

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: P559949

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-81-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559949  
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-LD4-1LO-50-UNV-81-96-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

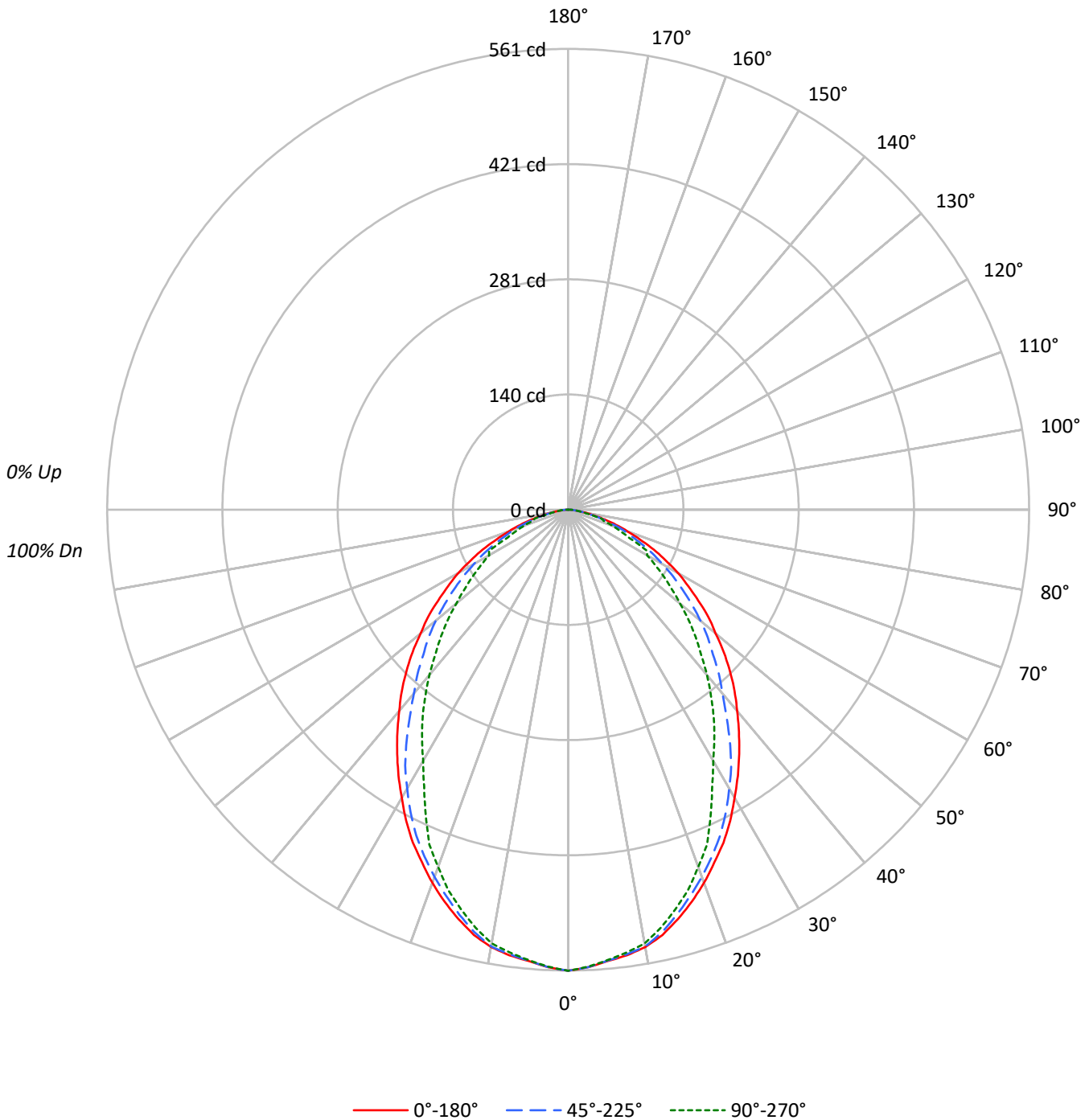
Lumens per Lamp: N/A  
Luminaire Lumens: 1102.0 lumens  
Efficiency: N/A  
Efficacy: 94.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3021	3021	3021
5°	2980	2977	2973
10°	2954	2951	2929
15°	2874	2846	2806
20°	2769	2725	2650
25°	2655	2597	2435
30°	2516	2436	2194
35°	2384	2251	2030
40°	2248	2051	1846
45°	2119	1897	1669
50°	1962	1761	1489
55°	1815	1595	1333
60°	1663	1425	1195
65°	1463	1248	1058
70°	1205	1092	899
75°	959	836	878
80°	645	604	564
85°	401	482	562

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2119 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.3	4.7
10°-20°	143.4	13.0
20°-30°	198.5	18.0
30°-40°	211.7	19.2
40°-50°	193.1	17.5
50°-60°	151.3	13.7
60°-70°	98.6	8.9
70°-80°	43.7	4.0
80°-90°	9.4	0.8
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°	394.2	35.8
0°-40°	605.9	55.0
0°-60°	950.3	86.2
0°-90°	1102.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1102.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	561	561	561	561	561	
5°	552	551	551	550	550	52
15°	516	516	511	506	504	145
25°	447	444	437	422	410	205
35°	363	360	343	317	309	227
45°	278	273	249	228	219	214
55°	193	188	170	150	142	173
65°	115	108	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°	561.3	561.3	561.3	561.3	561.3
2.5°	557.5	557.5	557.5	556.8	556.8
5°	551.6	551.0	551.0	550.3	550.3
7.5°	547.1	546.4	545.8	545.1	543.8
10°	540.6	540.6	539.9	536.7	536.0
12.5°	530.2	529.5	526.9	522.4	521.1
15°	515.9	515.9	510.7	505.5	503.6
17.5°	500.3	499.7	493.2	488.0	485.4
20°	483.5	482.2	475.7	467.2	462.7
22.5°	464.7	464.7	456.9	445.8	441.3
25°	447.1	444.5	437.4	421.8	410.1
27.5°	427.0	423.1	415.3	393.3	379.6
30°	404.9	403.0	392.0	363.4	353.0
32.5°	384.2	380.9	369.3	339.4	331.0
35°	362.8	360.2	342.6	316.7	308.9
37.5°	341.3	338.1	316.0	295.3	285.5
40°	319.9	316.0	292.0	273.2	262.8
42.5°	299.8	294.6	271.3	251.1	239.5
45°	278.4	272.6	249.2	228.4	219.3
47.5°	257.0	251.8	230.4	209.0	198.6
50°	234.3	229.7	210.3	188.8	177.8
52.5°	215.5	208.3	189.5	168.1	159.0
55°	193.4	187.5	170.0	149.9	142.1
57.5°	173.3	167.4	151.2	132.4	125.9
60°	154.5	146.0	132.4	116.2	111.0
62.5°	133.7	127.2	115.5	101.9	108.4
65°	114.9	108.4	98.0	99.9	83.1
67.5°	94.1	90.9	81.8	72.7	70.1
70°	76.6	72.7	69.4	59.7	57.1
72.5°	61.0	57.1	52.6	47.4	45.4
75°	46.1	42.8	40.2	38.3	42.2
77.5°	31.8	30.5	28.6	26.6	26.0
80°	20.8	20.1	19.5	18.8	18.2
82.5°	12.3	12.3	12.3	12.3	12.3
85°	6.5	7.1	7.8	8.4	9.1
87.5°	3.9	3.9	4.5	5.2	5.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)