

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: P559915

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559915  
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-93-94-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

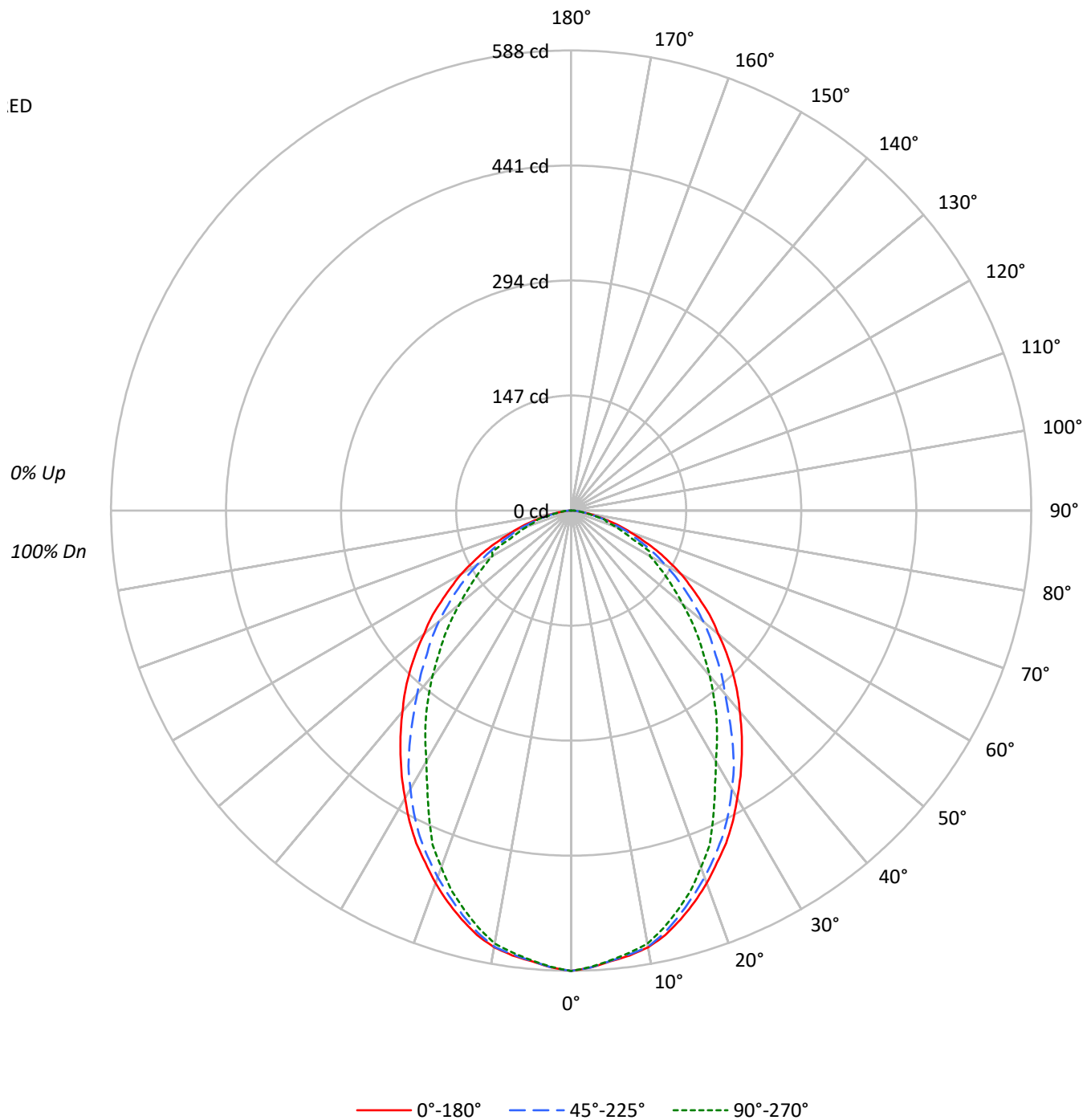
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1155.0 lumens  
Efficiency: N/A  
Efficacy: 98.7 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	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°	3166	3166	3166
5°	3123	3120	3116
10°	3096	3093	3070
15°	3013	2983	2941
20°	2902	2856	2778
25°	2783	2722	2553
30°	2637	2553	2299
35°	2498	2359	2127
40°	2356	2151	1936
45°	2221	1988	1750
50°	2056	1845	1561
55°	1902	1672	1398
60°	1743	1494	1252
65°	1533	1308	1109
70°	1264	1146	943
75°	1004	878	919
80°	676	632	589
85°	420	506	587

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2221 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.8	4.7
10°-20°	150.3	13.0
20°-30°	208.1	18.0
30°-40°	221.9	19.2
40°-50°	202.4	17.5
50°-60°	158.6	13.7
60°-70°	103.4	8.9
70°-80°	45.8	4.0
80°-90°	9.8	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°	413.2	35.8
0°-40°	635.0	55.0
0°-60°	996.0	86.2
0°-90°	1155.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1155.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	588	588	588	588	588	
5°	578	578	578	577	577	55
15°	541	541	535	530	528	152
25°	469	466	458	442	430	215
35°	380	378	359	332	324	238
45°	292	286	261	239	230	225
55°	203	197	178	157	149	182
65°	120	114	103	105	87	119
75°	48	45	42	40	44	52
85°	7	8	8	9	10	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	588.3	588.3	588.3	588.3	588.3
2.5°	584.3	584.3	584.3	583.6	583.6
5°	578.1	577.5	577.5	576.8	576.8
7.5°	573.4	572.7	572.0	571.3	570.0
10°	566.6	566.6	565.9	562.5	561.8
12.5°	555.7	555.0	552.3	547.5	546.2
15°	540.7	540.7	535.3	529.8	527.8
17.5°	524.4	523.7	516.9	511.5	508.8
20°	506.7	505.4	498.6	489.7	485.0
22.5°	487.0	487.0	478.8	467.3	462.5
25°	468.6	465.9	458.4	442.1	429.9
27.5°	447.5	443.5	435.3	412.2	397.9
30°	424.4	422.4	410.8	380.9	370.0
32.5°	402.7	399.3	387.0	355.7	346.9
35°	380.2	377.5	359.1	331.9	323.8
37.5°	357.8	354.4	331.2	309.5	299.3
40°	335.3	331.2	306.1	286.3	275.5
42.5°	314.2	308.8	284.3	263.2	251.0
45°	291.8	285.7	261.2	239.4	229.9
47.5°	269.3	263.9	241.5	219.0	208.1
50°	245.5	240.8	220.4	197.9	186.4
52.5°	225.8	218.3	198.6	176.2	166.6
55°	202.7	196.6	178.2	157.1	149.0
57.5°	181.6	175.5	158.5	138.8	132.0
60°	161.9	153.0	138.8	121.7	116.3
62.5°	140.1	133.3	121.1	106.8	113.6
65°	120.4	113.6	102.7	104.7	87.1
67.5°	98.6	95.2	85.7	76.2	73.5
70°	80.3	76.2	72.8	62.6	59.9
72.5°	63.9	59.9	55.1	49.7	47.6
75°	48.3	44.9	42.2	40.1	44.2
77.5°	33.3	32.0	29.9	27.9	27.2
80°	21.8	21.1	20.4	19.7	19.0
82.5°	12.9	12.9	12.9	12.9	12.9
85°	6.8	7.5	8.2	8.8	9.5
87.5°	4.1	4.1	4.8	5.4	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)