

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: P560372

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560372  
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-12-2-LD4-2LO-35-UNV-80-86-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

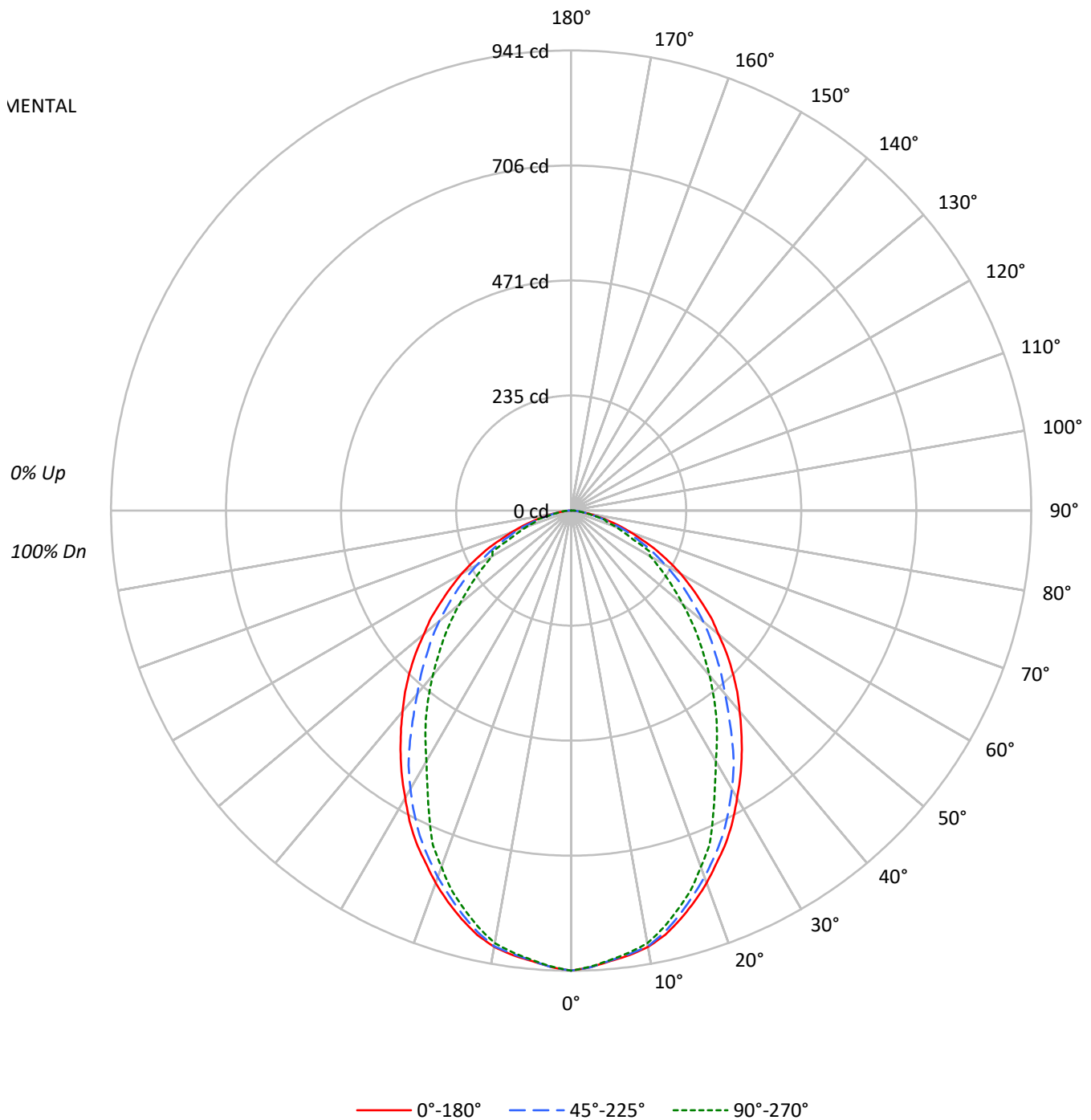
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1847.0 lumens  
Efficiency: N/A  
Efficacy: 78.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
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°	5063	5063	5063
5°	4995	4989	4983
10°	4951	4945	4910
15°	4818	4769	4703
20°	4641	4566	4442
25°	4450	4353	4082
30°	4218	4083	3677
35°	3995	3773	3401
40°	3767	3439	3095
45°	3551	3179	2798
50°	3287	2951	2495
55°	3041	2674	2235
60°	2787	2389	2002
65°	2451	2091	1773
70°	2019	1832	1506
75°	1605	1402	1470
80°	1079	1010	945
85°	673	809	939

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3551 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.6	4.7
10°-20°	240.4	13.0
20°-30°	332.8	18.0
30°-40°	354.8	19.2
40°-50°	323.7	17.5
50°-60°	253.6	13.7
60°-70°	165.3	8.9
70°-80°	73.2	4.0
80°-90°	15.7	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°	660.7	35.8
0°-40°	1015.5	55.0
0°-60°	1592.8	86.2
0°-90°	1847.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1847.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	941	941	941	941	941	
5°	924	923	923	922	922	88
15°	865	865	856	847	844	243
25°	749	745	733	707	687	344
35°	608	604	574	531	518	380
45°	467	457	418	383	368	359
55°	324	314	285	251	238	291
65°	192	182	164	168	139	190
75°	77	72	67	64	71	83
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	940.8	940.8	940.8	940.8	940.8
2.5°	934.3	934.3	934.3	933.2	933.2
5°	924.5	923.4	923.4	922.3	922.3
7.5°	916.9	915.8	914.7	913.6	911.5
10°	906.0	906.0	904.9	899.5	898.4
12.5°	888.6	887.5	883.2	875.6	873.4
15°	864.7	864.7	856.0	847.3	844.0
17.5°	838.6	837.5	826.6	817.9	813.6
20°	810.3	808.1	797.3	783.1	775.5
22.5°	778.8	778.8	765.7	747.2	739.6
25°	749.4	745.1	733.1	707.0	687.4
27.5°	715.7	709.2	696.1	659.1	636.3
30°	678.7	675.4	657.0	609.1	591.7
32.5°	643.9	638.5	618.9	568.9	554.7
35°	608.0	603.7	574.3	530.8	517.7
37.5°	572.1	566.7	529.7	494.9	478.6
40°	536.2	529.7	489.5	457.9	440.5
42.5°	502.5	493.8	454.6	420.9	401.4
45°	466.6	456.8	417.7	382.9	367.6
47.5°	430.7	422.0	386.1	350.2	332.8
50°	392.6	385.0	352.4	316.5	298.0
52.5°	361.1	349.1	317.6	281.7	266.5
55°	324.1	314.3	285.0	251.3	238.2
57.5°	290.4	280.6	253.4	221.9	211.0
60°	258.9	244.7	221.9	194.7	186.0
62.5°	224.1	213.2	193.6	170.8	181.6
65°	192.5	181.6	164.2	167.5	139.2
67.5°	157.7	152.3	137.0	121.8	117.5
70°	128.3	121.8	116.4	100.1	95.7
72.5°	102.2	95.7	88.1	79.4	76.1
75°	77.2	71.8	67.4	64.2	70.7
77.5°	53.3	51.1	47.9	44.6	43.5
80°	34.8	33.7	32.6	31.5	30.5
82.5°	20.7	20.7	20.7	20.7	20.7
85°	10.9	12.0	13.1	14.1	15.2
87.5°	6.5	6.5	7.6	8.7	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)