

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: P559902

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-82-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559902  
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-82-97-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

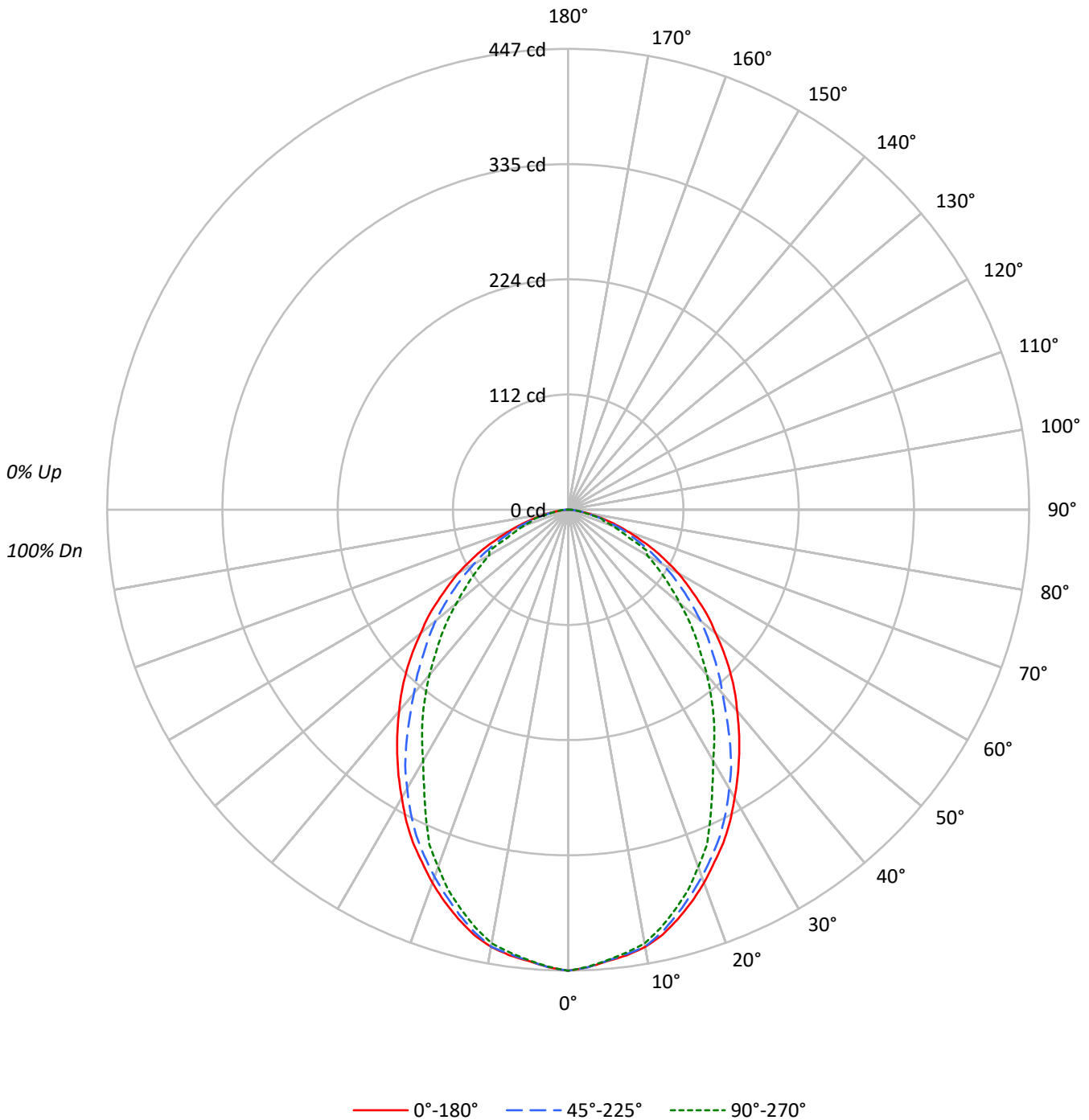
Lumens per Lamp: N/A  
Luminaire Lumens: 878.0 lumens  
Efficiency: N/A  
Efficacy: 75.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	2407	2407	2407
5°	2374	2372	2369
10°	2354	2351	2334
15°	2290	2267	2235
20°	2206	2171	2112
25°	2115	2070	1941
30°	2005	1941	1748
35°	1899	1794	1617
40°	1791	1635	1471
45°	1688	1511	1330
50°	1563	1402	1186
55°	1446	1271	1062
60°	1325	1136	952
65°	1165	995	843
70°	960	870	716
75°	763	667	699
80°	511	480	449
85°	321	383	445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1688 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.6	4.7
10°-20°	114.3	13.0
20°-30°	158.2	18.0
30°-40°	168.7	19.2
40°-50°	153.9	17.5
50°-60°	120.6	13.7
60°-70°	78.6	8.9
70°-80°	34.8	4.0
80°-90°	7.5	0.8
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°	314.1	35.8
0°-40°	482.7	55.0
0°-60°	757.2	86.2
0°-90°	878.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	878.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	447	447	447	447	447	
5°	440	439	439	438	438	42
15°	411	411	407	403	401	116
25°	356	354	348	336	327	164
35°	289	287	273	252	246	181
45°	222	217	198	182	175	171
55°	154	149	136	119	113	138
65°	92	86	78	80	66	90
75°	37	34	32	30	34	39
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°	447.2	447.2	447.2	447.2	447.2
2.5°	444.1	444.1	444.1	443.6	443.6
5°	439.5	439.0	439.0	438.5	438.5
7.5°	435.9	435.3	434.8	434.3	433.3
10°	430.7	430.7	430.2	427.6	427.1
12.5°	422.4	421.9	419.8	416.2	415.2
15°	411.0	411.0	406.9	402.8	401.2
17.5°	398.6	398.1	393.0	388.8	386.7
20°	385.2	384.2	379.0	372.3	368.7
22.5°	370.2	370.2	364.0	355.2	351.6
25°	356.2	354.2	348.5	336.1	326.8
27.5°	340.2	337.1	330.9	313.3	302.5
30°	322.6	321.1	312.3	289.5	281.3
32.5°	306.1	303.5	294.2	270.4	263.7
35°	289.0	287.0	273.0	252.3	246.1
37.5°	272.0	269.4	251.8	235.3	227.5
40°	254.9	251.8	232.7	217.7	209.4
42.5°	238.9	234.7	216.1	200.1	190.8
45°	221.8	217.2	198.5	182.0	174.8
47.5°	204.7	200.6	183.5	166.5	158.2
50°	186.7	183.0	167.5	150.5	141.7
52.5°	171.7	166.0	151.0	133.9	126.7
55°	154.1	149.4	135.5	119.4	113.2
57.5°	138.1	133.4	120.5	105.5	100.3
60°	123.1	116.3	105.5	92.6	88.4
62.5°	106.5	101.3	92.0	81.2	86.3
65°	91.5	86.3	78.1	79.6	66.2
67.5°	75.0	72.4	65.1	57.9	55.8
70°	61.0	57.9	55.3	47.6	45.5
72.5°	48.6	45.5	41.9	37.7	36.2
75°	36.7	34.1	32.1	30.5	33.6
77.5°	25.3	24.3	22.7	21.2	20.7
80°	16.5	16.0	15.5	15.0	14.5
82.5°	9.8	9.8	9.8	9.8	9.8
85°	5.2	5.7	6.2	6.7	7.2
87.5°	3.1	3.1	3.6	4.1	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)