

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: P558580

Luminaire Tested: FSR-12-1-LD4-1HI-50-UNV-80-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558580  
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-50-UNV-80-86-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

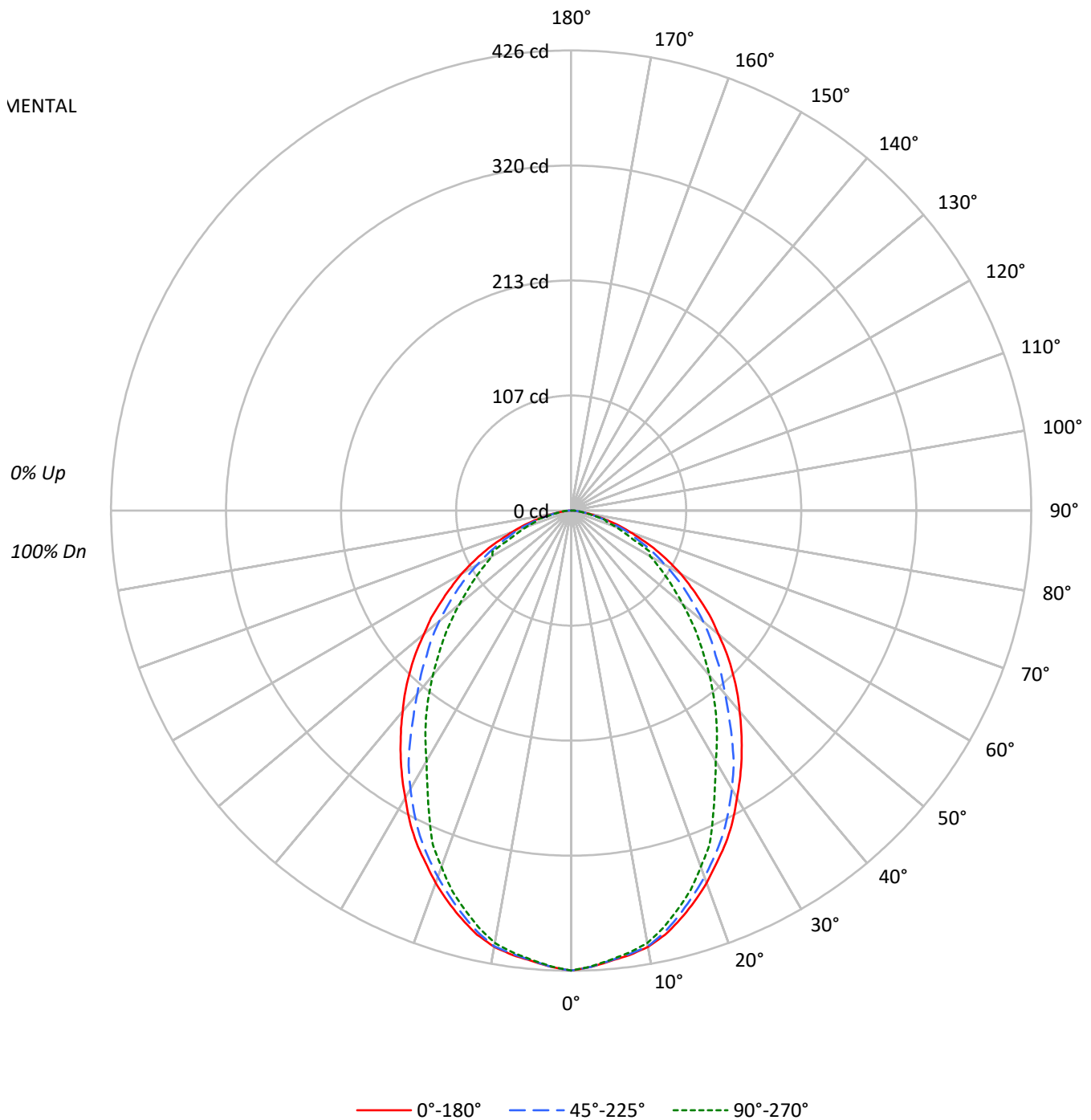
Lumens per Lamp: N/A  
Luminaire Lumens: 836.0 lumens  
Efficiency: N/A  
Efficacy: 77.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

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

	0°	45°	90°
0°	4583	4583	4583
5°	4522	4517	4511
10°	4482	4477	4444
15°	4362	4317	4257
20°	4202	4134	4021
25°	4029	3941	3695
30°	3818	3696	3329
35°	3616	3415	3079
40°	3410	3112	2802
45°	3215	2877	2533
50°	2976	2671	2259
55°	2753	2421	2023
60°	2523	2161	1813
65°	2218	1892	1605
70°	1828	1659	1363
75°	1456	1268	1331
80°	979	917	855
85°	605	729	852

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3215 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.6	4.7
10°-20°	108.8	13.0
20°-30°	150.6	18.0
30°-40°	160.6	19.2
40°-50°	146.5	17.5
50°-60°	114.8	13.7
60°-70°	74.8	8.9
70°-80°	33.1	4.0
80°-90°	7.1	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°	299.0	35.8
0°-40°	459.6	55.0
0°-60°	720.9	86.2
0°-90°	836.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	836.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	426	426	426	426	426	
5°	418	418	418	418	418	40
15°	391	391	387	384	382	110
25°	339	337	332	320	311	156
35°	275	273	260	240	234	172
45°	211	207	189	173	166	163
55°	147	142	129	114	108	132
65°	87	82	74	76	63	86
75°	35	32	30	29	32	37
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	425.8	425.8	425.8	425.8	425.8
2.5°	422.9	422.9	422.9	422.4	422.4
5°	418.5	418.0	418.0	417.5	417.5
7.5°	415.0	414.5	414.0	413.5	412.6
10°	410.1	410.1	409.6	407.1	406.6
12.5°	402.2	401.7	399.8	396.3	395.3
15°	391.4	391.4	387.4	383.5	382.0
17.5°	379.6	379.1	374.2	370.2	368.2
20°	366.8	365.8	360.9	354.5	351.0
22.5°	352.5	352.5	346.6	338.2	334.8
25°	339.2	337.2	331.8	320.0	311.1
27.5°	323.9	321.0	315.1	298.3	288.0
30°	307.2	305.7	297.4	275.7	267.8
32.5°	291.4	289.0	280.1	257.5	251.1
35°	275.2	273.2	259.9	240.2	234.3
37.5°	259.0	256.5	239.8	224.0	216.6
40°	242.7	239.8	221.5	207.3	199.4
42.5°	227.4	223.5	205.8	190.5	181.7
45°	211.2	206.8	189.0	173.3	166.4
47.5°	195.0	191.0	174.8	158.5	150.6
50°	177.7	174.3	159.5	143.3	134.9
52.5°	163.4	158.0	143.8	127.5	120.6
55°	146.7	142.3	129.0	113.7	107.8
57.5°	131.4	127.0	114.7	100.4	95.5
60°	117.2	110.8	100.4	88.1	84.2
62.5°	101.4	96.5	87.6	77.3	82.2
65°	87.1	82.2	74.3	75.8	63.0
67.5°	71.4	68.9	62.0	55.1	53.2
70°	58.1	55.1	52.7	45.3	43.3
72.5°	46.3	43.3	39.9	35.9	34.5
75°	35.0	32.5	30.5	29.0	32.0
77.5°	24.1	23.1	21.7	20.2	19.7
80°	15.8	15.3	14.8	14.3	13.8
82.5°	9.4	9.4	9.4	9.4	9.4
85°	4.9	5.4	5.9	6.4	6.9
87.5°	3.0	3.0	3.4	3.9	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)