

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: P558964

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-80-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558964  
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-LD4-1STD-50-UNV-80-86-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

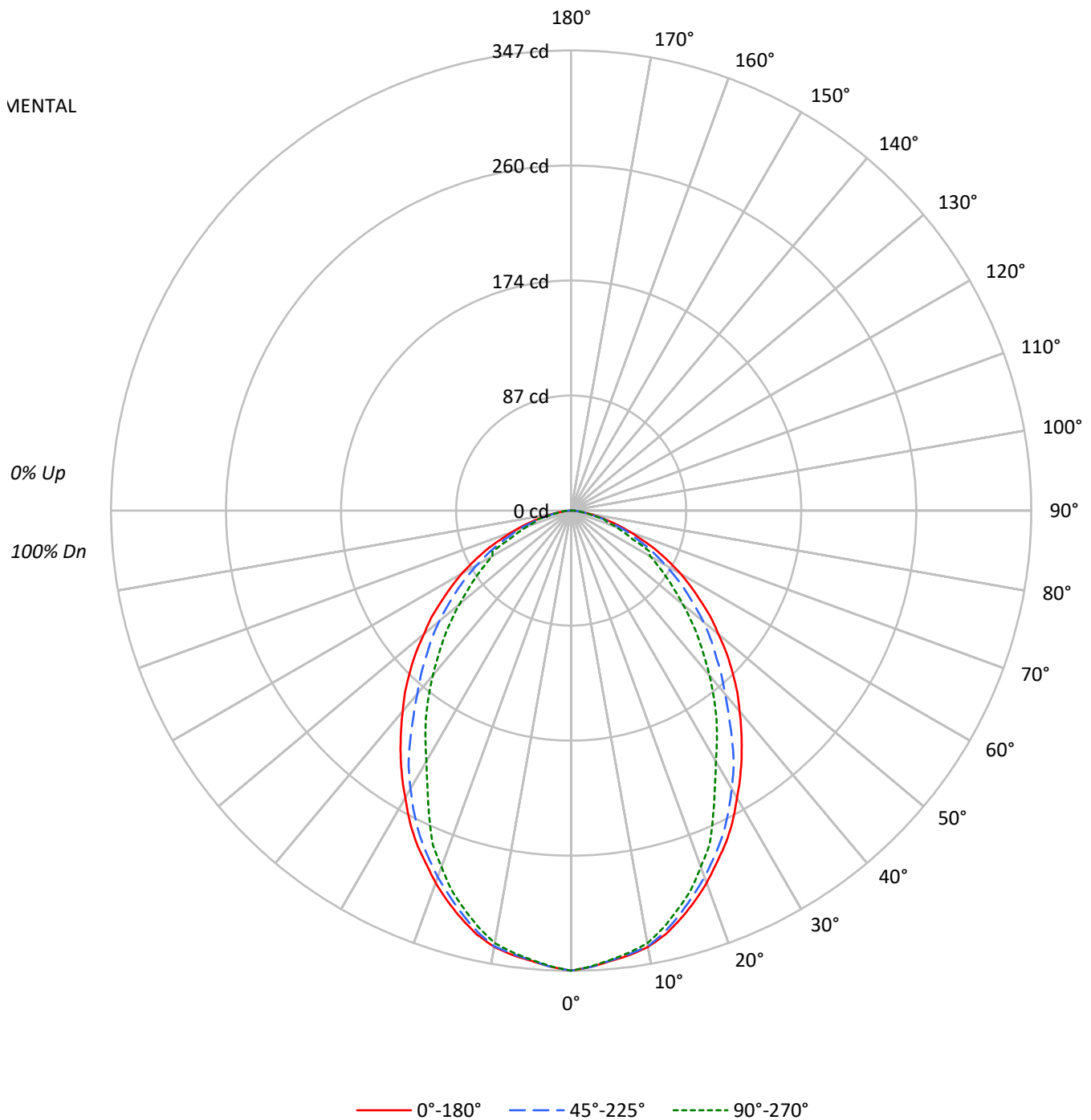
Lumens per Lamp: N/A  
Luminaire Lumens: 681.0 lumens  
Efficiency: N/A  
Efficacy: 82.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P558964

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-80-86-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P558964

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-80-86-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	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°	3734	3734	3734
5°	3683	3679	3675
10°	3652	3647	3621
15°	3553	3517	3468
20°	3423	3368	3275
25°	3282	3210	3011
30°	3110	3010	2712
35°	2946	2782	2508
40°	2778	2536	2282
45°	2618	2344	2063
50°	2425	2175	1840
55°	2243	1972	1648
60°	2054	1761	1477
65°	1808	1543	1307
70°	1489	1350	1111
75°	1185	1036	1085
80°	793	744	694
85°	494	593	692

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2618 cd/sqm



TEST NUMBER: P558964

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-80-86-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.3	4.7
10°-20°	88.6	13.0
20°-30°	122.7	18.0
30°-40°	130.8	19.2
40°-50°	119.3	17.5
50°-60°	93.5	13.7
60°-70°	60.9	8.9
70°-80°	27.0	4.0
80°-90°	5.8	0.8
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°	243.6	35.8
0°-40°	374.4	55.0
0°-60°	587.3	86.2
0°-90°	681.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	681.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	347	347	347	347	347	
5°	341	340	340	340	340	32
15°	319	319	316	312	311	90
25°	276	275	270	261	254	127
35°	224	223	212	196	191	140
45°	172	168	154	141	136	133
55°	120	116	105	93	88	107
65°	71	67	61	62	51	70
75°	28	26	25	24	26	31
85°	4	4	5	5	6	6
90°	0	0	0	0	0	

TEST NUMBER: P558964

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-80-86-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	346.9	346.9	346.9	346.9	346.9
2.5°	344.5	344.5	344.5	344.1	344.1
5°	340.9	340.5	340.5	340.1	340.1
7.5°	338.1	337.7	337.3	336.9	336.1
10°	334.1	334.1	333.7	331.7	331.3
12.5°	327.6	327.2	325.6	322.8	322.0
15°	318.8	318.8	315.6	312.4	311.2
17.5°	309.2	308.8	304.8	301.6	300.0
20°	298.8	298.0	294.0	288.7	285.9
22.5°	287.1	287.1	282.3	275.5	272.7
25°	276.3	274.7	270.3	260.7	253.5
27.5°	263.9	261.5	256.7	243.0	234.6
30°	250.2	249.0	242.2	224.6	218.2
32.5°	237.4	235.4	228.2	209.7	204.5
35°	224.2	222.6	211.7	195.7	190.9
37.5°	210.9	208.9	195.3	182.5	176.5
40°	197.7	195.3	180.5	168.8	162.4
42.5°	185.3	182.1	167.6	155.2	148.0
45°	172.0	168.4	154.0	141.2	135.5
47.5°	158.8	155.6	142.4	129.1	122.7
50°	144.8	142.0	129.9	116.7	109.9
52.5°	133.1	128.7	117.1	103.9	98.3
55°	119.5	115.9	105.1	92.6	87.8
57.5°	107.1	103.5	93.4	81.8	77.8
60°	95.4	90.2	81.8	71.8	68.6
62.5°	82.6	78.6	71.4	63.0	67.0
65°	71.0	67.0	60.6	61.8	51.3
67.5°	58.1	56.1	50.5	44.9	43.3
70°	47.3	44.9	42.9	36.9	35.3
72.5°	37.7	35.3	32.5	29.3	28.1
75°	28.5	26.5	24.9	23.7	26.1
77.5°	19.7	18.8	17.6	16.4	16.0
80°	12.8	12.4	12.0	11.6	11.2
82.5°	7.6	7.6	7.6	7.6	7.6
85°	4.0	4.4	4.8	5.2	5.6
87.5°	2.4	2.4	2.8	3.2	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)