

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: P560155

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-82-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560155  
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-12-2-LD4-1STD-50-UNV-82-94-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

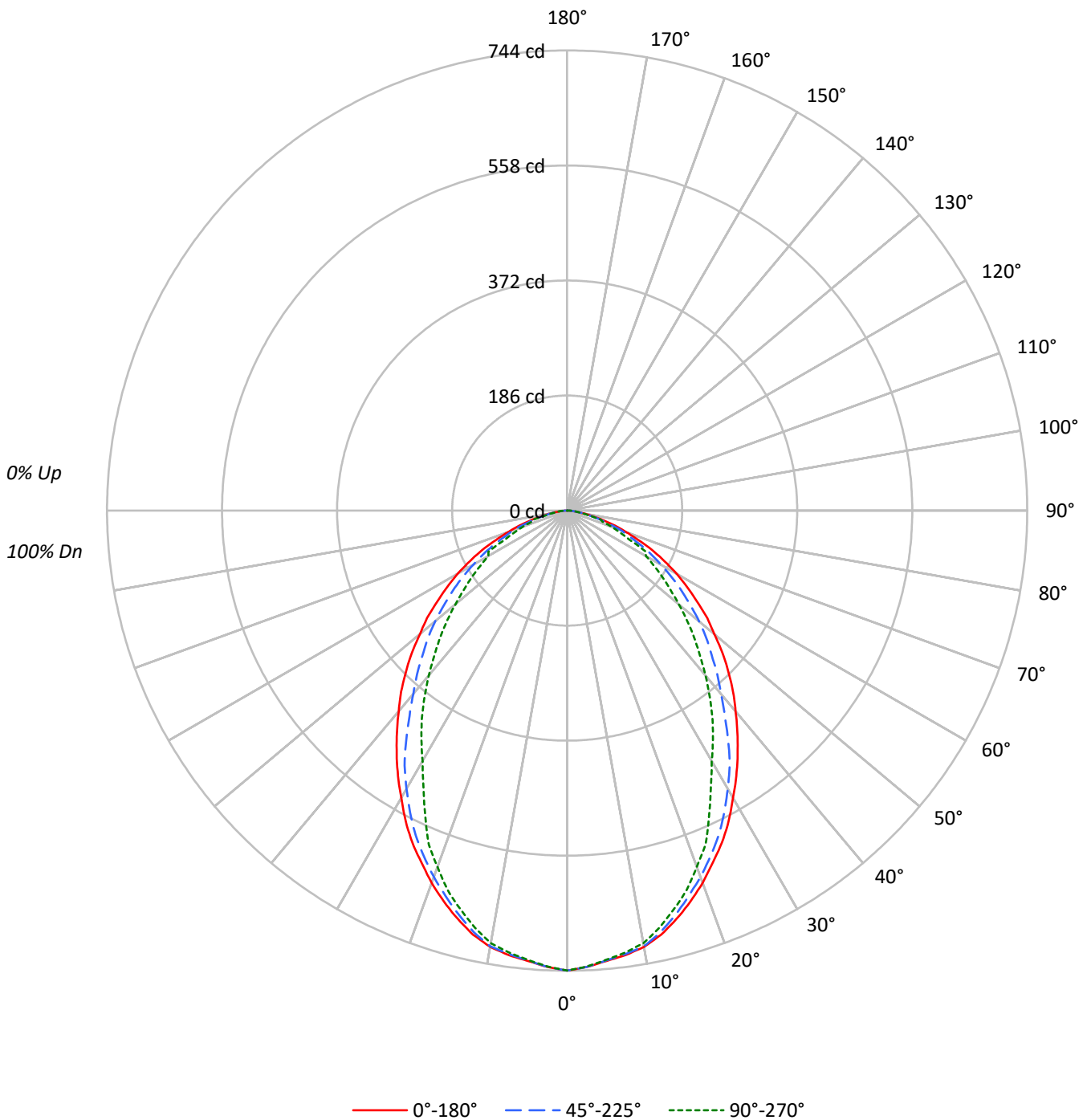
Lumens per Lamp: N/A  
Luminaire Lumens: 1460.0 lumens  
Efficiency: N/A  
Efficacy: 88.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4003	4003	4003
5°	3948	3943	3939
10°	3914	3909	3881
15°	3808	3770	3718
20°	3668	3609	3511
25°	3518	3441	3227
30°	3334	3227	2907
35°	3158	2983	2689
40°	2978	2718	2446
45°	2807	2513	2212
50°	2599	2333	1973
55°	2404	2114	1767
60°	2202	1888	1582
65°	1938	1653	1402
70°	1597	1448	1191
75°	1268	1108	1162
80°	852	800	747
85°	531	636	741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2807 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.2	4.7
10°-20°	190.0	13.0
20°-30°	263.0	18.0
30°-40°	280.5	19.2
40°-50°	255.9	17.5
50°-60°	200.5	13.7
60°-70°	130.6	8.9
70°-80°	57.9	4.0
80°-90°	12.4	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°	522.3	35.8
0°-40°	802.7	55.0
0°-60°	1259.1	86.2
0°-90°	1460.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1460.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	744	744	744	744	744	
5°	731	730	730	729	729	69
15°	684	684	677	670	667	192
25°	592	589	580	559	543	272
35°	481	477	454	420	409	300
45°	369	361	330	303	291	284
55°	256	248	225	199	188	230
65°	152	144	130	132	110	150
75°	61	57	53	51	56	65
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°	743.7	743.7	743.7	743.7	743.7
2.5°	738.5	738.5	738.5	737.7	737.7
5°	730.8	729.9	729.9	729.1	729.1
7.5°	724.8	723.9	723.1	722.2	720.5
10°	716.2	716.2	715.3	711.0	710.2
12.5°	702.4	701.6	698.1	692.1	690.4
15°	683.5	683.5	676.6	669.8	667.2
17.5°	662.9	662.0	653.4	646.6	643.1
20°	640.5	638.8	630.2	619.0	613.0
22.5°	615.6	615.6	605.3	590.7	584.6
25°	592.4	588.9	579.5	558.9	543.4
27.5°	565.7	560.6	550.3	521.0	503.0
30°	536.5	533.9	519.3	481.5	467.7
32.5°	509.0	504.7	489.2	449.7	438.5
35°	480.6	477.2	454.0	419.6	409.3
37.5°	452.2	447.9	418.7	391.2	378.3
40°	423.9	418.7	386.9	362.0	348.2
42.5°	397.2	390.3	359.4	332.7	317.3
45°	368.8	361.1	330.2	302.6	290.6
47.5°	340.5	333.6	305.2	276.8	263.1
50°	310.4	304.4	278.6	250.2	235.6
52.5°	285.4	276.0	251.1	222.7	210.6
55°	256.2	248.5	225.3	198.6	188.3
57.5°	229.6	221.8	200.3	175.4	166.8
60°	204.6	193.4	175.4	153.9	147.0
62.5°	177.1	168.5	153.0	135.0	143.6
65°	152.2	143.6	129.8	132.4	110.1
67.5°	124.7	120.4	108.3	96.3	92.9
70°	101.5	96.3	92.0	79.1	75.7
72.5°	80.8	75.7	69.6	62.8	60.2
75°	61.0	56.7	53.3	50.7	55.9
77.5°	42.1	40.4	37.8	35.3	34.4
80°	27.5	26.7	25.8	24.9	24.1
82.5°	16.3	16.3	16.3	16.3	16.3
85°	8.6	9.5	10.3	11.2	12.0
87.5°	5.2	5.2	6.0	6.9	7.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)