

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: P559478

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559478  
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-12-1-LD4-2STD-40-UNV-80-87-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

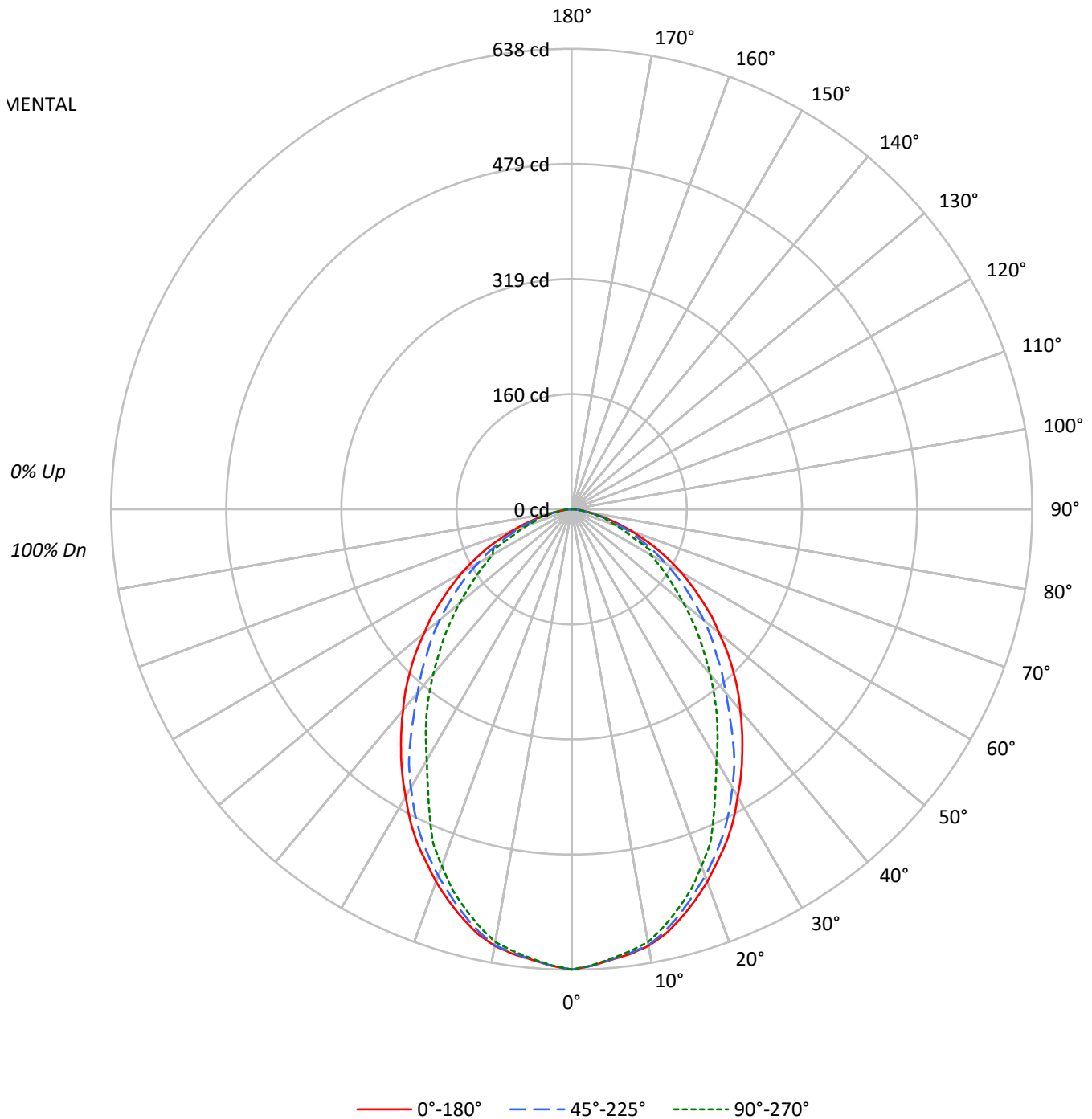
Lumens per Lamp: N/A  
Luminaire Lumens: 1252.0 lumens  
Efficiency: N/A  
Efficacy: 75.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	6865	6865	6865
5°	6772	6764	6755
10°	6713	6704	6656
15°	6531	6466	6375
20°	6292	6190	6022
25°	6033	5902	5535
30°	5719	5535	4985
35°	5415	5116	4611
40°	5108	4662	4196
45°	4815	4309	3793
50°	4458	4001	3383
55°	4123	3626	3031
60°	3778	3238	2715
65°	3324	2835	2404
70°	2738	2483	2043
75°	2175	1901	1992
80°	1463	1370	1277
85°	914	1087	1272

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4815 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.4	4.7
10°-20°	162.9	13.0
20°-30°	225.6	18.0
30°-40°	240.5	19.2
40°-50°	219.4	17.5
50°-60°	171.9	13.7
60°-70°	112.0	8.9
70°-80°	49.6	4.0
80°-90°	10.7	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°	447.8	35.8
0°-40°	688.4	55.0
0°-60°	1079.7	86.2
0°-90°	1252.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1252.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	638	638	638	638	638	
5°	627	626	626	625	625	59
15°	586	586	580	574	572	165
25°	508	505	497	479	466	233
35°	412	409	389	360	351	258
45°	316	310	283	260	249	244
55°	220	213	193	170	162	197
65°	130	123	111	114	94	129
75°	52	49	46	44	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	637.8	637.8	637.8	637.8	637.8
2.5°	633.3	633.3	633.3	632.6	632.6
5°	626.7	626.0	626.0	625.2	625.2
7.5°	621.5	620.8	620.1	619.3	617.8
10°	614.2	614.2	613.4	609.7	609.0
12.5°	602.4	601.6	598.7	593.5	592.0
15°	586.1	586.1	580.2	574.3	572.1
17.5°	568.4	567.7	560.3	554.4	551.5
20°	549.3	547.8	540.4	530.8	525.7
22.5°	527.9	527.9	519.0	506.5	501.4
25°	508.0	505.0	496.9	479.2	466.0
27.5°	485.1	480.7	471.9	446.8	431.3
30°	460.1	457.9	445.3	412.9	401.1
32.5°	436.5	432.8	419.5	385.6	376.0
35°	412.1	409.2	389.3	359.8	350.9
37.5°	387.8	384.1	359.1	335.5	324.4
40°	363.5	359.1	331.8	310.4	298.6
42.5°	340.6	334.7	308.2	285.3	272.1
45°	316.3	309.7	283.1	259.5	249.2
47.5°	292.0	286.1	261.7	237.4	225.6
50°	266.2	261.0	238.9	214.6	202.0
52.5°	244.8	236.7	215.3	191.0	180.6
55°	219.7	213.1	193.2	170.3	161.5
57.5°	196.9	190.2	171.8	150.4	143.0
60°	175.5	165.9	150.4	132.0	126.1
62.5°	151.9	144.5	131.2	115.8	123.1
65°	130.5	123.1	111.3	113.5	94.4
67.5°	106.9	103.2	92.9	82.6	79.6
70°	87.0	82.6	78.9	67.8	64.9
72.5°	69.3	64.9	59.7	53.8	51.6
75°	52.3	48.7	45.7	43.5	47.9
77.5°	36.1	34.7	32.4	30.2	29.5
80°	23.6	22.9	22.1	21.4	20.6
82.5°	14.0	14.0	14.0	14.0	14.0
85°	7.4	8.1	8.8	9.6	10.3
87.5°	4.4	4.4	5.2	5.9	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)