

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: P558830

Luminaire Tested: FSR-12-1-LD4-1LO-50-UNV-93-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558830  
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-50-UNV-93-97-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

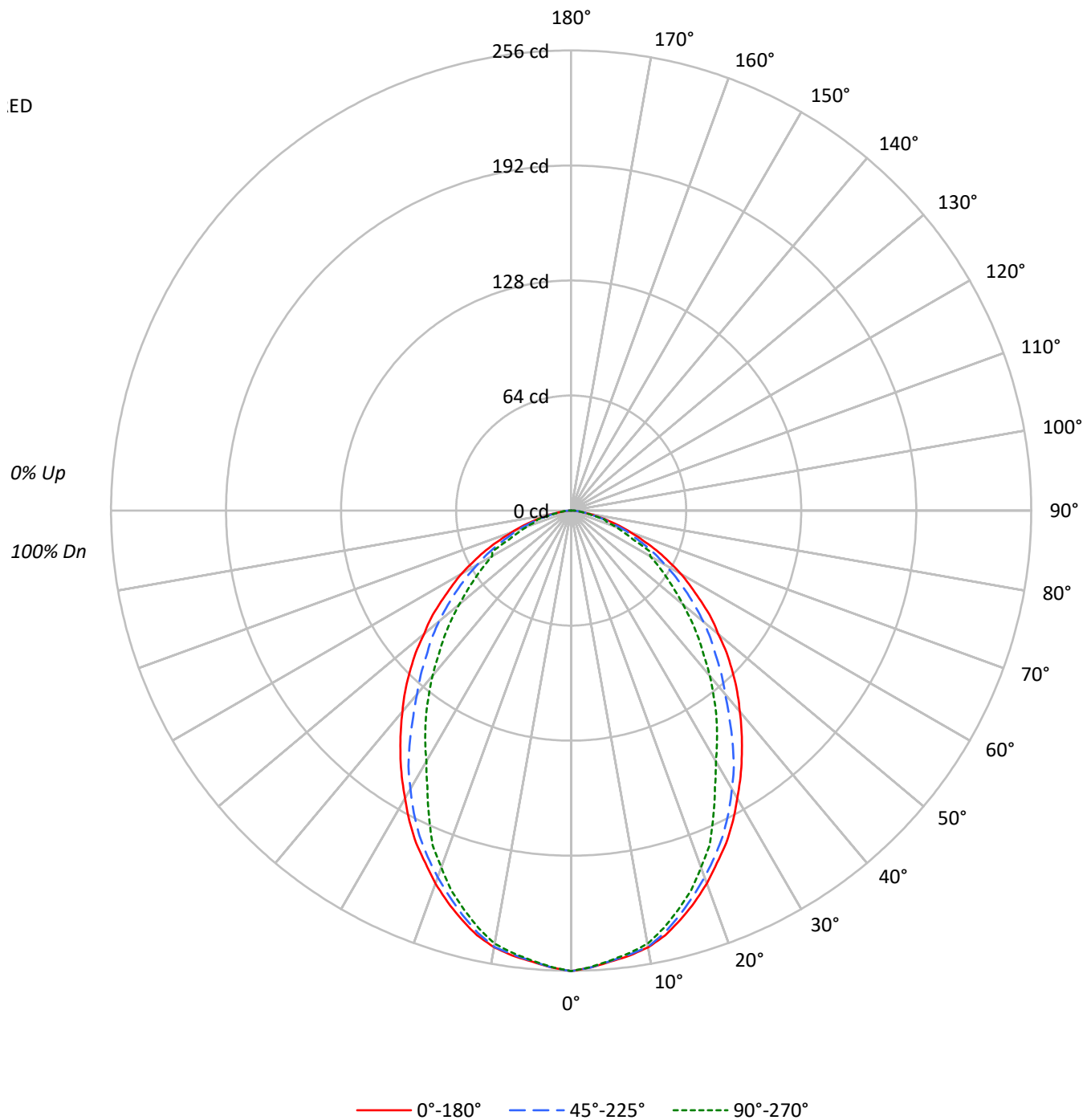
Lumens per Lamp: N/A  
Luminaire Lumens: 503.0 lumens  
Efficiency: N/A  
Efficacy: 86.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	2758	2758	2758
5°	2721	2717	2714
10°	2696	2693	2675
15°	2624	2598	2562
20°	2528	2487	2419
25°	2424	2371	2223
30°	2297	2224	2002
35°	2176	2055	1853
40°	2051	1873	1686
45°	1935	1731	1524
50°	1790	1608	1360
55°	1657	1456	1218
60°	1518	1300	1091
65°	1335	1138	965
70°	1102	998	821
75°	873	765	803
80°	589	552	514
85°	371	445	506

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1935 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.8	4.7
10°-20°	65.5	13.0
20°-30°	90.6	18.0
30°-40°	96.6	19.2
40°-50°	88.2	17.5
50°-60°	69.1	13.7
60°-70°	45.0	8.9
70°-80°	19.9	4.0
80°-90°	4.3	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°	179.9	35.8
0°-40°	276.6	55.0
0°-60°	433.8	86.2
0°-90°	503.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	503.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	252	252	252	251	251	24
15°	236	236	233	231	230	66
25°	204	203	200	192	187	94
35°	166	164	156	145	141	104
45°	127	124	114	104	100	98
55°	88	86	78	68	65	79
65°	52	50	45	46	38	52
75°	21	20	18	18	19	23
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°	256.2	256.2	256.2	256.2	256.2
2.5°	254.4	254.4	254.4	254.1	254.1
5°	251.8	251.5	251.5	251.2	251.2
7.5°	249.7	249.4	249.1	248.8	248.2
10°	246.7	246.7	246.4	245.0	244.7
12.5°	242.0	241.7	240.5	238.4	237.9
15°	235.5	235.5	233.1	230.7	229.9
17.5°	228.4	228.1	225.1	222.7	221.6
20°	220.7	220.1	217.1	213.3	211.2
22.5°	212.1	212.1	208.5	203.5	201.4
25°	204.1	202.9	199.6	192.5	187.2
27.5°	194.9	193.1	189.6	179.5	173.3
30°	184.8	183.9	178.9	165.9	161.1
32.5°	175.4	173.9	168.5	154.9	151.1
35°	165.6	164.4	156.4	144.6	141.0
37.5°	155.8	154.3	144.3	134.8	130.3
40°	146.0	144.3	133.3	124.7	120.0
42.5°	136.8	134.5	123.8	114.6	109.3
45°	127.1	124.4	113.7	104.3	100.1
47.5°	117.3	114.9	105.2	95.4	90.6
50°	106.9	104.9	96.0	86.2	81.2
52.5°	98.3	95.1	86.5	76.7	72.6
55°	88.3	85.6	77.6	68.4	64.9
57.5°	79.1	76.4	69.0	60.4	57.5
60°	70.5	66.6	60.4	53.0	50.7
62.5°	61.0	58.1	52.7	46.5	49.5
65°	52.4	49.5	44.7	45.6	37.9
67.5°	43.0	41.5	37.3	33.2	32.0
70°	35.0	33.2	31.7	27.3	26.1
72.5°	27.8	26.1	24.0	21.6	20.7
75°	21.0	19.5	18.4	17.5	19.3
77.5°	14.5	13.9	13.0	12.1	11.8
80°	9.5	9.2	8.9	8.6	8.3
82.5°	5.6	5.6	5.6	5.6	5.6
85°	3.0	3.3	3.6	3.9	4.1
87.5°	1.8	1.8	2.1	2.4	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)