

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: P558488

Luminaire Tested: FSR-12-1-LD4-1HI-35-UNV-82-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558488  
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-82-88-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

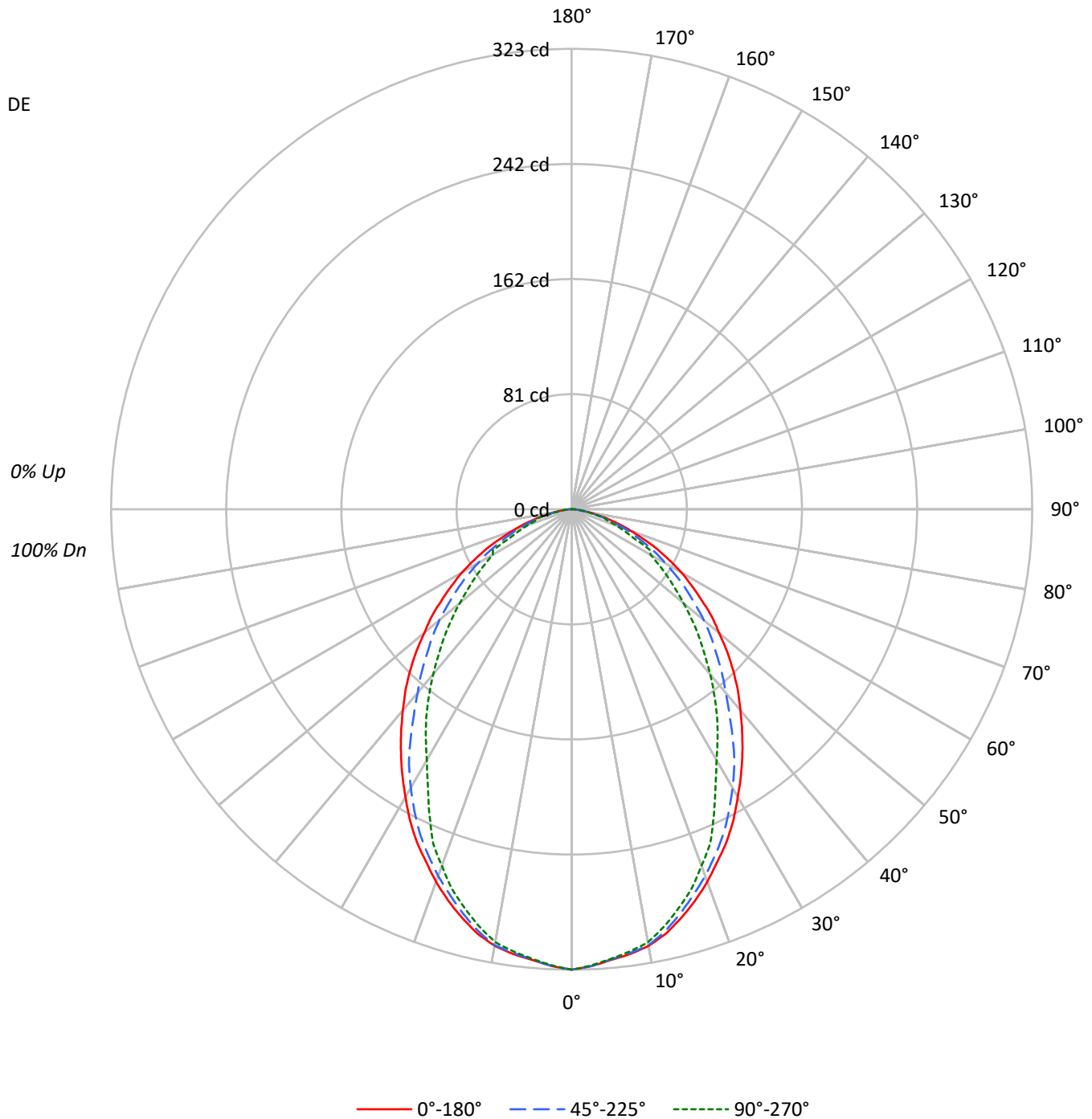
Lumens per Lamp: N/A  
Luminaire Lumens: 634.0 lumens  
Efficiency: N/A  
Efficacy: 58.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3477	3477	3477
5°	3430	3425	3421
10°	3399	3395	3371
15°	3307	3274	3228
20°	3186	3135	3049
25°	3055	2988	2803
30°	2896	2803	2524
35°	2742	2590	2335
40°	2587	2361	2125
45°	2439	2183	1921
50°	2257	2026	1713
55°	2089	1835	1535
60°	1914	1640	1373
65°	1684	1436	1217
70°	1388	1256	1035
75°	1102	961	1011
80°	738	694	651
85°	457	556	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2439 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.1	4.7
10°-20°	82.5	13.0
20°-30°	114.2	18.0
30°-40°	121.8	19.2
40°-50°	111.1	17.5
50°-60°	87.0	13.7
60°-70°	56.7	8.9
70°-80°	25.1	4.0
80°-90°	5.4	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°	226.8	35.8
0°-40°	348.6	55.0
0°-60°	546.7	86.2
0°-90°	634.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	634.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	323	323	323	323	323	
5°	317	317	317	317	317	30
15°	297	297	294	291	290	83
25°	257	256	252	243	236	118
35°	209	207	197	182	178	130
45°	160	157	143	131	126	123
55°	111	108	98	86	82	100
65°	66	62	56	58	48	65
75°	26	25	23	22	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	323.0	323.0	323.0	323.0	323.0
2.5°	320.7	320.7	320.7	320.3	320.3
5°	317.4	317.0	317.0	316.6	316.6
7.5°	314.7	314.4	314.0	313.6	312.9
10°	311.0	311.0	310.6	308.8	308.4
12.5°	305.0	304.7	303.2	300.5	299.8
15°	296.8	296.8	293.8	290.8	289.7
17.5°	287.9	287.5	283.7	280.8	279.3
20°	278.1	277.4	273.7	268.8	266.2
22.5°	267.3	267.3	262.8	256.5	253.9
25°	257.2	255.7	251.6	242.7	236.0
27.5°	245.7	243.4	238.9	226.3	218.4
30°	233.0	231.9	225.5	209.1	203.1
32.5°	221.0	219.2	212.4	195.3	190.4
35°	208.7	207.2	197.1	182.2	177.7
37.5°	196.4	194.5	181.8	169.9	164.3
40°	184.1	181.8	168.0	157.2	151.2
42.5°	172.5	169.5	156.1	144.5	137.8
45°	160.2	156.8	143.4	131.4	126.2
47.5°	147.8	144.9	132.5	120.2	114.2
50°	134.8	132.2	121.0	108.6	102.3
52.5°	124.0	119.8	109.0	96.7	91.5
55°	111.3	107.9	97.8	86.2	81.8
57.5°	99.7	96.3	87.0	76.2	72.4
60°	88.9	84.0	76.2	66.8	63.8
62.5°	76.9	73.2	66.5	58.6	62.4
65°	66.1	62.4	56.4	57.5	47.8
67.5°	54.1	52.3	47.0	41.8	40.3
70°	44.1	41.8	39.9	34.3	32.9
72.5°	35.1	32.9	30.2	27.3	26.1
75°	26.5	24.6	23.1	22.0	24.3
77.5°	18.3	17.5	16.4	15.3	14.9
80°	11.9	11.6	11.2	10.8	10.5
82.5°	7.1	7.1	7.1	7.1	7.1
85°	3.7	4.1	4.5	4.9	5.2
87.5°	2.2	2.2	2.6	3.0	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)