

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: P559900

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-82-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559900  
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-40-UNV-82-96-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

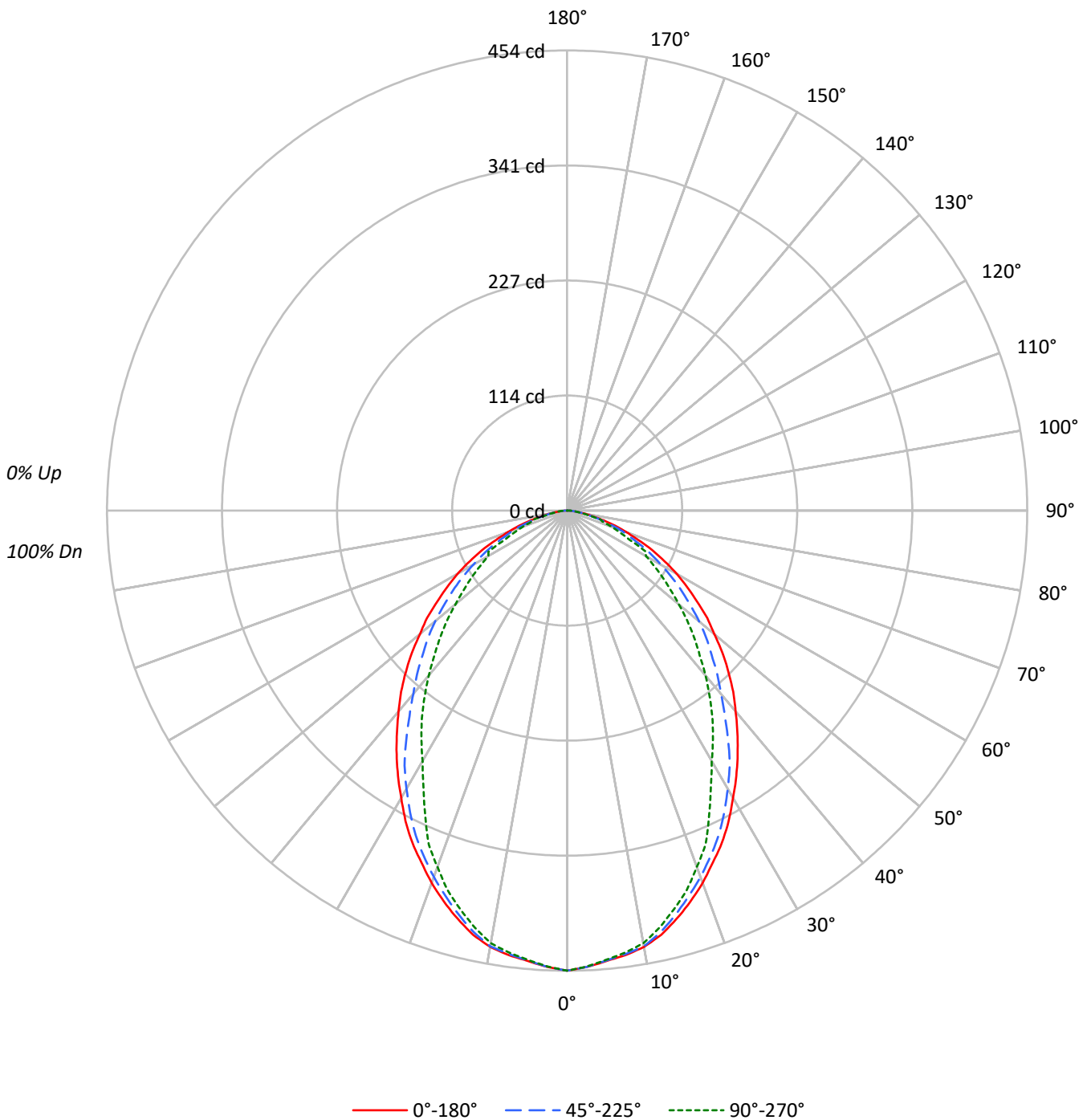
Lumens per Lamp: N/A  
Luminaire Lumens: 891.0 lumens  
Efficiency: N/A  
Efficacy: 76.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2443	2443	2443
5°	2410	2407	2404
10°	2389	2385	2369
15°	2324	2301	2269
20°	2239	2203	2143
25°	2147	2100	1969
30°	2035	1969	1774
35°	1927	1820	1641
40°	1818	1659	1493
45°	1713	1534	1349
50°	1586	1423	1204
55°	1468	1290	1078
60°	1344	1152	966
65°	1183	1009	856
70°	974	883	727
75°	776	676	709
80°	521	487	456
85°	321	389	451

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1713 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.2	4.7
10°-20°	115.9	13.0
20°-30°	160.5	18.0
30°-40°	171.2	19.2
40°-50°	156.2	17.5
50°-60°	122.3	13.7
60°-70°	79.7	8.9
70°-80°	35.3	4.0
80°-90°	7.6	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°	318.7	35.8
0°-40°	489.9	55.0
0°-60°	768.4	86.2
0°-90°	891.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	891.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	454	454	454	454	454	
5°	446	446	446	445	445	42
15°	417	417	413	409	407	117
25°	362	359	354	341	332	166
35°	293	291	277	256	250	183
45°	225	220	202	185	177	173
55°	156	152	138	121	115	140
65°	93	88	79	81	67	92
75°	37	35	32	31	34	40
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	453.9	453.9	453.9	453.9	453.9
2.5°	450.7	450.7	450.7	450.2	450.2
5°	446.0	445.5	445.5	444.9	444.9
7.5°	442.3	441.8	441.3	440.7	439.7
10°	437.1	437.1	436.5	433.9	433.4
12.5°	428.7	428.2	426.1	422.4	421.3
15°	417.1	417.1	412.9	408.7	407.2
17.5°	404.5	404.0	398.8	394.6	392.5
20°	390.9	389.9	384.6	377.8	374.1
22.5°	375.7	375.7	369.4	360.5	356.8
25°	361.5	359.4	353.6	341.1	331.6
27.5°	345.3	342.1	335.8	318.0	306.9
30°	327.4	325.8	316.9	293.8	285.4
32.5°	310.6	308.0	298.6	274.4	267.6
35°	293.3	291.2	277.0	256.1	249.8
37.5°	276.0	273.4	255.5	238.7	230.9
40°	258.7	255.5	236.1	220.9	212.5
42.5°	242.4	238.2	219.3	203.1	193.6
45°	225.1	220.4	201.5	184.7	177.3
47.5°	207.8	203.6	186.3	169.0	160.6
50°	189.4	185.7	170.0	152.7	143.8
52.5°	174.2	168.4	153.2	135.9	128.6
55°	156.4	151.6	137.5	121.2	114.9
57.5°	140.1	135.4	122.3	107.0	101.8
60°	124.9	118.1	107.0	93.9	89.7
62.5°	108.1	102.8	93.4	82.4	87.6
65°	92.9	87.6	79.2	80.8	67.2
67.5°	76.1	73.5	66.1	58.8	56.7
70°	61.9	58.8	56.1	48.3	46.2
72.5°	49.3	46.2	42.5	38.3	36.7
75°	37.3	34.6	32.5	31.0	34.1
77.5°	25.7	24.7	23.1	21.5	21.0
80°	16.8	16.3	15.7	15.2	14.7
82.5°	10.0	10.0	10.0	10.0	10.0
85°	5.2	5.8	6.3	6.8	7.3
87.5°	3.1	3.1	3.7	4.2	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)