

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: P590619

Luminaire Tested: FSR-24-2-LD4-3STD-35-UNV-80-96-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590619  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-24-2-LD4-3STD-35-UNV-80-96-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

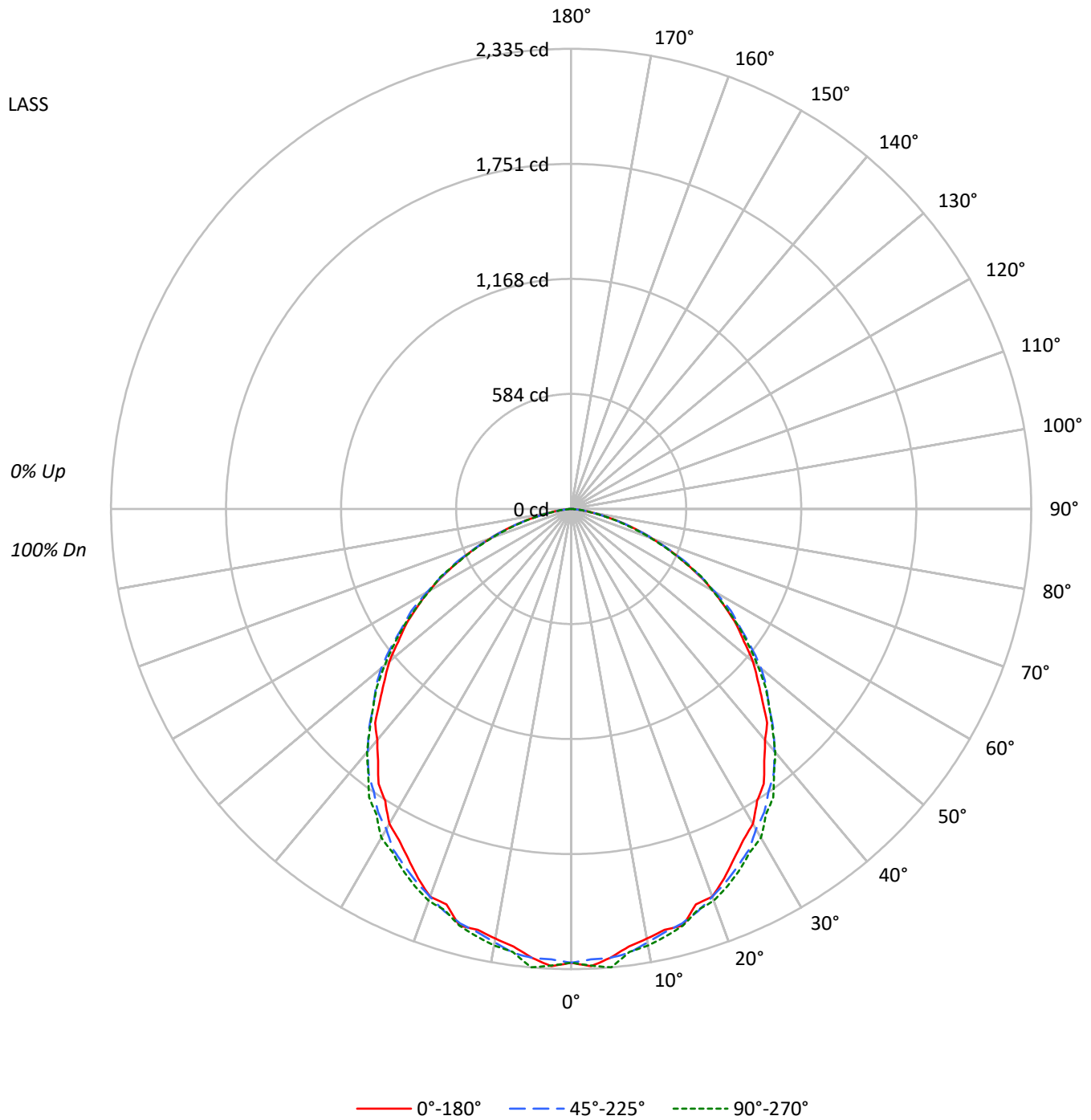
Lumens per Lamp: N/A  
Luminaire Lumens: 5802.0 lumens  
Efficiency: N/A  
Efficacy: 116.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 50  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																		
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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86									86																			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73									73																			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62									62																			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53									53																			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46									46																			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41									41																			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36									36																			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32									32																			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29									29																			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26									26																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6195	6195	6195
5°	6174	6177	6307
10°	6049	6102	6145
15°	6097	6064	6098
20°	5994	5994	6058
25°	5810	5937	6002
30°	5730	5830	5986
35°	5595	5741	5870
40°	5377	5636	5661
45°	5215	5400	5408
50°	5043	5271	5170
55°	4806	4899	4864
60°	4493	4539	4457
65°	4006	4109	3978
70°	3437	3449	3353
75°	2723	2717	2612
80°	1824	1773	1705
85°	991	982	917

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 5539 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	216.5	3.7
10°-20°	613.7	10.6
20°-30°	919.5	15.8
30°-40°	1089.8	18.8
40°-50°	1091.8	18.8
50°-60°	926.8	16.0
60°-70°	624.8	10.8
70°-80°	274.5	4.7
80°-90°	44.6	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°	1749.7	30.2
0°-40°	2839.5	48.9
0°-60°	4858.0	83.7
0°-90°	5802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5802.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2302	2302	2302	2302	2302	
5°	2286	2280	2287	2280	2335	215
15°	2188	2163	2177	2188	2189	610
25°	1957	1967	2000	2026	2022	905
35°	1703	1708	1748	1788	1787	1057
45°	1370	1396	1419	1456	1421	1060
55°	1024	1017	1044	1037	1037	911
65°	629	621	645	621	625	626
75°	262	256	261	243	251	281
85°	32	31	32	31	30	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2302.1	2302.1	2302.1	2302.1	2302.1
2.5°	2322.0	2304.5	2288.1	2307.1	2318.7
5°	2285.7	2280.4	2286.6	2279.8	2334.8
7.5°	2238.8	2259.3	2271.2	2263.7	2267.0
10°	2213.8	2206.7	2233.1	2251.6	2248.9
12.5°	2187.1	2197.8	2199.2	2219.2	2220.9
15°	2188.5	2163.3	2176.7	2187.9	2188.8
17.5°	2103.5	2130.9	2140.1	2166.0	2133.9
20°	2093.1	2073.2	2093.1	2119.6	2115.4
22.5°	2029.2	2006.9	2049.7	2073.2	2071.7
25°	1956.7	1967.4	1999.5	2025.7	2021.5
27.5°	1893.1	1905.6	1951.3	1987.3	1964.1
30°	1844.0	1837.8	1876.4	1908.5	1926.4
32.5°	1756.4	1779.0	1824.1	1855.9	1839.0
35°	1703.2	1708.2	1747.7	1788.2	1787.0
37.5°	1610.1	1633.6	1689.2	1700.5	1690.1
40°	1530.8	1554.2	1604.5	1616.7	1611.6
42.5°	1472.2	1476.4	1519.5	1533.4	1511.1
45°	1370.3	1395.8	1419.0	1455.6	1421.1
47.5°	1283.5	1295.4	1345.3	1355.1	1337.0
50°	1204.7	1208.9	1259.1	1246.9	1235.0
52.5°	1105.7	1123.3	1151.5	1149.1	1135.1
55°	1024.3	1017.4	1044.2	1037.1	1036.8
57.5°	926.5	938.4	960.4	949.1	930.9
60°	834.9	835.2	843.3	830.5	828.1
62.5°	733.0	736.5	738.3	722.6	748.1
65°	629.2	620.9	645.3	620.6	624.8
67.5°	533.8	538.0	535.6	520.2	526.1
70°	436.9	442.3	438.4	420.9	426.2
72.5°	348.4	341.8	346.0	324.0	334.1
75°	261.9	256.5	261.3	242.8	251.2
77.5°	178.3	182.5	179.5	169.7	175.4
80°	117.7	114.4	114.4	108.8	110.0
82.5°	68.7	65.4	64.5	62.7	65.4
85°	32.1	31.2	31.8	30.9	29.7
87.5°	11.6	11.9	11.9	11.3	10.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)