

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: P560054

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560054  
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-LD4-1STD-40-UNV-80-87-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

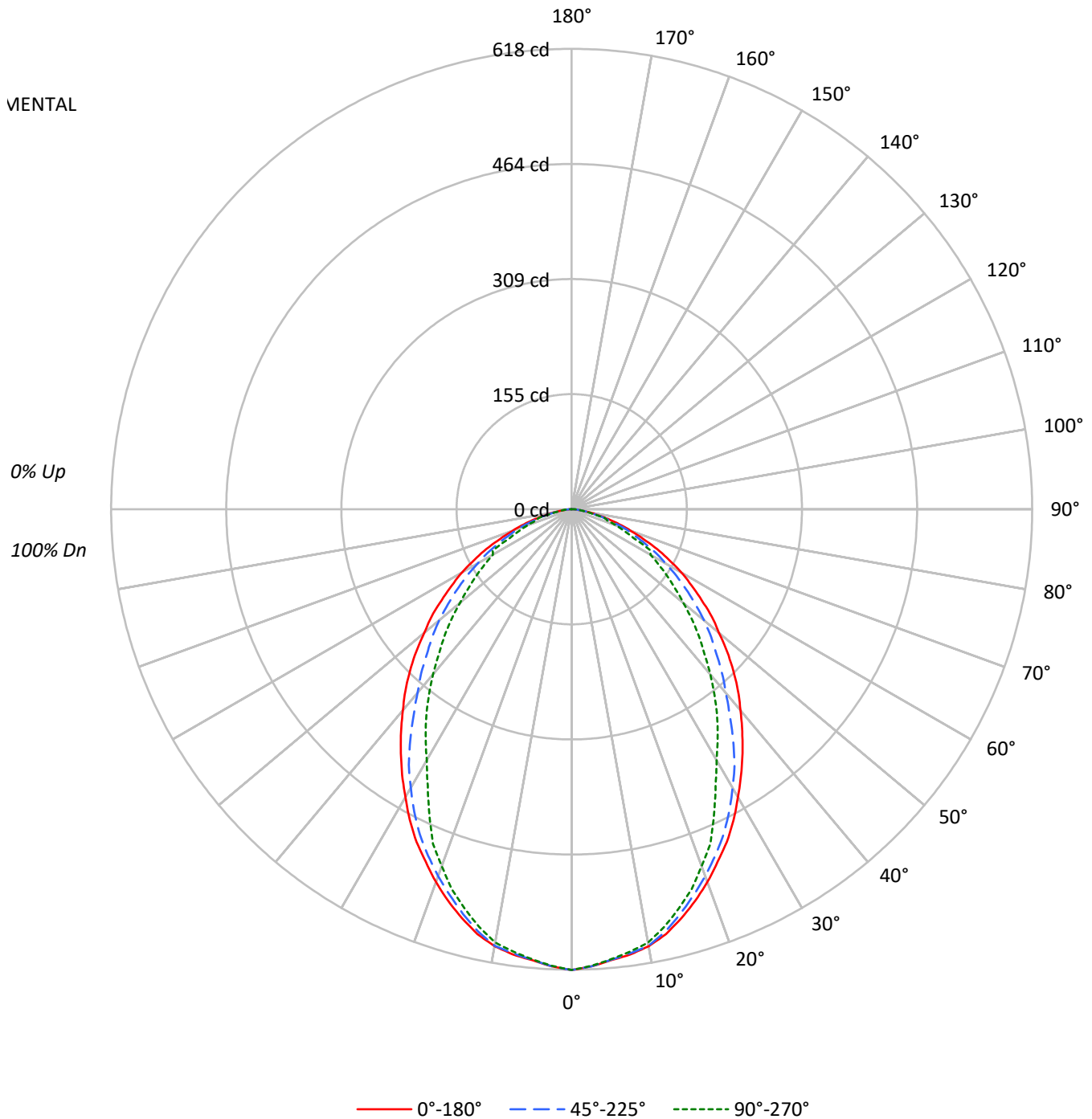
Lumens per Lamp: N/A  
Luminaire Lumens: 1214.0 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3328	3328	3328
5°	3283	3279	3275
10°	3254	3251	3227
15°	3167	3135	3091
20°	3050	3001	2919
25°	2925	2861	2683
30°	2772	2683	2417
35°	2625	2480	2236
40°	2476	2260	2034
45°	2334	2089	1839
50°	2161	1939	1640
55°	1999	1757	1469
60°	1831	1569	1315
65°	1611	1375	1165
70°	1328	1204	990
75°	1056	921	967
80°	710	663	620
85°	438	531	618

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2334 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.6	4.7
10°-20°	158.0	13.0
20°-30°	218.7	18.0
30°-40°	233.2	19.2
40°-50°	212.8	17.5
50°-60°	166.7	13.7
60°-70°	108.6	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°	434.3	35.8
0°-40°	667.5	55.0
0°-60°	1046.9	86.2
0°-90°	1214.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1214.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	618	618	618	618	618	
5°	608	607	607	606	606	58
15°	568	568	563	557	555	160
25°	493	490	482	465	452	226
35°	400	397	378	349	340	250
45°	307	300	274	252	242	236
55°	213	207	187	165	157	191
65°	126	119	108	110	92	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°	618.4	618.4	618.4	618.4	618.4
2.5°	614.1	614.1	614.1	613.4	613.4
5°	607.7	607.0	607.0	606.2	606.2
7.5°	602.7	602.0	601.2	600.5	599.1
10°	595.5	595.5	594.8	591.2	590.5
12.5°	584.1	583.4	580.5	575.5	574.1
15°	568.4	568.4	562.6	556.9	554.8
17.5°	551.2	550.5	543.3	537.6	534.8
20°	532.6	531.2	524.0	514.7	509.7
22.5°	511.9	511.9	503.3	491.1	486.1
25°	492.6	489.7	481.8	464.7	451.8
27.5°	470.4	466.1	457.5	433.2	418.2
30°	446.1	444.0	431.8	400.3	388.9
32.5°	423.2	419.7	406.8	373.9	364.6
35°	399.6	396.8	377.5	348.9	340.3
37.5°	376.0	372.5	348.2	325.3	314.6
40°	352.4	348.2	321.7	301.0	289.5
42.5°	330.3	324.6	298.8	276.7	263.8
45°	306.7	300.3	274.5	251.6	241.6
47.5°	283.1	277.4	253.8	230.2	218.8
50°	258.1	253.1	231.6	208.0	195.9
52.5°	237.3	229.5	208.8	185.2	175.2
55°	213.0	206.6	187.3	165.1	156.6
57.5°	190.9	184.4	166.6	145.8	138.7
60°	170.1	160.9	145.8	128.0	122.2
62.5°	147.3	140.1	127.3	112.2	119.4
65°	126.5	119.4	108.0	110.1	91.5
67.5°	103.7	100.1	90.1	80.1	77.2
70°	84.4	80.1	76.5	65.8	62.9
72.5°	67.2	62.9	57.9	52.2	50.0
75°	50.8	47.2	44.3	42.2	46.5
77.5°	35.0	33.6	31.5	29.3	28.6
80°	22.9	22.2	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)