

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: P560500

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-80-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560500  
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-80-86-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

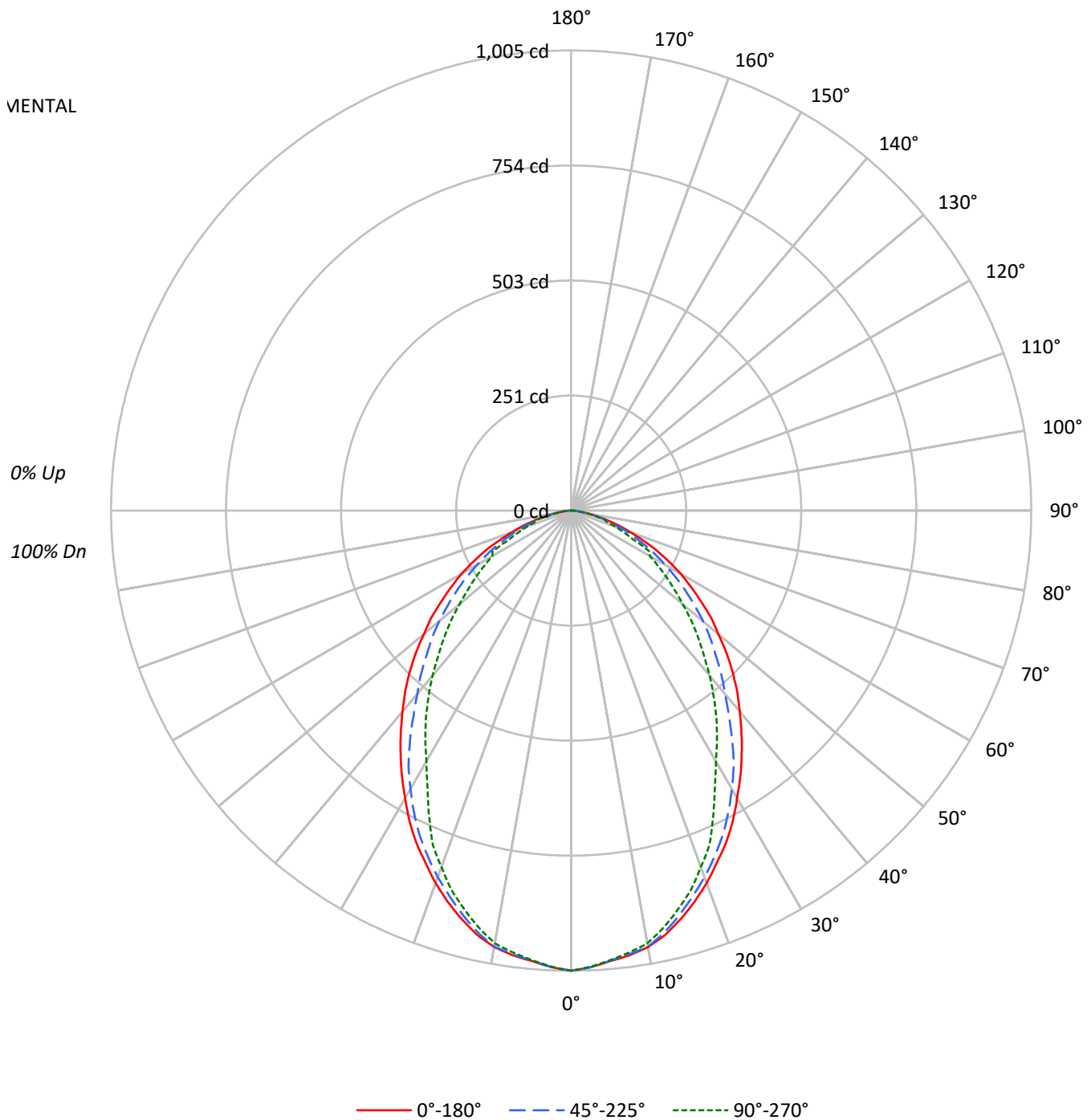
Lumens per Lamp: N/A  
Luminaire Lumens: 1973.0 lumens  
Efficiency: N/A  
Efficacy: 84.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																												
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°	5409	5409	5409
5°	5336	5329	5323
10°	5289	5283	5245
15°	5147	5095	5024
20°	4958	4878	4745
25°	4754	4650	4361
30°	4506	4361	3928
35°	4267	4031	3634
40°	4024	3673	3306
45°	3793	3396	2989
50°	3512	3152	2666
55°	3248	2856	2388
60°	2976	2551	2139
65°	2620	2234	1894
70°	2157	1956	1608
75°	1716	1497	1570
80°	1153	1082	1007
85°	716	858	1007

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3793 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.6	4.7
10°-20°	256.7	13.0
20°-30°	355.5	18.0
30°-40°	379.0	19.2
40°-50°	345.8	17.5
50°-60°	270.9	13.7
60°-70°	176.5	8.9
70°-80°	78.2	4.0
80°-90°	16.8	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°	705.8	35.8
0°-40°	1084.8	55.0
0°-60°	1701.4	86.2
0°-90°	1973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1973.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1005	1005	1005	1005	1005	
5°	988	986	986	985	985	94
15°	924	924	914	905	902	260
25°	800	796	783	755	734	368
35°	650	645	614	567	553	406
45°	498	488	446	409	393	384
55°	346	336	304	268	254	311
65°	206	194	175	179	149	203
75°	82	77	72	69	76	88
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1005.0	1005.0	1005.0	1005.0	1005.0
2.5°	998.0	998.0	998.0	996.9	996.9
5°	987.6	986.4	986.4	985.3	985.3
7.5°	979.5	978.3	977.1	976.0	973.6
10°	967.8	967.8	966.7	960.9	959.7
12.5°	949.2	948.1	943.4	935.3	933.0
15°	923.7	923.7	914.4	905.1	901.6
17.5°	895.8	894.6	883.0	873.7	869.1
20°	865.6	863.3	851.7	836.5	828.4
22.5°	831.9	831.9	818.0	798.2	790.1
25°	800.5	795.9	783.1	755.2	734.3
27.5°	764.5	757.5	743.6	704.1	679.7
30°	725.0	721.5	701.8	650.6	632.1
32.5°	687.8	682.0	661.1	607.7	592.6
35°	649.5	644.8	613.5	567.0	553.1
37.5°	611.1	605.3	565.8	528.7	511.2
40°	572.8	565.8	522.8	489.1	470.6
42.5°	536.8	527.5	485.7	449.6	428.7
45°	498.4	488.0	446.2	409.0	392.7
47.5°	460.1	450.8	412.5	374.1	355.5
50°	419.4	411.3	376.4	338.1	318.4
52.5°	385.7	373.0	339.3	300.9	284.7
55°	346.2	335.8	304.4	268.4	254.5
57.5°	310.2	299.8	270.7	237.0	225.4
60°	276.5	261.4	237.0	208.0	198.7
62.5°	239.3	227.7	206.8	182.4	194.0
65°	205.7	194.0	175.4	178.9	148.7
67.5°	168.5	162.7	146.4	130.1	125.5
70°	137.1	130.1	124.3	106.9	102.2
72.5°	109.2	102.2	94.1	84.8	81.3
75°	82.5	76.7	72.0	68.6	75.5
77.5°	56.9	54.6	51.1	47.6	46.5
80°	37.2	36.0	34.9	33.7	32.5
82.5°	22.1	22.1	22.1	22.1	22.1
85°	11.6	12.8	13.9	15.1	16.3
87.5°	7.0	7.0	8.1	9.3	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)