

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: P558927

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-81-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558927  
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-81-97-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

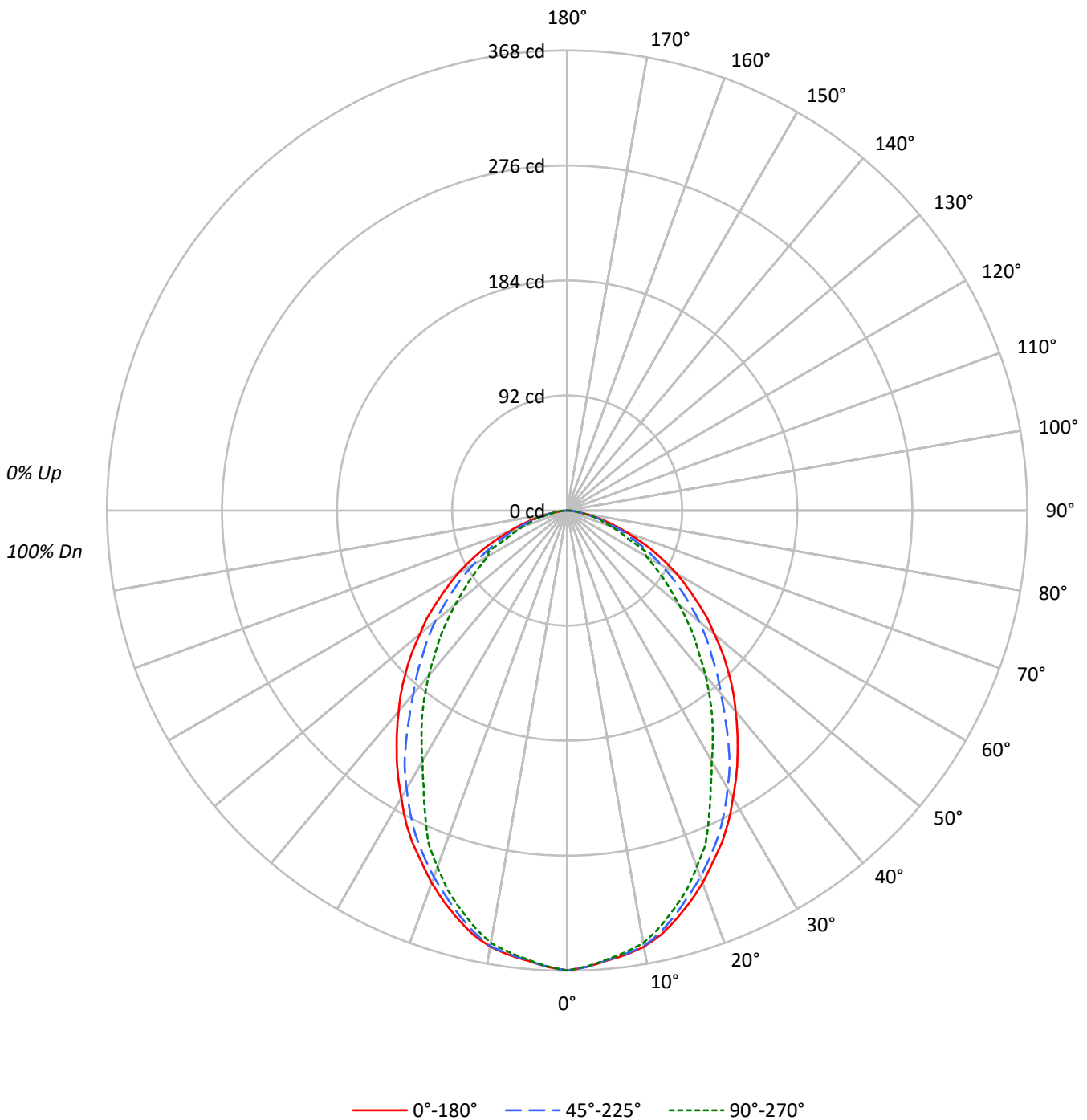
Lumens per Lamp: N/A  
Luminaire Lumens: 722.0 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



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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	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	47	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°	3959	3959	3959
5°	3905	3901	3895
10°	3871	3866	3839
15°	3767	3729	3676
20°	3629	3570	3473
25°	3479	3404	3191
30°	3297	3192	2875
35°	3123	2950	2660
40°	2945	2688	2420
45°	2777	2486	2187
50°	2570	2308	1951
55°	2378	2091	1747
60°	2179	1866	1565
65°	1918	1635	1386
70°	1580	1432	1177
75°	1256	1098	1148
80°	843	793	738
85°	531	630	741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2777 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.2	4.7
10°-20°	94.0	13.0
20°-30°	130.1	18.0
30°-40°	138.7	19.2
40°-50°	126.5	17.5
50°-60°	99.1	13.7
60°-70°	64.6	8.9
70°-80°	28.6	4.0
80°-90°	6.2	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°	258.3	35.8
0°-40°	397.0	55.0
0°-60°	622.6	86.2
0°-90°	722.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	722.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	368	368	368	368	368	
5°	361	361	361	360	360	34
15°	338	338	335	331	330	95
25°	293	291	287	276	269	134
35°	238	236	224	208	202	149
45°	182	179	163	150	144	141
55°	127	123	111	98	93	114
65°	75	71	64	66	54	74
75°	30	28	26	25	28	32
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°	367.8	367.8	367.8	367.8	367.8
2.5°	365.2	365.2	365.2	364.8	364.8
5°	361.4	361.0	361.0	360.5	360.5
7.5°	358.4	358.0	357.6	357.1	356.3
10°	354.2	354.2	353.7	351.6	351.2
12.5°	347.4	346.9	345.2	342.3	341.4
15°	338.0	338.0	334.6	331.2	329.9
17.5°	327.8	327.4	323.1	319.7	318.0
20°	316.8	315.9	311.7	306.1	303.2
22.5°	304.4	304.4	299.3	292.1	289.1
25°	292.9	291.2	286.6	276.4	268.7
27.5°	279.8	277.2	272.1	257.7	248.7
30°	265.3	264.0	256.8	238.1	231.3
32.5°	251.7	249.6	241.9	222.4	216.8
35°	237.7	236.0	224.5	207.5	202.4
37.5°	223.6	221.5	207.1	193.5	187.1
40°	209.6	207.1	191.3	179.0	172.2
42.5°	196.4	193.0	177.7	164.5	156.9
45°	182.4	178.6	163.3	149.7	143.7
47.5°	168.4	165.0	150.9	136.9	130.1
50°	153.5	150.5	137.8	123.7	116.5
52.5°	141.2	136.5	124.2	110.1	104.2
55°	126.7	122.9	111.4	98.2	93.1
57.5°	113.5	109.7	99.1	86.7	82.5
60°	101.2	95.7	86.7	76.1	72.7
62.5°	87.6	83.3	75.7	66.8	71.0
65°	75.3	71.0	64.2	65.5	54.4
67.5°	61.7	59.5	53.6	47.6	45.9
70°	50.2	47.6	45.5	39.1	37.4
72.5°	40.0	37.4	34.4	31.0	29.8
75°	30.2	28.1	26.4	25.1	27.6
77.5°	20.8	20.0	18.7	17.4	17.0
80°	13.6	13.2	12.8	12.3	11.9
82.5°	8.1	8.1	8.1	8.1	8.1
85°	4.3	4.7	5.1	5.5	6.0
87.5°	2.6	2.6	3.0	3.4	3.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)