

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: P559015

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559015  
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-93-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

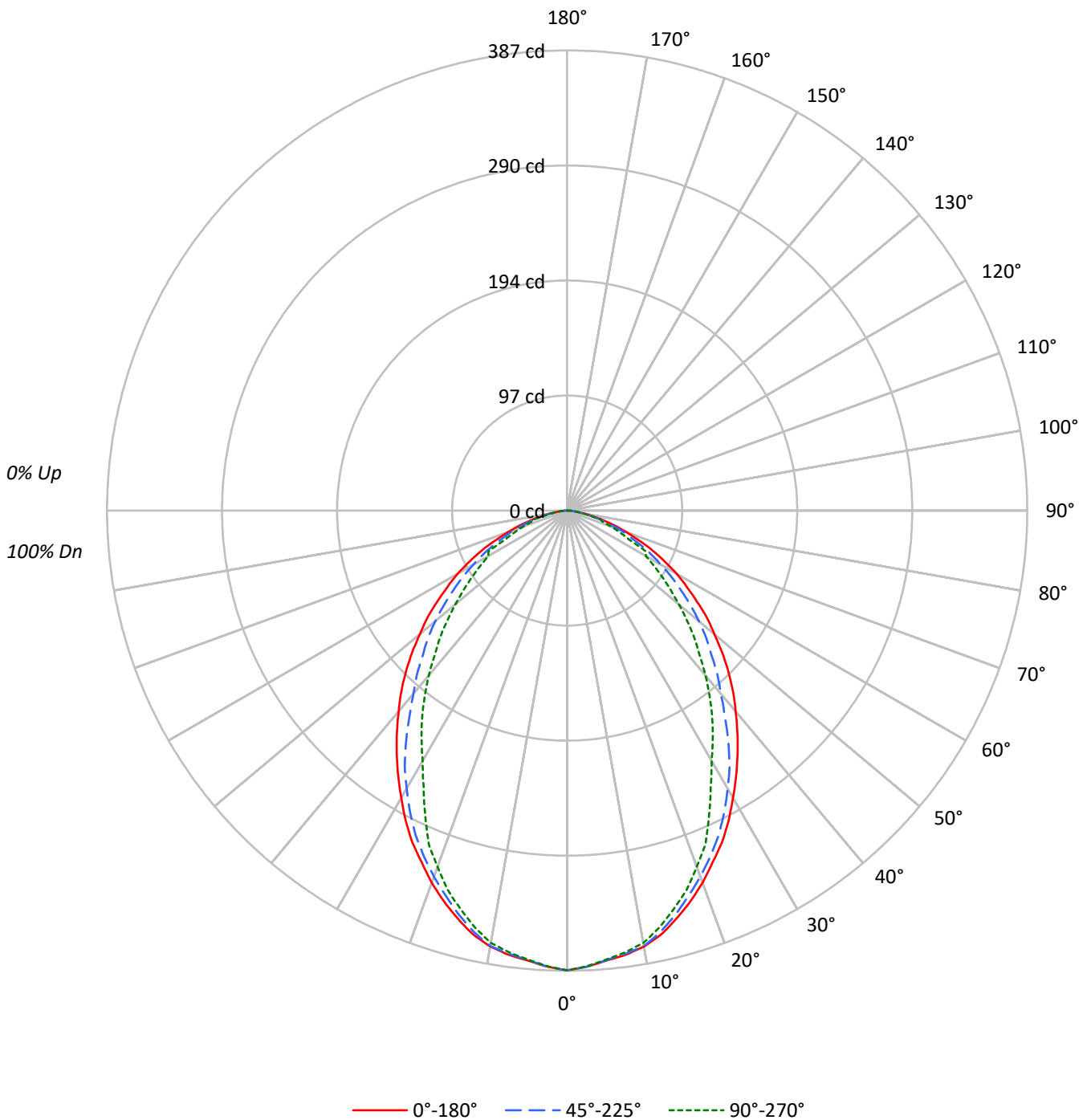
Lumens per Lamp: N/A  
Luminaire Lumens: 759.0 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



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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	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°	4161	4161	4161
5°	4105	4101	4095
10°	4069	4065	4035
15°	3959	3920	3865
20°	3814	3753	3651
25°	3658	3578	3355
30°	3466	3356	3022
35°	3284	3101	2796
40°	3097	2826	2543
45°	2918	2612	2300
50°	2703	2425	2051
55°	2500	2198	1837
60°	2291	1963	1645
65°	2015	1719	1457
70°	1659	1504	1237
75°	1318	1152	1210
80°	886	831	775
85°	556	667	778

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2918 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.0	4.7
10°-20°	98.8	13.0
20°-30°	136.7	18.0
30°-40°	145.8	19.2
40°-50°	133.0	17.5
50°-60°	104.2	13.7
60°-70°	67.9	8.9
70°-80°	30.1	4.0
80°-90°	6.5	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°	271.5	35.8
0°-40°	417.3	55.0
0°-60°	654.5	86.2
0°-90°	759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	759.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	387	387	387	387	387	
5°	380	380	380	379	379	36
15°	355	355	352	348	347	100
25°	308	306	301	290	282	141
35°	250	248	236	218	213	156
45°	192	188	172	157	151	148
55°	133	129	117	103	98	119
65°	79	75	68	69	57	78
75°	32	30	28	26	29	34
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	386.6	386.6	386.6	386.6	386.6
2.5°	383.9	383.9	383.9	383.5	383.5
5°	379.9	379.5	379.5	379.0	379.0
7.5°	376.8	376.3	375.9	375.5	374.6
10°	372.3	372.3	371.9	369.6	369.2
12.5°	365.2	364.7	362.9	359.8	358.9
15°	355.3	355.3	351.8	348.2	346.8
17.5°	344.6	344.2	339.7	336.1	334.3
20°	333.0	332.1	327.6	321.8	318.7
22.5°	320.0	320.0	314.7	307.1	303.9
25°	308.0	306.2	301.3	290.5	282.5
27.5°	294.1	291.4	286.1	270.9	261.5
30°	278.9	277.6	270.0	250.3	243.1
32.5°	264.6	262.4	254.3	233.8	228.0
35°	249.9	248.1	236.0	218.1	212.8
37.5°	235.1	232.9	217.7	203.4	196.7
40°	220.4	217.7	201.1	188.2	181.0
42.5°	206.5	202.9	186.8	173.0	164.9
45°	191.7	187.7	171.6	157.3	151.1
47.5°	177.0	173.4	158.7	143.9	136.8
50°	161.4	158.2	144.8	130.1	122.5
52.5°	148.4	143.5	130.5	115.8	109.5
55°	133.2	129.2	117.1	103.2	97.9
57.5°	119.3	115.3	104.1	91.2	86.7
60°	106.4	100.6	91.2	80.0	76.4
62.5°	92.1	87.6	79.6	70.2	74.6
65°	79.1	74.6	67.5	68.8	57.2
67.5°	64.8	62.6	56.3	50.1	48.3
70°	52.7	50.1	47.8	41.1	39.3
72.5°	42.0	39.3	36.2	32.6	31.3
75°	31.7	29.5	27.7	26.4	29.1
77.5°	21.9	21.0	19.7	18.3	17.9
80°	14.3	13.9	13.4	13.0	12.5
82.5°	8.5	8.5	8.5	8.5	8.5
85°	4.5	4.9	5.4	5.8	6.3
87.5°	2.7	2.7	3.1	3.6	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)