

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: P558980

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-81-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558980  
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-LD4-1STD-50-UNV-81-86-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

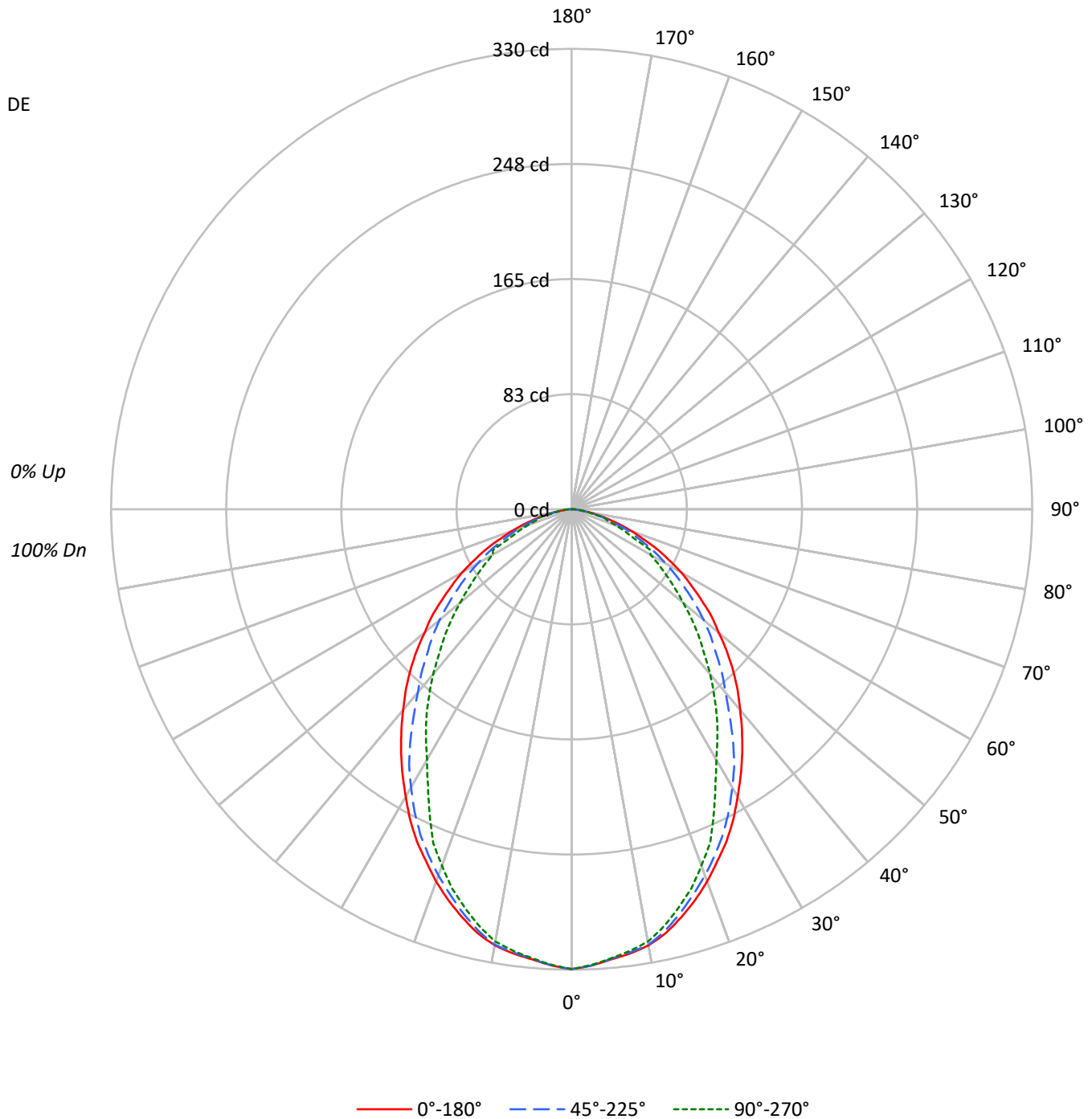
Lumens per Lamp: N/A  
Luminaire Lumens: 647.0 lumens  
Efficiency: N/A  
Efficacy: 78.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3548	3548	3548
5°	3500	3495	3491
10°	3469	3465	3440
15°	3375	3342	3295
20°	3252	3199	3112
25°	3118	3050	2860
30°	2954	2860	2577
35°	2799	2644	2384
40°	2639	2410	2168
45°	2489	2227	1961
50°	2303	2066	1748
55°	2130	1873	1565
60°	1953	1673	1404
65°	1717	1465	1243
70°	1416	1284	1054
75°	1127	981	1031
80°	756	707	663
85°	469	568	655

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2489 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.7	4.7
10°-20°	84.2	13.0
20°-30°	116.6	18.0
30°-40°	124.3	19.2
40°-50°	113.4	17.5
50°-60°	88.8	13.7
60°-70°	57.9	8.9
70°-80°	25.7	4.0
80°-90°	5.5	0.8
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°	231.4	35.8
0°-40°	355.7	55.0
0°-60°	558.0	86.2
0°-90°	647.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	647.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	330	330	330	330	330	
5°	324	324	324	323	323	31
15°	303	303	300	297	296	85
25°	262	261	257	248	241	121
35°	213	212	201	186	181	133
45°	164	160	146	134	129	126
55°	114	110	100	88	83	102
65°	67	64	58	59	49	66
75°	27	25	24	22	25	29
85°	4	4	5	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	329.6	329.6	329.6	329.6	329.6
2.5°	327.3	327.3	327.3	326.9	326.9
5°	323.9	323.5	323.5	323.1	323.1
7.5°	321.2	320.8	320.4	320.0	319.3
10°	317.4	317.4	317.0	315.1	314.7
12.5°	311.3	310.9	309.4	306.7	306.0
15°	302.9	302.9	299.9	296.8	295.7
17.5°	293.8	293.4	289.6	286.5	285.0
20°	283.9	283.1	279.3	274.3	271.7
22.5°	272.8	272.8	268.2	261.8	259.1
25°	262.5	261.0	256.8	247.7	240.8
27.5°	250.7	248.4	243.8	230.9	222.9
30°	237.7	236.6	230.1	213.4	207.3
32.5°	225.6	223.7	216.8	199.3	194.3
35°	213.0	211.5	201.2	185.9	181.4
37.5°	200.4	198.5	185.6	173.4	167.6
40°	187.8	185.6	171.5	160.4	154.3
42.5°	176.0	173.0	159.3	147.5	140.6
45°	163.5	160.0	146.3	134.1	128.8
47.5°	150.9	147.8	135.3	122.7	116.6
50°	137.5	134.9	123.4	110.9	104.4
52.5°	126.5	122.3	111.3	98.7	93.3
55°	113.5	110.1	99.8	88.0	83.4
57.5°	101.7	98.3	88.8	77.7	73.9
60°	90.7	85.7	77.7	68.2	65.2
62.5°	78.5	74.7	67.8	59.8	63.6
65°	67.4	63.6	57.5	58.7	48.8
67.5°	55.2	53.3	48.0	42.7	41.1
70°	45.0	42.7	40.8	35.1	33.5
72.5°	35.8	33.5	30.9	27.8	26.7
75°	27.1	25.1	23.6	22.5	24.8
77.5°	18.7	17.9	16.8	15.6	15.2
80°	12.2	11.8	11.4	11.0	10.7
82.5°	7.2	7.2	7.2	7.2	7.2
85°	3.8	4.2	4.6	5.0	5.3
87.5°	2.3	2.3	2.7	3.0	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)