

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: P560112

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560112
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-2-LD4-1STD-50-UNV-80-84-EDD-90
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1363.0 lumens
Efficiency: N/A
Efficacy: 82.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

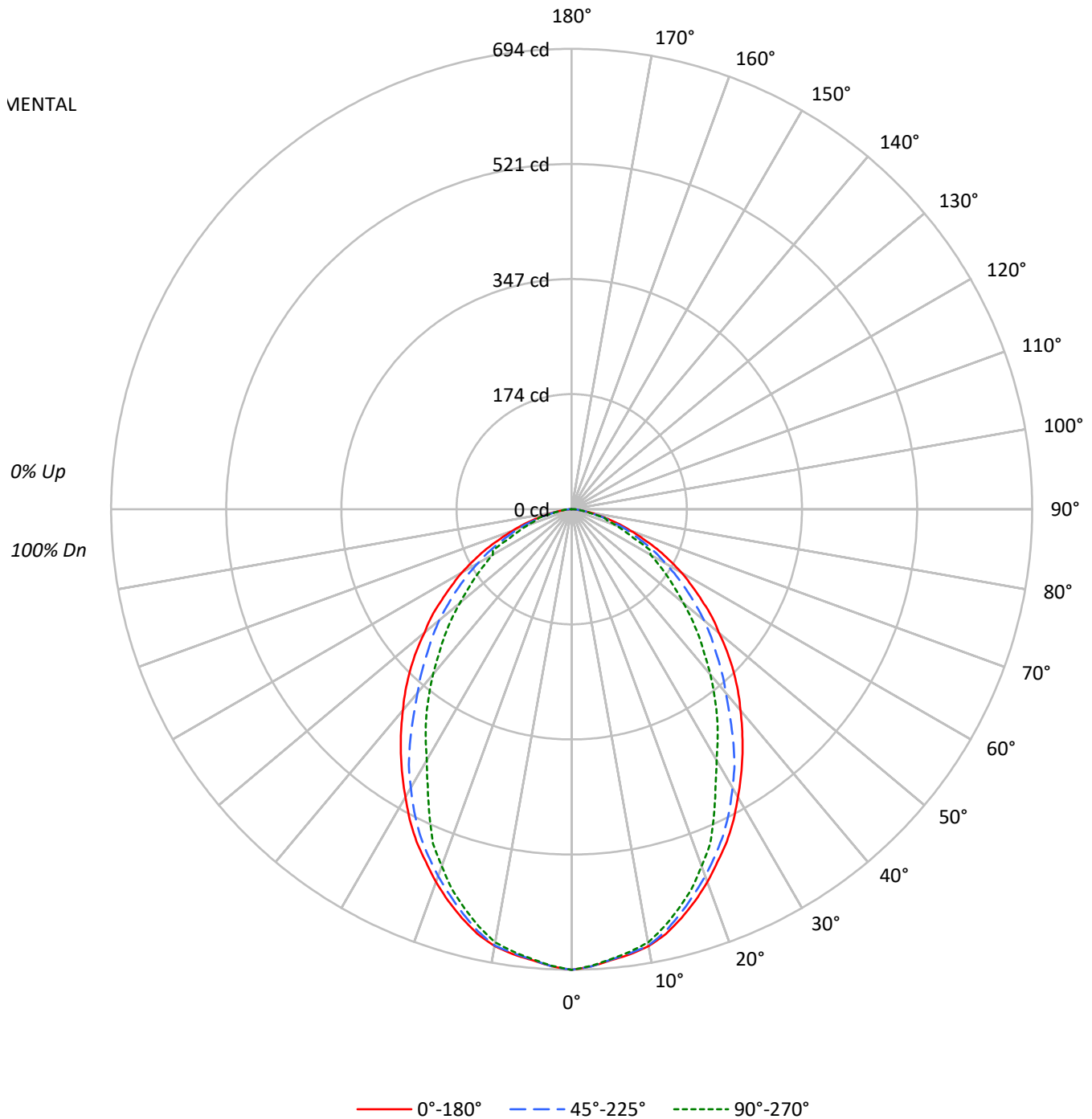
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P560112

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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 | 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 | 110 | 106 | 102 | 99 | 108 | 104 | 100 | 97 | 100 | 97 | 94 | 96 | 94 | 91 | 92 | 90 | 89 | 87 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 86 | 82 | 78 | 83 | 79 | 77 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 93 | 84 | 77 | 71 | 91 | 82 | 76 | 70 | 79 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 67 | 65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 66 | 61 | 72 | 65 | 60 | 69 | 64 | 59 | 67 | 62 | 58 | 56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 80 | 68 | 60 | 54 | 78 | 67 | 59 | 53 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 52 | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 74 | 62 | 53 | 48 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 57 | 51 | 47 | 56 | 50 | 46 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 69 | 56 | 48 | 43 | 67 | 56 | 48 | 42 | 54 | 47 | 42 | 53 | 46 | 42 | 51 | 46 | 42 | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 65 | 52 | 44 | 38 | 63 | 51 | 44 | 38 | 50 | 43 | 38 | 49 | 42 | 38 | 48 | 42 | 38 | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 61 | 48 | 40 | 35 | 59 | 47 | 40 | 35 | 46 | 39 | 35 | 45 | 39 | 34 | 44 | 38 | 34 | 33 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 57 | 44 | 37 | 32 | 56 | 44 | 37 | 32 | 43 | 36 | 32 | 42 | 36 | 32 | 41 | 36 | 32 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3737 | 3737 | 3737 |
| 5° | 3686 | 3682 | 3677 |
| 10° | 3654 | 3650 | 3623 |
| 15° | 3555 | 3520 | 3471 |
| 20° | 3425 | 3369 | 3278 |
| 25° | 3284 | 3213 | 3013 |
| 30° | 3113 | 3013 | 2713 |
| 35° | 2948 | 2784 | 2510 |
| 40° | 2780 | 2538 | 2284 |
| 45° | 2621 | 2346 | 2065 |
| 50° | 2426 | 2178 | 1841 |
| 55° | 2244 | 1973 | 1650 |
| 60° | 2056 | 1762 | 1478 |
| 65° | 1810 | 1543 | 1308 |
| 70° | 1490 | 1352 | 1111 |
| 75° | 1185 | 1036 | 1085 |
| 80° | 797 | 747 | 697 |
| 85° | 494 | 593 | 692 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2621 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 64.6 | 4.7 |
| 10°-20° | 177.4 | 13.0 |
| 20°-30° | 245.6 | 18.0 |
| 30°-40° | 261.8 | 19.2 |
| 40°-50° | 238.9 | 17.5 |
| 50°-60° | 187.1 | 13.7 |
| 60°-70° | 122.0 | 8.9 |
| 70°-80° | 54.0 | 4.0 |
| 80°-90° | 11.6 | 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° | 487.6 | 35.8 |
| 0°-40° | 749.4 | 55.0 |
| 0°-60° | 1175.4 | 86.2 |
| 0°-90° | 1363.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1363.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 694 | 694 | 694 | 694 | 694 | |
| 5° | 682 | 682 | 682 | 681 | 681 | 65 |
| 15° | 638 | 638 | 632 | 625 | 623 | 179 |
| 25° | 553 | 550 | 541 | 522 | 507 | 254 |
| 35° | 449 | 446 | 424 | 392 | 382 | 281 |
| 45° | 344 | 337 | 308 | 282 | 271 | 265 |
| 55° | 239 | 232 | 210 | 185 | 176 | 215 |
| 65° | 142 | 134 | 121 | 124 | 103 | 140 |
| 75° | 57 | 53 | 50 | 47 | 52 | 61 |
| 85° | 8 | 9 | 10 | 10 | 11 | 11 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 694.3 | 694.3 | 694.3 | 694.3 | 694.3 |
| 2.5° | 689.5 | 689.5 | 689.5 | 688.7 | 688.7 |
| 5° | 682.3 | 681.5 | 681.5 | 680.6 | 680.6 |
| 7.5° | 676.6 | 675.8 | 675.0 | 674.2 | 672.6 |
| 10° | 668.6 | 668.6 | 667.8 | 663.8 | 663.0 |
| 12.5° | 655.8 | 655.0 | 651.8 | 646.1 | 644.5 |
| 15° | 638.1 | 638.1 | 631.7 | 625.3 | 622.9 |
| 17.5° | 618.8 | 618.0 | 610.0 | 603.6 | 600.4 |
| 20° | 598.0 | 596.4 | 588.3 | 577.9 | 572.3 |
| 22.5° | 574.7 | 574.7 | 565.1 | 551.4 | 545.8 |
| 25° | 553.0 | 549.8 | 541.0 | 521.7 | 507.3 |
| 27.5° | 528.1 | 523.3 | 513.7 | 486.4 | 469.6 |
| 30° | 500.9 | 498.4 | 484.8 | 449.5 | 436.6 |
| 32.5° | 475.2 | 471.2 | 456.7 | 419.8 | 409.4 |
| 35° | 448.7 | 445.5 | 423.8 | 391.7 | 382.1 |
| 37.5° | 422.2 | 418.2 | 390.9 | 365.2 | 353.2 |
| 40° | 395.7 | 390.9 | 361.2 | 337.9 | 325.1 |
| 42.5° | 370.8 | 364.4 | 335.5 | 310.6 | 296.2 |
| 45° | 344.3 | 337.1 | 308.2 | 282.5 | 271.3 |
| 47.5° | 317.9 | 311.4 | 284.9 | 258.5 | 245.6 |
| 50° | 289.8 | 284.1 | 260.1 | 233.6 | 219.9 |
| 52.5° | 266.5 | 257.7 | 234.4 | 207.9 | 196.6 |
| 55° | 239.2 | 232.0 | 210.3 | 185.4 | 175.8 |
| 57.5° | 214.3 | 207.1 | 187.0 | 163.7 | 155.7 |
| 60° | 191.0 | 180.6 | 163.7 | 143.7 | 137.3 |
| 62.5° | 165.3 | 157.3 | 142.9 | 126.0 | 134.0 |
| 65° | 142.1 | 134.0 | 121.2 | 123.6 | 102.7 |
| 67.5° | 116.4 | 112.4 | 101.1 | 89.9 | 86.7 |
| 70° | 94.7 | 89.9 | 85.9 | 73.8 | 70.6 |
| 72.5° | 75.4 | 70.6 | 65.0 | 58.6 | 56.2 |
| 75° | 57.0 | 53.0 | 49.8 | 47.4 | 52.2 |
| 77.5° | 39.3 | 37.7 | 35.3 | 32.9 | 32.1 |
| 80° | 25.7 | 24.9 | 24.1 | 23.3 | 22.5 |
| 82.5° | 15.3 | 15.3 | 15.3 | 15.3 | 15.3 |
| 85° | 8.0 | 8.8 | 9.6 | 10.4 | 11.2 |
| 87.5° | 4.8 | 4.8 | 5.6 | 6.4 | 7.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)