

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: P559597

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559597  
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-LD4-2STD-50-UNV-93-96-EDD  
Description: 1X1 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**

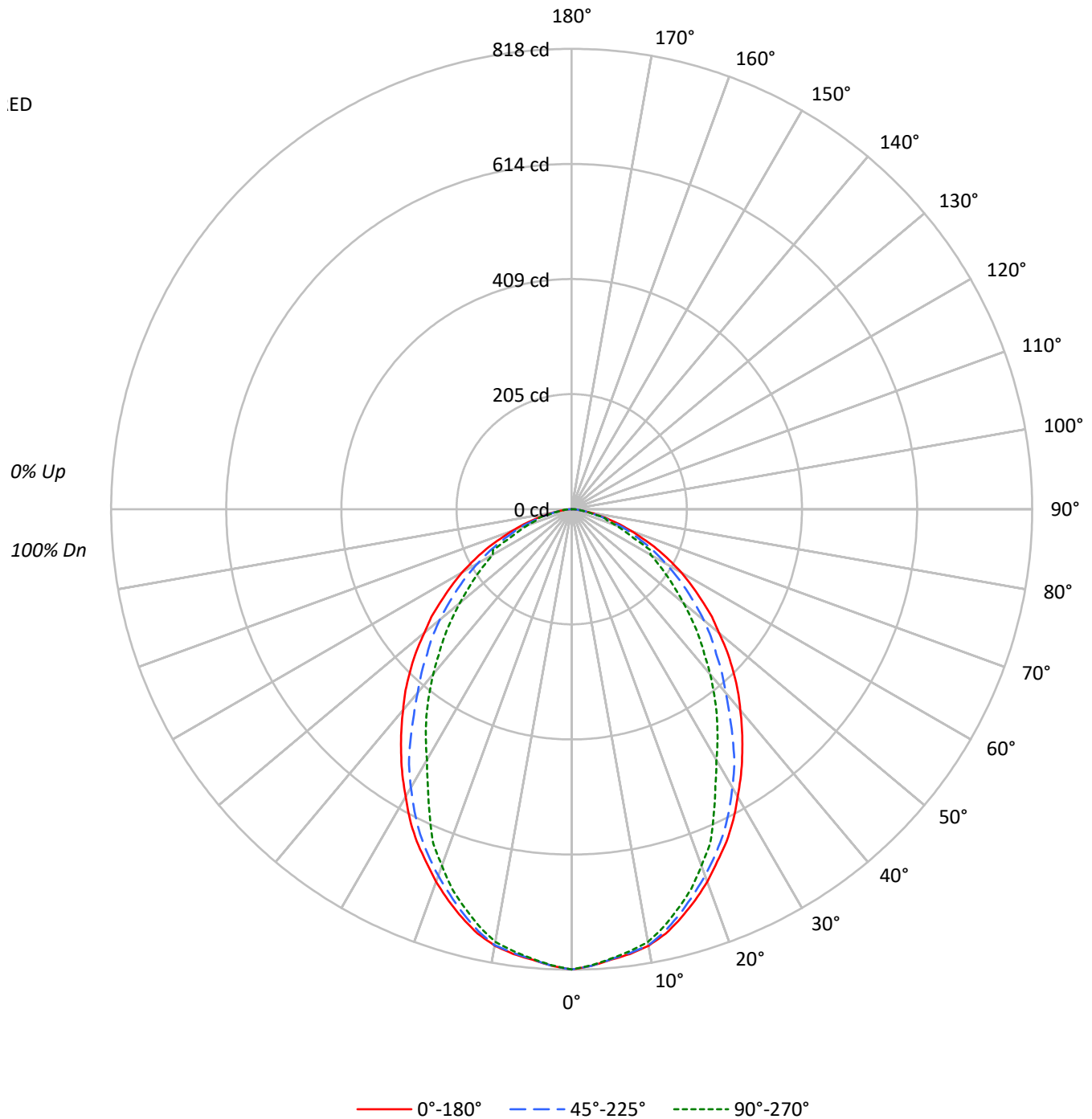
Lumens per Lamp: N/A  
Luminaire Lumens: 1605.0 lumens  
Efficiency: N/A  
Efficacy: 96.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	8801	8801	8801
5°	8681	8670	8660
10°	8605	8595	8533
15°	8373	8289	8173
20°	8065	7936	7719
25°	7734	7565	7094
30°	7331	7096	6391
35°	6942	6557	5912
40°	6548	5976	5379
45°	6173	5524	4864
50°	5714	5128	4337
55°	5286	4647	3885
60°	4842	4151	3479
65°	4261	3635	3082
70°	3509	3182	2618
75°	2791	2437	2554
80°	1872	1760	1643
85°	1173	1396	1630

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6173 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.1	4.7
10°-20°	208.9	13.0
20°-30°	289.2	18.0
30°-40°	308.3	19.2
40°-50°	281.3	17.5
50°-60°	220.4	13.7
60°-70°	143.6	8.9
70°-80°	63.6	4.0
80°-90°	13.7	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°	574.1	35.8
0°-40°	882.4	55.0
0°-60°	1384.1	86.2
0°-90°	1605.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1605.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	803	802	802	802	802	76
15°	751	751	744	736	733	211
25°	651	647	637	614	597	299
35°	528	525	499	461	450	330
45°	406	397	363	333	320	312
55°	282	273	248	218	207	253
65°	167	158	143	146	121	165
75°	67	62	59	56	61	72
85°	10	10	11	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	817.6	817.6	817.6	817.6	817.6
2.5°	811.9	811.9	811.9	810.9	810.9
5°	803.4	802.4	802.4	801.5	801.5
7.5°	796.8	795.8	794.9	793.9	792.0
10°	787.3	787.3	786.4	781.6	780.7
12.5°	772.2	771.3	767.5	760.9	759.0
15°	751.4	751.4	743.8	736.3	733.4
17.5°	728.7	727.8	718.3	710.8	707.0
20°	704.1	702.3	692.8	680.5	673.9
22.5°	676.7	676.7	665.4	649.3	642.7
25°	651.2	647.4	637.0	614.4	597.3
27.5°	621.9	616.2	604.9	572.8	552.9
30°	589.8	586.9	570.9	529.3	514.2
32.5°	559.5	554.8	537.8	494.3	482.0
35°	528.3	524.6	499.0	461.2	449.9
37.5°	497.2	492.4	460.3	430.0	415.9
40°	466.0	460.3	425.3	397.9	382.8
42.5°	436.7	429.1	395.1	365.8	348.8
45°	405.5	397.0	362.9	332.7	319.5
47.5°	374.3	366.7	335.5	304.3	289.2
50°	341.2	334.6	306.2	275.0	259.0
52.5°	313.8	303.4	276.0	244.8	231.6
55°	281.7	273.2	247.6	218.3	207.0
57.5°	252.4	243.9	220.2	192.8	183.4
60°	224.9	212.7	192.8	169.2	161.6
62.5°	194.7	185.3	168.2	148.4	157.8
65°	167.3	157.8	142.7	145.6	121.0
67.5°	137.0	132.3	119.1	105.9	102.1
70°	111.5	105.9	101.1	87.0	83.2
72.5°	88.8	83.2	76.6	69.0	66.2
75°	67.1	62.4	58.6	55.8	61.4
77.5°	46.3	44.4	41.6	38.8	37.8
80°	30.2	29.3	28.4	27.4	26.5
82.5°	18.0	18.0	18.0	18.0	18.0
85°	9.5	10.4	11.3	12.3	13.2
87.5°	5.7	5.7	6.6	7.6	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)