

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: P559982

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-93-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559982  
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-LD4-1LO-50-UNV-93-97-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

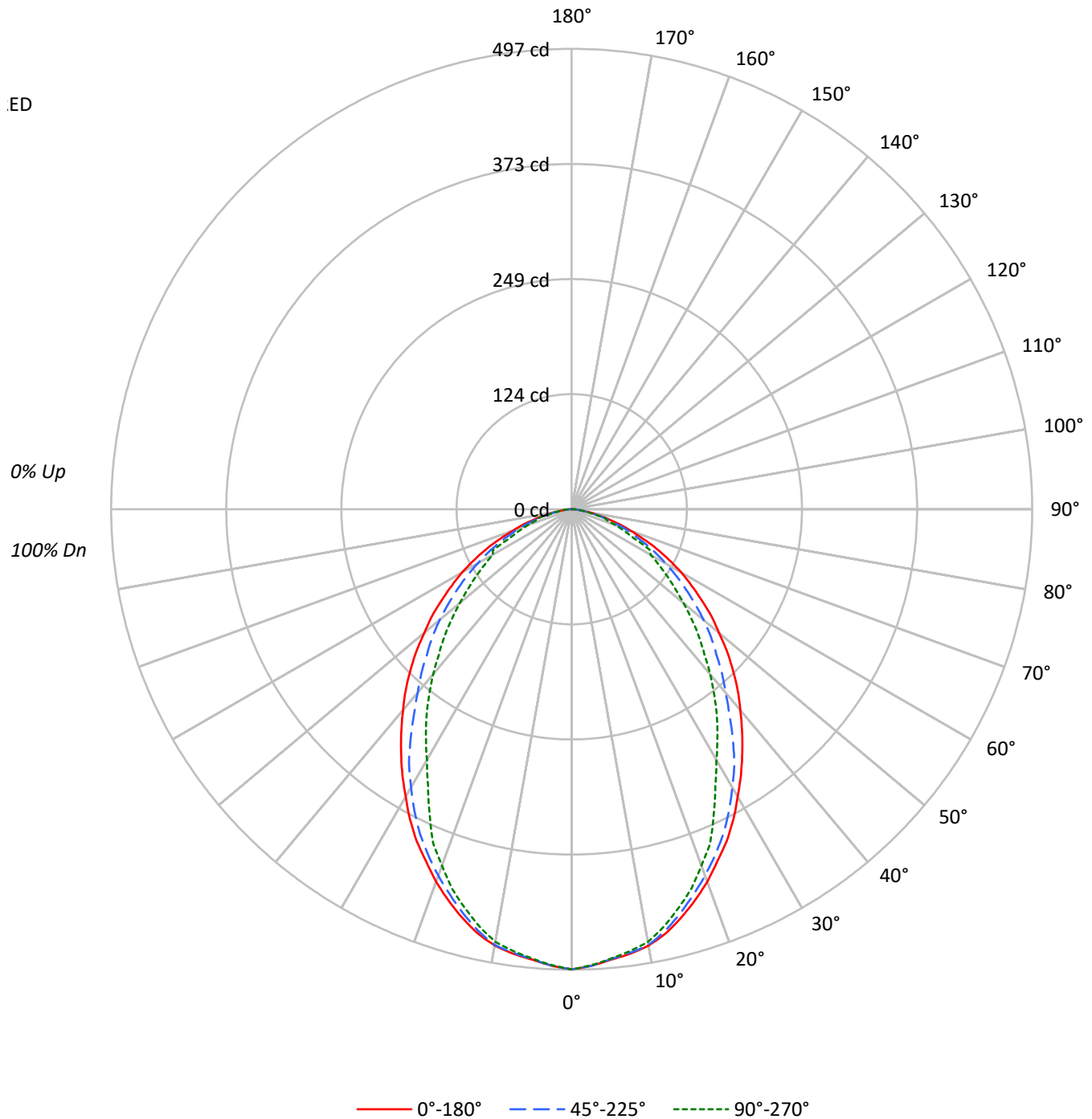
Lumens per Lamp: N/A  
Luminaire Lumens: 975.0 lumens  
Efficiency: N/A  
Efficacy: 83.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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				
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°	2673	2673	2673
5°	2636	2634	2630
10°	2614	2611	2592
15°	2544	2518	2483
20°	2450	2411	2345
25°	2349	2298	2155
30°	2227	2155	1941
35°	2109	1992	1796
40°	1989	1815	1633
45°	1875	1678	1477
50°	1736	1557	1317
55°	1605	1411	1179
60°	1471	1260	1057
65°	1294	1104	936
70°	1067	966	795
75°	848	740	776
80°	570	533	499
85°	352	426	494

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1875 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.2	4.7
10°-20°	126.9	13.0
20°-30°	175.7	18.0
30°-40°	187.3	19.2
40°-50°	170.9	17.5
50°-60°	133.9	13.7
60°-70°	87.2	8.9
70°-80°	38.7	4.0
80°-90°	8.3	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°	348.8	35.8
0°-40°	536.1	55.0
0°-60°	840.8	86.2
0°-90°	975.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	975.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	497	497	497	497	497	
5°	488	488	488	487	487	46
15°	456	456	452	447	446	128
25°	396	393	387	373	363	182
35°	321	319	303	280	273	201
45°	246	241	220	202	194	190
55°	171	166	150	133	126	153
65°	102	96	87	88	74	100
75°	41	38	36	34	37	44
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	496.7	496.7	496.7	496.7	496.7
2.5°	493.2	493.2	493.2	492.6	492.6
5°	488.0	487.5	487.5	486.9	486.9
7.5°	484.0	483.4	482.9	482.3	481.1
10°	478.3	478.3	477.7	474.8	474.3
12.5°	469.1	468.5	466.2	462.2	461.1
15°	456.5	456.5	451.9	447.3	445.6
17.5°	442.7	442.1	436.4	431.8	429.5
20°	427.8	426.6	420.9	413.4	409.4
22.5°	411.1	411.1	404.2	394.5	390.4
25°	395.6	393.3	387.0	373.2	362.9
27.5°	377.8	374.4	367.5	347.9	335.9
30°	358.3	356.6	346.8	321.5	312.3
32.5°	339.9	337.0	326.7	300.3	292.8
35°	321.0	318.7	303.2	280.2	273.3
37.5°	302.0	299.1	279.6	261.2	252.6
40°	283.1	279.6	258.4	241.7	232.5
42.5°	265.3	260.7	240.0	222.2	211.9
45°	246.3	241.1	220.5	202.1	194.1
47.5°	227.4	222.8	203.8	184.9	175.7
50°	207.3	203.3	186.0	167.1	157.3
52.5°	190.6	184.3	167.7	148.7	140.7
55°	171.1	165.9	150.4	132.6	125.7
57.5°	153.3	148.1	133.8	117.1	111.4
60°	136.7	129.2	117.1	102.8	98.2
62.5°	118.3	112.5	102.2	90.1	95.9
65°	101.6	95.9	86.7	88.4	73.5
67.5°	83.3	80.4	72.3	64.3	62.0
70°	67.8	64.3	61.4	52.8	50.5
72.5°	54.0	50.5	46.5	41.9	40.2
75°	40.8	37.9	35.6	33.9	37.3
77.5°	28.1	27.0	25.3	23.5	23.0
80°	18.4	17.8	17.2	16.7	16.1
82.5°	10.9	10.9	10.9	10.9	10.9
85°	5.7	6.3	6.9	7.5	8.0
87.5°	3.4	3.4	4.0	4.6	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)