

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: P559564

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-81-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559564  
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-50-UNV-81-96-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

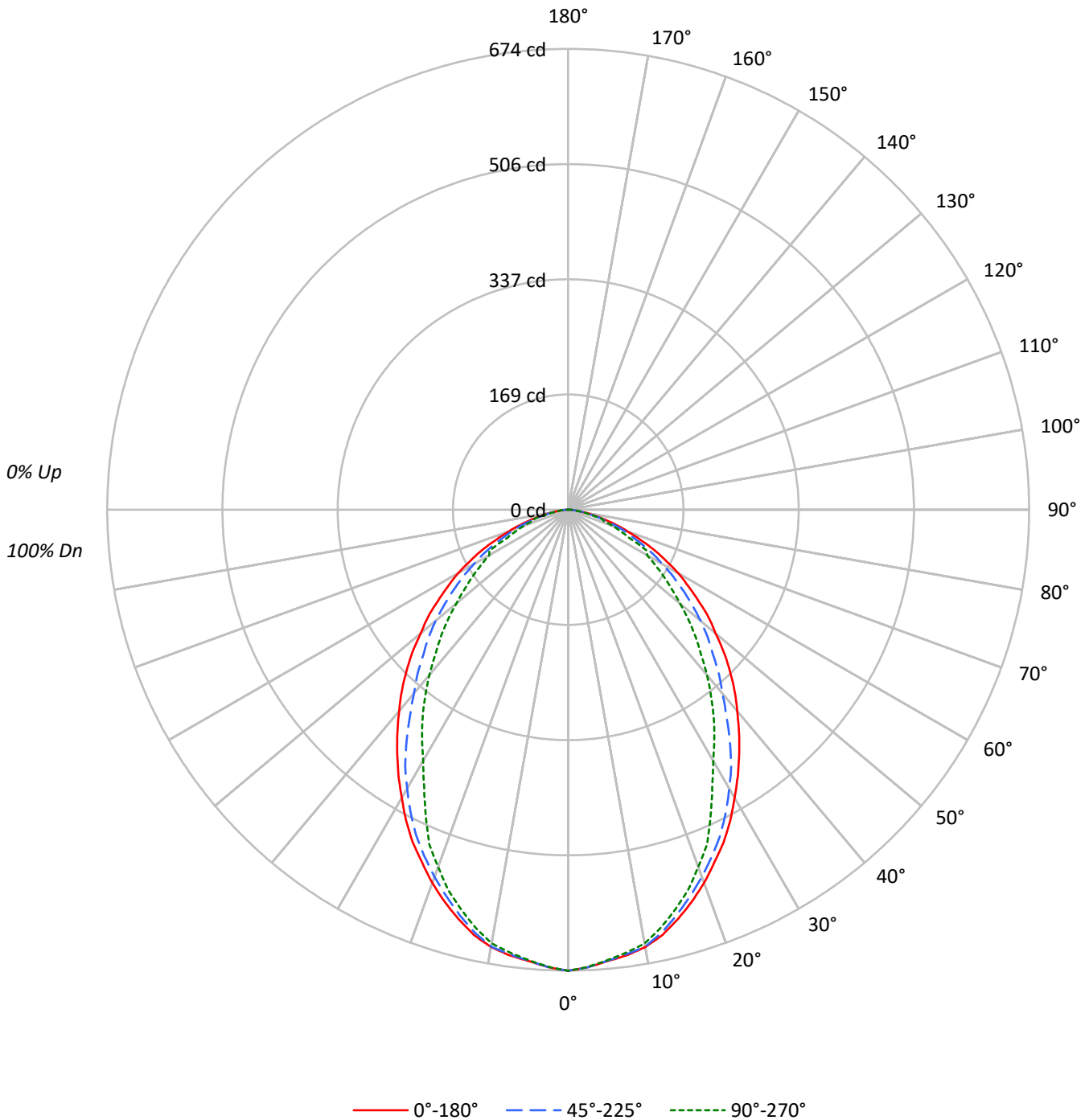
Lumens per Lamp: N/A  
Luminaire Lumens: 1324.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	7259	7259	7259
5°	7160	7153	7144
10°	7099	7090	7039
15°	6907	6838	6742
20°	6654	6546	6368
25°	6380	6241	5853
30°	6047	5853	5271
35°	5727	5410	4876
40°	5401	4931	4437
45°	5092	4558	4011
50°	4714	4230	3577
55°	4359	3834	3205
60°	3996	3425	2870
65°	3515	2998	2542
70°	2895	2625	2159
75°	2304	2009	2109
80°	1543	1450	1351
85°	963	1161	1346

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5092 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.8	4.7
10°-20°	172.3	13.0
20°-30°	238.5	18.0
30°-40°	254.3	19.2
40°-50°	232.0	17.5
50°-60°	181.8	13.7
60°-70°	118.5	8.9
70°-80°	52.5	4.0
80°-90°	11.3	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°	473.6	35.8
0°-40°	727.9	55.0
0°-60°	1141.8	86.2
0°-90°	1324.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1324.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	674	674	674	674	674	
5°	663	662	662	661	661	63
15°	620	620	614	607	605	174
25°	537	534	526	507	493	247
35°	436	433	412	380	371	272
45°	334	328	299	274	264	258
55°	232	225	204	180	171	208
65°	138	130	118	120	100	136
75°	55	52	48	46	51	59
85°	8	9	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	674.4	674.4	674.4	674.4	674.4
2.5°	669.7	669.7	669.7	669.0	669.0
5°	662.7	662.0	662.0	661.2	661.2
7.5°	657.3	656.5	655.7	654.9	653.4
10°	649.5	649.5	648.7	644.8	644.0
12.5°	637.0	636.2	633.1	627.6	626.1
15°	619.8	619.8	613.6	607.4	605.0
17.5°	601.1	600.4	592.6	586.3	583.2
20°	580.9	579.3	571.5	561.4	555.9
22.5°	558.3	558.3	548.9	535.6	530.2
25°	537.2	534.1	525.5	506.8	492.8
27.5°	513.0	508.4	499.0	472.5	456.1
30°	486.5	484.2	470.9	436.6	424.1
32.5°	461.6	457.7	443.6	407.8	397.6
35°	435.8	432.7	411.7	380.5	371.1
37.5°	410.1	406.2	379.7	354.8	343.1
40°	384.4	379.7	350.9	328.2	315.8
42.5°	360.2	354.0	325.9	301.7	287.7
45°	334.5	327.5	299.4	274.4	263.5
47.5°	308.8	302.5	276.8	251.1	238.6
50°	281.5	276.0	252.6	226.9	213.6
52.5°	258.9	250.3	227.7	201.9	191.0
55°	232.3	225.3	204.3	180.1	170.8
57.5°	208.2	201.2	181.7	159.1	151.3
60°	185.6	175.4	159.1	139.6	133.3
62.5°	160.6	152.8	138.8	122.4	130.2
65°	138.0	130.2	117.7	120.1	99.8
67.5°	113.1	109.2	98.2	87.3	84.2
70°	92.0	87.3	83.4	71.7	68.6
72.5°	73.3	68.6	63.2	56.9	54.6
75°	55.4	51.5	48.3	46.0	50.7
77.5°	38.2	36.6	34.3	32.0	31.2
80°	24.9	24.2	23.4	22.6	21.8
82.5°	14.8	14.8	14.8	14.8	14.8
85°	7.8	8.6	9.4	10.1	10.9
87.5°	4.7	4.7	5.5	6.2	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)