

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: P559515

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-82-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559515  
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-LD4-2STD-40-UNV-82-94-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

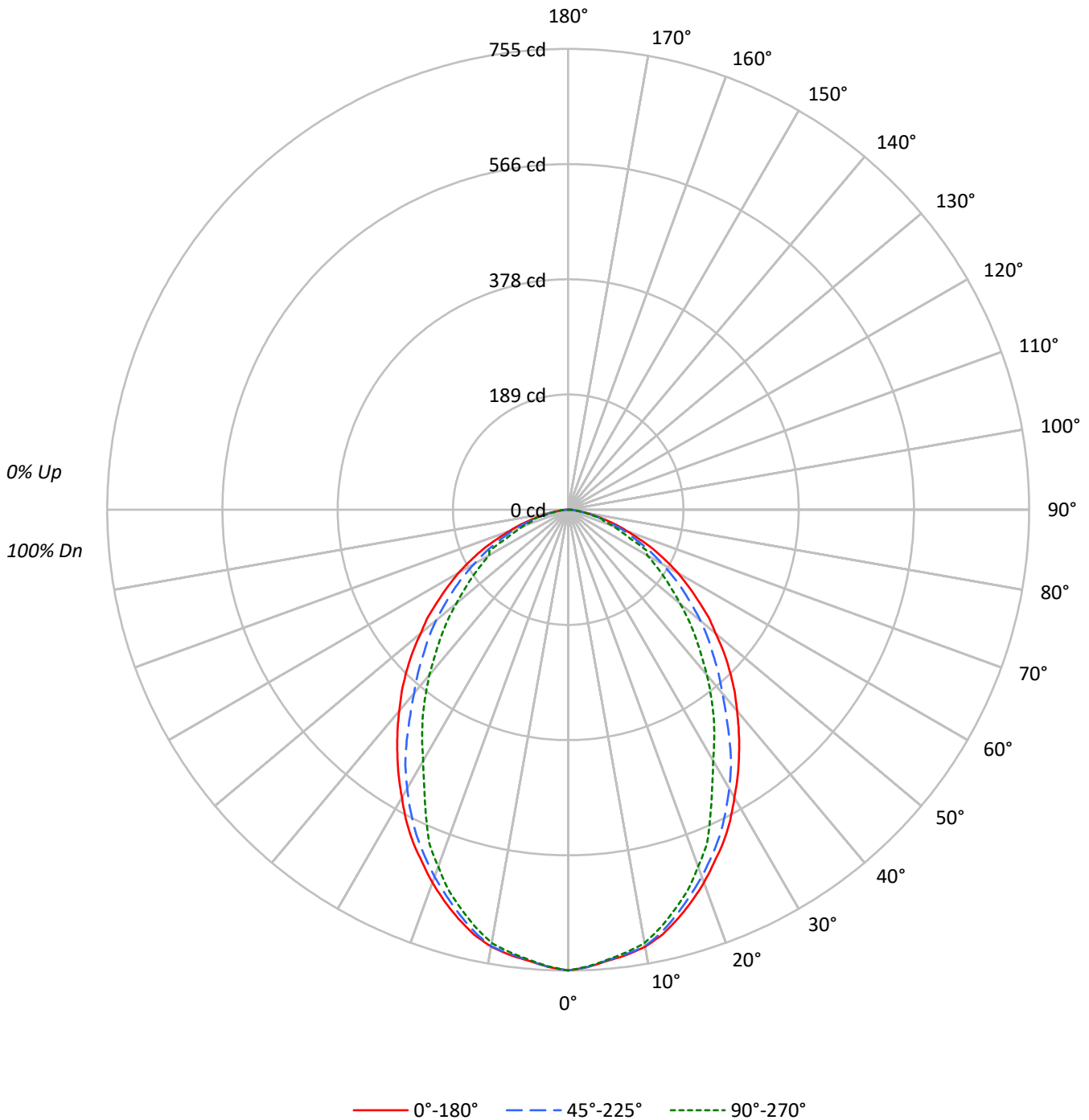
Lumens per Lamp: N/A  
Luminaire Lumens: 1482.0 lumens  
Efficiency: N/A  
Efficacy: 89.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	8126	8126	8126
5°	8015	8005	7997
10°	7946	7936	7879
15°	7731	7653	7546
20°	7448	7328	7128
25°	7141	6986	6551
30°	6769	6551	5901
35°	6411	6055	5458
40°	6046	5518	4967
45°	5699	5101	4491
50°	5277	4736	4004
55°	4881	4292	3586
60°	4471	3832	3212
65°	3935	3357	2845
70°	3242	2939	2417
75°	2578	2250	2358
80°	1729	1624	1512
85°	1074	1297	1507

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5699 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.3	4.7
10°-20°	192.9	13.0
20°-30°	267.0	18.0
30°-40°	284.7	19.2
40°-50°	259.7	17.5
50°-60°	203.5	13.7
60°-70°	132.6	8.9
70°-80°	58.8	4.0
80°-90°	12.6	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°	530.1	35.8
0°-40°	814.8	55.0
0°-60°	1278.0	86.2
0°-90°	1482.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1482.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	755	755	755	755	755	
5°	742	741	741	740	740	70
15°	694	694	687	680	677	195
25°	601	598	588	567	552	276
35°	488	484	461	426	415	305
45°	374	366	335	307	295	288
55°	260	252	229	202	191	233
65°	154	146	132	134	112	152
75°	62	58	54	52	57	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	754.9	754.9	754.9	754.9	754.9
2.5°	749.7	749.7	749.7	748.8	748.8
5°	741.8	740.9	740.9	740.1	740.1
7.5°	735.7	734.8	734.0	733.1	731.3
10°	727.0	727.0	726.1	721.7	720.9
12.5°	713.0	712.1	708.7	702.5	700.8
15°	693.8	693.8	686.8	679.9	677.2
17.5°	672.9	672.0	663.3	656.3	652.8
20°	650.2	648.4	639.7	628.4	622.3
22.5°	624.9	624.9	614.4	599.6	593.5
25°	601.3	597.8	588.2	567.3	551.6
27.5°	574.3	569.0	558.5	528.9	510.5
30°	544.6	542.0	527.1	488.7	474.8
32.5°	516.7	512.3	496.6	456.4	445.1
35°	487.9	484.4	460.8	425.9	415.4
37.5°	459.1	454.7	425.0	397.1	384.0
40°	430.3	425.0	392.7	367.4	353.5
42.5°	403.2	396.2	364.8	337.7	322.0
45°	374.4	366.5	335.1	307.2	295.0
47.5°	345.6	338.6	309.8	281.0	267.1
50°	315.1	308.9	282.8	254.0	239.1
52.5°	289.7	280.1	254.8	226.0	213.8
55°	260.1	252.2	228.7	201.6	191.1
57.5°	233.0	225.2	203.3	178.0	169.3
60°	207.7	196.4	178.0	156.2	149.2
62.5°	179.8	171.1	155.3	137.0	145.7
65°	154.5	145.7	131.8	134.4	111.7
67.5°	126.5	122.2	110.0	97.7	94.3
70°	103.0	97.7	93.4	80.3	76.8
72.5°	82.0	76.8	70.7	63.7	61.1
75°	62.0	57.6	54.1	51.5	56.7
77.5°	42.8	41.0	38.4	35.8	34.9
80°	27.9	27.1	26.2	25.3	24.4
82.5°	16.6	16.6	16.6	16.6	16.6
85°	8.7	9.6	10.5	11.3	12.2
87.5°	5.2	5.2	6.1	7.0	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)