

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: P559440

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-82-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559440  
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-35-UNV-82-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

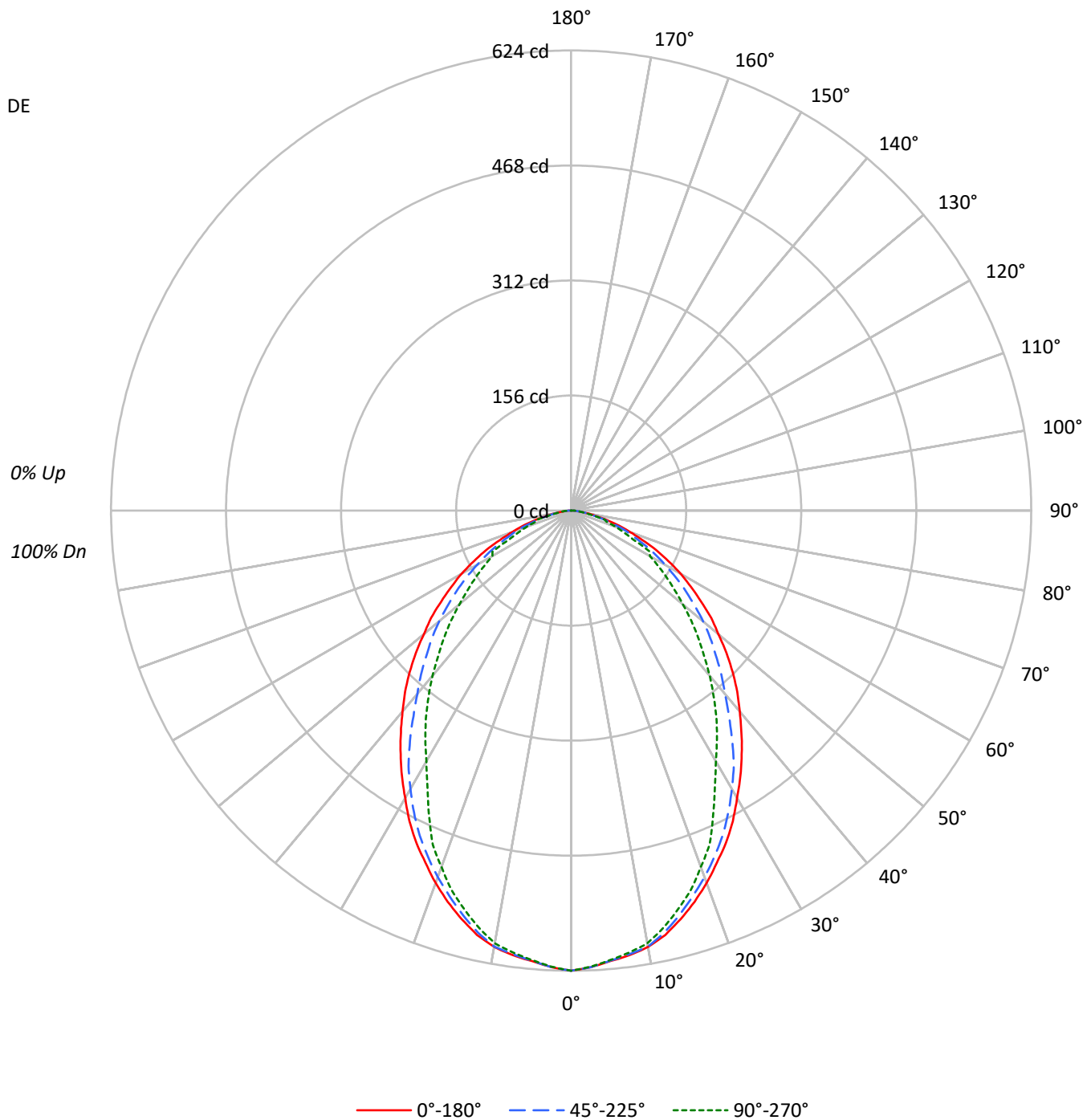
Lumens per Lamp: N/A  
Luminaire Lumens: 1225.0 lumens  
Efficiency: N/A  
Efficacy: 73.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	6717	6717	6717
5°	6626	6618	6609
10°	6568	6560	6513
15°	6391	6326	6238
20°	6156	6057	5891
25°	5903	5774	5415
30°	5594	5415	4877
35°	5299	5005	4512
40°	4997	4561	4106
45°	4711	4217	3711
50°	4361	3913	3311
55°	4035	3547	2965
60°	3696	3169	2657
65°	3252	2774	2351
70°	2678	2430	1998
75°	2129	1859	1951
80°	1432	1339	1252
85°	889	1074	1247

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4711 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.1	4.7
10°-20°	159.4	13.0
20°-30°	220.7	18.0
30°-40°	235.3	19.2
40°-50°	214.7	17.5
50°-60°	168.2	13.7
60°-70°	109.6	8.9
70°-80°	48.6	4.0
80°-90°	10.4	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°	438.2	35.8
0°-40°	673.5	55.0
0°-60°	1056.4	86.2
0°-90°	1225.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1225.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	624	624	624	624	624	
5°	613	612	612	612	612	58
15°	574	574	568	562	560	161
25°	497	494	486	469	456	228
35°	403	400	381	352	343	252
45°	310	303	277	254	244	238
55°	215	208	189	167	158	193
65°	128	120	109	111	92	126
75°	51	48	45	43	47	55
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	624.0	624.0	624.0	624.0	624.0
2.5°	619.7	619.7	619.7	618.9	618.9
5°	613.2	612.5	612.5	611.7	611.7
7.5°	608.1	607.4	606.7	606.0	604.5
10°	600.9	600.9	600.2	596.6	595.9
12.5°	589.4	588.7	585.8	580.7	579.3
15°	573.5	573.5	567.7	562.0	559.8
17.5°	556.2	555.5	548.3	542.5	539.6
20°	537.4	536.0	528.8	519.4	514.3
22.5°	516.5	516.5	507.9	495.6	490.5
25°	497.0	494.1	486.2	468.9	455.9
27.5°	474.7	470.3	461.7	437.2	422.0
30°	450.1	448.0	435.7	404.0	392.4
32.5°	427.1	423.5	410.5	377.3	367.9
35°	403.3	400.4	380.9	352.0	343.4
37.5°	379.4	375.8	351.3	328.2	317.4
40°	355.6	351.3	324.6	303.7	292.2
42.5°	333.3	327.5	301.5	279.2	266.2
45°	309.5	303.0	277.0	253.9	243.8
47.5°	285.7	279.9	256.1	232.3	220.7
50°	260.4	255.4	233.7	209.9	197.7
52.5°	239.5	231.6	210.6	186.8	176.7
55°	215.0	208.5	189.0	166.6	158.0
57.5°	192.6	186.1	168.1	147.2	139.9
60°	171.7	162.3	147.2	129.1	123.4
62.5°	148.6	141.4	128.4	113.3	120.5
65°	127.7	120.5	108.9	111.1	92.3
67.5°	104.6	101.0	90.9	80.8	77.9
70°	85.1	80.8	77.2	66.4	63.5
72.5°	67.8	63.5	58.4	52.7	50.5
75°	51.2	47.6	44.7	42.6	46.9
77.5°	35.3	33.9	31.7	29.6	28.9
80°	23.1	22.4	21.6	20.9	20.2
82.5°	13.7	13.7	13.7	13.7	13.7
85°	7.2	7.9	8.7	9.4	10.1
87.5°	4.3	4.3	5.0	5.8	6.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)