

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: P559166

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-80-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559166  
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-50-UNV-80-97-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

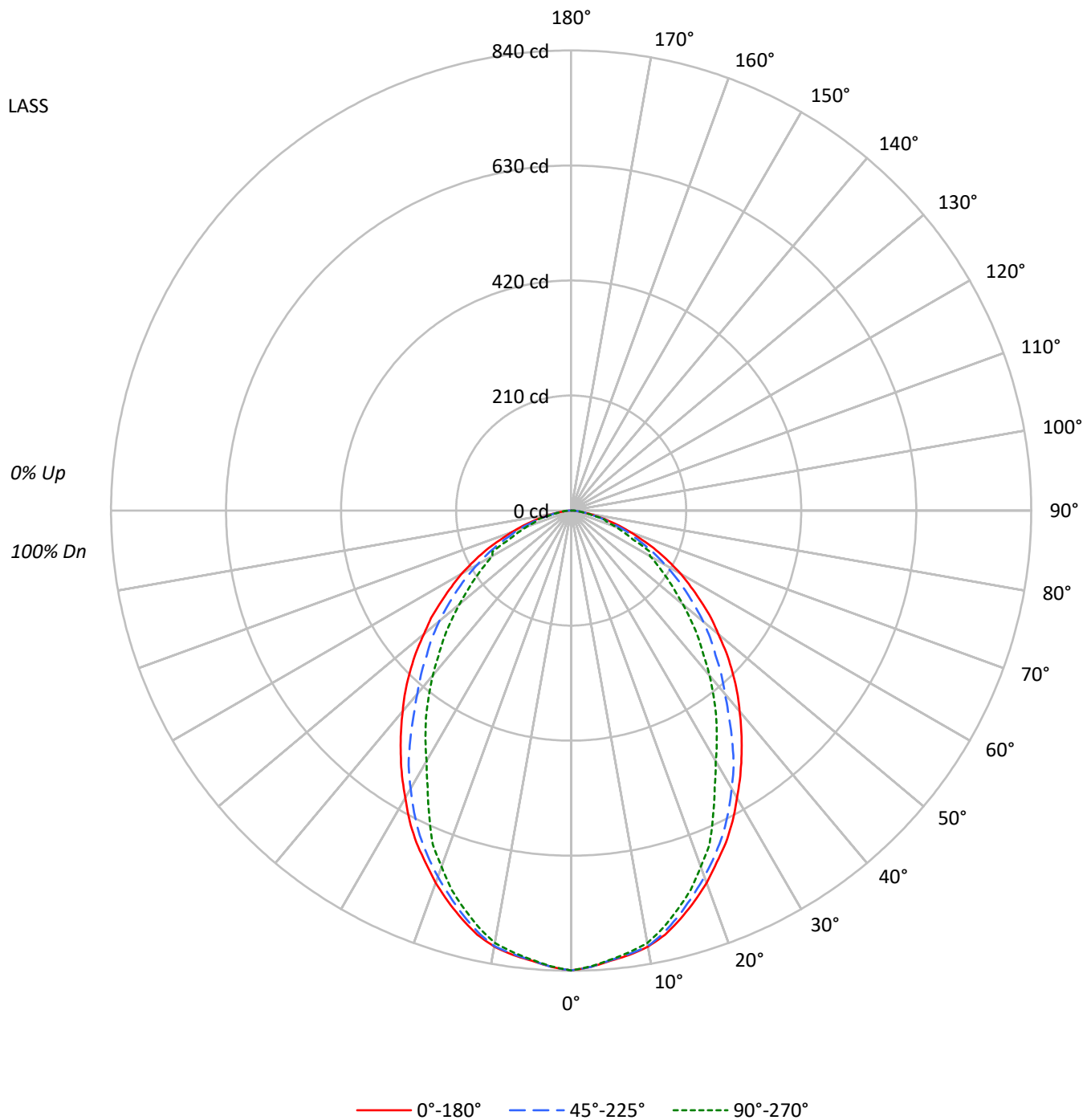
Lumens per Lamp: N/A  
Luminaire Lumens: 1648.0 lumens  
Efficiency: N/A  
Efficacy: 76.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	9036	9036	9036
5°	8913	8902	8893
10°	8836	8825	8761
15°	8597	8512	8392
20°	8282	8149	7927
25°	7942	7769	7284
30°	7527	7286	6561
35°	7129	6733	6071
40°	6722	6136	5522
45°	6337	5673	4993
50°	5866	5265	4453
55°	5427	4772	3988
60°	4973	4263	3574
65°	4376	3731	3163
70°	3603	3267	2688
75°	2865	2504	2624
80°	1928	1804	1686
85°	1198	1433	1680

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6337 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.1	4.7
10°-20°	214.5	13.0
20°-30°	296.9	18.0
30°-40°	316.6	19.2
40°-50°	288.8	17.5
50°-60°	226.3	13.7
60°-70°	147.5	8.9
70°-80°	65.3	4.0
80°-90°	14.0	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°	589.5	35.8
0°-40°	906.1	55.0
0°-60°	1421.2	86.2
0°-90°	1648.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1648.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	840	840	840	840	840	
5°	825	824	824	823	823	78
15°	772	772	764	756	753	217
25°	669	665	654	631	613	307
35°	542	539	512	474	462	339
45°	416	408	373	342	328	321
55°	289	280	254	224	212	259
65°	172	162	146	150	124	169
75°	69	64	60	57	63	74
85°	10	11	12	13	14	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	839.5	839.5	839.5	839.5	839.5
2.5°	833.6	833.6	833.6	832.7	832.7
5°	824.9	823.9	823.9	823.0	823.0
7.5°	818.1	817.1	816.2	815.2	813.3
10°	808.4	808.4	807.4	802.6	801.6
12.5°	792.9	791.9	788.0	781.2	779.3
15°	771.5	771.5	763.8	756.0	753.1
17.5°	748.2	747.3	737.6	729.8	725.9
20°	723.0	721.1	711.4	698.7	692.0
22.5°	694.9	694.9	683.2	666.7	659.9
25°	668.7	664.8	654.1	630.8	613.3
27.5°	638.6	632.8	621.1	588.1	567.7
30°	605.6	602.7	586.2	543.5	527.9
32.5°	574.5	569.7	552.2	507.6	494.9
35°	542.5	538.6	512.4	473.6	462.0
37.5°	510.5	505.6	472.6	441.6	427.0
40°	478.4	472.6	436.7	408.6	393.0
42.5°	448.4	440.6	405.7	375.6	358.1
45°	416.3	407.6	372.7	341.6	328.0
47.5°	384.3	376.5	344.5	312.5	297.0
50°	350.3	343.6	314.4	282.4	265.9
52.5°	322.2	311.5	283.4	251.4	237.8
55°	289.2	280.5	254.3	224.2	212.5
57.5°	259.1	250.4	226.1	198.0	188.3
60°	231.0	218.4	198.0	173.7	166.0
62.5°	199.9	190.2	172.7	152.4	162.1
65°	171.8	162.1	146.5	149.5	124.2
67.5°	140.7	135.9	122.3	108.7	104.8
70°	114.5	108.7	103.8	89.3	85.4
72.5°	91.2	85.4	78.6	70.8	67.9
75°	68.9	64.1	60.2	57.3	63.1
77.5°	47.6	45.6	42.7	39.8	38.8
80°	31.1	30.1	29.1	28.1	27.2
82.5°	18.4	18.4	18.4	18.4	18.4
85°	9.7	10.7	11.6	12.6	13.6
87.5°	5.8	5.8	6.8	7.8	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)