

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: P559385

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559385  
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-LD4-2LO-50-UNV-82-88-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

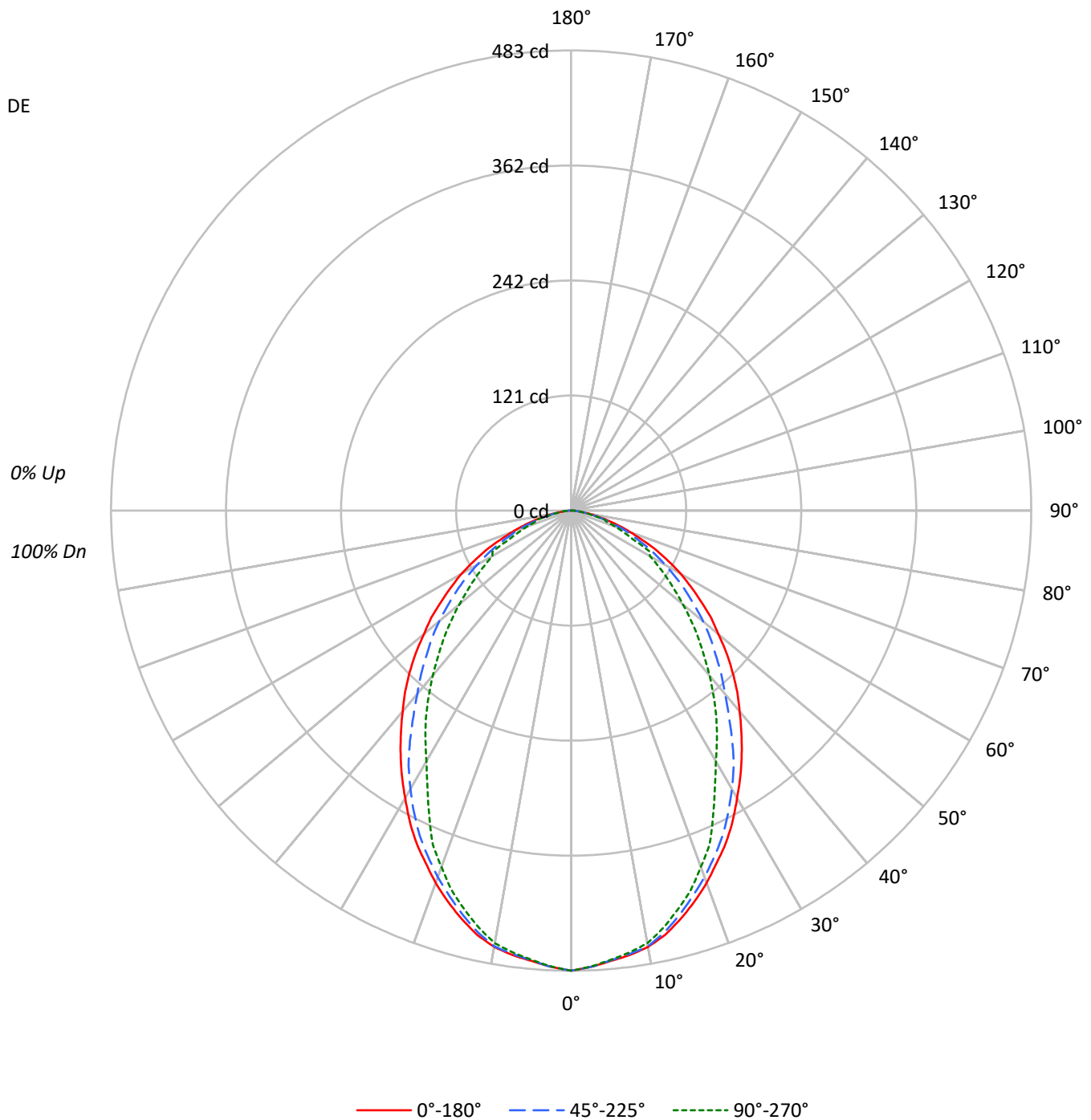
Lumens per Lamp: N/A  
Luminaire Lumens: 948.0 lumens  
Efficiency: N/A  
Efficacy: 81.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	5198	5198	5198
5°	5127	5122	5115
10°	5082	5077	5040
15°	4946	4897	4827
20°	4764	4687	4559
25°	4568	4469	4190
30°	4330	4191	3775
35°	4101	3874	3491
40°	3867	3530	3177
45°	3646	3264	2872
50°	3374	3029	2562
55°	3123	2746	2295
60°	2861	2452	2056
65°	2516	2147	1821
70°	2074	1879	1545
75°	1647	1439	1510
80°	1110	1035	967
85°	692	827	963

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3646 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.0	4.7
10°-20°	123.4	13.0
20°-30°	170.8	18.0
30°-40°	182.1	19.2
40°-50°	166.1	17.5
50°-60°	130.2	13.7
60°-70°	84.8	8.9
70°-80°	37.6	4.0
80°-90°	8.1	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°	339.1	35.8
0°-40°	521.2	55.0
0°-60°	817.5	86.2
0°-90°	948.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	948.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	483	483	483	483	483	
5°	474	474	474	473	473	45
15°	444	444	439	435	433	125
25°	385	382	376	363	353	177
35°	312	310	295	272	266	195
45°	240	234	214	196	189	184
55°	166	161	146	129	122	149
65°	99	93	84	86	72	97
75°	40	37	35	33	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	482.9	482.9	482.9	482.9	482.9
2.5°	479.5	479.5	479.5	479.0	479.0
5°	474.5	474.0	474.0	473.4	473.4
7.5°	470.6	470.1	469.5	468.9	467.8
10°	465.0	465.0	464.5	461.7	461.1
12.5°	456.1	455.5	453.3	449.4	448.3
15°	443.8	443.8	439.4	434.9	433.2
17.5°	430.4	429.9	424.3	419.8	417.6
20°	415.9	414.8	409.2	402.0	398.0
22.5°	399.7	399.7	393.0	383.5	379.6
25°	384.6	382.4	376.3	362.9	352.8
27.5°	367.3	364.0	357.3	338.3	326.6
30°	348.4	346.7	337.2	312.6	303.7
32.5°	330.5	327.7	317.7	292.0	284.7
35°	312.1	309.8	294.8	272.4	265.7
37.5°	293.6	290.9	271.9	254.0	245.6
40°	275.2	271.9	251.2	235.0	226.1
42.5°	257.9	253.5	233.4	216.0	206.0
45°	239.5	234.5	214.4	196.5	188.7
47.5°	221.1	216.6	198.2	179.8	170.8
50°	201.5	197.6	180.9	162.5	153.0
52.5°	185.3	179.2	163.0	144.6	136.8
55°	166.4	161.3	146.3	129.0	122.3
57.5°	149.1	144.0	130.1	113.9	108.3
60°	132.9	125.6	113.9	99.9	95.5
62.5°	115.0	109.4	99.4	87.6	93.2
65°	98.8	93.2	84.3	86.0	71.5
67.5°	80.9	78.2	70.3	62.5	60.3
70°	65.9	62.5	59.7	51.4	49.1
72.5°	52.5	49.1	45.2	40.8	39.1
75°	39.6	36.8	34.6	32.9	36.3
77.5°	27.4	26.2	24.6	22.9	22.3
80°	17.9	17.3	16.7	16.2	15.6
82.5°	10.6	10.6	10.6	10.6	10.6
85°	5.6	6.1	6.7	7.3	7.8
87.5°	3.3	3.3	3.9	4.5	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)