

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: P560446

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-80-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560446  
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-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

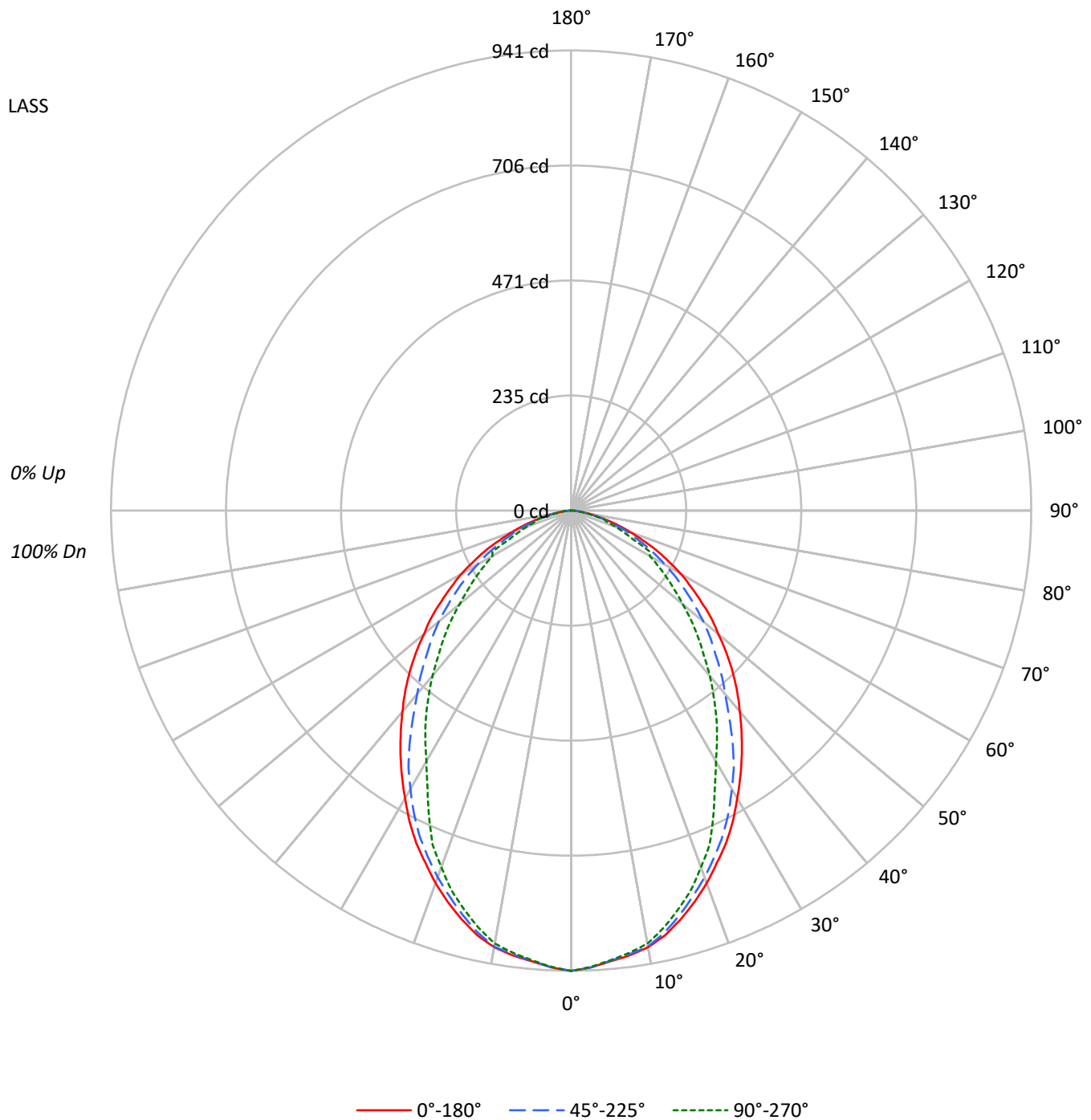
Lumens per Lamp: N/A  
Luminaire Lumens: 1848.0 lumens  
Efficiency: N/A  
Efficacy: 79.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5066	5066	5066
5°	4997	4991	4985
10°	4954	4948	4912
15°	4821	4772	4705
20°	4644	4569	4444
25°	4453	4356	4084
30°	4220	4085	3679
35°	3997	3775	3403
40°	3769	3440	3096
45°	3554	3181	2799
50°	3290	2952	2497
55°	3043	2675	2236
60°	2788	2390	2003
65°	2453	2092	1774
70°	2020	1832	1507
75°	1607	1404	1470
80°	1079	1010	945
85°	673	809	939

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3554 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.6	4.7
10°-20°	240.5	13.0
20°-30°	332.9	18.0
30°-40°	355.0	19.2
40°-50°	323.9	17.5
50°-60°	253.7	13.7
60°-70°	165.4	8.9
70°-80°	73.3	4.0
80°-90°	15.7	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°	661.0	35.8
0°-40°	1016.1	55.0
0°-60°	1593.7	86.2
0°-90°	1848.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1848.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	941	941	941	941	941	
5°	925	924	924	923	923	88
15°	865	865	856	848	844	243
25°	750	746	734	707	688	344
35°	608	604	575	531	518	380
45°	467	457	418	383	368	360
55°	324	314	285	251	238	291
65°	193	182	164	168	139	190
75°	77	72	68	64	71	83
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	941.3	941.3	941.3	941.3	941.3
2.5°	934.8	934.8	934.8	933.7	933.7
5°	925.0	923.9	923.9	922.8	922.8
7.5°	917.4	916.3	915.2	914.1	912.0
10°	906.5	906.5	905.4	900.0	898.9
12.5°	889.1	888.0	883.7	876.1	873.9
15°	865.2	865.2	856.5	847.8	844.5
17.5°	839.0	838.0	827.1	818.4	814.0
20°	810.8	808.6	797.7	783.5	775.9
22.5°	779.2	779.2	766.1	747.6	740.0
25°	749.8	745.5	733.5	707.4	687.8
27.5°	716.1	709.5	696.5	659.5	636.6
30°	679.1	675.8	657.3	609.4	592.0
32.5°	644.3	638.8	619.2	569.2	555.0
35°	608.3	604.0	574.6	531.1	518.0
37.5°	572.4	567.0	530.0	495.2	478.8
40°	536.5	530.0	489.7	458.2	440.7
42.5°	502.8	494.1	454.9	421.2	401.6
45°	466.9	457.1	417.9	383.1	367.8
47.5°	431.0	422.2	386.3	350.4	333.0
50°	392.9	385.2	352.6	316.7	298.2
52.5°	361.3	349.3	317.8	281.9	266.6
55°	324.3	314.5	285.1	251.4	238.3
57.5°	290.6	280.8	253.6	222.0	211.1
60°	259.0	244.9	222.0	194.8	186.1
62.5°	224.2	213.3	193.7	170.9	181.7
65°	192.6	181.7	164.3	167.6	139.3
67.5°	157.8	152.4	137.1	121.9	117.5
70°	128.4	121.9	116.4	100.1	95.8
72.5°	102.3	95.8	88.1	79.4	76.2
75°	77.3	71.8	67.5	64.2	70.7
77.5°	53.3	51.1	47.9	44.6	43.5
80°	34.8	33.7	32.6	31.6	30.5
82.5°	20.7	20.7	20.7	20.7	20.7
85°	10.9	12.0	13.1	14.1	15.2
87.5°	6.5	6.5	7.6	8.7	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)