

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: P562813

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-80-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562813  
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-24-4-LD4-2LO-50-UNV-80-96-EDD  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

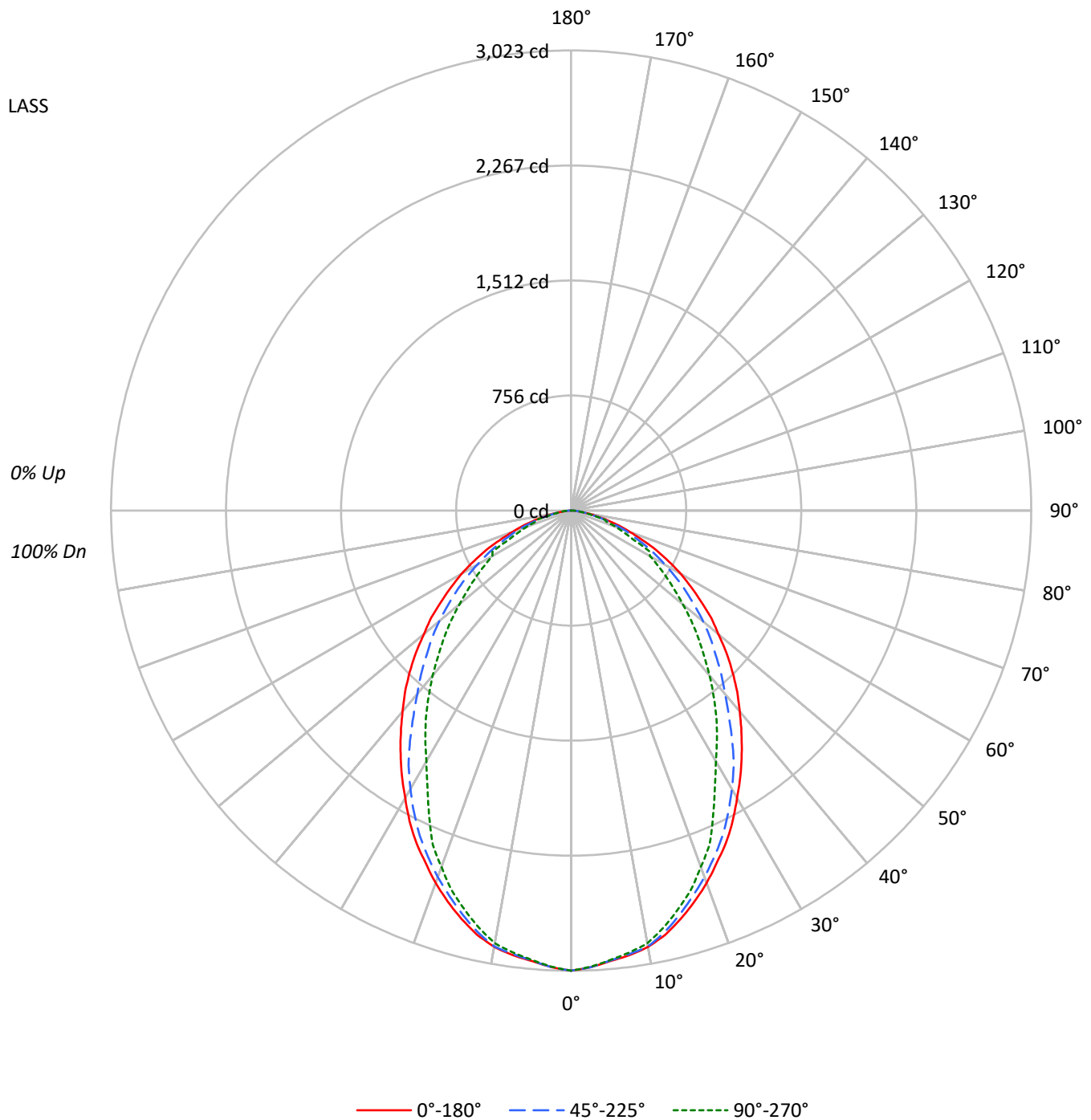
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5934.0 lumens  
Efficiency: N/A  
Efficacy: 126.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 46.8  
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





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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	4067	4067	4067
5°	4012	4007	4002
10°	3977	3972	3944
15°	3870	3831	3777
20°	3728	3668	3567
25°	3574	3497	3279
30°	3388	3279	2953
35°	3209	3031	2732
40°	3026	2762	2486
45°	2853	2553	2247
50°	2641	2370	2004
55°	2443	2148	1795
60°	2238	1918	1608
65°	1969	1680	1424
70°	1622	1471	1210
75°	1290	1127	1181
80°	866	812	758
85°	539	647	755

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2853 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	281.4	4.7
10°-20°	772.2	13.0
20°-30°	1069.1	18.0
30°-40°	1139.9	19.2
40°-50°	1040.0	17.5
50°-60°	814.7	13.7
60°-70°	531.0	8.9
70°-80°	235.3	4.0
80°-90°	50.5	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°	2122.6	35.8
0°-40°	3262.6	55.0
0°-60°	5117.2	86.2
0°-90°	5934.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5934.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3023	3023	3023	3023	3023	
5°	2970	2967	2967	2963	2963	282
15°	2778	2778	2750	2722	2712	781
25°	2408	2394	2355	2271	2208	1105
35°	1953	1939	1845	1705	1663	1221
45°	1499	1468	1342	1230	1181	1155
55°	1041	1010	916	807	765	934
65°	618	584	528	538	447	610
75°	248	231	217	206	227	266
85°	35	38	42	45	49	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3022.7	3022.7	3022.7	3022.7	3022.7
2.5°	3001.7	3001.7	3001.7	2998.2	2998.2
5°	2970.3	2966.8	2966.8	2963.3	2963.3
7.5°	2945.8	2942.3	2938.8	2935.3	2928.4
10°	2910.9	2910.9	2907.4	2889.9	2886.4
12.5°	2855.0	2851.5	2837.5	2813.0	2806.0
15°	2778.1	2778.1	2750.1	2722.2	2711.7
17.5°	2694.2	2690.7	2655.8	2627.8	2613.8
20°	2603.4	2596.4	2561.4	2516.0	2491.5
22.5°	2502.0	2502.0	2460.1	2400.7	2376.2
25°	2407.7	2393.7	2355.3	2271.4	2208.5
27.5°	2299.3	2278.4	2236.4	2117.6	2044.3
30°	2180.5	2170.1	2110.6	1956.9	1901.0
32.5°	2068.7	2051.2	1988.3	1827.6	1782.2
35°	1953.4	1939.4	1845.1	1705.3	1663.4
37.5°	1838.1	1820.6	1701.8	1590.0	1537.6
40°	1722.8	1701.8	1572.5	1471.2	1415.3
42.5°	1614.4	1586.5	1460.7	1352.4	1289.5
45°	1499.1	1467.7	1341.9	1230.0	1181.1
47.5°	1383.8	1355.8	1240.5	1125.2	1069.3
50°	1261.5	1237.0	1132.2	1016.9	957.5
52.5°	1160.2	1121.7	1020.4	905.1	856.1
55°	1041.3	1009.9	915.5	807.2	765.3
57.5°	933.0	901.6	814.2	712.9	677.9
60°	831.7	786.3	712.9	625.5	597.6
62.5°	719.9	684.9	622.0	548.6	583.6
65°	618.5	583.6	527.7	538.1	447.3
67.5°	506.7	489.2	440.3	391.4	377.4
70°	412.3	391.4	373.9	321.5	307.5
72.5°	328.5	307.5	283.1	255.1	244.6
75°	248.1	230.6	216.7	206.2	227.1
77.5°	171.2	164.2	153.8	143.3	139.8
80°	111.8	108.3	104.8	101.3	97.8
82.5°	66.4	66.4	66.4	66.4	66.4
85°	34.9	38.4	41.9	45.4	48.9
87.5°	21.0	21.0	24.5	28.0	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)