

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: P559981

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-93-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559981  
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-93-96-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

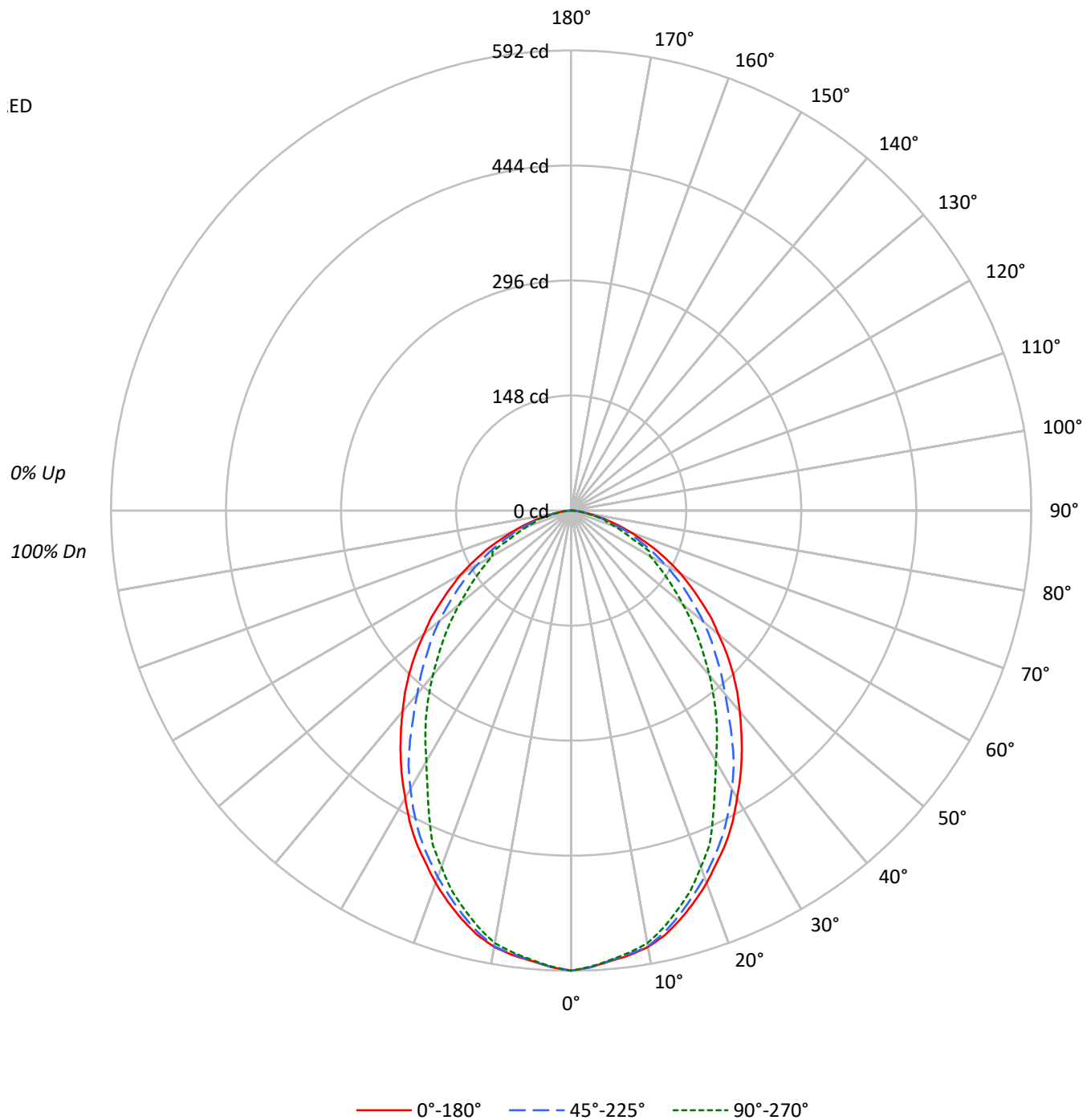
Lumens per Lamp: N/A  
Luminaire Lumens: 1162.0 lumens  
Efficiency: N/A  
Efficacy: 99.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																												
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°	3186	3186	3186
5°	3142	3139	3135
10°	3115	3111	3089
15°	3031	3000	2959
20°	2920	2873	2794
25°	2800	2739	2568
30°	2654	2568	2314
35°	2513	2374	2140
40°	2370	2163	1947
45°	2235	2000	1760
50°	2068	1856	1570
55°	1913	1682	1407
60°	1753	1503	1259
65°	1542	1316	1116
70°	1270	1152	947
75°	1011	882	925
80°	679	635	595
85°	420	506	593

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2235 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.1	4.7
10°-20°	151.2	13.0
20°-30°	209.3	18.0
30°-40°	223.2	19.2
40°-50°	203.6	17.5
50°-60°	159.5	13.7
60°-70°	104.0	8.9
70°-80°	46.1	4.0
80°-90°	9.9	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°	415.7	35.8
0°-40°	638.9	55.0
0°-60°	1002.1	86.2
0°-90°	1162.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1162.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	592	592	592	592	592	
5°	582	581	581	580	580	55
15°	544	544	538	533	531	153
25°	472	469	461	445	432	216
35°	382	380	361	334	326	239
45°	294	287	263	241	231	226
55°	204	198	179	158	150	183
65°	121	114	103	105	88	119
75°	49	45	42	40	44	52
85°	7	8	8	9	10	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	591.9	591.9	591.9	591.9	591.9
2.5°	587.8	587.8	587.8	587.1	587.1
5°	581.6	581.0	581.0	580.3	580.3
7.5°	576.9	576.2	575.5	574.8	573.4
10°	570.0	570.0	569.3	565.9	565.2
12.5°	559.1	558.4	555.6	550.9	549.5
15°	544.0	544.0	538.5	533.1	531.0
17.5°	527.6	526.9	520.1	514.6	511.8
20°	509.8	508.4	501.6	492.7	487.9
22.5°	489.9	489.9	481.7	470.1	465.3
25°	471.5	468.7	461.2	444.8	432.5
27.5°	450.3	446.2	437.9	414.7	400.3
30°	427.0	424.9	413.3	383.2	372.3
32.5°	405.1	401.7	389.4	357.9	349.0
35°	382.5	379.8	361.3	333.9	325.7
37.5°	359.9	356.5	333.2	311.4	301.1
40°	337.4	333.2	307.9	288.1	277.1
42.5°	316.1	310.7	286.0	264.8	252.5
45°	293.6	287.4	262.8	240.9	231.3
47.5°	271.0	265.5	242.9	220.3	209.4
50°	247.0	242.2	221.7	199.1	187.5
52.5°	227.2	219.7	199.8	177.2	167.7
55°	203.9	197.8	179.3	158.1	149.9
57.5°	182.7	176.5	159.4	139.6	132.8
60°	162.9	154.0	139.6	122.5	117.0
62.5°	141.0	134.1	121.8	107.4	114.3
65°	121.1	114.3	103.3	105.4	87.6
67.5°	99.2	95.8	86.2	76.6	73.9
70°	80.7	76.6	73.2	63.0	60.2
72.5°	64.3	60.2	55.4	50.0	47.9
75°	48.6	45.2	42.4	40.4	44.5
77.5°	33.5	32.2	30.1	28.1	27.4
80°	21.9	21.2	20.5	19.8	19.2
82.5°	13.0	13.0	13.0	13.0	13.0
85°	6.8	7.5	8.2	8.9	9.6
87.5°	4.1	4.1	4.8	5.5	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)