

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: P559383

Luminaire Tested: FSR-12-1-LD4-2LO-50-UNV-82-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559383  
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-82-87-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

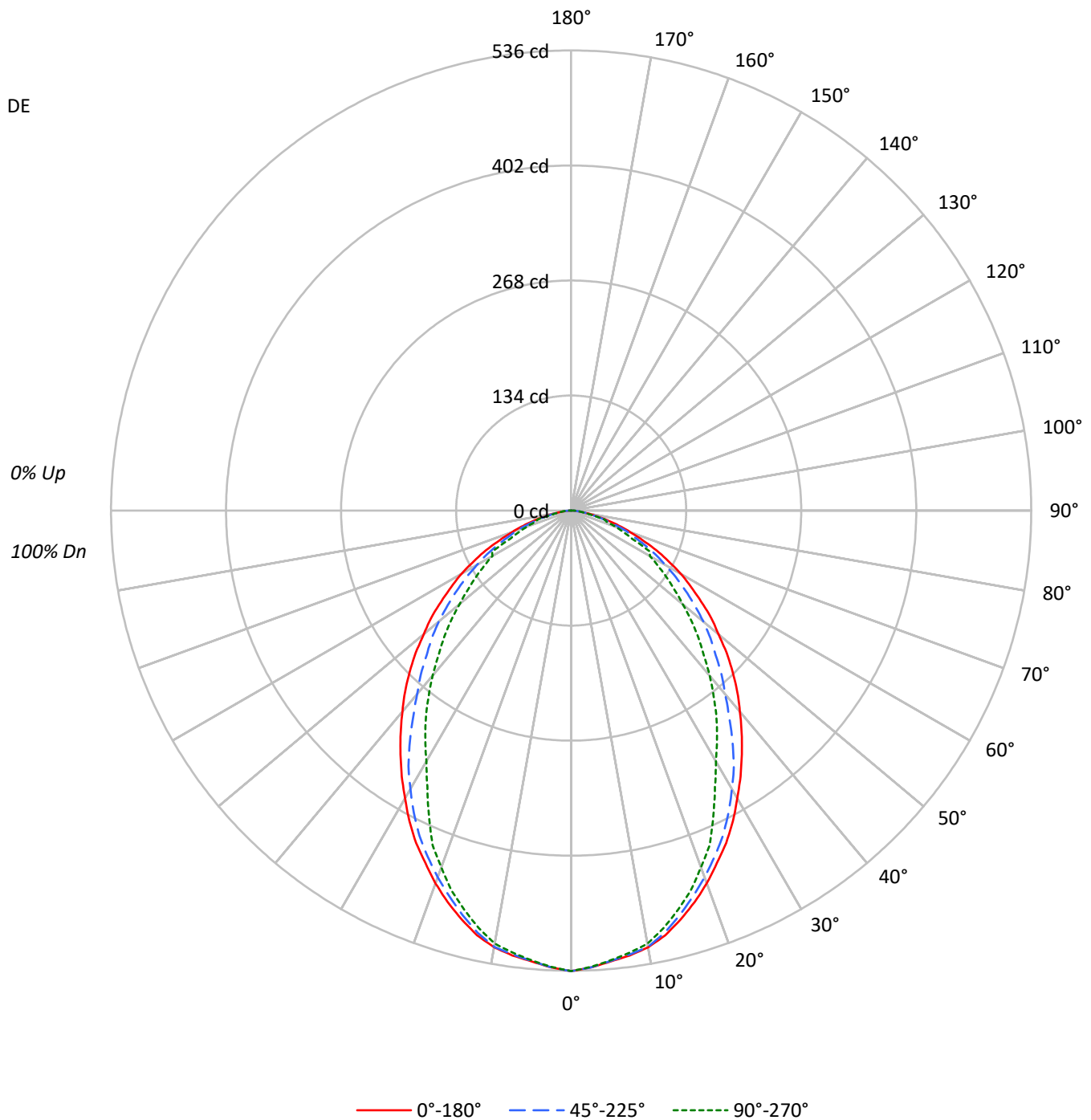
Lumens per Lamp: N/A  
Luminaire Lumens: 1053.0 lumens  
Efficiency: N/A  
Efficacy: 90.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5774	5774	5774
5°	5695	5689	5681
10°	5645	5639	5598
15°	5494	5438	5362
20°	5292	5206	5064
25°	5074	4963	4654
30°	4809	4655	4192
35°	4554	4302	3879
40°	4295	3920	3528
45°	4049	3624	3191
50°	3749	3364	2845
55°	3468	3050	2548
60°	3178	2723	2282
65°	2797	2384	2022
70°	2304	2090	1718
75°	1830	1597	1676
80°	1227	1153	1079
85°	766	914	1074

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4049 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.9	4.7
10°-20°	137.0	13.0
20°-30°	189.7	18.0
30°-40°	202.3	19.2
40°-50°	184.5	17.5
50°-60°	144.6	13.7
60°-70°	94.2	8.9
70°-80°	41.7	4.0
80°-90°	9.0	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°	376.7	35.8
0°-40°	578.9	55.0
0°-60°	908.1	86.2
0°-90°	1053.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1053.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	536	536	536	536	536	
5°	527	526	526	526	526	50
15°	493	493	488	483	481	139
25°	427	425	418	403	392	196
35°	347	344	327	303	295	217
45°	266	260	238	218	210	205
55°	185	179	162	143	136	166
65°	110	104	94	96	79	108
75°	44	41	38	37	40	47
85°	6	7	7	8	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	536.4	536.4	536.4	536.4	536.4
2.5°	532.7	532.7	532.7	532.0	532.0
5°	527.1	526.5	526.5	525.8	525.8
7.5°	522.7	522.1	521.5	520.9	519.6
10°	516.5	516.5	515.9	512.8	512.2
12.5°	506.6	506.0	503.5	499.2	497.9
15°	493.0	493.0	488.0	483.1	481.2
17.5°	478.1	477.5	471.3	466.3	463.8
20°	462.0	460.7	454.5	446.5	442.1
22.5°	444.0	444.0	436.5	426.0	421.7
25°	427.2	424.8	417.9	403.1	391.9
27.5°	408.0	404.3	396.9	375.8	362.8
30°	386.9	385.1	374.5	347.3	337.3
32.5°	367.1	364.0	352.8	324.3	316.2
35°	346.6	344.2	327.4	302.6	295.2
37.5°	326.2	323.1	302.0	282.1	272.8
40°	305.7	302.0	279.0	261.1	251.1
42.5°	286.5	281.5	259.2	240.0	228.8
45°	266.0	260.4	238.1	218.3	209.6
47.5°	245.6	240.6	220.1	199.7	189.7
50°	223.9	219.5	200.9	180.4	169.9
52.5°	205.9	199.1	181.1	160.6	151.9
55°	184.8	179.2	162.5	143.2	135.8
57.5°	165.6	160.0	144.5	126.5	120.3
60°	147.6	139.5	126.5	111.0	106.0
62.5°	127.7	121.5	110.4	97.4	103.6
65°	109.8	103.6	93.6	95.5	79.4
67.5°	89.9	86.8	78.1	69.5	67.0
70°	73.2	69.5	66.4	57.0	54.6
72.5°	58.3	54.6	50.2	45.3	43.4
75°	44.0	40.9	38.4	36.6	40.3
77.5°	30.4	29.1	27.3	25.4	24.8
80°	19.8	19.2	18.6	18.0	17.4
82.5°	11.8	11.8	11.8	11.8	11.8
85°	6.2	6.8	7.4	8.1	8.7
87.5°	3.7	3.7	4.3	5.0	5.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)