

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: P559211

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-93-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559211  
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-93-94-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

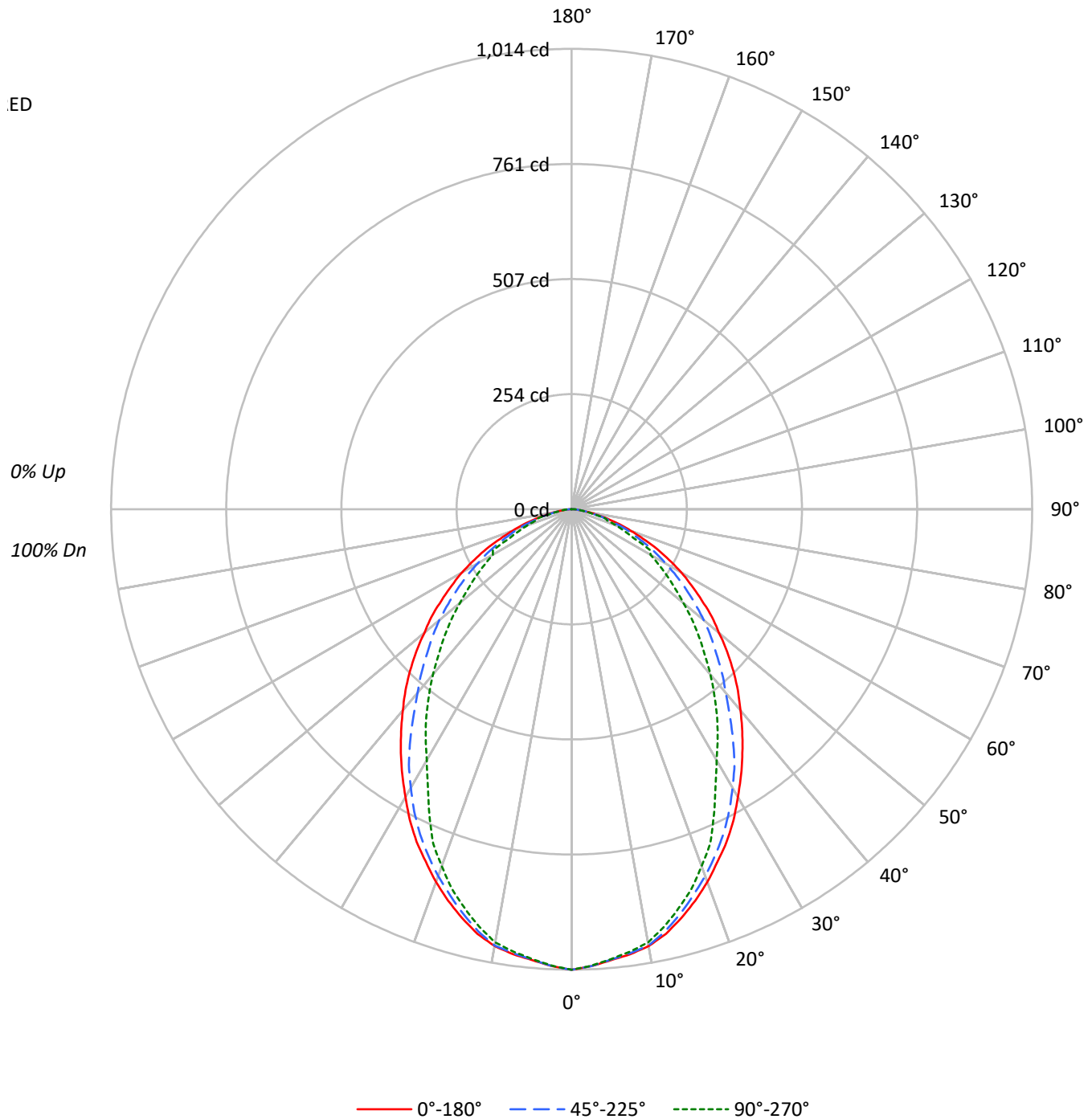
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1991.0 lumens  
Efficiency: N/A  
Efficacy: 92.2 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	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°	10917	10917	10917
5°	10768	10755	10743
10°	10675	10662	10586
15°	10387	10282	10138
20°	10006	9844	9576
25°	9594	9385	8801
30°	9093	8802	7927
35°	8612	8135	7334
40°	8122	7413	6673
45°	7657	6853	6033
50°	7088	6362	5380
55°	6557	5765	4819
60°	6006	5149	4316
65°	5285	4508	3823
70°	4356	3950	3248
75°	3460	3023	3169
80°	2325	2182	2033
85°	1445	1741	2025

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7657 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.4	4.7
10°-20°	259.1	13.0
20°-30°	358.7	18.0
30°-40°	382.5	19.2
40°-50°	348.9	17.5
50°-60°	273.4	13.7
60°-70°	178.2	8.9
70°-80°	78.9	4.0
80°-90°	16.9	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°	712.2	35.8
0°-40°	1094.7	55.0
0°-60°	1717.0	86.2
0°-90°	1991.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1991.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1014	1014	1014	1014	1014	
5°	997	995	995	994	994	95
15°	932	932	923	913	910	262
25°	808	803	790	762	741	371
35°	655	651	619	572	558	410
45°	503	492	450	413	396	387
55°	349	339	307	271	257	313
65°	208	196	177	181	150	205
75°	83	77	73	69	76	89
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1014.2	1014.2	1014.2	1014.2	1014.2
2.5°	1007.2	1007.2	1007.2	1006.0	1006.0
5°	996.6	995.4	995.4	994.3	994.3
7.5°	988.4	987.2	986.0	984.9	982.5
10°	976.7	976.7	975.5	969.6	968.5
12.5°	957.9	956.7	952.0	943.8	941.5
15°	932.1	932.1	922.7	913.4	909.8
17.5°	904.0	902.8	891.1	881.7	877.0
20°	873.5	871.1	859.4	844.2	836.0
22.5°	839.5	839.5	825.4	805.5	797.3
25°	807.8	803.1	790.2	762.1	741.0
27.5°	771.5	764.5	750.4	710.5	685.9
30°	731.6	728.1	708.2	656.6	637.8
32.5°	694.1	688.2	667.1	613.2	598.0
35°	655.4	650.7	619.1	572.2	558.1
37.5°	616.7	610.9	571.0	533.5	515.9
40°	578.0	571.0	527.6	493.6	474.9
42.5°	541.7	532.3	490.1	453.7	432.6
45°	503.0	492.4	450.2	412.7	396.3
47.5°	464.3	454.9	416.2	377.5	358.8
50°	423.3	415.1	379.9	341.2	321.3
52.5°	389.3	376.4	342.4	303.7	287.3
55°	349.4	338.8	307.2	270.8	256.8
57.5°	313.1	302.5	273.2	239.2	227.5
60°	279.0	263.8	239.2	209.9	200.5
62.5°	241.5	229.8	208.7	184.1	195.8
65°	207.5	195.8	177.0	180.6	150.1
67.5°	170.0	164.1	147.7	131.3	126.6
70°	138.4	131.3	125.5	107.9	103.2
72.5°	110.2	103.2	95.0	85.6	82.1
75°	83.2	77.4	72.7	69.2	76.2
77.5°	57.5	55.1	51.6	48.1	46.9
80°	37.5	36.3	35.2	34.0	32.8
82.5°	22.3	22.3	22.3	22.3	22.3
85°	11.7	12.9	14.1	15.2	16.4
87.5°	7.0	7.0	8.2	9.4	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)