

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: P558668

Luminaire Tested: FSR-12-1-LD4-1LO-35-UNV-81-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558668  
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-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

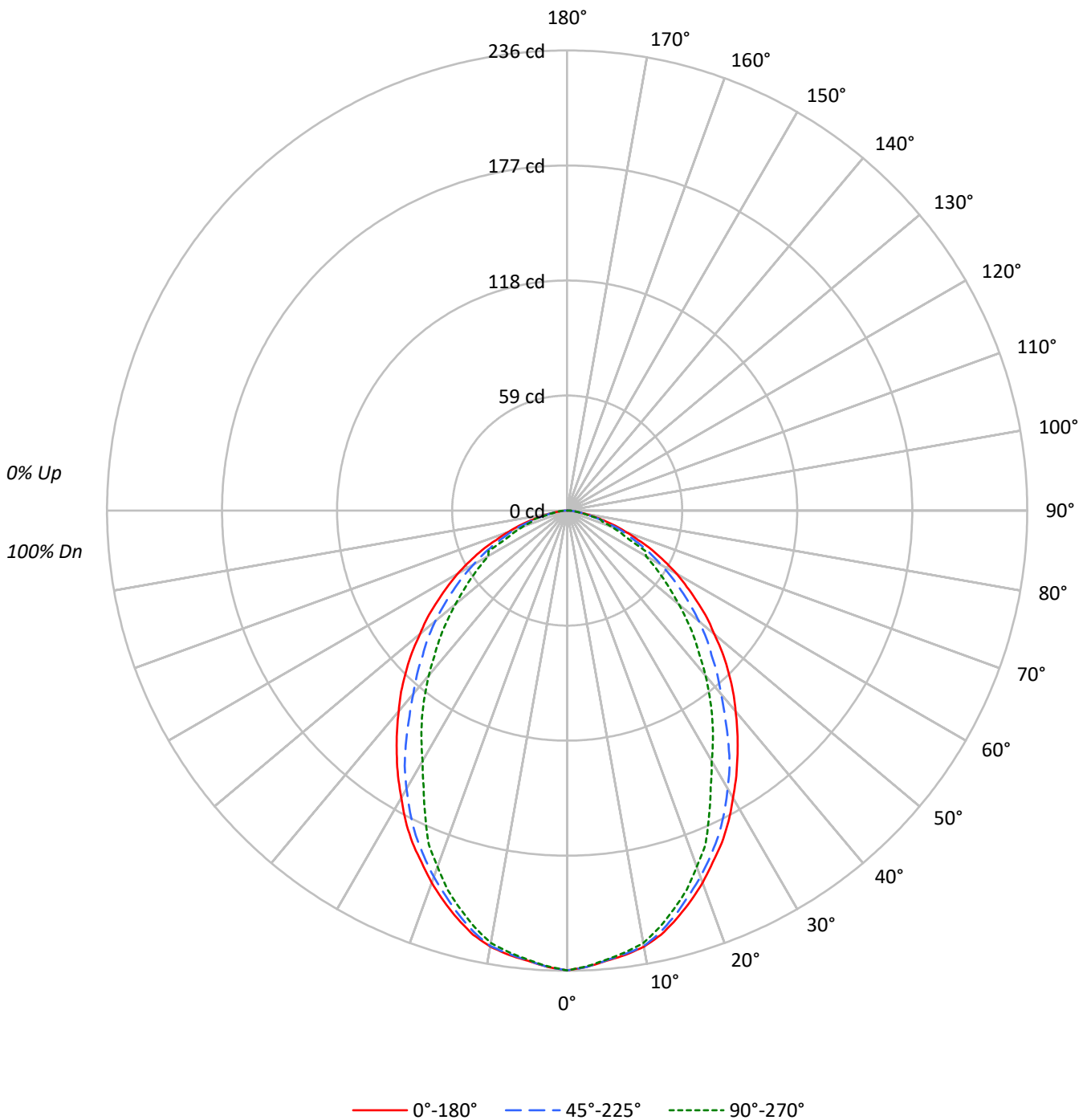
Lumens per Lamp: N/A  
Luminaire Lumens: 463.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

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

	0°	45°	90°
0°	2538	2538	2538
5°	2505	2501	2498
10°	2482	2479	2461
15°	2416	2391	2358
20°	2326	2290	2227
25°	2232	2183	2046
30°	2114	2047	1843
35°	2003	1892	1706
40°	1888	1724	1551
45°	1781	1594	1404
50°	1648	1479	1251
55°	1526	1340	1120
60°	1397	1197	1003
65°	1230	1049	889
70°	1013	919	755
75°	807	703	736
80°	539	508	471
85°	333	408	469

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1781 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.0	4.7
10°-20°	60.3	13.0
20°-30°	83.4	18.0
30°-40°	88.9	19.2
40°-50°	81.1	17.5
50°-60°	63.6	13.7
60°-70°	41.4	8.9
70°-80°	18.4	4.0
80°-90°	3.9	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°	165.6	35.8
0°-40°	254.6	55.0
0°-60°	399.3	86.2
0°-90°	463.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	463.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	236	236	236	236	236	
5°	232	232	232	231	231	22
15°	217	217	215	212	212	61
25°	188	187	184	177	172	86
35°	152	151	144	133	130	95
45°	117	114	105	96	92	90
55°	81	79	71	63	60	73
65°	48	46	41	42	35	48
75°	19	18	17	16	18	21
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	235.8	235.8	235.8	235.8	235.8
2.5°	234.2	234.2	234.2	233.9	233.9
5°	231.8	231.5	231.5	231.2	231.2
7.5°	229.8	229.6	229.3	229.0	228.5
10°	227.1	227.1	226.8	225.5	225.2
12.5°	222.8	222.5	221.4	219.5	218.9
15°	216.8	216.8	214.6	212.4	211.6
17.5°	210.2	209.9	207.2	205.0	203.9
20°	203.1	202.6	199.9	196.3	194.4
22.5°	195.2	195.2	191.9	187.3	185.4
25°	187.9	186.8	183.8	177.2	172.3
27.5°	179.4	177.8	174.5	165.2	159.5
30°	170.1	169.3	164.7	152.7	148.3
32.5°	161.4	160.0	155.1	142.6	139.1
35°	152.4	151.3	144.0	133.1	129.8
37.5°	143.4	142.1	132.8	124.1	120.0
40°	134.4	132.8	122.7	114.8	110.4
42.5°	126.0	123.8	114.0	105.5	100.6
45°	117.0	114.5	104.7	96.0	92.2
47.5°	108.0	105.8	96.8	87.8	83.4
50°	98.4	96.5	88.3	79.3	74.7
52.5°	90.5	87.5	79.6	70.6	66.8
55°	81.3	78.8	71.4	63.0	59.7
57.5°	72.8	70.3	63.5	55.6	52.9
60°	64.9	61.3	55.6	48.8	46.6
62.5°	56.2	53.4	48.5	42.8	45.5
65°	48.3	45.5	41.2	42.0	34.9
67.5°	39.5	38.2	34.4	30.5	29.4
70°	32.2	30.5	29.2	25.1	24.0
72.5°	25.6	24.0	22.1	19.9	19.1
75°	19.4	18.0	16.9	16.1	17.7
77.5°	13.4	12.8	12.0	11.2	10.9
80°	8.7	8.5	8.2	7.9	7.6
82.5°	5.2	5.2	5.2	5.2	5.2
85°	2.7	3.0	3.3	3.5	3.8
87.5°	1.6	1.6	1.9	2.2	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)