

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: P560700

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560700  
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-LD4-2STD-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**

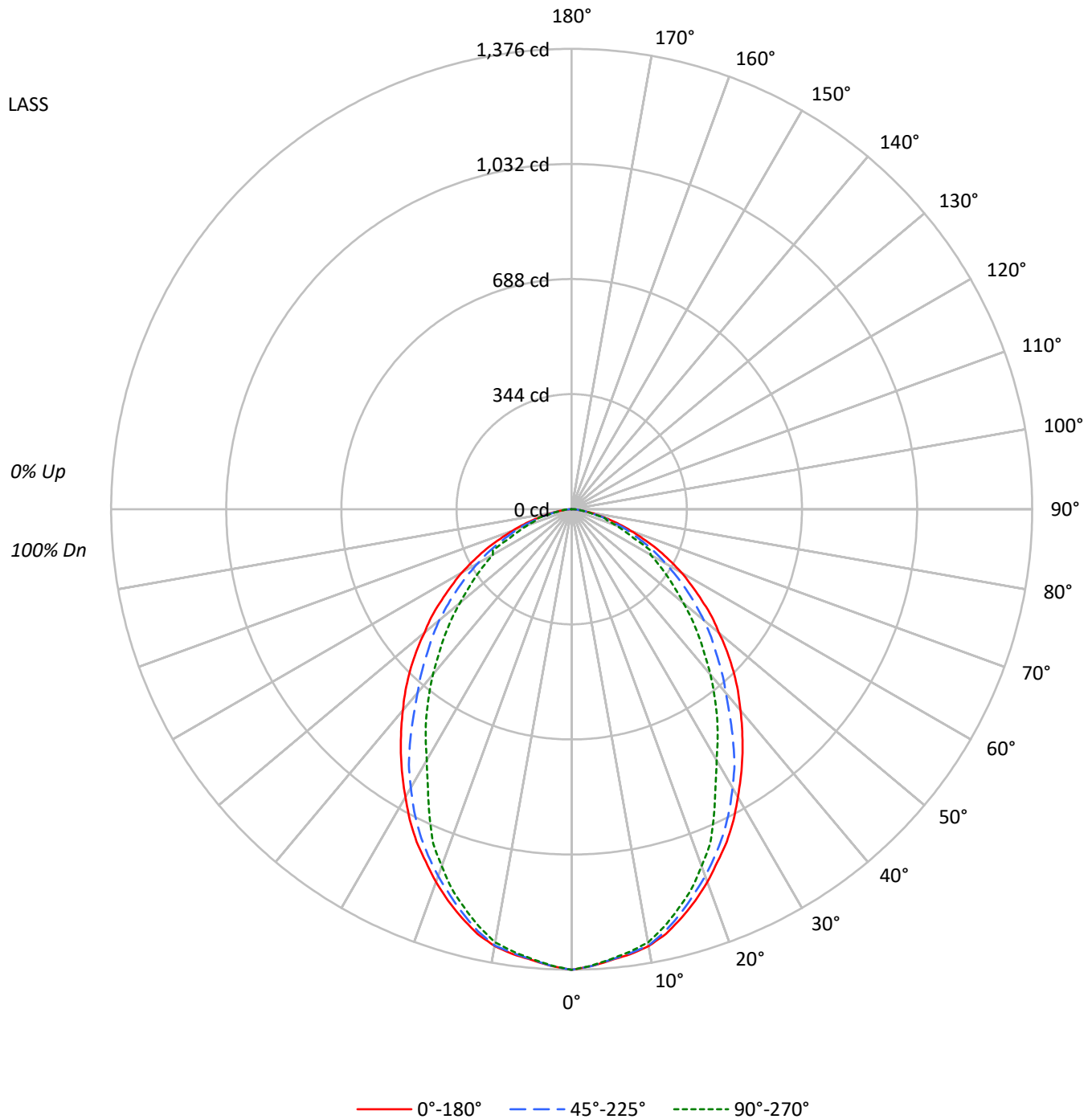
Lumens per Lamp: N/A  
Luminaire Lumens: 2702.0 lumens  
Efficiency: N/A  
Efficacy: 81.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	7408	7408	7408
5°	7307	7298	7290
10°	7243	7235	7183
15°	7048	6978	6880
20°	6789	6680	6498
25°	6510	6368	5972
30°	6170	5973	5379
35°	5844	5520	4976
40°	5511	5030	4527
45°	5195	4650	4093
50°	4809	4316	3651
55°	4449	3912	3270
60°	4076	3494	2929
65°	3586	3060	2594
70°	2955	2680	2203
75°	2350	2052	2150
80°	1578	1478	1382
85°	982	1179	1377

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5195 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.1	4.7
10°-20°	351.6	13.0
20°-30°	486.8	18.0
30°-40°	519.1	19.2
40°-50°	473.5	17.5
50°-60°	371.0	13.7
60°-70°	241.8	8.9
70°-80°	107.1	4.0
80°-90°	23.0	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°	966.5	35.8
0°-40°	1485.6	55.0
0°-60°	2330.1	86.2
0°-90°	2702.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2702.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1376	1376	1376	1376	1376	
5°	1352	1351	1351	1349	1349	128
15°	1265	1265	1252	1240	1235	356
25°	1096	1090	1072	1034	1006	503
35°	890	883	840	776	757	556
45°	683	668	611	560	538	526
55°	474	460	417	368	348	425
65°	282	266	240	245	204	278
75°	113	105	99	94	103	121
85°	16	18	19	21	22	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1376.4	1376.4	1376.4	1376.4	1376.4
2.5°	1366.8	1366.8	1366.8	1365.2	1365.2
5°	1352.5	1350.9	1350.9	1349.3	1349.3
7.5°	1341.4	1339.8	1338.2	1336.6	1333.4
10°	1325.4	1325.4	1323.9	1315.9	1314.3
12.5°	1300.0	1298.4	1292.0	1280.9	1277.7
15°	1265.0	1265.0	1252.3	1239.5	1234.7
17.5°	1226.8	1225.2	1209.3	1196.6	1190.2
20°	1185.4	1182.2	1166.3	1145.6	1134.5
22.5°	1139.3	1139.3	1120.2	1093.1	1082.0
25°	1096.3	1090.0	1072.4	1034.3	1005.6
27.5°	1047.0	1037.4	1018.3	964.2	930.8
30°	992.9	988.1	961.1	891.1	865.6
32.5°	942.0	934.0	905.4	832.2	811.5
35°	889.5	883.1	840.1	776.5	757.4
37.5°	837.0	829.0	774.9	724.0	700.1
40°	784.4	774.9	716.0	669.9	644.4
42.5°	735.1	722.4	665.1	615.8	587.1
45°	682.6	668.3	611.0	560.1	537.8
47.5°	630.1	617.4	564.9	512.4	486.9
50°	574.4	563.3	515.5	463.0	436.0
52.5°	528.3	510.8	464.6	412.1	389.8
55°	474.2	459.8	416.9	367.6	348.5
57.5°	424.8	410.5	370.7	324.6	308.7
60°	378.7	358.0	324.6	284.8	272.1
62.5°	327.8	311.9	283.2	249.8	265.7
65°	281.6	265.7	240.3	245.0	203.7
67.5°	230.7	222.8	200.5	178.2	171.8
70°	187.8	178.2	170.3	146.4	140.0
72.5°	149.6	140.0	128.9	116.2	111.4
75°	113.0	105.0	98.7	93.9	103.4
77.5°	78.0	74.8	70.0	65.2	63.6
80°	50.9	49.3	47.7	46.1	44.6
82.5°	30.2	30.2	30.2	30.2	30.2
85°	15.9	17.5	19.1	20.7	22.3
87.5°	9.5	9.5	11.1	12.7	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)