

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: P559178

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-81-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559178  
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-LD4-2HI-50-UNV-81-94-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

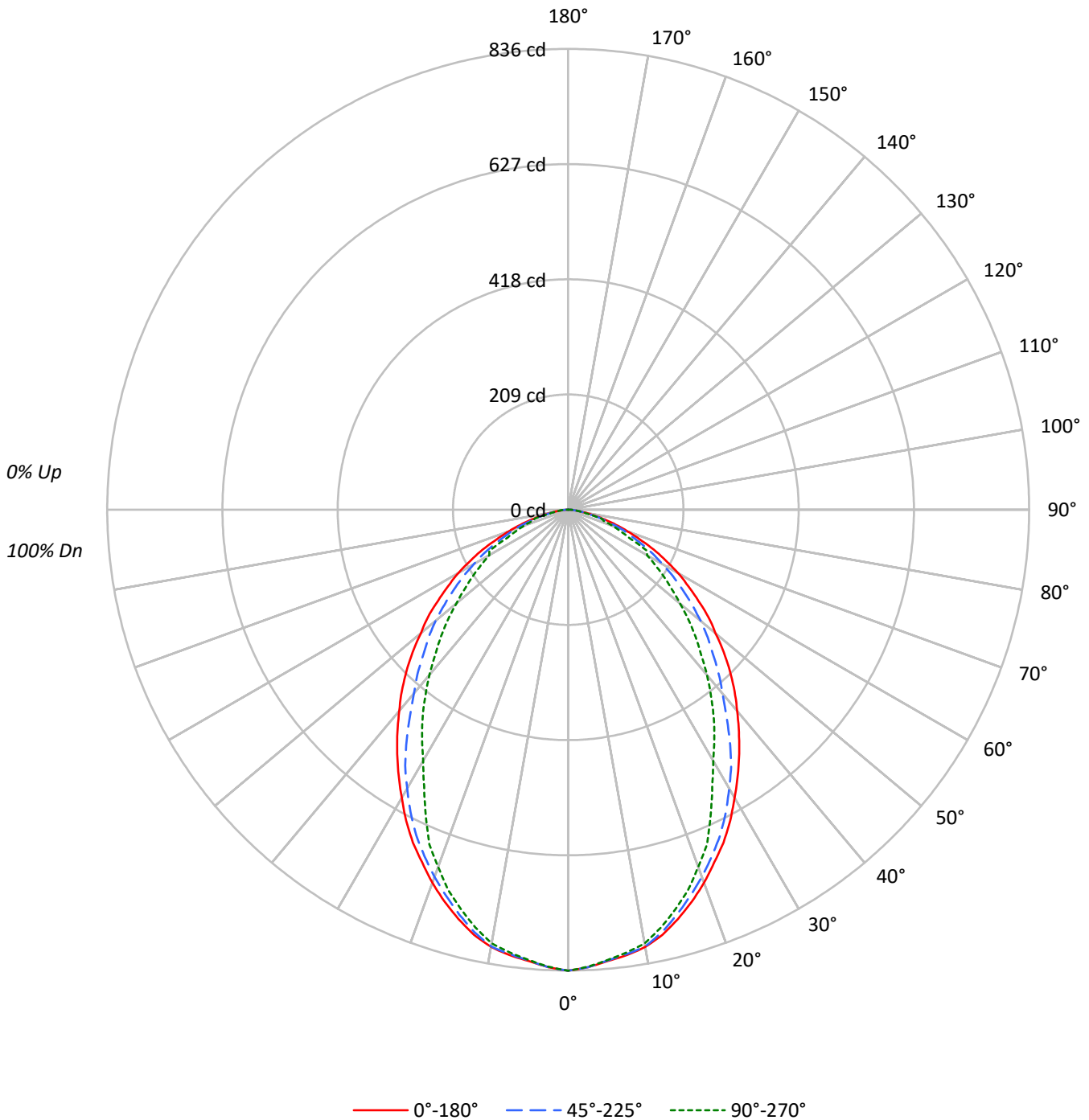
Lumens per Lamp: N/A  
Luminaire Lumens: 1642.0 lumens  
Efficiency: N/A  
Efficacy: 76.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	9003	9003	9003
5°	8881	8870	8860
10°	8804	8793	8730
15°	8566	8480	8362
20°	8252	8119	7897
25°	7912	7740	7258
30°	7500	7259	6538
35°	7102	6709	6048
40°	6698	6114	5502
45°	6314	5652	4975
50°	5846	5246	4436
55°	5408	4754	3975
60°	4954	4247	3559
65°	4360	3719	3153
70°	3591	3257	2678
75°	2857	2495	2616
80°	1915	1798	1680
85°	1198	1433	1667

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6314 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.9	4.7
10°-20°	213.7	13.0
20°-30°	295.8	18.0
30°-40°	315.4	19.2
40°-50°	287.8	17.5
50°-60°	225.4	13.7
60°-70°	146.9	8.9
70°-80°	65.1	4.0
80°-90°	14.0	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°	587.4	35.8
0°-40°	902.8	55.0
0°-60°	1416.0	86.2
0°-90°	1642.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1642.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	836	836	836	836	836	
5°	822	821	821	820	820	78
15°	769	769	761	753	750	216
25°	666	662	652	628	611	306
35°	540	537	511	472	460	338
45°	415	406	371	340	327	320
55°	288	279	253	223	212	258
65°	171	162	146	149	124	169
75°	69	64	60	57	63	74
85°	10	11	12	13	14	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	836.4	836.4	836.4	836.4	836.4
2.5°	830.6	830.6	830.6	829.6	829.6
5°	821.9	820.9	820.9	820.0	820.0
7.5°	815.1	814.2	813.2	812.2	810.3
10°	805.5	805.5	804.5	799.7	798.7
12.5°	790.0	789.0	785.2	778.4	776.5
15°	768.7	768.7	761.0	753.3	750.4
17.5°	745.5	744.6	734.9	727.1	723.3
20°	720.4	718.4	708.8	696.2	689.4
22.5°	692.3	692.3	680.7	664.3	657.5
25°	666.2	662.4	651.7	628.5	611.1
27.5°	636.3	630.5	618.8	586.0	565.7
30°	603.4	600.5	584.0	541.5	526.0
32.5°	572.4	567.6	550.2	505.7	493.1
35°	540.5	536.7	510.6	471.9	460.3
37.5°	508.6	503.8	470.9	440.0	425.5
40°	476.7	470.9	435.1	407.1	391.6
42.5°	446.7	439.0	404.2	374.2	356.8
45°	414.8	406.1	371.3	340.4	326.8
47.5°	382.9	375.2	343.3	311.4	295.9
50°	349.1	342.3	313.3	281.4	264.9
52.5°	321.0	310.4	282.3	250.4	236.9
55°	288.2	279.4	253.3	223.4	211.8
57.5°	258.2	249.5	225.3	197.3	187.6
60°	230.1	217.6	197.3	173.1	165.3
62.5°	199.2	189.5	172.1	151.8	161.5
65°	171.2	161.5	146.0	148.9	123.8
67.5°	140.2	135.4	121.8	108.3	104.4
70°	114.1	108.3	103.5	89.0	85.1
72.5°	90.9	85.1	78.3	70.6	67.7
75°	68.7	63.8	60.0	57.1	62.9
77.5°	47.4	45.4	42.5	39.6	38.7
80°	30.9	30.0	29.0	28.0	27.1
82.5°	18.4	18.4	18.4	18.4	18.4
85°	9.7	10.6	11.6	12.6	13.5
87.5°	5.8	5.8	6.8	7.7	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)