

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: P558618

Luminaire Tested: FSR-12-1-LD4-1HI-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558618  
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-LD4-1HI-50-UNV-82-94-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

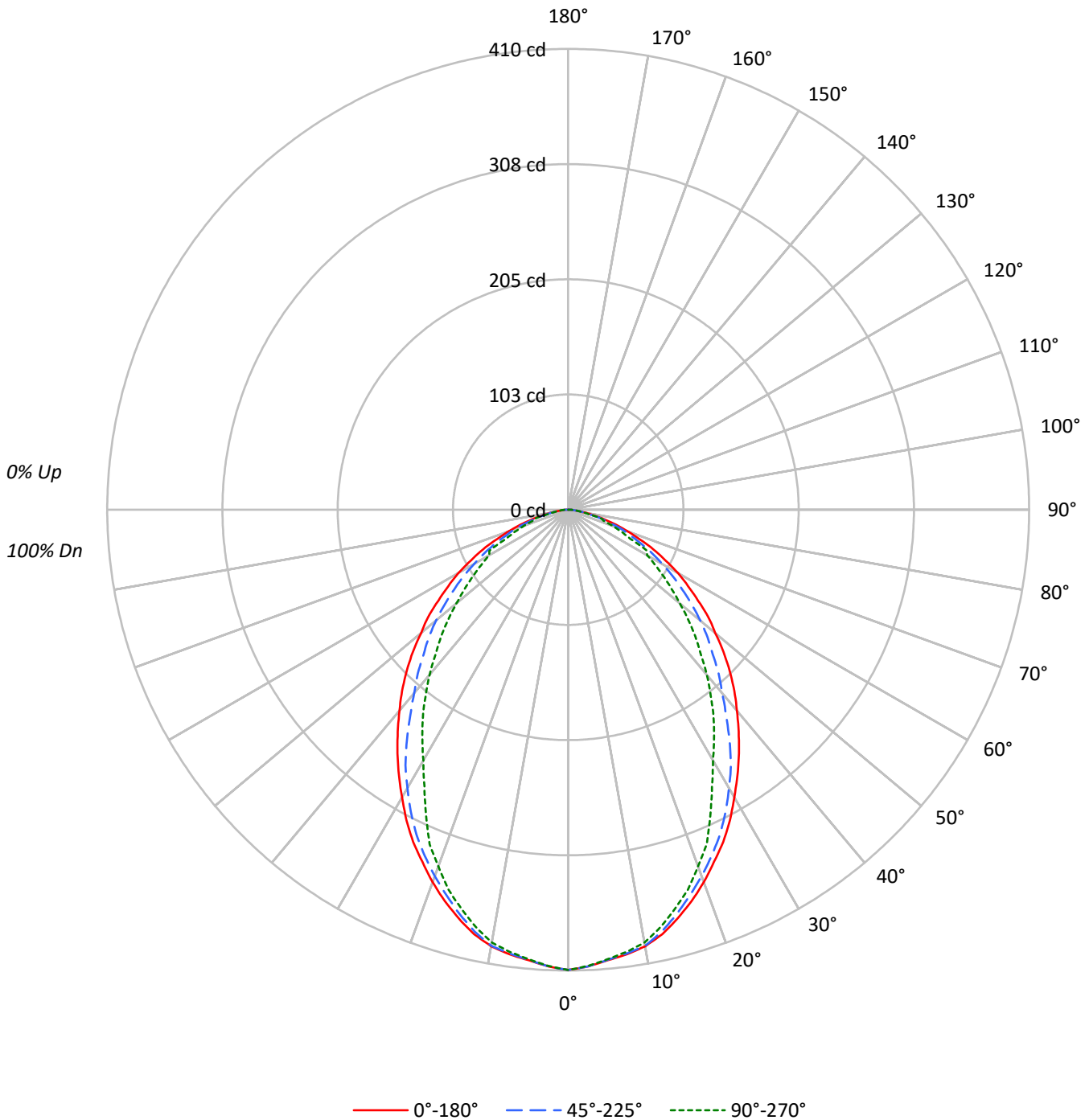
Lumens per Lamp: N/A  
Luminaire Lumens: 804.0 lumens  
Efficiency: N/A  
Efficacy: 74.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4408	4408	4408
5°	4348	4344	4338
10°	4311	4305	4275
15°	4194	4152	4094
20°	4040	3975	3867
25°	3874	3790	3553
30°	3672	3555	3202
35°	3478	3285	2962
40°	3280	2994	2695
45°	3092	2767	2436
50°	2862	2569	2172
55°	2648	2327	1946
60°	2426	2080	1744
65°	2134	1821	1543
70°	1759	1596	1312
75°	1397	1223	1281
80°	942	880	824
85°	580	704	815

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3092 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.1	4.7
10°-20°	104.6	13.0
20°-30°	144.8	18.0
30°-40°	154.5	19.2
40°-50°	140.9	17.5
50°-60°	110.4	13.7
60°-70°	72.0	8.9
70°-80°	31.9	4.0
80°-90°	6.8	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°	287.6	35.8
0°-40°	442.0	55.0
0°-60°	693.3	86.2
0°-90°	804.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	804.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	410	410	410	410	410	
5°	402	402	402	402	402	38
15°	376	376	373	369	367	106
25°	326	324	319	308	299	150
35°	265	263	250	231	225	165
45°	203	199	182	167	160	156
55°	141	137	124	109	104	127
65°	84	79	72	73	61	83
75°	34	31	29	28	31	36
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	409.5	409.5	409.5	409.5	409.5
2.5°	406.7	406.7	406.7	406.2	406.2
5°	402.4	402.0	402.0	401.5	401.5
7.5°	399.1	398.7	398.2	397.7	396.8
10°	394.4	394.4	393.9	391.6	391.1
12.5°	386.8	386.3	384.5	381.1	380.2
15°	376.4	376.4	372.6	368.8	367.4
17.5°	365.0	364.6	359.8	356.0	354.2
20°	352.7	351.8	347.0	340.9	337.6
22.5°	339.0	339.0	333.3	325.3	322.0
25°	326.2	324.3	319.1	307.8	299.2
27.5°	311.5	308.7	303.0	286.9	277.0
30°	295.4	294.0	286.0	265.1	257.6
32.5°	280.3	277.9	269.4	247.6	241.5
35°	264.7	262.8	250.0	231.1	225.4
37.5°	249.0	246.7	230.6	215.4	208.3
40°	233.4	230.6	213.1	199.3	191.8
42.5°	218.7	215.0	197.9	183.2	174.7
45°	203.1	198.9	181.8	166.7	160.0
47.5°	187.5	183.7	168.1	152.5	144.9
50°	170.9	167.6	153.4	137.8	129.7
52.5°	157.2	152.0	138.3	122.6	116.0
55°	141.1	136.8	124.0	109.4	103.7
57.5°	126.4	122.2	110.3	96.6	91.9
60°	112.7	106.5	96.6	84.8	81.0
62.5°	97.5	92.8	84.3	74.3	79.1
65°	83.8	79.1	71.5	72.9	60.6
67.5°	68.7	66.3	59.7	53.0	51.1
70°	55.9	53.0	50.7	43.6	41.7
72.5°	44.5	41.7	38.4	34.6	33.1
75°	33.6	31.2	29.4	27.9	30.8
77.5°	23.2	22.3	20.8	19.4	18.9
80°	15.2	14.7	14.2	13.7	13.3
82.5°	9.0	9.0	9.0	9.0	9.0
85°	4.7	5.2	5.7	6.2	6.6
87.5°	2.8	2.8	3.3	3.8	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)