

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: P559954

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-82-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559954  
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-12-2-LD4-1LO-50-UNV-82-85-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

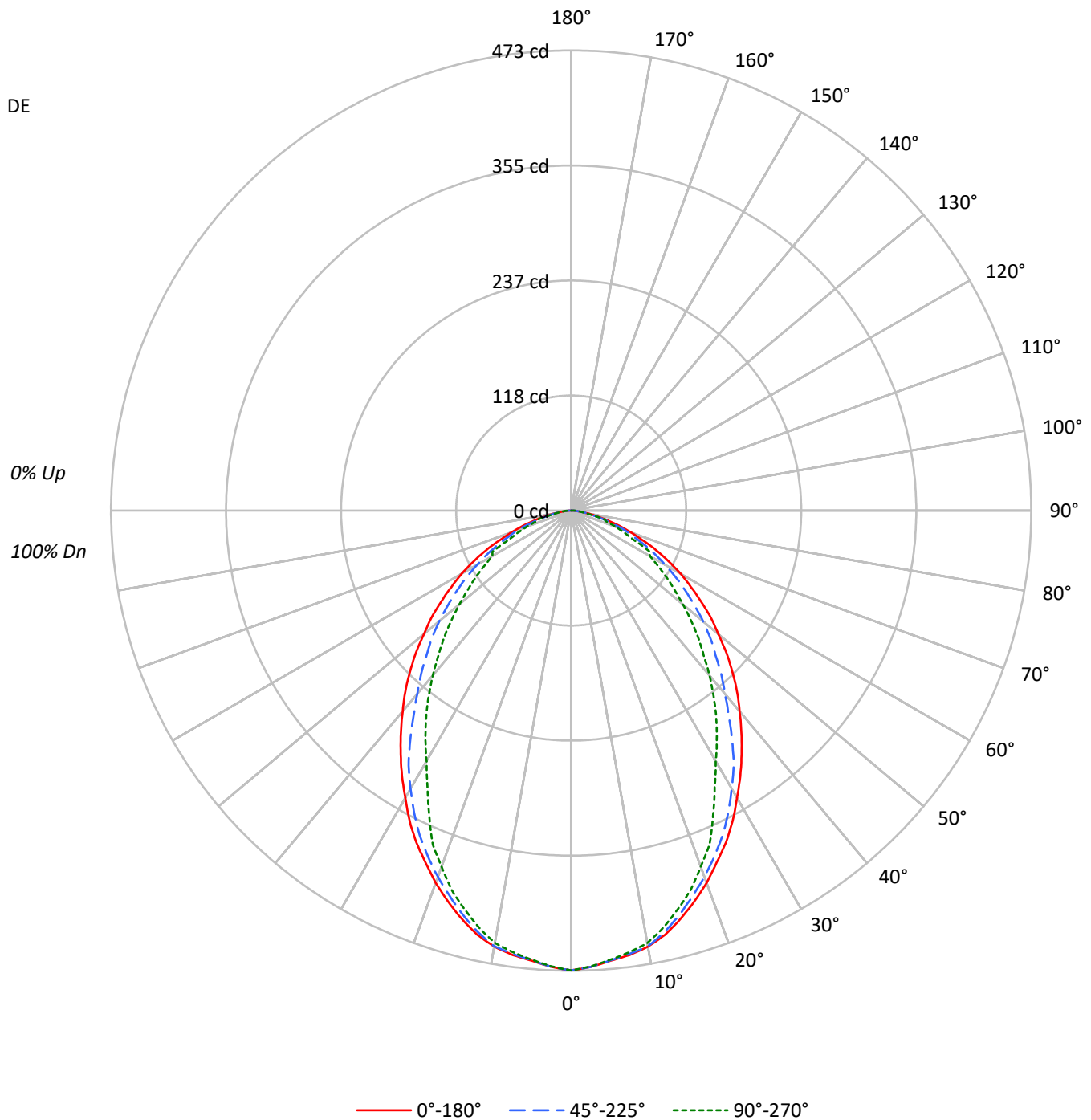
Lumens per Lamp: N/A  
Luminaire Lumens: 928.0 lumens  
Efficiency: N/A  
Efficacy: 79.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P559954

CATALOG NUMBER: FSR-12-2-LD4-1LO-50-UNV-82-85-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P559954

CATALOG NUMBER: FSR-12-2-LD4-1LO-50-UNV-82-85-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	38	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°	2544	2544	2544
5°	2509	2507	2504
10°	2488	2485	2467
15°	2421	2396	2363
20°	2332	2294	2231
25°	2236	2187	2051
30°	2119	2051	1848
35°	2007	1895	1709
40°	1893	1728	1555
45°	1784	1598	1406
50°	1652	1483	1253
55°	1529	1344	1123
60°	1400	1200	1005
65°	1231	1051	891
70°	1015	921	757
75°	807	705	738
80°	542	508	474
85°	340	408	475

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1784 cd/sqm



TEST NUMBER: P559954

CATALOG NUMBER: FSR-12-2-LD4-1LO-50-UNV-82-85-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.0	4.7
10°-20°	120.8	13.0
20°-30°	167.2	18.0
30°-40°	178.3	19.2
40°-50°	162.6	17.5
50°-60°	127.4	13.7
60°-70°	83.1	8.9
70°-80°	36.8	4.0
80°-90°	7.9	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°	332.0	35.8
0°-40°	510.2	55.0
0°-60°	800.3	86.2
0°-90°	928.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	928.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	473	473	473	473	473	
5°	464	464	464	463	463	44
15°	434	434	430	426	424	122
25°	376	374	368	355	345	173
35°	306	303	288	267	260	191
45°	234	230	210	192	185	181
55°	163	158	143	126	120	146
65°	97	91	82	84	70	95
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



TEST NUMBER: P559954

CATALOG NUMBER: FSR-12-2-LD4-1LO-50-UNV-82-85-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	472.7	472.7	472.7	472.7	472.7
2.5°	469.4	469.4	469.4	468.9	468.9
5°	464.5	464.0	464.0	463.4	463.4
7.5°	460.7	460.1	459.6	459.0	458.0
10°	455.2	455.2	454.7	451.9	451.4
12.5°	446.5	445.9	443.7	439.9	438.8
15°	434.5	434.5	430.1	425.7	424.1
17.5°	421.3	420.8	415.3	411.0	408.8
20°	407.1	406.0	400.6	393.5	389.6
22.5°	391.3	391.3	384.7	375.4	371.6
25°	376.5	374.3	368.3	355.2	345.4
27.5°	359.6	356.3	349.8	331.2	319.7
30°	341.0	339.4	330.1	306.0	297.3
32.5°	323.5	320.8	311.0	285.8	278.7
35°	305.5	303.3	288.5	266.7	260.1
37.5°	287.5	284.7	266.1	248.7	240.5
40°	269.4	266.1	245.9	230.1	221.3
42.5°	252.5	248.1	228.4	211.5	201.7
45°	234.4	229.5	209.9	192.4	184.7
47.5°	216.4	212.0	194.0	176.0	167.2
50°	197.3	193.5	177.1	159.0	149.7
52.5°	181.4	175.4	159.6	141.5	133.9
55°	162.9	157.9	143.2	126.2	119.7
57.5°	145.9	141.0	127.3	111.5	106.0
60°	130.1	123.0	111.5	97.8	93.4
62.5°	112.6	107.1	97.3	85.8	91.3
65°	96.7	91.3	82.5	84.2	70.0
67.5°	79.2	76.5	68.9	61.2	59.0
70°	64.5	61.2	58.5	50.3	48.1
72.5°	51.4	48.1	44.3	39.9	38.3
75°	38.8	36.1	33.9	32.2	35.5
77.5°	26.8	25.7	24.0	22.4	21.9
80°	17.5	16.9	16.4	15.8	15.3
82.5°	10.4	10.4	10.4	10.4	10.4
85°	5.5	6.0	6.6	7.1	7.7
87.5°	3.3	3.3	3.8	4.4	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)