

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: P558558

Luminaire Tested: FSR-12-1-LD4-1HI-40-UNV-82-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558558  
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-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

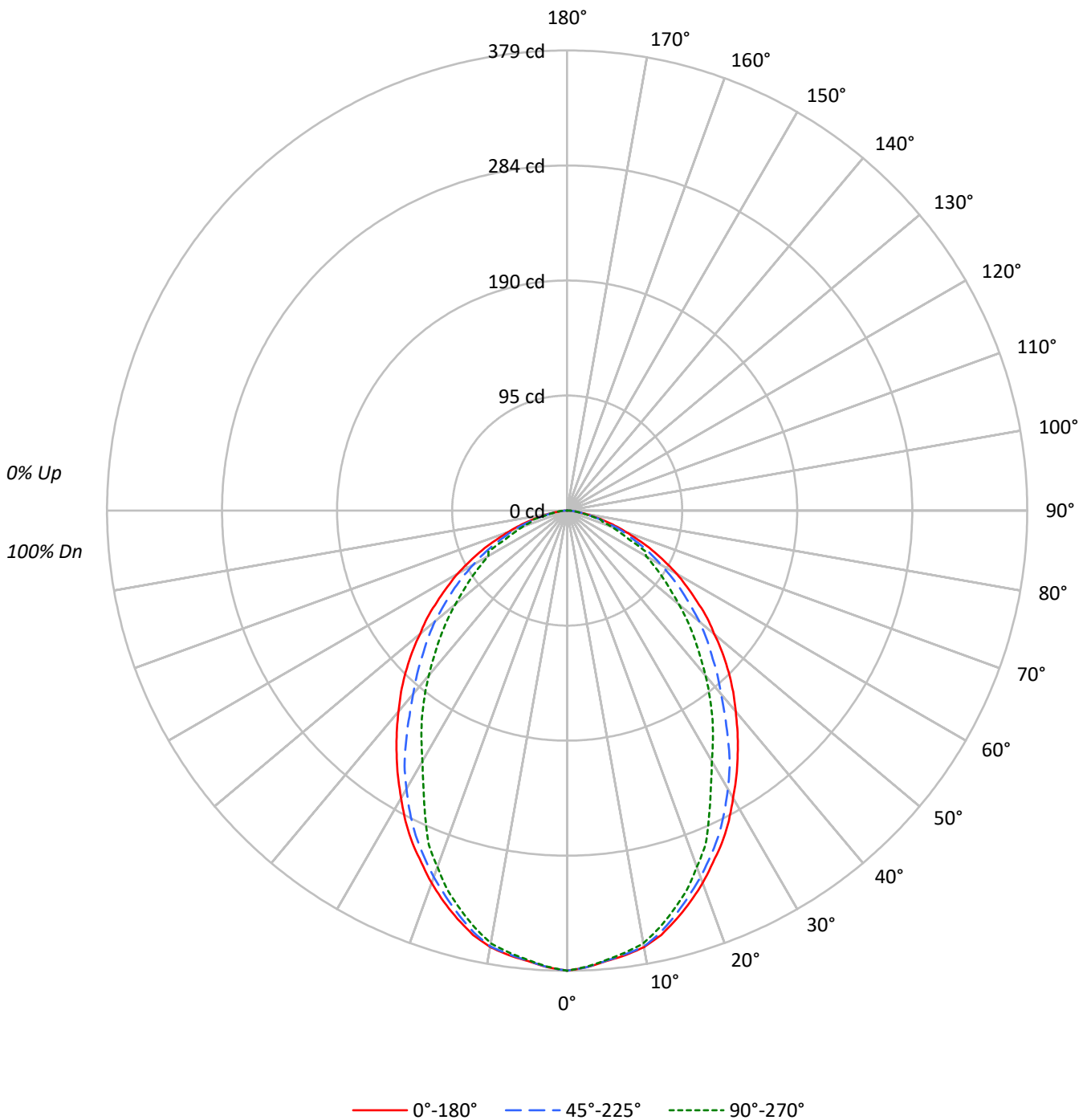
Lumens per Lamp: N/A  
Luminaire Lumens: 744.0 lumens  
Efficiency: N/A  
Efficacy: 68.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P558558

CATALOG NUMBER: FSR-12-1-LD4-1HI-40-UNV-82-97-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P558558

CATALOG NUMBER: FSR-12-1-LD4-1HI-40-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	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°	4080	4080	4080
5°	4024	4019	4014
10°	3989	3984	3956
15°	3881	3842	3789
20°	3739	3679	3578
25°	3586	3507	3289
30°	3398	3289	2962
35°	3218	3039	2741
40°	3035	2771	2493
45°	2862	2560	2254
50°	2649	2378	2009
55°	2451	2154	1802
60°	2245	1925	1612
65°	1974	1686	1429
70°	1627	1476	1215
75°	1293	1131	1185
80°	868	812	762
85°	543	655	753

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2862 cd/sqm



TEST NUMBER: P558558

CATALOG NUMBER: FSR-12-1-LD4-1HI-40-UNV-82-97-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.3	4.7
10°-20°	96.8	13.0
20°-30°	134.0	18.0
30°-40°	142.9	19.2
40°-50°	130.4	17.5
50°-60°	102.1	13.7
60°-70°	66.6	8.9
70°-80°	29.5	4.0
80°-90°	6.3	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°	266.1	35.8
0°-40°	409.1	55.0
0°-60°	641.6	86.2
0°-90°	744.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	744.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	379	379	379	379	379	
5°	372	372	372	372	372	35
15°	348	348	345	341	340	98
25°	302	300	295	285	277	139
35°	245	243	231	214	209	153
45°	188	184	168	154	148	145
55°	131	127	115	101	96	117
65°	78	73	66	68	56	76
75°	31	29	27	26	28	33
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



TEST NUMBER: P558558

CATALOG NUMBER: FSR-12-1-LD4-1HI-40-UNV-82-97-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	379.0	379.0	379.0	379.0	379.0
2.5°	376.4	376.4	376.4	375.9	375.9
5°	372.4	372.0	372.0	371.5	371.5
7.5°	369.3	368.9	368.5	368.0	367.2
10°	365.0	365.0	364.5	362.3	361.9
12.5°	358.0	357.5	355.8	352.7	351.8
15°	348.3	348.3	344.8	341.3	340.0
17.5°	337.8	337.4	333.0	329.5	327.7
20°	326.4	325.5	321.2	315.5	312.4
22.5°	313.7	313.7	308.4	301.0	297.9
25°	301.9	300.1	295.3	284.8	276.9
27.5°	288.3	285.7	280.4	265.5	256.3
30°	273.4	272.1	264.6	245.4	238.3
32.5°	259.4	257.2	249.3	229.1	223.4
35°	244.9	243.2	231.3	213.8	208.6
37.5°	230.5	228.3	213.4	199.3	192.8
40°	216.0	213.4	197.2	184.5	177.4
42.5°	202.4	198.9	183.1	169.6	161.7
45°	188.0	184.0	168.2	154.2	148.1
47.5°	173.5	170.0	155.5	141.1	134.1
50°	158.2	155.1	142.0	127.5	120.0
52.5°	145.5	140.6	127.9	113.5	107.3
55°	130.6	126.6	114.8	101.2	96.0
57.5°	117.0	113.0	102.1	89.4	85.0
60°	104.3	98.6	89.4	78.4	74.9
62.5°	90.3	85.9	78.0	68.8	73.2
65°	77.5	73.2	66.2	67.5	56.1
67.5°	63.5	61.3	55.2	49.1	47.3
70°	51.7	49.1	46.9	40.3	38.6
72.5°	41.2	38.6	35.5	32.0	30.7
75°	31.1	28.9	27.2	25.8	28.5
77.5°	21.5	20.6	19.3	18.0	17.5
80°	14.0	13.6	13.1	12.7	12.3
82.5°	8.3	8.3	8.3	8.3	8.3
85°	4.4	4.8	5.3	5.7	6.1
87.5°	2.6	2.6	3.1	3.5	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)