

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: P558779

Luminaire Tested: FSR-12-1-LD4-1LO-50-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558779
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-LD4-1LO-50-UNV-80-94-EDD
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

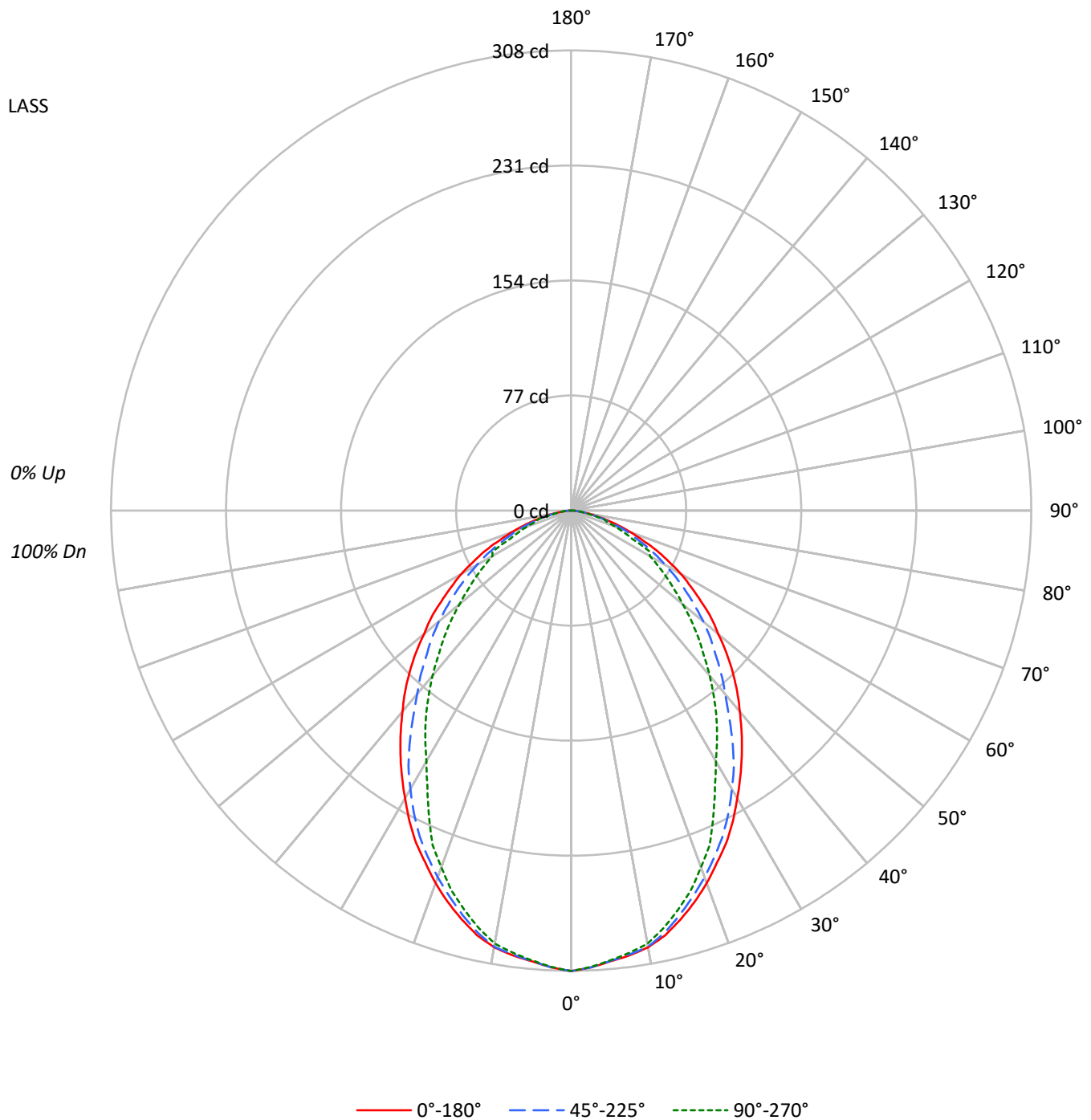
Lumens per Lamp: N/A
Luminaire Lumens: 605.0 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 5.8
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: P558779

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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3317 | 3317 | 3317 |
| 5° | 3272 | 3269 | 3264 |
| 10° | 3244 | 3240 | 3217 |
| 15° | 3156 | 3125 | 3081 |
| 20° | 3040 | 2992 | 2909 |
| 25° | 2916 | 2852 | 2675 |
| 30° | 2763 | 2675 | 2409 |
| 35° | 2618 | 2472 | 2229 |
| 40° | 2467 | 2252 | 2028 |
| 45° | 2326 | 2082 | 1833 |
| 50° | 2153 | 1932 | 1634 |
| 55° | 1993 | 1751 | 1464 |
| 60° | 1826 | 1565 | 1311 |
| 65° | 1607 | 1370 | 1161 |
| 70° | 1322 | 1199 | 988 |
| 75° | 1052 | 919 | 965 |
| 80° | 707 | 663 | 620 |
| 85° | 445 | 531 | 618 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2326 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 28.7 | 4.7 |
| 10°-20° | 78.7 | 13.0 |
| 20°-30° | 109.0 | 18.0 |
| 30°-40° | 116.2 | 19.2 |
| 40°-50° | 106.0 | 17.5 |
| 50°-60° | 83.1 | 13.7 |
| 60°-70° | 54.1 | 8.9 |
| 70°-80° | 24.0 | 4.0 |
| 80°-90° | 5.2 | 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° | 216.4 | 35.8 |
| 0°-40° | 332.6 | 55.0 |
| 0°-60° | 521.7 | 86.2 |
| 0°-90° | 605.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 605.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 308 | 308 | 308 | 308 | 308 | |
| 5° | 303 | 302 | 302 | 302 | 302 | 29 |
| 15° | 283 | 283 | 280 | 278 | 276 | 80 |
| 25° | 246 | 244 | 240 | 232 | 225 | 113 |
| 35° | 199 | 198 | 188 | 174 | 170 | 125 |
| 45° | 153 | 150 | 137 | 125 | 120 | 118 |
| 55° | 106 | 103 | 93 | 82 | 78 | 95 |
| 65° | 63 | 60 | 54 | 55 | 46 | 62 |
| 75° | 25 | 24 | 22 | 21 | 23 | 27 |
| 85° | 4 | 4 | 4 | 5 | 5 | 5 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P558779

CATALOG NUMBER: FSR-12-1-LD4-1LO-50-UNV-80-94-EDD

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 308.2 | 308.2 | 308.2 | 308.2 | 308.2 |
| 2.5° | 306.0 | 306.0 | 306.0 | 305.7 | 305.7 |
| 5° | 302.8 | 302.5 | 302.5 | 302.1 | 302.1 |
| 7.5° | 300.3 | 300.0 | 299.6 | 299.3 | 298.6 |
| 10° | 296.8 | 296.8 | 296.4 | 294.6 | 294.3 |
| 12.5° | 291.1 | 290.7 | 289.3 | 286.8 | 286.1 |
| 15° | 283.2 | 283.2 | 280.4 | 277.5 | 276.5 |
| 17.5° | 274.7 | 274.3 | 270.8 | 267.9 | 266.5 |
| 20° | 265.4 | 264.7 | 261.2 | 256.5 | 254.0 |
| 22.5° | 255.1 | 255.1 | 250.8 | 244.8 | 242.3 |
| 25° | 245.5 | 244.0 | 240.1 | 231.6 | 225.2 |
| 27.5° | 234.4 | 232.3 | 228.0 | 215.9 | 208.4 |
| 30° | 222.3 | 221.2 | 215.2 | 199.5 | 193.8 |
| 32.5° | 210.9 | 209.1 | 202.7 | 186.3 | 181.7 |
| 35° | 199.2 | 197.7 | 188.1 | 173.9 | 169.6 |
| 37.5° | 187.4 | 185.6 | 173.5 | 162.1 | 156.8 |
| 40° | 175.6 | 173.5 | 160.3 | 150.0 | 144.3 |
| 42.5° | 164.6 | 161.7 | 148.9 | 137.9 | 131.5 |
| 45° | 152.8 | 149.6 | 136.8 | 125.4 | 120.4 |
| 47.5° | 141.1 | 138.2 | 126.5 | 114.7 | 109.0 |
| 50° | 128.6 | 126.1 | 115.4 | 103.7 | 97.6 |
| 52.5° | 118.3 | 114.4 | 104.0 | 92.3 | 87.3 |
| 55° | 106.2 | 103.0 | 93.3 | 82.3 | 78.0 |
| 57.5° | 95.1 | 91.9 | 83.0 | 72.7 | 69.1 |
| 60° | 84.8 | 80.2 | 72.7 | 63.8 | 60.9 |
| 62.5° | 73.4 | 69.8 | 63.4 | 55.9 | 59.5 |
| 65° | 63.1 | 59.5 | 53.8 | 54.9 | 45.6 |
| 67.5° | 51.7 | 49.9 | 44.9 | 39.9 | 38.5 |
| 70° | 42.0 | 39.9 | 38.1 | 32.8 | 31.4 |
| 72.5° | 33.5 | 31.4 | 28.9 | 26.0 | 24.9 |
| 75° | 25.3 | 23.5 | 22.1 | 21.0 | 23.2 |
| 77.5° | 17.5 | 16.7 | 15.7 | 14.6 | 14.3 |
| 80° | 11.4 | 11.0 | 10.7 | 10.3 | 10.0 |
| 82.5° | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 85° | 3.6 | 3.9 | 4.3 | 4.6 | 5.0 |
| 87.5° | 2.1 | 2.1 | 2.5 | 2.9 | 3.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)