

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: P559911

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559911  
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-93-87-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

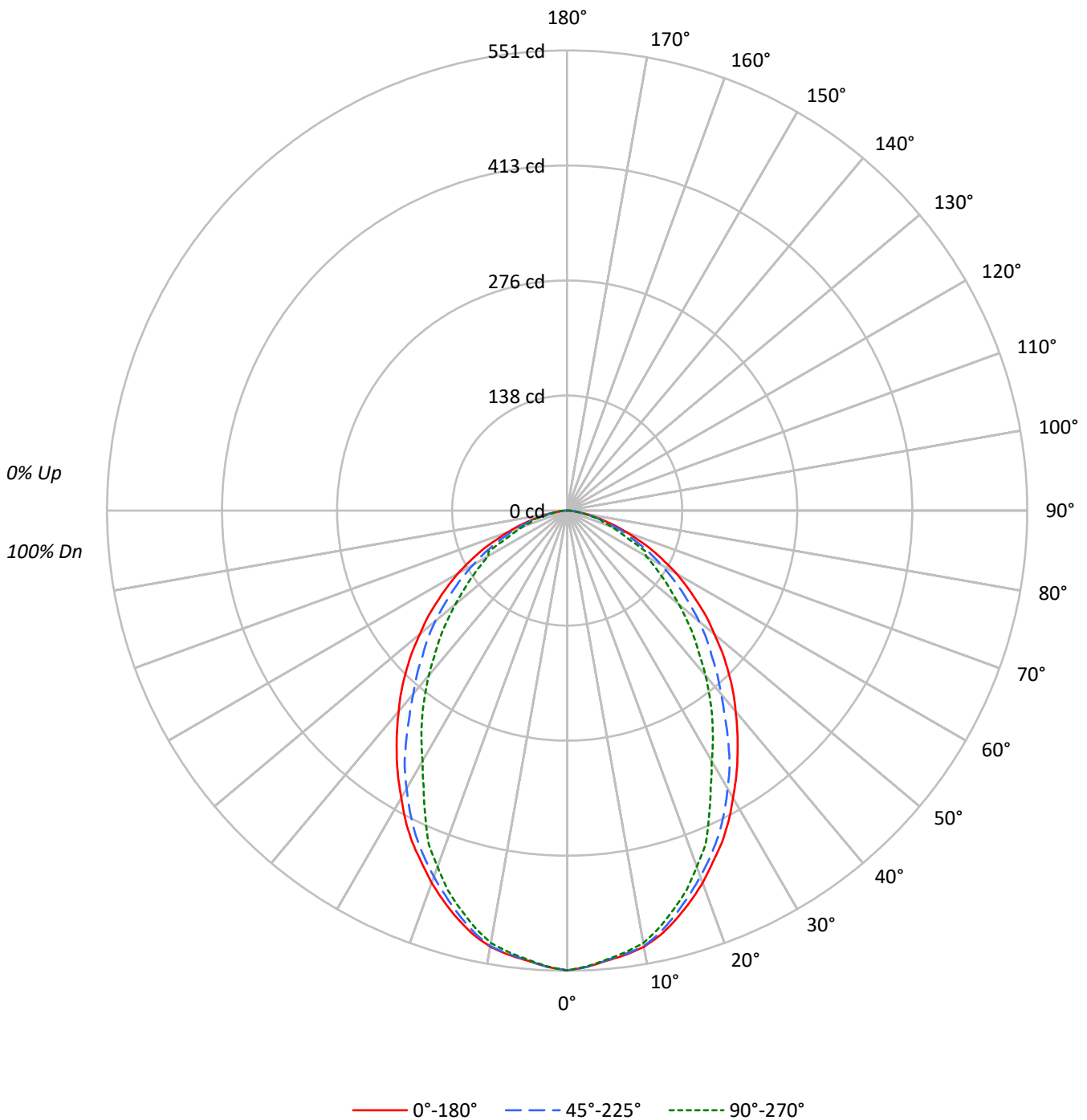
Lumens per Lamp: N/A  
Luminaire Lumens: 1081.0 lumens  
Efficiency: N/A  
Efficacy: 92.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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					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°	2963	2963	2963
5°	2923	2920	2916
10°	2898	2894	2873
15°	2820	2791	2752
20°	2716	2672	2600
25°	2605	2548	2389
30°	2468	2389	2152
35°	2338	2208	1991
40°	2205	2013	1811
45°	2079	1860	1638
50°	1924	1727	1460
55°	1780	1565	1308
60°	1631	1398	1172
65°	1435	1224	1038
70°	1182	1072	881
75°	940	821	861
80°	632	592	552
85°	395	469	550

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2079 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.3	4.7
10°-20°	140.7	13.0
20°-30°	194.8	18.0
30°-40°	207.7	19.2
40°-50°	189.5	17.5
50°-60°	148.4	13.7
60°-70°	96.7	8.9
70°-80°	42.9	4.0
80°-90°	9.2	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°	386.7	35.8
0°-40°	594.4	55.0
0°-60°	932.2	86.2
0°-90°	1081.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1081.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	551	551	551	551	551	
5°	541	540	540	540	540	51
15°	506	506	501	496	494	142
25°	439	436	429	414	402	201
35°	356	353	336	311	303	222
45°	273	267	244	224	215	210
55°	190	184	167	147	139	170
65°	113	106	96	98	82	111
75°	45	42	40	38	41	48
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	550.6	550.6	550.6	550.6	550.6
2.5°	546.8	546.8	546.8	546.2	546.2
5°	541.1	540.5	540.5	539.8	539.8
7.5°	536.6	536.0	535.4	534.7	533.5
10°	530.3	530.3	529.6	526.5	525.8
12.5°	520.1	519.5	516.9	512.5	511.2
15°	506.1	506.1	501.0	495.9	494.0
17.5°	490.8	490.2	483.8	478.7	476.2
20°	474.3	473.0	466.6	458.3	453.9
22.5°	455.8	455.8	448.2	437.3	432.9
25°	438.6	436.1	429.1	413.8	402.3
27.5°	418.9	415.1	407.4	385.8	372.4
30°	397.2	395.3	384.5	356.5	346.3
32.5°	376.9	373.7	362.2	332.9	324.7
35°	355.9	353.3	336.1	310.7	303.0
37.5°	334.8	331.7	310.0	289.6	280.1
40°	313.8	310.0	286.5	268.0	257.8
42.5°	294.1	289.0	266.1	246.4	234.9
45°	273.1	267.4	244.4	224.1	215.2
47.5°	252.1	247.0	226.0	205.0	194.8
50°	229.8	225.4	206.3	185.2	174.4
52.5°	211.3	204.3	185.9	164.9	156.0
55°	189.7	184.0	166.8	147.1	139.4
57.5°	170.0	164.2	148.3	129.9	123.5
60°	151.5	143.2	129.9	113.9	108.9
62.5°	131.1	124.8	113.3	99.9	106.3
65°	112.7	106.3	96.1	98.0	81.5
67.5°	92.3	89.1	80.2	71.3	68.8
70°	75.1	71.3	68.1	58.6	56.0
72.5°	59.8	56.0	51.6	46.5	44.6
75°	45.2	42.0	39.5	37.6	41.4
77.5°	31.2	29.9	28.0	26.1	25.5
80°	20.4	19.7	19.1	18.5	17.8
82.5°	12.1	12.1	12.1	12.1	12.1
85°	6.4	7.0	7.6	8.3	8.9
87.5°	3.8	3.8	4.5	5.1	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)