

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: P558878

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-82-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558878  
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-35-UNV-82-97-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

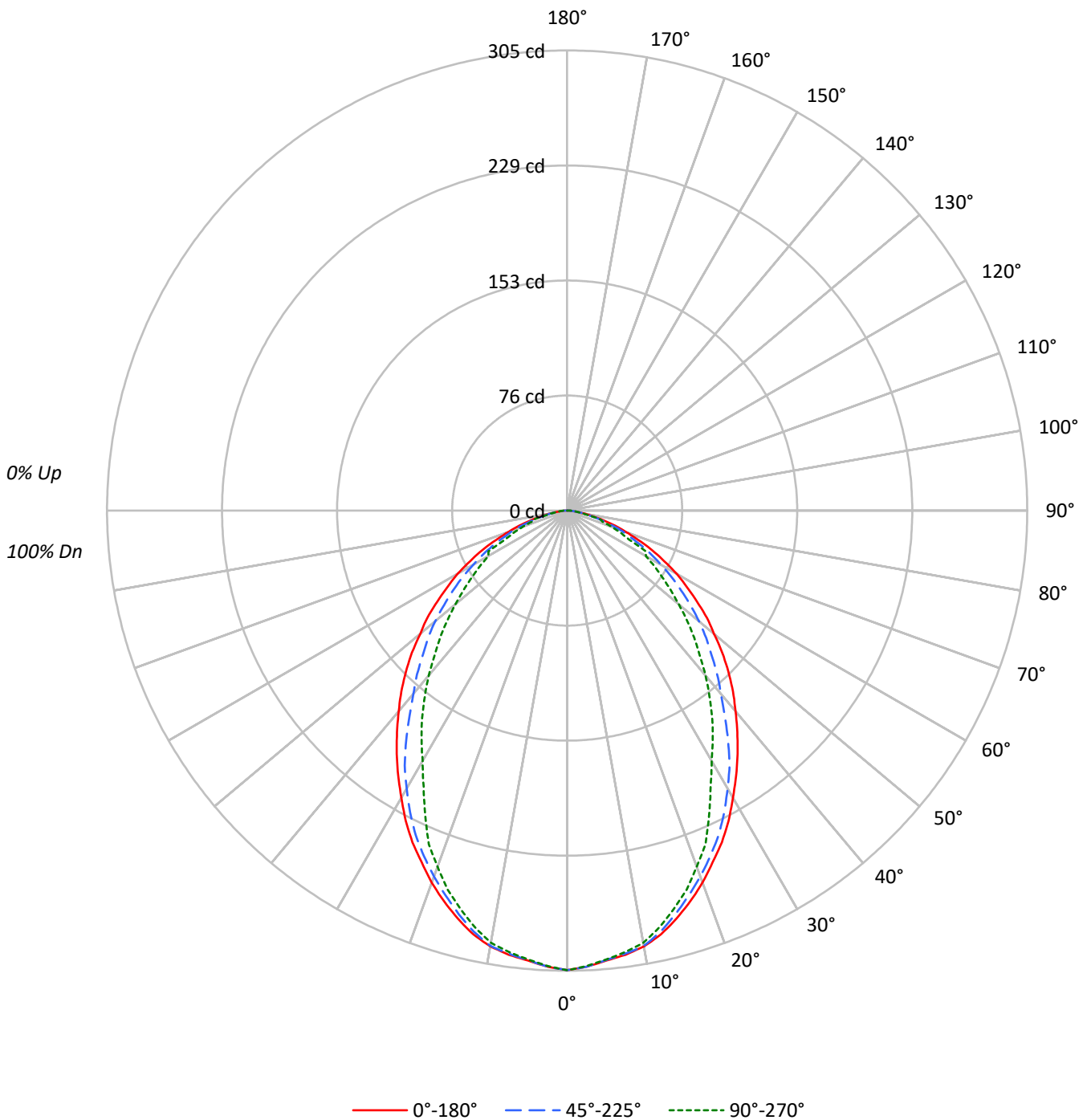
Lumens per Lamp: N/A  
Luminaire Lumens: 598.0 lumens  
Efficiency: N/A  
Efficacy: 72.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P558878

CATALOG NUMBER: FSR-12-1-LD4-1STD-35-UNV-82-97-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P558878

CATALOG NUMBER: FSR-12-1-LD4-1STD-35-UNV-82-97-EDD-90

**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°	3279	3279	3279
5°	3234	3231	3226
10°	3206	3202	3180
15°	3120	3088	3046
20°	3006	2956	2876
25°	2881	2820	2644
30°	2731	2644	2381
35°	2587	2443	2202
40°	2439	2227	2004
45°	2300	2058	1811
50°	2128	1911	1616
55°	1969	1732	1447
60°	1804	1546	1296
65°	1587	1355	1149
70°	1309	1186	976
75°	1040	907	952
80°	700	657	614
85°	432	519	605

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2300 cd/sqm



TEST NUMBER: P558878

CATALOG NUMBER: FSR-12-1-LD4-1STD-35-UNV-82-97-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.4	4.7
10°-20°	77.8	13.0
20°-30°	107.7	18.0
30°-40°	114.9	19.2
40°-50°	104.8	17.5
50°-60°	82.1	13.7
60°-70°	53.5	8.9
70°-80°	23.7	4.0
80°-90°	5.1	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°	213.9	35.8
0°-40°	328.8	55.0
0°-60°	515.7	86.2
0°-90°	598.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	598.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	305	305	305	305	305	
5°	299	299	299	299	299	28
15°	280	280	277	274	273	79
25°	243	241	237	229	223	111
35°	197	195	186	172	168	123
45°	151	148	135	124	119	116
55°	105	102	92	81	77	94
65°	62	59	53	54	45	61
75°	25	23	22	21	23	27
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



TEST NUMBER: P558878

CATALOG NUMBER: FSR-12-1-LD4-1STD-35-UNV-82-97-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	304.6	304.6	304.6	304.6	304.6
2.5°	302.5	302.5	302.5	302.1	302.1
5°	299.3	299.0	299.0	298.6	298.6
7.5°	296.9	296.5	296.2	295.8	295.1
10°	293.3	293.3	293.0	291.2	290.9
12.5°	287.7	287.4	285.9	283.5	282.8
15°	280.0	280.0	277.1	274.3	273.3
17.5°	271.5	271.2	267.6	264.8	263.4
20°	262.4	261.7	258.1	253.6	251.1
22.5°	252.1	252.1	247.9	241.9	239.5
25°	242.6	241.2	237.4	228.9	222.6
27.5°	231.7	229.6	225.4	213.4	206.0
30°	219.7	218.7	212.7	197.2	191.6
32.5°	208.5	206.7	200.4	184.2	179.6
35°	196.9	195.4	185.9	171.9	167.6
37.5°	185.2	183.5	171.5	160.2	154.9
40°	173.6	171.5	158.5	148.3	142.6
42.5°	162.7	159.9	147.2	136.3	129.9
45°	151.1	147.9	135.2	124.0	119.0
47.5°	139.5	136.6	125.0	113.4	107.8
50°	127.1	124.7	114.1	102.5	96.5
52.5°	116.9	113.0	102.8	91.2	86.3
55°	104.9	101.8	92.3	81.3	77.1
57.5°	94.0	90.9	82.1	71.8	68.3
60°	83.8	79.2	71.8	63.0	60.2
62.5°	72.5	69.0	62.7	55.3	58.8
65°	62.3	58.8	53.2	54.2	45.1
67.5°	51.1	49.3	44.4	39.4	38.0
70°	41.6	39.4	37.7	32.4	31.0
72.5°	33.1	31.0	28.5	25.7	24.7
75°	25.0	23.2	21.8	20.8	22.9
77.5°	17.3	16.6	15.5	14.4	14.1
80°	11.3	10.9	10.6	10.2	9.9
82.5°	6.7	6.7	6.7	6.7	6.7
85°	3.5	3.9	4.2	4.6	4.9
87.5°	2.1	2.1	2.5	2.8	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)