

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: P558706

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-80-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558706  
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-80-85-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

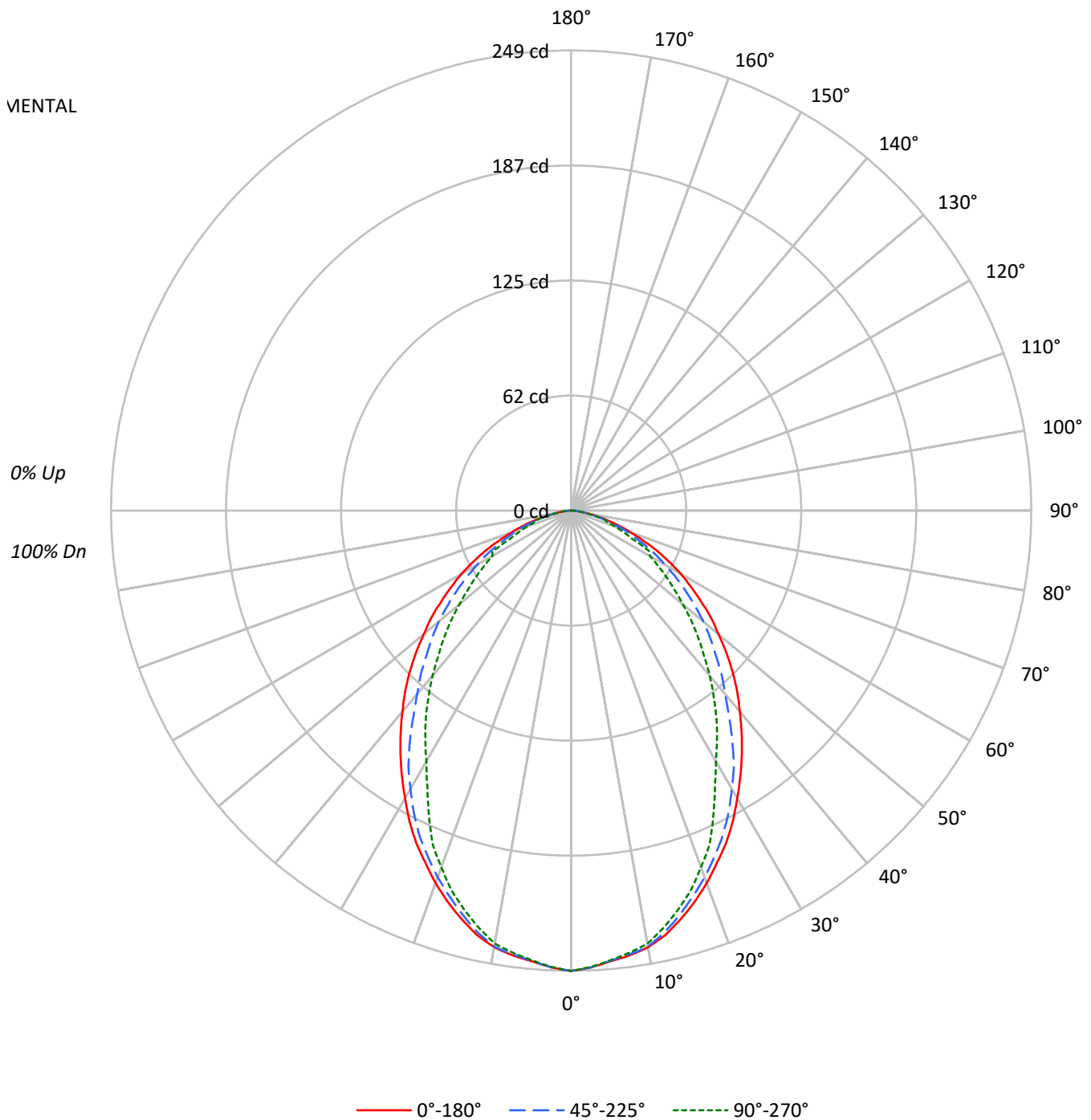
Lumens per Lamp: N/A  
Luminaire Lumens: 489.0 lumens  
Efficiency: N/A  
Efficacy: 84.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2681	2681	2681
5°	2645	2642	2639
10°	2622	2619	2600
15°	2551	2525	2491
20°	2457	2418	2352
25°	2356	2305	2162
30°	2234	2161	1948
35°	2116	1997	1802
40°	1995	1821	1638
45°	1880	1684	1481
50°	1742	1562	1321
55°	1610	1415	1184
60°	1475	1264	1059
65°	1299	1108	940
70°	1070	969	796
75°	848	744	778
80°	570	533	502
85°	358	432	494

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1880 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.2	4.7
10°-20°	63.6	13.0
20°-30°	88.1	18.0
30°-40°	93.9	19.2
40°-50°	85.7	17.5
50°-60°	67.1	13.7
60°-70°	43.8	8.9
70°-80°	19.4	4.0
80°-90°	4.2	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°	174.9	35.8
0°-40°	268.9	55.0
0°-60°	421.7	86.2
0°-90°	489.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	489.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	249	249	249	249	249	
5°	245	244	244	244	244	23
15°	229	229	227	224	224	64
25°	198	197	194	187	182	91
35°	161	160	152	140	137	101
45°	124	121	111	101	97	95
55°	86	83	75	66	63	77
65°	51	48	44	44	37	50
75°	20	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°	249.1	249.1	249.1	249.1	249.1
2.5°	247.4	247.4	247.4	247.1	247.1
5°	244.8	244.5	244.5	244.2	244.2
7.5°	242.8	242.5	242.2	241.9	241.3
10°	239.9	239.9	239.6	238.1	237.9
12.5°	235.3	235.0	233.8	231.8	231.2
15°	228.9	228.9	226.6	224.3	223.5
17.5°	222.0	221.7	218.9	216.5	215.4
20°	214.5	214.0	211.1	207.3	205.3
22.5°	206.2	206.2	202.7	197.8	195.8
25°	198.4	197.3	194.1	187.2	182.0
27.5°	189.5	187.8	184.3	174.5	168.5
30°	179.7	178.8	173.9	161.3	156.7
32.5°	170.5	169.0	163.9	150.6	146.9
35°	161.0	159.8	152.0	140.5	137.1
37.5°	151.5	150.0	140.2	131.0	126.7
40°	142.0	140.2	129.6	121.2	116.6
42.5°	133.0	130.7	120.4	111.4	106.3
45°	123.5	120.9	110.6	101.4	97.3
47.5°	114.0	111.7	102.2	92.7	88.1
50°	104.0	101.9	93.3	83.8	78.9
52.5°	95.6	92.4	84.1	74.6	70.6
55°	85.8	83.2	75.4	66.5	63.1
57.5°	76.9	74.3	67.1	58.7	55.9
60°	68.5	64.8	58.7	51.5	49.2
62.5°	59.3	56.4	51.3	45.2	48.1
65°	51.0	48.1	43.5	44.3	36.9
67.5°	41.8	40.3	36.3	32.3	31.1
70°	34.0	32.3	30.8	26.5	25.3
72.5°	27.1	25.3	23.3	21.0	20.2
75°	20.4	19.0	17.9	17.0	18.7
77.5°	14.1	13.5	12.7	11.8	11.5
80°	9.2	8.9	8.6	8.4	8.1
82.5°	5.5	5.5	5.5	5.5	5.5
85°	2.9	3.2	3.5	3.7	4.0
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)