

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: P558481

Luminaire Tested: FSR-12-1-LD4-1HI-35-UNV-82-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558481  
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-LD4-1HI-35-UNV-82-84-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

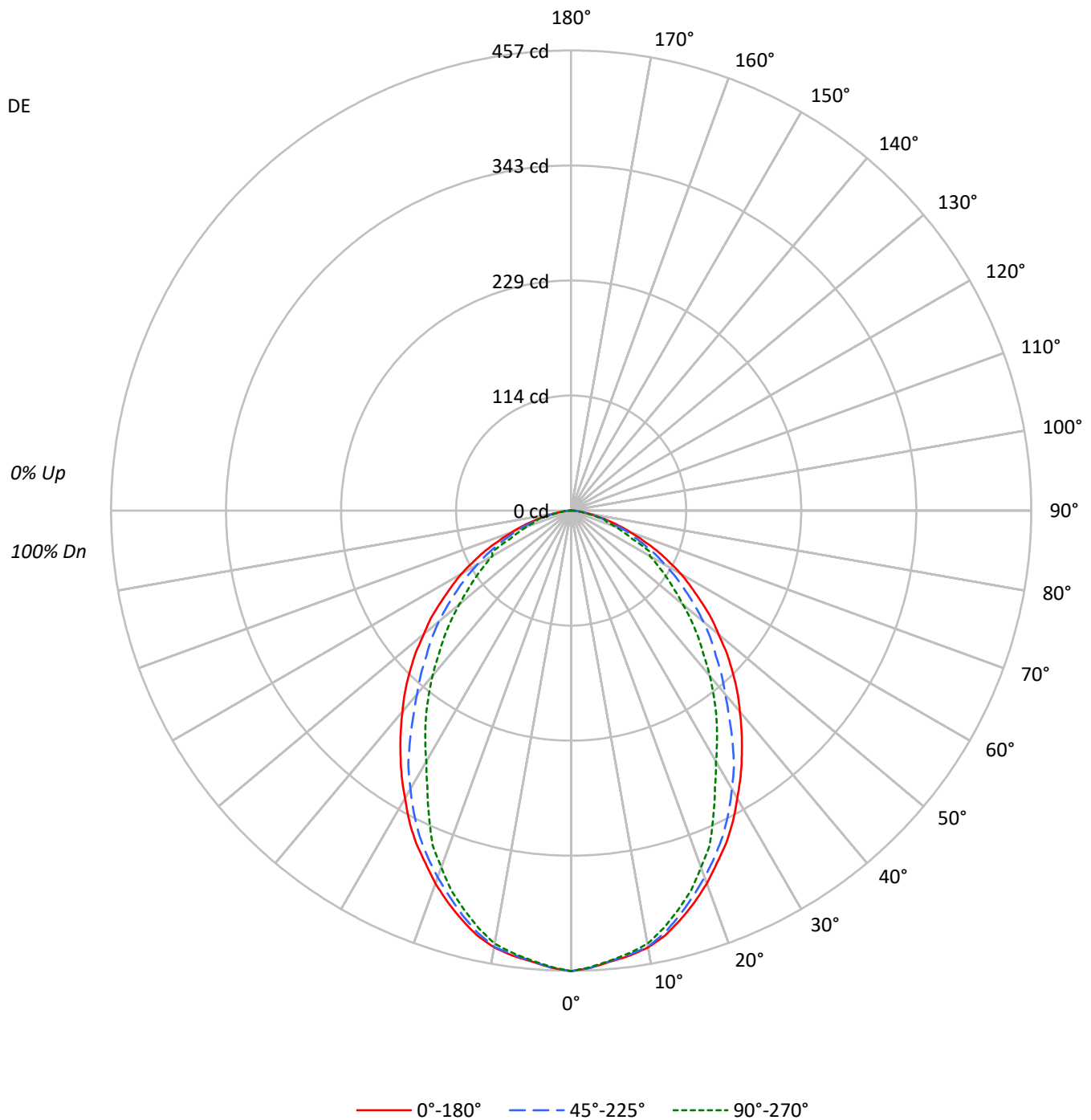
Lumens per Lamp: N/A  
Luminaire Lumens: 898.0 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4923	4923	4923
5°	4857	4851	4845
10°	4815	4809	4774
15°	4685	4638	4573
20°	4513	4440	4318
25°	4328	4233	3969
30°	4102	3970	3576
35°	3884	3669	3307
40°	3663	3344	3010
45°	3454	3092	2720
50°	3197	2869	2426
55°	2958	2601	2173
60°	2710	2323	1946
65°	2384	2035	1724
70°	1964	1781	1463
75°	1560	1364	1431
80°	1048	986	917
85°	655	778	914

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3454 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.6	4.7
10°-20°	116.9	13.0
20°-30°	161.8	18.0
30°-40°	172.5	19.2
40°-50°	157.4	17.5
50°-60°	123.3	13.7
60°-70°	80.3	8.9
70°-80°	35.6	4.0
80°-90°	7.6	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°	321.2	35.8
0°-40°	493.7	55.0
0°-60°	774.4	86.2
0°-90°	898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	898.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	457	457	457	457	457	
5°	450	449	449	448	448	43
15°	420	420	416	412	410	118
25°	364	362	356	344	334	167
35°	296	294	279	258	252	185
45°	227	222	203	186	179	175
55°	158	153	139	122	116	141
65°	94	88	80	81	68	92
75°	38	35	33	31	34	40
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	457.4	457.4	457.4	457.4	457.4
2.5°	454.3	454.3	454.3	453.7	453.7
5°	449.5	449.0	449.0	448.4	448.4
7.5°	445.8	445.3	444.7	444.2	443.2
10°	440.5	440.5	440.0	437.3	436.8
12.5°	432.0	431.5	429.4	425.7	424.6
15°	420.4	420.4	416.2	412.0	410.4
17.5°	407.7	407.2	401.9	397.7	395.6
20°	394.0	392.9	387.6	380.8	377.0
22.5°	378.6	378.6	372.3	363.3	359.6
25°	364.4	362.2	356.4	343.7	334.2
27.5°	348.0	344.8	338.4	320.5	309.4
30°	330.0	328.4	319.4	296.1	287.7
32.5°	313.1	310.4	300.9	276.6	269.7
35°	295.6	293.5	279.2	258.1	251.7
37.5°	278.2	275.5	257.5	240.6	232.7
40°	260.7	257.5	238.0	222.6	214.2
42.5°	244.3	240.1	221.0	204.7	195.1
45°	226.9	222.1	203.1	186.1	178.7
47.5°	209.4	205.2	187.7	170.3	161.8
50°	190.9	187.2	171.3	153.9	144.9
52.5°	175.6	169.8	154.4	137.0	129.6
55°	157.6	152.8	138.6	122.2	115.8
57.5°	141.2	136.4	123.2	107.9	102.6
60°	125.9	119.0	107.9	94.7	90.4
62.5°	108.9	103.6	94.1	83.0	88.3
65°	93.6	88.3	79.9	81.4	67.7
67.5°	76.7	74.0	66.6	59.2	57.1
70°	62.4	59.2	56.6	48.7	46.5
72.5°	49.7	46.5	42.8	38.6	37.0
75°	37.5	34.9	32.8	31.2	34.4
77.5°	25.9	24.9	23.3	21.7	21.2
80°	16.9	16.4	15.9	15.3	14.8
82.5°	10.0	10.0	10.0	10.0	10.0
85°	5.3	5.8	6.3	6.9	7.4
87.5°	3.2	3.2	3.7	4.2	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)