

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: P559722

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-93-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559722  
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-40-UNV-93-94-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

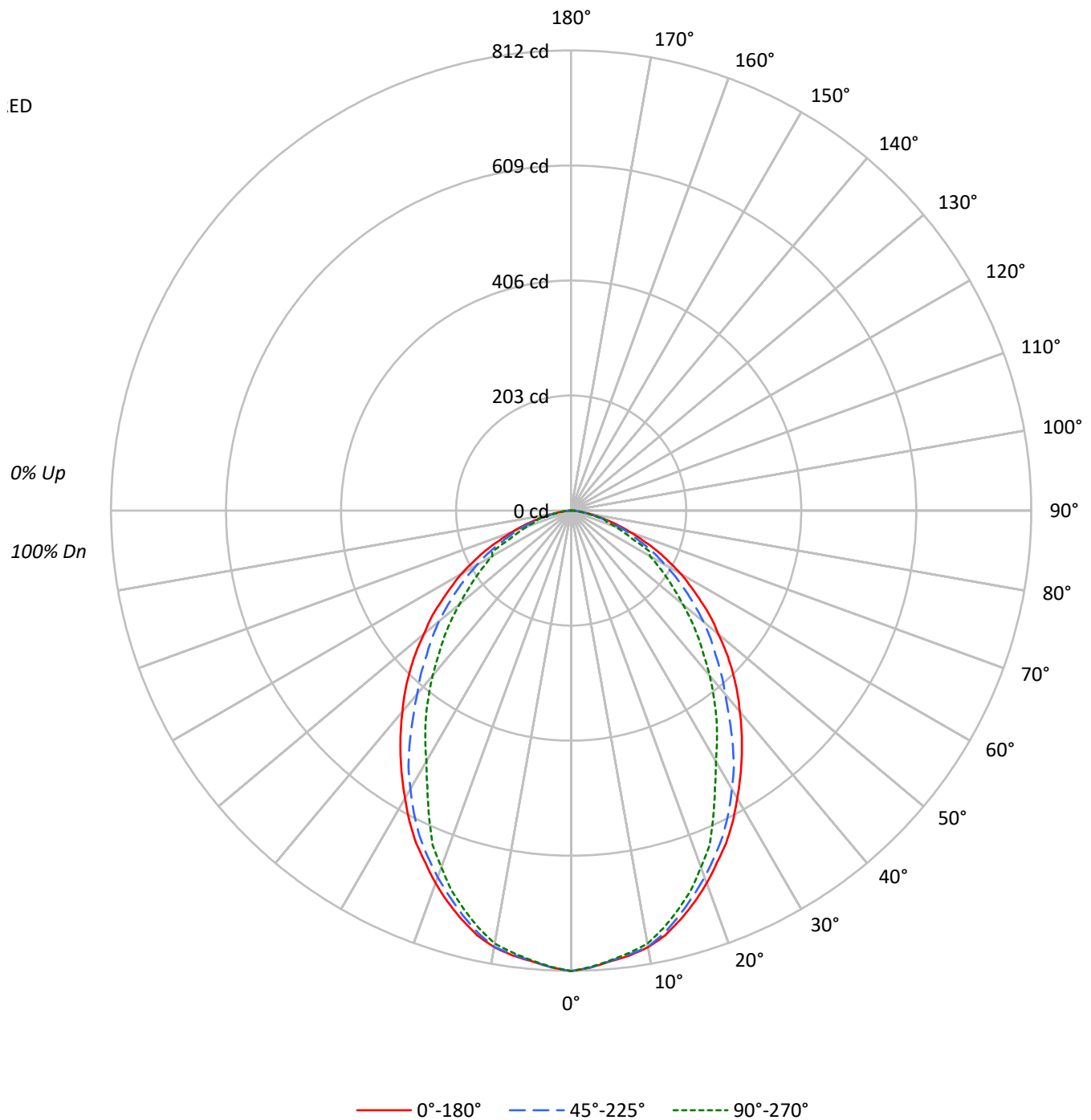
Lumens per Lamp: N/A  
Luminaire Lumens: 1595.0 lumens  
Efficiency: N/A  
Efficacy: 73.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4373	4373	4373
5°	4313	4308	4303
10°	4276	4271	4240
15°	4160	4119	4061
20°	4008	3943	3836
25°	3843	3760	3525
30°	3642	3526	3176
35°	3450	3258	2938
40°	3254	2970	2673
45°	3067	2745	2417
50°	2839	2548	2155
55°	2626	2309	1930
60°	2406	2062	1729
65°	2118	1806	1531
70°	1744	1581	1301
75°	1387	1210	1271
80°	933	874	815
85°	580	698	809

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3067 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.6	4.7
10°-20°	207.6	13.0
20°-30°	287.4	18.0
30°-40°	306.4	19.2
40°-50°	279.5	17.5
50°-60°	219.0	13.7
60°-70°	142.7	8.9
70°-80°	63.2	4.0
80°-90°	13.6	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°	570.5	35.8
0°-40°	876.9	55.0
0°-60°	1375.5	86.2
0°-90°	1595.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1595.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	812	812	812	812	812	
5°	798	797	797	796	796	76
15°	747	747	739	732	729	210
25°	647	643	633	610	594	297
35°	525	521	496	458	447	328
45°	403	394	361	331	318	310
55°	280	272	246	217	206	251
65°	166	157	142	145	120	164
75°	67	62	58	55	61	71
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	812.5	812.5	812.5	812.5	812.5
2.5°	806.8	806.8	806.8	805.9	805.9
5°	798.4	797.4	797.4	796.5	796.5
7.5°	791.8	790.9	789.9	789.0	787.1
10°	782.4	782.4	781.5	776.8	775.8
12.5°	767.4	766.4	762.7	756.1	754.2
15°	746.7	746.7	739.2	731.7	728.9
17.5°	724.2	723.2	713.8	706.3	702.6
20°	699.8	697.9	688.5	676.3	669.7
22.5°	672.5	672.5	661.2	645.3	638.7
25°	647.2	643.4	633.1	610.5	593.6
27.5°	618.0	612.4	601.1	569.2	549.5
30°	586.1	583.3	567.3	526.0	511.0
32.5°	556.0	551.4	534.4	491.2	479.0
35°	525.1	521.3	495.9	458.4	447.1
37.5°	494.1	489.4	457.4	427.4	413.3
40°	463.1	457.4	422.7	395.4	380.4
42.5°	433.9	426.4	392.6	363.5	346.6
45°	402.9	394.5	360.7	330.6	317.5
47.5°	372.0	364.4	333.4	302.4	287.4
50°	339.1	332.5	304.3	273.3	257.4
52.5°	311.8	301.5	274.3	243.3	230.1
55°	279.9	271.5	246.1	217.0	205.7
57.5°	250.8	242.3	218.9	191.6	182.2
60°	223.5	211.3	191.6	168.1	160.6
62.5°	193.5	184.1	167.2	147.5	156.9
65°	166.3	156.9	141.8	144.6	120.2
67.5°	136.2	131.5	118.3	105.2	101.4
70°	110.8	105.2	100.5	86.4	82.7
72.5°	88.3	82.7	76.1	68.6	65.7
75°	66.7	62.0	58.2	55.4	61.1
77.5°	46.0	44.1	41.3	38.5	37.6
80°	30.1	29.1	28.2	27.2	26.3
82.5°	17.8	17.8	17.8	17.8	17.8
85°	9.4	10.3	11.3	12.2	13.1
87.5°	5.6	5.6	6.6	7.5	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)