

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: P559670

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-80-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559670  
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-LD4-1HI-40-UNV-80-87-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

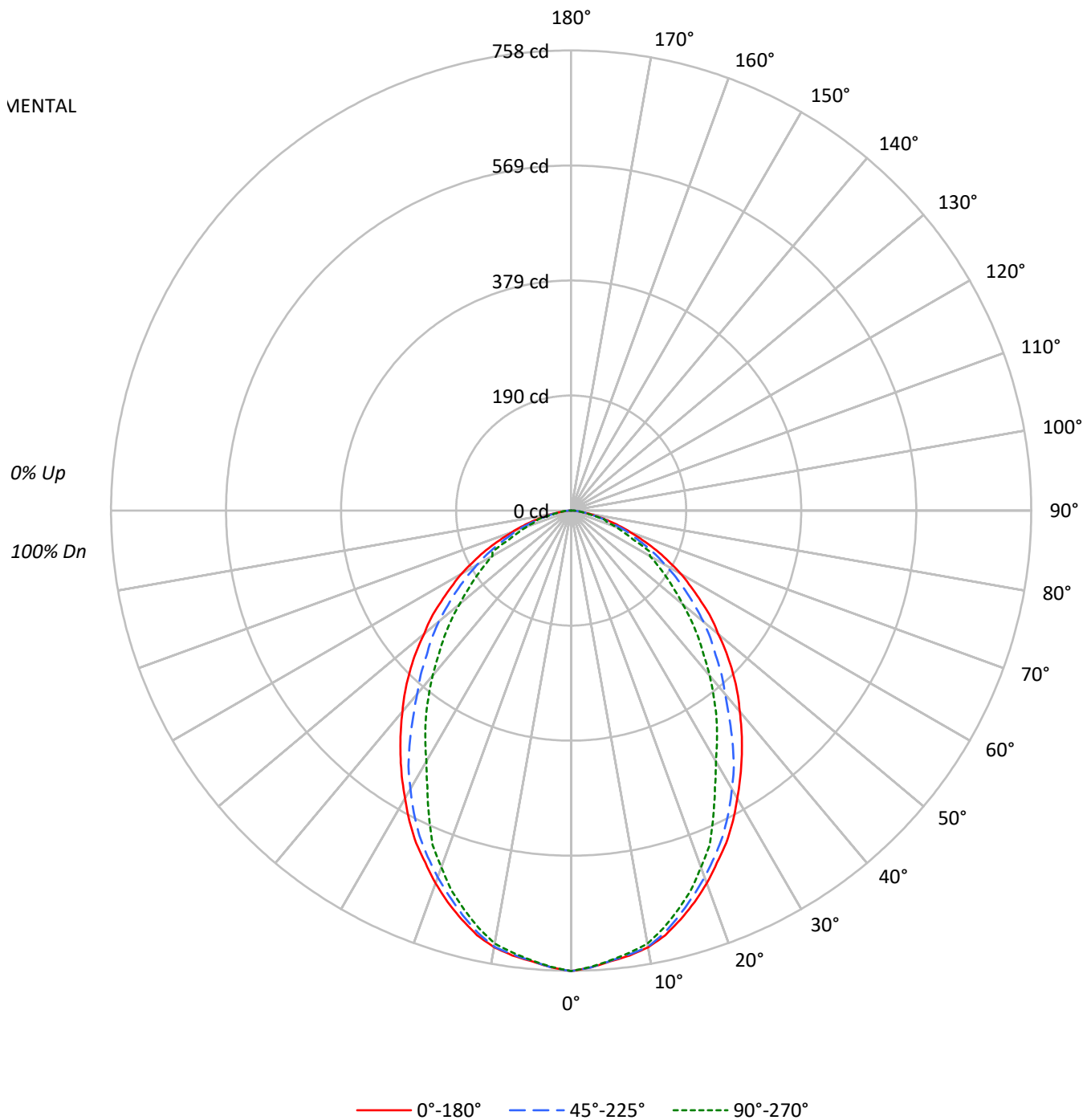
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1489.0 lumens  
Efficiency: N/A  
Efficacy: 68.9 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): 21.6  
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	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°	4082	4082	4082
5°	4026	4022	4017
10°	3992	3987	3958
15°	3884	3845	3791
20°	3742	3681	3581
25°	3588	3510	3291
30°	3401	3291	2964
35°	3221	3042	2742
40°	3037	2772	2495
45°	2863	2563	2256
50°	2650	2379	2012
55°	2452	2155	1802
60°	2246	1926	1614
65°	1976	1686	1429
70°	1629	1476	1215
75°	1295	1131	1185
80°	871	815	762
85°	543	648	760

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2863 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.6	4.7
10°-20°	193.8	13.0
20°-30°	268.3	18.0
30°-40°	286.0	19.2
40°-50°	261.0	17.5
50°-60°	204.4	13.7
60°-70°	133.2	8.9
70°-80°	59.0	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°	532.6	35.8
0°-40°	818.7	55.0
0°-60°	1284.1	86.2
0°-90°	1489.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1489.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	758	758	758	758	758	
5°	745	744	744	744	744	71
15°	697	697	690	683	680	196
25°	604	601	591	570	554	277
35°	490	487	463	428	417	306
45°	376	368	337	309	296	290
55°	261	253	230	203	192	234
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°	758.5	758.5	758.5	758.5	758.5
2.5°	753.2	753.2	753.2	752.3	752.3
5°	745.3	744.4	744.4	743.6	743.6
7.5°	739.2	738.3	737.4	736.6	734.8
10°	730.4	730.4	729.5	725.2	724.3
12.5°	716.4	715.5	712.0	705.9	704.1
15°	697.1	697.1	690.1	683.1	680.4
17.5°	676.1	675.2	666.4	659.4	655.9
20°	653.3	651.5	642.7	631.3	625.2
22.5°	627.8	627.8	617.3	602.4	596.3
25°	604.2	600.6	591.0	570.0	554.2
27.5°	577.0	571.7	561.2	531.4	513.0
30°	547.2	544.5	529.6	491.0	477.0
32.5°	519.1	514.7	498.9	458.6	447.2
35°	490.2	486.7	463.0	427.9	417.4
37.5°	461.2	456.8	427.0	399.0	385.8
40°	432.3	427.0	394.6	369.2	355.1
42.5°	405.1	398.1	366.5	339.3	323.6
45°	376.2	368.3	336.7	308.7	296.4
47.5°	347.2	340.2	311.3	282.3	268.3
50°	316.5	310.4	284.1	255.2	240.3
52.5°	291.1	281.5	256.0	227.1	214.8
55°	261.3	253.4	229.7	202.6	192.0
57.5°	234.1	226.2	204.3	178.9	170.1
60°	208.7	197.3	178.9	157.0	149.9
62.5°	180.6	171.9	156.1	137.7	146.4
65°	155.2	146.4	132.4	135.0	112.2
67.5°	127.1	122.8	110.5	98.2	94.7
70°	103.5	98.2	93.8	80.7	77.2
72.5°	82.4	77.2	71.0	64.0	61.4
75°	62.3	57.9	54.4	51.7	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	9.6	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)