

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: P559972

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-93-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559972  
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-93-86-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

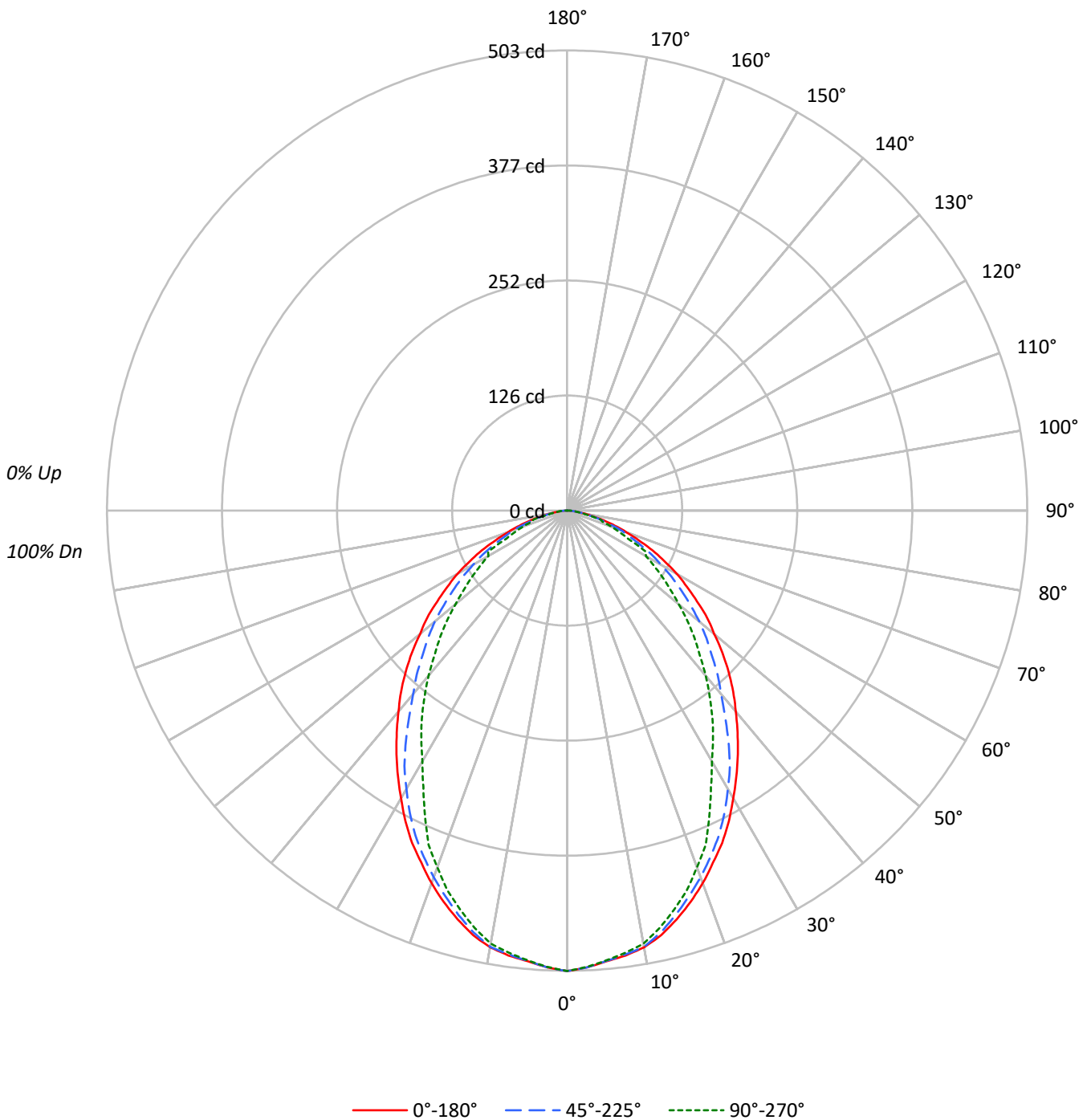
Lumens per Lamp: N/A  
Luminaire Lumens: 988.0 lumens  
Efficiency: N/A  
Efficacy: 84.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	47	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°	2709	2709	2709
5°	2672	2669	2666
10°	2649	2646	2626
15°	2577	2551	2516
20°	2483	2443	2376
25°	2381	2328	2184
30°	2257	2184	1967
35°	2137	2018	1819
40°	2015	1839	1655
45°	1900	1700	1497
50°	1758	1578	1335
55°	1627	1430	1195
60°	1491	1278	1071
65°	1312	1119	949
70°	1081	980	806
75°	859	751	786
80°	576	542	505
85°	358	432	500

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1900 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.8	4.7
10°-20°	128.6	13.0
20°-30°	178.0	18.0
30°-40°	189.8	19.2
40°-50°	173.1	17.5
50°-60°	135.6	13.7
60°-70°	88.4	8.9
70°-80°	39.2	4.0
80°-90°	8.4	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°	353.4	35.8
0°-40°	543.2	55.0
0°-60°	852.0	86.2
0°-90°	988.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	988.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	503	503	503	503	503	
5°	494	494	494	493	493	47
15°	462	462	458	453	452	130
25°	401	398	392	378	368	184
35°	325	323	307	284	277	203
45°	250	244	223	205	197	192
55°	173	168	152	134	127	156
65°	103	97	88	90	74	102
75°	41	38	36	34	38	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°	503.3	503.3	503.3	503.3	503.3
2.5°	499.8	499.8	499.8	499.2	499.2
5°	494.5	494.0	494.0	493.4	493.4
7.5°	490.5	489.9	489.3	488.7	487.6
10°	484.7	484.7	484.1	481.2	480.6
12.5°	475.3	474.8	472.4	468.4	467.2
15°	462.5	462.5	457.9	453.2	451.5
17.5°	448.6	448.0	442.2	437.5	435.2
20°	433.5	432.3	426.5	418.9	414.8
22.5°	416.6	416.6	409.6	399.7	395.6
25°	400.9	398.5	392.1	378.2	367.7
27.5°	382.8	379.3	372.4	352.6	340.4
30°	363.1	361.3	351.4	325.8	316.5
32.5°	344.4	341.5	331.1	304.3	296.7
35°	325.2	322.9	307.2	283.9	276.9
37.5°	306.0	303.1	283.3	264.7	256.0
40°	286.8	283.3	261.8	244.9	235.6
42.5°	268.8	264.1	243.2	225.2	214.7
45°	249.6	244.4	223.4	204.8	196.7
47.5°	230.4	225.7	206.5	187.3	178.0
50°	210.0	206.0	188.5	169.3	159.4
52.5°	193.2	186.8	169.9	150.7	142.5
55°	173.4	168.1	152.4	134.4	127.4
57.5°	155.3	150.1	135.6	118.7	112.9
60°	138.5	130.9	118.7	104.1	99.5
62.5°	119.9	114.0	103.6	91.3	97.2
65°	103.0	97.2	87.9	89.6	74.5
67.5°	84.4	81.5	73.3	65.2	62.8
70°	68.7	65.2	62.3	53.5	51.2
72.5°	54.7	51.2	47.1	42.5	40.7
75°	41.3	38.4	36.1	34.3	37.8
77.5°	28.5	27.3	25.6	23.9	23.3
80°	18.6	18.0	17.5	16.9	16.3
82.5°	11.1	11.1	11.1	11.1	11.1
85°	5.8	6.4	7.0	7.6	8.1
87.5°	3.5	3.5	4.1	4.7	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)