

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: P559366

Luminaire Tested: FSR-12-1-LD4-2LO-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559366  
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-LD4-2LO-50-UNV-81-87-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

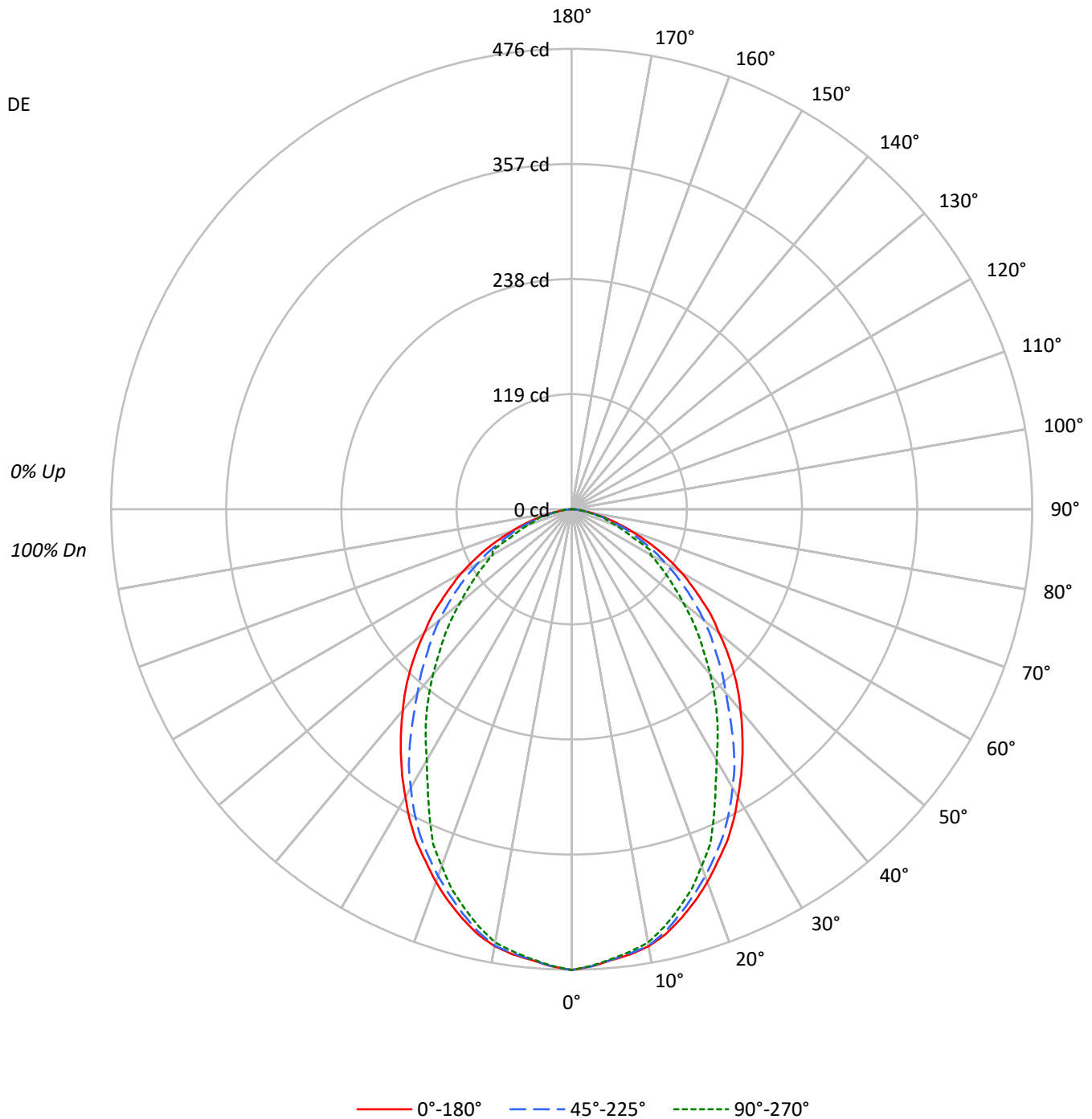
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 935.0 lumens  
Efficiency: N/A  
Efficacy: 79.9 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): 11.7  
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	47	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°	5127	5127	5127
5°	5057	5051	5045
10°	5014	5007	4971
15°	4878	4829	4762
20°	4699	4623	4497
25°	4506	4407	4133
30°	4271	4134	3723
35°	4045	3820	3444
40°	3815	3482	3133
45°	3596	3218	2833
50°	3329	2987	2527
55°	3080	2708	2263
60°	2820	2418	2028
65°	2483	2117	1796
70°	2046	1854	1526
75°	1626	1418	1489
80°	1091	1023	955
85°	679	815	951

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3596 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.3	4.7
10°-20°	121.7	13.0
20°-30°	168.4	18.0
30°-40°	179.6	19.2
40°-50°	163.9	17.5
50°-60°	128.4	13.7
60°-70°	83.7	8.9
70°-80°	37.1	4.0
80°-90°	8.0	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°	334.5	35.8
0°-40°	514.1	55.0
0°-60°	806.3	86.2
0°-90°	935.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	935.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	476	476	476	476	476	
5°	468	468	468	467	467	44
15°	438	438	433	429	427	123
25°	379	377	371	358	348	174
35°	308	306	291	269	262	192
45°	236	231	211	194	186	182
55°	164	159	144	127	121	147
65°	98	92	83	85	70	96
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	476.3	476.3	476.3	476.3	476.3
2.5°	473.0	473.0	473.0	472.4	472.4
5°	468.0	467.5	467.5	466.9	466.9
7.5°	464.2	463.6	463.1	462.5	461.4
10°	458.7	458.7	458.1	455.4	454.8
12.5°	449.8	449.3	447.1	443.2	442.1
15°	437.7	437.7	433.3	428.9	427.3
17.5°	424.5	424.0	418.5	414.1	411.9
20°	410.2	409.1	403.6	396.4	392.6
22.5°	394.2	394.2	387.6	378.3	374.4
25°	379.4	377.2	371.1	357.9	348.0
27.5°	362.3	359.0	352.4	333.7	322.1
30°	343.6	341.9	332.6	308.3	299.5
32.5°	326.0	323.2	313.3	288.0	280.8
35°	307.8	305.6	290.7	268.7	262.1
37.5°	289.6	286.9	268.1	250.5	242.3
40°	271.5	268.1	247.8	231.8	223.0
42.5°	254.4	250.0	230.2	213.1	203.2
45°	236.2	231.3	211.4	193.8	186.1
47.5°	218.0	213.6	195.5	177.3	168.5
50°	198.8	194.9	178.4	160.2	150.9
52.5°	182.8	176.7	160.8	142.6	134.9
55°	164.1	159.1	144.3	127.2	120.6
57.5°	147.0	142.1	128.3	112.3	106.8
60°	131.0	123.9	112.3	98.6	94.2
62.5°	113.4	107.9	98.0	86.4	92.0
65°	97.5	92.0	83.1	84.8	70.5
67.5°	79.8	77.1	69.4	61.7	59.5
70°	65.0	61.7	58.9	50.7	48.5
72.5°	51.8	48.5	44.6	40.2	38.5
75°	39.1	36.3	34.1	32.5	35.8
77.5°	27.0	25.9	24.2	22.6	22.0
80°	17.6	17.1	16.5	16.0	15.4
82.5°	10.5	10.5	10.5	10.5	10.5
85°	5.5	6.1	6.6	7.2	7.7
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)