

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: P558988

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-81-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558988  
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-LD4-1STD-50-UNV-81-96-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

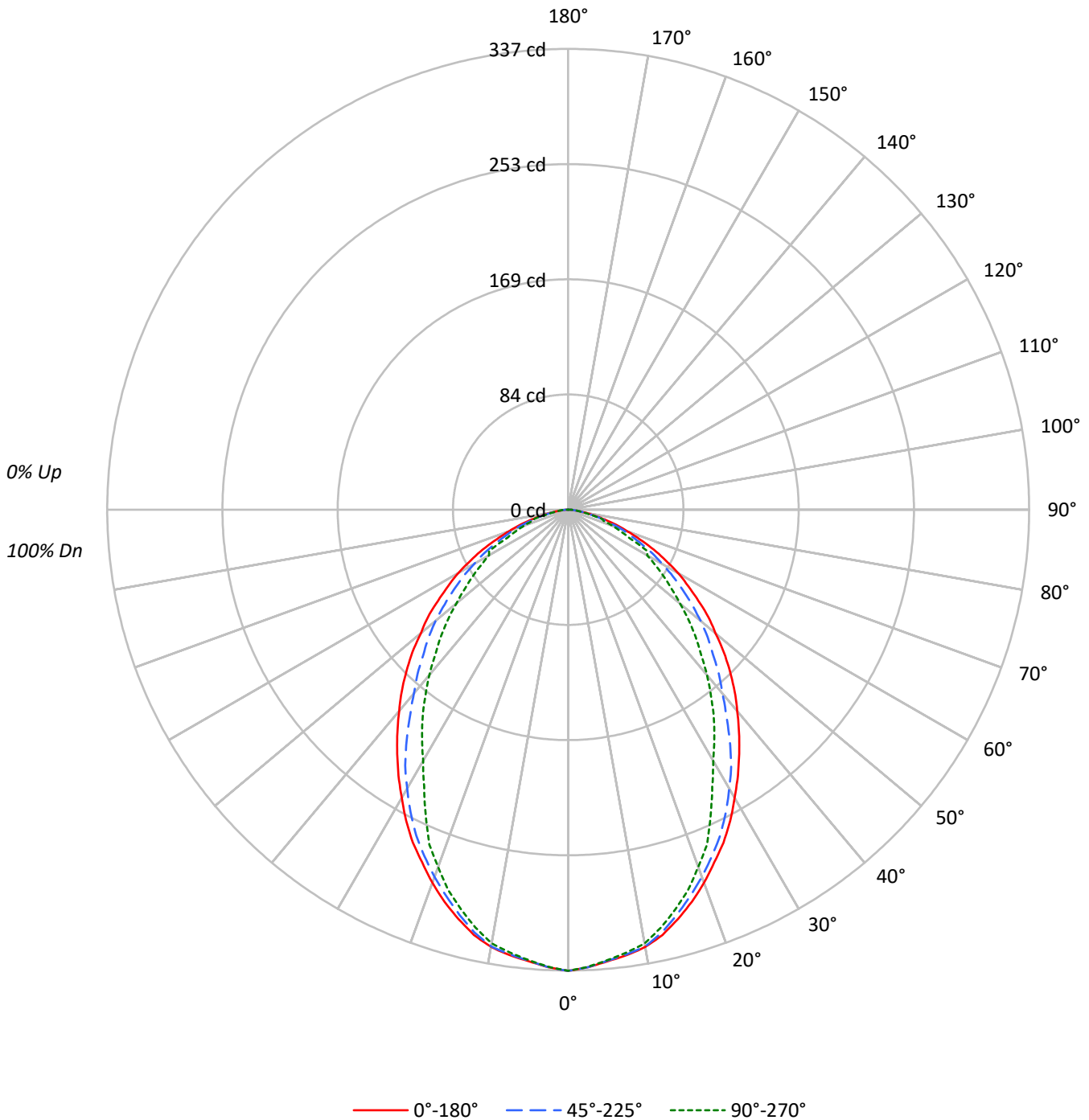
Lumens per Lamp: N/A  
Luminaire Lumens: 662.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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			
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°	3630	3630	3630
5°	3581	3576	3572
10°	3549	3545	3519
15°	3453	3419	3371
20°	3326	3274	3184
25°	3190	3121	2926
30°	3024	2927	2636
35°	2863	2704	2439
40°	2701	2465	2219
45°	2545	2279	2006
50°	2356	2115	1788
55°	2181	1916	1603
60°	1998	1711	1436
65°	1757	1500	1271
70°	1448	1312	1079
75°	1152	1006	1052
80°	775	725	676
85°	482	580	679

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2545 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.4	4.7
10°-20°	86.1	13.0
20°-30°	119.3	18.0
30°-40°	127.2	19.2
40°-50°	116.0	17.5
50°-60°	90.9	13.7
60°-70°	59.2	8.9
70°-80°	26.3	4.0
80°-90°	5.6	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°	236.8	35.8
0°-40°	364.0	55.0
0°-60°	570.9	86.2
0°-90°	662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	662.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	337	337	337	337	337	
5°	331	331	331	331	331	31
15°	310	310	307	304	302	87
25°	269	267	263	253	246	123
35°	218	216	206	190	186	136
45°	167	164	150	137	132	129
55°	116	113	102	90	85	104
65°	69	65	59	60	50	68
75°	28	26	24	23	25	30
85°	4	4	5	5	6	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	337.2	337.2	337.2	337.2	337.2
2.5°	334.9	334.9	334.9	334.5	334.5
5°	331.4	331.0	331.0	330.6	330.6
7.5°	328.6	328.2	327.9	327.5	326.7
10°	324.7	324.7	324.3	322.4	322.0
12.5°	318.5	318.1	316.6	313.8	313.0
15°	309.9	309.9	306.8	303.7	302.5
17.5°	300.6	300.2	296.3	293.2	291.6
20°	290.4	289.7	285.8	280.7	278.0
22.5°	279.1	279.1	274.4	267.8	265.1
25°	268.6	267.0	262.8	253.4	246.4
27.5°	256.5	254.2	249.5	236.2	228.1
30°	243.3	242.1	235.5	218.3	212.1
32.5°	230.8	228.8	221.8	203.9	198.8
35°	217.9	216.4	205.8	190.2	185.6
37.5°	205.1	203.1	189.9	177.4	171.5
40°	192.2	189.9	175.4	164.1	157.9
42.5°	180.1	177.0	163.0	150.9	143.9
45°	167.2	163.7	149.7	137.2	131.8
47.5°	154.4	151.3	138.4	125.5	119.3
50°	140.7	138.0	126.3	113.4	106.8
52.5°	129.4	125.1	113.8	101.0	95.5
55°	116.2	112.7	102.1	90.1	85.4
57.5°	104.1	100.6	90.8	79.5	75.6
60°	92.8	87.7	79.5	69.8	66.7
62.5°	80.3	76.4	69.4	61.2	65.1
65°	69.0	65.1	58.9	60.0	49.9
67.5°	56.5	54.6	49.1	43.7	42.1
70°	46.0	43.7	41.7	35.9	34.3
72.5°	36.6	34.3	31.6	28.5	27.3
75°	27.7	25.7	24.2	23.0	25.3
77.5°	19.1	18.3	17.2	16.0	15.6
80°	12.5	12.1	11.7	11.3	10.9
82.5°	7.4	7.4	7.4	7.4	7.4
85°	3.9	4.3	4.7	5.1	5.5
87.5°	2.3	2.3	2.7	3.1	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)