

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: P560154

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560154  
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-12-2-LD4-1STD-50-UNV-82-94-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

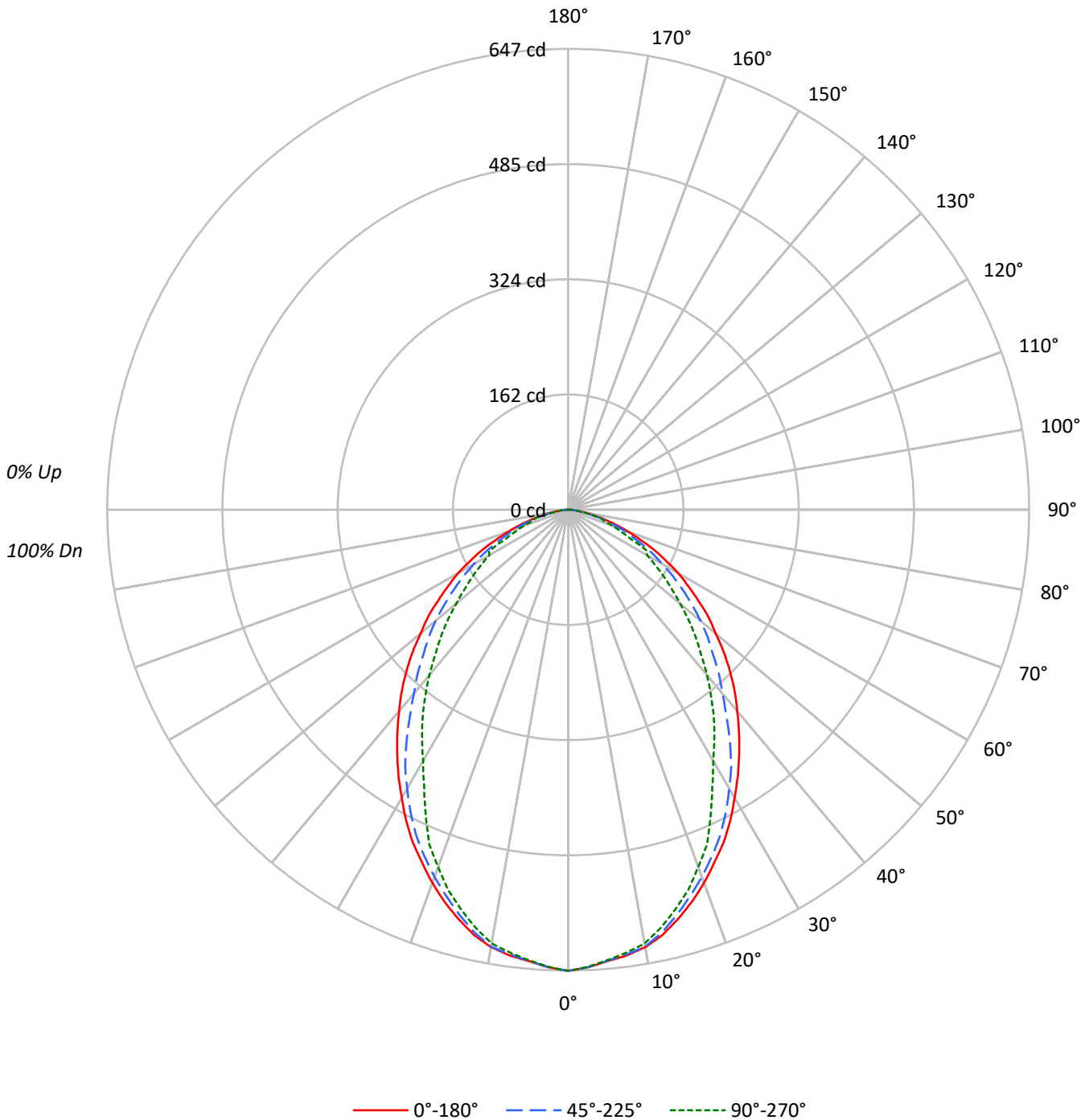
Lumens per Lamp: N/A  
Luminaire Lumens: 1271.0 lumens  
Efficiency: N/A  
Efficacy: 76.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3484	3484	3484
5°	3437	3433	3429
10°	3407	3403	3378
15°	3315	3282	3236
20°	3194	3142	3057
25°	3062	2996	2809
30°	2902	2810	2531
35°	2749	2597	2341
40°	2592	2366	2129
45°	2444	2187	1926
50°	2262	2030	1717
55°	2092	1840	1538
60°	1917	1644	1378
65°	1687	1439	1220
70°	1389	1260	1037
75°	1104	965	1013
80°	744	697	651
85°	463	556	648

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2444 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.3	4.7
10°-20°	165.4	13.0
20°-30°	229.0	18.0
30°-40°	244.2	19.2
40°-50°	222.8	17.5
50°-60°	174.5	13.7
60°-70°	113.7	8.9
70°-80°	50.4	4.0
80°-90°	10.8	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°	454.6	35.8
0°-40°	698.8	55.0
0°-60°	1096.1	86.2
0°-90°	1271.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1271.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	647	647	647	647	647	
5°	636	636	636	635	635	60
15°	595	595	589	583	581	167
25°	516	513	504	486	473	237
35°	418	415	395	365	356	262
45°	321	314	287	264	253	247
55°	223	216	196	173	164	200
65°	132	125	113	115	96	131
75°	53	49	46	44	49	57
85°	8	8	9	10	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	647.4	647.4	647.4	647.4	647.4
2.5°	642.9	642.9	642.9	642.2	642.2
5°	636.2	635.5	635.5	634.7	634.7
7.5°	631.0	630.2	629.5	628.7	627.2
10°	623.5	623.5	622.7	619.0	618.2
12.5°	611.5	610.8	607.8	602.5	601.0
15°	595.0	595.0	589.0	583.1	580.8
17.5°	577.1	576.3	568.8	562.9	559.9
20°	557.6	556.1	548.6	538.9	533.7
22.5°	535.9	535.9	526.9	514.2	509.0
25°	515.7	512.7	504.5	486.5	473.0
27.5°	492.5	488.0	479.0	453.6	437.9
30°	467.0	464.8	452.1	419.1	407.2
32.5°	443.1	439.4	425.9	391.5	381.7
35°	418.4	415.4	395.2	365.3	356.3
37.5°	393.7	390.0	364.5	340.6	329.3
40°	369.0	364.5	336.8	315.1	303.1
42.5°	345.8	339.8	312.9	289.7	276.2
45°	321.1	314.4	287.4	263.5	253.0
47.5°	296.4	290.4	265.7	241.0	229.0
50°	270.2	265.0	242.5	217.8	205.1
52.5°	248.5	240.3	218.6	193.9	183.4
55°	223.0	216.3	196.1	172.9	163.9
57.5°	199.8	193.1	174.4	152.7	145.2
60°	178.1	168.4	152.7	134.0	128.0
62.5°	154.2	146.7	133.2	117.5	125.0
65°	132.5	125.0	113.0	115.3	95.8
67.5°	108.5	104.8	94.3	83.8	80.8
70°	88.3	83.8	80.1	68.9	65.9
72.5°	70.4	65.9	60.6	54.6	52.4
75°	53.1	49.4	46.4	44.2	48.7
77.5°	36.7	35.2	32.9	30.7	29.9
80°	24.0	23.2	22.5	21.7	21.0
82.5°	14.2	14.2	14.2	14.2	14.2
85°	7.5	8.2	9.0	9.7	10.5
87.5°	4.5	4.5	5.2	6.0	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)