

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: P558688

Luminaire Tested: FSR-12-1-LD4-1LO-35-UNV-93-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558688  
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-35-UNV-93-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

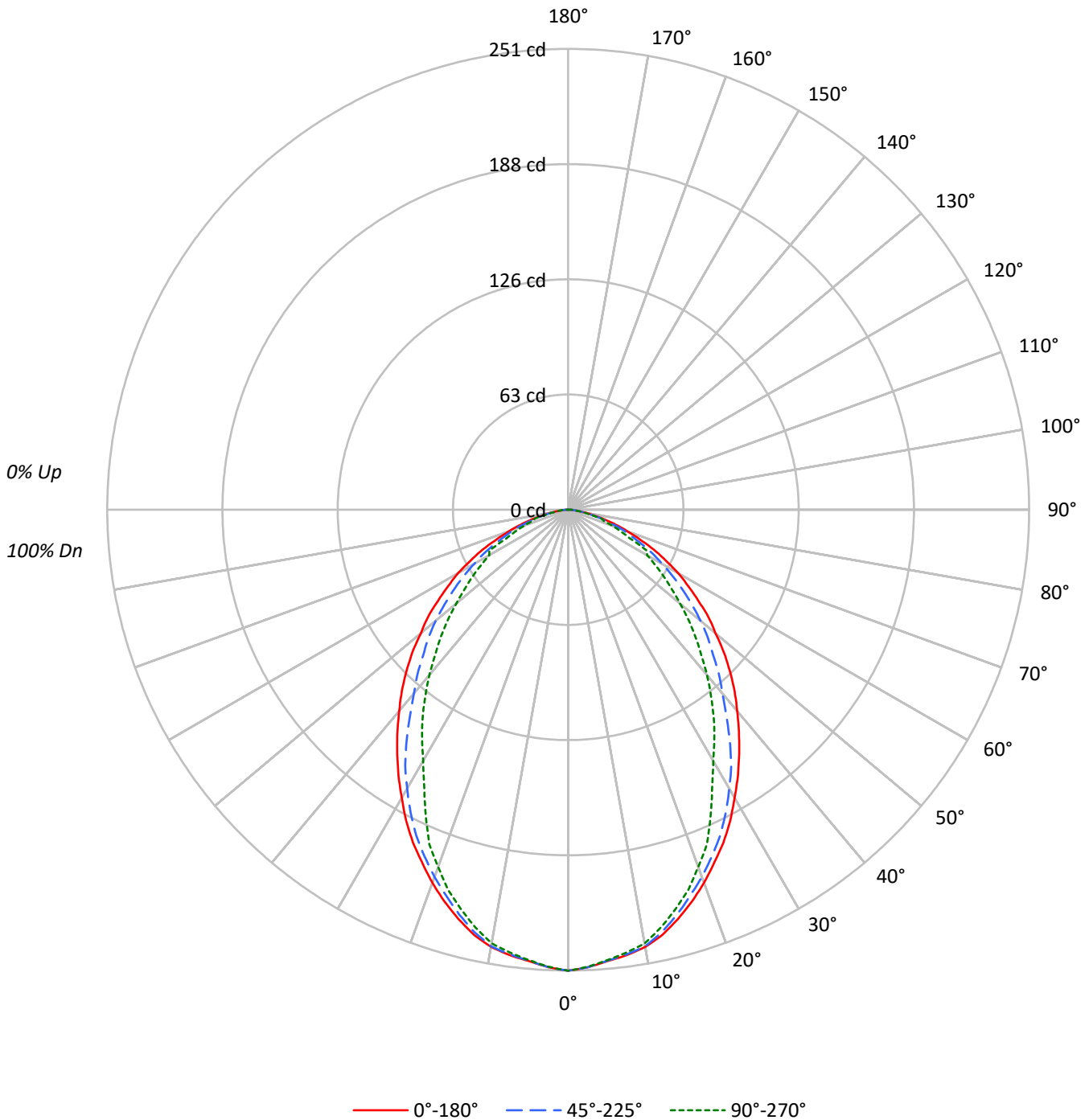
Lumens per Lamp: N/A  
Luminaire Lumens: 493.0 lumens  
Efficiency: N/A  
Efficacy: 85.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2703	2703	2703
5°	2667	2663	2660
10°	2643	2640	2621
15°	2572	2546	2511
20°	2478	2438	2371
25°	2375	2324	2179
30°	2252	2180	1963
35°	2133	2014	1816
40°	2011	1835	1652
45°	1895	1697	1493
50°	1755	1576	1331
55°	1623	1428	1194
60°	1488	1274	1068
65°	1309	1116	947
70°	1079	979	803
75°	857	749	786
80°	576	539	502
85°	358	432	506

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1895 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.4	4.7
10°-20°	64.2	13.0
20°-30°	88.8	18.0
30°-40°	94.7	19.2
40°-50°	86.4	17.5
50°-60°	67.7	13.7
60°-70°	44.1	8.9
70°-80°	19.5	4.0
80°-90°	4.2	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°	176.4	35.8
0°-40°	271.1	55.0
0°-60°	425.1	86.2
0°-90°	493.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	493.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	251	251	251	251	251	
5°	247	246	246	246	246	23
15°	231	231	228	226	225	65
25°	200	199	196	189	184	92
35°	162	161	153	142	138	101
45°	124	122	112	102	98	96
55°	86	84	76	67	64	78
65°	51	48	44	45	37	51
75°	21	19	18	17	19	22
85°	3	3	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°	251.1	251.1	251.1	251.1	251.1
2.5°	249.4	249.4	249.4	249.1	249.1
5°	246.8	246.5	246.5	246.2	246.2
7.5°	244.7	244.5	244.2	243.9	243.3
10°	241.8	241.8	241.5	240.1	239.8
12.5°	237.2	236.9	235.7	233.7	233.1
15°	230.8	230.8	228.5	226.2	225.3
17.5°	223.8	223.5	220.6	218.3	217.2
20°	216.3	215.7	212.8	209.0	207.0
22.5°	207.9	207.9	204.4	199.5	197.4
25°	200.0	198.9	195.7	188.7	183.5
27.5°	191.0	189.3	185.8	175.9	169.8
30°	181.2	180.3	175.4	162.6	157.9
32.5°	171.9	170.4	165.2	151.8	148.1
35°	162.3	161.1	153.3	141.7	138.2
37.5°	152.7	151.3	141.4	132.1	127.7
40°	143.1	141.4	130.6	122.2	117.6
42.5°	134.1	131.8	121.4	112.4	107.1
45°	124.5	121.9	111.5	102.2	98.1
47.5°	115.0	112.6	103.1	93.5	88.8
50°	104.8	102.8	94.1	84.5	79.5
52.5°	96.4	93.2	84.8	75.2	71.1
55°	86.5	83.9	76.1	67.1	63.6
57.5°	77.5	74.9	67.6	59.2	56.3
60°	69.1	65.3	59.2	52.0	49.6
62.5°	59.8	56.9	51.7	45.6	48.5
65°	51.4	48.5	43.8	44.7	37.2
67.5°	42.1	40.6	36.6	32.5	31.4
70°	34.3	32.5	31.1	26.7	25.5
72.5°	27.3	25.5	23.5	21.2	20.3
75°	20.6	19.2	18.0	17.1	18.9
77.5°	14.2	13.6	12.8	11.9	11.6
80°	9.3	9.0	8.7	8.4	8.1
82.5°	5.5	5.5	5.5	5.5	5.5
85°	2.9	3.2	3.5	3.8	4.1
87.5°	1.7	1.7	2.0	2.3	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)