

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: P559985

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559985
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-35-UNV-80-84-EDD
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1525.0 lumens
Efficiency: N/A
Efficacy: 91.9 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

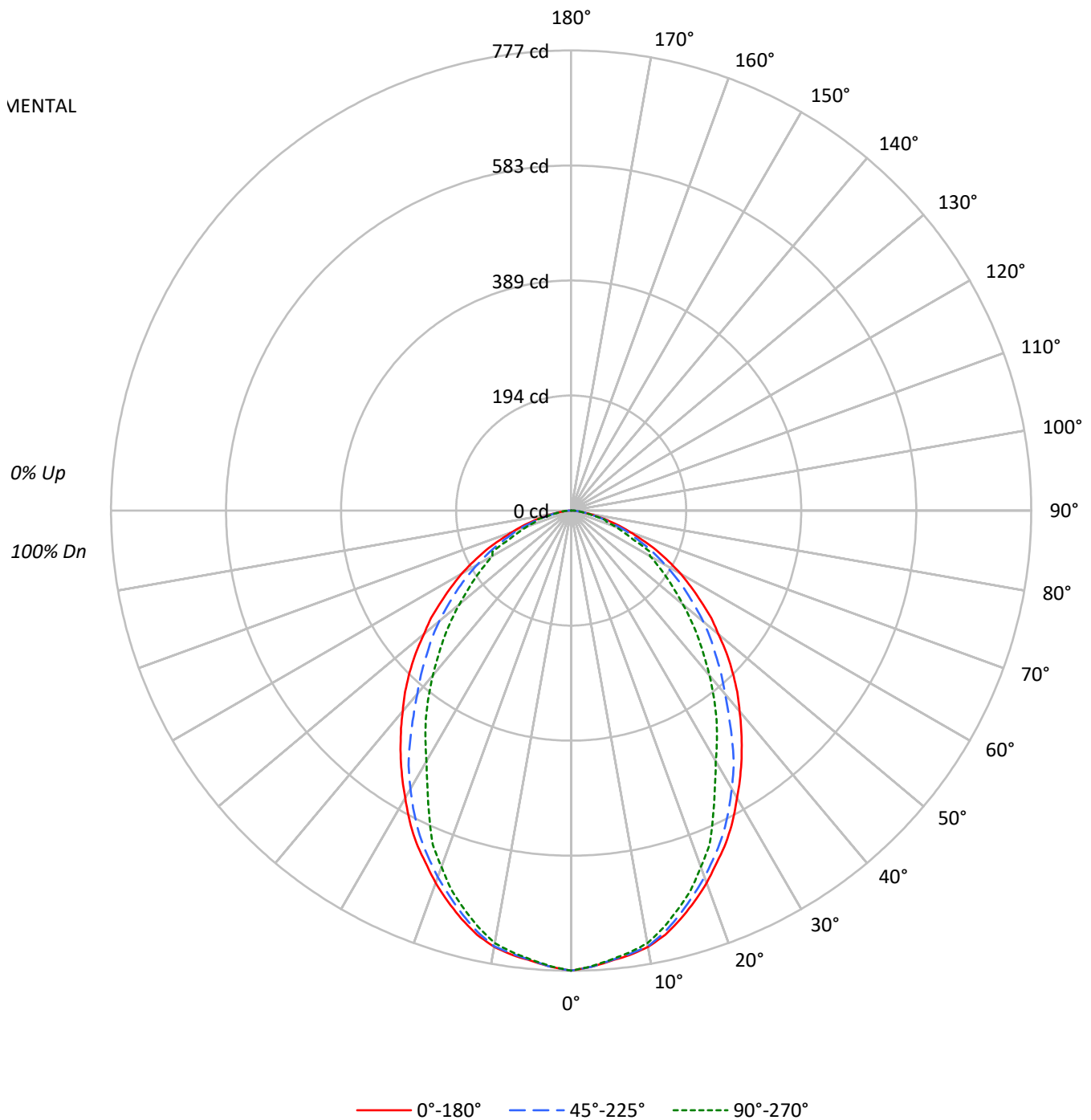
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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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 | 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° | 4181 | 4181 | 4181 |
| 5° | 4124 | 4119 | 4114 |
| 10° | 4088 | 4083 | 4054 |
| 15° | 3978 | 3938 | 3883 |
| 20° | 3832 | 3770 | 3667 |
| 25° | 3675 | 3594 | 3371 |
| 30° | 3483 | 3371 | 3036 |
| 35° | 3298 | 3116 | 2809 |
| 40° | 3110 | 2839 | 2555 |
| 45° | 2933 | 2625 | 2310 |
| 50° | 2714 | 2436 | 2061 |
| 55° | 2511 | 2208 | 1846 |
| 60° | 2300 | 1972 | 1653 |
| 65° | 2025 | 1727 | 1465 |
| 70° | 1668 | 1512 | 1243 |
| 75° | 1327 | 1158 | 1214 |
| 80° | 890 | 834 | 778 |
| 85° | 556 | 667 | 778 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2933 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 72.3 | 4.7 |
| 10°-20° | 198.5 | 13.0 |
| 20°-30° | 274.7 | 18.0 |
| 30°-40° | 293.0 | 19.2 |
| 40°-50° | 267.3 | 17.5 |
| 50°-60° | 209.4 | 13.7 |
| 60°-70° | 136.5 | 8.9 |
| 70°-80° | 60.5 | 4.0 |
| 80°-90° | 13.0 | 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° | 545.5 | 35.8 |
| 0°-40° | 838.5 | 55.0 |
| 0°-60° | 1315.1 | 86.2 |
| 0°-90° | 1525.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1525.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 777 | 777 | 777 | 777 | 777 | |
| 5° | 763 | 762 | 762 | 762 | 762 | 72 |
| 15° | 714 | 714 | 707 | 700 | 697 | 201 |
| 25° | 619 | 615 | 605 | 584 | 568 | 284 |
| 35° | 502 | 498 | 474 | 438 | 428 | 314 |
| 45° | 385 | 377 | 345 | 316 | 304 | 297 |
| 55° | 268 | 260 | 235 | 207 | 197 | 240 |
| 65° | 159 | 150 | 136 | 138 | 115 | 157 |
| 75° | 64 | 59 | 56 | 53 | 58 | 68 |
| 85° | 9 | 10 | 11 | 12 | 13 | 12 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P559985

CATALOG NUMBER: FSR-12-2-LD4-1STD-35-UNV-80-84-EDD

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 776.8 | 776.8 | 776.8 | 776.8 | 776.8 |
| 2.5° | 771.4 | 771.4 | 771.4 | 770.5 | 770.5 |
| 5° | 763.3 | 762.4 | 762.4 | 761.5 | 761.5 |
| 7.5° | 757.1 | 756.2 | 755.3 | 754.4 | 752.6 |
| 10° | 748.1 | 748.1 | 747.2 | 742.7 | 741.8 |
| 12.5° | 733.7 | 732.8 | 729.2 | 722.9 | 721.1 |
| 15° | 714.0 | 714.0 | 706.8 | 699.6 | 696.9 |
| 17.5° | 692.4 | 691.5 | 682.5 | 675.3 | 671.7 |
| 20° | 669.0 | 667.3 | 658.3 | 646.6 | 640.3 |
| 22.5° | 643.0 | 643.0 | 632.2 | 617.0 | 610.7 |
| 25° | 618.8 | 615.2 | 605.3 | 583.7 | 567.6 |
| 27.5° | 590.9 | 585.5 | 574.8 | 544.2 | 525.4 |
| 30° | 560.4 | 557.7 | 542.4 | 502.9 | 488.5 |
| 32.5° | 531.6 | 527.2 | 511.0 | 469.7 | 458.0 |
| 35° | 502.0 | 498.4 | 474.2 | 438.2 | 427.5 |
| 37.5° | 472.4 | 467.9 | 437.4 | 408.6 | 395.1 |
| 40° | 442.7 | 437.4 | 404.1 | 378.1 | 363.7 |
| 42.5° | 414.9 | 407.7 | 375.4 | 347.5 | 331.4 |
| 45° | 385.3 | 377.2 | 344.9 | 316.1 | 303.5 |
| 47.5° | 355.6 | 348.4 | 318.8 | 289.2 | 274.8 |
| 50° | 324.2 | 317.9 | 291.0 | 261.3 | 246.1 |
| 52.5° | 298.2 | 288.3 | 262.2 | 232.6 | 220.0 |
| 55° | 267.6 | 259.5 | 235.3 | 207.4 | 196.7 |
| 57.5° | 239.8 | 231.7 | 209.2 | 183.2 | 174.2 |
| 60° | 213.7 | 202.1 | 183.2 | 160.8 | 153.6 |
| 62.5° | 185.0 | 176.0 | 159.9 | 141.0 | 150.0 |
| 65° | 159.0 | 150.0 | 135.6 | 138.3 | 115.0 |
| 67.5° | 130.2 | 125.7 | 113.2 | 100.6 | 97.0 |
| 70° | 106.0 | 100.6 | 96.1 | 82.6 | 79.0 |
| 72.5° | 84.4 | 79.0 | 72.7 | 65.6 | 62.9 |
| 75° | 63.8 | 59.3 | 55.7 | 53.0 | 58.4 |
| 77.5° | 44.0 | 42.2 | 39.5 | 36.8 | 35.9 |
| 80° | 28.7 | 27.8 | 26.9 | 26.0 | 25.1 |
| 82.5° | 17.1 | 17.1 | 17.1 | 17.1 | 17.1 |
| 85° | 9.0 | 9.9 | 10.8 | 11.7 | 12.6 |
| 87.5° | 5.4 | 5.4 | 6.3 | 7.2 | 8.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)