

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: P559479

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-80-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559479  
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-LD4-2STD-40-UNV-80-87-EDD  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

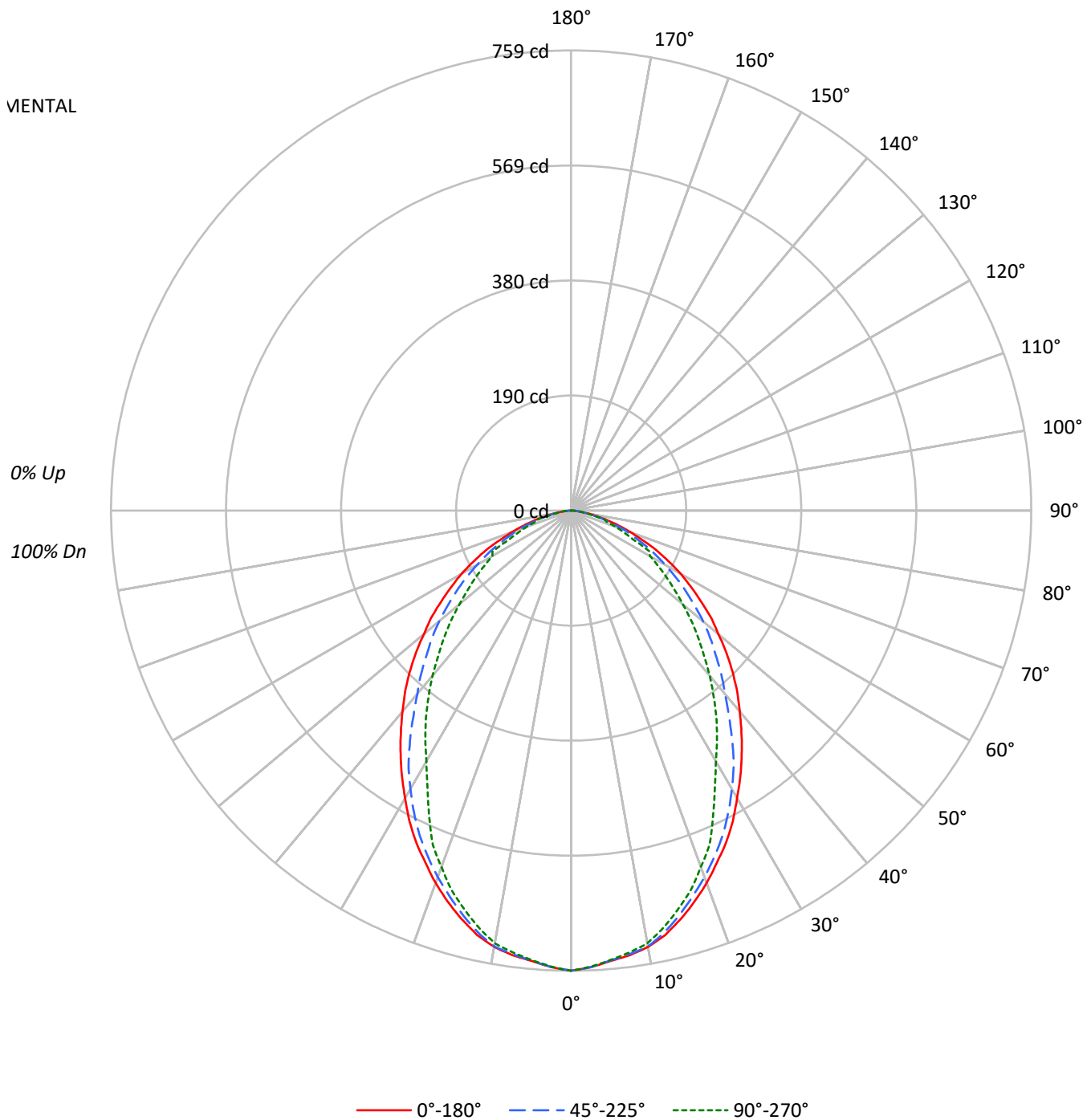
Lumens per Lamp: N/A  
Luminaire Lumens: 1490.0 lumens  
Efficiency: N/A  
Efficacy: 89.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



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### Luminous Intensity Polar Plot





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**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°	8170	8170	8170
5°	8058	8049	8040
10°	7989	7979	7922
15°	7774	7695	7588
20°	7488	7368	7166
25°	7181	7024	6586
30°	6805	6587	5932
35°	6445	6088	5489
40°	6079	5547	4994
45°	5730	5128	4515
50°	5305	4761	4026
55°	4907	4314	3607
60°	4495	3853	3229
65°	3955	3375	2860
70°	3257	2955	2430
75°	2591	2262	2371
80°	1742	1630	1525
85°	1087	1297	1519

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5730 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.7	4.7
10°-20°	193.9	13.0
20°-30°	268.4	18.0
30°-40°	286.2	19.2
40°-50°	261.1	17.5
50°-60°	204.6	13.7
60°-70°	133.3	8.9
70°-80°	59.1	4.0
80°-90°	12.7	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°	533.0	35.8
0°-40°	819.2	55.0
0°-60°	1284.9	86.2
0°-90°	1490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1490.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	759	759	759	759	759	
5°	746	745	745	744	744	71
15°	698	698	690	684	681	196
25°	605	601	591	570	554	278
35°	490	487	463	428	418	307
45°	376	368	337	309	297	290
55°	262	254	230	203	192	235
65°	155	146	132	135	112	153
75°	62	58	54	52	57	67
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	759.0	759.0	759.0	759.0	759.0
2.5°	753.7	753.7	753.7	752.8	752.8
5°	745.8	744.9	744.9	744.1	744.1
7.5°	739.7	738.8	737.9	737.1	735.3
10°	730.9	730.9	730.0	725.6	724.8
12.5°	716.9	716.0	712.5	706.3	704.6
15°	697.6	697.6	690.5	683.5	680.9
17.5°	676.5	675.6	666.9	659.8	656.3
20°	653.7	651.9	643.2	631.8	625.6
22.5°	628.2	628.2	617.7	602.8	596.7
25°	604.6	601.0	591.4	570.3	554.5
27.5°	577.4	572.1	561.6	531.7	513.3
30°	547.5	544.9	530.0	491.4	477.3
32.5°	519.4	515.1	499.3	458.9	447.5
35°	490.5	487.0	463.3	428.2	417.7
37.5°	461.5	457.1	427.3	399.2	386.1
40°	432.6	427.3	394.8	369.4	355.4
42.5°	405.4	398.4	366.8	339.6	323.8
45°	376.4	368.5	336.9	308.9	296.6
47.5°	347.5	340.4	311.5	282.5	268.5
50°	316.8	310.6	284.3	255.3	240.4
52.5°	291.3	281.7	256.2	227.3	215.0
55°	261.5	253.6	229.9	202.7	192.2
57.5°	234.3	226.4	204.4	179.0	170.2
60°	208.8	197.4	179.0	157.1	150.0
62.5°	180.8	172.0	156.2	137.8	146.5
65°	155.3	146.5	132.5	135.1	112.3
67.5°	127.2	122.8	110.6	98.3	94.8
70°	103.5	98.3	93.9	80.7	77.2
72.5°	82.5	77.2	71.1	64.1	61.4
75°	62.3	57.9	54.4	51.8	57.0
77.5°	43.0	41.2	38.6	36.0	35.1
80°	28.1	27.2	26.3	25.4	24.6
82.5°	16.7	16.7	16.7	16.7	16.7
85°	8.8	9.7	10.5	11.4	12.3
87.5°	5.3	5.3	6.1	7.0	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)