

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: P558741

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-82-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558741  
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-LD4-1LO-40-UNV-82-86-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

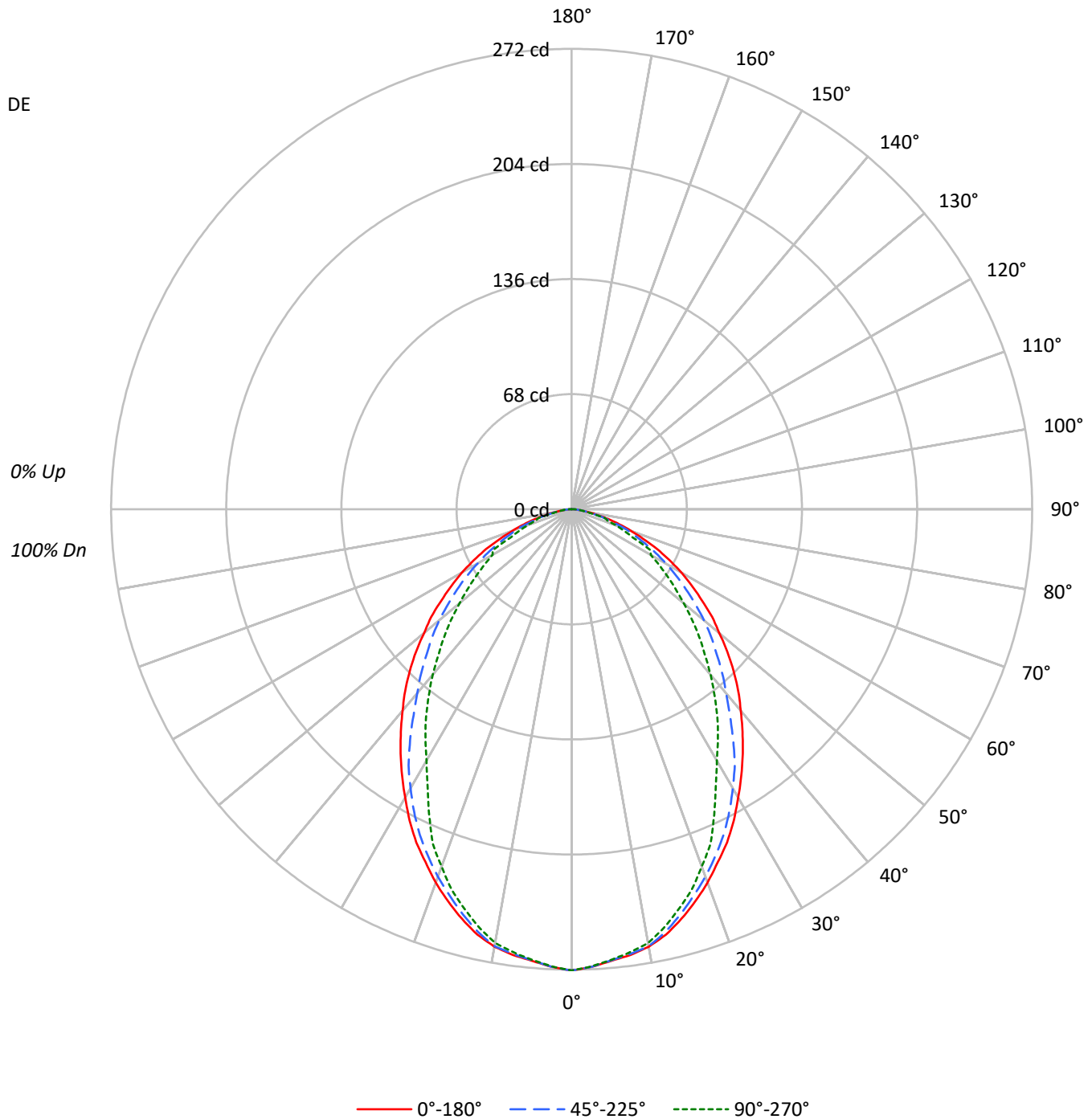
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 535.0 lumens  
Efficiency: N/A  
Efficacy: 92.2 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): 5.8  
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	47	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°	2933	2933	2933
5°	2894	2890	2887
10°	2868	2865	2844
15°	2791	2763	2725
20°	2688	2645	2573
25°	2578	2521	2365
30°	2444	2365	2130
35°	2314	2185	1971
40°	2182	1992	1793
45°	2058	1842	1621
50°	1904	1710	1445
55°	1762	1548	1295
60°	1615	1384	1160
65°	1421	1212	1026
70°	1171	1061	872
75°	932	811	853
80°	626	589	545
85°	395	469	543

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2058 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.4	4.7
10°-20°	69.6	13.0
20°-30°	96.4	18.0
30°-40°	102.8	19.2
40°-50°	93.8	17.5
50°-60°	73.5	13.7
60°-70°	47.9	9.0
70°-80°	21.2	4.0
80°-90°	4.6	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°	191.4	35.8
0°-40°	294.1	55.0
0°-60°	461.3	86.2
0°-90°	535.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	535.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	272	272	272	272	272	
5°	268	268	268	267	267	25
15°	250	250	248	245	244	70
25°	217	216	212	205	199	100
35°	176	175	166	154	150	110
45°	135	132	121	111	106	104
55°	94	91	82	73	69	84
65°	56	53	48	48	40	55
75°	22	21	20	19	20	24
85°	3	4	4	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	272.5	272.5	272.5	272.5	272.5
2.5°	270.6	270.6	270.6	270.3	270.3
5°	267.8	267.5	267.5	267.2	267.2
7.5°	265.6	265.3	265.0	264.6	264.0
10°	262.4	262.4	262.1	260.5	260.2
12.5°	257.4	257.1	255.8	253.6	253.0
15°	250.5	250.5	247.9	245.4	244.5
17.5°	242.9	242.6	239.4	236.9	235.7
20°	234.7	234.1	230.9	226.8	224.6
22.5°	225.6	225.6	221.8	216.4	214.2
25°	217.1	215.8	212.3	204.8	199.1
27.5°	207.3	205.4	201.6	190.9	184.3
30°	196.6	195.6	190.3	176.4	171.4
32.5°	186.5	184.9	179.3	164.8	160.7
35°	176.1	174.9	166.3	153.7	150.0
37.5°	165.7	164.1	153.4	143.3	138.6
40°	155.3	153.4	141.8	132.6	127.6
42.5°	145.6	143.0	131.7	121.9	116.3
45°	135.2	132.3	121.0	110.9	106.5
47.5°	124.8	122.2	111.8	101.4	96.4
50°	113.7	111.5	102.1	91.7	86.3
52.5°	104.6	101.1	92.0	81.6	77.2
55°	93.9	91.1	82.5	72.8	69.0
57.5°	84.1	81.3	73.4	64.3	61.1
60°	75.0	70.9	64.3	56.4	53.9
62.5°	64.9	61.8	56.1	49.5	52.6
65°	55.8	52.6	47.6	48.5	40.3
67.5°	45.7	44.1	39.7	35.3	34.0
70°	37.2	35.3	33.7	29.0	27.7
72.5°	29.6	27.7	25.5	23.0	22.1
75°	22.4	20.8	19.5	18.6	20.5
77.5°	15.4	14.8	13.9	12.9	12.6
80°	10.1	9.8	9.5	9.1	8.8
82.5°	6.0	6.0	6.0	6.0	6.0
85°	3.2	3.5	3.8	4.1	4.4
87.5°	1.9	1.9	2.2	2.5	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)