

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: P558828

Luminaire Tested: FSR-12-1-LD4-1LO-50-UNV-93-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558828  
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-93-96-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

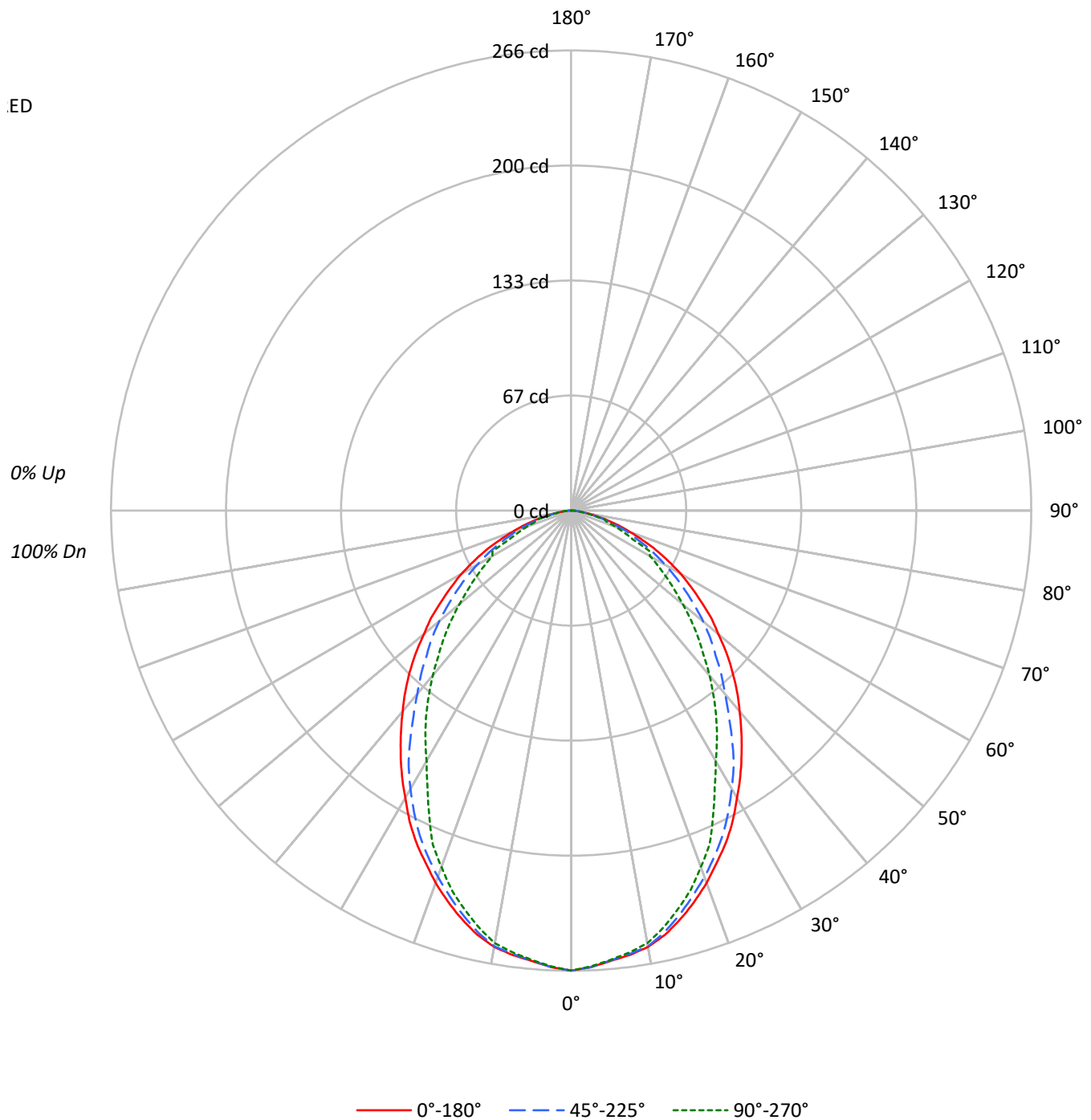
Lumens per Lamp: N/A  
Luminaire Lumens: 522.0 lumens  
Efficiency: N/A  
Efficacy: 90.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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	39	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°	2862	2862	2862
5°	2823	2820	2817
10°	2799	2796	2775
15°	2724	2696	2658
20°	2623	2581	2511
25°	2515	2461	2308
30°	2384	2308	2078
35°	2258	2133	1922
40°	2129	1943	1749
45°	2008	1796	1582
50°	1859	1668	1410
55°	1719	1511	1263
60°	1576	1350	1132
65°	1386	1182	1001
70°	1142	1035	853
75°	907	794	832
80°	607	570	533
85°	383	457	531

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2008 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.8	4.7
10°-20°	67.9	13.0
20°-30°	94.0	18.0
30°-40°	100.3	19.2
40°-50°	91.5	17.5
50°-60°	71.7	13.7
60°-70°	46.7	8.9
70°-80°	20.7	4.0
80°-90°	4.4	0.8
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°	186.7	35.8
0°-40°	287.0	55.0
0°-60°	450.1	86.2
0°-90°	522.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	522.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	266	266	266	266	266	
5°	261	261	261	261	261	25
15°	244	244	242	240	238	69
25°	212	211	207	200	194	97
35°	172	171	162	150	146	107
45°	132	129	118	108	104	102
55°	92	89	80	71	67	82
65°	54	51	46	47	39	54
75°	22	20	19	18	20	23
85°	3	3	4	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	265.9	265.9	265.9	265.9	265.9
2.5°	264.1	264.1	264.1	263.7	263.7
5°	261.3	261.0	261.0	260.7	260.7
7.5°	259.1	258.8	258.5	258.2	257.6
10°	256.1	256.1	255.8	254.2	253.9
12.5°	251.1	250.8	249.6	247.5	246.8
15°	244.4	244.4	241.9	239.5	238.5
17.5°	237.0	236.7	233.6	231.2	229.9
20°	229.0	228.4	225.3	221.3	219.2
22.5°	220.1	220.1	216.4	211.2	209.0
25°	211.8	210.6	207.2	199.8	194.3
27.5°	202.3	200.4	196.7	186.3	179.8
30°	191.8	190.9	185.7	172.1	167.2
32.5°	182.0	180.4	174.9	160.8	156.8
35°	171.8	170.6	162.3	150.0	146.3
37.5°	161.7	160.2	149.7	139.9	135.3
40°	151.5	149.7	138.3	129.4	124.5
42.5°	142.0	139.6	128.5	119.0	113.4
45°	131.9	129.1	118.0	108.2	103.9
47.5°	121.7	119.3	109.1	99.0	94.1
50°	111.0	108.8	99.6	89.5	84.2
52.5°	102.1	98.7	89.8	79.6	75.3
55°	91.6	88.8	80.5	71.0	67.3
57.5°	82.1	79.3	71.6	62.7	59.6
60°	73.2	69.2	62.7	55.0	52.6
62.5°	63.3	60.3	54.7	48.3	51.3
65°	54.4	51.3	46.4	47.3	39.3
67.5°	44.6	43.0	38.7	34.4	33.2
70°	36.3	34.4	32.9	28.3	27.1
72.5°	28.9	27.1	24.9	22.4	21.5
75°	21.8	20.3	19.1	18.1	20.0
77.5°	15.1	14.4	13.5	12.6	12.3
80°	9.8	9.5	9.2	8.9	8.6
82.5°	5.8	5.8	5.8	5.8	5.8
85°	3.1	3.4	3.7	4.0	4.3
87.5°	1.8	1.8	2.2	2.5	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)