

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: P560498

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-80-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560498  
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-80-85-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

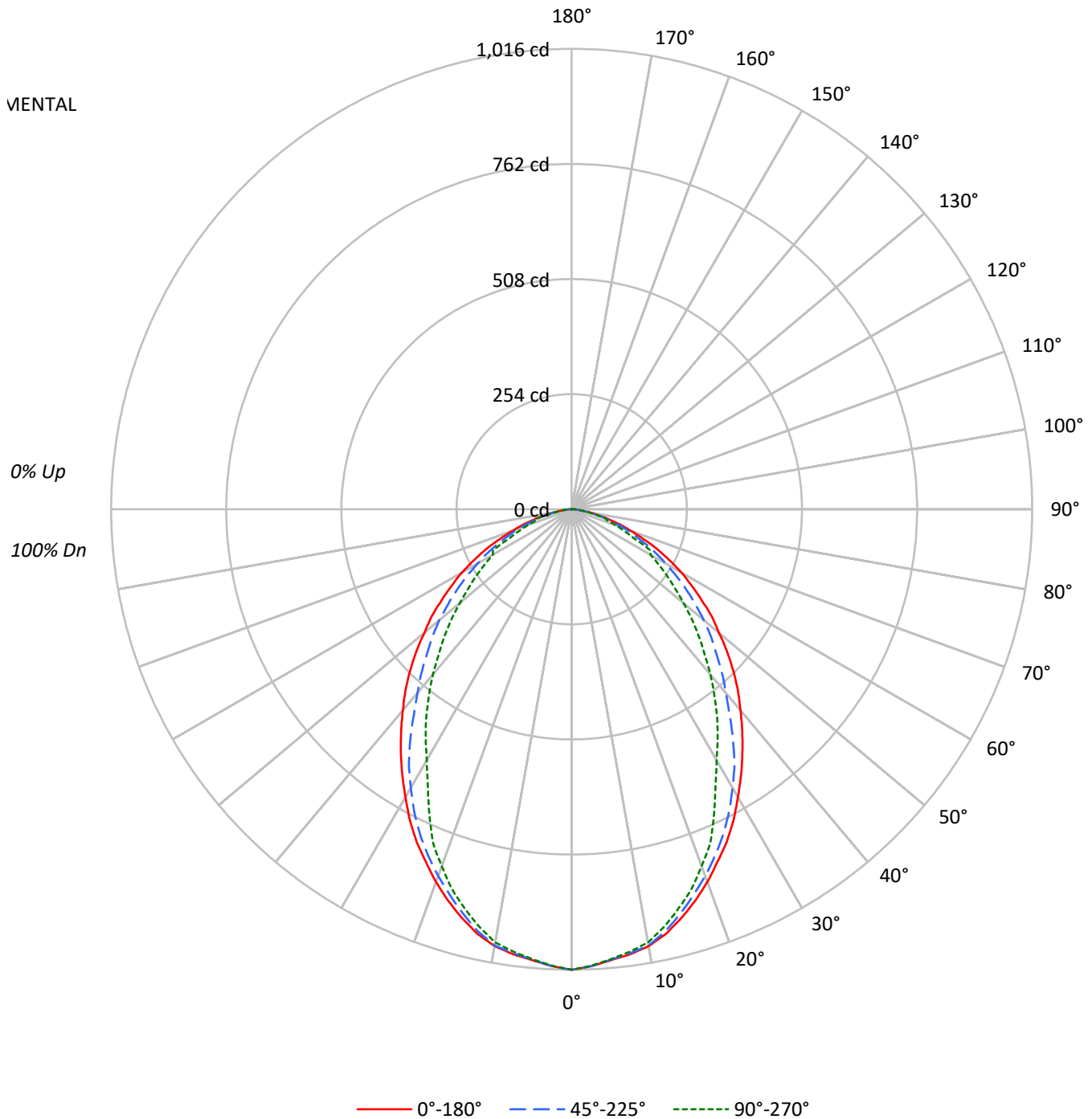
Lumens per Lamp: N/A  
Luminaire Lumens: 1995.0 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	5469	5469	5469
5°	5395	5388	5383
10°	5348	5342	5303
15°	5204	5152	5080
20°	5013	4932	4798
25°	4807	4702	4409
30°	4556	4410	3972
35°	4315	4075	3674
40°	4069	3714	3343
45°	3836	3433	3022
50°	3551	3187	2695
55°	3285	2888	2414
60°	3010	2580	2162
65°	2648	2259	1915
70°	2181	1978	1627
75°	1734	1514	1589
80°	1165	1091	1020
85°	722	871	1013

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3836 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.6	4.7
10°-20°	259.6	13.0
20°-30°	359.4	18.0
30°-40°	383.2	19.2
40°-50°	349.6	17.5
50°-60°	273.9	13.7
60°-70°	178.5	8.9
70°-80°	79.1	4.0
80°-90°	17.0	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°	713.6	35.8
0°-40°	1096.9	55.0
0°-60°	1720.4	86.2
0°-90°	1995.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1995.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	999	997	997	996	996	95
15°	934	934	925	915	912	263
25°	810	805	792	764	742	372
35°	657	652	620	573	559	411
45°	504	493	451	414	397	388
55°	350	340	308	271	257	314
65°	208	196	177	181	150	205
75°	83	78	73	69	76	89
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°	1016.2	1016.2	1016.2	1016.2	1016.2
2.5°	1009.2	1009.2	1009.2	1008.0	1008.0
5°	998.6	997.4	997.4	996.3	996.3
7.5°	990.4	989.2	988.0	986.9	984.5
10°	978.6	978.6	977.5	971.6	970.4
12.5°	959.8	958.7	954.0	945.7	943.4
15°	934.0	934.0	924.6	915.2	911.7
17.5°	905.8	904.6	892.9	883.5	878.8
20°	875.2	872.9	861.1	845.9	837.7
22.5°	841.2	841.2	827.1	807.1	798.9
25°	809.5	804.8	791.8	763.6	742.5
27.5°	773.0	766.0	751.9	711.9	687.3
30°	733.1	729.6	709.6	657.9	639.1
32.5°	695.5	689.6	668.5	614.4	599.2
35°	656.7	652.0	620.3	573.3	559.2
37.5°	618.0	612.1	572.1	534.5	516.9
40°	579.2	572.1	528.7	494.6	475.8
42.5°	542.8	533.4	491.1	454.7	433.5
45°	504.0	493.4	451.1	413.5	397.1
47.5°	465.2	455.8	417.1	378.3	359.5
50°	424.1	415.9	380.6	341.9	321.9
52.5°	390.0	377.1	343.0	304.3	287.8
55°	350.1	339.5	307.8	271.4	257.3
57.5°	313.7	303.1	273.7	239.7	227.9
60°	279.6	264.3	239.7	210.3	200.9
62.5°	242.0	230.3	209.1	184.4	196.2
65°	207.9	196.2	177.4	180.9	150.4
67.5°	170.4	164.5	148.0	131.6	126.9
70°	138.6	131.6	125.7	108.1	103.4
72.5°	110.4	103.4	95.2	85.8	82.2
75°	83.4	77.5	72.8	69.3	76.4
77.5°	57.6	55.2	51.7	48.2	47.0
80°	37.6	36.4	35.2	34.1	32.9
82.5°	22.3	22.3	22.3	22.3	22.3
85°	11.7	12.9	14.1	15.3	16.4
87.5°	7.0	7.0	8.2	9.4	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)