

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: P563005

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P563005  
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-LD4-2STD-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**

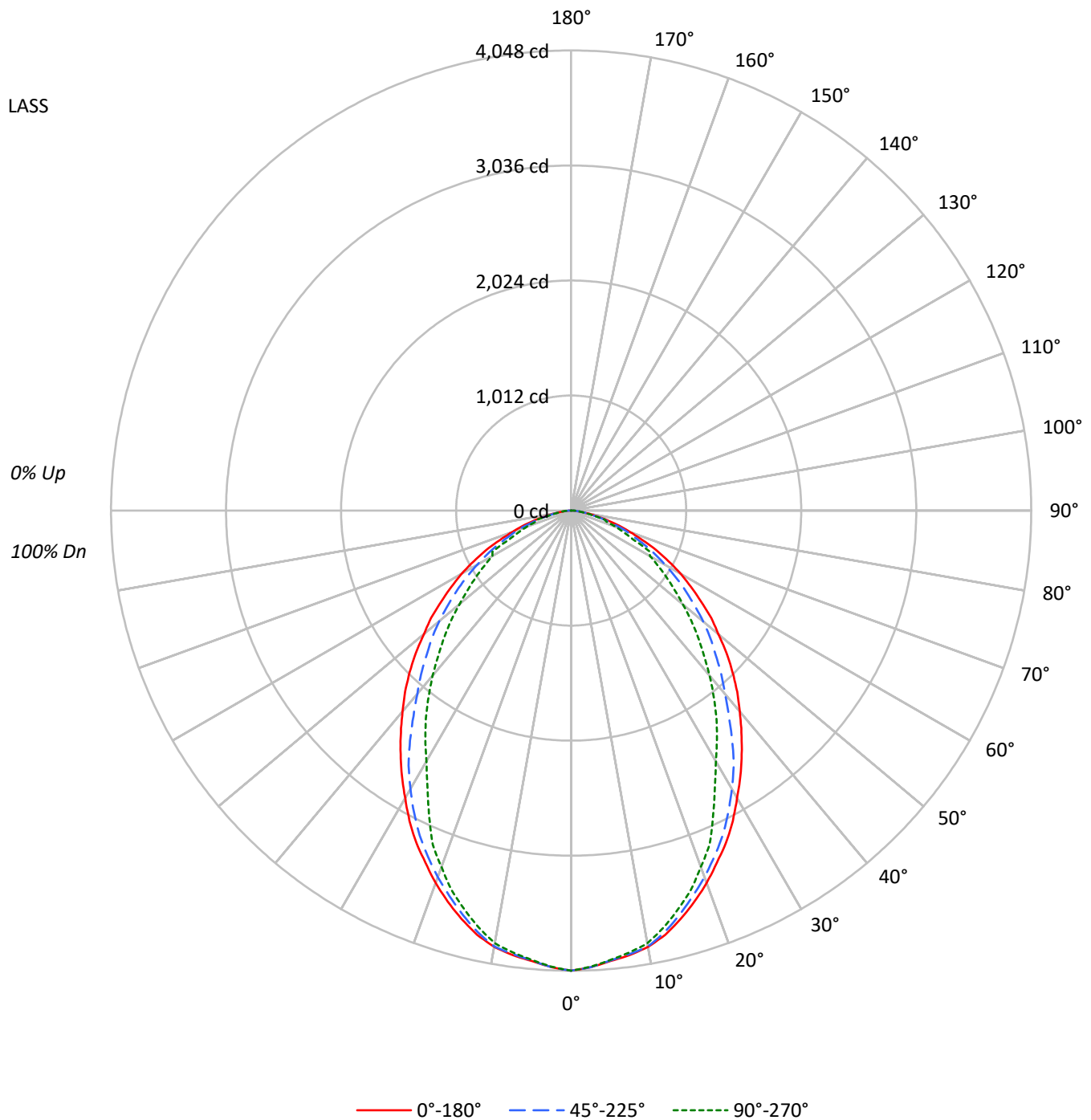
Lumens per Lamp: N/A  
Luminaire Lumens: 7946.0 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5446	5446	5446
5°	5372	5366	5359
10°	5325	5319	5281
15°	5182	5130	5058
20°	4992	4911	4777
25°	4786	4682	4390
30°	4536	4391	3955
35°	4296	4058	3658
40°	4052	3698	3329
45°	3820	3419	3009
50°	3536	3174	2684
55°	3271	2876	2404
60°	2997	2569	2153
65°	2637	2250	1907
70°	2172	1970	1620
75°	1727	1508	1581
80°	1160	1088	1015
85°	722	868	1011

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3820 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	376.8	4.7
10°-20°	1034.0	13.0
20°-30°	1431.5	18.0
30°-40°	1526.4	19.2
40°-50°	1392.6	17.5
50°-60°	1091.0	13.7
60°-70°	711.0	8.9
70°-80°	315.0	4.0
80°-90°	67.6	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°	2842.3	35.8
0°-40°	4368.8	55.0
0°-60°	6852.3	86.2
0°-90°	7946.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7946.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4048	4048	4048	4048	4048	
5°	3977	3973	3973	3968	3968	378
15°	3720	3720	3683	3645	3631	1046
25°	3224	3205	3154	3042	2957	1480
35°	2616	2597	2471	2284	2227	1635
45°	2007	1965	1797	1647	1582	1546
55°	1394	1352	1226	1081	1025	1251
65°	828	781	707	721	599	816
75°	332	309	290	276	304	356
85°	47	52	56	61	66	65
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4047.6	4047.6	4047.6	4047.6	4047.6
2.5°	4019.5	4019.5	4019.5	4014.8	4014.8
5°	3977.4	3972.7	3972.7	3968.0	3968.0
7.5°	3944.6	3940.0	3935.3	3930.6	3921.2
10°	3897.8	3897.8	3893.2	3869.8	3865.1
12.5°	3823.0	3818.3	3799.6	3766.8	3757.5
15°	3720.0	3720.0	3682.6	3645.2	3631.1
17.5°	3607.7	3603.1	3556.3	3518.8	3500.1
20°	3486.1	3476.7	3429.9	3369.1	3336.3
22.5°	3350.4	3350.4	3294.2	3214.7	3181.9
25°	3224.0	3205.3	3153.8	3041.5	2957.3
27.5°	3079.0	3050.9	2994.7	2835.7	2737.4
30°	2919.9	2905.8	2826.3	2620.4	2545.5
32.5°	2770.1	2746.7	2662.5	2447.3	2386.4
35°	2615.7	2597.0	2470.7	2283.5	2227.3
37.5°	2461.3	2437.9	2278.8	2129.1	2058.9
40°	2306.9	2278.8	2105.7	1970.0	1895.1
42.5°	2161.8	2124.4	1955.9	1810.9	1726.7
45°	2007.4	1965.3	1796.8	1647.1	1581.6
47.5°	1853.0	1815.6	1661.1	1506.7	1431.9
50°	1689.2	1656.5	1516.1	1361.7	1282.1
52.5°	1553.5	1502.1	1366.4	1211.9	1146.4
55°	1394.4	1352.3	1226.0	1080.9	1024.8
57.5°	1249.4	1207.3	1090.3	954.6	907.8
60°	1113.7	1052.8	954.6	837.6	800.2
62.5°	963.9	917.1	832.9	734.6	781.4
65°	828.2	781.4	706.6	720.6	598.9
67.5°	678.5	655.1	589.6	524.1	505.4
70°	552.2	524.1	500.7	430.5	411.8
72.5°	439.9	411.8	379.0	341.6	327.6
75°	332.2	308.8	290.1	276.1	304.2
77.5°	229.3	219.9	205.9	191.9	187.2
80°	149.7	145.1	140.4	135.7	131.0
82.5°	88.9	88.9	88.9	88.9	88.9
85°	46.8	51.5	56.2	60.8	65.5
87.5°	28.1	28.1	32.8	37.4	42.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)