

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: P560511

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560511  
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  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

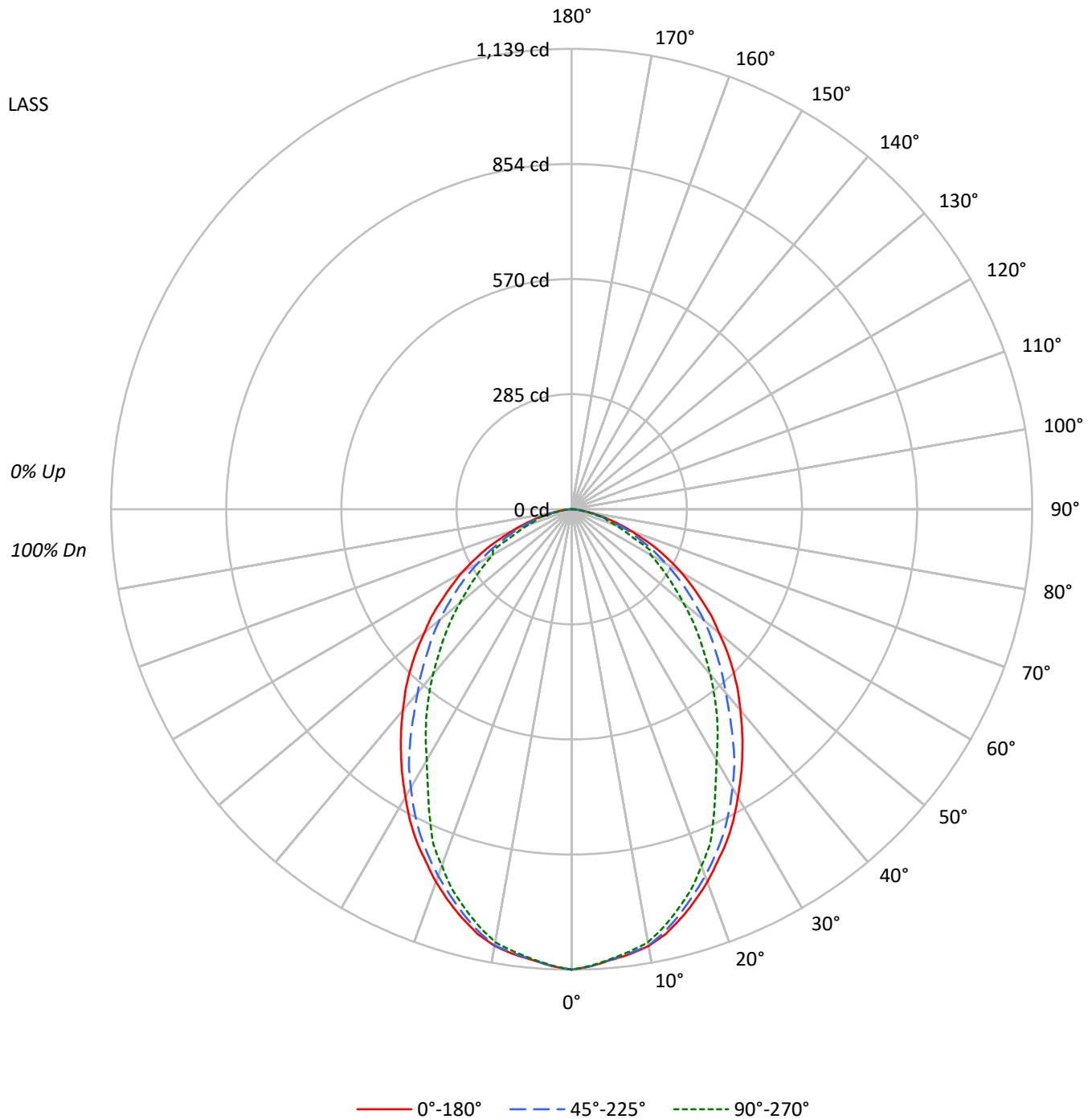
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2236.0 lumens  
Efficiency: N/A  
Efficacy: 95.6 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																												
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°	6130	6130	6130
5°	6046	6039	6032
10°	5995	5987	5944
15°	5833	5774	5693
20°	5619	5528	5377
25°	5387	5270	4942
30°	5106	4942	4451
35°	4836	4568	4118
40°	4561	4163	3747
45°	4300	3848	3388
50°	3980	3572	3021
55°	3682	3237	2706
60°	3373	2891	2424
65°	2968	2532	2146
70°	2445	2217	1824
75°	1944	1697	1780
80°	1305	1224	1144
85°	815	976	1136

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4300 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.0	4.7
10°-20°	291.0	13.0
20°-30°	402.8	18.0
30°-40°	429.5	19.2
40°-50°	391.9	17.5
50°-60°	307.0	13.7
60°-70°	200.1	8.9
70°-80°	88.6	4.0
80°-90°	19.0	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°	799.8	35.8
0°-40°	1229.4	55.0
0°-60°	1928.2	86.2
0°-90°	2236.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2236.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1139	1139	1139	1139	1139	
5°	1119	1118	1118	1117	1117	106
15°	1047	1047	1036	1026	1022	294
25°	907	902	888	856	832	417
35°	736	731	695	643	627	460
45°	565	553	506	464	445	435
55°	392	380	345	304	288	352
65°	233	220	199	203	168	230
75°	94	87	82	78	86	100
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°	1139.0	1139.0	1139.0	1139.0	1139.0
2.5°	1131.1	1131.1	1131.1	1129.8	1129.8
5°	1119.2	1117.9	1117.9	1116.6	1116.6
7.5°	1110.0	1108.7	1107.4	1106.1	1103.4
10°	1096.9	1096.9	1095.5	1089.0	1087.6
12.5°	1075.8	1074.5	1069.2	1060.0	1057.4
15°	1046.8	1046.8	1036.3	1025.7	1021.8
17.5°	1015.2	1013.9	1000.7	990.2	984.9
20°	981.0	978.3	965.2	948.1	938.8
22.5°	942.8	942.8	927.0	904.6	895.4
25°	907.2	902.0	887.5	855.9	832.2
27.5°	866.4	858.5	842.7	798.0	770.3
30°	821.7	817.7	795.3	737.4	716.3
32.5°	779.5	772.9	749.2	688.7	671.5
35°	736.1	730.8	695.2	642.6	626.8
37.5°	692.6	686.0	641.3	599.1	579.4
40°	649.2	641.3	592.5	554.4	533.3
42.5°	608.3	597.8	550.4	509.6	485.9
45°	564.9	553.0	505.6	463.5	445.1
47.5°	521.4	510.9	467.4	424.0	402.9
50°	475.3	466.1	426.6	383.2	360.8
52.5°	437.2	422.7	384.5	341.0	322.6
55°	392.4	380.5	345.0	304.2	288.4
57.5°	351.6	339.7	306.8	268.6	255.4
60°	313.4	296.3	268.6	235.7	225.2
62.5°	271.3	258.1	234.4	206.7	219.9
65°	233.1	219.9	198.8	202.8	168.5
67.5°	190.9	184.3	165.9	147.5	142.2
70°	155.4	147.5	140.9	121.1	115.9
72.5°	123.8	115.9	106.7	96.1	92.2
75°	93.5	86.9	81.6	77.7	85.6
77.5°	64.5	61.9	57.9	54.0	52.7
80°	42.1	40.8	39.5	38.2	36.9
82.5°	25.0	25.0	25.0	25.0	25.0
85°	13.2	14.5	15.8	17.1	18.4
87.5°	7.9	7.9	9.2	10.5	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)