

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: P560635

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560635
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-LD4-2STD-40-UNV-80-94-EDD
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

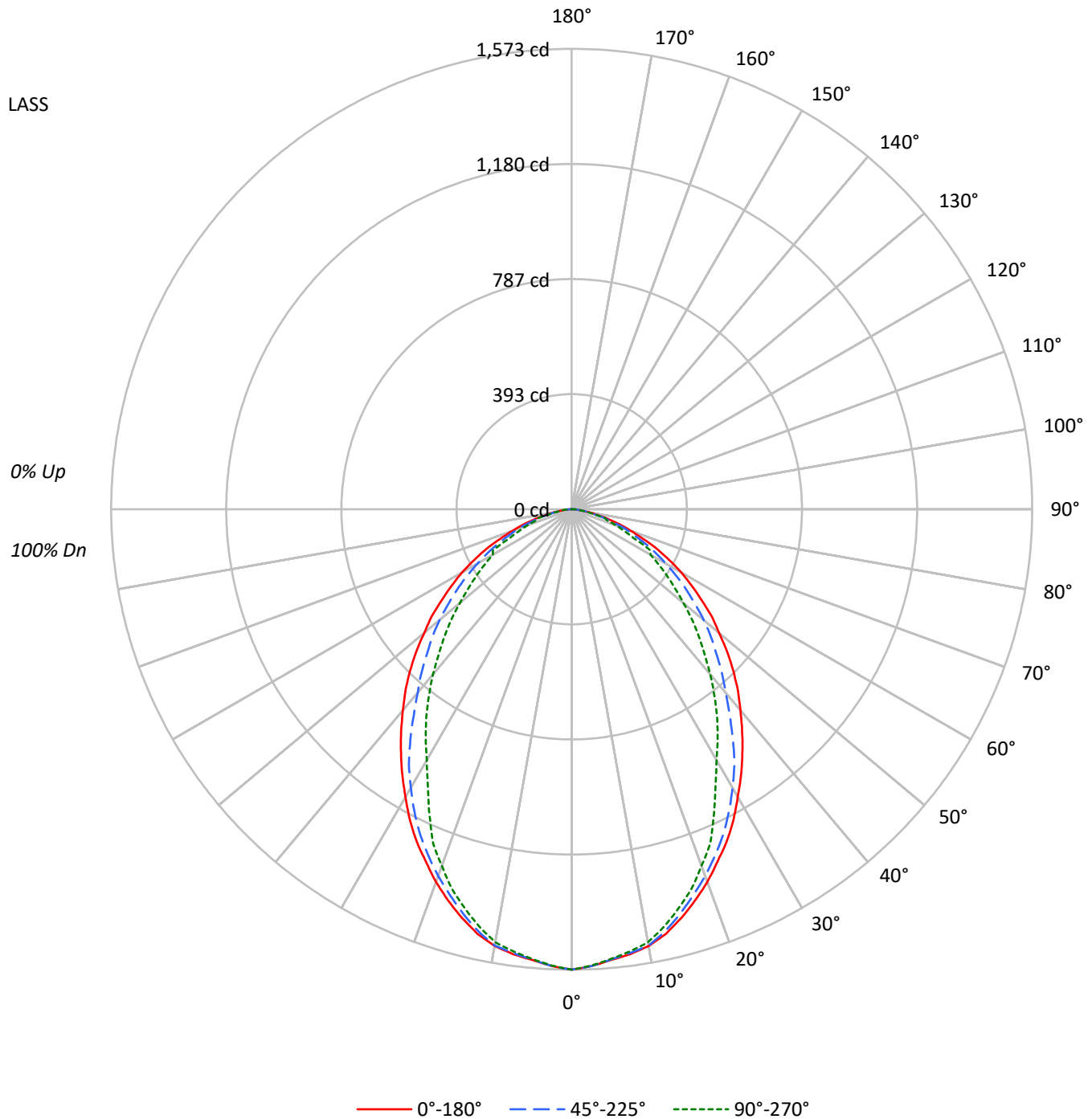
Lumens per Lamp: N/A
Luminaire Lumens: 3088.0 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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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Luminous Intensity Polar Plot





TEST NUMBER: P560635

CATALOG NUMBER: FSR-12-2-LD4-2STD-40-UNV-80-94-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 | 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° | 8466 | 8466 | 8466 |
| 5° | 8351 | 8341 | 8331 |
| 10° | 8278 | 8269 | 8209 |
| 15° | 8055 | 7974 | 7862 |
| 20° | 7759 | 7634 | 7426 |
| 25° | 7440 | 7279 | 6825 |
| 30° | 7052 | 6826 | 6148 |
| 35° | 6679 | 6309 | 5687 |
| 40° | 6298 | 5749 | 5174 |
| 45° | 5938 | 5315 | 4678 |
| 50° | 5497 | 4933 | 4172 |
| 55° | 5085 | 4470 | 3736 |
| 60° | 4659 | 3993 | 3348 |
| 65° | 4099 | 3497 | 2965 |
| 70° | 3377 | 3062 | 2518 |
| 75° | 2685 | 2344 | 2458 |
| 80° | 1804 | 1692 | 1578 |
| 85° | 1124 | 1346 | 1575 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5938 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 146.4 | 4.7 |
| 10°-20° | 401.8 | 13.0 |
| 20°-30° | 556.3 | 18.0 |
| 30°-40° | 593.2 | 19.2 |
| 40°-50° | 541.2 | 17.5 |
| 50°-60° | 424.0 | 13.7 |
| 60°-70° | 276.3 | 8.9 |
| 70°-80° | 122.4 | 4.0 |
| 80°-90° | 26.3 | 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° | 1104.6 | 35.8 |
| 0°-40° | 1697.8 | 55.0 |
| 0°-60° | 2663.0 | 86.2 |
| 0°-90° | 3088.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3088.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1573 | 1573 | 1573 | 1573 | 1573 | |
| 5° | 1546 | 1544 | 1544 | 1542 | 1542 | 147 |
| 15° | 1446 | 1446 | 1431 | 1417 | 1411 | 406 |
| 25° | 1253 | 1246 | 1226 | 1182 | 1149 | 575 |
| 35° | 1016 | 1009 | 960 | 887 | 866 | 635 |
| 45° | 780 | 764 | 698 | 640 | 615 | 601 |
| 55° | 542 | 526 | 476 | 420 | 398 | 486 |
| 65° | 322 | 304 | 275 | 280 | 233 | 317 |
| 75° | 129 | 120 | 113 | 107 | 118 | 138 |
| 85° | 18 | 20 | 22 | 24 | 26 | 25 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P560635

CATALOG NUMBER: FSR-12-2-LD4-2STD-40-UNV-80-94-EDD

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1573.0 | 1573.0 | 1573.0 | 1573.0 | 1573.0 |
| 2.5° | 1562.1 | 1562.1 | 1562.1 | 1560.3 | 1560.3 |
| 5° | 1545.7 | 1543.9 | 1543.9 | 1542.1 | 1542.1 |
| 7.5° | 1533.0 | 1531.2 | 1529.3 | 1527.5 | 1523.9 |
| 10° | 1514.8 | 1514.8 | 1513.0 | 1503.9 | 1502.1 |
| 12.5° | 1485.7 | 1483.9 | 1476.6 | 1463.9 | 1460.2 |
| 15° | 1445.7 | 1445.7 | 1431.1 | 1416.6 | 1411.1 |
| 17.5° | 1402.0 | 1400.2 | 1382.0 | 1367.5 | 1360.2 |
| 20° | 1354.8 | 1351.1 | 1332.9 | 1309.3 | 1296.6 |
| 22.5° | 1302.0 | 1302.0 | 1280.2 | 1249.3 | 1236.6 |
| 25° | 1252.9 | 1245.7 | 1225.7 | 1182.0 | 1149.3 |
| 27.5° | 1196.6 | 1185.6 | 1163.8 | 1102.0 | 1063.8 |
| 30° | 1134.7 | 1129.3 | 1098.4 | 1018.3 | 989.3 |
| 32.5° | 1076.5 | 1067.4 | 1034.7 | 951.1 | 927.4 |
| 35° | 1016.5 | 1009.3 | 960.2 | 887.4 | 865.6 |
| 37.5° | 956.5 | 947.4 | 885.6 | 827.4 | 800.1 |
| 40° | 896.5 | 885.6 | 818.3 | 765.6 | 736.5 |
| 42.5° | 840.1 | 825.6 | 760.1 | 703.8 | 671.0 |
| 45° | 780.1 | 763.8 | 698.3 | 640.1 | 614.6 |
| 47.5° | 720.1 | 705.6 | 645.6 | 585.6 | 556.5 |
| 50° | 656.5 | 643.7 | 589.2 | 529.2 | 498.3 |
| 52.5° | 603.7 | 583.7 | 531.0 | 471.0 | 445.5 |
| 55° | 541.9 | 525.5 | 476.4 | 420.1 | 398.2 |
| 57.5° | 485.5 | 469.2 | 423.7 | 371.0 | 352.8 |
| 60° | 432.8 | 409.2 | 371.0 | 325.5 | 311.0 |
| 62.5° | 374.6 | 356.4 | 323.7 | 285.5 | 303.7 |
| 65° | 321.9 | 303.7 | 274.6 | 280.0 | 232.8 |
| 67.5° | 263.7 | 254.6 | 229.1 | 203.7 | 196.4 |
| 70° | 214.6 | 203.7 | 194.6 | 167.3 | 160.0 |
| 72.5° | 170.9 | 160.0 | 147.3 | 132.7 | 127.3 |
| 75° | 129.1 | 120.0 | 112.7 | 107.3 | 118.2 |
| 77.5° | 89.1 | 85.5 | 80.0 | 74.6 | 72.7 |
| 80° | 58.2 | 56.4 | 54.6 | 52.7 | 50.9 |
| 82.5° | 34.6 | 34.6 | 34.6 | 34.6 | 34.6 |
| 85° | 18.2 | 20.0 | 21.8 | 23.6 | 25.5 |
| 87.5° | 10.9 | 10.9 | 12.7 | 14.5 | 16.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)