

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: P558868

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-82-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558868  
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-35-UNV-82-86-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

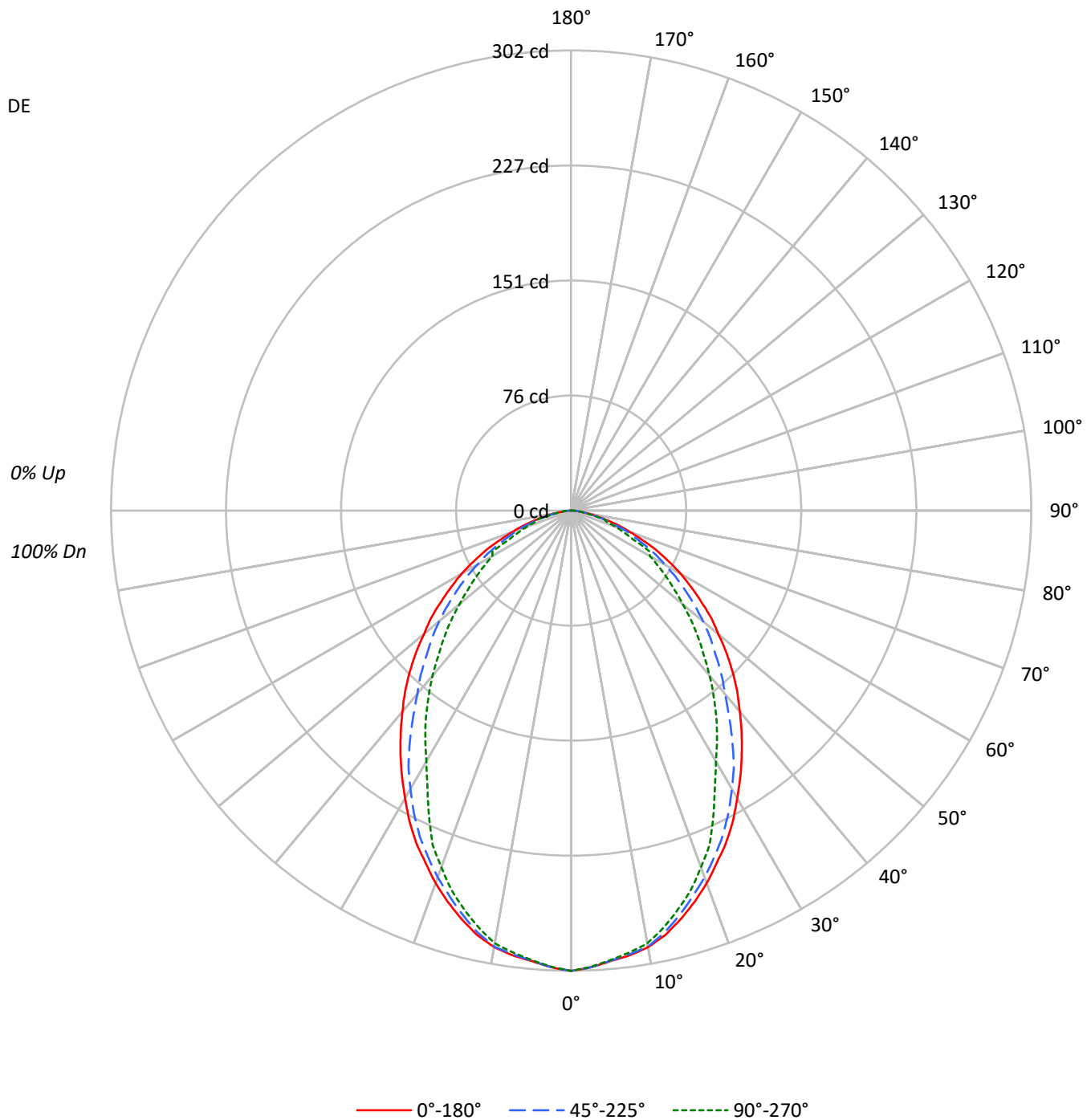
Lumens per Lamp: N/A  
Luminaire Lumens: 593.0 lumens  
Efficiency: N/A  
Efficacy: 71.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	39	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°	3252	3252	3252
5°	3207	3204	3199
10°	3180	3175	3152
15°	3093	3062	3020
20°	2981	2932	2852
25°	2858	2796	2621
30°	2708	2621	2362
35°	2565	2423	2184
40°	2420	2207	1987
45°	2280	2041	1796
50°	2112	1894	1603
55°	1954	1717	1436
60°	1789	1533	1285
65°	1574	1342	1138
70°	1297	1177	966
75°	1031	902	944
80°	694	651	607
85°	432	519	605

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2280 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.1	4.7
10°-20°	77.2	13.0
20°-30°	106.8	18.0
30°-40°	113.9	19.2
40°-50°	103.9	17.5
50°-60°	81.4	13.7
60°-70°	53.1	8.9
70°-80°	23.5	4.0
80°-90°	5.0	0.8
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°	212.1	35.8
0°-40°	326.0	55.0
0°-60°	511.4	86.2
0°-90°	593.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	593.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	302	302	302	302	302	
5°	297	296	296	296	296	28
15°	278	278	275	272	271	78
25°	241	239	235	227	221	110
35°	195	194	184	170	166	122
45°	150	147	134	123	118	115
55°	104	101	92	81	76	93
65°	62	58	53	54	45	61
75°	25	23	22	21	23	27
85°	4	4	4	4	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	302.1	302.1	302.1	302.1	302.1
2.5°	300.0	300.0	300.0	299.6	299.6
5°	296.8	296.5	296.5	296.1	296.1
7.5°	294.4	294.0	293.7	293.3	292.6
10°	290.9	290.9	290.5	288.8	288.4
12.5°	285.3	285.0	283.6	281.1	280.4
15°	277.6	277.6	274.8	272.0	271.0
17.5°	269.2	268.9	265.4	262.6	261.2
20°	260.2	259.5	256.0	251.4	249.0
22.5°	250.0	250.0	245.8	239.9	237.5
25°	240.6	239.2	235.4	227.0	220.7
27.5°	229.8	227.7	223.5	211.6	204.3
30°	217.9	216.9	210.9	195.6	190.0
32.5°	206.7	205.0	198.7	182.6	178.1
35°	195.2	193.8	184.4	170.4	166.2
37.5°	183.7	181.9	170.1	158.9	153.7
40°	172.2	170.1	157.1	147.0	141.4
42.5°	161.3	158.5	146.0	135.1	128.9
45°	149.8	146.7	134.1	122.9	118.0
47.5°	138.3	135.5	124.0	112.4	106.9
50°	126.1	123.6	113.1	101.6	95.7
52.5°	115.9	112.1	102.0	90.4	85.6
55°	104.1	100.9	91.5	80.7	76.5
57.5°	93.2	90.1	81.4	71.2	67.7
60°	83.1	78.6	71.2	62.5	59.7
62.5°	71.9	68.4	62.2	54.8	58.3
65°	61.8	58.3	52.7	53.8	44.7
67.5°	50.6	48.9	44.0	39.1	37.7
70°	41.2	39.1	37.4	32.1	30.7
72.5°	32.8	30.7	28.3	25.5	24.4
75°	24.8	23.0	21.7	20.6	22.7
77.5°	17.1	16.4	15.4	14.3	14.0
80°	11.2	10.8	10.5	10.1	9.8
82.5°	6.6	6.6	6.6	6.6	6.6
85°	3.5	3.8	4.2	4.5	4.9
87.5°	2.1	2.1	2.4	2.8	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)