

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: P558998

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-82-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558998  
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-LD4-1STD-50-UNV-82-87-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

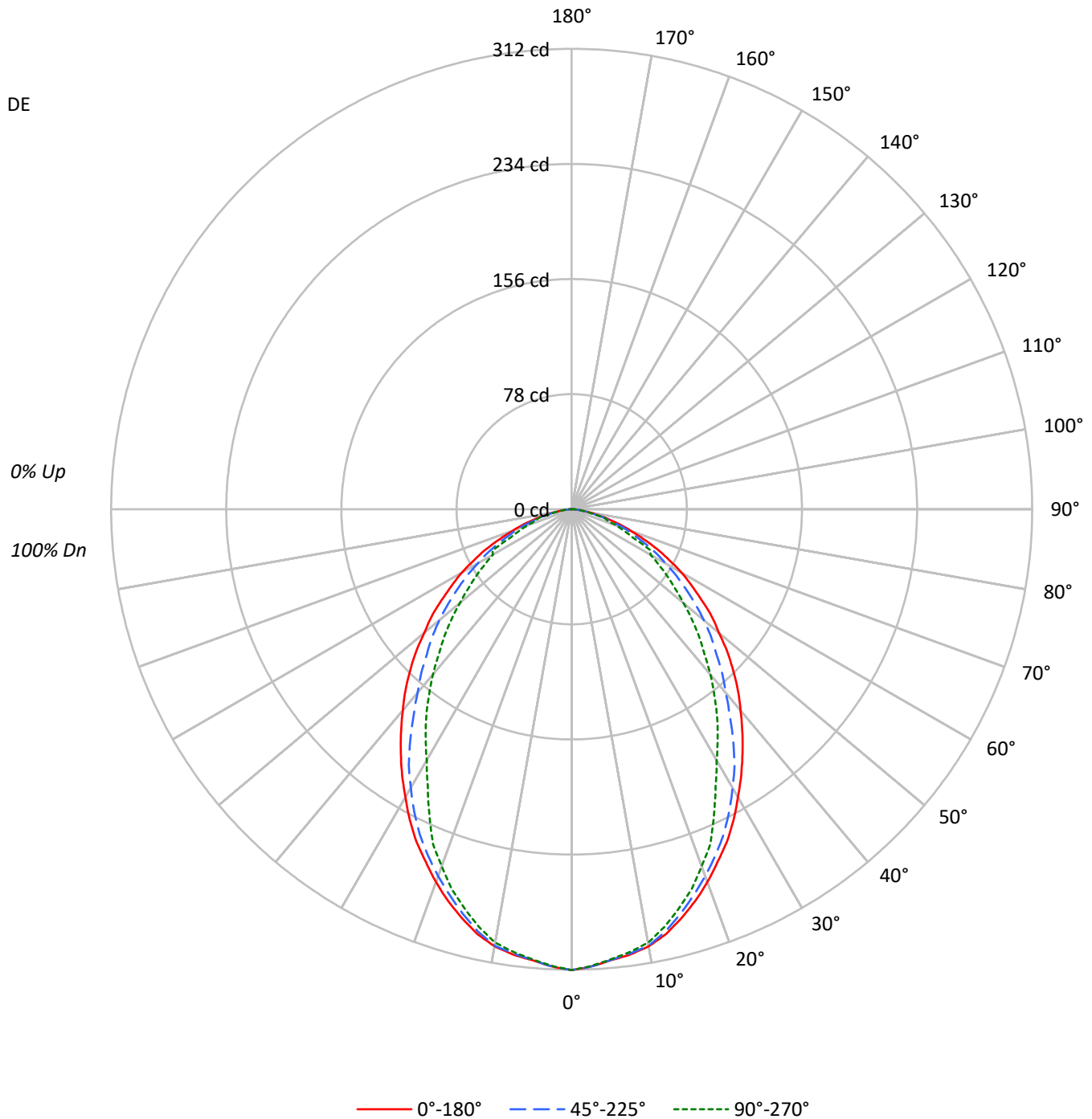
Lumens per Lamp: N/A  
Luminaire Lumens: 613.0 lumens  
Efficiency: N/A  
Efficacy: 73.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3362	3362	3362
5°	3315	3312	3307
10°	3287	3282	3259
15°	3198	3166	3121
20°	3080	3031	2948
25°	2954	2890	2709
30°	2800	2710	2441
35°	2652	2505	2258
40°	2501	2282	2054
45°	2358	2110	1857
50°	2182	1959	1656
55°	2019	1775	1484
60°	1849	1584	1328
65°	1628	1388	1177
70°	1341	1215	1001
75°	1065	932	977
80°	719	669	626
85°	445	531	630

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2358 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.1	4.7
10°-20°	79.8	13.0
20°-30°	110.4	18.0
30°-40°	117.8	19.2
40°-50°	107.4	17.5
50°-60°	84.2	13.7
60°-70°	54.9	8.9
70°-80°	24.3	4.0
80°-90°	5.2	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°	219.3	35.8
0°-40°	337.0	55.0
0°-60°	528.6	86.2
0°-90°	613.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	613.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	312	312	312	312	312	
5°	307	306	306	306	306	29
15°	287	287	284	281	280	81
25°	249	247	243	235	228	114
35°	202	200	191	176	172	126
45°	155	152	139	127	122	119
55°	108	104	95	83	79	96
65°	64	60	54	56	46	63
75°	26	24	22	21	24	27
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	312.3	312.3	312.3	312.3	312.3
2.5°	310.1	310.1	310.1	309.7	309.7
5°	306.8	306.5	306.5	306.1	306.1
7.5°	304.3	304.0	303.6	303.2	302.5
10°	300.7	300.7	300.3	298.5	298.2
12.5°	294.9	294.6	293.1	290.6	289.9
15°	287.0	287.0	284.1	281.2	280.1
17.5°	278.3	278.0	274.4	271.5	270.0
20°	268.9	268.2	264.6	259.9	257.4
22.5°	258.5	258.5	254.1	248.0	245.5
25°	248.7	247.3	243.3	234.6	228.1
27.5°	237.5	235.4	231.0	218.8	211.2
30°	225.3	224.2	218.0	202.2	196.4
32.5°	213.7	211.9	205.4	188.8	184.1
35°	201.8	200.3	190.6	176.2	171.8
37.5°	189.9	188.1	175.8	164.2	158.8
40°	178.0	175.8	162.4	152.0	146.2
42.5°	166.8	163.9	150.9	139.7	133.2
45°	154.9	151.6	138.6	127.1	122.0
47.5°	143.0	140.1	128.2	116.2	110.5
50°	130.3	127.8	117.0	105.0	98.9
52.5°	119.8	115.9	105.4	93.5	88.4
55°	107.6	104.3	94.6	83.4	79.1
57.5°	96.4	93.1	84.1	73.6	70.0
60°	85.9	81.2	73.6	64.6	61.7
62.5°	74.4	70.8	64.3	56.7	60.3
65°	63.9	60.3	54.5	55.6	46.2
67.5°	52.3	50.5	45.5	40.4	39.0
70°	42.6	40.4	38.6	33.2	31.8
72.5°	33.9	31.8	29.2	26.4	25.3
75°	25.6	23.8	22.4	21.3	23.5
77.5°	17.7	17.0	15.9	14.8	14.4
80°	11.6	11.2	10.8	10.5	10.1
82.5°	6.9	6.9	6.9	6.9	6.9
85°	3.6	4.0	4.3	4.7	5.1
87.5°	2.2	2.2	2.5	2.9	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)