

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: P559772

Luminaire Tested: FSR-12-2-LD4-1HI-50-UNV-82-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559772  
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-LD4-1HI-50-UNV-82-96-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

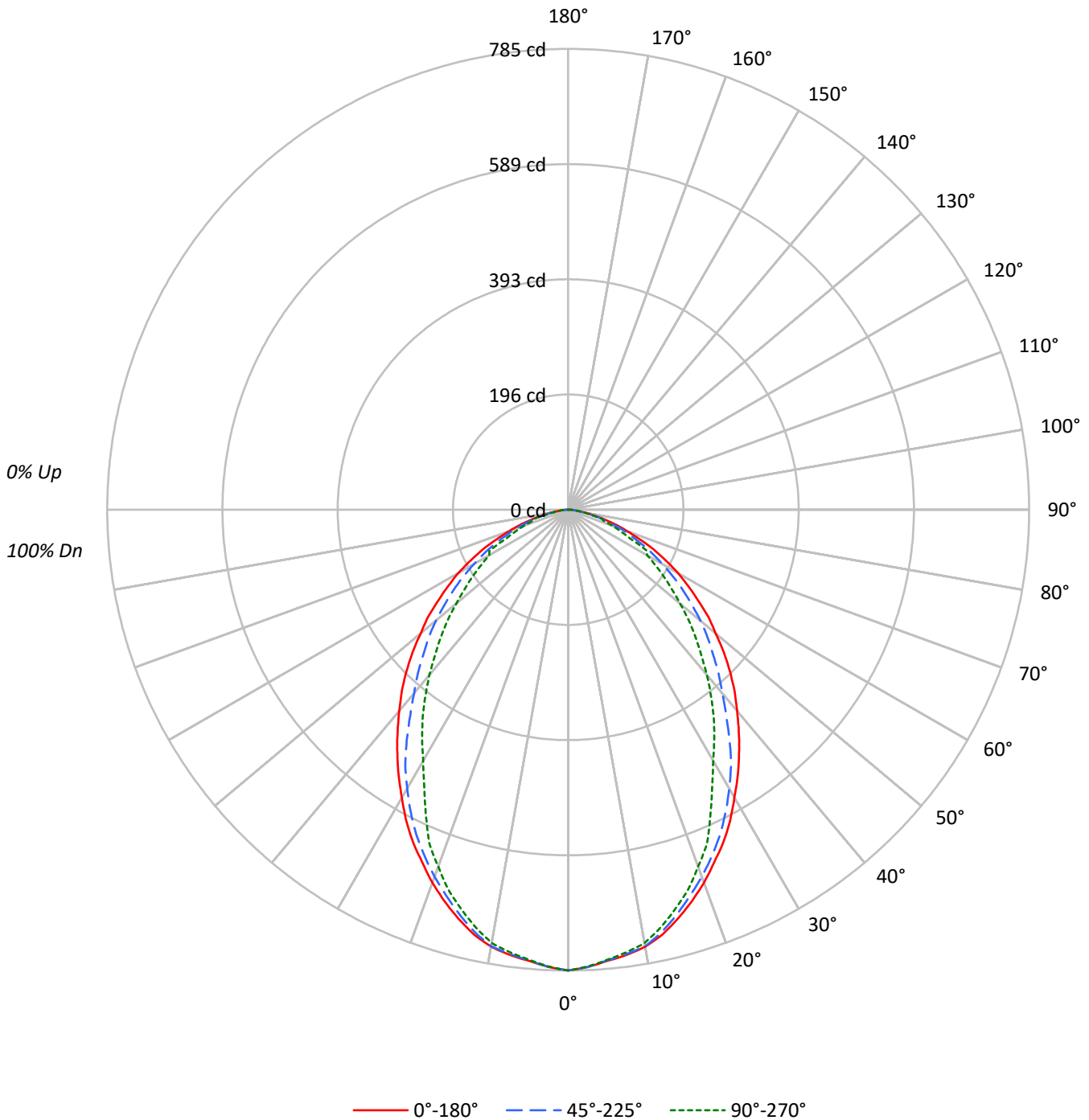
Lumens per Lamp: N/A  
Luminaire Lumens: 1541.0 lumens  
Efficiency: N/A  
Efficacy: 71.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4225	4225	4225
5°	4168	4162	4157
10°	4131	4126	4097
15°	4020	3979	3924
20°	3872	3810	3706
25°	3713	3632	3406
30°	3519	3406	3068
35°	3333	3148	2838
40°	3143	2869	2582
45°	2963	2653	2334
50°	2743	2462	2081
55°	2537	2231	1864
60°	2325	1992	1671
65°	2045	1745	1480
70°	1685	1528	1257
75°	1339	1171	1227
80°	899	843	787
85°	562	673	784

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2963 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.1	4.7
10°-20°	200.5	13.0
20°-30°	277.6	18.0
30°-40°	296.0	19.2
40°-50°	270.1	17.5
50°-60°	211.6	13.7
60°-70°	137.9	8.9
70°-80°	61.1	4.0
80°-90°	13.1	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°	551.2	35.8
0°-40°	847.3	55.0
0°-60°	1328.9	86.2
0°-90°	1541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1541.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	785	785	785	785	785	
5°	771	770	770	770	770	73
15°	721	721	714	707	704	203
25°	625	622	612	590	574	287
35°	507	504	479	443	432	317
45°	389	381	348	319	307	300
55°	270	262	238	210	199	243
65°	161	152	137	140	116	158
75°	64	60	56	54	59	69
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	785.0	785.0	785.0	785.0	785.0
2.5°	779.5	779.5	779.5	778.6	778.6
5°	771.4	770.4	770.4	769.5	769.5
7.5°	765.0	764.1	763.2	762.3	760.5
10°	755.9	755.9	755.0	750.5	749.6
12.5°	741.4	740.5	736.9	730.5	728.7
15°	721.4	721.4	714.2	706.9	704.2
17.5°	699.7	698.8	689.7	682.4	678.8
20°	676.1	674.3	665.2	653.4	647.0
22.5°	649.8	649.8	638.9	623.4	617.1
25°	625.2	621.6	611.6	589.9	573.5
27.5°	597.1	591.7	580.8	549.9	530.9
30°	566.3	563.5	548.1	508.2	493.7
32.5°	537.2	532.7	516.4	474.6	462.8
35°	507.3	503.6	479.1	442.8	432.0
37.5°	477.3	472.8	441.9	412.9	399.3
40°	447.4	441.9	408.4	382.0	367.5
42.5°	419.3	412.0	379.3	351.2	334.9
45°	389.3	381.1	348.5	319.4	306.7
47.5°	359.4	352.1	322.2	292.2	277.7
50°	327.6	321.2	294.0	264.1	248.6
52.5°	301.3	291.3	265.0	235.0	222.3
55°	270.4	262.3	237.8	209.6	198.7
57.5°	242.3	234.1	211.4	185.1	176.0
60°	216.0	204.2	185.1	162.4	155.2
62.5°	186.9	177.9	161.5	142.5	151.5
65°	160.6	151.5	137.0	139.8	116.2
67.5°	131.6	127.0	114.3	101.6	98.0
70°	107.1	101.6	97.1	83.5	79.9
72.5°	85.3	79.9	73.5	66.2	63.5
75°	64.4	59.9	56.3	53.5	59.0
77.5°	44.5	42.7	39.9	37.2	36.3
80°	29.0	28.1	27.2	26.3	25.4
82.5°	17.2	17.2	17.2	17.2	17.2
85°	9.1	10.0	10.9	11.8	12.7
87.5°	5.4	5.4	6.4	7.3	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)