

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: P558569

Luminaire Tested: FSR-12-1-LD4-1HI-40-UNV-93-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558569  
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-40-UNV-93-88-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

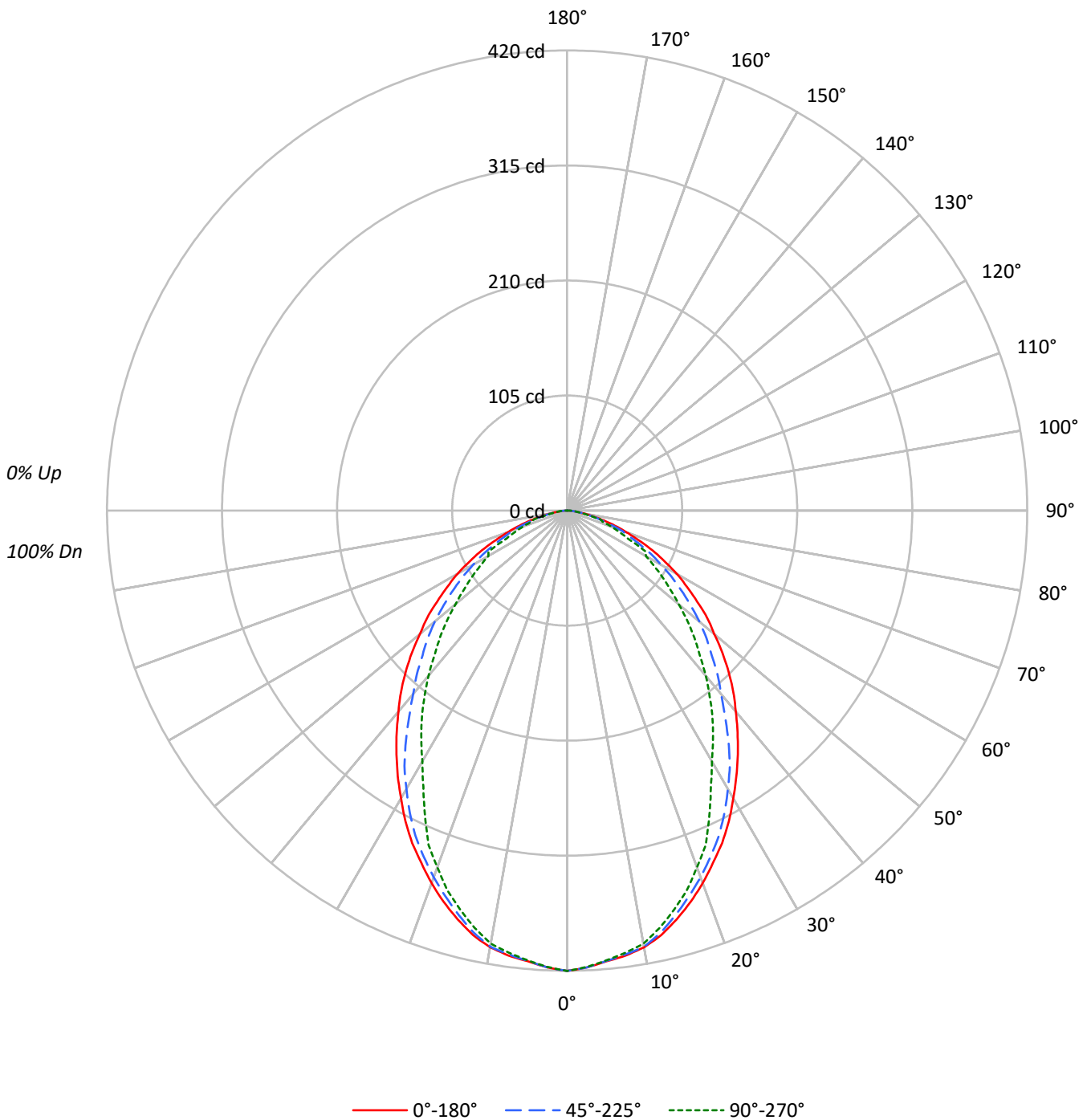
Lumens per Lamp: N/A  
Luminaire Lumens: 825.0 lumens  
Efficiency: N/A  
Efficacy: 76.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4523	4523	4523
5°	4462	4457	4452
10°	4423	4418	4386
15°	4304	4260	4201
20°	4145	4079	3968
25°	3975	3890	3646
30°	3769	3647	3285
35°	3569	3370	3039
40°	3365	3072	2765
45°	3172	2841	2500
50°	2937	2636	2229
55°	2717	2389	1997
60°	2489	2133	1789
65°	2190	1869	1584
70°	1803	1637	1347
75°	1435	1252	1314
80°	961	905	843
85°	605	716	840

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3172 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.1	4.7
10°-20°	107.4	13.0
20°-30°	148.6	18.0
30°-40°	158.5	19.2
40°-50°	144.6	17.5
50°-60°	113.3	13.7
60°-70°	73.8	8.9
70°-80°	32.7	4.0
80°-90°	7.0	0.8
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°	295.1	35.8
0°-40°	453.6	55.0
0°-60°	711.5	86.2
0°-90°	825.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	825.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	420	420	420	420	420	
5°	413	412	412	412	412	39
15°	386	386	382	378	377	109
25°	335	333	328	316	307	154
35°	272	270	256	237	231	170
45°	208	204	187	171	164	161
55°	145	140	127	112	106	130
65°	86	81	73	75	62	85
75°	34	32	30	29	32	37
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°	420.2	420.2	420.2	420.2	420.2
2.5°	417.3	417.3	417.3	416.8	416.8
5°	413.0	412.5	412.5	412.0	412.0
7.5°	409.6	409.1	408.6	408.1	407.1
10°	404.7	404.7	404.2	401.8	401.3
12.5°	396.9	396.4	394.5	391.1	390.1
15°	386.2	386.2	382.3	378.5	377.0
17.5°	374.6	374.1	369.2	365.3	363.4
20°	361.9	361.0	356.1	349.8	346.4
22.5°	347.9	347.9	342.0	333.8	330.4
25°	334.7	332.8	327.5	315.8	307.0
27.5°	319.7	316.8	310.9	294.4	284.2
30°	303.2	301.7	293.4	272.1	264.3
32.5°	287.6	285.2	276.4	254.1	247.8
35°	271.6	269.6	256.5	237.1	231.3
37.5°	255.5	253.1	236.6	221.1	213.8
40°	239.5	236.6	218.6	204.5	196.8
42.5°	224.5	220.6	203.1	188.0	179.3
45°	208.4	204.0	186.6	171.0	164.2
47.5°	192.4	188.5	172.5	156.4	148.7
50°	175.4	172.0	157.4	141.4	133.1
52.5°	161.3	156.0	141.9	125.8	119.0
55°	144.8	140.4	127.3	112.2	106.4
57.5°	129.7	125.3	113.2	99.1	94.3
60°	115.6	109.3	99.1	87.0	83.1
62.5°	100.1	95.2	86.5	76.3	81.1
65°	86.0	81.1	73.4	74.8	62.2
67.5°	70.4	68.0	61.2	54.4	52.5
70°	57.3	54.4	52.0	44.7	42.8
72.5°	45.7	42.8	39.4	35.5	34.0
75°	34.5	32.1	30.1	28.7	31.6
77.5°	23.8	22.8	21.4	19.9	19.4
80°	15.5	15.1	14.6	14.1	13.6
82.5°	9.2	9.2	9.2	9.2	9.2
85°	4.9	5.3	5.8	6.3	6.8
87.5°	2.9	2.9	3.4	3.9	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)