

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: P558748

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-82-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558748  
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-LD4-1LO-40-UNV-82-96-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

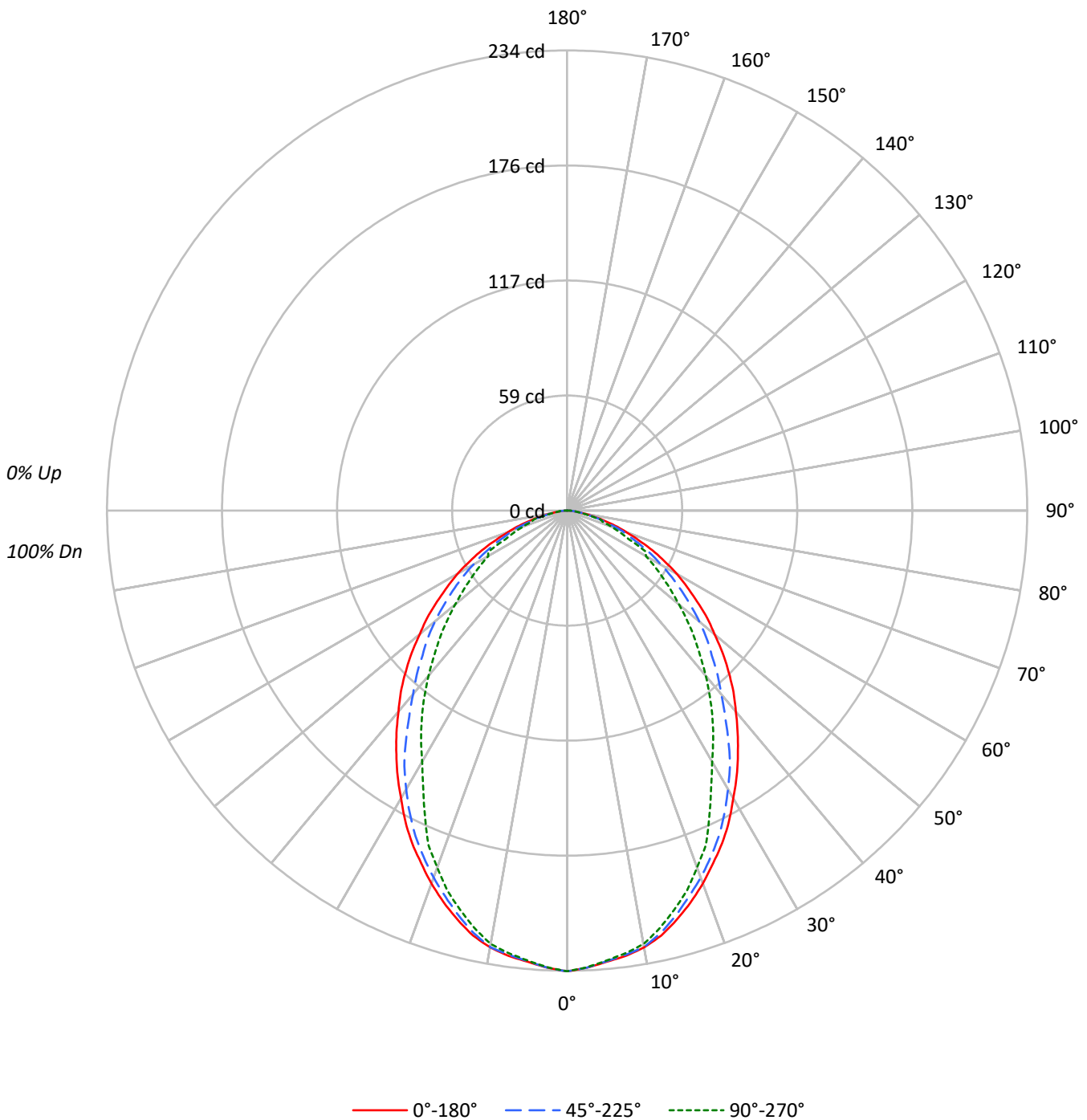
Lumens per Lamp: N/A  
Luminaire Lumens: 460.0 lumens  
Efficiency: N/A  
Efficacy: 79.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P558748

CATALOG NUMBER: FSR-12-1-LD4-1LO-40-UNV-82-96-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P558748

CATALOG NUMBER: FSR-12-1-LD4-1LO-40-UNV-82-96-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	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	39	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°	2522	2522	2522
5°	2488	2485	2482
10°	2466	2464	2446
15°	2400	2376	2342
20°	2312	2275	2212
25°	2216	2169	2033
30°	2101	2033	1832
35°	1989	1879	1694
40°	1876	1713	1541
45°	1769	1583	1394
50°	1638	1470	1243
55°	1514	1332	1113
60°	1389	1190	997
65°	1220	1042	884
70°	1007	913	749
75°	799	699	732
80°	539	502	471
85°	333	408	469

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1769 cd/sqm



TEST NUMBER: P558748

CATALOG NUMBER: FSR-12-1-LD4-1LO-40-UNV-82-96-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.8	4.7
10°-20°	59.9	13.0
20°-30°	82.9	18.0
30°-40°	88.4	19.2
40°-50°	80.6	17.5
50°-60°	63.2	13.7
60°-70°	41.1	8.9
70°-80°	18.2	4.0
80°-90°	3.9	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°	164.6	35.8
0°-40°	252.9	55.0
0°-60°	396.7	86.2
0°-90°	460.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	460.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	234	234	234	234	234	
5°	230	230	230	230	230	22
15°	215	215	213	211	210	61
25°	187	186	183	176	171	86
35°	151	150	143	132	129	95
45°	116	114	104	95	92	90
55°	81	78	71	63	59	72
65°	48	45	41	42	35	47
75°	19	18	17	16	18	21
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



TEST NUMBER: P558748

CATALOG NUMBER: FSR-12-1-LD4-1LO-40-UNV-82-96-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	234.3	234.3	234.3	234.3	234.3
2.5°	232.7	232.7	232.7	232.4	232.4
5°	230.3	230.0	230.0	229.7	229.7
7.5°	228.4	228.1	227.8	227.5	227.0
10°	225.6	225.6	225.4	224.0	223.8
12.5°	221.3	221.0	220.0	218.1	217.5
15°	215.4	215.4	213.2	211.0	210.2
17.5°	208.9	208.6	205.9	203.7	202.6
20°	201.8	201.3	198.6	195.0	193.1
22.5°	194.0	194.0	190.7	186.1	184.2
25°	186.6	185.6	182.6	176.1	171.2
27.5°	178.2	176.6	173.4	164.2	158.5
30°	169.0	168.2	163.6	151.7	147.4
32.5°	160.4	159.0	154.1	141.7	138.2
35°	151.4	150.3	143.0	132.2	128.9
37.5°	142.5	141.1	131.9	123.3	119.2
40°	133.5	131.9	121.9	114.0	109.7
42.5°	125.2	123.0	113.2	104.8	100.0
45°	116.2	113.8	104.0	95.4	91.6
47.5°	107.3	105.1	96.2	87.2	82.9
50°	97.8	95.9	87.8	78.8	74.2
52.5°	89.9	87.0	79.1	70.2	66.4
55°	80.7	78.3	71.0	62.6	59.3
57.5°	72.3	69.9	63.1	55.3	52.6
60°	64.5	60.9	55.3	48.5	46.3
62.5°	55.8	53.1	48.2	42.5	45.2
65°	47.9	45.2	40.9	41.7	34.7
67.5°	39.3	37.9	34.1	30.3	29.3
70°	32.0	30.3	29.0	24.9	23.8
72.5°	25.5	23.8	21.9	19.8	19.0
75°	19.2	17.9	16.8	16.0	17.6
77.5°	13.3	12.7	11.9	11.1	10.8
80°	8.7	8.4	8.1	7.9	7.6
82.5°	5.1	5.1	5.1	5.1	5.1
85°	2.7	3.0	3.3	3.5	3.8
87.5°	1.6	1.6	1.9	2.2	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)