

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: P590010

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-80-94-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590010  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-24-2-LD4-1LO-50-UNV-80-94-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

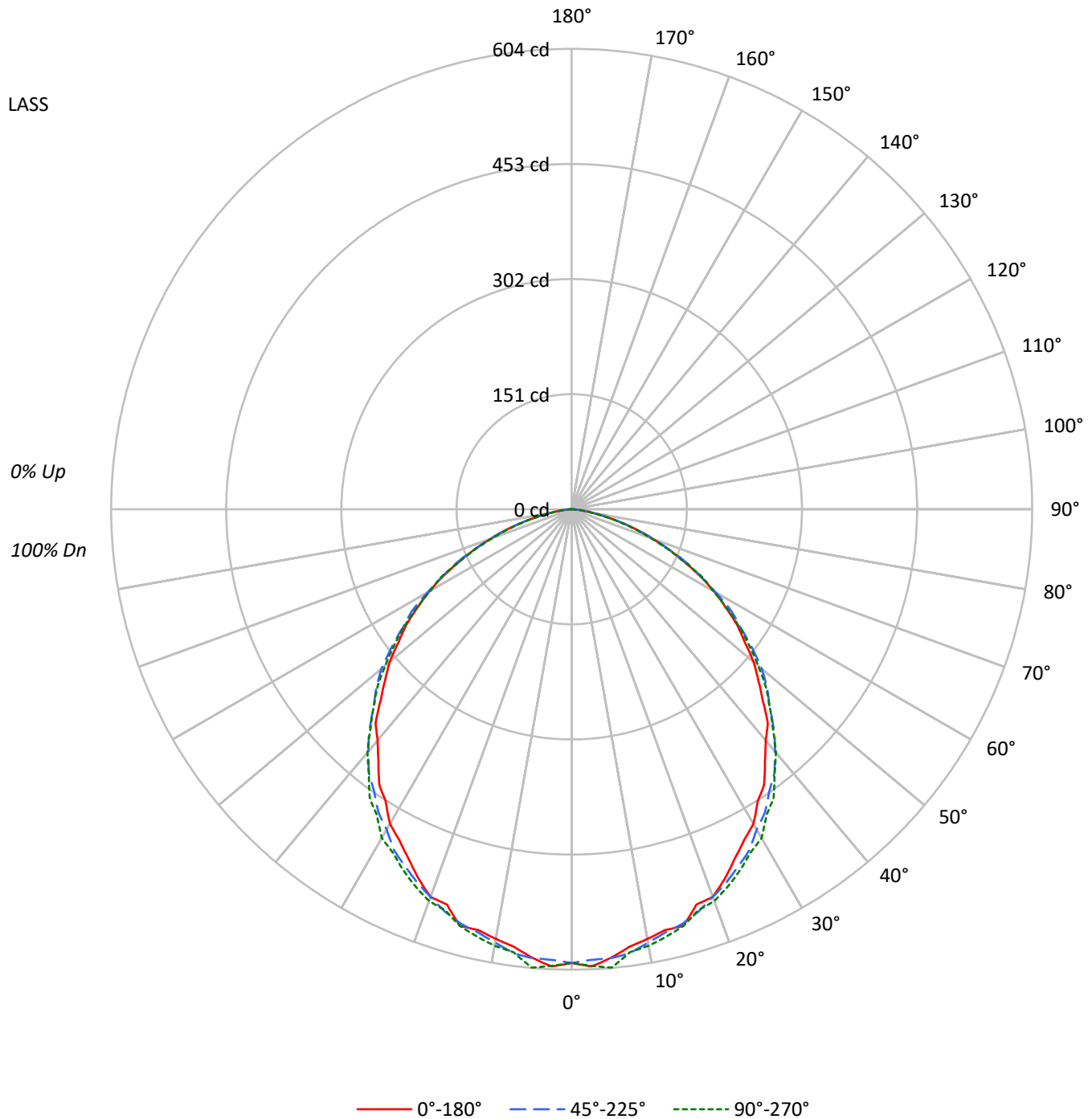
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1500.0 lumens  
Efficiency: N/A  
Efficacy: 128.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1602	1602	1602
5°	1596	1597	1630
10°	1564	1577	1589
15°	1576	1568	1577
20°	1550	1550	1566
25°	1502	1535	1552
30°	1481	1507	1547
35°	1446	1484	1518
40°	1390	1457	1464
45°	1348	1396	1398
50°	1304	1363	1337
55°	1242	1267	1257
60°	1162	1173	1152
65°	1036	1062	1028
70°	889	891	867
75°	704	702	675
80°	471	459	440
85°	256	253	238

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 1432 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.0	3.7
10°-20°	158.7	10.6
20°-30°	237.7	15.8
30°-40°	281.7	18.8
40°-50°	282.3	18.8
50°-60°	239.6	16.0
60°-70°	161.5	10.8
70°-80°	71.0	4.7
80°-90°	11.5	0.8
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°	452.4	30.2
0°-40°	734.1	48.9
0°-60°	1256.0	83.7
0°-90°	1500.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1500.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	595	595	595	595	595	
5°	591	590	591	589	604	56
15°	566	559	563	566	566	158
25°	506	509	517	524	523	234
35°	440	442	452	462	462	273
45°	354	361	367	376	367	274
55°	265	263	270	268	268	236
65°	163	160	167	160	162	162
75°	68	66	68	63	65	73
85°	8	8	8	8	8	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	595.2	595.2	595.2	595.2	595.2
2.5°	600.3	595.8	591.6	596.5	599.5
5°	590.9	589.6	591.2	589.4	603.6
7.5°	578.8	584.1	587.2	585.2	586.1
10°	572.3	570.5	577.3	582.1	581.4
12.5°	565.4	568.2	568.6	573.7	574.2
15°	565.8	559.3	562.7	565.7	565.9
17.5°	543.8	550.9	553.3	560.0	551.7
20°	541.1	536.0	541.1	548.0	546.9
22.5°	524.6	518.9	529.9	536.0	535.6
25°	505.9	508.6	516.9	523.7	522.6
27.5°	489.4	492.7	504.5	513.8	507.8
30°	476.7	475.1	485.1	493.4	498.0
32.5°	454.1	459.9	471.6	479.8	475.4
35°	440.3	441.6	451.8	462.3	462.0
37.5°	416.3	422.3	436.7	439.6	436.9
40°	395.8	401.8	414.8	418.0	416.7
42.5°	380.6	381.7	392.8	396.4	390.7
45°	354.3	360.9	366.9	376.3	367.4
47.5°	331.8	334.9	347.8	350.3	345.6
50°	311.5	312.5	325.5	322.4	319.3
52.5°	285.9	290.4	297.7	297.1	293.5
55°	264.8	263.0	270.0	268.1	268.0
57.5°	239.5	242.6	248.3	245.4	240.7
60°	215.9	215.9	218.0	214.7	214.1
62.5°	189.5	190.4	190.9	186.8	193.4
65°	162.7	160.5	166.8	160.5	161.5
67.5°	138.0	139.1	138.5	134.5	136.0
70°	113.0	114.3	113.3	108.8	110.2
72.5°	90.1	88.4	89.4	83.8	86.4
75°	67.7	66.3	67.5	62.8	64.9
77.5°	46.1	47.2	46.4	43.9	45.3
80°	30.4	29.6	29.6	28.1	28.4
82.5°	17.8	16.9	16.7	16.2	16.9
85°	8.3	8.1	8.2	8.0	7.7
87.5°	3.0	3.1	3.1	2.9	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)