

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: P559740

Luminaire Tested: FSR-12-2-LD4-1HI-50-UNV-80-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559740  
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-LD4-1HI-50-UNV-80-96-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

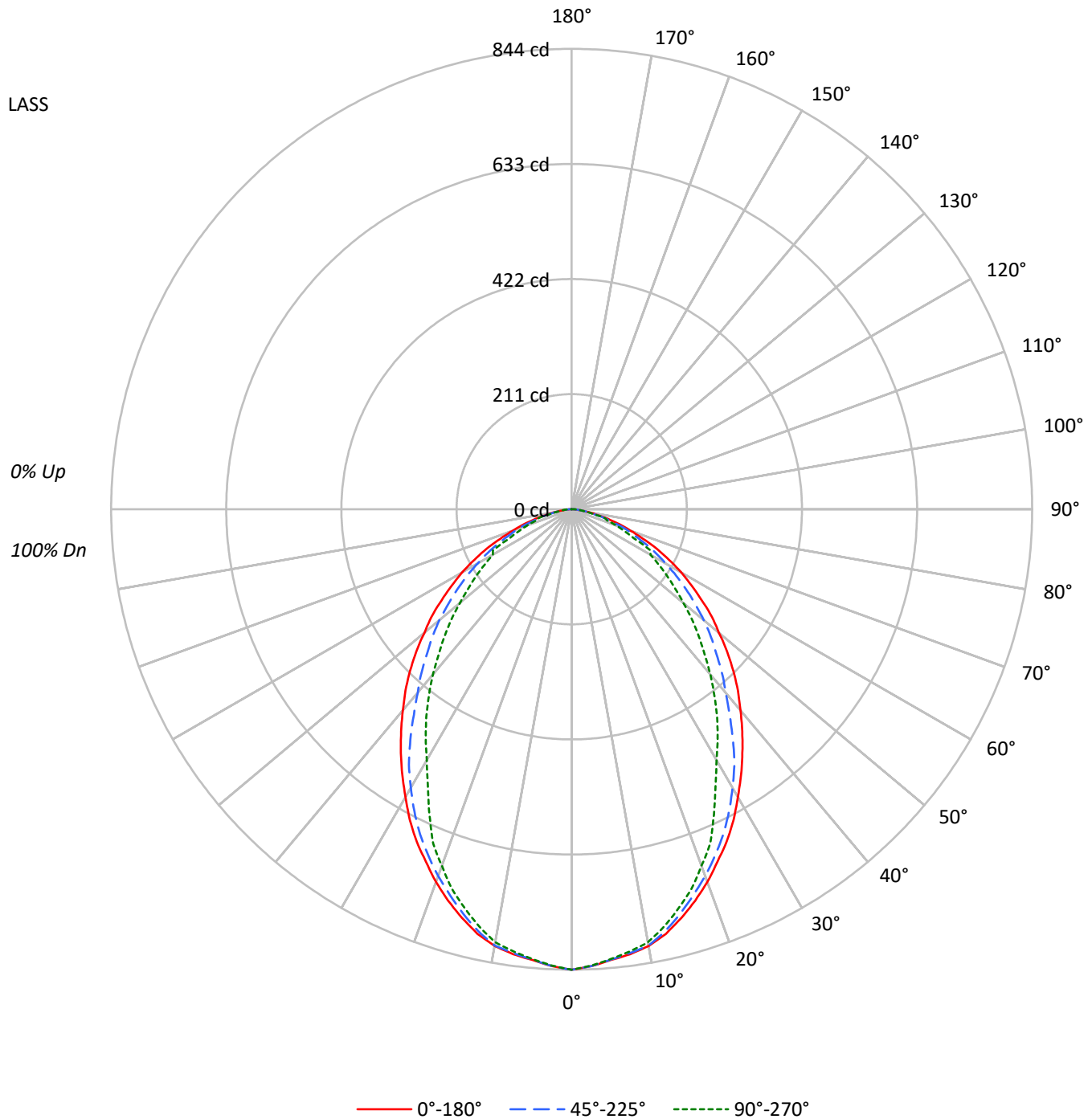
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1657.0 lumens  
Efficiency: N/A  
Efficacy: 76.7 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): 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	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°	4543	4543	4543
5°	4481	4475	4471
10°	4442	4437	4405
15°	4322	4279	4219
20°	4164	4097	3985
25°	3992	3906	3662
30°	3784	3663	3299
35°	3584	3385	3052
40°	3380	3085	2777
45°	3186	2852	2510
50°	2950	2647	2239
55°	2729	2399	2005
60°	2499	2143	1796
65°	2199	1876	1591
70°	1811	1643	1352
75°	1441	1258	1318
80°	967	908	846
85°	605	722	846

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3186 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.6	4.7
10°-20°	215.6	13.0
20°-30°	298.5	18.0
30°-40°	318.3	19.2
40°-50°	290.4	17.5
50°-60°	227.5	13.7
60°-70°	148.3	8.9
70°-80°	65.7	4.0
80°-90°	14.1	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
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0°-30°	592.7	35.8
0°-40°	911.0	55.0
0°-60°	1429.0	86.2
0°-90°	1657.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1657.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	844	844	844	844	844	
5°	829	828	828	828	828	79
15°	776	776	768	760	757	218
25°	672	668	658	634	617	309
35°	546	542	515	476	464	341
45°	419	410	375	344	330	322
55°	291	282	256	225	214	261
65°	173	163	147	150	125	170
75°	69	64	60	58	63	74
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	844.1	844.1	844.1	844.1	844.1
2.5°	838.2	838.2	838.2	837.2	837.2
5°	829.4	828.4	828.4	827.5	827.5
7.5°	822.6	821.6	820.6	819.7	817.7
10°	812.8	812.8	811.9	807.0	806.0
12.5°	797.2	796.2	792.3	785.5	783.6
15°	775.7	775.7	767.9	760.1	757.2
17.5°	752.3	751.4	741.6	733.8	729.9
20°	727.0	725.0	715.3	702.6	695.7
22.5°	698.7	698.7	687.0	670.4	663.5
25°	672.3	668.4	657.7	634.3	616.7
27.5°	642.1	636.2	624.5	591.3	570.8
30°	608.9	606.0	589.4	546.4	530.8
32.5°	577.7	572.8	555.2	510.3	497.7
35°	545.5	541.6	515.2	476.2	464.5
37.5°	513.3	508.4	475.2	444.0	429.3
40°	481.1	475.2	439.1	410.8	395.2
42.5°	450.8	443.0	407.9	377.6	360.1
45°	418.6	409.8	374.7	343.5	329.8
47.5°	386.4	378.6	346.4	314.2	298.6
50°	352.3	345.4	316.2	284.0	267.4
52.5°	324.0	313.2	284.9	252.7	239.1
55°	290.8	282.0	255.7	225.4	213.7
57.5°	260.5	251.8	227.4	199.1	189.3
60°	232.2	219.6	199.1	174.7	166.9
62.5°	201.0	191.3	173.7	153.2	163.0
65°	172.7	163.0	147.3	150.3	124.9
67.5°	141.5	136.6	122.9	109.3	105.4
70°	115.1	109.3	104.4	89.8	85.9
72.5°	91.7	85.9	79.0	71.2	68.3
75°	69.3	64.4	60.5	57.6	63.4
77.5°	47.8	45.9	42.9	40.0	39.0
80°	31.2	30.2	29.3	28.3	27.3
82.5°	18.5	18.5	18.5	18.5	18.5
85°	9.8	10.7	11.7	12.7	13.7
87.5°	5.9	5.9	6.8	7.8	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)