

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: P559502

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-81-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559502  
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-81-97-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

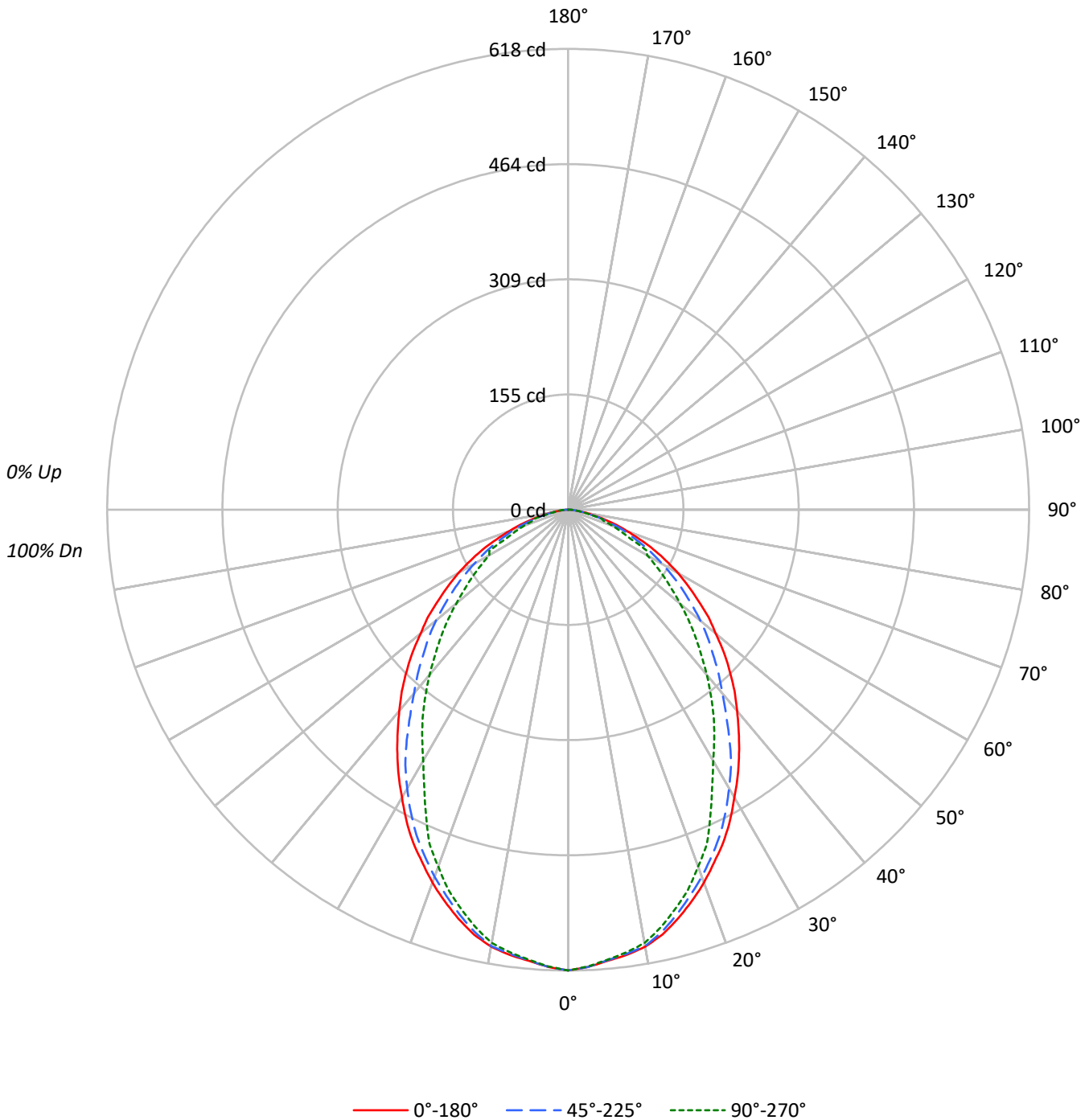
Lumens per Lamp: N/A  
Luminaire Lumens: 1213.0 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	6651	6651	6651
5°	6561	6553	6545
10°	6503	6496	6449
15°	6328	6265	6177
20°	6096	5998	5834
25°	5846	5719	5361
30°	5540	5362	4830
35°	5247	4957	4468
40°	4949	4516	4065
45°	4664	4176	3675
50°	4319	3875	3277
55°	3995	3513	2935
60°	3660	3137	2629
65°	3219	2748	2328
70°	2653	2404	1980
75°	2109	1842	1930
80°	1420	1327	1240
85°	877	1062	1235

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4664 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.5	4.7
10°-20°	157.9	13.0
20°-30°	218.5	18.0
30°-40°	233.0	19.2
40°-50°	212.6	17.5
50°-60°	166.5	13.7
60°-70°	108.5	8.9
70°-80°	48.1	4.0
80°-90°	10.3	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°	433.9	35.8
0°-40°	666.9	55.0
0°-60°	1046.0	86.2
0°-90°	1213.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1213.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	618	618	618	618	618	
5°	607	606	606	606	606	58
15°	568	568	562	556	554	160
25°	492	489	482	464	451	226
35°	399	396	377	349	340	250
45°	306	300	274	251	241	236
55°	213	206	187	165	156	191
65°	126	119	108	110	91	125
75°	51	47	44	42	46	54
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	617.9	617.9	617.9	617.9	617.9
2.5°	613.6	613.6	613.6	612.9	612.9
5°	607.2	606.5	606.5	605.7	605.7
7.5°	602.2	601.5	600.7	600.0	598.6
10°	595.0	595.0	594.3	590.7	590.0
12.5°	583.6	582.9	580.0	575.0	573.6
15°	567.9	567.9	562.2	556.5	554.3
17.5°	550.7	550.0	542.9	537.2	534.3
20°	532.2	530.7	523.6	514.3	509.3
22.5°	511.5	511.5	502.9	490.7	485.7
25°	492.2	489.3	481.5	464.3	451.4
27.5°	470.0	465.7	457.2	432.9	417.9
30°	445.7	443.6	431.4	400.0	388.6
32.5°	422.9	419.3	406.4	373.6	364.3
35°	399.3	396.4	377.2	348.6	340.0
37.5°	375.7	372.2	347.9	325.0	314.3
40°	352.2	347.9	321.4	300.7	289.3
42.5°	330.0	324.3	298.6	276.4	263.6
45°	306.4	300.0	274.3	251.4	241.4
47.5°	282.9	277.2	253.6	230.0	218.6
50°	257.9	252.9	231.4	207.9	195.7
52.5°	237.2	229.3	208.6	185.0	175.0
55°	212.9	206.4	187.2	165.0	156.4
57.5°	190.7	184.3	166.4	145.7	138.6
60°	170.0	160.7	145.7	127.9	122.1
62.5°	147.1	140.0	127.1	112.1	119.3
65°	126.4	119.3	107.9	110.0	91.4
67.5°	103.6	100.0	90.0	80.0	77.1
70°	84.3	80.0	76.4	65.7	62.9
72.5°	67.1	62.9	57.9	52.1	50.0
75°	50.7	47.1	44.3	42.1	46.4
77.5°	35.0	33.6	31.4	29.3	28.6
80°	22.9	22.1	21.4	20.7	20.0
82.5°	13.6	13.6	13.6	13.6	13.6
85°	7.1	7.9	8.6	9.3	10.0
87.5°	4.3	4.3	5.0	5.7	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)