

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: P558474

Luminaire Tested: FSR-12-1-LD4-1HI-35-UNV-81-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558474  
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-35-UNV-81-94-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

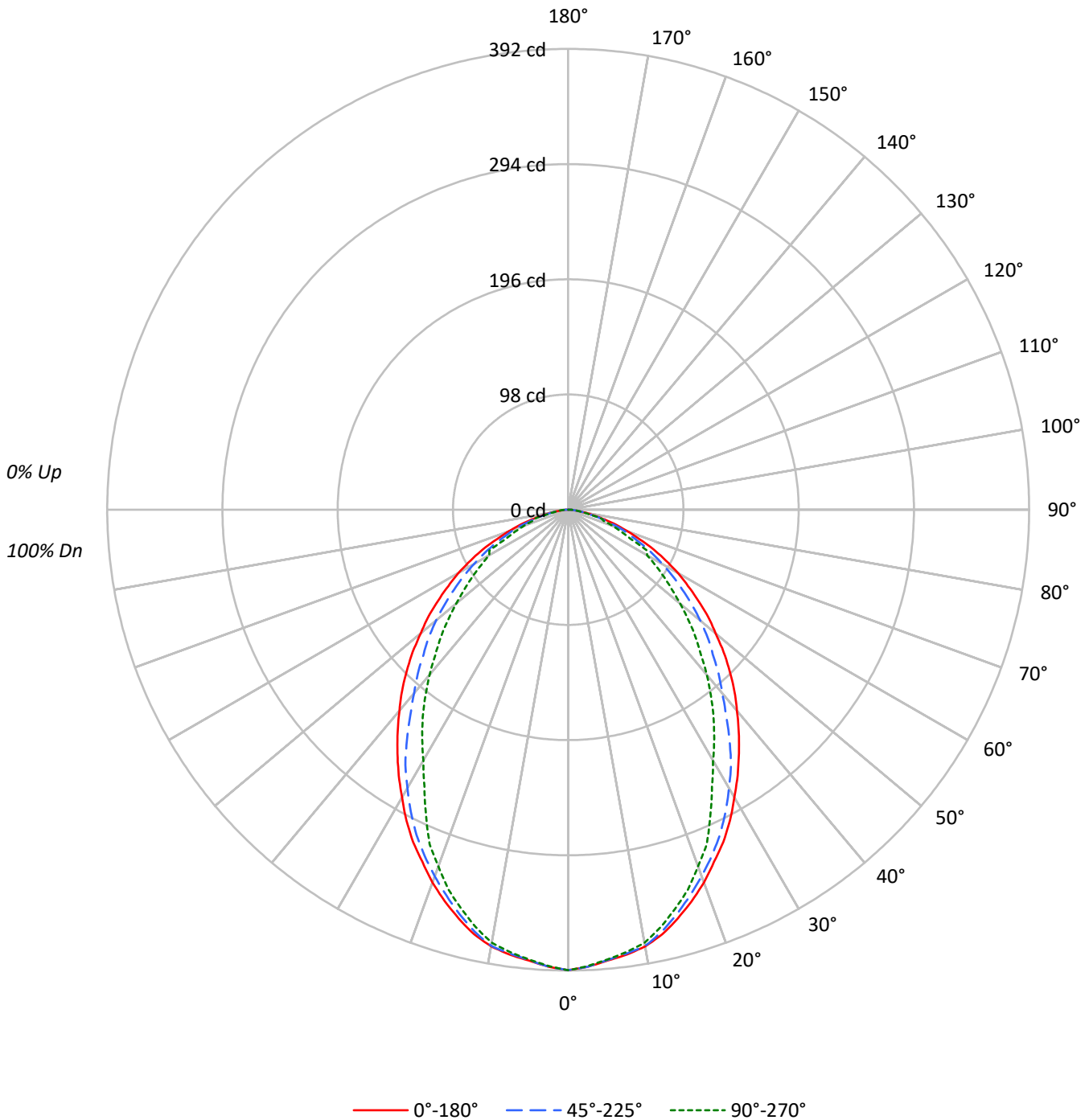
Lumens per Lamp: N/A  
Luminaire Lumens: 769.0 lumens  
Efficiency: N/A  
Efficacy: 71.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4216	4216	4216
5°	4159	4155	4149
10°	4123	4118	4089
15°	4012	3972	3916
20°	3865	3802	3699
25°	3706	3625	3399
30°	3512	3399	3063
35°	3326	3142	2833
40°	3138	2864	2577
45°	2958	2647	2331
50°	2738	2457	2078
55°	2533	2226	1862
60°	2321	1989	1666
65°	2043	1742	1477
70°	1681	1526	1256
75°	1339	1169	1223
80°	899	843	787
85°	556	667	778

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2958 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.5	4.7
10°-20°	100.1	13.0
20°-30°	138.5	18.0
30°-40°	147.7	19.2
40°-50°	134.8	17.5
50°-60°	105.6	13.7
60°-70°	68.8	8.9
70°-80°	30.5	4.0
80°-90°	6.5	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°	275.1	35.8
0°-40°	422.8	55.0
0°-60°	663.1	86.2
0°-90°	769.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	769.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	392	392	392	392	392	
5°	385	384	384	384	384	37
15°	360	360	356	353	351	101
25°	312	310	305	294	286	143
35°	253	251	239	221	216	158
45°	194	190	174	159	153	150
55°	135	131	119	105	99	121
65°	80	76	68	70	58	79
75°	32	30	28	27	29	34
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	391.7	391.7	391.7	391.7	391.7
2.5°	389.0	389.0	389.0	388.5	388.5
5°	384.9	384.5	384.5	384.0	384.0
7.5°	381.8	381.3	380.8	380.4	379.5
10°	377.2	377.2	376.8	374.5	374.1
12.5°	370.0	369.5	367.7	364.5	363.6
15°	360.0	360.0	356.4	352.8	351.4
17.5°	349.2	348.7	344.2	340.5	338.7
20°	337.4	336.5	331.9	326.1	322.9
22.5°	324.2	324.2	318.8	311.1	307.9
25°	312.0	310.2	305.2	294.4	286.2
27.5°	298.0	295.3	289.8	274.4	264.9
30°	282.6	281.2	273.5	253.6	246.4
32.5°	268.1	265.8	257.7	236.8	231.0
35°	253.1	251.3	239.1	221.0	215.6
37.5°	238.2	235.9	220.5	206.0	199.3
40°	223.3	220.5	203.8	190.7	183.4
42.5°	209.2	205.6	189.3	175.3	167.1
45°	194.3	190.2	173.9	159.4	153.1
47.5°	179.3	175.7	160.8	145.8	138.6
50°	163.5	160.3	146.7	131.8	124.1
52.5°	150.3	145.4	132.2	117.3	110.9
55°	135.0	130.9	118.6	104.6	99.2
57.5°	120.9	116.8	105.5	92.4	87.9
60°	107.8	101.9	92.4	81.1	77.4
62.5°	93.3	88.8	80.6	71.1	75.6
65°	80.2	75.6	68.4	69.7	58.0
67.5°	65.7	63.4	57.1	50.7	48.9
70°	53.4	50.7	48.5	41.7	39.9
72.5°	42.6	39.9	36.7	33.1	31.7
75°	32.2	29.9	28.1	26.7	29.4
77.5°	22.2	21.3	19.9	18.6	18.1
80°	14.5	14.0	13.6	13.1	12.7
82.5°	8.6	8.6	8.6	8.6	8.6
85°	4.5	5.0	5.4	5.9	6.3
87.5°	2.7	2.7	3.2	3.6	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)