

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: P558705

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558705
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

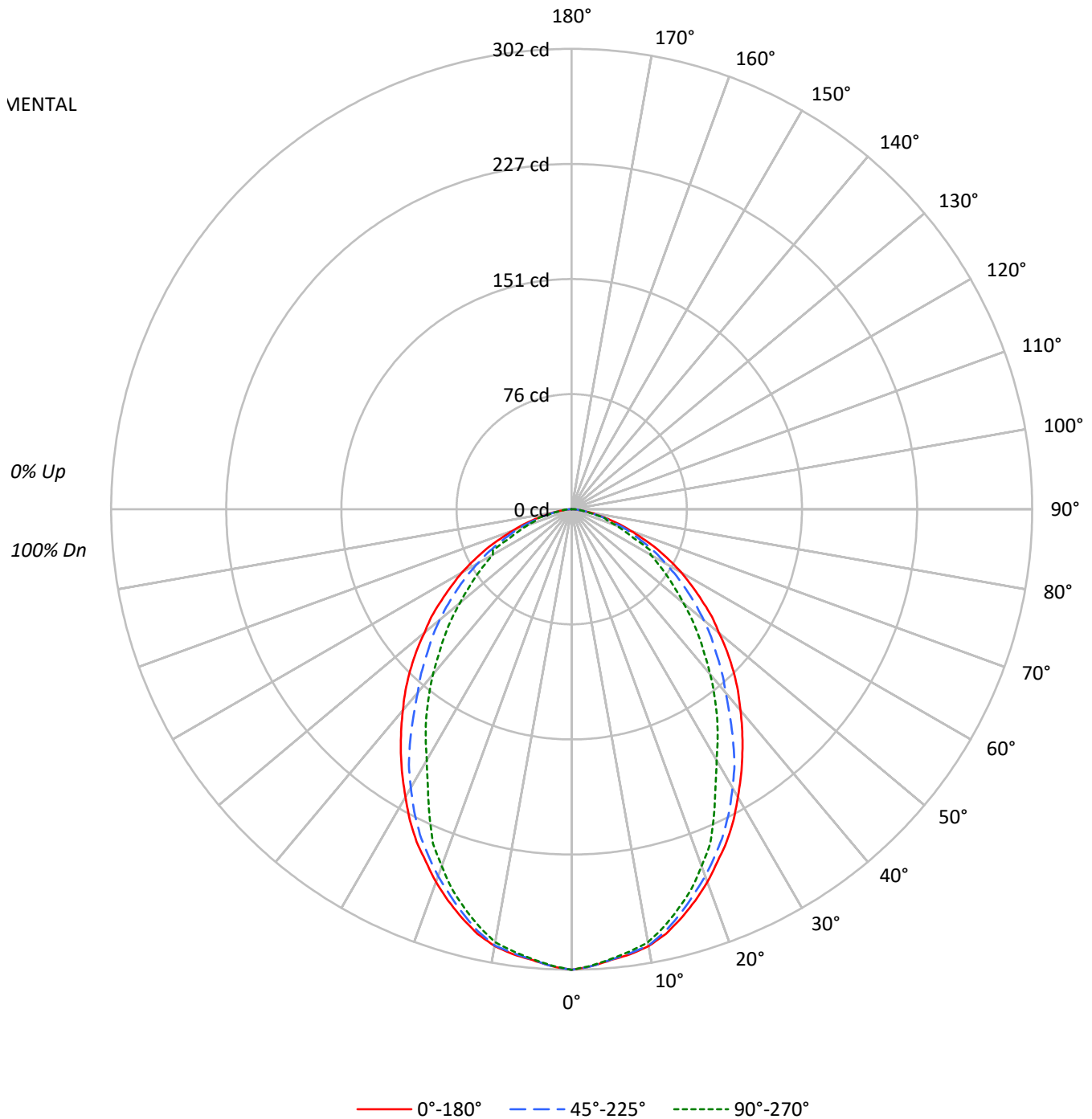
Lumens per Lamp: N/A
Luminaire Lumens: 593.0 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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



TEST NUMBER: P558705
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Luminous Intensity Polar Plot





TEST NUMBER: P558705

CATALOG NUMBER: FSR-12-1-LD4-1LO-40-UNV-80-84-EDD

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 | | | | | | | | | | | | 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 | 39 | 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° | 3252 | 3252 | 3252 |
| 5° | 3207 | 3204 | 3199 |
| 10° | 3180 | 3175 | 3152 |
| 15° | 3093 | 3062 | 3020 |
| 20° | 2981 | 2932 | 2852 |
| 25° | 2858 | 2796 | 2621 |
| 30° | 2708 | 2621 | 2362 |
| 35° | 2565 | 2423 | 2184 |
| 40° | 2420 | 2207 | 1987 |
| 45° | 2280 | 2041 | 1796 |
| 50° | 2112 | 1894 | 1603 |
| 55° | 1954 | 1717 | 1436 |
| 60° | 1789 | 1533 | 1285 |
| 65° | 1574 | 1342 | 1138 |
| 70° | 1297 | 1177 | 966 |
| 75° | 1031 | 902 | 944 |
| 80° | 694 | 651 | 607 |
| 85° | 432 | 519 | 605 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2280 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 28.1 | 4.7 |
| 10°-20° | 77.2 | 13.0 |
| 20°-30° | 106.8 | 18.0 |
| 30°-40° | 113.9 | 19.2 |
| 40°-50° | 103.9 | 17.5 |
| 50°-60° | 81.4 | 13.7 |
| 60°-70° | 53.1 | 8.9 |
| 70°-80° | 23.5 | 4.0 |
| 80°-90° | 5.0 | 0.8 |
| 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° | 212.1 | 35.8 |
| 0°-40° | 326.0 | 55.0 |
| 0°-60° | 511.4 | 86.2 |
| 0°-90° | 593.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 593.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 302 | 302 | 302 | 302 | 302 | |
| 5° | 297 | 296 | 296 | 296 | 296 | 28 |
| 15° | 278 | 278 | 275 | 272 | 271 | 78 |
| 25° | 241 | 239 | 235 | 227 | 221 | 110 |
| 35° | 195 | 194 | 184 | 170 | 166 | 122 |
| 45° | 150 | 147 | 134 | 123 | 118 | 115 |
| 55° | 104 | 101 | 92 | 81 | 76 | 93 |
| 65° | 62 | 58 | 53 | 54 | 45 | 61 |
| 75° | 25 | 23 | 22 | 21 | 23 | 27 |
| 85° | 4 | 4 | 4 | 4 | 5 | 5 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P558705

CATALOG NUMBER: FSR-12-1-LD4-1LO-40-UNV-80-84-EDD

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 302.1 | 302.1 | 302.1 | 302.1 | 302.1 |
| 2.5° | 300.0 | 300.0 | 300.0 | 299.6 | 299.6 |
| 5° | 296.8 | 296.5 | 296.5 | 296.1 | 296.1 |
| 7.5° | 294.4 | 294.0 | 293.7 | 293.3 | 292.6 |
| 10° | 290.9 | 290.9 | 290.5 | 288.8 | 288.4 |
| 12.5° | 285.3 | 285.0 | 283.6 | 281.1 | 280.4 |
| 15° | 277.6 | 277.6 | 274.8 | 272.0 | 271.0 |
| 17.5° | 269.2 | 268.9 | 265.4 | 262.6 | 261.2 |
| 20° | 260.2 | 259.5 | 256.0 | 251.4 | 249.0 |
| 22.5° | 250.0 | 250.0 | 245.8 | 239.9 | 237.5 |
| 25° | 240.6 | 239.2 | 235.4 | 227.0 | 220.7 |
| 27.5° | 229.8 | 227.7 | 223.5 | 211.6 | 204.3 |
| 30° | 217.9 | 216.9 | 210.9 | 195.6 | 190.0 |
| 32.5° | 206.7 | 205.0 | 198.7 | 182.6 | 178.1 |
| 35° | 195.2 | 193.8 | 184.4 | 170.4 | 166.2 |
| 37.5° | 183.7 | 181.9 | 170.1 | 158.9 | 153.7 |
| 40° | 172.2 | 170.1 | 157.1 | 147.0 | 141.4 |
| 42.5° | 161.3 | 158.5 | 146.0 | 135.1 | 128.9 |
| 45° | 149.8 | 146.7 | 134.1 | 122.9 | 118.0 |
| 47.5° | 138.3 | 135.5 | 124.0 | 112.4 | 106.9 |
| 50° | 126.1 | 123.6 | 113.1 | 101.6 | 95.7 |
| 52.5° | 115.9 | 112.1 | 102.0 | 90.4 | 85.6 |
| 55° | 104.1 | 100.9 | 91.5 | 80.7 | 76.5 |
| 57.5° | 93.2 | 90.1 | 81.4 | 71.2 | 67.7 |
| 60° | 83.1 | 78.6 | 71.2 | 62.5 | 59.7 |
| 62.5° | 71.9 | 68.4 | 62.2 | 54.8 | 58.3 |
| 65° | 61.8 | 58.3 | 52.7 | 53.8 | 44.7 |
| 67.5° | 50.6 | 48.9 | 44.0 | 39.1 | 37.7 |
| 70° | 41.2 | 39.1 | 37.4 | 32.1 | 30.7 |
| 72.5° | 32.8 | 30.7 | 28.3 | 25.5 | 24.4 |
| 75° | 24.8 | 23.0 | 21.7 | 20.6 | 22.7 |
| 77.5° | 17.1 | 16.4 | 15.4 | 14.3 | 14.0 |
| 80° | 11.2 | 10.8 | 10.5 | 10.1 | 9.8 |
| 82.5° | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| 85° | 3.5 | 3.8 | 4.2 | 4.5 | 4.9 |
| 87.5° | 2.1 | 2.1 | 2.4 | 2.8 | 3.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)