

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: P558961

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558961
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-12-1-LD4-1STD-50-UNV-80-84-EDD
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 808.0 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

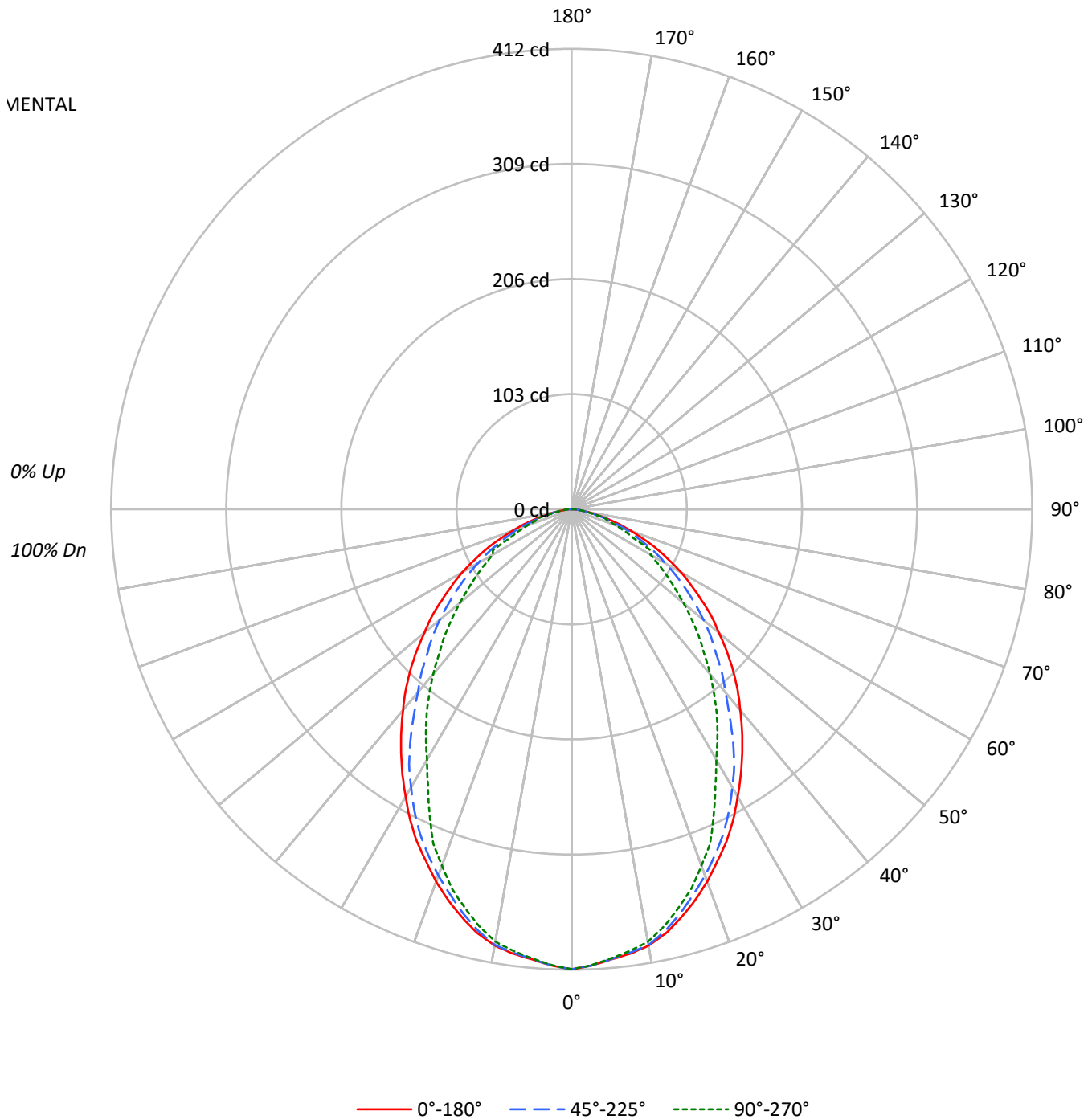
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-80-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P558961

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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 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 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° | 4430 | 4430 | 4430 |
| 5° | 4370 | 4365 | 4360 |
| 10° | 4333 | 4327 | 4295 |
| 15° | 4216 | 4173 | 4114 |
| 20° | 4061 | 3995 | 3887 |
| 25° | 3893 | 3809 | 3571 |
| 30° | 3690 | 3572 | 3217 |
| 35° | 3495 | 3301 | 2976 |
| 40° | 3296 | 3008 | 2708 |
| 45° | 3107 | 2781 | 2448 |
| 50° | 2877 | 2582 | 2184 |
| 55° | 2661 | 2340 | 1955 |
| 60° | 2437 | 2090 | 1752 |
| 65° | 2145 | 1829 | 1551 |
| 70° | 1766 | 1602 | 1319 |
| 75° | 1406 | 1227 | 1285 |
| 80° | 942 | 886 | 824 |
| 85° | 593 | 704 | 827 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3107 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 38.3 | 4.7 |
| 10°-20° | 105.1 | 13.0 |
| 20°-30° | 145.6 | 18.0 |
| 30°-40° | 155.2 | 19.2 |
| 40°-50° | 141.6 | 17.5 |
| 50°-60° | 110.9 | 13.7 |
| 60°-70° | 72.3 | 8.9 |
| 70°-80° | 32.0 | 4.0 |
| 80°-90° | 6.9 | 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° | 289.0 | 35.8 |
| 0°-40° | 444.2 | 55.0 |
| 0°-60° | 696.8 | 86.2 |
| 0°-90° | 808.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 808.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 412 | 412 | 412 | 412 | 412 | |
| 5° | 404 | 404 | 404 | 404 | 404 | 38 |
| 15° | 378 | 378 | 374 | 371 | 369 | 106 |
| 25° | 328 | 326 | 321 | 309 | 301 | 151 |
| 35° | 266 | 264 | 251 | 232 | 226 | 166 |
| 45° | 204 | 200 | 183 | 168 | 161 | 157 |
| 55° | 142 | 138 | 125 | 110 | 104 | 127 |
| 65° | 84 | 80 | 72 | 73 | 61 | 83 |
| 75° | 34 | 31 | 30 | 28 | 31 | 36 |
| 85° | 5 | 5 | 6 | 6 | 7 | 7 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P558961

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-80-84-EDD

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 411.6 | 411.6 | 411.6 | 411.6 | 411.6 |
| 2.5° | 408.7 | 408.7 | 408.7 | 408.3 | 408.3 |
| 5° | 404.4 | 404.0 | 404.0 | 403.5 | 403.5 |
| 7.5° | 401.1 | 400.6 | 400.2 | 399.7 | 398.7 |
| 10° | 396.4 | 396.4 | 395.9 | 393.5 | 393.0 |
| 12.5° | 388.7 | 388.3 | 386.4 | 383.0 | 382.1 |
| 15° | 378.3 | 378.3 | 374.5 | 370.7 | 369.2 |
| 17.5° | 366.9 | 366.4 | 361.6 | 357.8 | 355.9 |
| 20° | 354.5 | 353.5 | 348.8 | 342.6 | 339.3 |
| 22.5° | 340.7 | 340.7 | 335.0 | 326.9 | 323.6 |
| 25° | 327.8 | 325.9 | 320.7 | 309.3 | 300.7 |
| 27.5° | 313.1 | 310.2 | 304.5 | 288.3 | 278.4 |
| 30° | 296.9 | 295.5 | 287.4 | 266.5 | 258.8 |
| 32.5° | 281.7 | 279.3 | 270.7 | 248.9 | 242.7 |
| 35° | 266.0 | 264.1 | 251.2 | 232.2 | 226.5 |
| 37.5° | 250.3 | 247.9 | 231.7 | 216.5 | 209.4 |
| 40° | 234.6 | 231.7 | 214.1 | 200.3 | 192.7 |
| 42.5° | 219.8 | 216.0 | 198.9 | 184.1 | 175.6 |
| 45° | 204.1 | 199.8 | 182.7 | 167.5 | 160.8 |
| 47.5° | 188.4 | 184.6 | 168.9 | 153.2 | 145.6 |
| 50° | 171.8 | 168.4 | 154.2 | 138.5 | 130.4 |
| 52.5° | 158.0 | 152.7 | 138.9 | 123.2 | 116.6 |
| 55° | 141.8 | 137.5 | 124.7 | 109.9 | 104.2 |
| 57.5° | 127.0 | 122.8 | 110.9 | 97.1 | 92.3 |
| 60° | 113.2 | 107.1 | 97.1 | 85.2 | 81.4 |
| 62.5° | 98.0 | 93.3 | 84.7 | 74.7 | 79.5 |
| 65° | 84.2 | 79.5 | 71.8 | 73.3 | 60.9 |
| 67.5° | 69.0 | 66.6 | 60.0 | 53.3 | 51.4 |
| 70° | 56.1 | 53.3 | 50.9 | 43.8 | 41.9 |
| 72.5° | 44.7 | 41.9 | 38.5 | 34.7 | 33.3 |
| 75° | 33.8 | 31.4 | 29.5 | 28.1 | 30.9 |
| 77.5° | 23.3 | 22.4 | 20.9 | 19.5 | 19.0 |
| 80° | 15.2 | 14.8 | 14.3 | 13.8 | 13.3 |
| 82.5° | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| 85° | 4.8 | 5.2 | 5.7 | 6.2 | 6.7 |
| 87.5° | 2.9 | 2.9 | 3.3 | 3.8 | 4.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)