

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: P558820

Luminaire Tested: FSR-12-1-LD4-1LO-50-UNV-93-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558820  
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-93-86-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

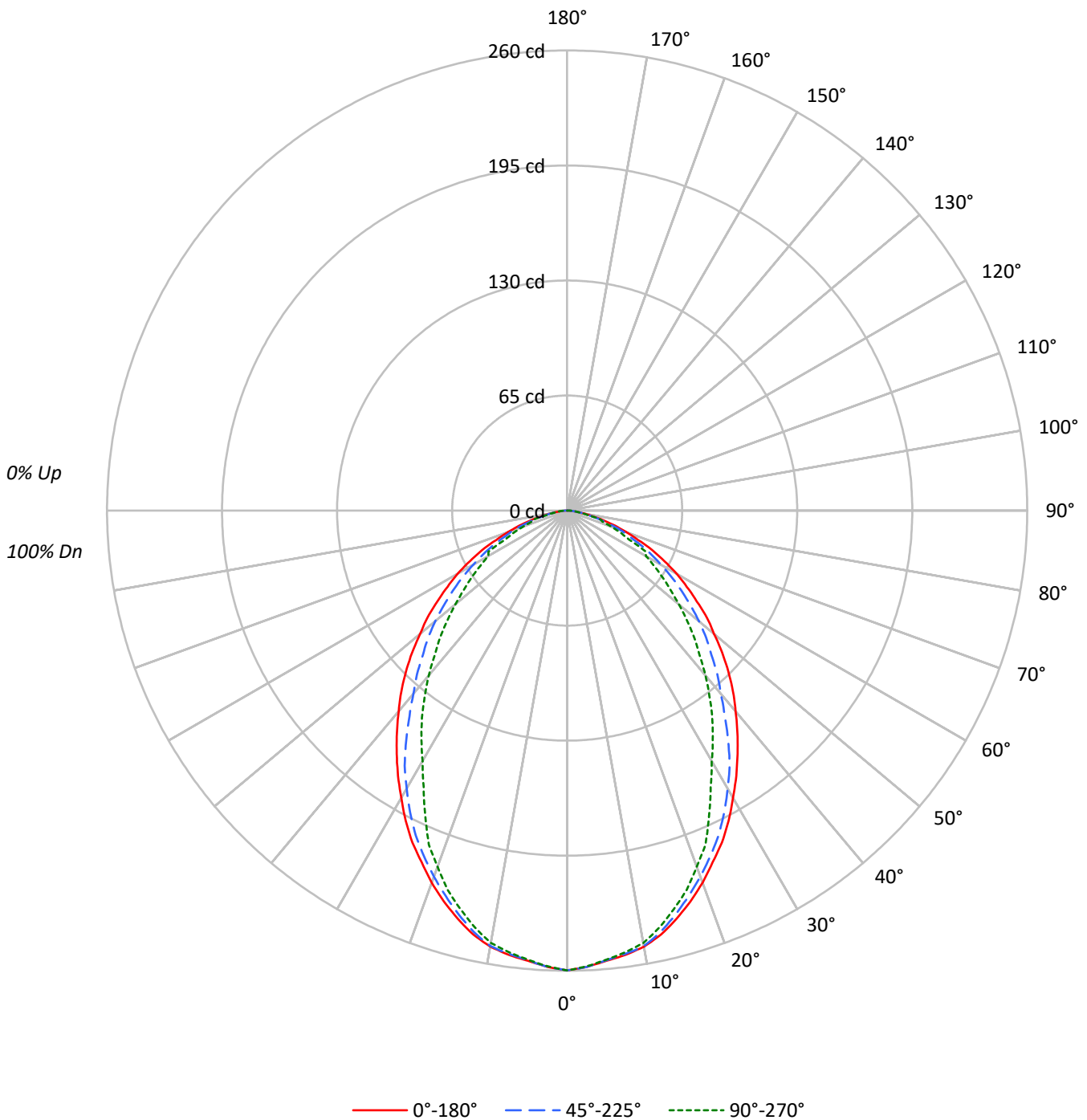
Lumens per Lamp: N/A  
Luminaire Lumens: 510.0 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



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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	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°	2796	2796	2796
5°	2759	2755	2752
10°	2735	2731	2712
15°	2661	2634	2598
20°	2562	2521	2452
25°	2457	2404	2254
30°	2329	2255	2031
35°	2206	2084	1879
40°	2081	1898	1709
45°	1961	1755	1545
50°	1815	1629	1378
55°	1680	1477	1235
60°	1539	1320	1107
65°	1355	1156	978
70°	1114	1010	831
75°	886	774	811
80°	595	558	521
85°	371	445	519

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1961 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.2	4.7
10°-20°	66.4	13.0
20°-30°	91.9	18.0
30°-40°	98.0	19.2
40°-50°	89.4	17.5
50°-60°	70.0	13.7
60°-70°	45.6	9.0
70°-80°	20.2	4.0
80°-90°	4.3	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
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0°-30°	182.4	35.8
0°-40°	280.4	55.0
0°-60°	439.8	86.2
0°-90°	510.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	510.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	260	260	260	260	260	
5°	255	255	255	255	255	24
15°	239	239	236	234	233	67
25°	207	206	202	195	190	95
35°	168	167	159	147	143	105
45°	129	126	115	106	102	99
55°	90	87	79	69	66	80
65°	53	50	45	46	38	52
75°	21	20	19	18	20	23
85°	3	3	4	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	259.8	259.8	259.8	259.8	259.8
2.5°	258.0	258.0	258.0	257.7	257.7
5°	255.3	255.0	255.0	254.7	254.7
7.5°	253.2	252.9	252.6	252.3	251.7
10°	250.2	250.2	249.9	248.4	248.1
12.5°	245.4	245.1	243.9	241.8	241.2
15°	238.8	238.8	236.4	234.0	233.1
17.5°	231.6	231.3	228.3	225.8	224.6
20°	223.7	223.1	220.1	216.2	214.1
22.5°	215.0	215.0	211.4	206.3	204.2
25°	206.9	205.7	202.4	195.2	189.8
27.5°	197.6	195.8	192.2	182.0	175.7
30°	187.4	186.5	181.4	168.2	163.4
32.5°	177.8	176.3	170.9	157.1	153.2
35°	167.9	166.7	158.6	146.6	143.0
37.5°	158.0	156.5	146.3	136.7	132.1
40°	148.1	146.3	135.1	126.4	121.6
42.5°	138.8	136.4	125.5	116.2	110.8
45°	128.8	126.1	115.3	105.7	101.5
47.5°	118.9	116.5	106.6	96.7	91.9
50°	108.4	106.3	97.3	87.4	82.3
52.5°	99.7	96.4	87.7	77.8	73.6
55°	89.5	86.8	78.7	69.4	65.8
57.5°	80.2	77.5	70.0	61.3	58.3
60°	71.5	67.6	61.3	53.8	51.4
62.5°	61.9	58.9	53.5	47.2	50.2
65°	53.2	50.2	45.4	46.3	38.4
67.5°	43.5	42.0	37.8	33.6	32.4
70°	35.4	33.6	32.1	27.6	26.4
72.5°	28.2	26.4	24.3	21.9	21.0
75°	21.3	19.8	18.6	17.7	19.5
77.5°	14.7	14.1	13.2	12.3	12.0
80°	9.6	9.3	9.0	8.7	8.4
82.5°	5.7	5.7	5.7	5.7	5.7
85°	3.0	3.3	3.6	3.9	4.2
87.5°	1.8	1.8	2.1	2.4	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)