

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: P559567

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-81-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559567  
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-LD4-2STD-50-UNV-81-97-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

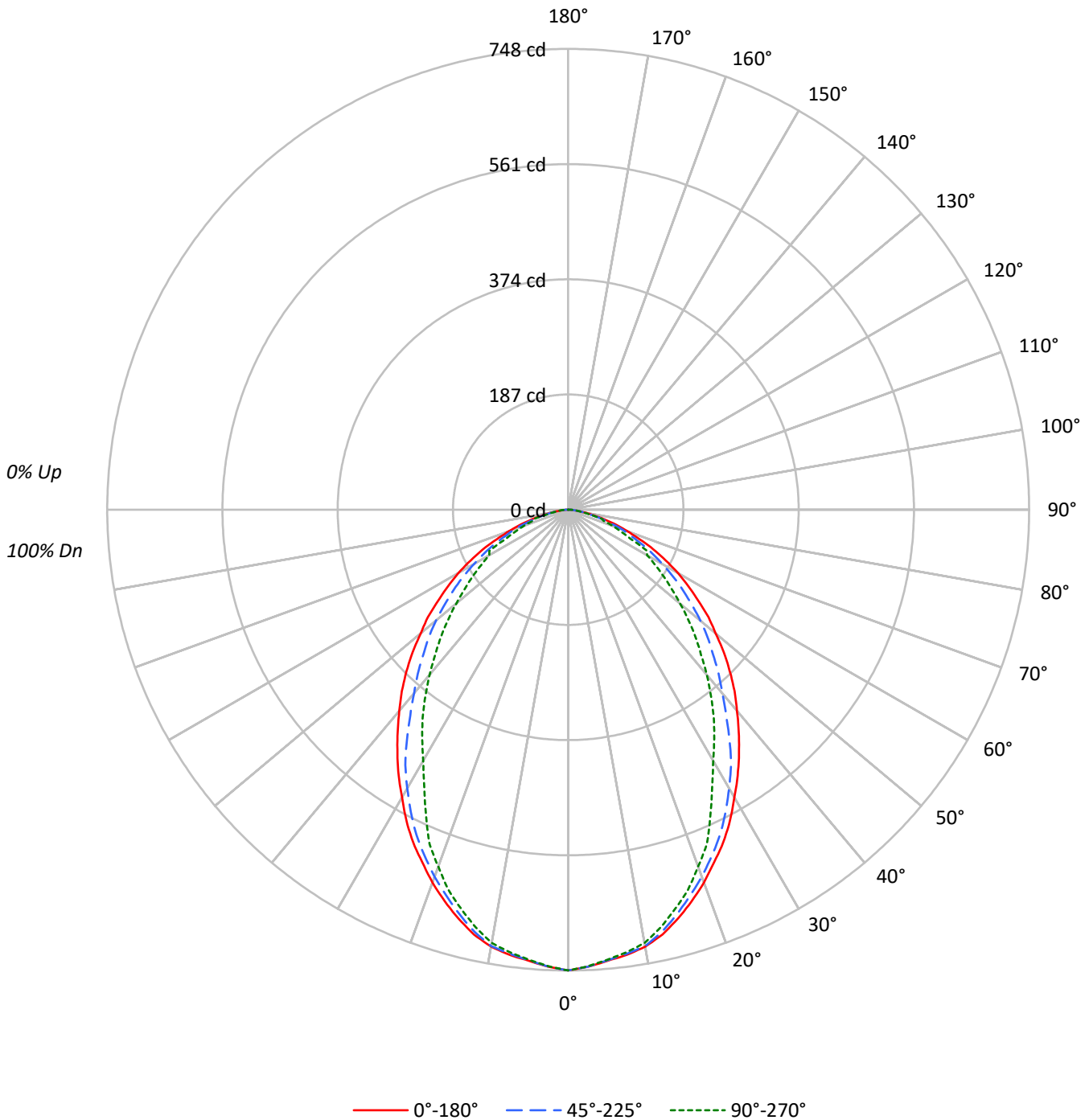
Lumens per Lamp: N/A  
Luminaire Lumens: 1468.0 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P559567

CATALOG NUMBER: FSR-12-1-LD4-2STD-50-UNV-81-97-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P559567

CATALOG NUMBER: FSR-12-1-LD4-2STD-50-UNV-81-97-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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8049	8049	8049
5°	7940	7930	7921
10°	7871	7862	7805
15°	7659	7581	7475
20°	7377	7259	7061
25°	7074	6921	6489
30°	6704	6489	5845
35°	6349	5997	5407
40°	5989	5466	4919
45°	5646	5054	4448
50°	5226	4690	3967
55°	4834	4251	3552
60°	4428	3798	3182
65°	3897	3324	2819
70°	3210	2911	2395
75°	2554	2229	2337
80°	1717	1605	1500
85°	1062	1284	1494

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5646 cd/sqm



TEST NUMBER: P559567

CATALOG NUMBER: FSR-12-1-LD4-2STD-50-UNV-81-97-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.6	4.7
10°-20°	191.0	13.0
20°-30°	264.5	18.0
30°-40°	282.0	19.2
40°-50°	257.3	17.5
50°-60°	201.5	13.7
60°-70°	131.4	8.9
70°-80°	58.2	4.0
80°-90°	12.5	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°	525.1	35.8
0°-40°	807.1	55.0
0°-60°	1265.9	86.2
0°-90°	1468.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1468.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	735	734	734	733	733	70
15°	687	687	680	673	671	193
25°	596	592	583	562	546	273
35°	483	480	456	422	412	302
45°	371	363	332	304	292	286
55°	258	250	226	200	189	231
65°	153	144	130	133	111	151
75°	61	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



TEST NUMBER: P559567

CATALOG NUMBER: FSR-12-1-LD4-2STD-50-UNV-81-97-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	747.8	747.8	747.8	747.8	747.8
2.5°	742.6	742.6	742.6	741.7	741.7
5°	734.8	733.9	733.9	733.1	733.1
7.5°	728.8	727.9	727.0	726.2	724.4
10°	720.1	720.1	719.3	714.9	714.1
12.5°	706.3	705.4	702.0	695.9	694.2
15°	687.3	687.3	680.3	673.4	670.8
17.5°	666.5	665.7	657.0	650.1	646.6
20°	644.0	642.3	633.7	622.4	616.4
22.5°	619.0	619.0	608.6	593.9	587.8
25°	595.6	592.2	582.7	561.9	546.4
27.5°	568.8	563.6	553.3	523.9	505.7
30°	539.4	536.8	522.1	484.1	470.3
32.5°	511.8	507.5	491.9	452.1	440.9
35°	483.2	479.8	456.4	421.9	411.5
37.5°	454.7	450.4	421.0	393.3	380.4
40°	426.2	421.0	389.0	363.9	350.1
42.5°	399.4	392.5	361.4	334.6	319.0
45°	370.9	363.1	332.0	304.3	292.2
47.5°	342.3	335.4	306.9	278.4	264.5
50°	312.1	306.0	280.1	251.6	236.9
52.5°	287.0	277.5	252.4	223.9	211.8
55°	257.6	249.8	226.5	199.7	189.3
57.5°	230.8	223.0	201.4	176.4	167.7
60°	205.7	194.5	176.4	154.7	147.8
62.5°	178.1	169.4	153.9	135.7	144.4
65°	153.0	144.4	130.5	133.1	110.7
67.5°	125.4	121.0	108.9	96.8	93.4
70°	102.0	96.8	92.5	79.5	76.1
72.5°	81.3	76.1	70.0	63.1	60.5
75°	61.4	57.1	53.6	51.0	56.2
77.5°	42.4	40.6	38.0	35.4	34.6
80°	27.7	26.8	25.9	25.1	24.2
82.5°	16.4	16.4	16.4	16.4	16.4
85°	8.6	9.5	10.4	11.2	12.1
87.5°	5.2	5.2	6.1	6.9	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)