

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: P560496

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-80-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560496  
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-50-UNV-80-84-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

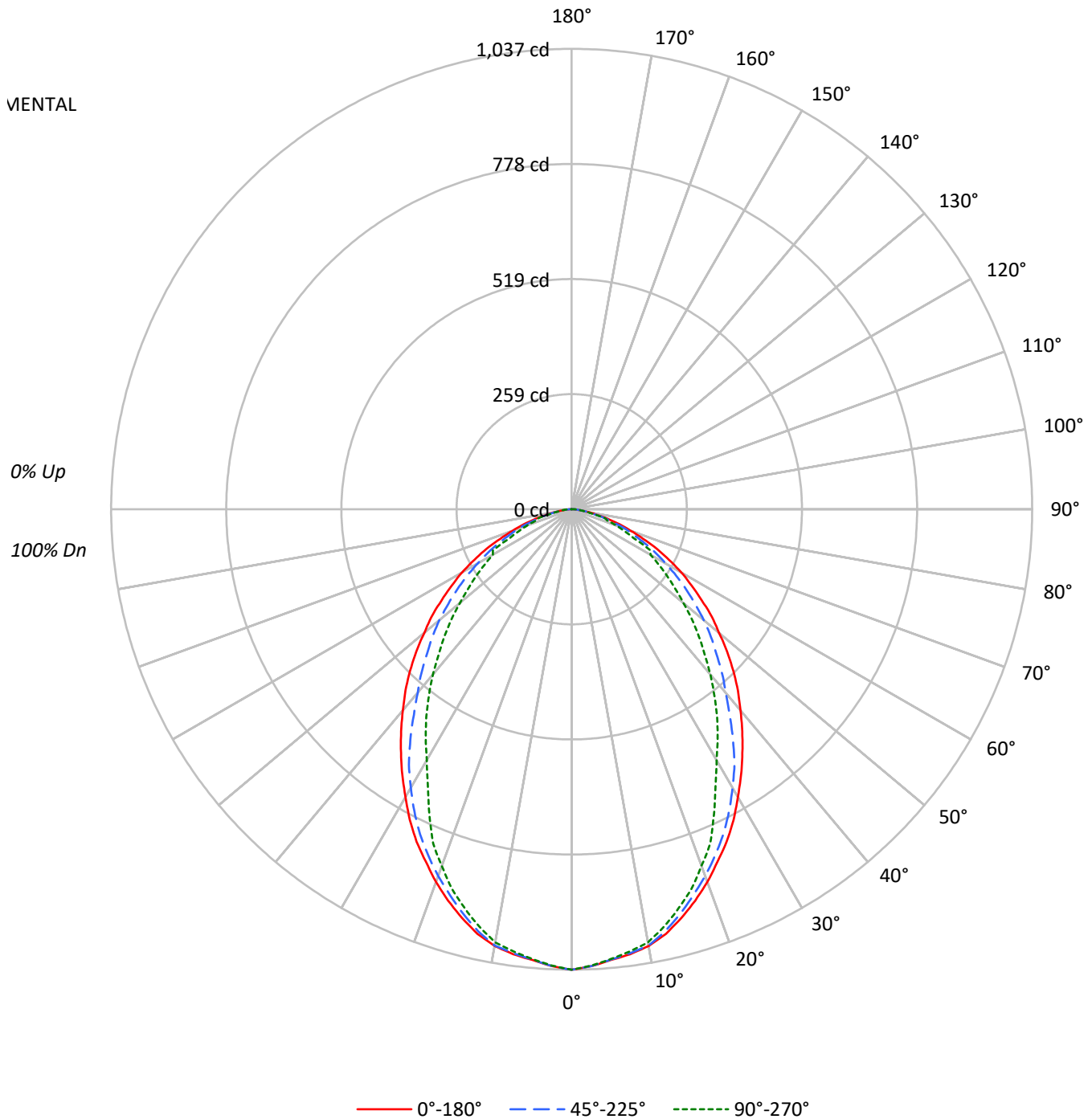
Lumens per Lamp: N/A  
Luminaire Lumens: 2036.0 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5582	5582	5582
5°	5506	5499	5493
10°	5458	5451	5413
15°	5311	5258	5184
20°	5116	5033	4896
25°	4906	4799	4500
30°	4650	4501	4053
35°	4403	4160	3750
40°	4153	3790	3412
45°	3915	3504	3085
50°	3624	3253	2750
55°	3353	2947	2464
60°	3072	2633	2207
65°	2702	2305	1955
70°	2227	2019	1660
75°	1770	1545	1620
80°	1190	1116	1041
85°	741	889	1037

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3915 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.5	4.7
10°-20°	264.9	13.0
20°-30°	366.8	18.0
30°-40°	391.1	19.2
40°-50°	356.8	17.5
50°-60°	279.5	13.7
60°-70°	182.2	8.9
70°-80°	80.7	4.0
80°-90°	17.3	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°	728.3	35.8
0°-40°	1119.4	55.0
0°-60°	1755.8	86.2
0°-90°	2036.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2036.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1037	1037	1037	1037	1037	
5°	1019	1018	1018	1017	1017	97
15°	953	953	944	934	930	268
25°	826	821	808	779	758	379
35°	670	665	633	585	571	419
45°	514	504	460	422	405	396
55°	357	346	314	277	263	320
65°	212	200	181	185	154	209
75°	85	79	74	71	78	91
85°	12	13	14	16	17	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1037.1	1037.1	1037.1	1037.1	1037.1
2.5°	1029.9	1029.9	1029.9	1028.7	1028.7
5°	1019.1	1017.9	1017.9	1016.7	1016.7
7.5°	1010.7	1009.5	1008.3	1007.1	1004.7
10°	998.7	998.7	997.5	991.6	990.4
12.5°	979.6	978.4	973.6	965.2	962.8
15°	953.2	953.2	943.6	934.0	930.4
17.5°	924.4	923.2	911.2	901.6	896.8
20°	893.2	890.8	878.8	863.3	854.9
22.5°	858.5	858.5	844.1	823.7	815.3
25°	826.1	821.3	808.1	779.3	757.8
27.5°	788.9	781.7	767.3	726.6	701.4
30°	748.2	744.6	724.2	671.4	652.2
32.5°	709.8	703.8	682.2	627.1	611.5
35°	670.2	665.4	633.1	585.1	570.7
37.5°	630.7	624.7	583.9	545.5	527.5
40°	591.1	583.9	539.5	504.8	485.6
42.5°	553.9	544.3	501.2	464.0	442.4
45°	514.4	503.6	460.4	422.0	405.3
47.5°	474.8	465.2	425.6	386.1	366.9
50°	432.8	424.4	388.5	348.9	328.5
52.5°	398.1	384.9	350.1	310.5	293.7
55°	357.3	346.5	314.1	277.0	262.6
57.5°	320.1	309.3	279.4	244.6	232.6
60°	285.4	269.8	244.6	214.6	205.0
62.5°	247.0	235.0	213.4	188.2	200.2
65°	212.2	200.2	181.0	184.6	153.5
67.5°	173.9	167.9	151.1	134.3	129.5
70°	141.5	134.3	128.3	110.3	105.5
72.5°	112.7	105.5	97.1	87.5	83.9
75°	85.1	79.1	74.3	70.7	77.9
77.5°	58.7	56.4	52.8	49.2	48.0
80°	38.4	37.2	36.0	34.8	33.6
82.5°	22.8	22.8	22.8	22.8	22.8
85°	12.0	13.2	14.4	15.6	16.8
87.5°	7.2	7.2	8.4	9.6	10.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)