

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: P559246

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-81-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559246  
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-LD4-2LO-35-UNV-81-97-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

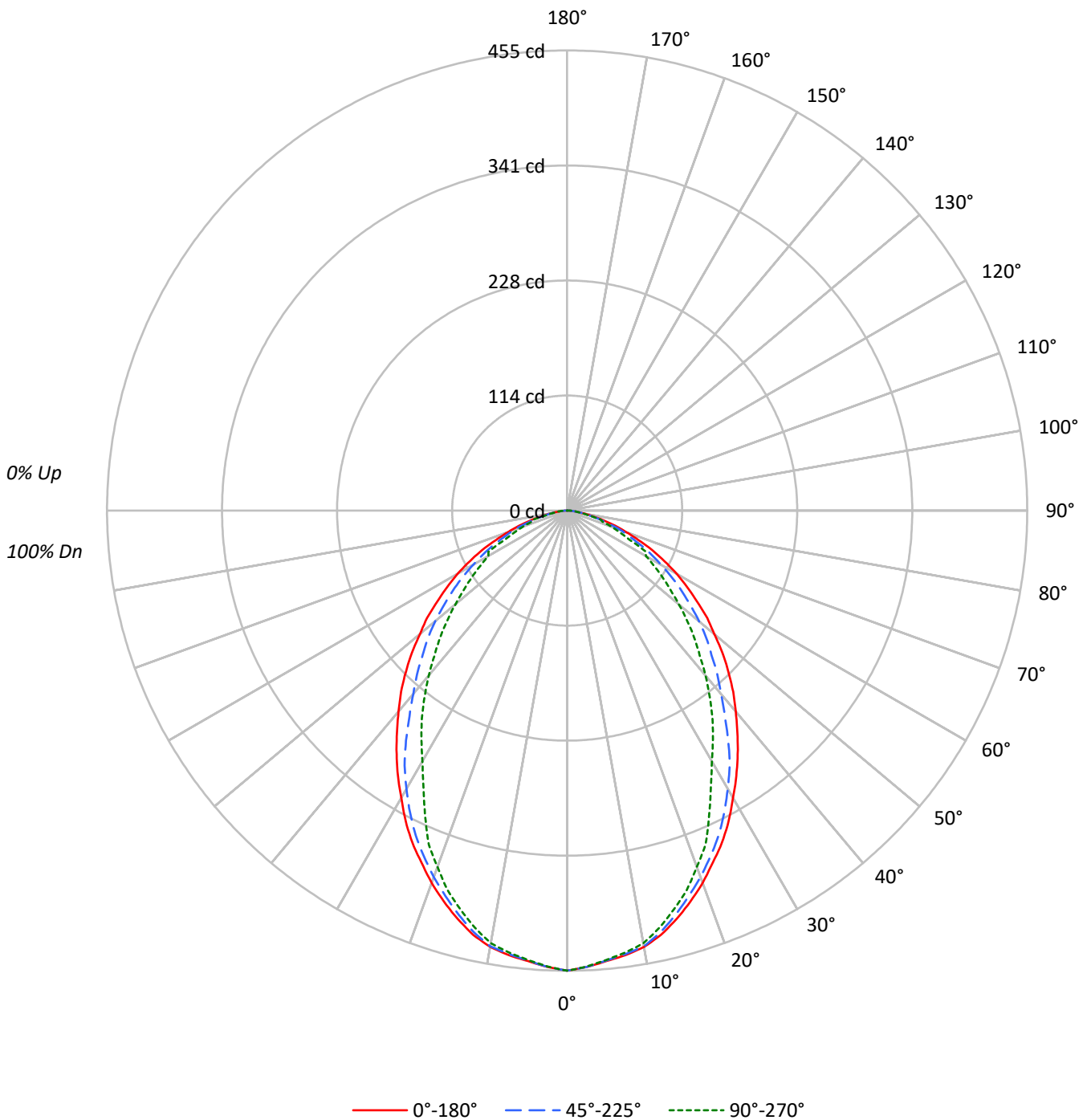
Lumens per Lamp: N/A  
Luminaire Lumens: 893.0 lumens  
Efficiency: N/A  
Efficacy: 76.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4897	4897	4897
5°	4830	4824	4818
10°	4788	4782	4748
15°	4659	4612	4548
20°	4488	4416	4294
25°	4303	4209	3948
30°	4078	3947	3556
35°	3863	3649	3289
40°	3644	3325	2993
45°	3434	3073	2705
50°	3178	2853	2413
55°	2941	2586	2162
60°	2695	2310	1935
65°	2371	2022	1714
70°	1954	1772	1457
75°	1551	1356	1422
80°	1041	979	911
85°	655	778	914

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3434 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.3	4.7
10°-20°	116.2	13.0
20°-30°	160.9	18.0
30°-40°	171.5	19.2
40°-50°	156.5	17.5
50°-60°	122.6	13.7
60°-70°	79.9	8.9
70°-80°	35.4	4.0
80°-90°	7.6	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°	319.4	35.8
0°-40°	491.0	55.0
0°-60°	770.1	86.2
0°-90°	893.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	893.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	455	455	455	455	455	
5°	447	446	446	446	446	42
15°	418	418	414	410	408	118
25°	362	360	354	342	332	166
35°	294	292	278	257	250	184
45°	226	221	202	185	178	174
55°	157	152	138	122	115	141
65°	93	88	79	81	67	92
75°	37	35	33	31	34	40
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	454.9	454.9	454.9	454.9	454.9
2.5°	451.7	451.7	451.7	451.2	451.2
5°	447.0	446.5	446.5	445.9	445.9
7.5°	443.3	442.8	442.3	441.7	440.7
10°	438.1	438.1	437.5	434.9	434.4
12.5°	429.6	429.1	427.0	423.3	422.3
15°	418.1	418.1	413.9	409.7	408.1
17.5°	405.4	404.9	399.7	395.5	393.4
20°	391.8	390.7	385.5	378.6	374.9
22.5°	376.5	376.5	370.2	361.3	357.6
25°	362.3	360.2	354.4	341.8	332.4
27.5°	346.0	342.9	336.6	318.7	307.6
30°	328.1	326.6	317.6	294.5	286.1
32.5°	311.3	308.7	299.2	275.0	268.2
35°	294.0	291.9	277.7	256.6	250.3
37.5°	276.6	274.0	256.1	239.3	231.4
40°	259.3	256.1	236.6	221.4	213.0
42.5°	243.0	238.7	219.8	203.5	194.0
45°	225.6	220.9	201.9	185.1	177.7
47.5°	208.2	204.0	186.7	169.3	160.9
50°	189.8	186.2	170.4	153.0	144.1
52.5°	174.6	168.8	153.6	136.2	128.8
55°	156.7	152.0	137.8	121.5	115.2
57.5°	140.4	135.7	122.5	107.3	102.0
60°	125.2	118.3	107.3	94.1	89.9
62.5°	108.3	103.1	93.6	82.6	87.8
65°	93.1	87.8	79.4	81.0	67.3
67.5°	76.3	73.6	66.3	58.9	56.8
70°	62.1	58.9	56.3	48.4	46.3
72.5°	49.4	46.3	42.6	38.4	36.8
75°	37.3	34.7	32.6	31.0	34.2
77.5°	25.8	24.7	23.1	21.6	21.0
80°	16.8	16.3	15.8	15.3	14.7
82.5°	10.0	10.0	10.0	10.0	10.0
85°	5.3	5.8	6.3	6.8	7.4
87.5°	3.2	3.2	3.7	4.2	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)