

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: P559154

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-80-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559154  
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-80-85-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

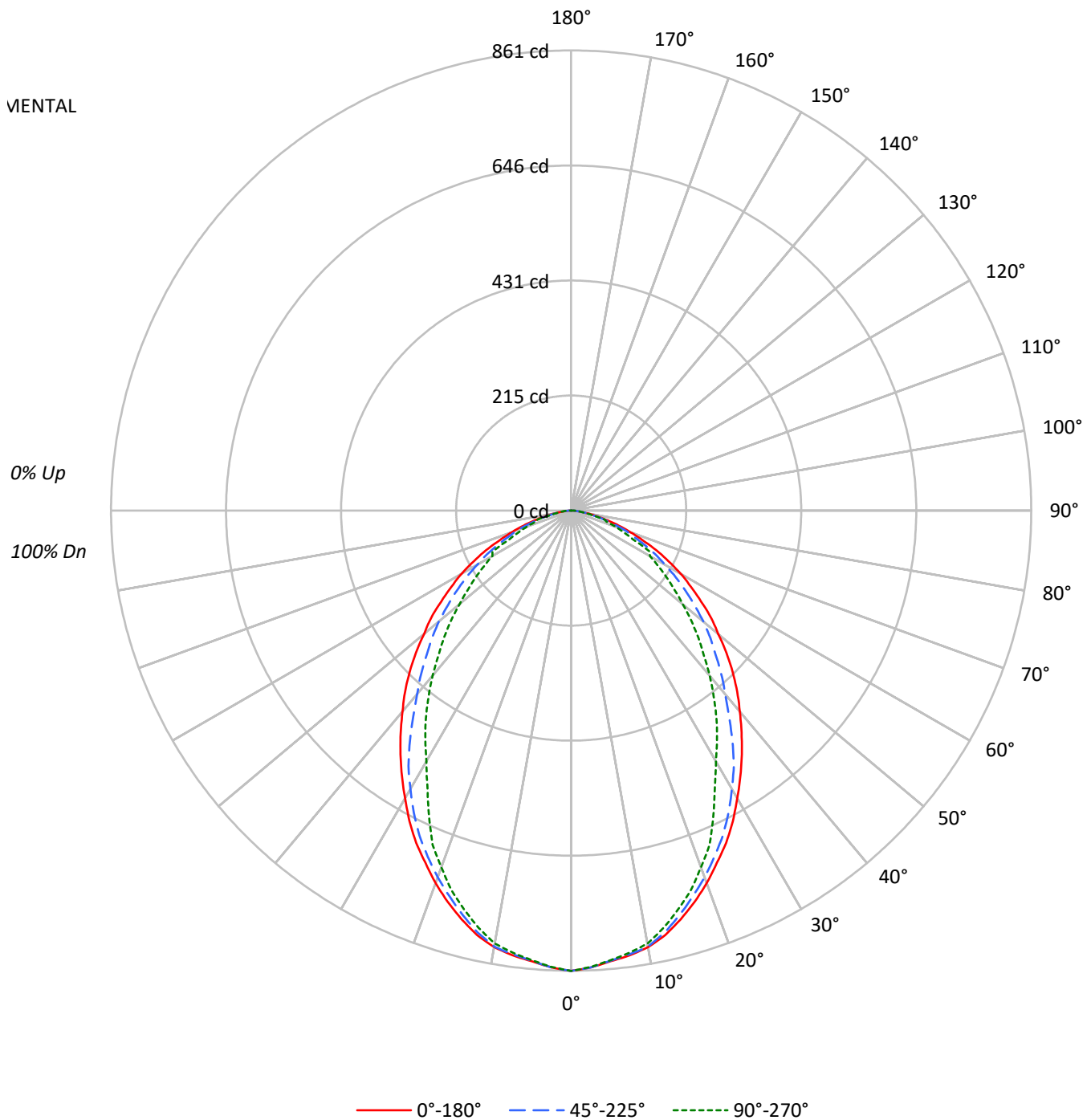
Lumens per Lamp: N/A  
Luminaire Lumens: 1691.0 lumens  
Efficiency: N/A  
Efficacy: 78.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	9272	9272	9272
5°	9145	9135	9124
10°	9066	9055	8990
15°	8822	8733	8611
20°	8498	8361	8133
25°	8149	7972	7474
30°	7723	7476	6733
35°	7315	6909	6229
40°	6898	6296	5667
45°	6503	5821	5124
50°	6020	5402	4570
55°	5570	4896	4093
60°	5102	4372	3666
65°	4490	3831	3247
70°	3698	3355	2757
75°	2940	2566	2691
80°	1977	1853	1729
85°	1235	1470	1717

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6503 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.2	4.7
10°-20°	220.1	13.0
20°-30°	304.6	18.0
30°-40°	324.9	19.2
40°-50°	296.3	17.5
50°-60°	232.2	13.7
60°-70°	151.3	8.9
70°-80°	67.0	4.0
80°-90°	14.4	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°	604.9	35.8
0°-40°	929.7	55.0
0°-60°	1458.2	86.2
0°-90°	1691.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1691.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	861	861	861	861	861	
5°	846	845	845	844	844	80
15°	792	792	784	776	773	223
25°	686	682	671	647	629	315
35°	557	553	526	486	474	348
45°	427	418	382	350	337	329
55°	297	288	261	230	218	266
65°	176	166	150	153	128	174
75°	71	66	62	59	65	76
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	861.4	861.4	861.4	861.4	861.4
2.5°	855.4	855.4	855.4	854.4	854.4
5°	846.4	845.4	845.4	844.4	844.4
7.5°	839.5	838.5	837.5	836.5	834.5
10°	829.5	829.5	828.5	823.5	822.5
12.5°	813.6	812.6	808.6	801.6	799.6
15°	791.7	791.7	783.7	775.7	772.7
17.5°	767.8	766.8	756.8	748.8	744.9
20°	741.9	739.9	729.9	717.0	710.0
22.5°	713.0	713.0	701.0	684.1	677.1
25°	686.1	682.1	671.2	647.3	629.3
27.5°	655.2	649.3	637.3	603.5	582.5
30°	621.4	618.4	601.5	557.7	541.7
32.5°	589.5	584.5	566.6	520.8	507.9
35°	556.7	552.7	525.8	486.0	474.0
37.5°	523.8	518.8	485.0	453.1	438.2
40°	490.9	485.0	448.1	419.2	403.3
42.5°	460.1	452.1	416.2	385.4	367.5
45°	427.2	418.2	382.4	350.5	336.6
47.5°	394.3	386.4	353.5	320.6	304.7
50°	359.5	352.5	322.6	289.8	272.9
52.5°	330.6	319.7	290.8	257.9	244.0
55°	296.8	287.8	260.9	230.0	218.1
57.5°	265.9	256.9	232.0	203.1	193.2
60°	237.0	224.1	203.1	178.2	170.3
62.5°	205.1	195.2	177.3	156.3	166.3
65°	176.3	166.3	150.4	153.4	127.5
67.5°	144.4	139.4	125.5	111.5	107.5
70°	117.5	111.5	106.6	91.6	87.6
72.5°	93.6	87.6	80.7	72.7	69.7
75°	70.7	65.7	61.7	58.8	64.7
77.5°	48.8	46.8	43.8	40.8	39.8
80°	31.9	30.9	29.9	28.9	27.9
82.5°	18.9	18.9	18.9	18.9	18.9
85°	10.0	11.0	11.9	12.9	13.9
87.5°	6.0	6.0	7.0	8.0	9.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)