

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: P559103

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-80-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559103  
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-12-1-LD4-2HI-40-UNV-80-97-EDD  
Description: 1X1 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**

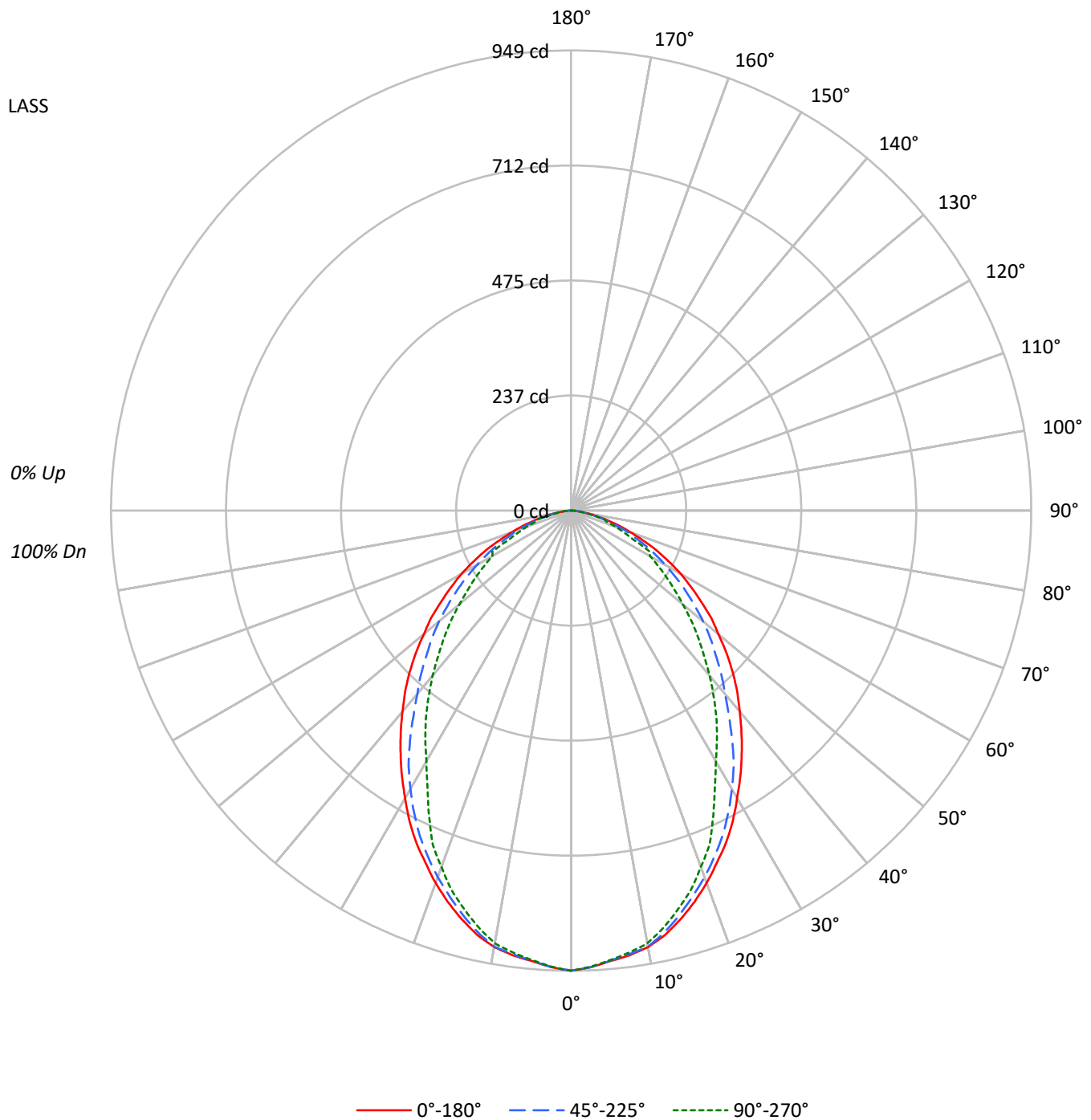
Lumens per Lamp: N/A  
Luminaire Lumens: 1863.0 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	10215	10215	10215
5°	10076	10064	10052
10°	9989	9977	9905
15°	9719	9621	9487
20°	9362	9212	8960
25°	8978	8782	8235
30°	8509	8236	7418
35°	8059	7612	6862
40°	7600	6937	6243
45°	7165	6413	5644
50°	6633	5953	5034
55°	6135	5393	4510
60°	5621	4818	4039
65°	4946	4220	3576
70°	4076	3695	3037
75°	3240	2828	2965
80°	2176	2039	1903
85°	1359	1630	1902

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7165 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.3	4.7
10°-20°	242.4	13.0
20°-30°	335.6	18.0
30°-40°	357.9	19.2
40°-50°	326.5	17.5
50°-60°	255.8	13.7
60°-70°	166.7	8.9
70°-80°	73.9	4.0
80°-90°	15.9	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°	666.4	35.8
0°-40°	1024.3	55.0
0°-60°	1606.6	86.2
0°-90°	1863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1863.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	949	949	949	949	949	
5°	932	931	931	930	930	89
15°	872	872	863	855	851	245
25°	756	752	739	713	693	347
35°	613	609	579	535	522	383
45°	471	461	421	386	371	363
55°	327	317	287	253	240	293
65°	194	183	166	169	140	191
75°	78	72	68	65	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°	949.0	949.0	949.0	949.0	949.0
2.5°	942.4	942.4	942.4	941.3	941.3
5°	932.5	931.4	931.4	930.3	930.3
7.5°	924.9	923.8	922.7	921.6	919.4
10°	913.9	913.9	912.8	907.3	906.2
12.5°	896.3	895.2	890.8	883.2	881.0
15°	872.2	872.2	863.4	854.6	851.3
17.5°	845.9	844.8	833.8	825.0	820.6
20°	817.3	815.1	804.2	789.9	782.2
22.5°	785.5	785.5	772.4	753.7	746.0
25°	755.9	751.5	739.4	713.1	693.4
27.5°	721.9	715.3	702.1	664.8	641.8
30°	684.6	681.3	662.6	614.4	596.8
32.5°	649.5	644.0	624.2	573.8	559.5
35°	613.3	608.9	579.3	535.4	522.2
37.5°	577.1	571.6	534.3	499.2	482.7
40°	540.9	534.3	493.7	461.9	444.3
42.5°	506.9	498.1	458.6	424.6	404.8
45°	470.7	460.8	421.3	386.2	370.8
47.5°	434.4	425.7	389.5	353.3	335.7
50°	396.1	388.4	355.5	319.3	300.6
52.5°	364.2	352.2	320.4	284.1	268.8
55°	326.9	317.1	287.4	253.4	240.3
57.5°	292.9	283.1	255.6	223.8	212.8
60°	261.1	246.8	223.8	196.4	187.6
62.5°	226.0	215.0	195.3	172.2	183.2
65°	194.2	183.2	165.7	169.0	140.4
67.5°	159.1	153.6	138.2	122.9	118.5
70°	129.5	122.9	117.4	100.9	96.5
72.5°	103.1	96.5	88.9	80.1	76.8
75°	77.9	72.4	68.0	64.7	71.3
77.5°	53.8	51.6	48.3	45.0	43.9
80°	35.1	34.0	32.9	31.8	30.7
82.5°	20.8	20.8	20.8	20.8	20.8
85°	11.0	12.1	13.2	14.3	15.4
87.5°	6.6	6.6	7.7	8.8	9.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)