

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: P558464

Luminaire Tested: FSR-12-1-LD4-1HI-35-UNV-81-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558464  
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-81-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

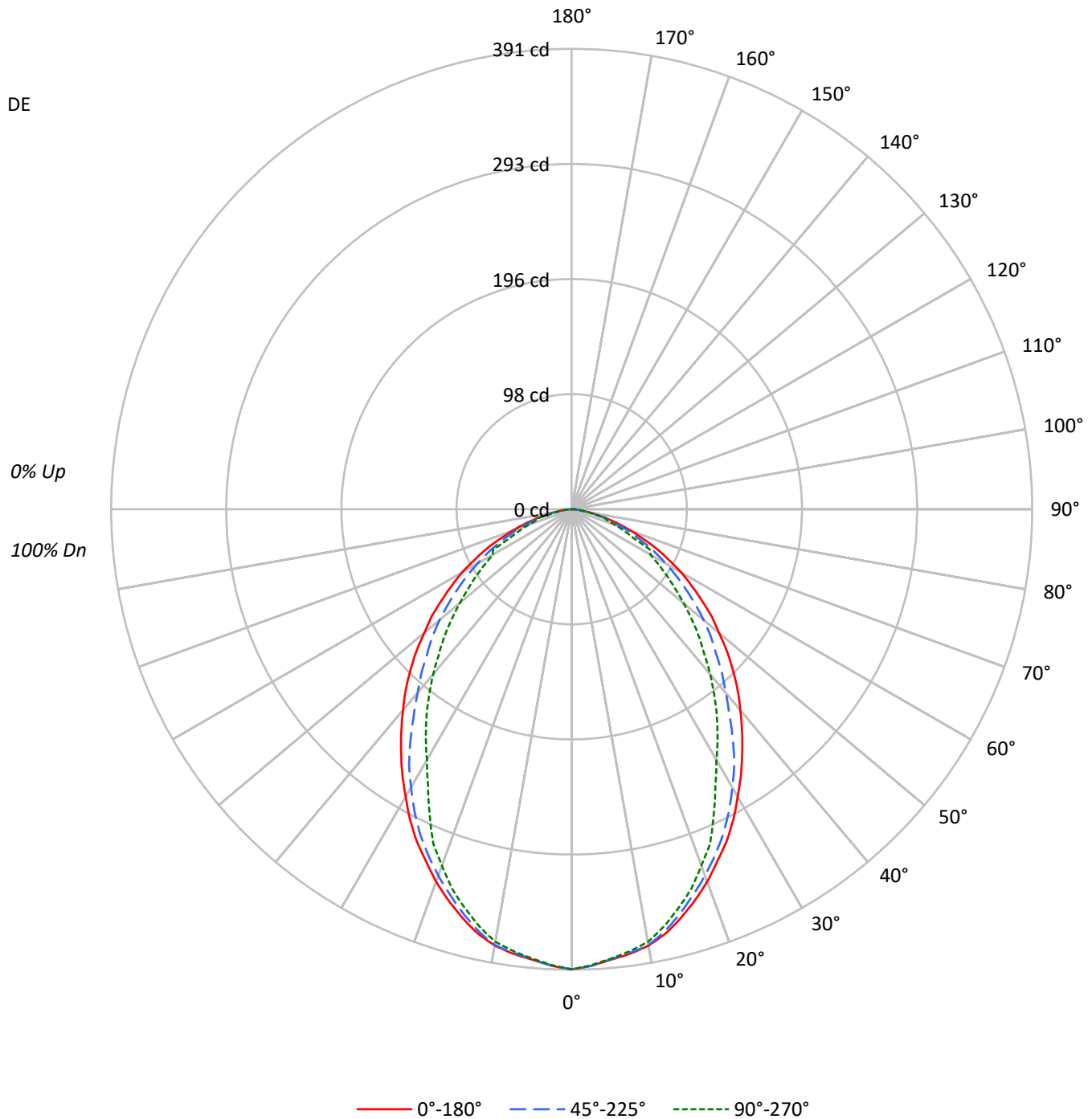
Lumens per Lamp: N/A  
Luminaire Lumens: 767.0 lumens  
Efficiency: N/A  
Efficacy: 71.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																												
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°	4205	4205	4205
5°	4148	4144	4138
10°	4112	4107	4078
15°	4002	3962	3906
20°	3855	3793	3688
25°	3696	3615	3391
30°	3503	3391	3054
35°	3318	3134	2825
40°	3129	2857	2570
45°	2950	2640	2324
50°	2731	2450	2073
55°	2526	2220	1856
60°	2314	1983	1662
65°	2035	1737	1472
70°	1677	1520	1249
75°	1335	1164	1223
80°	899	843	781
85°	556	667	778

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2950 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.4	4.7
10°-20°	99.8	13.0
20°-30°	138.2	18.0
30°-40°	147.3	19.2
40°-50°	134.4	17.5
50°-60°	105.3	13.7
60°-70°	68.6	8.9
70°-80°	30.4	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°	274.4	35.8
0°-40°	421.7	55.0
0°-60°	661.4	86.2
0°-90°	767.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	767.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	391	391	391	391	391	
5°	384	384	384	383	383	36
15°	359	359	356	352	350	101
25°	311	309	304	294	286	143
35°	252	251	238	220	215	158
45°	194	190	173	159	153	149
55°	135	130	118	104	99	121
65°	80	75	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°	390.7	390.7	390.7	390.7	390.7
2.5°	388.0	388.0	388.0	387.5	387.5
5°	383.9	383.5	383.5	383.0	383.0
7.5°	380.8	380.3	379.9	379.4	378.5
10°	376.2	376.2	375.8	373.5	373.1
12.5°	369.0	368.6	366.8	363.6	362.7
15°	359.1	359.1	355.5	351.9	350.5
17.5°	348.2	347.8	343.3	339.7	337.9
20°	336.5	335.6	331.1	325.2	322.0
22.5°	323.4	323.4	318.0	310.3	307.1
25°	311.2	309.4	304.4	293.6	285.5
27.5°	297.2	294.5	289.1	273.7	264.2
30°	281.8	280.5	272.8	252.9	245.7
32.5°	267.4	265.1	257.0	236.2	230.4
35°	252.5	250.7	238.5	220.4	215.0
37.5°	237.6	235.3	220.0	205.5	198.7
40°	222.7	220.0	203.3	190.2	182.9
42.5°	208.7	205.1	188.8	174.8	166.7
45°	193.8	189.7	173.4	159.0	152.7
47.5°	178.9	175.3	160.3	145.4	138.2
50°	163.1	159.9	146.3	131.4	123.8
52.5°	150.0	145.0	131.9	117.0	110.7
55°	134.6	130.5	118.3	104.3	98.9
57.5°	120.6	116.5	105.2	92.1	87.6
60°	107.5	101.6	92.1	80.8	77.2
62.5°	93.0	88.5	80.4	70.9	75.4
65°	79.9	75.4	68.2	69.6	57.8
67.5°	65.5	63.2	56.9	50.6	48.8
70°	53.3	50.6	48.3	41.6	39.7
72.5°	42.5	39.7	36.6	33.0	31.6
75°	32.1	29.8	28.0	26.6	29.4
77.5°	22.1	21.2	19.9	18.5	18.1
80°	14.5	14.0	13.6	13.1	12.6
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)