

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: P559377

Luminaire Tested: FSR-12-1-LD4-2LO-50-UNV-82-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559377  
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-LD4-2LO-50-UNV-82-84-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

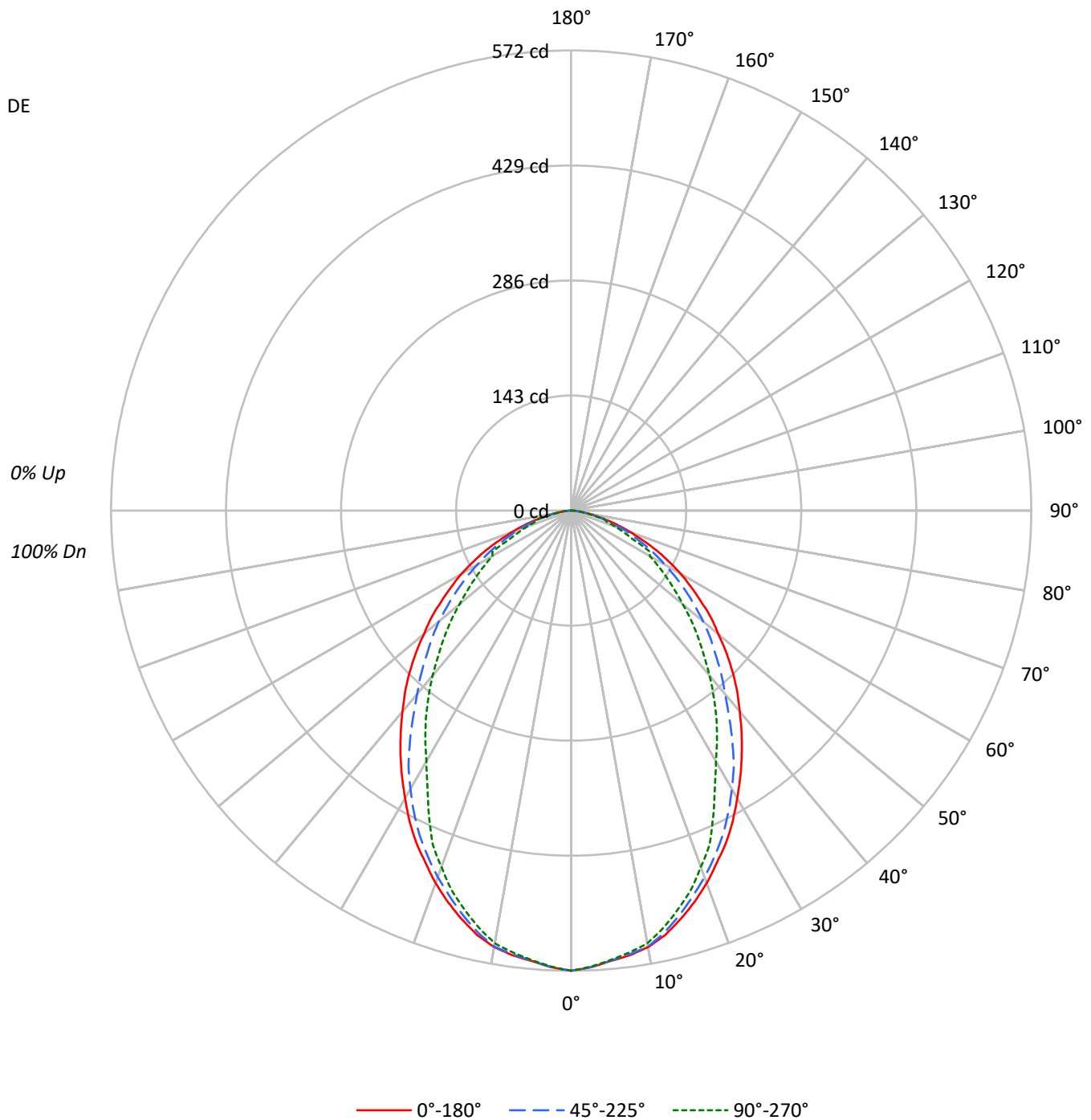
Lumens per Lamp: N/A  
Luminaire Lumens: 1123.0 lumens  
Efficiency: N/A  
Efficacy: 96.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	6157	6157	6157
5°	6074	6067	6059
10°	6021	6014	5970
15°	5858	5800	5719
20°	5644	5552	5401
25°	5411	5293	4964
30°	5129	4964	4472
35°	4858	4589	4137
40°	4581	4182	3763
45°	4319	3865	3402
50°	3997	3589	3034
55°	3699	3252	2717
60°	3388	2904	2435
65°	2982	2544	2155
70°	2455	2228	1832
75°	1955	1705	1788
80°	1314	1227	1147
85°	815	976	1149

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4319 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.2	4.7
10°-20°	146.1	13.0
20°-30°	202.3	18.0
30°-40°	215.7	19.2
40°-50°	196.8	17.5
50°-60°	154.2	13.7
60°-70°	100.5	8.9
70°-80°	44.5	4.0
80°-90°	9.6	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°	401.7	35.8
0°-40°	617.4	55.0
0°-60°	968.4	86.2
0°-90°	1123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1123.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	572	572	572	572	572	
5°	562	562	562	561	561	53
15°	526	526	520	515	513	148
25°	456	453	446	430	418	209
35°	370	367	349	323	315	231
45°	284	278	254	233	224	219
55°	197	191	173	153	145	177
65°	117	110	100	102	85	115
75°	47	44	41	39	43	50
85°	7	7	8	9	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	572.0	572.0	572.0	572.0	572.0
2.5°	568.1	568.1	568.1	567.4	567.4
5°	562.1	561.5	561.5	560.8	560.8
7.5°	557.5	556.8	556.2	555.5	554.2
10°	550.9	550.9	550.2	546.9	546.2
12.5°	540.3	539.6	537.0	532.4	531.0
15°	525.7	525.7	520.5	515.2	513.2
17.5°	509.9	509.2	502.6	497.3	494.7
20°	492.7	491.4	484.7	476.1	471.5
22.5°	473.5	473.5	465.6	454.3	449.7
25°	455.6	453.0	445.7	429.9	418.0
27.5°	435.1	431.2	423.2	400.8	386.9
30°	412.7	410.7	399.4	370.3	359.8
32.5°	391.5	388.2	376.3	345.9	337.3
35°	369.7	367.0	349.2	322.7	314.8
37.5°	347.9	344.5	322.1	300.9	291.0
40°	326.0	322.1	297.6	278.4	267.8
42.5°	305.5	300.2	276.4	255.9	244.0
45°	283.7	277.8	253.9	232.8	223.5
47.5°	261.9	256.6	234.8	212.9	202.4
50°	238.7	234.1	214.3	192.4	181.2
52.5°	219.6	212.3	193.1	171.3	162.0
55°	197.1	191.1	173.3	152.8	144.8
57.5°	176.6	170.6	154.1	134.9	128.3
60°	157.4	148.8	134.9	118.4	113.1
62.5°	136.2	129.6	117.7	103.8	110.4
65°	117.1	110.4	99.9	101.8	84.6
67.5°	95.9	92.6	83.3	74.1	71.4
70°	78.0	74.1	70.8	60.8	58.2
72.5°	62.2	58.2	53.6	48.3	46.3
75°	47.0	43.6	41.0	39.0	43.0
77.5°	32.4	31.1	29.1	27.1	26.5
80°	21.2	20.5	19.8	19.2	18.5
82.5°	12.6	12.6	12.6	12.6	12.6
85°	6.6	7.3	7.9	8.6	9.3
87.5°	4.0	4.0	4.6	5.3	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)