

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: P560510

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-80-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560510  
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-50-UNV-80-97-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

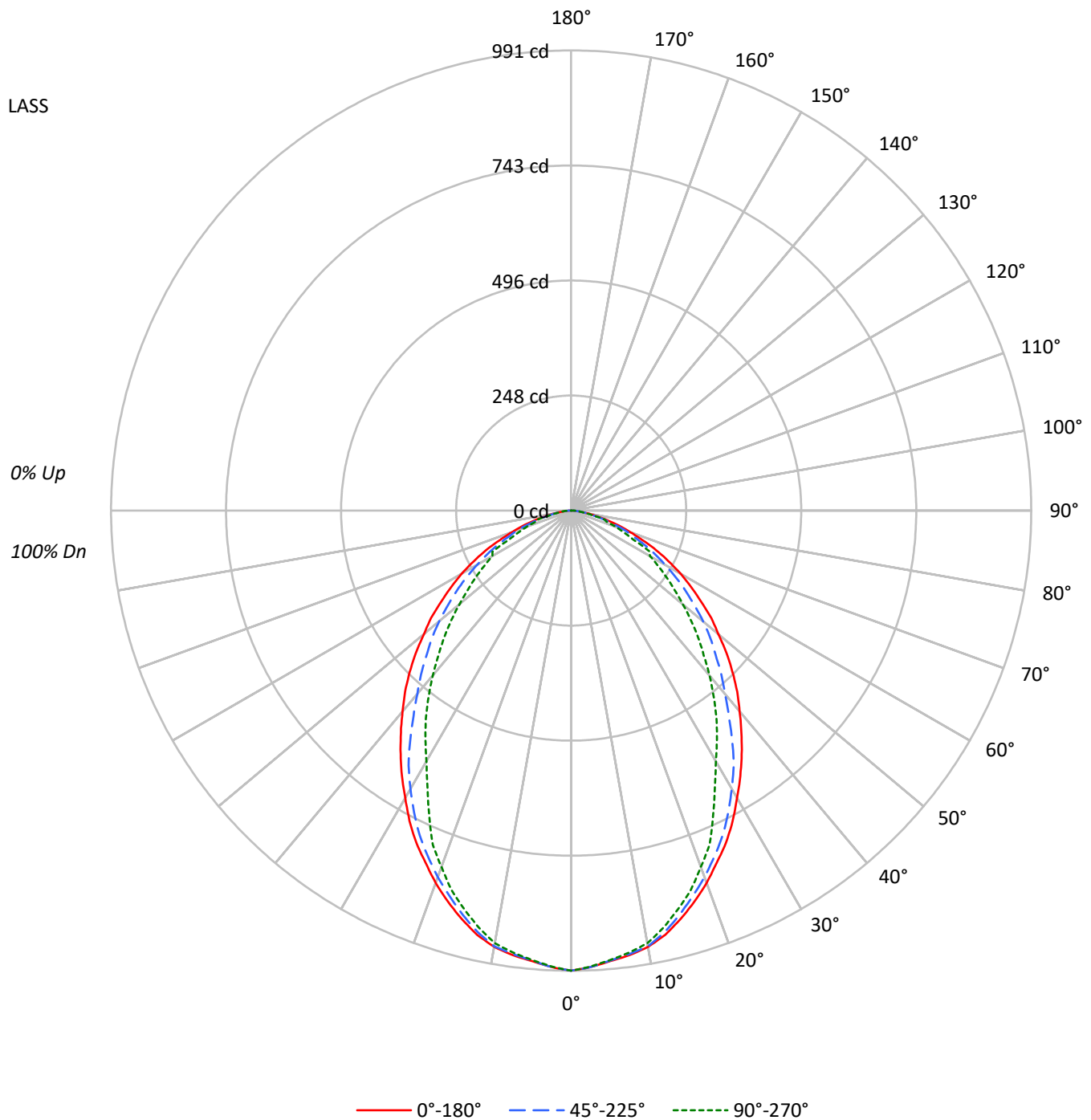
Lumens per Lamp: N/A  
Luminaire Lumens: 1945.0 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5332	5332	5332
5°	5260	5253	5247
10°	5214	5208	5170
15°	5074	5022	4952
20°	4887	4809	4678
25°	4687	4584	4299
30°	4442	4299	3872
35°	4207	3974	3582
40°	3967	3621	3259
45°	3740	3347	2946
50°	3462	3107	2627
55°	3202	2816	2353
60°	2934	2516	2109
65°	2581	2203	1867
70°	2127	1929	1586
75°	1691	1476	1547
80°	1137	1066	995
85°	710	846	988

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3740 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.2	4.7
10°-20°	253.1	13.0
20°-30°	350.4	18.0
30°-40°	373.6	19.2
40°-50°	340.9	17.5
50°-60°	267.1	13.7
60°-70°	174.1	8.9
70°-80°	77.1	4.0
80°-90°	16.6	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°	695.7	35.8
0°-40°	1069.4	55.0
0°-60°	1677.3	86.2
0°-90°	1945.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1945.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	991	991	991	991	991	
5°	974	972	972	971	971	92
15°	911	911	901	892	889	256
25°	789	785	772	744	724	362
35°	640	636	605	559	545	400
45°	491	481	440	403	387	379
55°	341	331	300	265	251	306
65°	203	191	173	176	147	200
75°	81	76	71	68	74	87
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	990.8	990.8	990.8	990.8	990.8
2.5°	983.9	983.9	983.9	982.7	982.7
5°	973.6	972.4	972.4	971.3	971.3
7.5°	965.6	964.4	963.3	962.1	959.8
10°	954.1	954.1	953.0	947.2	946.1
12.5°	935.8	934.6	930.1	922.0	919.7
15°	910.6	910.6	901.4	892.3	888.8
17.5°	883.1	881.9	870.5	861.3	856.7
20°	853.3	851.0	839.6	824.7	816.7
22.5°	820.1	820.1	806.4	786.9	778.9
25°	789.2	784.6	772.0	744.5	723.9
27.5°	753.7	746.8	733.0	694.1	670.0
30°	714.7	711.3	691.8	641.4	623.1
32.5°	678.1	672.3	651.7	599.0	584.1
35°	640.3	635.7	604.8	558.9	545.2
37.5°	602.5	596.7	557.8	521.1	504.0
40°	564.7	557.8	515.4	482.2	463.9
42.5°	529.2	520.0	478.8	443.3	422.6
45°	491.4	481.1	439.8	403.2	387.1
47.5°	453.6	444.4	406.6	368.8	350.5
50°	413.5	405.5	371.1	333.3	313.8
52.5°	380.3	367.7	334.5	296.7	280.6
55°	341.3	331.0	300.1	264.6	250.8
57.5°	305.8	295.5	266.9	233.7	222.2
60°	272.6	257.7	233.7	205.0	195.9
62.5°	235.9	224.5	203.9	179.8	191.3
65°	202.7	191.3	173.0	176.4	146.6
67.5°	166.1	160.4	144.3	128.3	123.7
70°	135.2	128.3	122.6	105.4	100.8
72.5°	107.7	100.8	92.8	83.6	80.2
75°	81.3	75.6	71.0	67.6	74.4
77.5°	56.1	53.8	50.4	47.0	45.8
80°	36.7	35.5	34.4	33.2	32.1
82.5°	21.8	21.8	21.8	21.8	21.8
85°	11.5	12.6	13.7	14.9	16.0
87.5°	6.9	6.9	8.0	9.2	10.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)