

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: P560141

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560141  
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-50-UNV-81-96-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

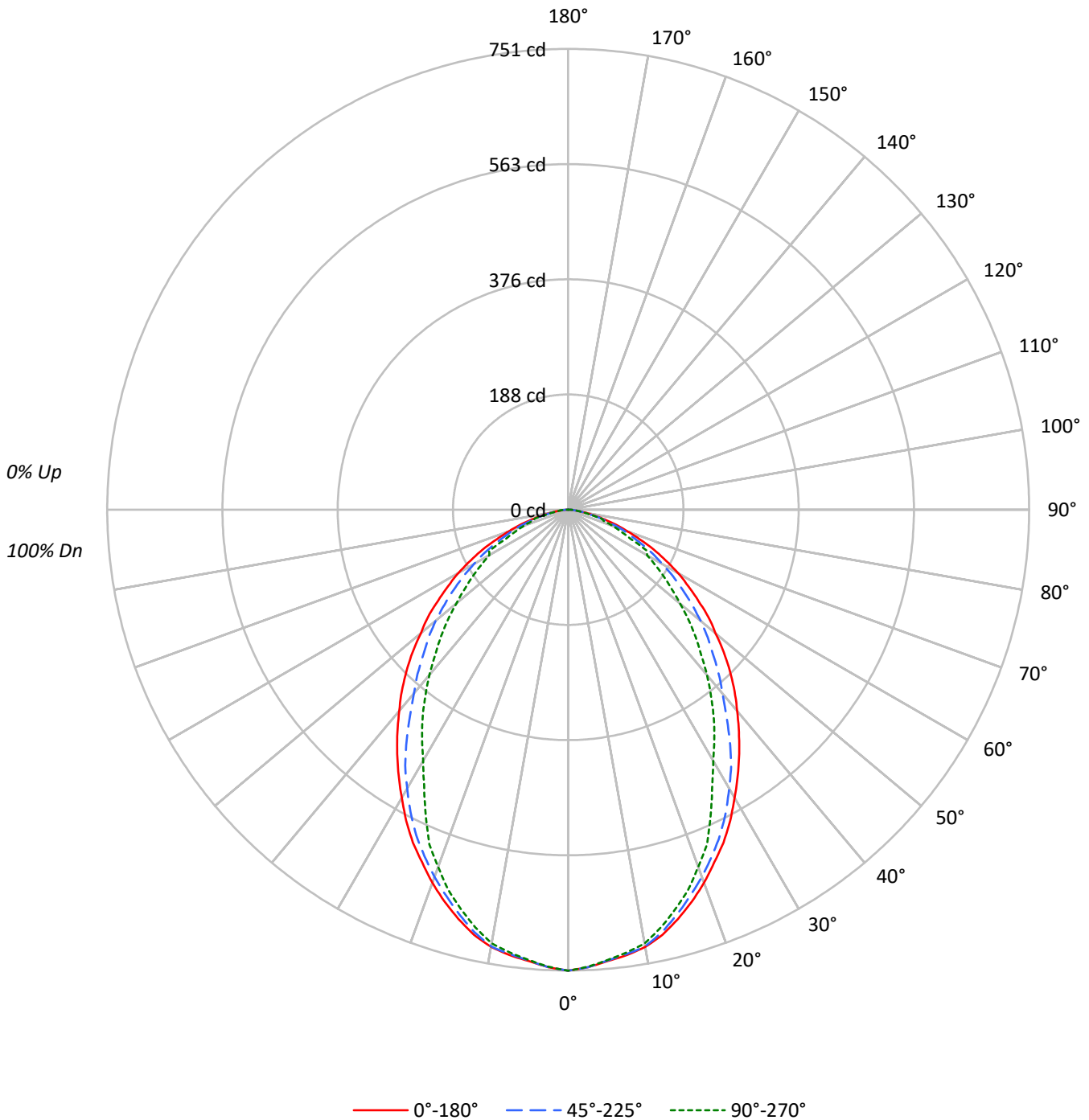
Lumens per Lamp: N/A  
Luminaire Lumens: 1475.0 lumens  
Efficiency: N/A  
Efficacy: 88.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4043	4043	4043
5°	3989	3984	3979
10°	3954	3950	3921
15°	3847	3809	3755
20°	3706	3647	3547
25°	3554	3476	3260
30°	3368	3260	2936
35°	3190	3013	2717
40°	3008	2746	2472
45°	2836	2538	2235
50°	2626	2356	1993
55°	2428	2136	1785
60°	2225	1907	1598
65°	1957	1671	1416
70°	1613	1462	1202
75°	1283	1121	1175
80°	862	809	753
85°	537	642	753

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2836 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.9	4.7
10°-20°	191.9	13.0
20°-30°	265.7	18.0
30°-40°	283.3	19.2
40°-50°	258.5	17.5
50°-60°	202.5	13.7
60°-70°	132.0	8.9
70°-80°	58.5	4.0
80°-90°	12.6	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°	527.6	35.8
0°-40°	811.0	55.0
0°-60°	1272.0	86.2
0°-90°	1475.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1475.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	751	751	751	751	751	
5°	738	737	737	737	737	70
15°	690	690	684	677	674	194
25°	598	595	585	565	549	275
35°	486	482	459	424	414	304
45°	373	365	334	306	294	287
55°	259	251	228	201	190	232
65°	154	145	131	134	111	151
75°	62	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	751.3	751.3	751.3	751.3	751.3
2.5°	746.1	746.1	746.1	745.3	745.3
5°	738.3	737.4	737.4	736.6	736.6
7.5°	732.2	731.4	730.5	729.6	727.9
10°	723.5	723.5	722.7	718.3	717.5
12.5°	709.7	708.8	705.3	699.2	697.5
15°	690.5	690.5	683.6	676.6	674.0
17.5°	669.7	668.8	660.1	653.2	649.7
20°	647.1	645.4	636.7	625.4	619.3
22.5°	621.9	621.9	611.5	596.7	590.7
25°	598.5	595.0	585.4	564.6	549.0
27.5°	571.5	566.3	555.9	526.4	508.1
30°	542.0	539.4	524.6	486.4	472.5
32.5°	514.2	509.9	494.2	454.3	443.0
35°	485.6	482.1	458.6	423.9	413.5
37.5°	456.9	452.5	423.0	395.2	382.2
40°	428.2	423.0	390.9	365.7	351.8
42.5°	401.3	394.3	363.1	336.2	320.5
45°	372.6	364.8	333.5	305.7	293.6
47.5°	344.0	337.0	308.4	279.7	265.8
50°	313.6	307.5	281.4	252.8	238.0
52.5°	288.4	278.8	253.6	225.0	212.8
55°	258.8	251.0	227.6	200.6	190.2
57.5°	231.9	224.1	202.4	177.2	168.5
60°	206.7	195.4	177.2	155.5	148.5
62.5°	178.9	170.2	154.6	136.4	145.1
65°	153.7	145.1	131.2	133.8	111.2
67.5°	125.9	121.6	109.4	97.3	93.8
70°	102.5	97.3	92.9	79.9	76.4
72.5°	81.6	76.4	70.4	63.4	60.8
75°	61.7	57.3	53.9	51.2	56.5
77.5°	42.6	40.8	38.2	35.6	34.7
80°	27.8	26.9	26.1	25.2	24.3
82.5°	16.5	16.5	16.5	16.5	16.5
85°	8.7	9.6	10.4	11.3	12.2
87.5°	5.2	5.2	6.1	6.9	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)