

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: P559917

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-93-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559917  
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-93-96-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

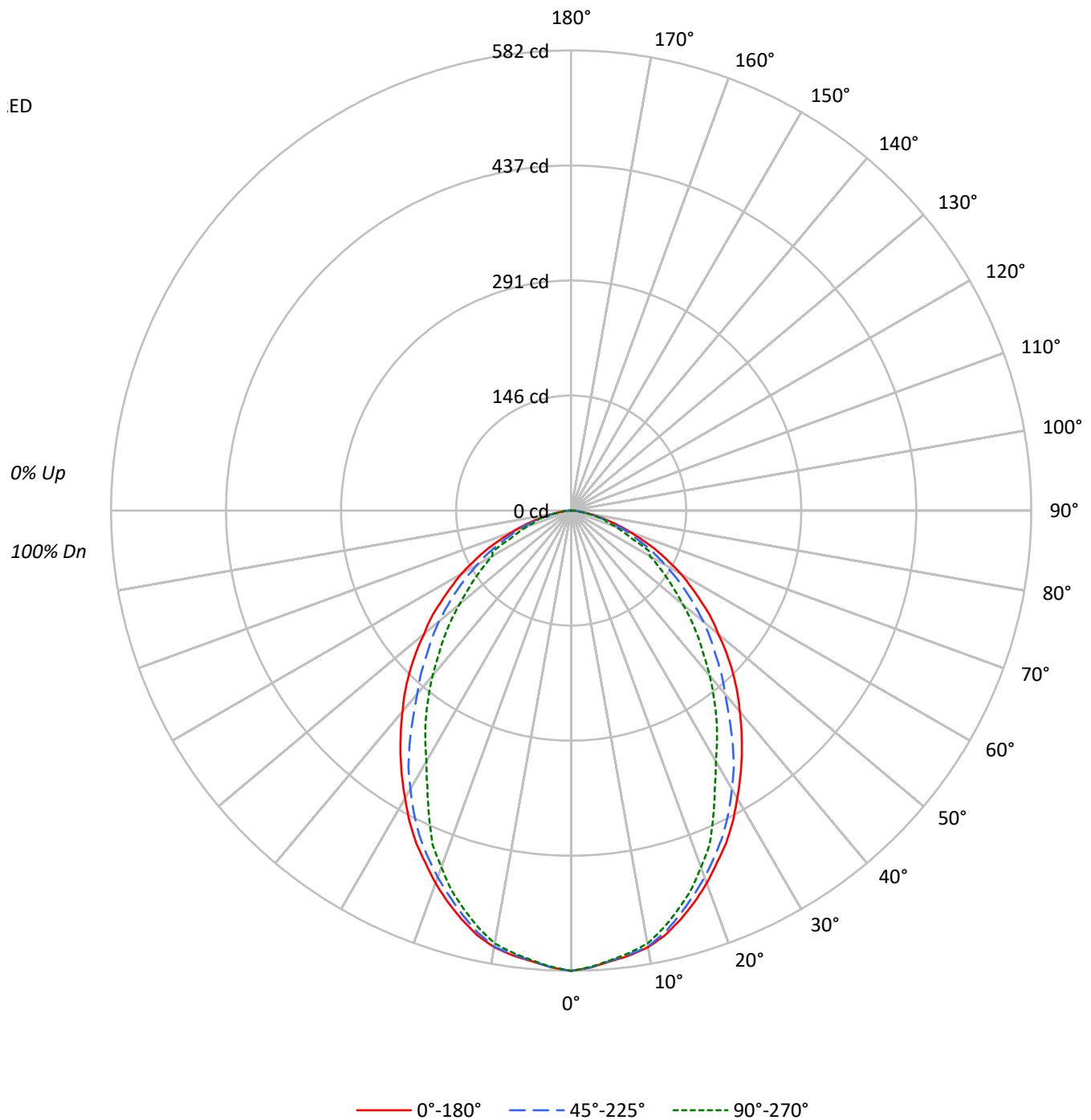
Lumens per Lamp: N/A  
Luminaire Lumens: 1143.0 lumens  
Efficiency: N/A  
Efficacy: 97.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3133	3133	3133
5°	3091	3088	3084
10°	3064	3060	3039
15°	2981	2951	2910
20°	2872	2826	2749
25°	2754	2694	2526
30°	2610	2527	2276
35°	2472	2335	2105
40°	2331	2128	1915
45°	2198	1968	1732
50°	2035	1826	1544
55°	1882	1655	1383
60°	1724	1478	1239
65°	1517	1294	1098
70°	1249	1133	932
75°	994	867	911
80°	666	626	583
85°	414	500	580

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2198 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.2	4.7
10°-20°	148.7	13.0
20°-30°	205.9	18.0
30°-40°	219.6	19.2
40°-50°	200.3	17.5
50°-60°	156.9	13.7
60°-70°	102.3	8.9
70°-80°	45.3	4.0
80°-90°	9.7	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°	408.9	35.8
0°-40°	628.4	55.0
0°-60°	985.7	86.2
0°-90°	1143.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1143.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	582	582	582	582	582	
5°	572	572	572	571	571	54
15°	535	535	530	524	522	150
25°	464	461	454	438	425	213
35°	376	374	355	328	320	235
45°	289	283	258	237	228	222
55°	201	194	176	156	147	180
65°	119	112	102	104	86	117
75°	48	44	42	40	44	51
85°	7	7	8	9	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	582.2	582.2	582.2	582.2	582.2
2.5°	578.2	578.2	578.2	577.5	577.5
5°	572.1	571.5	571.5	570.8	570.8
7.5°	567.4	566.7	566.1	565.4	564.1
10°	560.7	560.7	560.0	556.7	556.0
12.5°	549.9	549.2	546.6	541.8	540.5
15°	535.1	535.1	529.7	524.3	522.3
17.5°	519.0	518.3	511.6	506.2	503.5
20°	501.5	500.1	493.4	484.6	479.9
22.5°	481.9	481.9	473.9	462.4	457.7
25°	463.8	461.1	453.7	437.5	425.4
27.5°	442.9	438.9	430.8	407.9	393.8
30°	420.0	418.0	406.6	376.9	366.2
32.5°	398.5	395.1	383.0	352.0	343.3
35°	376.3	373.6	355.4	328.5	320.4
37.5°	354.0	350.7	327.8	306.3	296.2
40°	331.8	327.8	302.9	283.4	272.6
42.5°	311.0	305.6	281.4	260.5	248.4
45°	288.8	282.7	258.5	236.9	227.5
47.5°	266.5	261.2	238.9	216.7	206.0
50°	243.0	238.3	218.1	195.9	184.4
52.5°	223.5	216.1	196.5	174.3	164.9
55°	200.6	194.5	176.4	155.5	147.4
57.5°	179.7	173.7	156.8	137.3	130.6
60°	160.2	151.4	137.3	120.5	115.1
62.5°	138.7	131.9	119.8	105.7	112.4
65°	119.1	112.4	101.6	103.7	86.2
67.5°	97.6	94.2	84.8	75.4	72.7
70°	79.4	75.4	72.0	61.9	59.2
72.5°	63.3	59.2	54.5	49.1	47.1
75°	47.8	44.4	41.7	39.7	43.8
77.5°	33.0	31.6	29.6	27.6	26.9
80°	21.5	20.9	20.2	19.5	18.8
82.5°	12.8	12.8	12.8	12.8	12.8
85°	6.7	7.4	8.1	8.8	9.4
87.5°	4.0	4.0	4.7	5.4	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)