

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: P558593

Luminaire Tested: FSR-12-1-LD4-1HI-50-UNV-81-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558593  
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-50-UNV-81-84-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

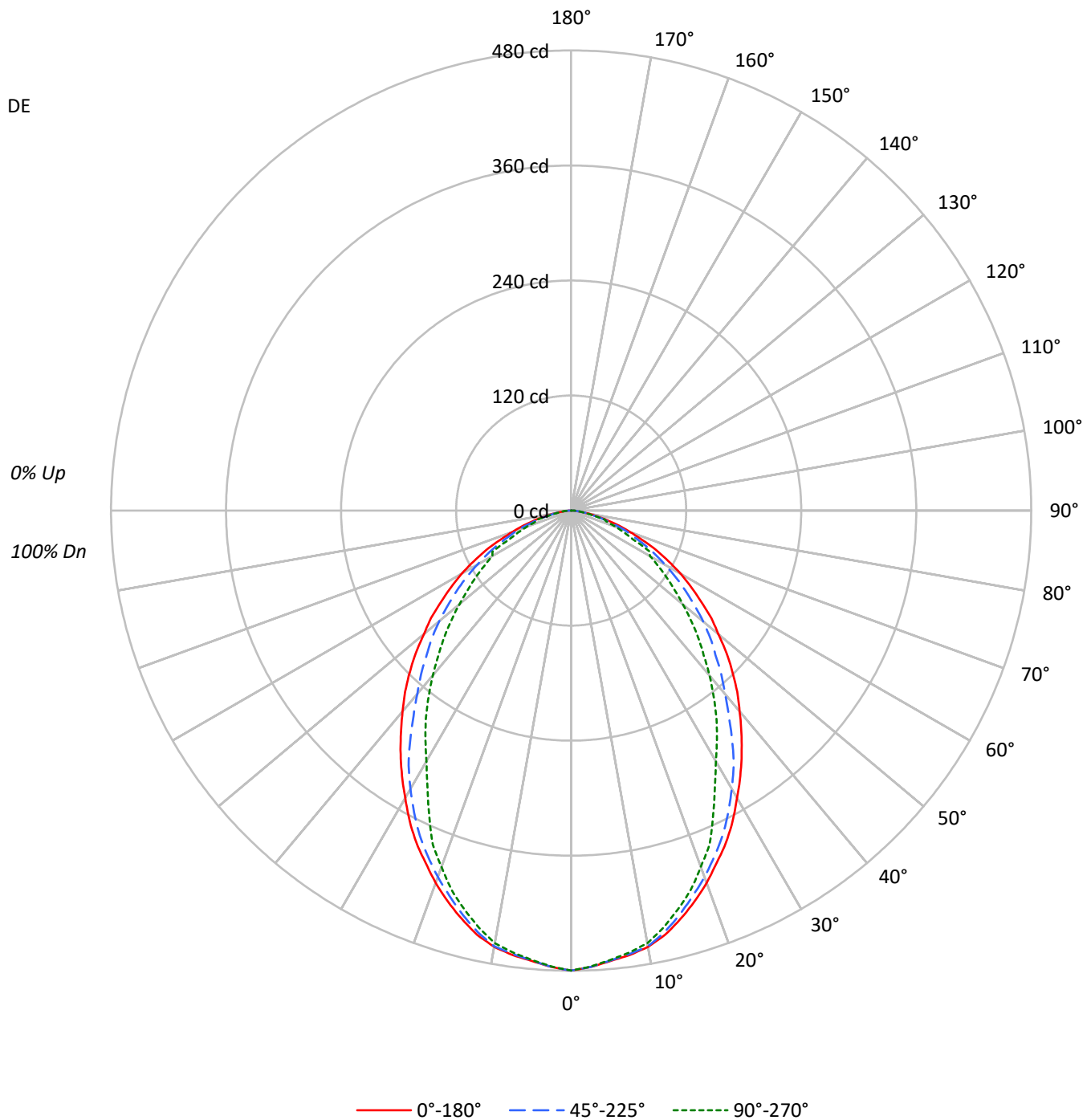
Lumens per Lamp: N/A  
Luminaire Lumens: 942.0 lumens  
Efficiency: N/A  
Efficacy: 87.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P558593

CATALOG NUMBER: FSR-12-1-LD4-1HI-50-UNV-81-84-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P558593

CATALOG NUMBER: FSR-12-1-LD4-1HI-50-UNV-81-84-EDD

**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	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°	5165	5165	5165
5°	5095	5089	5083
10°	5051	5044	5008
15°	4914	4865	4797
20°	4734	4657	4530
25°	4539	4441	4164
30°	4303	4165	3751
35°	4075	3849	3470
40°	3843	3507	3157
45°	3623	3242	2854
50°	3354	3009	2545
55°	3102	2727	2280
60°	2842	2437	2043
65°	2501	2134	1808
70°	2061	1869	1536
75°	1639	1431	1501
80°	1103	1029	961
85°	679	827	963

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3623 cd/sqm



TEST NUMBER: P558593

CATALOG NUMBER: FSR-12-1-LD4-1HI-50-UNV-81-84-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.7	4.7
10°-20°	122.6	13.0
20°-30°	169.7	18.0
30°-40°	181.0	19.2
40°-50°	165.1	17.5
50°-60°	129.3	13.7
60°-70°	84.3	8.9
70°-80°	37.3	4.0
80°-90°	8.0	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°	337.0	35.8
0°-40°	517.9	55.0
0°-60°	812.3	86.2
0°-90°	942.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	942.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	480	480	480	480	480	
5°	472	471	471	470	470	45
15°	441	441	437	432	430	124
25°	382	380	374	361	351	175
35°	310	308	293	271	264	194
45°	238	233	213	195	188	183
55°	165	160	145	128	122	148
65°	98	93	84	85	71	97
75°	39	37	34	33	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



TEST NUMBER: P558593

CATALOG NUMBER: FSR-12-1-LD4-1HI-50-UNV-81-84-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	479.8	479.8	479.8	479.8	479.8
2.5°	476.5	476.5	476.5	476.0	476.0
5°	471.5	471.0	471.0	470.4	470.4
7.5°	467.6	467.1	466.5	466.0	464.9
10°	462.1	462.1	461.5	458.8	458.2
12.5°	453.2	452.7	450.4	446.6	445.4
15°	441.0	441.0	436.6	432.1	430.5
17.5°	427.7	427.1	421.6	417.2	414.9
20°	413.3	412.2	406.6	399.4	395.5
22.5°	397.2	397.2	390.5	381.1	377.2
25°	382.2	380.0	373.9	360.6	350.6
27.5°	365.0	361.7	355.0	336.2	324.5
30°	346.2	344.5	335.1	310.6	301.8
32.5°	328.4	325.6	315.6	290.1	282.9
35°	310.1	307.9	292.9	270.7	264.1
37.5°	291.8	289.0	270.2	252.4	244.1
40°	273.5	270.2	249.6	233.5	224.7
42.5°	256.3	251.8	231.9	214.7	204.7
45°	238.0	233.0	213.0	195.3	187.5
47.5°	219.7	215.2	196.9	178.6	169.7
50°	200.3	196.4	179.7	161.4	152.0
52.5°	184.2	178.1	162.0	143.7	135.9
55°	165.3	160.3	145.3	128.1	121.5
57.5°	148.1	143.1	129.3	113.2	107.6
60°	132.0	124.8	113.2	99.3	94.9
62.5°	114.3	108.7	98.7	87.1	92.6
65°	98.2	92.6	83.8	85.4	71.0
67.5°	80.4	77.7	69.9	62.1	59.9
70°	65.5	62.1	59.4	51.0	48.8
72.5°	52.1	48.8	44.9	40.5	38.8
75°	39.4	36.6	34.4	32.7	36.1
77.5°	27.2	26.1	24.4	22.7	22.2
80°	17.8	17.2	16.6	16.1	15.5
82.5°	10.5	10.5	10.5	10.5	10.5
85°	5.5	6.1	6.7	7.2	7.8
87.5°	3.3	3.3	3.9	4.4	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)