

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: P558873

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-82-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558873  
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-82-88-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

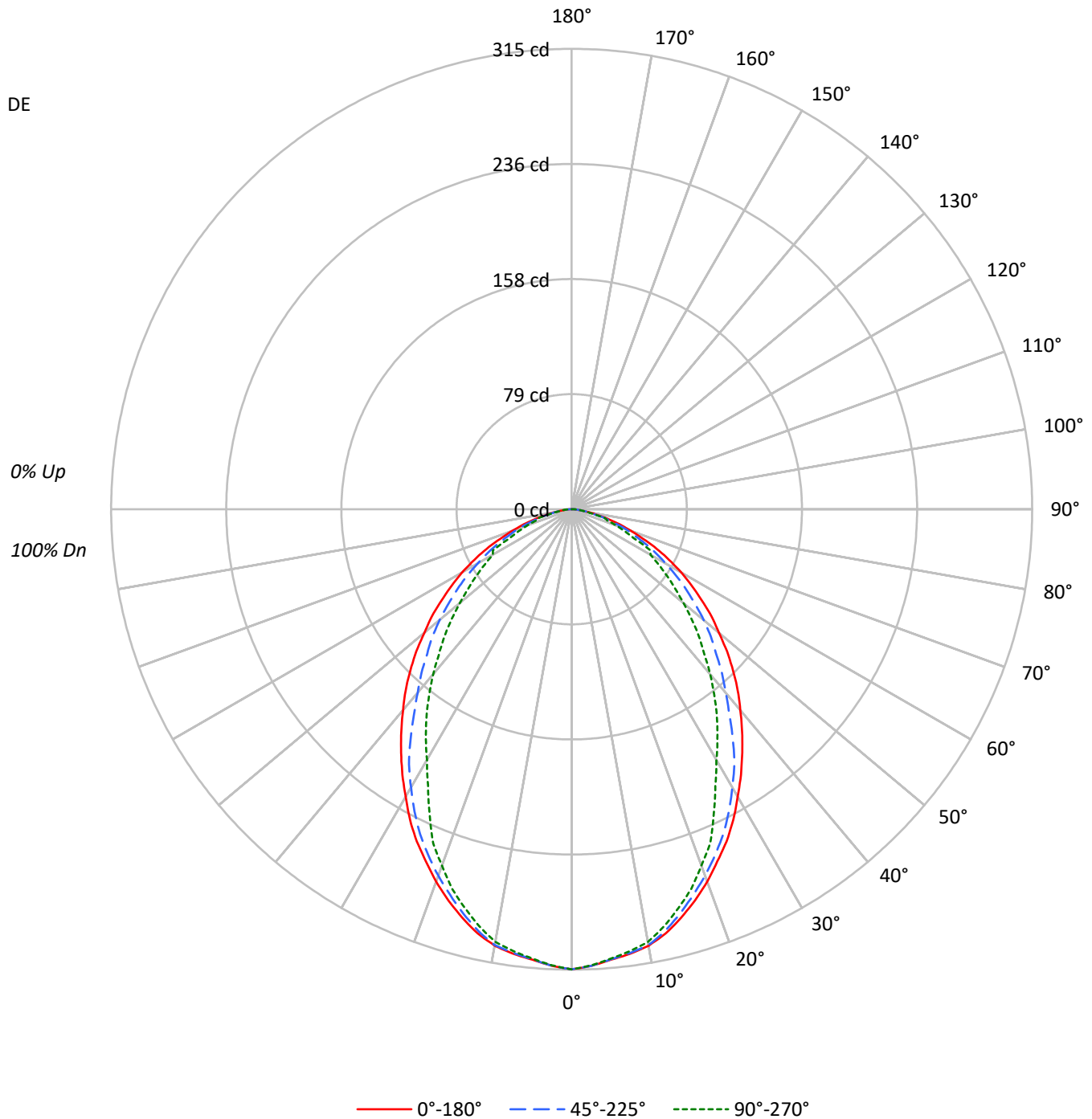
Lumens per Lamp: N/A  
Luminaire Lumens: 618.0 lumens  
Efficiency: N/A  
Efficacy: 74.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3388	3388	3388
5°	3342	3339	3334
10°	3314	3310	3286
15°	3224	3192	3147
20°	3105	3056	2972
25°	2977	2913	2732
30°	2823	2732	2461
35°	2673	2526	2276
40°	2521	2302	2071
45°	2376	2127	1872
50°	2200	1974	1670
55°	2036	1790	1496
60°	1864	1597	1339
65°	1640	1401	1187
70°	1350	1224	1007
75°	1073	940	986
80°	719	676	632
85°	445	543	630

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2376 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.3	4.7
10°-20°	80.4	13.0
20°-30°	111.3	18.0
30°-40°	118.7	19.2
40°-50°	108.3	17.5
50°-60°	84.9	13.7
60°-70°	55.3	8.9
70°-80°	24.5	4.0
80°-90°	5.3	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°	221.1	35.8
0°-40°	339.8	55.0
0°-60°	532.9	86.2
0°-90°	618.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	618.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	315	315	315	315	315	
5°	309	309	309	309	309	29
15°	289	289	286	284	282	81
25°	251	249	245	237	230	115
35°	203	202	192	178	173	127
45°	156	153	140	128	123	120
55°	108	105	95	84	80	97
65°	64	61	55	56	47	63
75°	26	24	23	22	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	314.8	314.8	314.8	314.8	314.8
2.5°	312.6	312.6	312.6	312.3	312.3
5°	309.3	309.0	309.0	308.6	308.6
7.5°	306.8	306.4	306.1	305.7	305.0
10°	303.2	303.2	302.8	301.0	300.6
12.5°	297.3	297.0	295.5	293.0	292.2
15°	289.3	289.3	286.4	283.5	282.4
17.5°	280.6	280.2	276.6	273.7	272.2
20°	271.1	270.4	266.8	262.0	259.5
22.5°	260.6	260.6	256.2	250.0	247.5
25°	250.7	249.3	245.3	236.6	230.0
27.5°	239.5	237.3	232.9	220.5	212.9
30°	227.1	226.0	219.8	203.8	198.0
32.5°	215.4	213.6	207.1	190.3	185.6
35°	203.4	202.0	192.2	177.6	173.2
37.5°	191.4	189.6	177.2	165.6	160.1
40°	179.4	177.2	163.8	153.2	147.4
42.5°	168.1	165.2	152.1	140.8	134.3
45°	156.1	152.9	139.7	128.1	123.0
47.5°	144.1	141.2	129.2	117.2	111.4
50°	131.4	128.8	117.9	105.9	99.7
52.5°	120.8	116.8	106.3	94.3	89.2
55°	108.5	105.2	95.4	84.1	79.7
57.5°	97.2	93.9	84.8	74.2	70.6
60°	86.6	81.9	74.2	65.1	62.2
62.5°	75.0	71.3	64.8	57.1	60.8
65°	64.4	60.8	55.0	56.0	46.6
67.5°	52.8	51.0	45.9	40.8	39.3
70°	42.9	40.8	38.9	33.5	32.0
72.5°	34.2	32.0	29.5	26.6	25.5
75°	25.8	24.0	22.6	21.5	23.7
77.5°	17.8	17.1	16.0	14.9	14.6
80°	11.6	11.3	10.9	10.6	10.2
82.5°	6.9	6.9	6.9	6.9	6.9
85°	3.6	4.0	4.4	4.7	5.1
87.5°	2.2	2.2	2.5	2.9	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)