

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: P558817

Luminaire Tested: FSR-12-1-LD4-1LO-50-UNV-93-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558817  
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-LD4-1LO-50-UNV-93-84-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

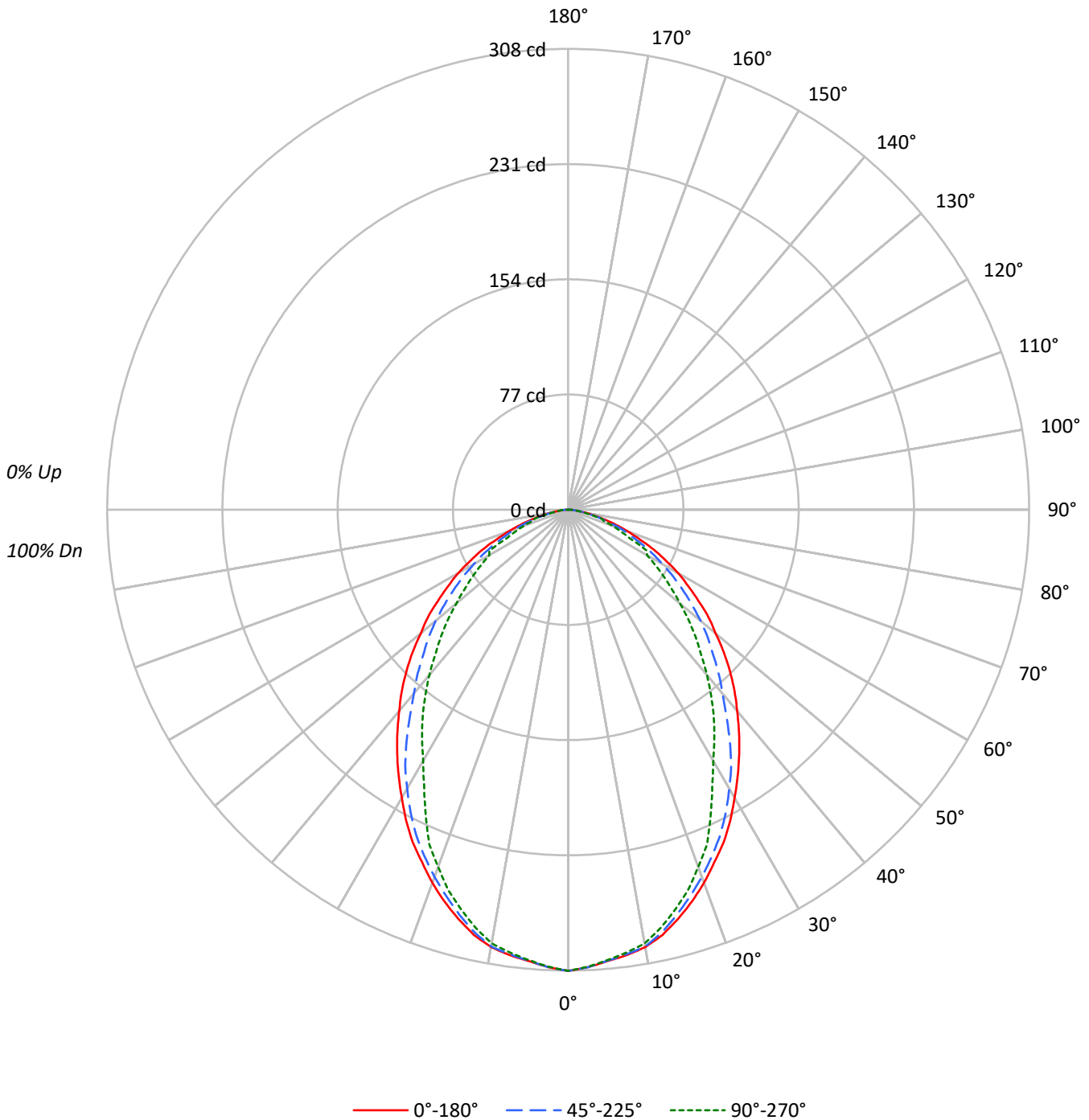
Lumens per Lamp: N/A  
Luminaire Lumens: 605.0 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3317	3317	3317
5°	3272	3269	3264
10°	3244	3240	3217
15°	3156	3125	3081
20°	3040	2992	2909
25°	2916	2852	2675
30°	2763	2675	2409
35°	2618	2472	2229
40°	2467	2252	2028
45°	2326	2082	1833
50°	2153	1932	1634
55°	1993	1751	1464
60°	1826	1565	1311
65°	1607	1370	1161
70°	1322	1199	988
75°	1052	919	965
80°	707	663	620
85°	445	531	618

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2326 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.7	4.7
10°-20°	78.7	13.0
20°-30°	109.0	18.0
30°-40°	116.2	19.2
40°-50°	106.0	17.5
50°-60°	83.1	13.7
60°-70°	54.1	8.9
70°-80°	24.0	4.0
80°-90°	5.2	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°	216.4	35.8
0°-40°	332.6	55.0
0°-60°	521.7	86.2
0°-90°	605.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	605.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	308	308	308	308	308	
5°	303	302	302	302	302	29
15°	283	283	280	278	276	80
25°	246	244	240	232	225	113
35°	199	198	188	174	170	125
45°	153	150	137	125	120	118
55°	106	103	93	82	78	95
65°	63	60	54	55	46	62
75°	25	24	22	21	23	27
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	308.2	308.2	308.2	308.2	308.2
2.5°	306.0	306.0	306.0	305.7	305.7
5°	302.8	302.5	302.5	302.1	302.1
7.5°	300.3	300.0	299.6	299.3	298.6
10°	296.8	296.8	296.4	294.6	294.3
12.5°	291.1	290.7	289.3	286.8	286.1
15°	283.2	283.2	280.4	277.5	276.5
17.5°	274.7	274.3	270.8	267.9	266.5
20°	265.4	264.7	261.2	256.5	254.0
22.5°	255.1	255.1	250.8	244.8	242.3
25°	245.5	244.0	240.1	231.6	225.2
27.5°	234.4	232.3	228.0	215.9	208.4
30°	222.3	221.2	215.2	199.5	193.8
32.5°	210.9	209.1	202.7	186.3	181.7
35°	199.2	197.7	188.1	173.9	169.6
37.5°	187.4	185.6	173.5	162.1	156.8
40°	175.6	173.5	160.3	150.0	144.3
42.5°	164.6	161.7	148.9	137.9	131.5
45°	152.8	149.6	136.8	125.4	120.4
47.5°	141.1	138.2	126.5	114.7	109.0
50°	128.6	126.1	115.4	103.7	97.6
52.5°	118.3	114.4	104.0	92.3	87.3
55°	106.2	103.0	93.3	82.3	78.0
57.5°	95.1	91.9	83.0	72.7	69.1
60°	84.8	80.2	72.7	63.8	60.9
62.5°	73.4	69.8	63.4	55.9	59.5
65°	63.1	59.5	53.8	54.9	45.6
67.5°	51.7	49.9	44.9	39.9	38.5
70°	42.0	39.9	38.1	32.8	31.4
72.5°	33.5	31.4	28.9	26.0	24.9
75°	25.3	23.5	22.1	21.0	23.2
77.5°	17.5	16.7	15.7	14.6	14.3
80°	11.4	11.0	10.7	10.3	10.0
82.5°	6.8	6.8	6.8	6.8	6.8
85°	3.6	3.9	4.3	4.6	5.0
87.5°	2.1	2.1	2.5	2.9	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)