

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: P560447

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-80-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560447  
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-40-UNV-80-97-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

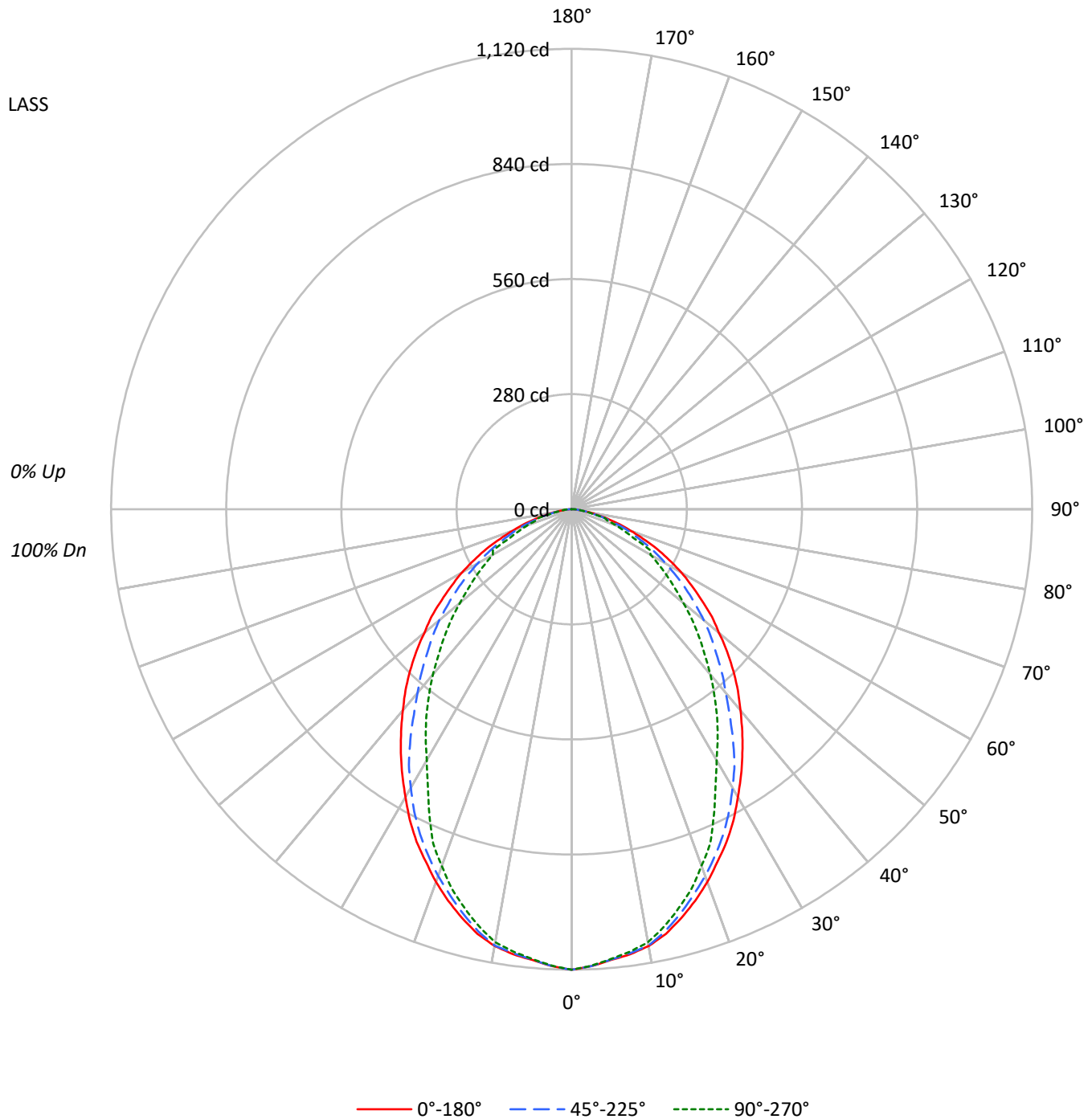
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2199.0 lumens  
Efficiency: N/A  
Efficacy: 94.0 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	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°	6028	6028	6028
5°	5947	5940	5933
10°	5895	5888	5845
15°	5736	5678	5599
20°	5525	5436	5288
25°	5298	5183	4860
30°	5022	4861	4378
35°	4756	4492	4050
40°	4485	4094	3685
45°	4228	3785	3331
50°	3914	3513	2971
55°	3621	3184	2661
60°	3317	2844	2383
65°	2919	2490	2111
70°	2404	2181	1794
75°	1911	1670	1751
80°	1283	1203	1125
85°	797	957	1118

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4228 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.3	4.7
10°-20°	286.2	13.0
20°-30°	396.2	18.0
30°-40°	422.4	19.2
40°-50°	385.4	17.5
50°-60°	301.9	13.7
60°-70°	196.8	8.9
70°-80°	87.2	4.0
80°-90°	18.7	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°	786.6	35.8
0°-40°	1209.0	55.0
0°-60°	1896.3	86.2
0°-90°	2199.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2199.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1120	1120	1120	1120	1120	
5°	1101	1099	1099	1098	1098	104
15°	1030	1030	1019	1009	1005	289
25°	892	887	873	842	818	410
35°	724	719	684	632	616	453
45°	556	544	497	456	438	428
55°	386	374	339	299	284	346
65°	229	216	196	199	166	226
75°	92	86	80	76	84	99
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1120.1	1120.1	1120.1	1120.1	1120.1
2.5°	1112.4	1112.4	1112.4	1111.1	1111.1
5°	1100.7	1099.4	1099.4	1098.1	1098.1
7.5°	1091.7	1090.4	1089.1	1087.8	1085.2
10°	1078.7	1078.7	1077.4	1070.9	1069.6
12.5°	1058.0	1056.7	1051.5	1042.4	1039.9
15°	1029.5	1029.5	1019.1	1008.8	1004.9
17.5°	998.4	997.1	984.2	973.8	968.6
20°	964.7	962.2	949.2	932.4	923.3
22.5°	927.2	927.2	911.7	889.6	880.6
25°	892.2	887.0	872.8	841.7	818.4
27.5°	852.1	844.3	828.8	784.7	757.6
30°	808.1	804.2	782.2	725.2	704.5
32.5°	766.6	760.1	736.8	677.3	660.4
35°	723.9	718.7	683.7	631.9	616.4
37.5°	681.1	674.7	630.6	589.2	569.8
40°	638.4	630.6	582.7	545.2	524.5
42.5°	598.3	587.9	541.3	501.1	477.8
45°	555.5	543.9	497.3	455.8	437.7
47.5°	512.8	502.4	459.7	417.0	396.3
50°	467.5	458.4	419.6	376.8	354.8
52.5°	429.9	415.7	378.1	335.4	317.3
55°	385.9	374.2	339.3	299.1	283.6
57.5°	345.8	334.1	301.7	264.2	251.2
60°	308.2	291.4	264.2	231.8	221.4
62.5°	266.8	253.8	230.5	203.3	216.3
65°	229.2	216.3	195.5	199.4	165.8
67.5°	187.8	181.3	163.2	145.0	139.9
70°	152.8	145.0	138.6	119.1	114.0
72.5°	121.7	114.0	104.9	94.5	90.6
75°	91.9	85.5	80.3	76.4	84.2
77.5°	63.5	60.9	57.0	53.1	51.8
80°	41.4	40.1	38.8	37.6	36.3
82.5°	24.6	24.6	24.6	24.6	24.6
85°	12.9	14.2	15.5	16.8	18.1
87.5°	7.8	7.8	9.1	10.4	11.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)