

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: P559593

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-93-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559593  
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-LD4-2STD-50-UNV-93-88-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

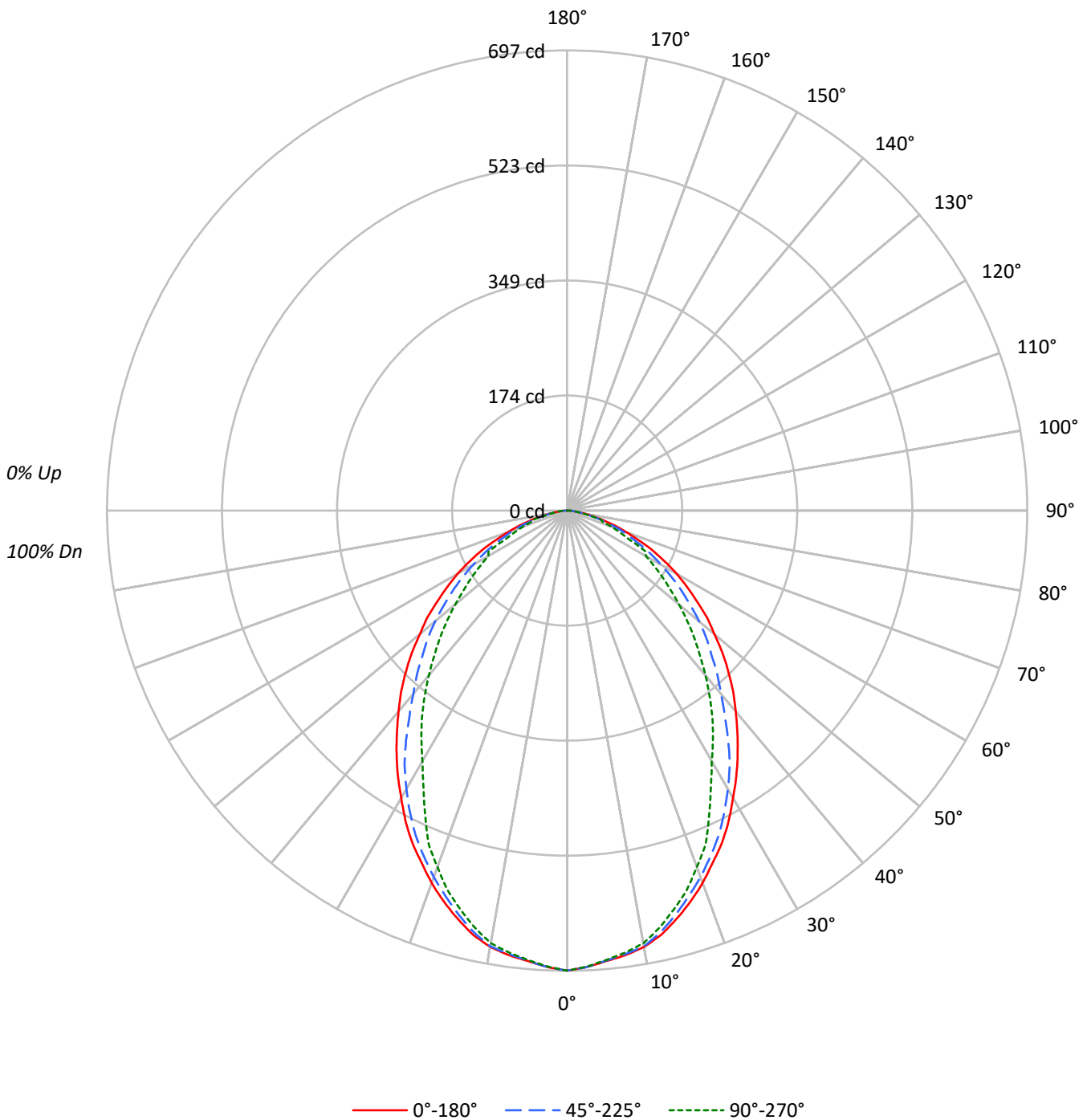
Lumens per Lamp: N/A  
Luminaire Lumens: 1368.0 lumens  
Efficiency: N/A  
Efficacy: 82.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7500	7500	7500
5°	7399	7391	7381
10°	7335	7326	7273
15°	7136	7065	6966
20°	6875	6764	6580
25°	6593	6449	6046
30°	6248	6048	5446
35°	5917	5590	5039
40°	5581	5094	4585
45°	5261	4708	4145
50°	4870	4371	3696
55°	4506	3962	3310
60°	4127	3537	2967
65°	3632	3097	2626
70°	2993	2713	2231
75°	2379	2075	2179
80°	1599	1500	1401
85°	1000	1198	1396

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5261 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.9	4.7
10°-20°	178.0	13.0
20°-30°	246.5	18.0
30°-40°	262.8	19.2
40°-50°	239.7	17.5
50°-60°	187.8	13.7
60°-70°	122.4	8.9
70°-80°	54.2	4.0
80°-90°	11.6	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°	489.3	35.8
0°-40°	752.1	55.0
0°-60°	1179.7	86.2
0°-90°	1368.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1368.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	697	697	697	697	697	
5°	685	684	684	683	683	65
15°	640	640	634	628	625	180
25°	555	552	543	524	509	255
35°	450	447	425	393	384	282
45°	346	338	309	284	272	266
55°	240	233	211	186	176	215
65°	143	134	122	124	103	141
75°	57	53	50	48	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	696.8	696.8	696.8	696.8	696.8
2.5°	692.0	692.0	692.0	691.2	691.2
5°	684.8	684.0	684.0	683.1	683.1
7.5°	679.1	678.3	677.5	676.7	675.1
10°	671.1	671.1	670.3	666.2	665.4
12.5°	658.2	657.4	654.1	648.5	646.9
15°	640.4	640.4	634.0	627.6	625.1
17.5°	621.1	620.3	612.3	605.8	602.6
20°	600.2	598.6	590.5	580.0	574.4
22.5°	576.8	576.8	567.1	553.4	547.8
25°	555.1	551.8	543.0	523.6	509.1
27.5°	530.1	525.2	515.6	488.2	471.3
30°	502.7	500.3	486.6	451.1	438.2
32.5°	476.9	472.9	458.4	421.3	410.9
35°	450.3	447.1	425.4	393.1	383.5
37.5°	423.7	419.7	392.3	366.5	354.5
40°	397.2	392.3	362.5	339.2	326.3
42.5°	372.2	365.7	336.7	311.8	297.3
45°	345.6	338.4	309.3	283.6	272.3
47.5°	319.0	312.6	286.0	259.4	246.5
50°	290.8	285.2	261.0	234.4	220.7
52.5°	267.5	258.6	235.2	208.6	197.4
55°	240.1	232.8	211.1	186.1	176.4
57.5°	215.1	207.8	187.7	164.3	156.3
60°	191.7	181.3	164.3	144.2	137.8
62.5°	166.0	157.9	143.4	126.5	134.5
65°	142.6	134.5	121.6	124.1	103.1
67.5°	116.8	112.8	101.5	90.2	87.0
70°	95.1	90.2	86.2	74.1	70.9
72.5°	75.7	70.9	65.3	58.8	56.4
75°	57.2	53.2	49.9	47.5	52.4
77.5°	39.5	37.9	35.4	33.0	32.2
80°	25.8	25.0	24.2	23.4	22.6
82.5°	15.3	15.3	15.3	15.3	15.3
85°	8.1	8.9	9.7	10.5	11.3
87.5°	4.8	4.8	5.6	6.4	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)