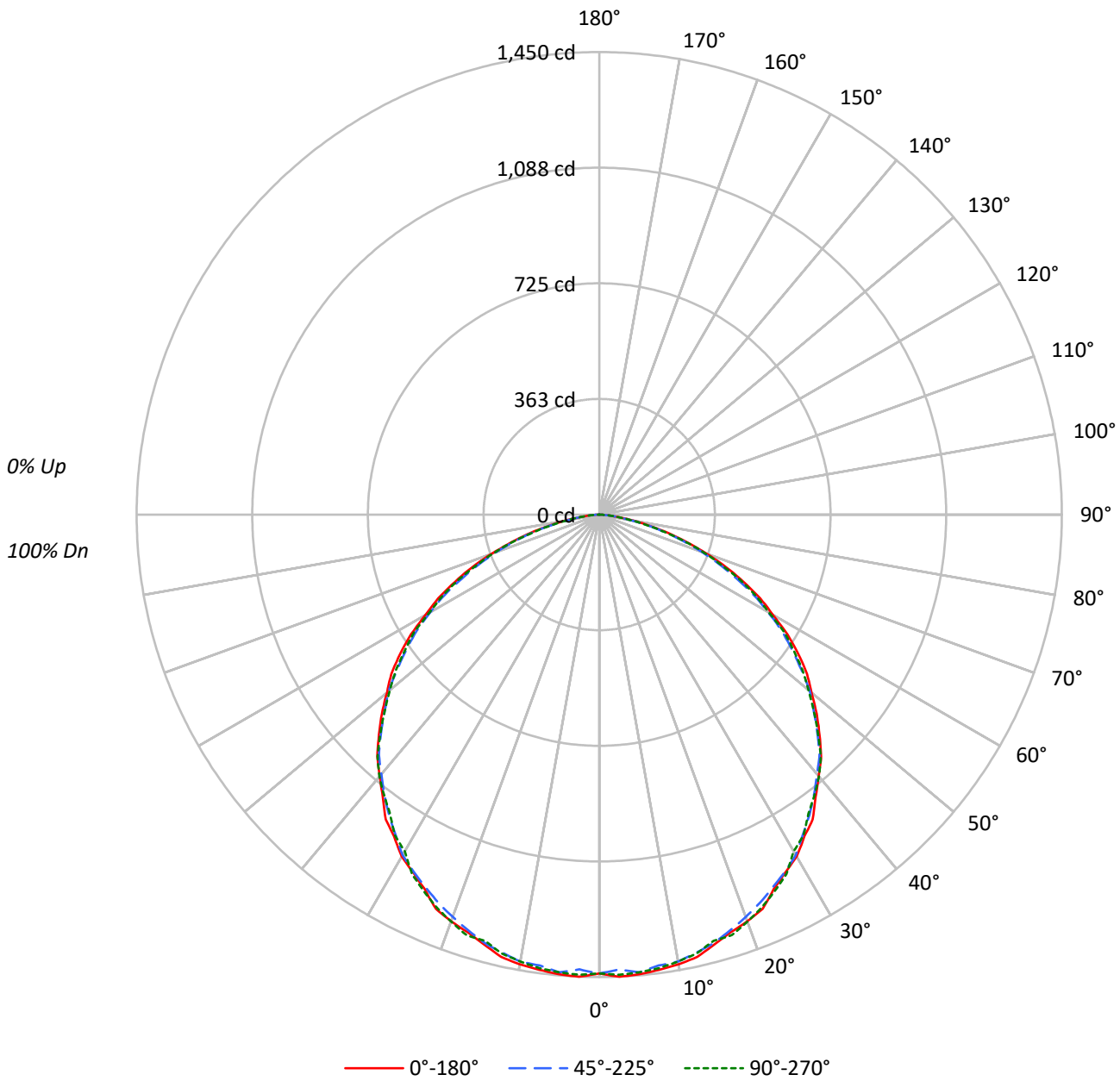
Lumens per Lamp: N/A
Luminaire Lumens: 3993.4 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 39.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P688255
CATALOG NUMBER: FLR-WL-14-40-40-CP187

Luminous Intensity Polar Plot



TEST NUMBER: P688255
 CATALOG NUMBER: FLR-WL-14-40-40-CP187

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 | 103 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 85 | 79 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 76 | 73 | 71 |
| 3 | 91 | 81 | 73 | 66 | 88 | 79 | 72 | 66 | 76 | 70 | 64 | 73 | 68 | 63 | 71 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 51 |
| 5 | 77 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 61 | 53 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 44 |
| 6 | 71 | 57 | 49 | 42 | 69 | 57 | 48 | 42 | 55 | 47 | 42 | 53 | 46 | 41 | 51 | 46 | 41 | 39 |
| 7 | 66 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 36 | 34 |
| 8 | 61 | 48 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 35 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 28 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3872 | 3872 | 3872 |
| 5° | 3907 | 3891 | 3891 |
| 10° | 3912 | 3889 | 3887 |
| 15° | 3886 | 3873 | 3854 |
| 20° | 3887 | 3845 | 3889 |
| 25° | 3845 | 3827 | 3866 |
| 30° | 3847 | 3830 | 3787 |
| 35° | 3832 | 3774 | 3756 |
| 40° | 3760 | 3730 | 3765 |
| 45° | 3717 | 3679 | 3690 |
| 50° | 3635 | 3609 | 3583 |
| 55° | 3575 | 3460 | 3492 |
| 60° | 3377 | 3286 | 3302 |
| 65° | 3178 | 3026 | 3119 |
| 70° | 2814 | 2681 | 2765 |
| 75° | 2319 | 2215 | 2206 |
| 80° | 1657 | 1537 | 1537 |
| 85° | 806 | 784 | 806 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3717 cd/sqm

TEST NUMBER: P688255
 CATALOG NUMBER: FLR-WL-14-40-40-CP187

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 136.7 | 3.4 |
| 10°-20° | 392.0 | 9.8 |
| 20°-30° | 595.7 | 14.9 |
| 30°-40° | 720.1 | 18.0 |
| 40°-50° | 746.2 | 18.7 |
| 50°-60° | 663.3 | 16.6 |
| 60°-70° | 475.6 | 11.9 |
| 70°-80° | 226.4 | 5.7 |
| 80°-90° | 37.5 | 0.9 |
| 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° | 1124.3 | 28.2 |
| 0°-40° | 1844.4 | 46.2 |
| 0°-60° | 3253.9 | 81.5 |
| 0°-90° | 3993.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3993.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1439 | 1439 | 1439 | 1439 | 1439 | |
| 5° | 1446 | 1440 | 1440 | 1433 | 1440 | 138 |
| 15° | 1395 | 1390 | 1390 | 1383 | 1383 | 394 |
| 25° | 1295 | 1292 | 1289 | 1288 | 1302 | 599 |
| 35° | 1166 | 1148 | 1149 | 1150 | 1143 | 725 |
| 45° | 977 | 966 | 967 | 963 | 970 | 753 |
| 55° | 762 | 739 | 737 | 741 | 744 | 678 |
| 65° | 499 | 472 | 475 | 481 | 490 | 493 |
| 75° | 223 | 202 | 213 | 214 | 212 | 237 |
| 85° | 26 | 23 | 25 | 25 | 26 | 40 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

TEST NUMBER: P688255
 CATALOG NUMBER: FLR-WL-14-40-40-CP187

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1438.7 | 1438.7 | 1438.7 | 1438.7 | 1438.7 |
| 2.5° | 1450.3 | 1442.6 | 1427.2 | 1437.2 | 1444.1 |
| 5° | 1446.4 | 1439.5 | 1440.3 | 1433.3 | 1440.3 |
| 7.5° | 1439.5 | 1432.6 | 1425.7 | 1423.3 | 1434.1 |
| 10° | 1431.8 | 1418.7 | 1423.3 | 1418.0 | 1422.6 |
| 12.5° | 1420.3 | 1409.5 | 1406.4 | 1399.5 | 1409.5 |
| 15° | 1394.9 | 1390.3 | 1390.3 | 1382.6 | 1383.4 |
| 17.5° | 1372.6 | 1363.4 | 1366.4 | 1362.6 | 1382.6 |
| 20° | 1357.2 | 1342.6 | 1342.6 | 1340.3 | 1358.0 |
| 22.5° | 1338.0 | 1321.1 | 1317.2 | 1318.8 | 1332.6 |
| 25° | 1294.9 | 1291.9 | 1288.8 | 1288.0 | 1301.9 |
| 27.5° | 1264.2 | 1255.7 | 1261.1 | 1258.8 | 1270.3 |
| 30° | 1238.0 | 1223.4 | 1232.6 | 1224.2 | 1218.8 |
| 32.5° | 1196.5 | 1191.1 | 1188.8 | 1189.6 | 1191.9 |
| 35° | 1166.5 | 1148.1 | 1148.8 | 1149.6 | 1143.4 |
| 37.5° | 1114.2 | 1116.5 | 1106.5 | 1106.5 | 1108.1 |
| 40° | 1070.4 | 1067.3 | 1061.9 | 1061.9 | 1071.9 |
| 42.5° | 1029.6 | 1015.8 | 1022.0 | 1012.7 | 1028.1 |
| 45° | 976.6 | 965.8 | 966.6 | 962.7 | 969.7 |
| 47.5° | 924.3 | 915.1 | 912.0 | 915.1 | 912.0 |
| 50° | 868.2 | 862.0 | 862.0 | 858.9 | 855.9 |
| 52.5° | 821.3 | 799.7 | 798.2 | 802.8 | 803.6 |
| 55° | 762.0 | 739.0 | 737.4 | 741.3 | 744.4 |
| 57.5° | 699.8 | 672.8 | 678.2 | 684.4 | 688.2 |
| 60° | 627.5 | 608.2 | 610.6 | 620.6 | 613.6 |
| 62.5° | 569.0 | 542.9 | 546.7 | 555.2 | 555.2 |
| 65° | 499.1 | 472.1 | 475.2 | 481.4 | 489.8 |
| 67.5° | 431.4 | 402.9 | 407.6 | 414.5 | 416.8 |
| 70° | 357.6 | 327.6 | 340.7 | 347.6 | 351.4 |
| 72.5° | 286.8 | 263.8 | 275.3 | 279.1 | 282.2 |
| 75° | 223.0 | 201.5 | 213.0 | 214.5 | 212.2 |
| 77.5° | 158.4 | 143.0 | 152.3 | 155.3 | 153.0 |
| 80° | 106.9 | 91.5 | 99.2 | 101.5 | 99.2 |
| 82.5° | 58.4 | 53.8 | 56.9 | 57.7 | 56.1 |
| 85° | 26.1 | 23.1 | 25.4 | 25.4 | 26.1 |
| 87.5° | 7.7 | 6.9 | 6.9 | 7.7 | 6.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)