

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: P559655

Luminaire Tested: FSR-12-2-LD4-1HI-35-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559655  
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-LD4-1HI-35-UNV-93-87-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

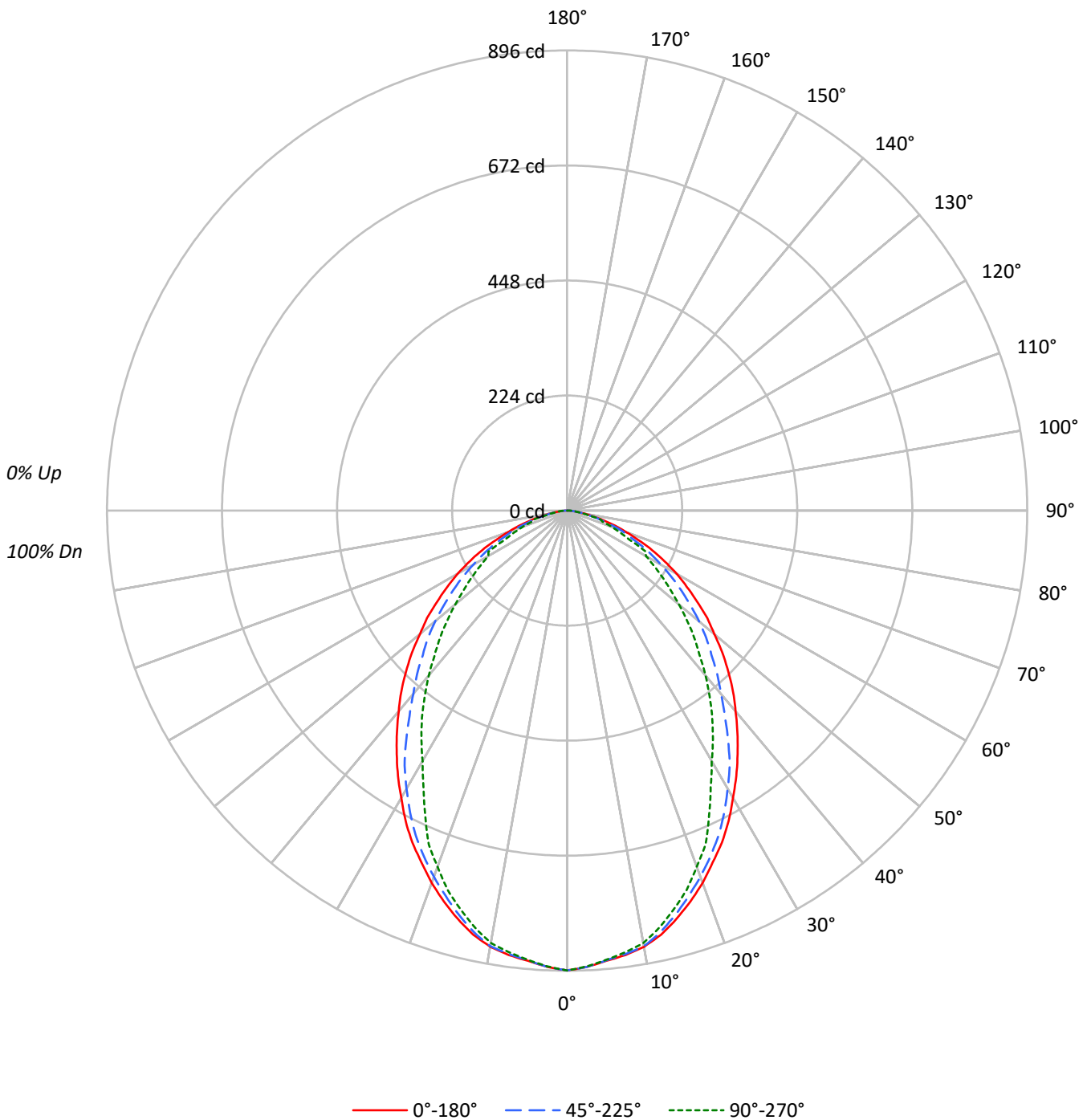
Lumens per Lamp: N/A  
Luminaire Lumens: 1758.0 lumens  
Efficiency: N/A  
Efficacy: 81.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4820	4820	4820
5°	4754	4748	4743
10°	4713	4707	4673
15°	4586	4540	4476
20°	4418	4346	4227
25°	4236	4144	3885
30°	4015	3886	3500
35°	3802	3591	3238
40°	3586	3273	2946
45°	3380	3025	2663
50°	3129	2808	2375
55°	2895	2545	2127
60°	2652	2273	1905
65°	2333	1990	1687
70°	1923	1744	1434
75°	1528	1335	1399
80°	1026	964	899
85°	642	766	895

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3380 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.4	4.7
10°-20°	228.8	13.0
20°-30°	316.7	18.0
30°-40°	337.7	19.2
40°-50°	308.1	17.5
50°-60°	241.4	13.7
60°-70°	157.3	8.9
70°-80°	69.7	4.0
80°-90°	15.0	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°	628.9	35.8
0°-40°	966.6	55.0
0°-60°	1516.0	86.2
0°-90°	1758.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1758.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	880	879	879	878	878	84
15°	823	823	815	806	803	231
25°	713	709	698	673	654	327
35°	579	575	547	505	493	362
45°	444	435	398	364	350	342
55°	308	299	271	239	227	277
65°	183	173	156	159	132	181
75°	74	68	64	61	67	79
85°	10	11	12	14	14	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	895.5	895.5	895.5	895.5	895.5
2.5°	889.3	889.3	889.3	888.3	888.3
5°	880.0	878.9	878.9	877.9	877.9
7.5°	872.7	871.7	870.7	869.6	867.5
10°	862.4	862.4	861.3	856.2	855.1
12.5°	845.8	844.8	840.6	833.4	831.3
15°	823.0	823.0	814.8	806.5	803.4
17.5°	798.2	797.2	786.8	778.5	774.4
20°	771.3	769.2	758.8	745.4	738.1
22.5°	741.2	741.2	728.8	711.2	704.0
25°	713.3	709.2	697.8	672.9	654.3
27.5°	681.2	675.0	662.6	627.4	605.6
30°	646.0	642.9	625.3	579.7	563.2
32.5°	612.9	607.7	589.1	541.4	528.0
35°	578.7	574.6	546.6	505.2	492.8
37.5°	544.5	539.4	504.2	471.0	455.5
40°	510.4	504.2	465.9	435.8	419.3
42.5°	478.3	470.0	432.7	400.6	382.0
45°	444.1	434.8	397.5	364.4	349.9
47.5°	410.0	401.7	367.5	333.4	316.8
50°	373.7	366.5	335.4	301.3	283.7
52.5°	343.7	332.3	302.3	268.1	253.6
55°	308.5	299.2	271.2	239.1	226.7
57.5°	276.4	267.1	241.2	211.2	200.8
60°	246.4	232.9	211.2	185.3	177.0
62.5°	213.3	202.9	184.3	162.5	172.9
65°	183.2	172.9	156.3	159.4	132.5
67.5°	150.1	144.9	130.4	115.9	111.8
70°	122.2	115.9	110.8	95.2	91.1
72.5°	97.3	91.1	83.9	75.6	72.5
75°	73.5	68.3	64.2	61.1	67.3
77.5°	50.7	48.7	45.6	42.4	41.4
80°	33.1	32.1	31.1	30.0	29.0
82.5°	19.7	19.7	19.7	19.7	19.7
85°	10.4	11.4	12.4	13.5	14.5
87.5°	6.2	6.2	7.2	8.3	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)