

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: P559192

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-82-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559192  
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-LD4-2HI-50-UNV-82-88-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

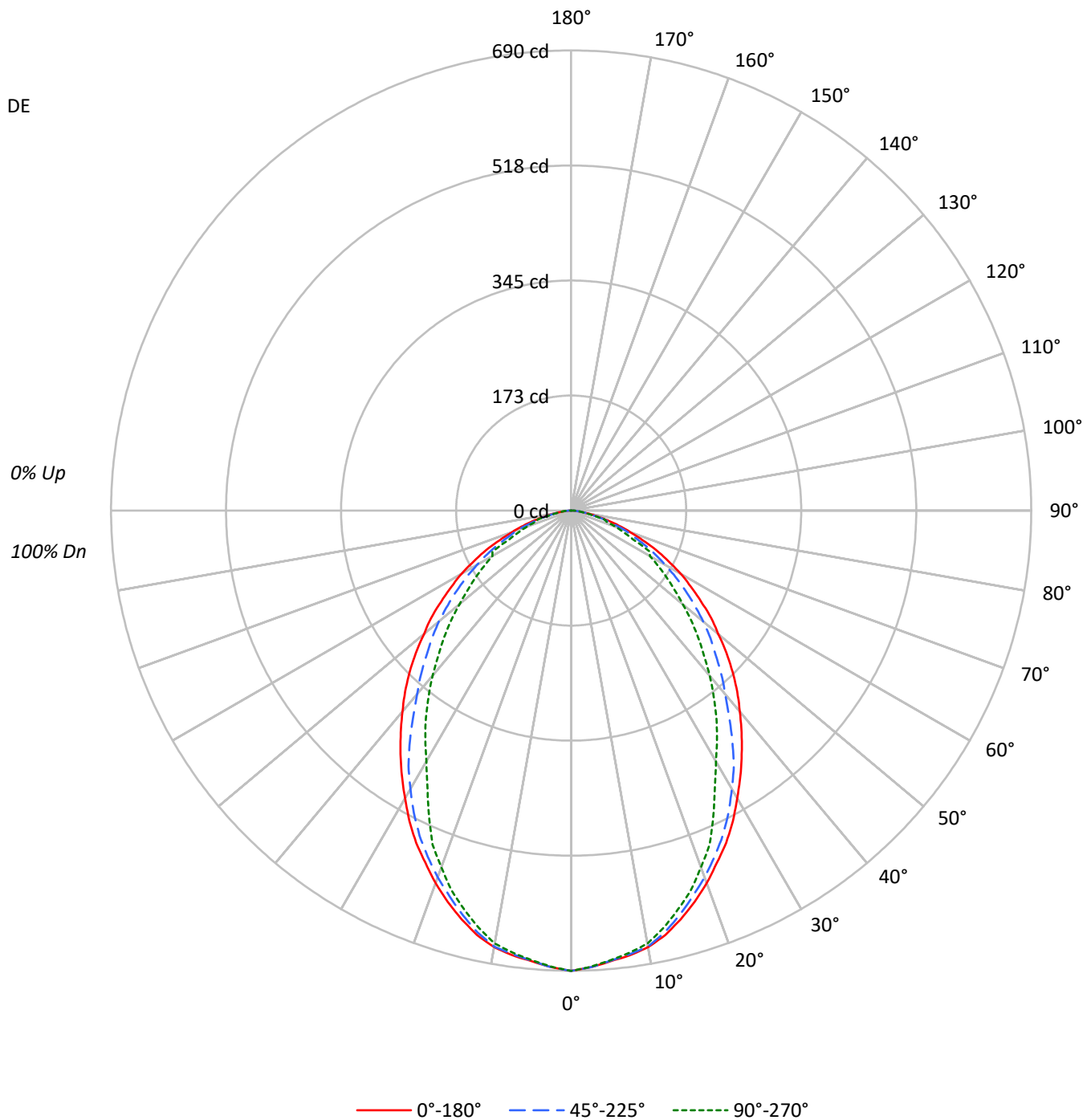
Lumens per Lamp: N/A  
Luminaire Lumens: 1355.0 lumens  
Efficiency: N/A  
Efficacy: 62.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	7429	7429	7429
5°	7328	7320	7312
10°	7265	7256	7204
15°	7070	6998	6900
20°	6810	6700	6517
25°	6530	6387	5989
30°	6188	5991	5395
35°	5861	5536	4991
40°	5528	5046	4541
45°	5211	4664	4106
50°	4824	4329	3661
55°	4463	3924	3278
60°	4088	3505	2936
65°	3596	3069	2600
70°	2965	2688	2209
75°	2358	2059	2158
80°	1581	1481	1382
85°	988	1186	1383

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5211 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.3	4.7
10°-20°	176.3	13.0
20°-30°	244.1	18.0
30°-40°	260.3	19.2
40°-50°	237.5	17.5
50°-60°	186.0	13.7
60°-70°	121.3	8.9
70°-80°	53.7	4.0
80°-90°	11.5	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°	484.7	35.8
0°-40°	745.0	55.0
0°-60°	1168.5	86.2
0°-90°	1355.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1355.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	690	690	690	690	690	
5°	678	678	678	677	677	64
15°	634	634	628	622	619	178
25°	550	547	538	519	504	252
35°	446	443	421	389	380	279
45°	342	335	306	281	270	264
55°	238	231	209	184	175	213
65°	141	133	120	123	102	139
75°	57	53	50	47	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	690.2	690.2	690.2	690.2	690.2
2.5°	685.4	685.4	685.4	684.6	684.6
5°	678.2	677.5	677.5	676.7	676.7
7.5°	672.7	671.9	671.1	670.3	668.7
10°	664.7	664.7	663.9	659.9	659.1
12.5°	651.9	651.1	647.9	642.3	640.7
15°	634.4	634.4	628.0	621.6	619.2
17.5°	615.2	614.4	606.4	600.1	596.9
20°	594.5	592.9	584.9	574.5	568.9
22.5°	571.3	571.3	561.8	548.2	542.6
25°	549.8	546.6	537.8	518.7	504.3
27.5°	525.0	520.3	510.7	483.6	466.8
30°	497.9	495.5	482.0	446.8	434.1
32.5°	472.4	468.4	454.0	417.3	406.9
35°	446.0	442.9	421.3	389.4	379.8
37.5°	419.7	415.7	388.6	363.1	351.1
40°	393.4	388.6	359.1	335.9	323.2
42.5°	368.6	362.3	333.5	308.8	294.4
45°	342.3	335.1	306.4	280.9	269.7
47.5°	316.0	309.6	283.3	256.9	244.2
50°	288.1	282.5	258.5	232.2	218.6
52.5°	264.9	256.1	233.0	206.7	195.5
55°	237.8	230.6	209.1	184.3	174.7
57.5°	213.1	205.9	185.9	162.8	154.8
60°	189.9	179.5	162.8	142.8	136.4
62.5°	164.4	156.4	142.0	125.3	133.3
65°	141.2	133.3	120.5	122.9	102.1
67.5°	115.7	111.7	100.5	89.4	86.2
70°	94.2	89.4	85.4	73.4	70.2
72.5°	75.0	70.2	64.6	58.2	55.9
75°	56.7	52.7	49.5	47.1	51.9
77.5°	39.1	37.5	35.1	32.7	31.9
80°	25.5	24.7	23.9	23.1	22.3
82.5°	15.2	15.2	15.2	15.2	15.2
85°	8.0	8.8	9.6	10.4	11.2
87.5°	4.8	4.8	5.6	6.4	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)