

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: P559351

Luminaire Tested: FSR-12-1-LD4-2LO-50-UNV-80-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559351  
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-LD4-2LO-50-UNV-80-87-EDD  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

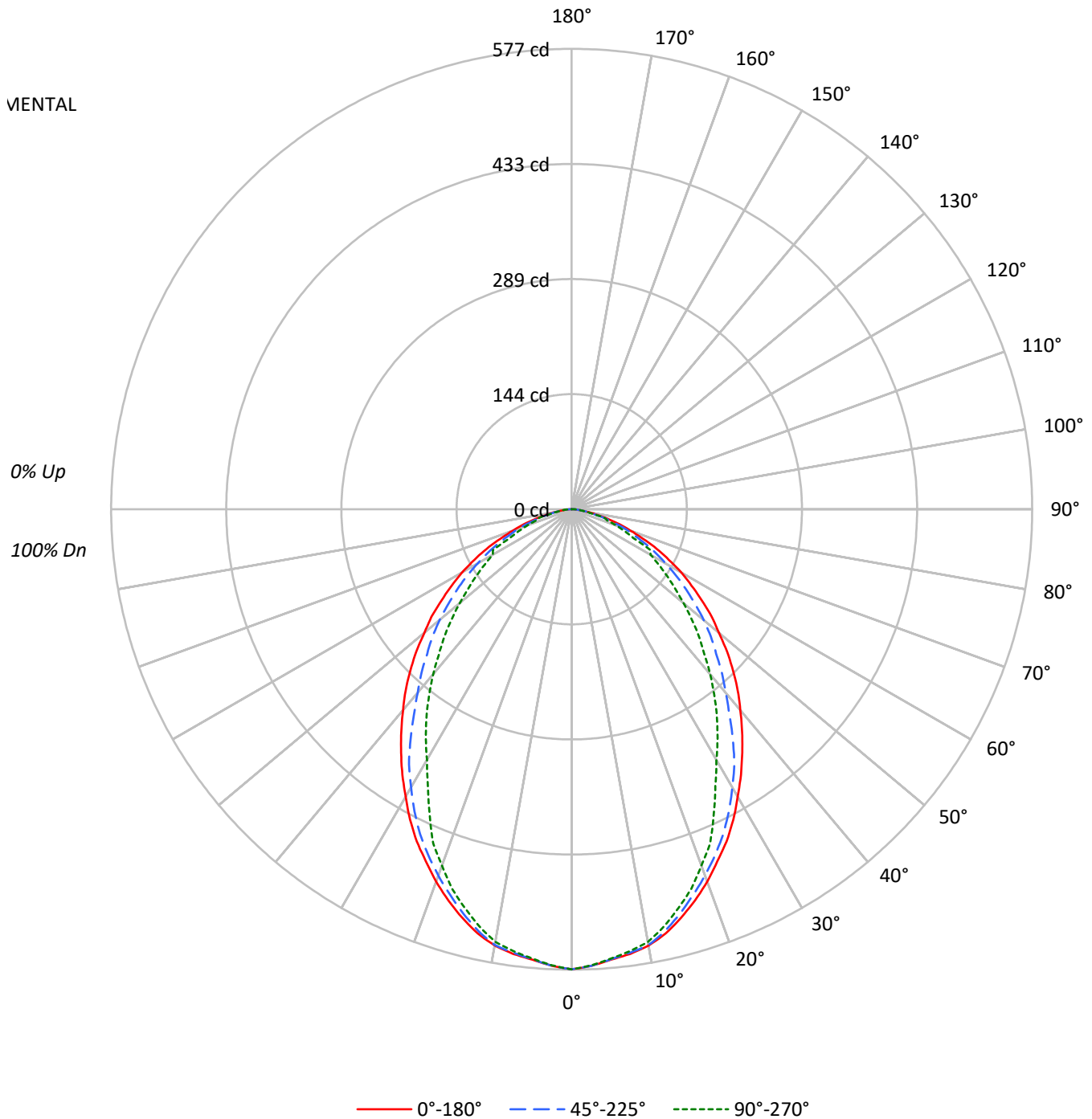
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1132.0 lumens  
Efficiency: N/A  
Efficacy: 96.8 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): 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: P559351  
CATALOG NUMBER: FSR-12-1-LD4-2LO-50-UNV-80-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P559351

CATALOG NUMBER: FSR-12-1-LD4-2LO-50-UNV-80-87-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	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°	6206	6206	6206
5°	6122	6116	6108
10°	6069	6062	6018
15°	5906	5846	5765
20°	5688	5597	5444
25°	5455	5336	5004
30°	5171	5004	4507
35°	4896	4625	4169
40°	4617	4215	3794
45°	4354	3897	3430
50°	4029	3617	3059
55°	3729	3278	2740
60°	3416	2928	2454
65°	3005	2565	2173
70°	2477	2244	1847
75°	1967	1718	1801
80°	1320	1240	1159
85°	827	988	1149

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4354 cd/sqm

TEST NUMBER: P559351

CATALOG NUMBER: FSR-12-1-LD4-2LO-50-UNV-80-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.7	4.7
10°-20°	147.3	13.0
20°-30°	203.9	18.0
30°-40°	217.5	19.2
40°-50°	198.4	17.5
50°-60°	155.4	13.7
60°-70°	101.3	8.9
70°-80°	44.9	4.0
80°-90°	9.6	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°	404.9	35.8
0°-40°	622.4	55.0
0°-60°	976.2	86.2
0°-90°	1132.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1132.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	577	577	577	577	577	
5°	567	566	566	565	565	54
15°	530	530	525	519	517	149
25°	459	457	449	433	421	211
35°	373	370	352	325	317	233
45°	286	280	256	235	225	220
55°	199	193	175	154	146	178
65°	118	111	101	103	85	116
75°	47	44	41	39	43	51
85°	7	7	8	9	9	9
90°	0	0	0	0	0	



TEST NUMBER: P559351

CATALOG NUMBER: FSR-12-1-LD4-2LO-50-UNV-80-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	576.6	576.6	576.6	576.6	576.6
2.5°	572.6	572.6	572.6	572.0	572.0
5°	566.6	566.0	566.0	565.3	565.3
7.5°	562.0	561.3	560.6	560.0	558.6
10°	555.3	555.3	554.6	551.3	550.6
12.5°	544.6	544.0	541.3	536.6	535.3
15°	530.0	530.0	524.6	519.3	517.3
17.5°	514.0	513.3	506.6	501.3	498.6
20°	496.6	495.3	488.6	480.0	475.3
22.5°	477.3	477.3	469.3	458.0	453.3
25°	459.3	456.6	449.3	433.3	421.3
27.5°	438.6	434.6	426.6	404.0	390.0
30°	416.0	414.0	402.6	373.3	362.6
32.5°	394.6	391.3	379.3	348.6	340.0
35°	372.6	370.0	352.0	325.3	317.3
37.5°	350.6	347.3	324.6	303.3	293.3
40°	328.6	324.6	300.0	280.6	270.0
42.5°	308.0	302.6	278.6	258.0	246.0
45°	286.0	280.0	256.0	234.6	225.3
47.5°	264.0	258.6	236.6	214.7	204.0
50°	240.6	236.0	216.0	194.0	182.7
52.5°	221.3	214.0	194.7	172.7	163.3
55°	198.7	192.7	174.7	154.0	146.0
57.5°	178.0	172.0	155.3	136.0	129.3
60°	158.7	150.0	136.0	119.3	114.0
62.5°	137.3	130.7	118.7	104.7	111.3
65°	118.0	111.3	100.7	102.7	85.3
67.5°	96.7	93.3	84.0	74.7	72.0
70°	78.7	74.7	71.3	61.3	58.7
72.5°	62.7	58.7	54.0	48.7	46.7
75°	47.3	44.0	41.3	39.3	43.3
77.5°	32.7	31.3	29.3	27.3	26.7
80°	21.3	20.7	20.0	19.3	18.7
82.5°	12.7	12.7	12.7	12.7	12.7
85°	6.7	7.3	8.0	8.7	9.3
87.5°	4.0	4.0	4.7	5.3	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)