

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: P558451

Luminaire Tested: FSR-12-1-LD4-1HI-35-UNV-80-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558451  
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-80-85-EDD  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

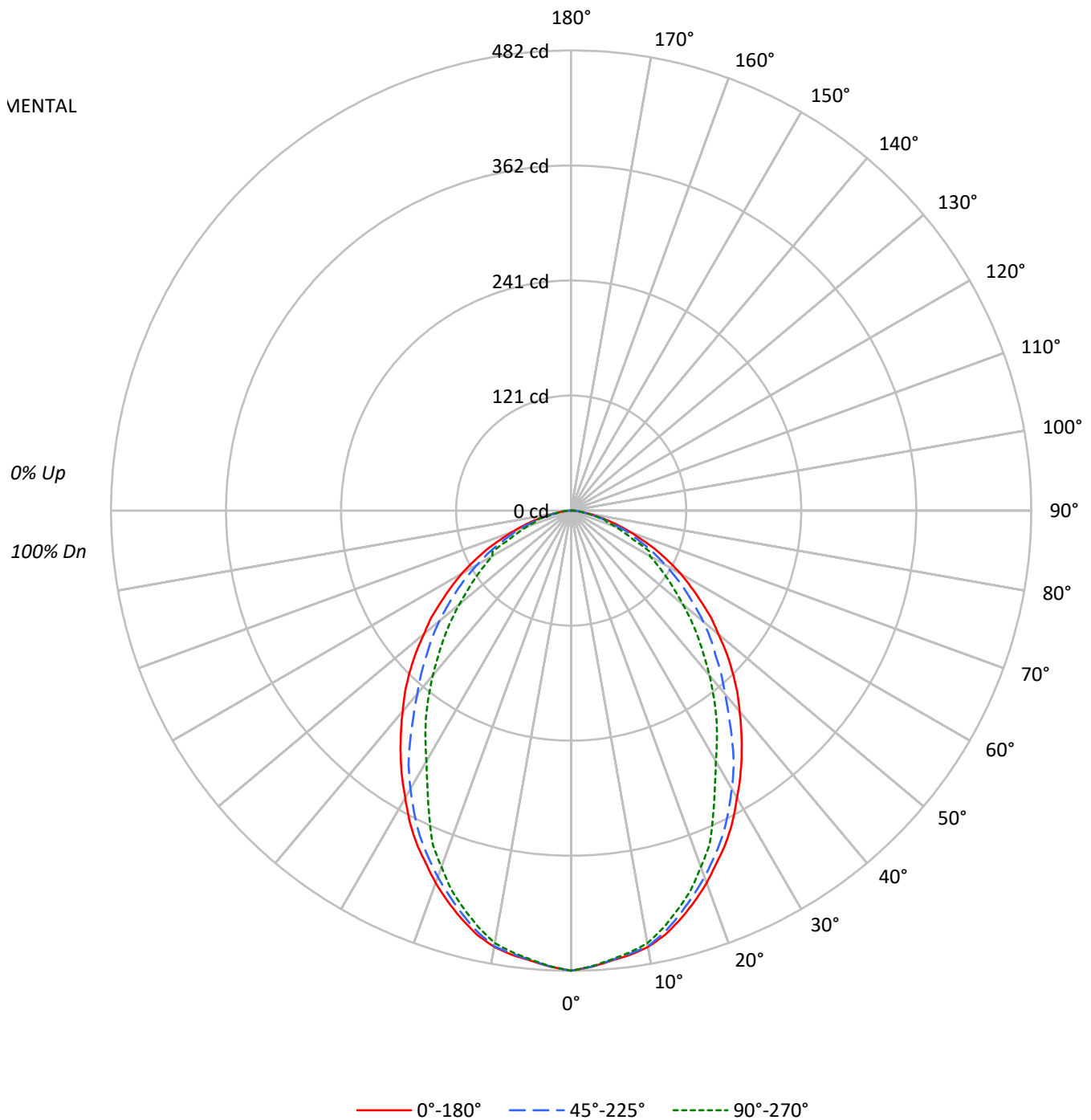
Lumens per Lamp: N/A  
Luminaire Lumens: 946.0 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	5187	5187	5187
5°	5116	5111	5104
10°	5073	5066	5030
15°	4936	4885	4817
20°	4754	4677	4550
25°	4558	4460	4182
30°	4320	4182	3767
35°	4092	3865	3485
40°	3858	3523	3170
45°	3638	3256	2866
50°	3368	3023	2555
55°	3115	2740	2289
60°	2855	2446	2052
65°	2511	2142	1816
70°	2068	1876	1542
75°	1647	1435	1506
80°	1103	1035	967
85°	692	827	963

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3638 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.9	4.7
10°-20°	123.1	13.0
20°-30°	170.4	18.0
30°-40°	181.7	19.2
40°-50°	165.8	17.5
50°-60°	129.9	13.7
60°-70°	84.7	8.9
70°-80°	37.5	4.0
80°-90°	8.1	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°	338.4	35.8
0°-40°	520.1	55.0
0°-60°	815.8	86.2
0°-90°	946.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	946.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	482	482	482	482	482	
5°	474	473	473	472	472	45
15°	443	443	438	434	432	125
25°	384	382	376	362	352	176
35°	311	309	294	272	265	195
45°	239	234	214	196	188	184
55°	166	161	146	129	122	149
65°	99	93	84	86	71	97
75°	40	37	34	33	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	481.9	481.9	481.9	481.9	481.9
2.5°	478.5	478.5	478.5	478.0	478.0
5°	473.5	473.0	473.0	472.4	472.4
7.5°	469.6	469.1	468.5	468.0	466.8
10°	464.1	464.1	463.5	460.7	460.2
12.5°	455.1	454.6	452.4	448.5	447.3
15°	442.9	442.9	438.4	434.0	432.3
17.5°	429.5	429.0	423.4	418.9	416.7
20°	415.0	413.9	408.3	401.1	397.2
22.5°	398.9	398.9	392.2	382.7	378.8
25°	383.8	381.6	375.5	362.1	352.1
27.5°	366.6	363.2	356.5	337.6	325.9
30°	347.6	346.0	336.5	312.0	303.1
32.5°	329.8	327.0	317.0	291.4	284.1
35°	311.4	309.2	294.1	271.9	265.2
37.5°	293.0	290.2	271.3	253.5	245.1
40°	274.6	271.3	250.7	234.5	225.6
42.5°	257.4	252.9	232.9	215.6	205.6
45°	239.0	234.0	213.9	196.1	188.3
47.5°	220.6	216.1	197.8	179.4	170.5
50°	201.1	197.2	180.5	162.1	152.6
52.5°	185.0	178.8	162.7	144.3	136.5
55°	166.0	161.0	146.0	128.7	122.0
57.5°	148.7	143.7	129.8	113.6	108.1
60°	132.6	125.3	113.6	99.7	95.3
62.5°	114.8	109.2	99.2	87.5	93.0
65°	98.6	93.0	84.1	85.8	71.3
67.5°	80.8	78.0	70.2	62.4	60.2
70°	65.7	62.4	59.6	51.3	49.0
72.5°	52.4	49.0	45.1	40.7	39.0
75°	39.6	36.8	34.5	32.9	36.2
77.5°	27.3	26.2	24.5	22.8	22.3
80°	17.8	17.3	16.7	16.2	15.6
82.5°	10.6	10.6	10.6	10.6	10.6
85°	5.6	6.1	6.7	7.2	7.8
87.5°	3.3	3.3	3.9	4.5	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)