

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: P559036

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-80-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559036  
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-LD4-2HI-35-UNV-80-96-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

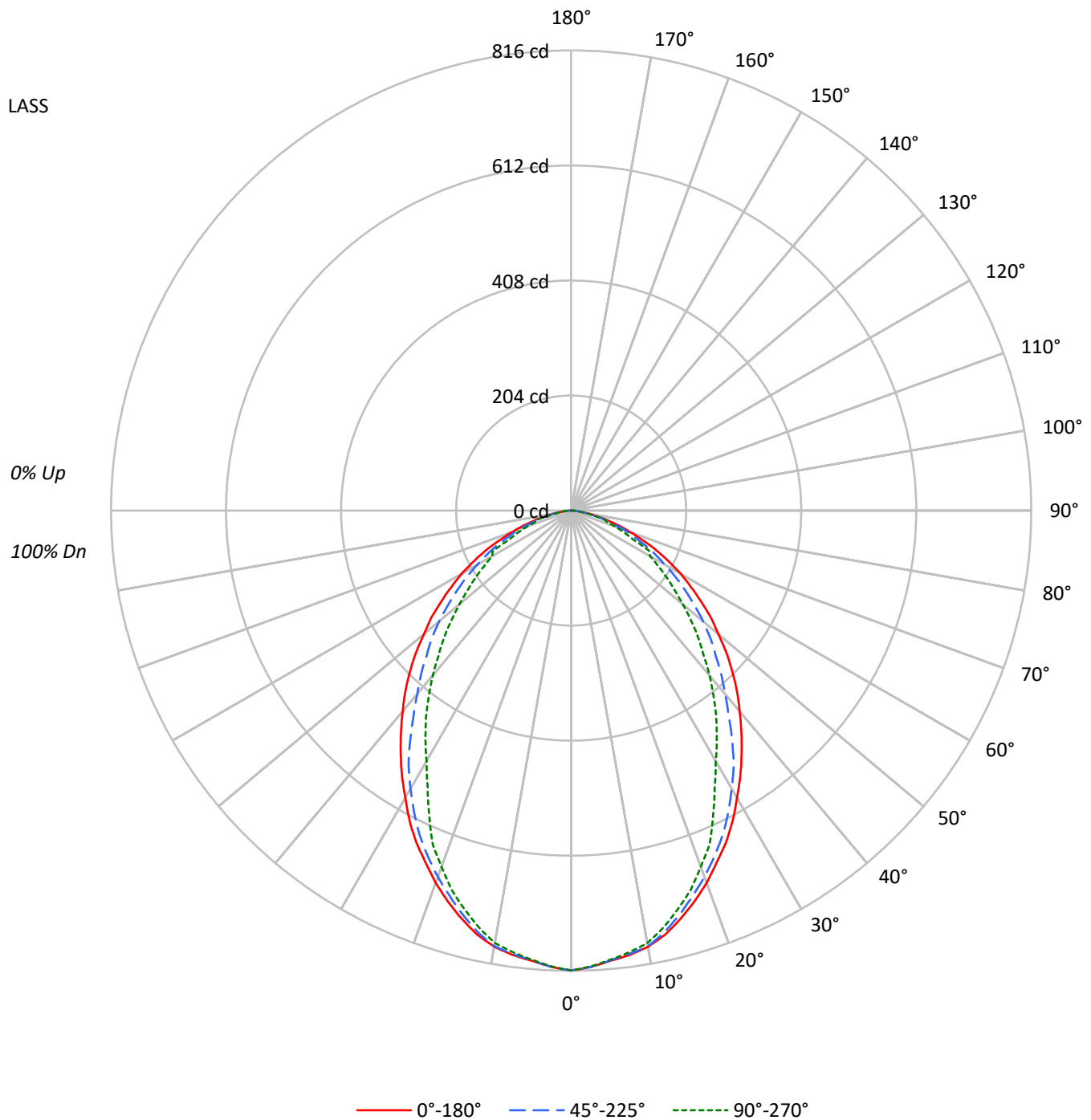
Lumens per Lamp: N/A  
Luminaire Lumens: 1601.0 lumens  
Efficiency: N/A  
Efficacy: 74.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	8778	8778	8778
5°	8659	8648	8639
10°	8584	8573	8512
15°	8352	8269	8153
20°	8046	7916	7700
25°	7715	7548	7077
30°	7312	7078	6375
35°	6925	6541	5897
40°	6531	5962	5365
45°	6157	5511	4851
50°	5700	5116	4325
55°	5273	4635	3875
60°	4831	4140	3470
65°	4251	3627	3074
70°	3503	3175	2612
75°	2782	2433	2549
80°	1872	1754	1636
85°	1161	1396	1630

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6157 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.9	4.7
10°-20°	208.3	13.0
20°-30°	288.4	18.0
30°-40°	307.6	19.2
40°-50°	280.6	17.5
50°-60°	219.8	13.7
60°-70°	143.3	8.9
70°-80°	63.5	4.0
80°-90°	13.6	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°	572.7	35.8
0°-40°	880.2	55.0
0°-60°	1380.6	86.2
0°-90°	1601.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1601.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	801	800	800	800	800	76
15°	750	750	742	734	732	211
25°	650	646	636	613	596	298
35°	527	523	498	460	449	329
45°	404	396	362	332	319	312
55°	281	272	247	218	206	252
65°	167	157	142	145	121	164
75°	67	62	58	56	61	72
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	815.5	815.5	815.5	815.5	815.5
2.5°	809.9	809.9	809.9	808.9	808.9
5°	801.4	800.4	800.4	799.5	799.5
7.5°	794.8	793.8	792.9	792.0	790.1
10°	785.4	785.4	784.4	779.7	778.8
12.5°	770.3	769.3	765.6	759.0	757.1
15°	749.5	749.5	742.0	734.4	731.6
17.5°	726.9	726.0	716.5	709.0	705.2
20°	702.4	700.5	691.1	678.8	672.2
22.5°	675.0	675.0	663.7	647.7	641.1
25°	649.6	645.8	635.5	612.8	595.9
27.5°	620.4	614.7	603.4	571.3	551.5
30°	588.3	585.5	569.5	528.0	512.9
32.5°	558.1	553.4	536.5	493.1	480.8
35°	527.0	523.3	497.8	460.1	448.8
37.5°	495.9	491.2	459.1	429.0	414.8
40°	464.8	459.1	424.3	396.9	381.8
42.5°	435.6	428.0	394.1	364.9	347.9
45°	404.5	396.0	362.0	331.9	318.7
47.5°	373.4	365.8	334.7	303.6	288.5
50°	340.4	333.8	305.5	274.4	258.3
52.5°	313.0	302.6	275.3	244.2	231.0
55°	281.0	272.5	247.0	217.8	206.5
57.5°	251.7	243.2	219.7	192.3	182.9
60°	224.4	212.1	192.3	168.8	161.2
62.5°	194.2	184.8	167.8	148.0	157.4
65°	166.9	157.4	142.4	145.2	120.7
67.5°	136.7	132.0	118.8	105.6	101.8
70°	111.3	105.6	100.9	86.7	83.0
72.5°	88.6	83.0	76.4	68.8	66.0
75°	66.9	62.2	58.5	55.6	61.3
77.5°	46.2	44.3	41.5	38.7	37.7
80°	30.2	29.2	28.3	27.3	26.4
82.5°	17.9	17.9	17.9	17.9	17.9
85°	9.4	10.4	11.3	12.3	13.2
87.5°	5.7	5.7	6.6	7.5	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)