

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: P559222

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-80-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559222  
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-35-UNV-80-87-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

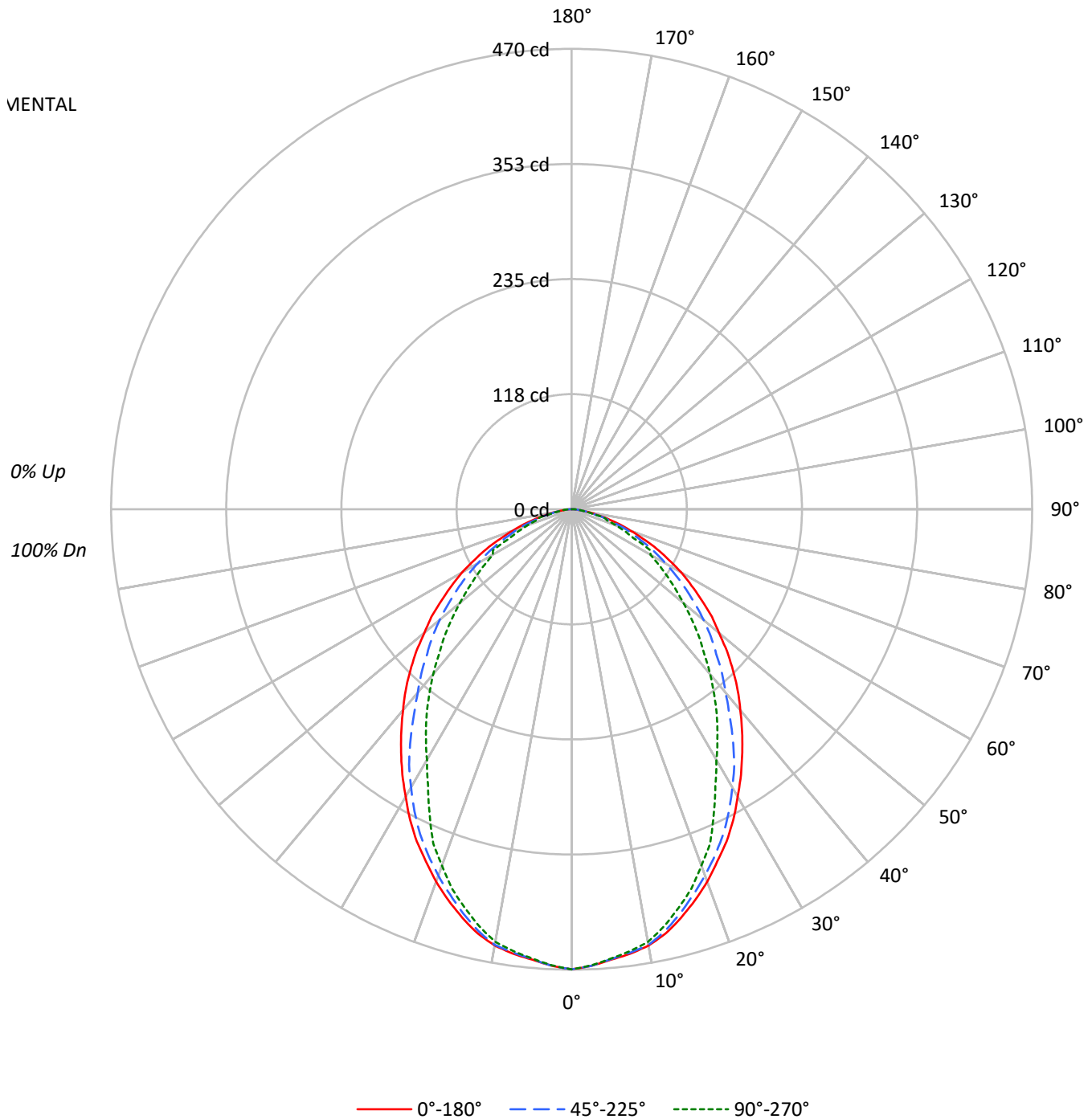
Lumens per Lamp: N/A  
Luminaire Lumens: 922.0 lumens  
Efficiency: N/A  
Efficacy: 78.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P559222

CATALOG NUMBER: FSR-12-1-LD4-2LO-35-UNV-80-87-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P559222

CATALOG NUMBER: FSR-12-1-LD4-2LO-35-UNV-80-87-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	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°	5056	5056	5056
5°	4987	4981	4975
10°	4944	4937	4902
15°	4810	4762	4695
20°	4633	4559	4434
25°	4443	4347	4075
30°	4211	4076	3672
35°	3988	3767	3395
40°	3762	3433	3090
45°	3545	3174	2793
50°	3282	2946	2492
55°	3036	2670	2231
60°	2781	2385	1998
65°	2448	2089	1770
70°	2017	1828	1504
75°	1601	1402	1468
80°	1079	1010	942
85°	667	803	939

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3545 cd/sqm



TEST NUMBER: P559222

CATALOG NUMBER: FSR-12-1-LD4-2LO-35-UNV-80-87-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.7	4.7
10°-20°	120.0	13.0
20°-30°	166.1	18.0
30°-40°	177.1	19.2
40°-50°	161.6	17.5
50°-60°	126.6	13.7
60°-70°	82.5	8.9
70°-80°	36.5	4.0
80°-90°	7.8	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°	329.8	35.8
0°-40°	506.9	55.0
0°-60°	795.1	86.2
0°-90°	922.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	922.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	470	470	470	470	470	
5°	462	461	461	460	460	44
15°	432	432	427	423	421	121
25°	374	372	366	353	343	172
35°	304	301	287	265	258	190
45°	233	228	208	191	184	179
55°	162	157	142	125	119	145
65°	96	91	82	84	70	95
75°	38	36	34	32	35	41
85°	5	6	6	7	8	8
90°	0	0	0	0	0	



TEST NUMBER: P559222

CATALOG NUMBER: FSR-12-1-LD4-2LO-35-UNV-80-87-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	469.7	469.7	469.7	469.7	469.7
2.5°	466.4	466.4	466.4	465.9	465.9
5°	461.5	461.0	461.0	460.4	460.4
7.5°	457.7	457.2	456.6	456.1	455.0
10°	452.3	452.3	451.7	449.0	448.5
12.5°	443.6	443.0	440.9	437.1	436.0
15°	431.6	431.6	427.3	423.0	421.3
17.5°	418.6	418.1	412.6	408.3	406.1
20°	404.5	403.4	398.0	390.9	387.1
22.5°	388.8	388.8	382.2	373.0	369.2
25°	374.1	371.9	366.0	352.9	343.1
27.5°	357.3	354.0	347.5	329.0	317.6
30°	338.8	337.2	327.9	304.1	295.4
32.5°	321.4	318.7	308.9	284.0	276.9
35°	303.5	301.3	286.7	265.0	258.4
37.5°	285.6	282.9	264.4	247.0	238.9
40°	267.7	264.4	244.3	228.6	219.9
42.5°	250.8	246.5	227.0	210.1	200.3
45°	232.9	228.0	208.5	191.1	183.5
47.5°	215.0	210.7	192.7	174.8	166.1
50°	196.0	192.2	175.9	158.0	148.8
52.5°	180.3	174.3	158.5	140.6	133.0
55°	161.8	156.9	142.3	125.4	118.9
57.5°	145.0	140.1	126.5	110.8	105.3
60°	129.2	122.2	110.8	97.2	92.8
62.5°	111.8	106.4	96.6	85.2	90.7
65°	96.1	90.7	82.0	83.6	69.5
67.5°	78.7	76.0	68.4	60.8	58.6
70°	64.1	60.8	58.1	50.0	47.8
72.5°	51.0	47.8	44.0	39.6	38.0
75°	38.5	35.8	33.7	32.0	35.3
77.5°	26.6	25.5	23.9	22.3	21.7
80°	17.4	16.8	16.3	15.7	15.2
82.5°	10.3	10.3	10.3	10.3	10.3
85°	5.4	6.0	6.5	7.1	7.6
87.5°	3.3	3.3	3.8	4.3	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)