

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: P560382

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-80-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560382  
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-LD4-2LO-35-UNV-80-97-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

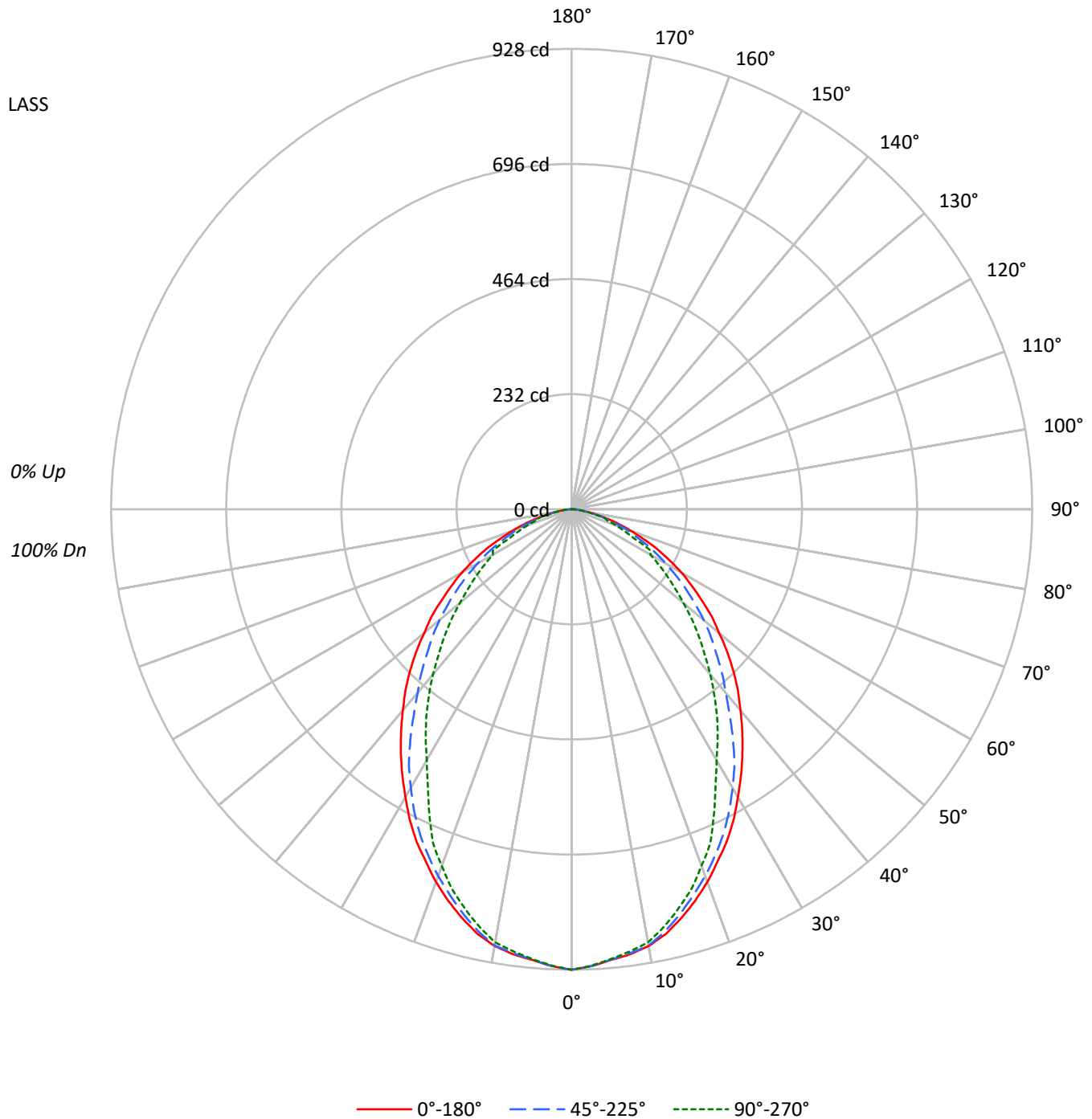
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1822.0 lumens  
Efficiency: N/A  
Efficacy: 77.9 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): 23.4  
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°	4995	4995	4995
5°	4927	4921	4916
10°	4885	4879	4844
15°	4753	4705	4639
20°	4578	4505	4381
25°	4390	4295	4027
30°	4161	4028	3627
35°	3941	3722	3355
40°	3717	3392	3053
45°	3503	3136	2761
50°	3243	2910	2462
55°	3000	2638	2205
60°	2749	2356	1975
65°	2418	2063	1748
70°	1992	1806	1485
75°	1585	1383	1449
80°	1063	998	930
85°	661	797	926

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3503 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.4	4.7
10°-20°	237.1	13.0
20°-30°	328.3	18.0
30°-40°	350.0	19.2
40°-50°	319.3	17.5
50°-60°	250.2	13.7
60°-70°	163.0	8.9
70°-80°	72.2	4.0
80°-90°	15.5	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°	651.7	35.8
0°-40°	1001.8	55.0
0°-60°	1571.2	86.2
0°-90°	1822.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1822.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	928	928	928	928	928	
5°	912	911	911	910	910	87
15°	853	853	844	836	833	240
25°	739	735	723	697	678	339
35°	600	596	566	524	511	375
45°	460	451	412	378	363	355
55°	320	310	281	248	235	287
65°	190	179	162	165	137	187
75°	76	71	66	63	70	82
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	928.1	928.1	928.1	928.1	928.1
2.5°	921.7	921.7	921.7	920.6	920.6
5°	912.0	910.9	910.9	909.9	909.9
7.5°	904.5	903.4	902.4	901.3	899.1
10°	893.8	893.8	892.7	887.3	886.3
12.5°	876.6	875.5	871.2	863.7	861.6
15°	853.0	853.0	844.4	835.8	832.6
17.5°	827.2	826.2	815.4	806.9	802.6
20°	799.3	797.2	786.5	772.5	765.0
22.5°	768.2	768.2	755.4	737.1	729.6
25°	739.3	735.0	723.2	697.4	678.1
27.5°	706.0	699.6	686.7	650.2	627.7
30°	669.5	666.3	648.1	600.9	583.7
32.5°	635.2	629.8	610.5	561.2	547.2
35°	599.8	595.5	566.5	523.6	510.7
37.5°	564.4	559.0	522.5	488.2	472.1
40°	529.0	522.5	482.8	451.7	434.5
42.5°	495.7	487.1	448.5	415.2	395.9
45°	460.3	450.6	412.0	377.7	362.7
47.5°	424.9	416.3	380.9	345.5	328.3
50°	387.3	379.8	347.6	312.2	294.0
52.5°	356.2	344.4	313.3	277.9	262.9
55°	319.7	310.1	281.1	247.9	235.0
57.5°	286.5	276.8	250.0	218.9	208.2
60°	255.4	241.4	218.9	192.1	183.5
62.5°	221.0	210.3	191.0	168.5	179.2
65°	189.9	179.2	162.0	165.2	137.3
67.5°	155.6	150.2	135.2	120.2	115.9
70°	126.6	120.2	114.8	98.7	94.4
72.5°	100.9	94.4	86.9	78.3	75.1
75°	76.2	70.8	66.5	63.3	69.7
77.5°	52.6	50.4	47.2	44.0	42.9
80°	34.3	33.3	32.2	31.1	30.0
82.5°	20.4	20.4	20.4	20.4	20.4
85°	10.7	11.8	12.9	13.9	15.0
87.5°	6.4	6.4	7.5	8.6	9.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)