

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: P558824

Luminaire Tested: FSR-12-1-LD4-1LO-50-UNV-93-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558824  
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-LD4-1LO-50-UNV-93-88-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

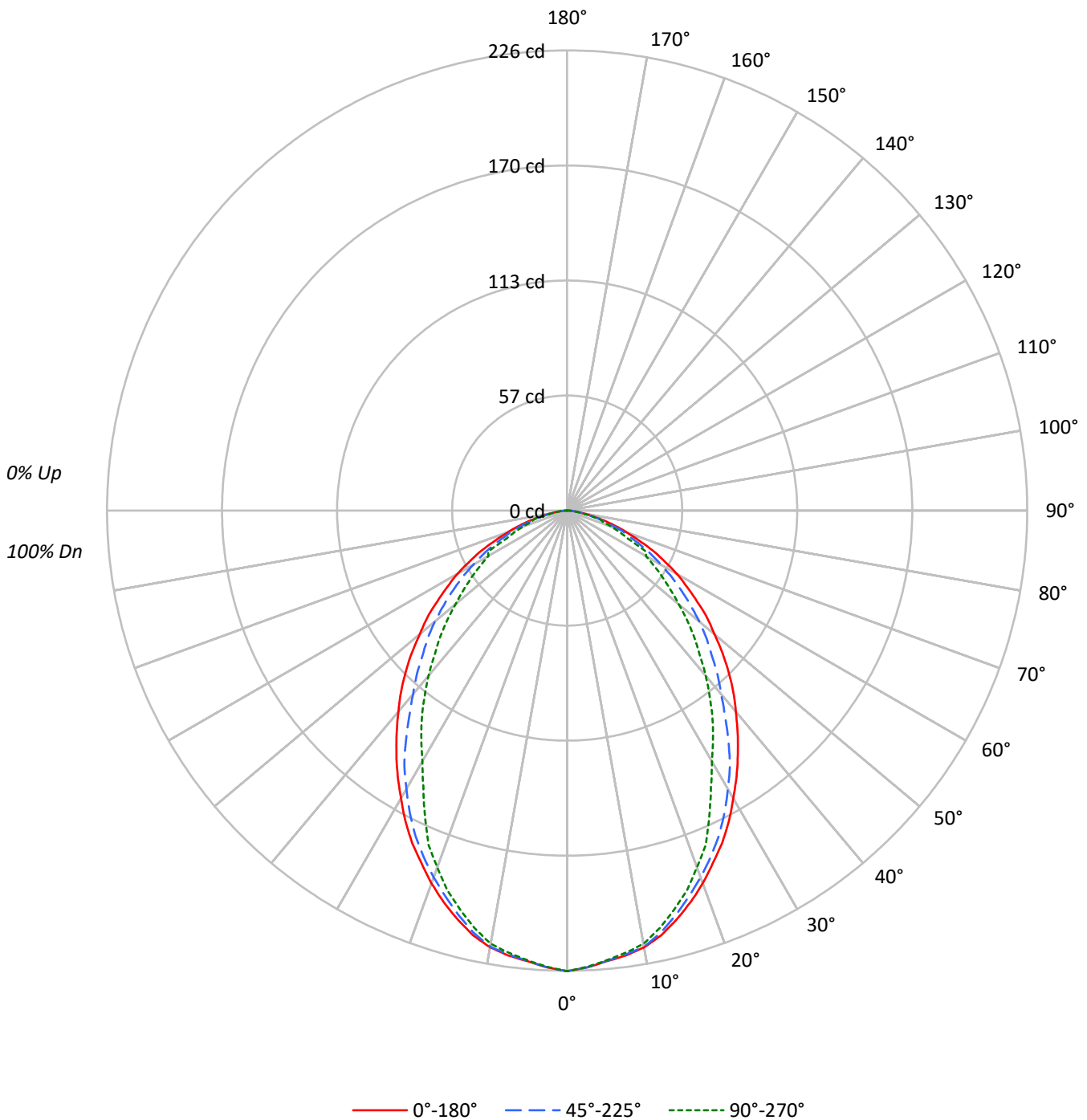
Lumens per Lamp: N/A  
Luminaire Lumens: 444.0 lumens  
Efficiency: N/A  
Efficacy: 76.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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	47	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°	2435	2435	2435
5°	2401	2399	2395
10°	2381	2377	2361
15°	2317	2293	2261
20°	2231	2196	2135
25°	2139	2093	1962
30°	2028	1963	1767
35°	1921	1815	1636
40°	1811	1654	1488
45°	1708	1528	1346
50°	1581	1418	1199
55°	1462	1285	1075
60°	1339	1147	962
65°	1179	1006	853
70°	972	881	724
75°	774	674	707
80°	521	483	453
85°	321	383	457

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1708 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.1	4.7
10°-20°	57.8	13.0
20°-30°	80.0	18.0
30°-40°	85.3	19.2
40°-50°	77.8	17.5
50°-60°	61.0	13.7
60°-70°	39.7	8.9
70°-80°	17.6	4.0
80°-90°	3.8	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°	158.8	35.8
0°-40°	244.1	55.0
0°-60°	382.9	86.2
0°-90°	444.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	444.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	226	226	226	226	226	
5°	222	222	222	222	222	21
15°	208	208	206	204	203	58
25°	180	179	176	170	165	83
35°	146	145	138	128	124	91
45°	112	110	100	92	88	86
55°	78	76	68	60	57	70
65°	46	44	40	40	34	46
75°	19	17	16	15	17	20
85°	3	3	3	3	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	226.2	226.2	226.2	226.2	226.2
2.5°	224.6	224.6	224.6	224.3	224.3
5°	222.2	222.0	222.0	221.7	221.7
7.5°	220.4	220.2	219.9	219.6	219.1
10°	217.8	217.8	217.5	216.2	216.0
12.5°	213.6	213.4	212.3	210.5	210.0
15°	207.9	207.9	205.8	203.7	202.9
17.5°	201.6	201.3	198.7	196.6	195.6
20°	194.8	194.3	191.7	188.3	186.4
22.5°	187.2	187.2	184.1	179.6	177.8
25°	180.1	179.1	176.2	170.0	165.2
27.5°	172.0	170.5	167.3	158.4	153.0
30°	163.2	162.4	157.9	146.4	142.2
32.5°	154.8	153.5	148.8	136.7	133.3
35°	146.2	145.1	138.1	127.6	124.5
37.5°	137.5	136.2	127.3	119.0	115.0
40°	128.9	127.3	117.7	110.1	105.9
42.5°	120.8	118.7	109.3	101.2	96.5
45°	112.2	109.8	100.4	92.0	88.4
47.5°	103.5	101.4	92.8	84.2	80.0
50°	94.4	92.6	84.7	76.1	71.6
52.5°	86.8	83.9	76.3	67.7	64.1
55°	77.9	75.6	68.5	60.4	57.3
57.5°	69.8	67.5	60.9	53.3	50.7
60°	62.2	58.8	53.3	46.8	44.7
62.5°	53.9	51.2	46.5	41.1	43.7
65°	46.3	43.7	39.5	40.3	33.5
67.5°	37.9	36.6	32.9	29.3	28.2
70°	30.9	29.3	28.0	24.1	23.0
72.5°	24.6	23.0	21.2	19.1	18.3
75°	18.6	17.3	16.2	15.4	17.0
77.5°	12.8	12.3	11.5	10.7	10.5
80°	8.4	8.1	7.8	7.6	7.3
82.5°	5.0	5.0	5.0	5.0	5.0
85°	2.6	2.9	3.1	3.4	3.7
87.5°	1.6	1.6	1.8	2.1	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)