

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: P558896

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558896  
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-40-UNV-80-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

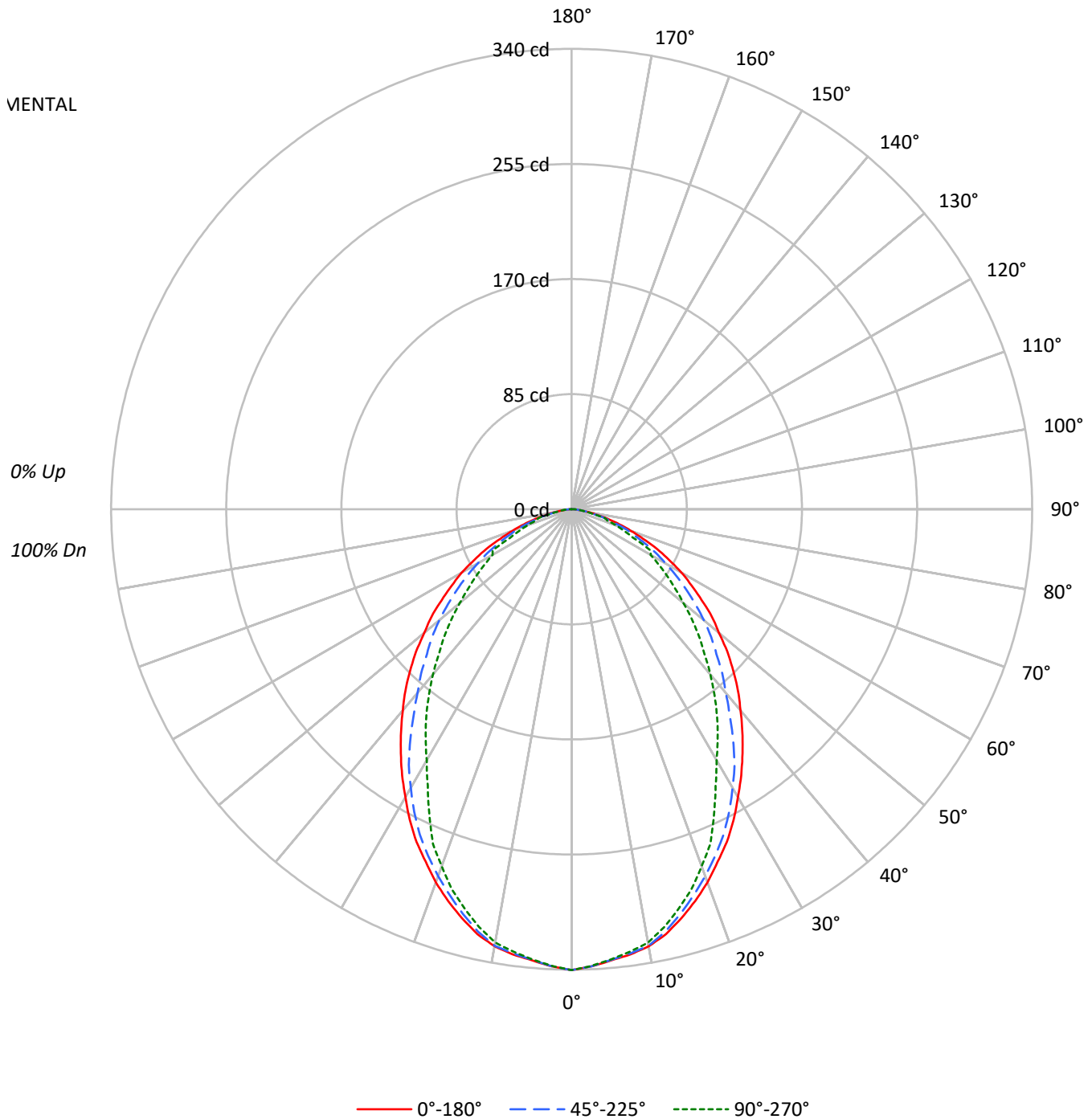
Lumens per Lamp: N/A  
Luminaire Lumens: 668.0 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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	47	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°	3663	3663	3663
5°	3613	3609	3605
10°	3582	3577	3551
15°	3485	3450	3402
20°	3357	3302	3213
25°	3219	3149	2953
30°	3051	2953	2660
35°	2890	2729	2460
40°	2725	2487	2238
45°	2570	2300	2025
50°	2378	2135	1805
55°	2199	1935	1616
60°	2015	1727	1449
65°	1773	1513	1284
70°	1460	1325	1089
75°	1160	1015	1065
80°	781	731	682
85°	482	580	679

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2570 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.7	4.7
10°-20°	86.9	13.0
20°-30°	120.3	18.0
30°-40°	128.3	19.2
40°-50°	117.1	17.5
50°-60°	91.7	13.7
60°-70°	59.8	8.9
70°-80°	26.5	4.0
80°-90°	5.7	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°	238.9	35.8
0°-40°	367.3	55.0
0°-60°	576.1	86.2
0°-90°	668.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	668.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	340	340	340	340	340	
5°	334	334	334	334	334	32
15°	313	313	310	306	305	88
25°	271	270	265	256	249	124
35°	220	218	208	192	187	137
45°	169	165	151	138	133	130
55°	117	114	103	91	86	105
65°	70	66	59	61	50	69
75°	28	26	24	23	26	30
85°	4	4	5	5	6	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	340.3	340.3	340.3	340.3	340.3
2.5°	337.9	337.9	337.9	337.5	337.5
5°	334.4	334.0	334.0	333.6	333.6
7.5°	331.6	331.2	330.8	330.4	329.6
10°	327.7	327.7	327.3	325.3	324.9
12.5°	321.4	321.0	319.4	316.7	315.9
15°	312.7	312.7	309.6	306.4	305.3
17.5°	303.3	302.9	299.0	295.8	294.2
20°	293.1	292.3	288.3	283.2	280.5
22.5°	281.7	281.7	276.9	270.2	267.5
25°	271.0	269.5	265.1	255.7	248.6
27.5°	258.8	256.5	251.8	238.4	230.1
30°	245.5	244.3	237.6	220.3	214.0
32.5°	232.9	230.9	223.8	205.7	200.6
35°	219.9	218.3	207.7	192.0	187.2
37.5°	206.9	204.9	191.6	179.0	173.1
40°	193.9	191.6	177.0	165.6	159.3
42.5°	181.7	178.6	164.4	152.2	145.2
45°	168.8	165.2	151.1	138.5	133.0
47.5°	155.8	152.6	139.6	126.7	120.4
50°	142.0	139.3	127.5	114.5	107.8
52.5°	130.6	126.3	114.9	101.9	96.4
55°	117.2	113.7	103.1	90.9	86.1
57.5°	105.0	101.5	91.7	80.2	76.3
60°	93.6	88.5	80.2	70.4	67.3
62.5°	81.0	77.1	70.0	61.8	65.7
65°	69.6	65.7	59.4	60.6	50.4
67.5°	57.0	55.1	49.6	44.1	42.5
70°	46.4	44.1	42.1	36.2	34.6
72.5°	37.0	34.6	31.9	28.7	27.5
75°	27.9	26.0	24.4	23.2	25.6
77.5°	19.3	18.5	17.3	16.1	15.7
80°	12.6	12.2	11.8	11.4	11.0
82.5°	7.5	7.5	7.5	7.5	7.5
85°	3.9	4.3	4.7	5.1	5.5
87.5°	2.4	2.4	2.8	3.1	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)