

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: P558631

Luminaire Tested: FSR-12-1-LD4-1HI-50-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558631  
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-LD4-1HI-50-UNV-93-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

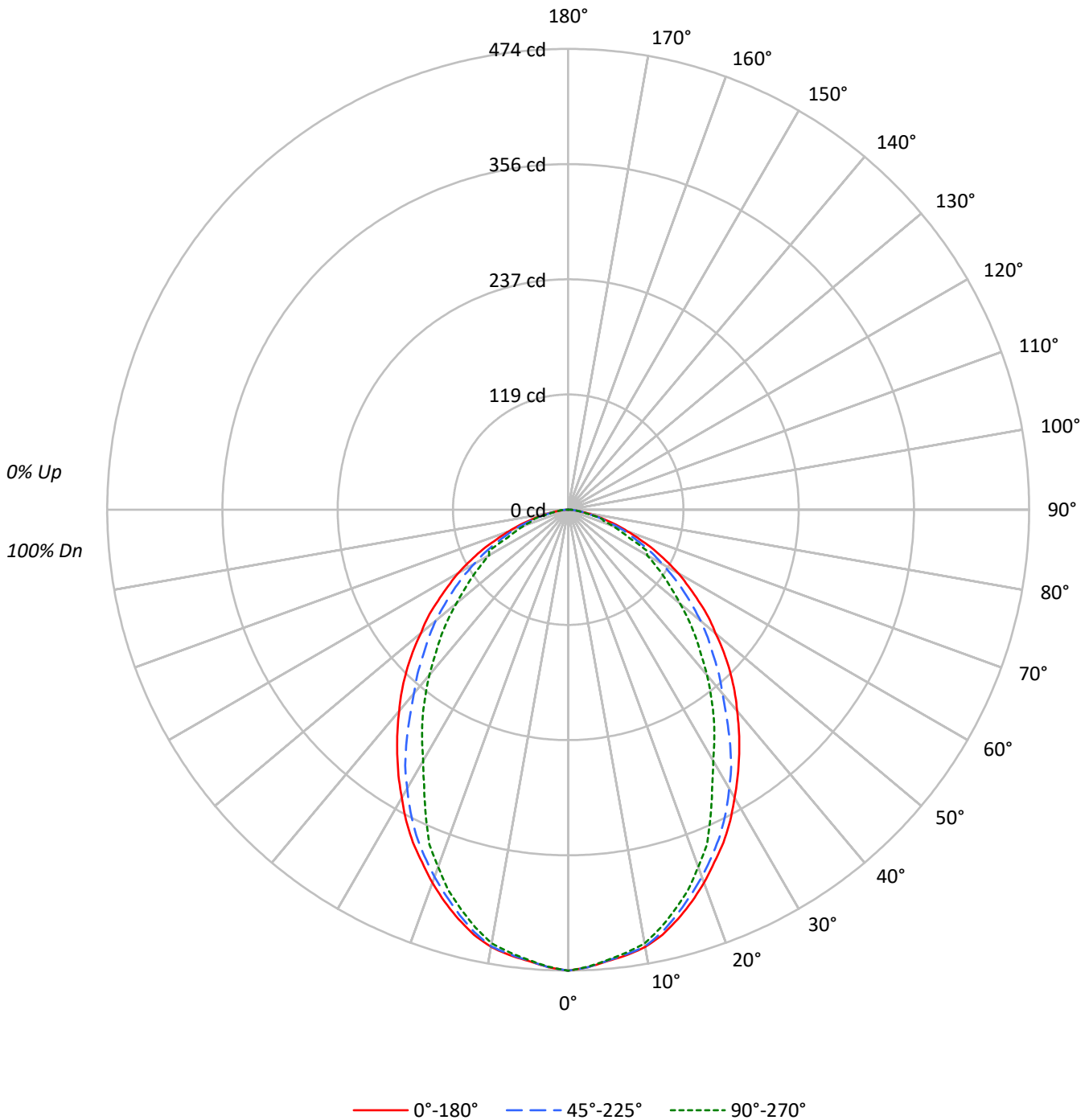
Lumens per Lamp: N/A  
Luminaire Lumens: 931.0 lumens  
Efficiency: N/A  
Efficacy: 86.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	5104	5104	5104
5°	5035	5030	5023
10°	4992	4985	4950
15°	4858	4808	4740
20°	4678	4604	4478
25°	4486	4388	4115
30°	4252	4115	3706
35°	4028	3804	3430
40°	3798	3466	3119
45°	3580	3204	2821
50°	3314	2974	2515
55°	3066	2695	2254
60°	2809	2407	2019
65°	2471	2109	1788
70°	2036	1847	1517
75°	1618	1414	1481
80°	1085	1017	955
85°	679	815	951

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3580 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.1	4.7
10°-20°	121.2	13.0
20°-30°	167.7	18.0
30°-40°	178.8	19.2
40°-50°	163.2	17.5
50°-60°	127.8	13.7
60°-70°	83.3	8.9
70°-80°	36.9	4.0
80°-90°	7.9	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°	333.0	35.8
0°-40°	511.9	55.0
0°-60°	802.8	86.2
0°-90°	931.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	931.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	474	474	474	474	474	
5°	466	466	466	465	465	44
15°	436	436	432	427	425	123
25°	378	376	370	356	346	173
35°	306	304	290	268	261	192
45°	235	230	210	193	185	181
55°	163	158	144	127	120	147
65°	97	92	83	84	70	96
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	474.2	474.2	474.2	474.2	474.2
2.5°	470.9	470.9	470.9	470.4	470.4
5°	466.0	465.5	465.5	464.9	464.9
7.5°	462.2	461.6	461.1	460.5	459.4
10°	456.7	456.7	456.1	453.4	452.9
12.5°	447.9	447.4	445.2	441.3	440.2
15°	435.9	435.9	431.5	427.1	425.4
17.5°	422.7	422.2	416.7	412.3	410.1
20°	408.4	407.4	401.9	394.7	390.9
22.5°	392.5	392.5	386.0	376.6	372.8
25°	377.7	375.6	369.5	356.4	346.5
27.5°	360.8	357.5	350.9	332.2	320.7
30°	342.1	340.5	331.1	307.0	298.2
32.5°	324.6	321.8	312.0	286.7	279.6
35°	306.5	304.3	289.5	267.5	261.0
37.5°	288.4	285.6	267.0	249.5	241.2
40°	270.3	267.0	246.7	230.8	222.0
42.5°	253.3	248.9	229.2	212.2	202.3
45°	235.2	230.3	210.5	193.0	185.3
47.5°	217.1	212.7	194.6	176.5	167.8
50°	197.9	194.1	177.6	159.5	150.2
52.5°	182.0	176.0	160.1	142.0	134.3
55°	163.4	158.4	143.6	126.6	120.1
57.5°	146.4	141.4	127.7	111.8	106.4
60°	130.5	123.4	111.8	98.1	93.8
62.5°	112.9	107.5	97.6	86.1	91.6
65°	97.0	91.6	82.8	84.4	70.2
67.5°	79.5	76.8	69.1	61.4	59.2
70°	64.7	61.4	58.7	50.4	48.2
72.5°	51.5	48.2	44.4	40.0	38.4
75°	38.9	36.2	34.0	32.3	35.6
77.5°	26.9	25.8	24.1	22.5	21.9
80°	17.5	17.0	16.4	15.9	15.4
82.5°	10.4	10.4	10.4	10.4	10.4
85°	5.5	6.0	6.6	7.1	7.7
87.5°	3.3	3.3	3.8	4.4	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)