

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: P688140

Luminaire Tested: FLR-MC-22-L3C3 (HI)-35-CP250

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688140
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-MC-22-L3C3 (HI)-35-CP250
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 3500K Luminaire at High Lumen setting for Medical/Cleanroom
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

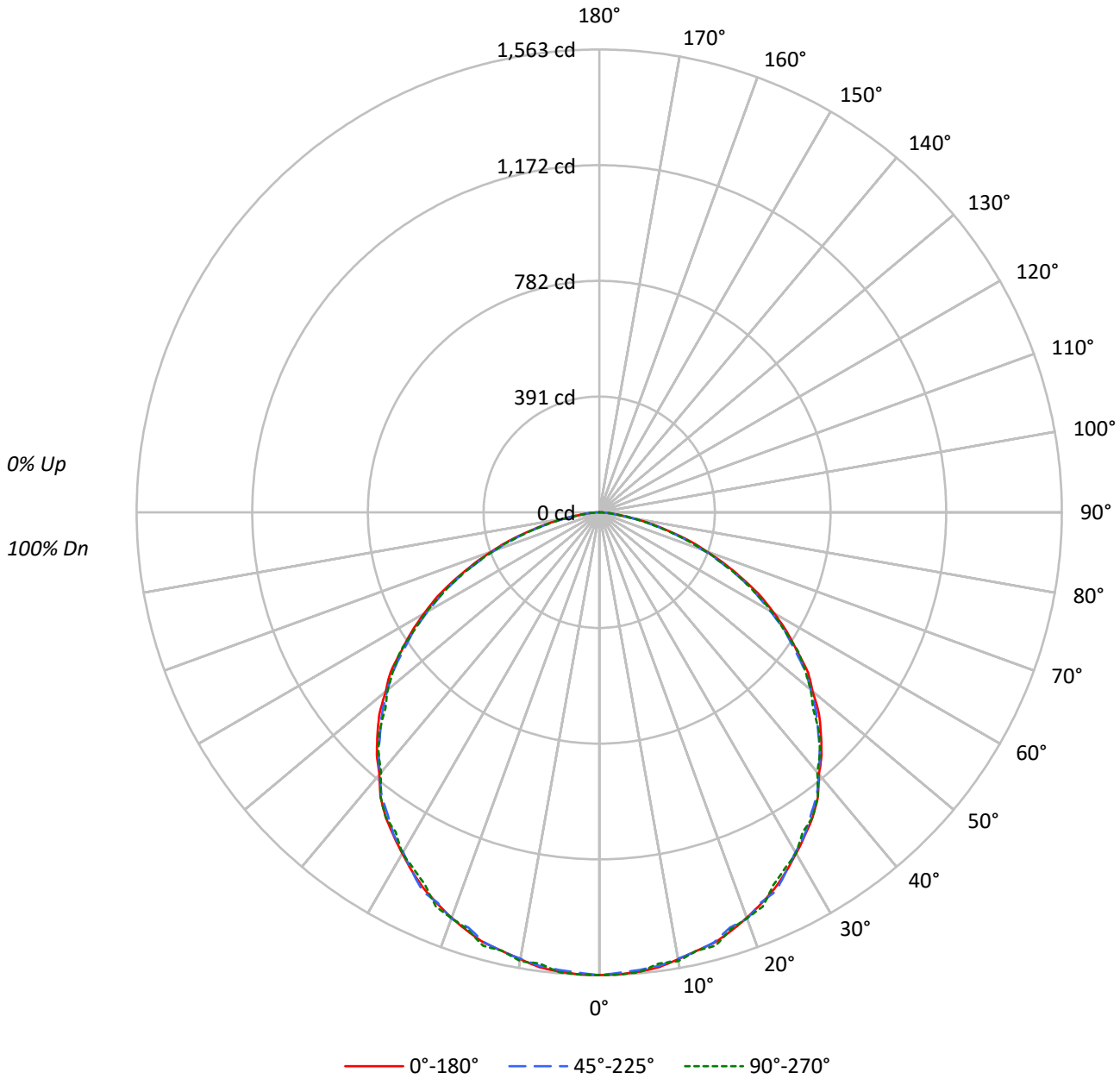
Lumens per Lamp: N/A
Luminaire Lumens: 4332.8 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 40.6
Input Voltage (V): 120
Input Current (Ain): 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



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Luminous Intensity Polar Plot



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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 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 85 | 79 | 97 | 90 | 84 | 78 | 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 | 53 | 51 |
| 5 | 76 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 61 | 53 | 48 | 59 | 52 | 47 | 57 | 51 | 46 | 44 |
| 6 | 71 | 57 | 49 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 42 | 53 | 46 | 41 | 51 | 45 | 41 | 39 |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 32 | 31 |
| 9 | 57 | 44 | 35 | 30 | 55 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 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° | 4207 | 4207 | 4207 |
| 5° | 4207 | 4191 | 4211 |
| 10° | 4188 | 4183 | 4206 |
| 15° | 4193 | 4186 | 4223 |
| 20° | 4174 | 4184 | 4177 |
| 25° | 4163 | 4192 | 4128 |
| 30° | 4135 | 4119 | 4132 |
| 35° | 4131 | 4096 | 4131 |
| 40° | 4059 | 4056 | 4026 |
| 45° | 4030 | 3980 | 3999 |
| 50° | 3940 | 3908 | 3905 |
| 55° | 3827 | 3772 | 3850 |
| 60° | 3670 | 3590 | 3630 |
| 65° | 3422 | 3348 | 3353 |
| 70° | 3032 | 2947 | 2980 |
| 75° | 2495 | 2401 | 2435 |
| 80° | 1751 | 1712 | 1737 |
| 85° | 898 | 846 | 846 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4030 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 147.8 | 3.4 |
| 10°-20° | 424.0 | 9.8 |
| 20°-30° | 644.7 | 14.9 |
| 30°-40° | 779.7 | 18.0 |
| 40°-50° | 807.9 | 18.6 |
| 50°-60° | 721.2 | 16.6 |
| 60°-70° | 517.9 | 12.0 |
| 70°-80° | 248.4 | 5.7 |
| 80°-90° | 41.2 | 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° | 1216.5 | 28.1 |
| 0°-40° | 1996.1 | 46.1 |
| 0°-60° | 3525.3 | 81.4 |
| 0°-90° | 4332.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4332.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1563 | 1563 | 1563 | 1563 | 1563 | |
| 5° | 1557 | 1562 | 1552 | 1552 | 1559 | 148 |
| 15° | 1505 | 1507 | 1503 | 1503 | 1516 | 424 |
| 25° | 1402 | 1399 | 1412 | 1395 | 1390 | 646 |
| 35° | 1258 | 1248 | 1247 | 1242 | 1258 | 784 |
| 45° | 1059 | 1052 | 1046 | 1045 | 1051 | 816 |
| 55° | 816 | 806 | 804 | 802 | 821 | 731 |
| 65° | 537 | 522 | 526 | 518 | 527 | 531 |
| 75° | 240 | 224 | 231 | 231 | 234 | 259 |
| 85° | 29 | 27 | 27 | 27 | 27 | 43 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

TEST NUMBER: P688140
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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1563.2 | 1563.2 | 1563.2 | 1563.2 | 1563.2 |
| 2.5° | 1562.4 | 1564.0 | 1556.6 | 1554.9 | 1562.4 |
| 5° | 1557.4 | 1562.4 | 1551.6 | 1552.4 | 1559.0 |
| 7.5° | 1549.9 | 1546.6 | 1544.9 | 1550.7 | 1537.5 |
| 10° | 1532.5 | 1539.9 | 1530.8 | 1526.7 | 1539.1 |
| 12.5° | 1517.5 | 1518.4 | 1519.2 | 1520.8 | 1516.7 |
| 15° | 1505.1 | 1506.7 | 1502.6 | 1502.6 | 1515.9 |
| 17.5° | 1482.6 | 1486.0 | 1470.2 | 1480.1 | 1476.8 |
| 20° | 1457.7 | 1454.4 | 1461.0 | 1458.5 | 1458.5 |
| 22.5° | 1430.3 | 1430.3 | 1427.0 | 1428.6 | 1441.9 |
| 25° | 1402.1 | 1398.7 | 1412.0 | 1394.6 | 1390.4 |
| 27.5° | 1368.0 | 1364.7 | 1368.0 | 1358.9 | 1357.2 |
| 30° | 1330.6 | 1322.3 | 1325.6 | 1326.5 | 1329.8 |
| 32.5° | 1294.1 | 1285.8 | 1291.6 | 1285.8 | 1280.0 |
| 35° | 1257.5 | 1247.6 | 1246.7 | 1241.8 | 1257.5 |
| 37.5° | 1213.5 | 1202.7 | 1206.9 | 1191.1 | 1212.7 |
| 40° | 1155.4 | 1148.7 | 1154.5 | 1149.6 | 1146.2 |
| 42.5° | 1112.2 | 1104.7 | 1102.2 | 1098.9 | 1103.9 |
| 45° | 1059.0 | 1051.5 | 1045.7 | 1044.9 | 1050.7 |
| 47.5° | 1007.5 | 988.4 | 993.4 | 985.9 | 979.3 |
| 50° | 941.1 | 936.1 | 933.6 | 926.1 | 932.8 |
| 52.5° | 889.6 | 871.3 | 875.5 | 868.8 | 876.3 |
| 55° | 815.7 | 806.5 | 804.0 | 802.4 | 820.6 |
| 57.5° | 751.7 | 740.1 | 741.7 | 737.6 | 740.1 |
| 60° | 681.9 | 671.1 | 667.0 | 666.1 | 674.5 |
| 62.5° | 616.3 | 593.9 | 597.2 | 596.4 | 600.5 |
| 65° | 537.4 | 521.6 | 525.8 | 518.3 | 526.6 |
| 67.5° | 461.8 | 446.0 | 447.7 | 446.0 | 450.2 |
| 70° | 385.4 | 368.0 | 374.6 | 371.3 | 378.8 |
| 72.5° | 319.0 | 298.2 | 304.0 | 298.2 | 304.8 |
| 75° | 240.0 | 224.3 | 230.9 | 230.9 | 234.2 |
| 77.5° | 176.9 | 162.8 | 167.8 | 166.1 | 169.4 |
| 80° | 113.0 | 107.1 | 110.5 | 108.0 | 112.1 |
| 82.5° | 64.8 | 60.6 | 60.6 | 62.3 | 63.1 |
| 85° | 29.1 | 27.4 | 27.4 | 27.4 | 27.4 |
| 87.5° | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)