

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: P559851

Luminaire Tested: FSR-12-2-LD4-1LO-35-UNV-93-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559851  
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-35-UNV-93-94-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

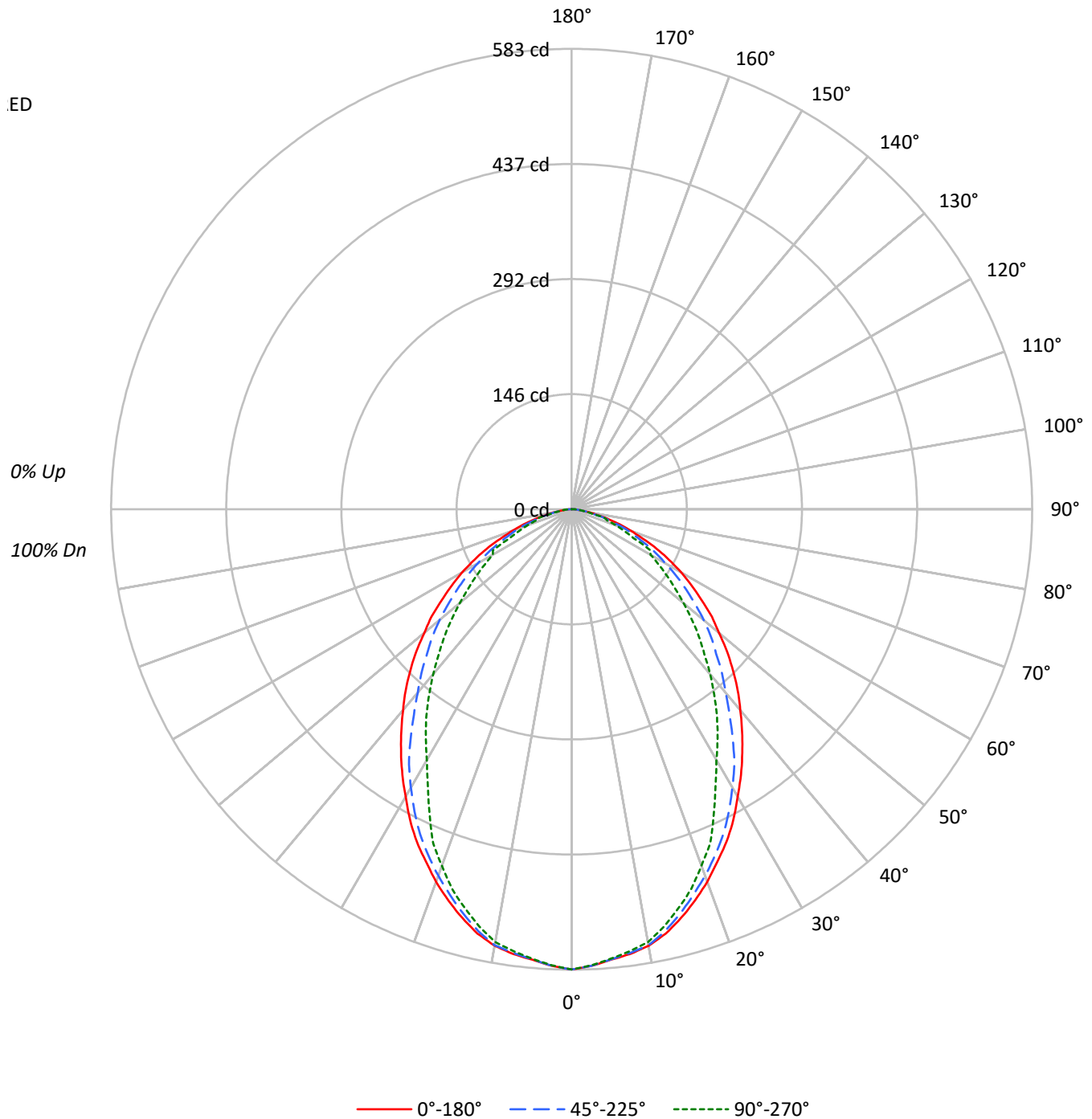
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1144.0 lumens  
Efficiency: N/A  
Efficacy: 97.8 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	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°	3136	3136	3136
5°	3093	3090	3086
10°	3067	3063	3041
15°	2984	2954	2913
20°	2875	2828	2751
25°	2757	2697	2529
30°	2613	2529	2278
35°	2474	2337	2107
40°	2333	2130	1917
45°	2200	1969	1733
50°	2036	1828	1546
55°	1884	1656	1384
60°	1725	1479	1240
65°	1518	1295	1098
70°	1251	1135	933
75°	994	869	911
80°	669	626	586
85°	414	500	580

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2200 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.2	4.7
10°-20°	148.9	13.0
20°-30°	206.1	18.0
30°-40°	219.8	19.2
40°-50°	200.5	17.5
50°-60°	157.1	13.7
60°-70°	102.4	8.9
70°-80°	45.4	4.0
80°-90°	9.7	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°	409.2	35.8
0°-40°	629.0	55.0
0°-60°	986.5	86.2
0°-90°	1144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1144.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	583	583	583	583	583	
5°	573	572	572	571	571	54
15°	536	536	530	525	523	151
25°	464	462	454	438	426	213
35°	377	374	356	329	321	235
45°	289	283	259	237	228	223
55°	201	195	176	156	148	180
65°	119	112	102	104	86	118
75°	48	44	42	40	44	51
85°	7	7	8	9	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	582.7	582.7	582.7	582.7	582.7
2.5°	578.7	578.7	578.7	578.0	578.0
5°	572.6	572.0	572.0	571.3	571.3
7.5°	567.9	567.2	566.6	565.9	564.5
10°	561.2	561.2	560.5	557.1	556.5
12.5°	550.4	549.7	547.0	542.3	541.0
15°	535.6	535.6	530.2	524.8	522.8
17.5°	519.4	518.7	512.0	506.6	503.9
20°	501.9	500.5	493.8	485.1	480.3
22.5°	482.4	482.4	474.3	462.8	458.1
25°	464.2	461.5	454.1	437.9	425.8
27.5°	443.3	439.2	431.2	408.3	394.1
30°	420.4	418.4	406.9	377.3	366.5
32.5°	398.8	395.5	383.3	352.3	343.6
35°	376.6	373.9	355.7	328.8	320.7
37.5°	354.4	351.0	328.1	306.5	296.4
40°	332.1	328.1	303.2	283.6	272.8
42.5°	311.2	305.9	281.6	260.7	248.6
45°	289.0	282.9	258.7	237.1	227.7
47.5°	266.8	261.4	239.2	216.9	206.1
50°	243.2	238.5	218.3	196.0	184.6
52.5°	223.7	216.3	196.7	174.5	165.1
55°	200.8	194.7	176.5	155.6	147.5
57.5°	179.9	173.8	157.0	137.4	130.7
60°	160.3	151.6	137.4	120.6	115.2
62.5°	138.8	132.0	119.9	105.8	112.5
65°	119.2	112.5	101.7	103.7	86.2
67.5°	97.7	94.3	84.9	75.5	72.8
70°	79.5	75.5	72.1	62.0	59.3
72.5°	63.3	59.3	54.6	49.2	47.2
75°	47.8	44.5	41.8	39.7	43.8
77.5°	33.0	31.7	29.6	27.6	26.9
80°	21.6	20.9	20.2	19.5	18.9
82.5°	12.8	12.8	12.8	12.8	12.8
85°	6.7	7.4	8.1	8.8	9.4
87.5°	4.0	4.0	4.7	5.4	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)