

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: P558494

Luminaire Tested: FSR-12-1-LD4-1HI-35-UNV-82-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558494  
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-LD4-1HI-35-UNV-82-97-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

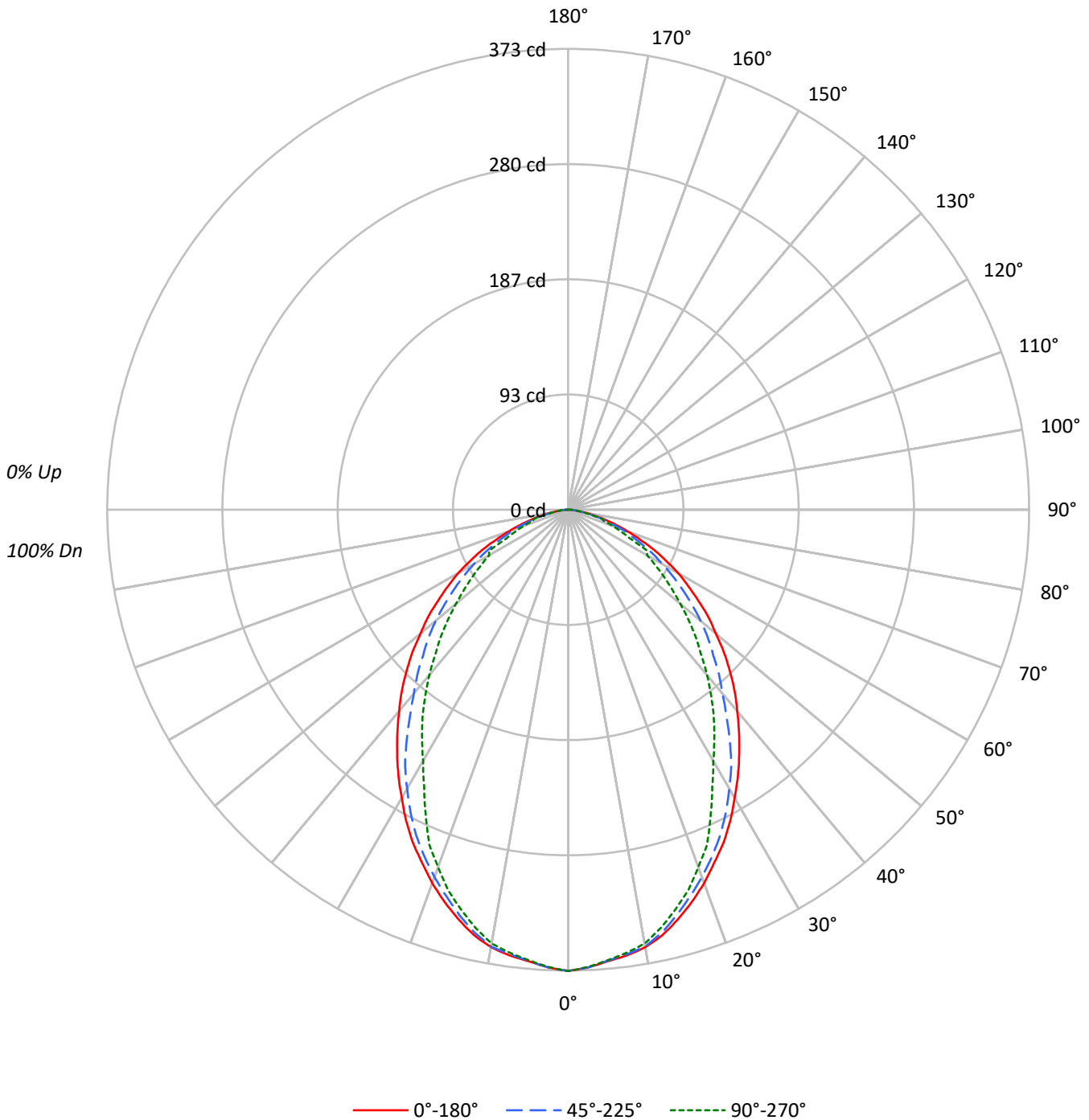
Lumens per Lamp: N/A  
Luminaire Lumens: 733.0 lumens  
Efficiency: N/A  
Efficacy: 67.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4019	4019	4019
5°	3964	3960	3955
10°	3930	3925	3897
15°	3824	3785	3733
20°	3684	3624	3526
25°	3532	3455	3240
30°	3348	3240	2918
35°	3171	2995	2700
40°	2990	2729	2456
45°	2819	2524	2221
50°	2609	2343	1981
55°	2413	2122	1773
60°	2211	1897	1589
65°	1946	1661	1408
70°	1602	1454	1196
75°	1273	1115	1169
80°	855	800	750
85°	531	642	741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2819 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.8	4.7
10°-20°	95.4	13.0
20°-30°	132.1	18.0
30°-40°	140.8	19.2
40°-50°	128.5	17.5
50°-60°	100.6	13.7
60°-70°	65.6	8.9
70°-80°	29.1	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°	262.2	35.8
0°-40°	403.0	55.0
0°-60°	632.1	86.2
0°-90°	733.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	733.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	373	373	373	373	373	
5°	367	366	366	366	366	35
15°	343	343	340	336	335	96
25°	297	296	291	281	273	137
35°	241	240	228	211	206	151
45°	185	181	166	152	146	143
55°	129	125	113	100	94	115
65°	76	72	65	66	55	75
75°	31	28	27	26	28	33
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°	373.4	373.4	373.4	373.4	373.4
2.5°	370.8	370.8	370.8	370.4	370.4
5°	366.9	366.5	366.5	366.0	366.0
7.5°	363.9	363.5	363.0	362.6	361.7
10°	359.6	359.6	359.1	357.0	356.5
12.5°	352.7	352.2	350.5	347.5	346.6
15°	343.2	343.2	339.7	336.3	335.0
17.5°	332.8	332.4	328.1	324.6	322.9
20°	321.6	320.7	316.4	310.8	307.8
22.5°	309.1	309.1	303.9	296.5	293.5
25°	297.4	295.7	290.9	280.6	272.8
27.5°	284.0	281.4	276.3	261.6	252.5
30°	269.4	268.1	260.7	241.7	234.8
32.5°	255.5	253.4	245.6	225.8	220.1
35°	241.3	239.6	227.9	210.6	205.5
37.5°	227.0	224.9	210.2	196.4	189.9
40°	212.8	210.2	194.2	181.7	174.8
42.5°	199.4	196.0	180.4	167.0	159.3
45°	185.2	181.3	165.8	151.9	145.9
47.5°	170.9	167.5	153.2	139.0	132.1
50°	155.8	152.8	139.9	125.6	118.3
52.5°	143.3	138.6	126.0	111.8	105.8
55°	128.6	124.7	113.1	99.7	94.5
57.5°	115.3	111.4	100.6	88.1	83.7
60°	102.7	97.1	88.1	77.3	73.8
62.5°	88.9	84.6	76.8	67.8	72.1
65°	76.4	72.1	65.2	66.5	55.3
67.5°	62.6	60.4	54.4	48.3	46.6
70°	50.9	48.3	46.2	39.7	38.0
72.5°	40.6	38.0	35.0	31.5	30.2
75°	30.6	28.5	26.8	25.5	28.1
77.5°	21.2	20.3	19.0	17.7	17.3
80°	13.8	13.4	12.9	12.5	12.1
82.5°	8.2	8.2	8.2	8.2	8.2
85°	4.3	4.7	5.2	5.6	6.0
87.5°	2.6	2.6	3.0	3.5	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)