

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: P559513

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-82-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559513  
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-LD4-2STD-40-UNV-82-88-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

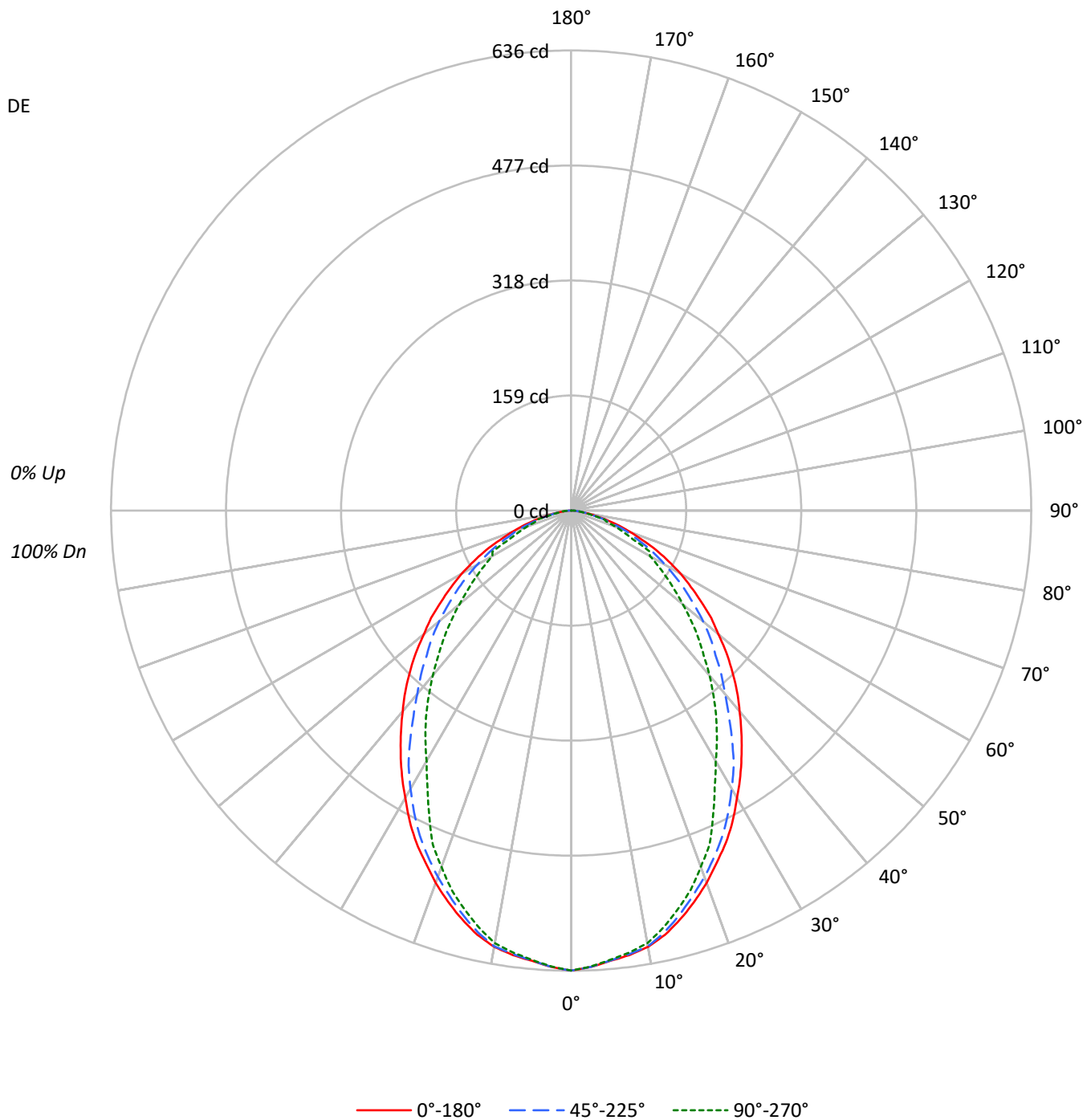
Lumens per Lamp: N/A  
Luminaire Lumens: 1248.0 lumens  
Efficiency: N/A  
Efficacy: 75.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P559513

CATALOG NUMBER: FSR-12-1-LD4-2STD-40-UNV-82-88-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P559513

CATALOG NUMBER: FSR-12-1-LD4-2STD-40-UNV-82-88-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	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°	6843	6843	6843
5°	6750	6742	6734
10°	6691	6684	6636
15°	6511	6445	6355
20°	6271	6171	6002
25°	6014	5883	5517
30°	5700	5517	4969
35°	5398	5098	4596
40°	5091	4647	4182
45°	4800	4296	3781
50°	4443	3987	3373
55°	4110	3614	3019
60°	3765	3227	2706
65°	3314	2827	2397
70°	2729	2474	2036
75°	2171	1896	1988
80°	1457	1364	1277
85°	902	1087	1272

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4800 cd/sqm



TEST NUMBER: P559513

CATALOG NUMBER: FSR-12-1-LD4-2STD-40-UNV-82-88-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.2	4.7
10°-20°	162.4	13.0
20°-30°	224.8	18.0
30°-40°	239.7	19.2
40°-50°	218.7	17.5
50°-60°	171.3	13.7
60°-70°	111.7	8.9
70°-80°	49.5	4.0
80°-90°	10.6	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°	446.4	35.8
0°-40°	686.2	55.0
0°-60°	1076.2	86.2
0°-90°	1248.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1248.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	636	636	636	636	636	
5°	625	624	624	623	623	59
15°	584	584	578	572	570	164
25°	506	503	495	478	464	232
35°	411	408	388	359	350	257
45°	315	309	282	259	248	243
55°	219	212	193	170	161	196
65°	130	123	111	113	94	128
75°	52	48	46	43	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



TEST NUMBER: P559513

CATALOG NUMBER: FSR-12-1-LD4-2STD-40-UNV-82-88-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	635.7	635.7	635.7	635.7	635.7
2.5°	631.3	631.3	631.3	630.6	630.6
5°	624.7	624.0	624.0	623.2	623.2
7.5°	619.5	618.8	618.1	617.3	615.9
10°	612.2	612.2	611.5	607.8	607.1
12.5°	600.4	599.7	596.8	591.6	590.1
15°	584.3	584.3	578.4	572.5	570.3
17.5°	566.6	565.9	558.5	552.7	549.7
20°	547.5	546.1	538.7	529.1	524.0
22.5°	526.2	526.2	517.4	504.9	499.8
25°	506.4	503.4	495.3	477.7	464.5
27.5°	483.6	479.2	470.4	445.4	429.9
30°	458.6	456.4	443.9	411.6	399.8
32.5°	435.1	431.4	418.2	384.4	374.8
35°	410.8	407.9	388.0	358.6	349.8
37.5°	386.6	382.9	357.9	334.4	323.4
40°	362.3	357.9	330.7	309.4	297.6
42.5°	339.5	333.7	307.2	284.4	271.2
45°	315.3	308.7	282.2	258.7	248.4
47.5°	291.0	285.2	260.9	236.6	224.9
50°	265.3	260.2	238.1	213.9	201.4
52.5°	244.0	235.9	214.6	190.3	180.1
55°	219.0	212.4	192.6	169.8	160.9
57.5°	196.2	189.6	171.2	149.9	142.6
60°	174.9	165.4	149.9	131.6	125.7
62.5°	151.4	144.0	130.8	115.4	122.7
65°	130.1	122.7	111.0	113.2	94.1
67.5°	106.6	102.9	92.6	82.3	79.4
70°	86.7	82.3	78.6	67.6	64.7
72.5°	69.1	64.7	59.5	53.6	51.4
75°	52.2	48.5	45.6	43.4	47.8
77.5°	36.0	34.5	32.3	30.1	29.4
80°	23.5	22.8	22.0	21.3	20.6
82.5°	14.0	14.0	14.0	14.0	14.0
85°	7.3	8.1	8.8	9.6	10.3
87.5°	4.4	4.4	5.1	5.9	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)