

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: P558750

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-82-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558750  
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-82-97-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

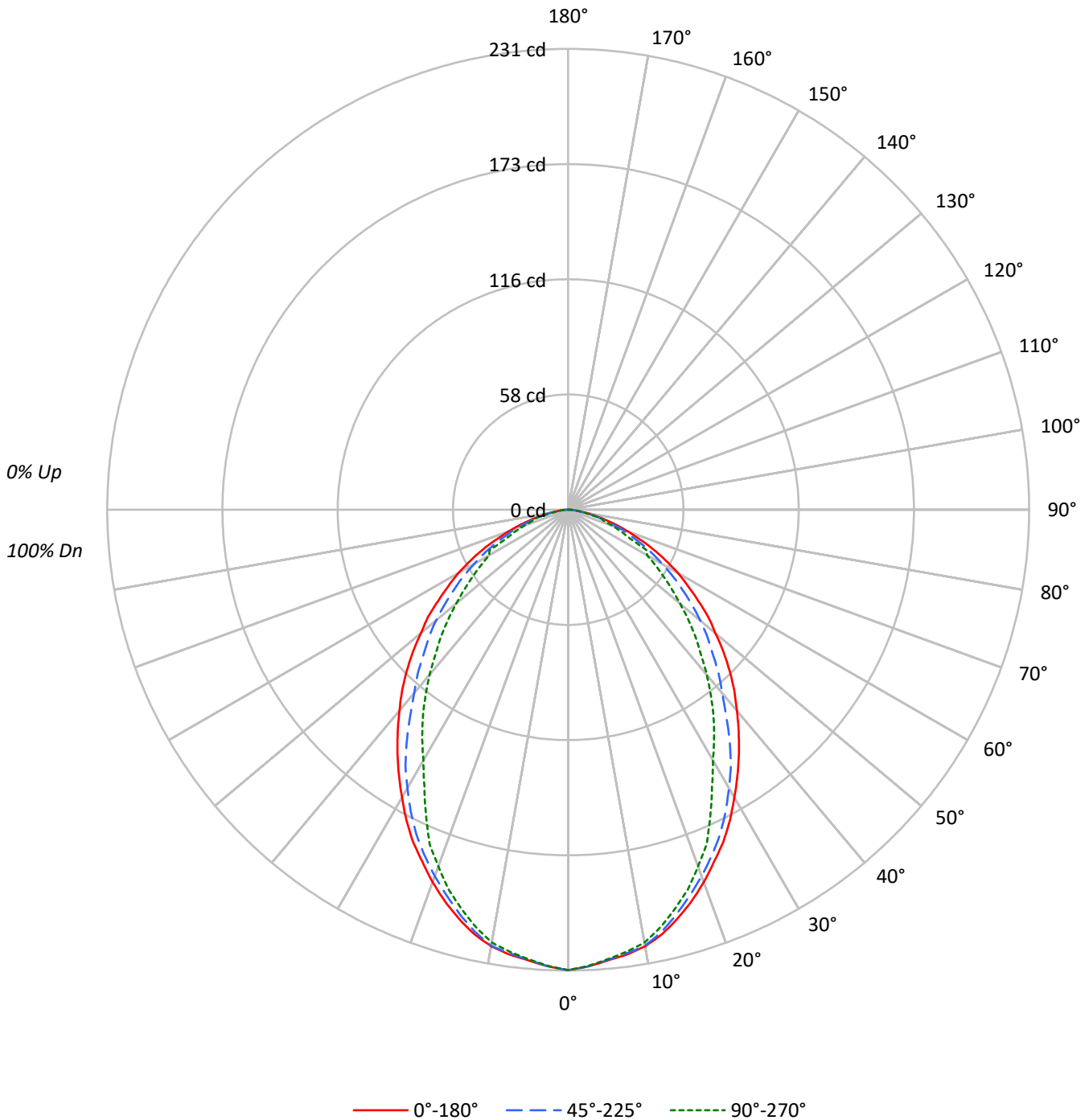
Lumens per Lamp: N/A  
Luminaire Lumens: 453.0 lumens  
Efficiency: N/A  
Efficacy: 78.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																												
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°	2484	2484	2484
5°	2451	2447	2444
10°	2429	2425	2408
15°	2364	2339	2307
20°	2276	2239	2179
25°	2183	2135	2002
30°	2069	2002	1803
35°	1959	1851	1669
40°	1848	1686	1518
45°	1741	1559	1373
50°	1613	1447	1224
55°	1492	1312	1096
60°	1367	1171	982
65°	1202	1026	869
70°	991	897	740
75°	786	686	719
80°	527	496	465
85°	333	395	457

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1741 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.5	4.7
10°-20°	58.9	13.0
20°-30°	81.6	18.0
30°-40°	87.0	19.2
40°-50°	79.4	17.5
50°-60°	62.2	13.7
60°-70°	40.5	8.9
70°-80°	17.9	4.0
80°-90°	3.9	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°	162.0	35.8
0°-40°	249.1	55.0
0°-60°	390.6	86.2
0°-90°	453.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	453.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	231	231	231	231	231	
5°	227	226	226	226	226	22
15°	212	212	210	208	207	60
25°	184	183	180	173	169	84
35°	149	148	141	130	127	93
45°	114	112	102	94	90	88
55°	80	77	70	62	58	71
65°	47	44	40	41	34	47
75°	19	18	16	16	17	20
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	230.8	230.8	230.8	230.8	230.8
2.5°	229.2	229.2	229.2	228.9	228.9
5°	226.8	226.5	226.5	226.2	226.2
7.5°	224.9	224.6	224.3	224.1	223.5
10°	222.2	222.2	221.9	220.6	220.3
12.5°	217.9	217.7	216.6	214.7	214.2
15°	212.1	212.1	209.9	207.8	207.0
17.5°	205.7	205.4	202.7	200.6	199.5
20°	198.7	198.2	195.5	192.1	190.2
22.5°	191.0	191.0	187.8	183.3	181.4
25°	183.8	182.7	179.8	173.4	168.6
27.5°	175.5	173.9	170.7	161.7	156.1
30°	166.5	165.7	161.1	149.4	145.1
32.5°	157.9	156.6	151.8	139.5	136.1
35°	149.1	148.1	140.9	130.2	127.0
37.5°	140.3	139.0	129.9	121.4	117.4
40°	131.5	129.9	120.0	112.3	108.0
42.5°	123.2	121.1	111.5	103.2	98.4
45°	114.4	112.0	102.4	93.9	90.2
47.5°	105.6	103.5	94.7	85.9	81.6
50°	96.3	94.4	86.4	77.6	73.1
52.5°	88.6	85.6	77.9	69.1	65.4
55°	79.5	77.1	69.9	61.6	58.4
57.5°	71.2	68.8	62.2	54.4	51.8
60°	63.5	60.0	54.4	47.8	45.6
62.5°	55.0	52.3	47.5	41.9	44.5
65°	47.2	44.5	40.3	41.1	34.1
67.5°	38.7	37.3	33.6	29.9	28.8
70°	31.5	29.9	28.5	24.5	23.5
72.5°	25.1	23.5	21.6	19.5	18.7
75°	18.9	17.6	16.5	15.7	17.3
77.5°	13.1	12.5	11.7	10.9	10.7
80°	8.5	8.3	8.0	7.7	7.5
82.5°	5.1	5.1	5.1	5.1	5.1
85°	2.7	2.9	3.2	3.5	3.7
87.5°	1.6	1.6	1.9	2.1	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)