

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: P558761

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558761  
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-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**

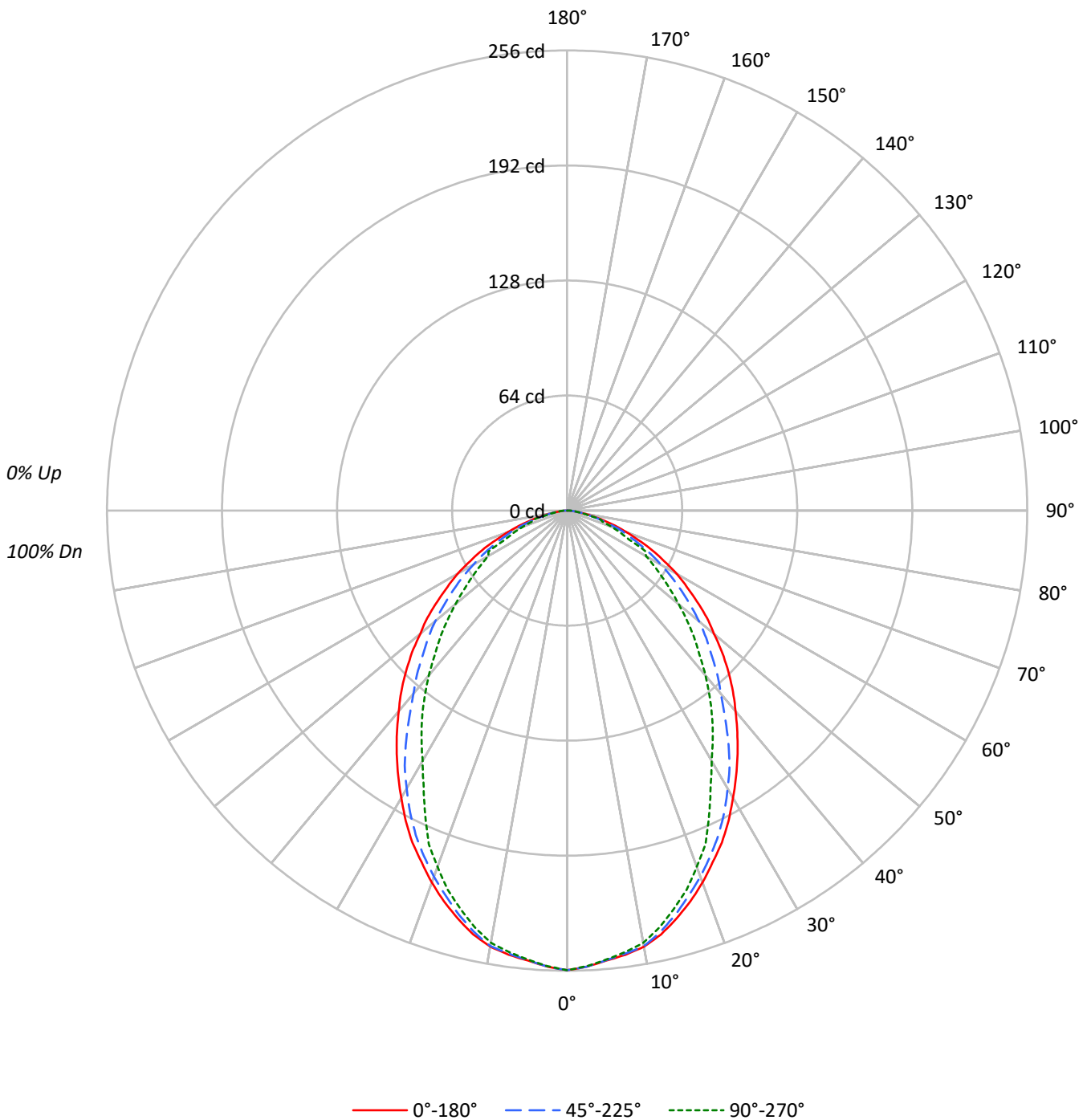
Lumens per Lamp: N/A  
Luminaire Lumens: 502.0 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	2752	2752	2752
5°	2715	2712	2709
10°	2692	2689	2669
15°	2619	2593	2556
20°	2522	2482	2415
25°	2419	2366	2219
30°	2293	2220	1999
35°	2172	2051	1849
40°	2047	1869	1682
45°	1930	1728	1521
50°	1787	1604	1356
55°	1653	1454	1214
60°	1516	1298	1089
65°	1332	1136	963
70°	1098	995	818
75°	873	761	799
80°	589	552	514
85°	371	432	506

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1930 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.8	4.7
10°-20°	65.3	13.0
20°-30°	90.4	18.0
30°-40°	96.4	19.2
40°-50°	88.0	17.5
50°-60°	68.9	13.7
60°-70°	44.9	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°	179.6	35.8
0°-40°	276.0	55.0
0°-60°	432.9	86.2
0°-90°	502.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	502.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	251	251	251	251	251	24
15°	235	235	233	230	229	66
25°	204	202	199	192	187	94
35°	165	164	156	144	141	103
45°	127	124	114	104	100	98
55°	88	85	78	68	65	79
65°	52	49	45	46	38	52
75°	21	20	18	17	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°	255.7	255.7	255.7	255.7	255.7
2.5°	253.9	253.9	253.9	253.6	253.6
5°	251.3	251.0	251.0	250.7	250.7
7.5°	249.2	248.9	248.6	248.3	247.7
10°	246.3	246.3	246.0	244.5	244.2
12.5°	241.5	241.2	240.0	238.0	237.4
15°	235.0	235.0	232.7	230.3	229.4
17.5°	227.9	227.6	224.7	222.3	221.1
20°	220.2	219.6	216.7	212.8	210.8
22.5°	211.7	211.7	208.1	203.1	201.0
25°	203.7	202.5	199.2	192.2	186.8
27.5°	194.5	192.7	189.2	179.1	172.9
30°	184.5	183.6	178.6	165.5	160.8
32.5°	175.0	173.5	168.2	154.6	150.8
35°	165.3	164.1	156.1	144.3	140.7
37.5°	155.5	154.0	144.0	134.5	130.1
40°	145.7	144.0	133.0	124.5	119.7
42.5°	136.6	134.2	123.6	114.4	109.1
45°	126.8	124.2	113.5	104.1	99.9
47.5°	117.1	114.7	104.9	95.2	90.5
50°	106.7	104.6	95.8	86.0	81.0
52.5°	98.1	94.9	86.3	76.6	72.4
55°	88.1	85.4	77.5	68.3	64.7
57.5°	78.9	76.3	68.9	60.3	57.4
60°	70.4	66.5	60.3	52.9	50.6
62.5°	60.9	57.9	52.6	46.4	49.4
65°	52.3	49.4	44.6	45.5	37.8
67.5°	42.9	41.4	37.2	33.1	31.9
70°	34.9	33.1	31.6	27.2	26.0
72.5°	27.8	26.0	23.9	21.6	20.7
75°	21.0	19.5	18.3	17.4	19.2
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	3.5	3.8	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)