

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: P558812

Luminaire Tested: FSR-12-1-LD4-1LO-50-UNV-82-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558812  
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-LD4-1LO-50-UNV-82-96-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

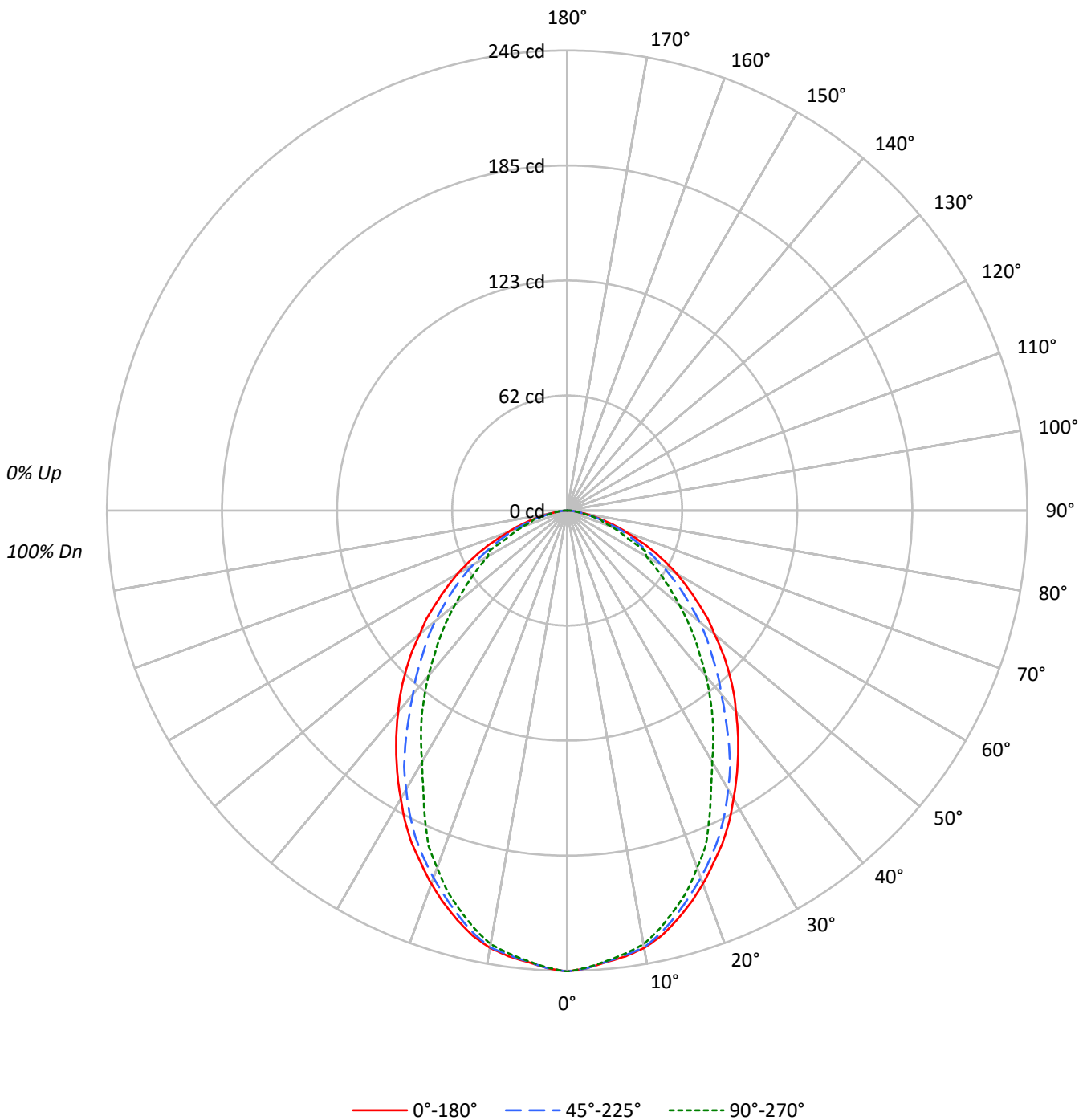
Lumens per Lamp: N/A  
Luminaire Lumens: 484.0 lumens  
Efficiency: N/A  
Efficacy: 83.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P558812

CATALOG NUMBER: FSR-12-1-LD4-1LO-50-UNV-82-96-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P558812

CATALOG NUMBER: FSR-12-1-LD4-1LO-50-UNV-82-96-EDD-90

**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	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	39	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°	2653	2653	2653
5°	2618	2615	2612
10°	2595	2591	2573
15°	2525	2500	2465
20°	2432	2393	2328
25°	2333	2282	2139
30°	2211	2140	1928
35°	2093	1978	1783
40°	1974	1803	1622
45°	1862	1665	1466
50°	1723	1546	1308
55°	1593	1402	1171
60°	1460	1251	1048
65°	1284	1095	930
70°	1057	960	790
75°	840	736	769
80°	564	533	496
85°	358	420	494

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1862 cd/sqm



TEST NUMBER: P558812

CATALOG NUMBER: FSR-12-1-LD4-1LO-50-UNV-82-96-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.9	4.7
10°-20°	63.0	13.0
20°-30°	87.2	18.0
30°-40°	93.0	19.2
40°-50°	84.8	17.5
50°-60°	66.4	13.7
60°-70°	43.3	8.9
70°-80°	19.2	4.0
80°-90°	4.1	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°	173.1	35.8
0°-40°	266.1	55.0
0°-60°	417.4	86.2
0°-90°	484.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	484.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	246	246	246	246	246	
5°	242	242	242	242	242	23
15°	227	227	224	222	221	64
25°	196	195	192	185	180	90
35°	159	158	150	139	136	100
45°	122	120	109	100	96	94
55°	85	82	75	66	62	76
65°	50	48	43	44	36	50
75°	20	19	18	17	18	22
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



TEST NUMBER: P558812

CATALOG NUMBER: FSR-12-1-LD4-1LO-50-UNV-82-96-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	246.5	246.5	246.5	246.5	246.5
2.5°	244.8	244.8	244.8	244.5	244.5
5°	242.3	242.0	242.0	241.7	241.7
7.5°	240.3	240.0	239.7	239.4	238.8
10°	237.4	237.4	237.1	235.7	235.4
12.5°	232.9	232.6	231.4	229.4	228.9
15°	226.6	226.6	224.3	222.0	221.2
17.5°	219.8	219.5	216.6	214.3	213.2
20°	212.3	211.8	208.9	205.2	203.2
22.5°	204.1	204.1	200.7	195.8	193.8
25°	196.4	195.2	192.1	185.3	180.1
27.5°	187.5	185.8	182.4	172.7	166.7
30°	177.9	177.0	172.2	159.6	155.1
32.5°	168.7	167.3	162.2	149.1	145.4
35°	159.3	158.2	150.5	139.1	135.7
37.5°	149.9	148.5	138.8	129.7	125.4
40°	140.5	138.8	128.3	120.0	115.4
42.5°	131.7	129.4	119.1	110.3	105.2
45°	122.3	119.7	109.4	100.3	96.3
47.5°	112.9	110.6	101.2	91.8	87.2
50°	102.9	100.9	92.3	82.9	78.1
52.5°	94.6	91.5	83.2	73.8	69.8
55°	84.9	82.4	74.7	65.8	62.4
57.5°	76.1	73.5	66.4	58.1	55.3
60°	67.8	64.1	58.1	51.0	48.7
62.5°	58.7	55.9	50.7	44.7	47.6
65°	50.4	47.6	43.0	43.9	36.5
67.5°	41.3	39.9	35.9	31.9	30.8
70°	33.6	31.9	30.5	26.2	25.1
72.5°	26.8	25.1	23.1	20.8	20.0
75°	20.2	18.8	17.7	16.8	18.5
77.5°	14.0	13.4	12.5	11.7	11.4
80°	9.1	8.8	8.6	8.3	8.0
82.5°	5.4	5.4	5.4	5.4	5.4
85°	2.9	3.1	3.4	3.7	4.0
87.5°	1.7	1.7	2.0	2.3	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)