

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: P559407

Luminaire Tested: FSR-12-1-LD4-2LO-50-UNV-93-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559407  
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-50-UNV-93-97-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

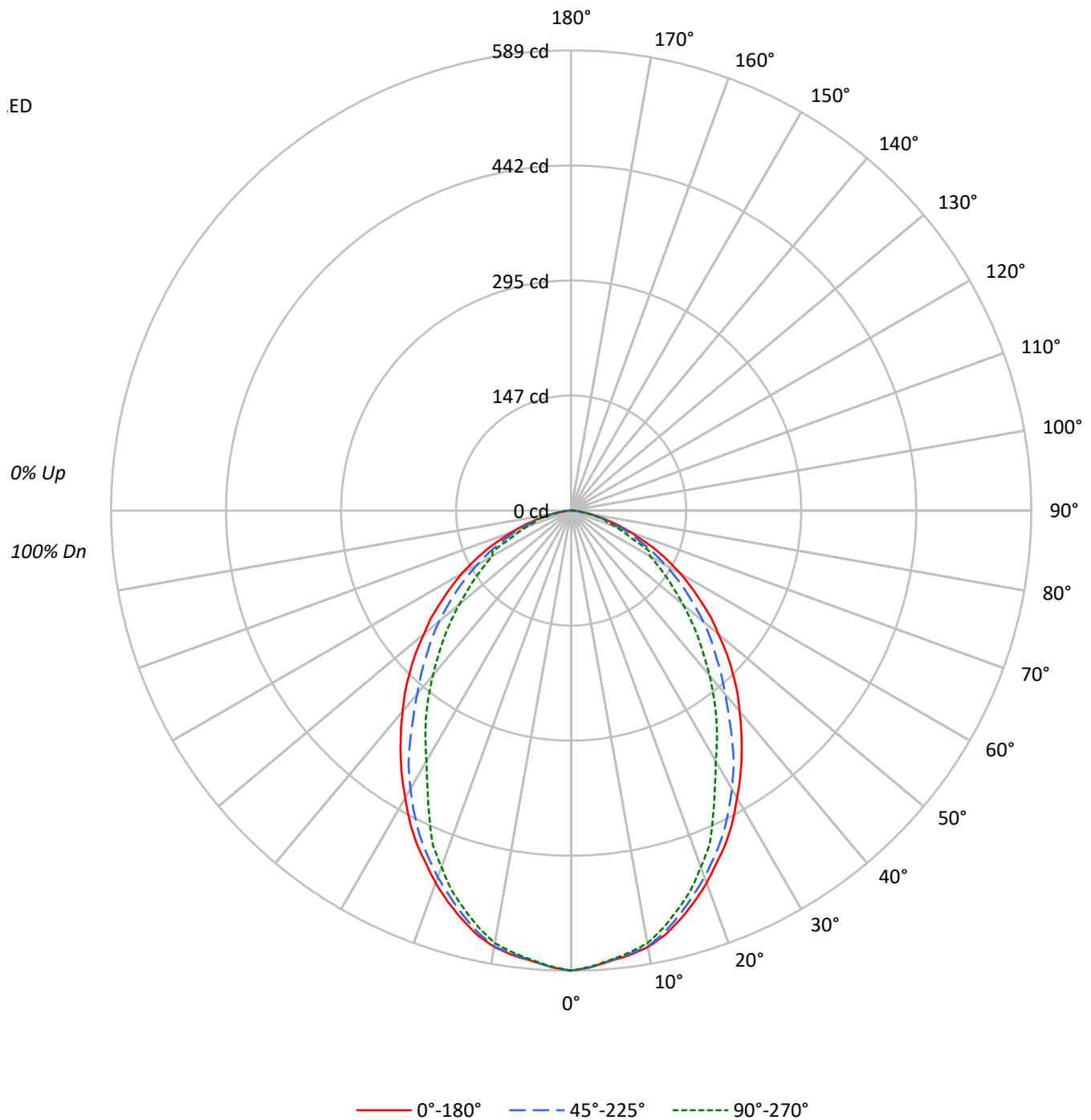
Lumens per Lamp: N/A  
Luminaire Lumens: 1156.0 lumens  
Efficiency: N/A  
Efficacy: 98.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	6339	6339	6339
5°	6252	6245	6238
10°	6198	6191	6146
15°	6031	5971	5887
20°	5810	5716	5560
25°	5570	5449	5109
30°	5280	5111	4602
35°	5000	4723	4257
40°	4716	4304	3874
45°	4445	3979	3503
50°	4116	3694	3123
55°	3808	3348	2798
60°	3488	2990	2506
65°	3069	2618	2218
70°	2527	2291	1885
75°	2009	1755	1838
80°	1351	1265	1184
85°	840	1013	1173

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4445 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.8	4.7
10°-20°	150.4	13.0
20°-30°	208.3	18.0
30°-40°	222.1	19.2
40°-50°	202.6	17.5
50°-60°	158.7	13.7
60°-70°	103.4	8.9
70°-80°	45.8	4.0
80°-90°	9.8	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°	413.5	35.8
0°-40°	635.6	55.0
0°-60°	996.9	86.2
0°-90°	1156.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1156.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	589	589	589	589	589	
5°	579	578	578	577	577	55
15°	541	541	536	530	528	152
25°	469	466	459	442	430	215
35°	380	378	359	332	324	238
45°	292	286	261	240	230	225
55°	203	197	178	157	149	182
65°	120	114	103	105	87	119
75°	48	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°	588.9	588.9	588.9	588.9	588.9
2.5°	584.8	584.8	584.8	584.1	584.1
5°	578.6	578.0	578.0	577.3	577.3
7.5°	573.9	573.2	572.5	571.8	570.5
10°	567.1	567.1	566.4	563.0	562.3
12.5°	556.2	555.5	552.8	548.0	546.6
15°	541.2	541.2	535.8	530.3	528.3
17.5°	524.9	524.2	517.4	511.9	509.2
20°	507.2	505.8	499.0	490.1	485.4
22.5°	487.4	487.4	479.2	467.7	462.9
25°	469.0	466.3	458.8	442.5	430.2
27.5°	447.9	443.9	435.7	412.5	398.2
30°	424.8	422.7	411.2	381.2	370.3
32.5°	403.0	399.6	387.3	356.0	347.2
35°	380.5	377.8	359.4	332.2	324.0
37.5°	358.1	354.7	331.5	309.7	299.5
40°	335.6	331.5	306.3	286.6	275.7
42.5°	314.5	309.1	284.6	263.5	251.2
45°	292.0	285.9	261.4	239.6	230.1
47.5°	269.6	264.1	241.7	219.2	208.3
50°	245.8	241.0	220.6	198.1	186.5
52.5°	226.0	218.5	198.8	176.3	166.8
55°	202.9	196.7	178.4	157.3	149.1
57.5°	181.8	175.6	158.6	138.9	132.1
60°	162.0	153.2	138.9	121.9	116.4
62.5°	140.2	133.4	121.2	106.9	113.7
65°	120.5	113.7	102.8	104.8	87.1
67.5°	98.7	95.3	85.8	76.2	73.5
70°	80.3	76.2	72.8	62.6	59.9
72.5°	64.0	59.9	55.1	49.7	47.7
75°	48.3	44.9	42.2	40.2	44.2
77.5°	33.4	32.0	30.0	27.9	27.2
80°	21.8	21.1	20.4	19.7	19.1
82.5°	12.9	12.9	12.9	12.9	12.9
85°	6.8	7.5	8.2	8.8	9.5
87.5°	4.1	4.1	4.8	5.4	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)