

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: P558791

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558791  
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-50-UNV-81-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

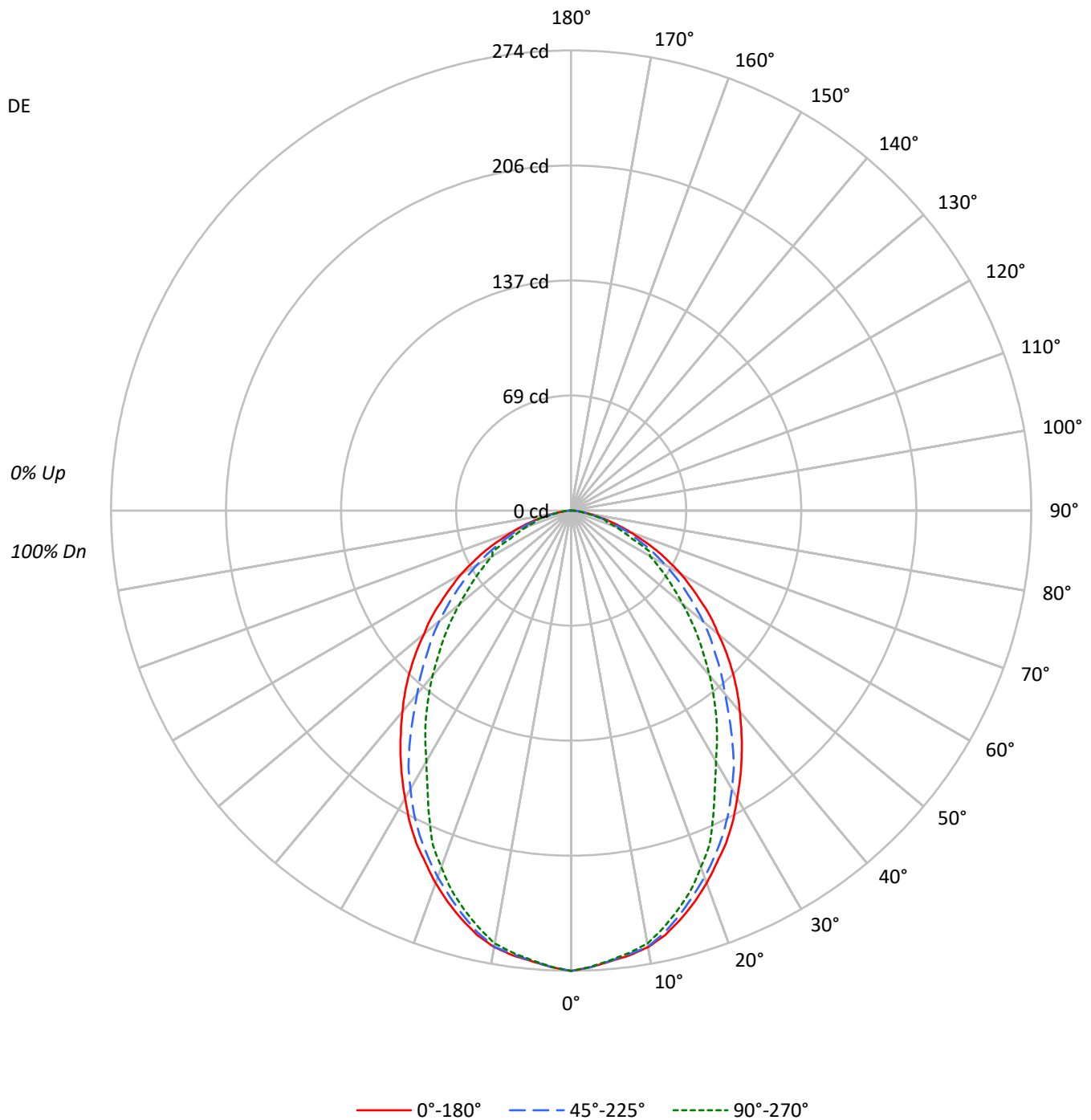
Lumens per Lamp: N/A  
Luminaire Lumens: 538.0 lumens  
Efficiency: N/A  
Efficacy: 92.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P558791

CATALOG NUMBER: FSR-12-1-LD4-1LO-50-UNV-81-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P558791

CATALOG NUMBER: FSR-12-1-LD4-1LO-50-UNV-81-87-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	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°	2950	2950	2950
5°	2910	2907	2903
10°	2884	2881	2860
15°	2807	2778	2740
20°	2703	2660	2588
25°	2593	2536	2378
30°	2457	2379	2143
35°	2327	2198	1982
40°	2195	2004	1803
45°	2069	1853	1630
50°	1916	1718	1454
55°	1772	1558	1302
60°	1623	1391	1167
65°	1429	1217	1034
70°	1177	1067	878
75°	936	815	857
80°	626	589	552
85°	395	469	543

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2069 cd/sqm



TEST NUMBER: P558791

CATALOG NUMBER: FSR-12-1-LD4-1LO-50-UNV-81-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.5	4.7
10°-20°	70.0	13.0
20°-30°	96.9	18.0
30°-40°	103.4	19.2
40°-50°	94.3	17.5
50°-60°	73.9	13.7
60°-70°	48.1	8.9
70°-80°	21.3	4.0
80°-90°	4.6	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°	192.4	35.8
0°-40°	295.8	55.0
0°-60°	464.0	86.2
0°-90°	538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	538.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	274	274	274	274	274	
5°	269	269	269	269	269	26
15°	252	252	249	247	246	71
25°	218	217	214	206	200	100
35°	177	176	167	155	151	111
45°	136	133	122	112	107	105
55°	94	92	83	73	69	85
65°	56	53	48	49	41	55
75°	22	21	20	19	21	24
85°	3	4	4	4	4	4
90°	0	0	0	0	0	



TEST NUMBER: P558791

CATALOG NUMBER: FSR-12-1-LD4-1LO-50-UNV-81-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	274.1	274.1	274.1	274.1	274.1
2.5°	272.1	272.1	272.1	271.8	271.8
5°	269.3	269.0	269.0	268.7	268.7
7.5°	267.1	266.8	266.4	266.1	265.5
10°	263.9	263.9	263.6	262.0	261.7
12.5°	258.8	258.5	257.3	255.0	254.4
15°	251.9	251.9	249.3	246.8	245.9
17.5°	244.3	244.0	240.8	238.2	237.0
20°	236.0	235.4	232.2	228.1	225.9
22.5°	226.8	226.8	223.0	217.7	215.4
25°	218.3	217.0	213.5	205.9	200.2
27.5°	208.5	206.6	202.8	192.0	185.3
30°	197.7	196.7	191.4	177.4	172.4
32.5°	187.6	186.0	180.3	165.7	161.6
35°	177.1	175.8	167.3	154.6	150.8
37.5°	166.6	165.1	154.3	144.2	139.4
40°	156.2	154.3	142.6	133.4	128.3
42.5°	146.4	143.8	132.4	122.6	116.9
45°	135.9	133.1	121.7	111.5	107.1
47.5°	125.5	122.9	112.5	102.0	96.9
50°	114.4	112.2	102.6	92.2	86.8
52.5°	105.2	101.7	92.5	82.1	77.6
55°	94.4	91.6	83.0	73.2	69.4
57.5°	84.6	81.7	73.8	64.6	61.5
60°	75.4	71.3	64.6	56.7	54.2
62.5°	65.3	62.1	56.4	49.7	52.9
65°	56.1	52.9	47.8	48.8	40.6
67.5°	45.9	44.4	39.9	35.5	34.2
70°	37.4	35.5	33.9	29.1	27.9
72.5°	29.8	27.9	25.7	23.1	22.2
75°	22.5	20.9	19.6	18.7	20.6
77.5°	15.5	14.9	13.9	13.0	12.7
80°	10.1	9.8	9.5	9.2	8.9
82.5°	6.0	6.0	6.0	6.0	6.0
85°	3.2	3.5	3.8	4.1	4.4
87.5°	1.9	1.9	2.2	2.5	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)