

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: P559271

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559271  
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-LD4-2LO-35-UNV-93-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

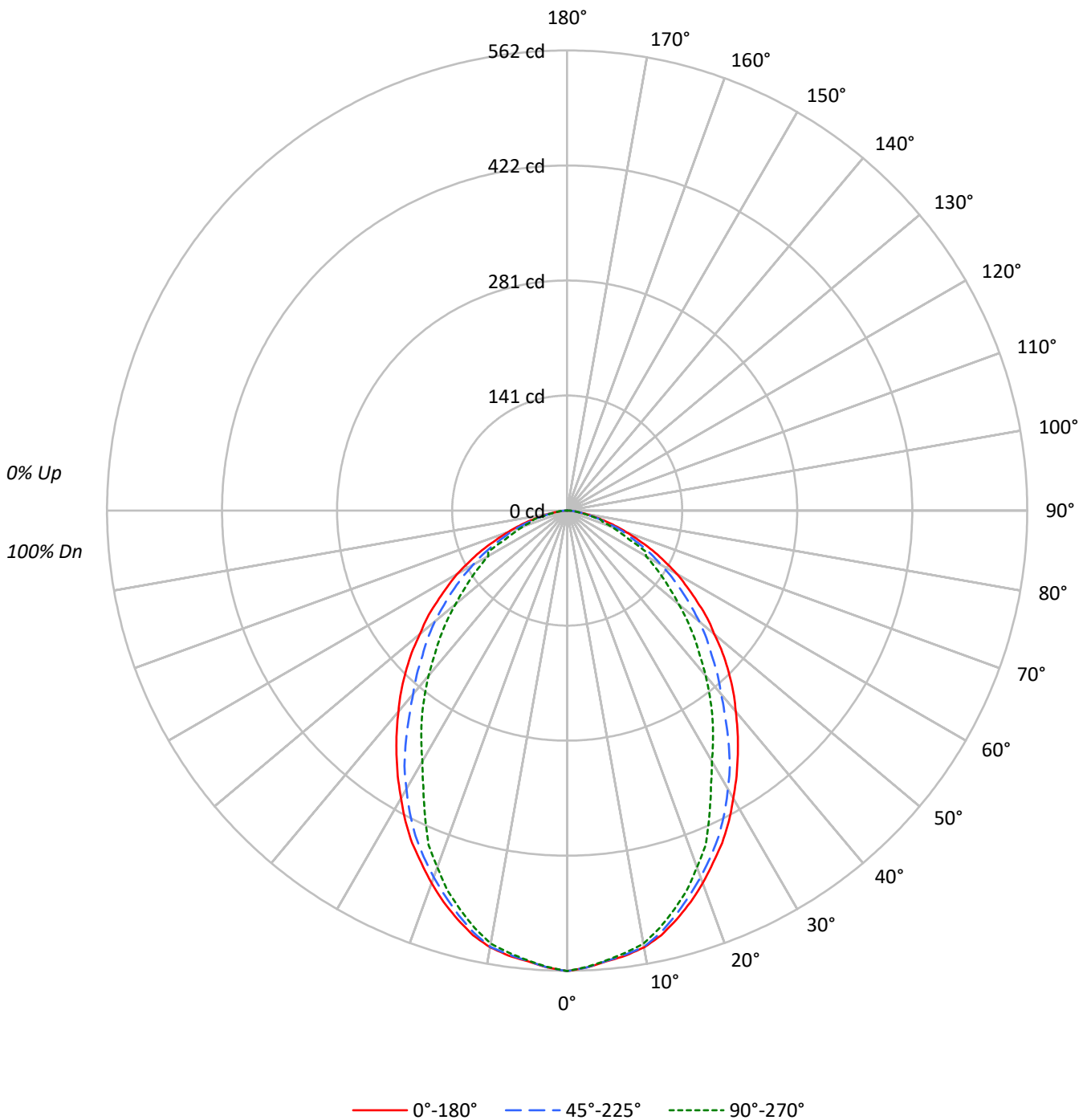
Lumens per Lamp: N/A  
Luminaire Lumens: 1104.0 lumens  
Efficiency: N/A  
Efficacy: 94.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	47	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°	6054	6054	6054
5°	5971	5964	5957
10°	5920	5912	5869
15°	5760	5702	5622
20°	5548	5458	5309
25°	5320	5204	4880
30°	5042	4881	4396
35°	4775	4511	4067
40°	4503	4111	3700
45°	4246	3801	3344
50°	3930	3527	2982
55°	3635	3196	2672
60°	3330	2855	2394
65°	2932	2501	2119
70°	2414	2190	1800
75°	1921	1676	1759
80°	1289	1209	1128
85°	803	963	1124

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4246 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.3	4.7
10°-20°	143.7	13.0
20°-30°	198.9	18.0
30°-40°	212.1	19.2
40°-50°	193.5	17.5
50°-60°	151.6	13.7
60°-70°	98.8	8.9
70°-80°	43.8	4.0
80°-90°	9.4	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°	394.9	35.8
0°-40°	607.0	55.0
0°-60°	952.0	86.2
0°-90°	1104.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1104.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	562	562	562	562	562	
5°	553	552	552	551	551	52
15°	517	517	512	506	504	145
25°	448	445	438	423	411	206
35°	363	361	343	317	310	227
45°	279	273	250	229	220	215
55°	194	188	170	150	142	174
65°	115	109	98	100	83	113
75°	46	43	40	38	42	49
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	562.4	562.4	562.4	562.4	562.4
2.5°	558.5	558.5	558.5	557.8	557.8
5°	552.6	552.0	552.0	551.3	551.3
7.5°	548.1	547.4	546.8	546.1	544.8
10°	541.6	541.6	540.9	537.7	537.0
12.5°	531.2	530.5	527.9	523.4	522.1
15°	516.9	516.9	511.7	506.5	504.5
17.5°	501.3	500.6	494.1	488.9	486.3
20°	484.3	483.0	476.5	468.1	463.5
22.5°	465.5	465.5	457.7	446.6	442.1
25°	447.9	445.3	438.2	422.6	410.9
27.5°	427.8	423.9	416.1	394.0	380.3
30°	405.7	403.7	392.7	364.1	353.7
32.5°	384.9	381.6	369.9	340.0	331.6
35°	363.4	360.8	343.3	317.3	309.5
37.5°	342.0	338.7	316.6	295.8	286.1
40°	320.5	316.6	292.6	273.7	263.3
42.5°	300.4	295.2	271.8	251.6	239.9
45°	278.9	273.1	249.7	228.8	219.7
47.5°	257.5	252.3	230.8	209.3	198.9
50°	234.7	230.1	210.6	189.2	178.1
52.5°	215.8	208.7	189.8	168.4	159.3
55°	193.7	187.9	170.3	150.2	142.4
57.5°	173.6	167.7	151.5	132.6	126.1
60°	154.7	146.3	132.6	116.4	111.2
62.5°	133.9	127.4	115.7	102.1	108.6
65°	115.1	108.6	98.2	100.1	83.2
67.5°	94.3	91.0	81.9	72.8	70.2
70°	76.7	72.8	69.6	59.8	57.2
72.5°	61.1	57.2	52.7	47.5	45.5
75°	46.2	42.9	40.3	38.4	42.3
77.5°	31.9	30.6	28.6	26.7	26.0
80°	20.8	20.2	19.5	18.9	18.2
82.5°	12.4	12.4	12.4	12.4	12.4
85°	6.5	7.2	7.8	8.5	9.1
87.5°	3.9	3.9	4.6	5.2	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)