

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: P560426

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-93-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560426  
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-LD4-2LO-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

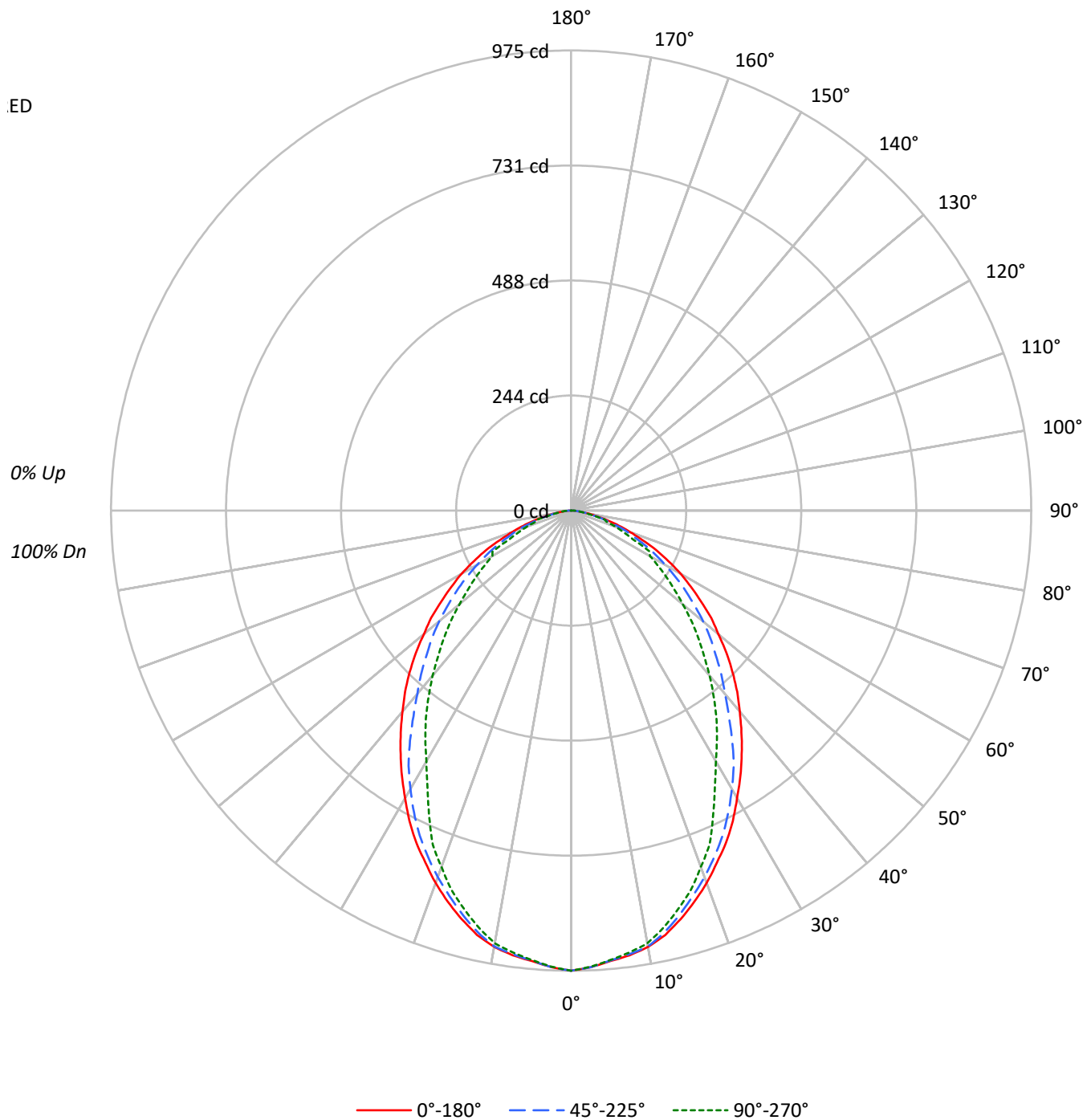
Lumens per Lamp: N/A  
Luminaire Lumens: 1914.0 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																												
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°	5247	5247	5247
5°	5176	5170	5164
10°	5131	5125	5088
15°	4993	4943	4874
20°	4809	4732	4603
25°	4612	4511	4230
30°	4371	4231	3811
35°	4140	3910	3525
40°	3904	3563	3207
45°	3680	3294	2900
50°	3407	3058	2586
55°	3152	2771	2316
60°	2888	2475	2074
65°	2541	2167	1838
70°	2093	1898	1561
75°	1664	1454	1524
80°	1119	1048	979
85°	698	834	976

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3680 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.8	4.7
10°-20°	249.1	13.0
20°-30°	344.8	18.0
30°-40°	367.7	19.2
40°-50°	335.4	17.5
50°-60°	262.8	13.7
60°-70°	171.3	8.9
70°-80°	75.9	4.0
80°-90°	16.3	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°	684.7	35.8
0°-40°	1052.3	55.0
0°-60°	1650.5	86.2
0°-90°	1914.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1914.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	975	975	975	975	975	
5°	958	957	957	956	956	91
15°	896	896	887	878	875	252
25°	777	772	760	733	712	357
35°	630	626	595	550	536	394
45°	484	473	433	397	381	372
55°	336	326	295	260	247	301
65°	200	188	170	174	144	197
75°	80	74	70	66	73	86
85°	11	12	14	15	16	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	975.0	975.0	975.0	975.0	975.0
2.5°	968.2	968.2	968.2	967.1	967.1
5°	958.1	956.9	956.9	955.8	955.8
7.5°	950.2	949.0	947.9	946.8	944.5
10°	938.9	938.9	937.8	932.1	931.0
12.5°	920.9	919.7	915.2	907.3	905.1
15°	896.1	896.1	887.1	878.0	874.7
17.5°	869.0	867.9	856.6	847.6	843.1
20°	839.7	837.5	826.2	811.5	803.6
22.5°	807.0	807.0	793.5	774.3	766.4
25°	776.6	772.1	759.7	732.6	712.3
27.5°	741.7	734.9	721.4	683.0	659.4
30°	703.3	699.9	680.8	631.2	613.2
32.5°	667.3	661.6	641.3	589.5	574.8
35°	630.1	625.6	595.1	550.0	536.5
37.5°	592.9	587.2	548.9	512.8	495.9
40°	555.7	548.9	507.2	474.5	456.5
42.5°	520.7	511.7	471.1	436.2	415.9
45°	483.5	473.4	432.8	396.7	381.0
47.5°	446.3	437.3	400.1	362.9	344.9
50°	406.9	399.0	365.2	328.0	308.8
52.5°	374.2	361.8	329.1	291.9	276.1
55°	335.9	325.7	295.3	260.4	246.8
57.5°	300.9	290.8	262.6	229.9	218.7
60°	268.3	253.6	229.9	201.8	192.7
62.5°	232.2	220.9	200.6	177.0	188.2
65°	199.5	188.2	170.2	173.6	144.3
67.5°	163.4	157.8	142.0	126.2	121.7
70°	133.0	126.2	120.6	103.7	99.2
72.5°	106.0	99.2	91.3	82.3	78.9
75°	80.0	74.4	69.9	66.5	73.3
77.5°	55.2	53.0	49.6	46.2	45.1
80°	36.1	34.9	33.8	32.7	31.6
82.5°	21.4	21.4	21.4	21.4	21.4
85°	11.3	12.4	13.5	14.7	15.8
87.5°	6.8	6.8	7.9	9.0	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)