

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: P558880

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-93-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558880  
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-35-UNV-93-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

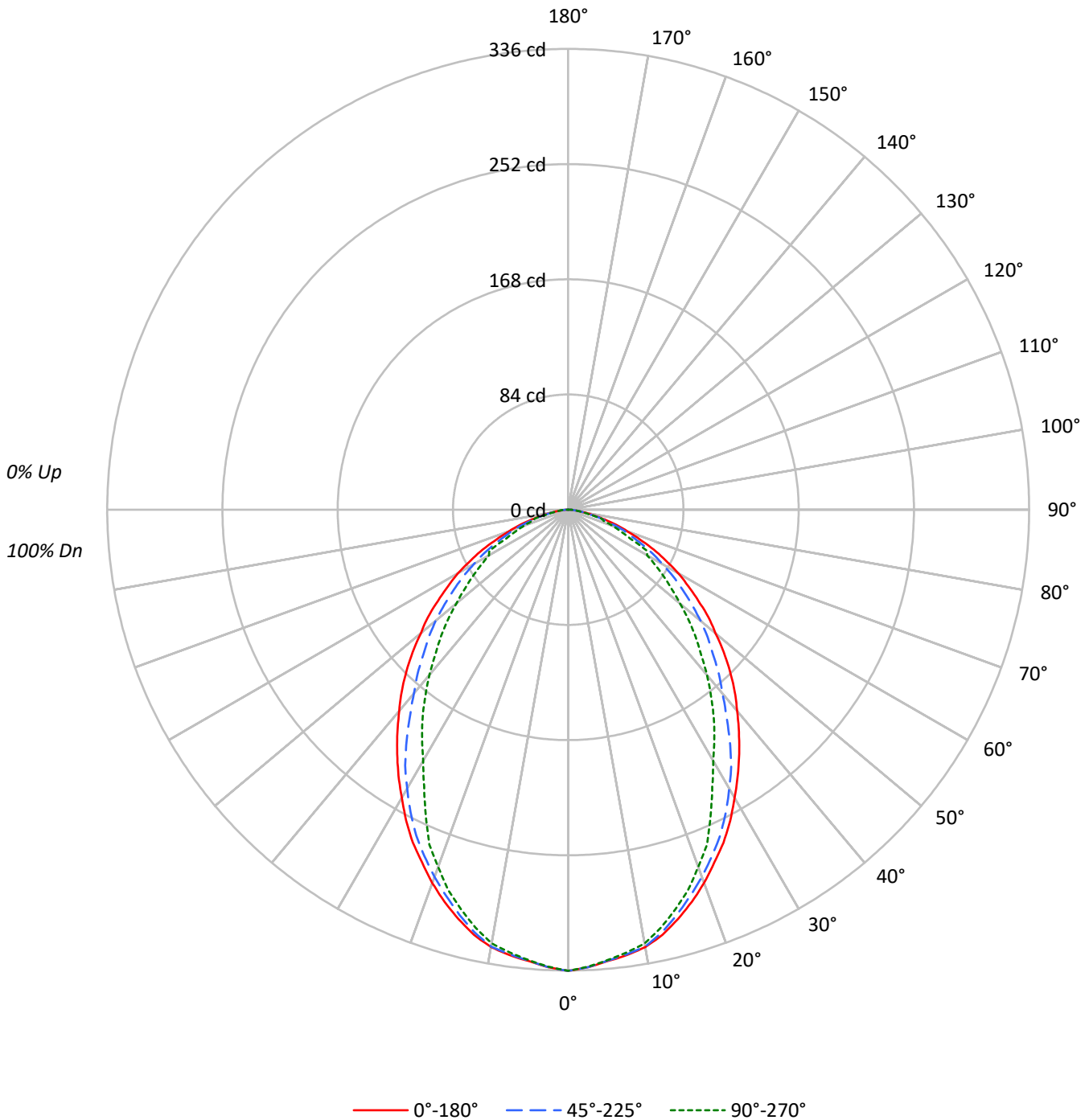
Lumens per Lamp: N/A  
Luminaire Lumens: 660.0 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3619	3619	3619
5°	3570	3566	3561
10°	3539	3535	3509
15°	3443	3409	3361
20°	3317	3263	3174
25°	3181	3112	2917
30°	3014	2918	2628
35°	2855	2696	2431
40°	2692	2458	2212
45°	2538	2271	2000
50°	2349	2108	1783
55°	2173	1910	1597
60°	1991	1707	1432
65°	1752	1495	1266
70°	1445	1309	1076
75°	1148	1002	1052
80°	769	725	676
85°	482	580	667

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2538 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.3	4.7
10°-20°	85.9	13.0
20°-30°	118.9	18.0
30°-40°	126.8	19.2
40°-50°	115.7	17.5
50°-60°	90.6	13.7
60°-70°	59.1	8.9
70°-80°	26.2	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°	236.1	35.8
0°-40°	362.9	55.0
0°-60°	569.2	86.2
0°-90°	660.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	660.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	336	336	336	336	336	
5°	330	330	330	330	330	31
15°	309	309	306	303	302	87
25°	268	266	262	253	246	123
35°	217	216	205	190	185	136
45°	167	163	149	137	131	128
55°	116	112	102	90	85	104
65°	69	65	59	60	50	68
75°	28	26	24	23	25	30
85°	4	4	5	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	336.2	336.2	336.2	336.2	336.2
2.5°	333.9	333.9	333.9	333.5	333.5
5°	330.4	330.0	330.0	329.6	329.6
7.5°	327.6	327.3	326.9	326.5	325.7
10°	323.8	323.8	323.4	321.4	321.0
12.5°	317.5	317.2	315.6	312.9	312.1
15°	309.0	309.0	305.9	302.8	301.6
17.5°	299.7	299.3	295.4	292.3	290.7
20°	289.6	288.8	284.9	279.8	277.1
22.5°	278.3	278.3	273.6	267.0	264.3
25°	267.8	266.2	262.0	252.6	245.6
27.5°	255.7	253.4	248.7	235.5	227.4
30°	242.5	241.4	234.8	217.7	211.4
32.5°	230.1	228.1	221.2	203.3	198.2
35°	217.3	215.7	205.2	189.7	185.0
37.5°	204.4	202.5	189.3	176.8	171.0
40°	191.6	189.3	174.9	163.6	157.4
42.5°	179.6	176.5	162.5	150.4	143.4
45°	166.7	163.2	149.2	136.8	131.4
47.5°	153.9	150.8	138.0	125.2	118.9
50°	140.3	137.6	125.9	113.1	106.5
52.5°	129.0	124.8	113.5	100.7	95.2
55°	115.8	112.3	101.8	89.8	85.1
57.5°	103.8	100.3	90.6	79.3	75.4
60°	92.5	87.4	79.3	69.6	66.5
62.5°	80.1	76.2	69.2	61.0	64.9
65°	68.8	64.9	58.7	59.9	49.7
67.5°	56.4	54.4	49.0	43.5	42.0
70°	45.9	43.5	41.6	35.8	34.2
72.5°	36.5	34.2	31.5	28.4	27.2
75°	27.6	25.7	24.1	22.9	25.3
77.5°	19.0	18.3	17.1	15.9	15.5
80°	12.4	12.0	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	5.4
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)