

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: P560124

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560124  
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-LD4-1STD-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**

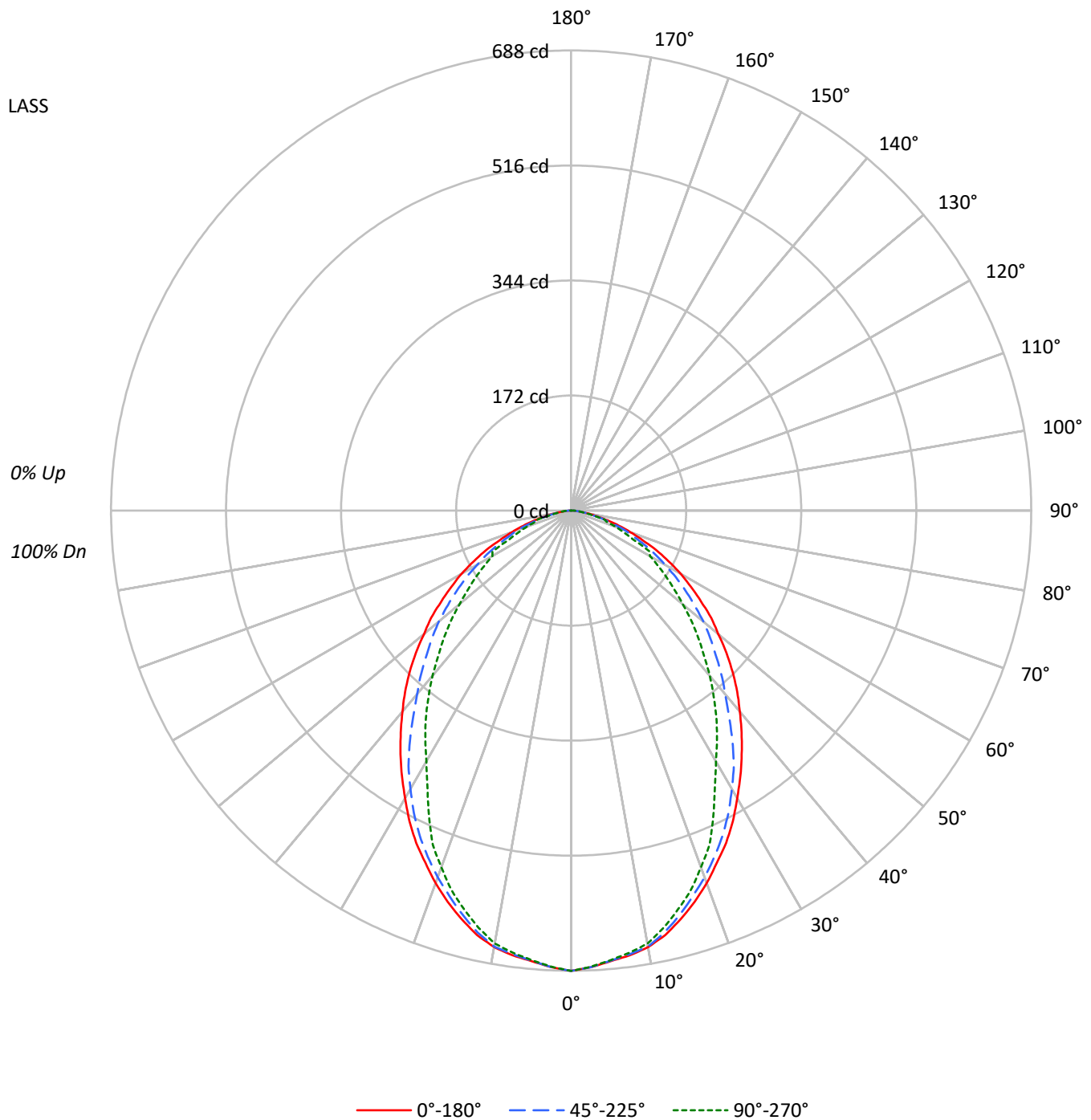
Lumens per Lamp: N/A  
Luminaire Lumens: 1351.0 lumens  
Efficiency: N/A  
Efficacy: 81.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P560124

CATALOG NUMBER: FSR-12-2-LD4-1STD-50-UNV-80-96-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P560124

CATALOG NUMBER: FSR-12-2-LD4-1STD-50-UNV-80-96-EDD-90

**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																												
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°	3704	3704	3704
5°	3653	3649	3645
10°	3622	3617	3592
15°	3524	3489	3440
20°	3395	3340	3249
25°	3255	3184	2986
30°	3085	2986	2690
35°	2922	2760	2488
40°	2755	2515	2264
45°	2598	2325	2047
50°	2405	2159	1825
55°	2225	1955	1635
60°	2038	1747	1464
65°	1793	1529	1296
70°	1478	1339	1102
75°	1175	1025	1075
80°	790	741	691
85°	494	587	685

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2598 cd/sqm



TEST NUMBER: P560124

CATALOG NUMBER: FSR-12-2-LD4-1STD-50-UNV-80-96-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.1	4.7
10°-20°	175.8	13.0
20°-30°	243.4	18.0
30°-40°	259.5	19.2
40°-50°	236.8	17.5
50°-60°	185.5	13.7
60°-70°	120.9	8.9
70°-80°	53.6	4.0
80°-90°	11.5	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°	483.3	35.8
0°-40°	742.8	55.0
0°-60°	1165.0	86.2
0°-90°	1351.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1351.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	688	688	688	688	688	
5°	676	676	676	675	675	64
15°	632	632	626	620	617	178
25°	548	545	536	517	503	252
35°	445	442	420	388	379	278
45°	341	334	306	280	269	263
55°	237	230	208	184	174	213
65°	141	133	120	122	102	139
75°	56	52	49	47	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



TEST NUMBER: P560124

CATALOG NUMBER: FSR-12-2-LD4-1STD-50-UNV-80-96-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	688.2	688.2	688.2	688.2	688.2
2.5°	683.4	683.4	683.4	682.6	682.6
5°	676.2	675.5	675.5	674.7	674.7
7.5°	670.7	669.9	669.1	668.3	666.7
10°	662.7	662.7	661.9	657.9	657.2
12.5°	650.0	649.2	646.0	640.4	638.9
15°	632.5	632.5	626.1	619.8	617.4
17.5°	613.4	612.6	604.6	598.3	595.1
20°	592.7	591.1	583.2	572.8	567.3
22.5°	569.6	569.6	560.1	546.6	541.0
25°	548.2	545.0	536.2	517.1	502.8
27.5°	523.5	518.7	509.2	482.1	465.4
30°	496.4	494.1	480.5	445.5	432.8
32.5°	471.0	467.0	452.7	416.1	405.7
35°	444.7	441.5	420.1	388.2	378.7
37.5°	418.5	414.5	387.5	362.0	350.1
40°	392.2	387.5	358.0	334.9	322.2
42.5°	367.6	361.2	332.6	307.9	293.6
45°	341.3	334.1	305.5	280.0	268.9
47.5°	315.1	308.7	282.4	256.2	243.4
50°	287.2	281.6	257.8	231.5	218.0
52.5°	264.1	255.4	232.3	206.1	194.9
55°	237.1	229.9	208.4	183.8	174.2
57.5°	212.4	205.3	185.4	162.3	154.3
60°	189.3	179.0	162.3	142.4	136.0
62.5°	163.9	155.9	141.6	124.9	132.9
65°	140.8	132.9	120.1	122.5	101.8
67.5°	115.4	111.4	100.2	89.1	85.9
70°	93.9	89.1	85.1	73.2	70.0
72.5°	74.8	70.0	64.4	58.1	55.7
75°	56.5	52.5	49.3	46.9	51.7
77.5°	39.0	37.4	35.0	32.6	31.8
80°	25.5	24.7	23.9	23.1	22.3
82.5°	15.1	15.1	15.1	15.1	15.1
85°	8.0	8.8	9.5	10.3	11.1
87.5°	4.8	4.8	5.6	6.4	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)