

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: P559322

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559322  
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-12-1-LD4-2LO-40-UNV-82-94-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

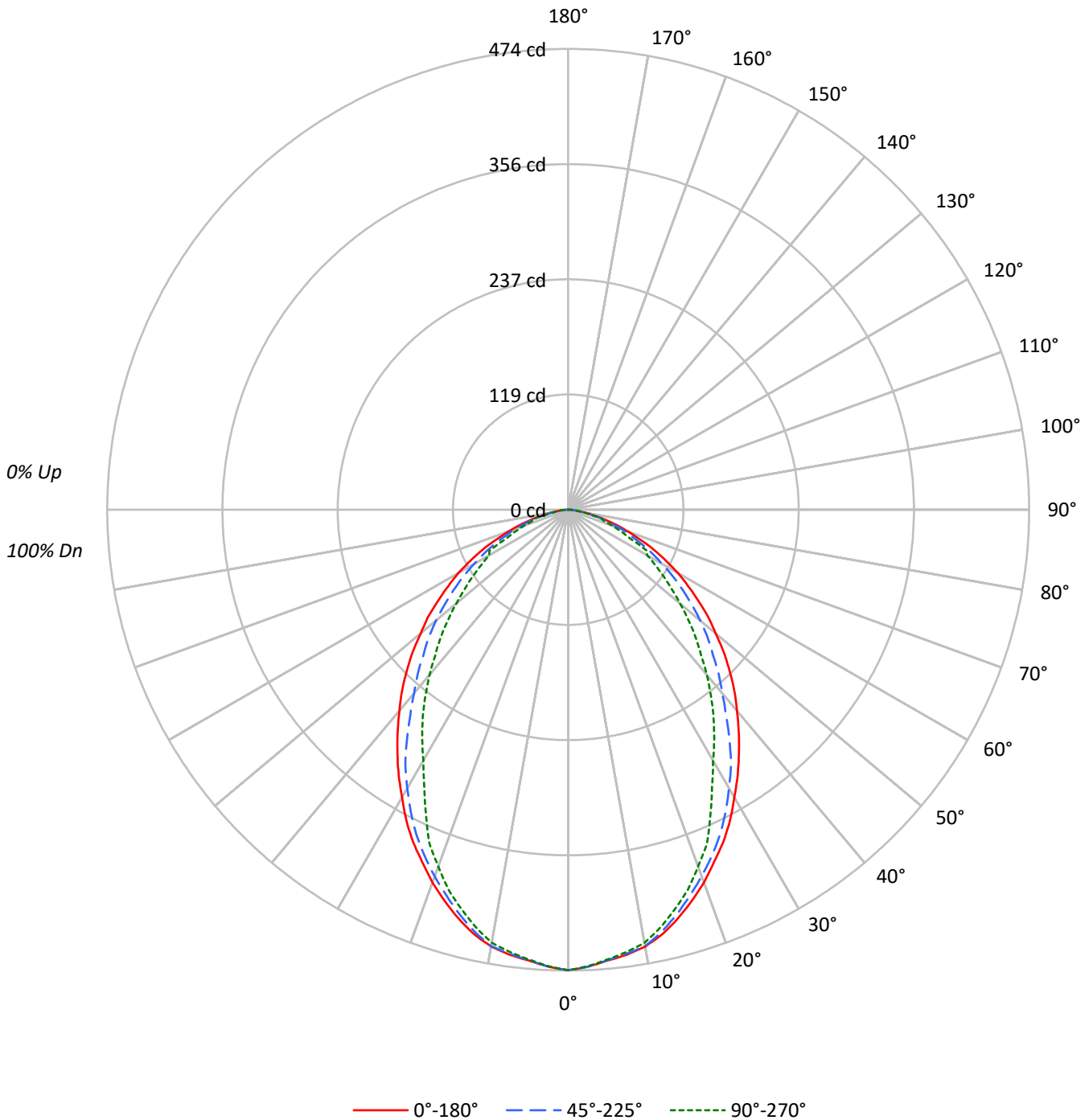
Lumens per Lamp: N/A  
Luminaire Lumens: 930.0 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5099	5099	5099
5°	5030	5024	5018
10°	4986	4981	4945
15°	4852	4803	4736
20°	4674	4598	4473
25°	4481	4384	4111
30°	4247	4112	3703
35°	4022	3800	3426
40°	3794	3462	3117
45°	3576	3201	2818
50°	3311	2971	2514
55°	3063	2693	2250
60°	2805	2405	2017
65°	2468	2106	1785
70°	2033	1844	1517
75°	1618	1414	1481
80°	1085	1017	948
85°	679	815	951

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3576 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.1	4.7
10°-20°	121.0	13.0
20°-30°	167.5	18.0
30°-40°	178.7	19.2
40°-50°	163.0	17.5
50°-60°	127.7	13.7
60°-70°	83.2	8.9
70°-80°	36.9	4.0
80°-90°	7.9	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°	332.7	35.8
0°-40°	511.3	55.0
0°-60°	802.0	86.2
0°-90°	930.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	930.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	474	474	474	474	474	
5°	466	465	465	464	464	44
15°	435	435	431	427	425	122
25°	377	375	369	356	346	173
35°	306	304	289	267	261	191
45°	235	230	210	193	185	181
55°	163	158	144	126	120	146
65°	97	92	83	84	70	96
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	473.7	473.7	473.7	473.7	473.7
2.5°	470.4	470.4	470.4	469.9	469.9
5°	465.5	465.0	465.0	464.4	464.4
7.5°	461.7	461.1	460.6	460.0	458.9
10°	456.2	456.2	455.7	452.9	452.4
12.5°	447.4	446.9	444.7	440.9	439.8
15°	435.4	435.4	431.0	426.6	425.0
17.5°	422.2	421.7	416.2	411.8	409.7
20°	408.0	406.9	401.4	394.3	390.5
22.5°	392.1	392.1	385.6	376.2	372.4
25°	377.3	375.2	369.1	356.0	346.1
27.5°	360.4	357.1	350.5	331.9	320.4
30°	341.7	340.1	330.8	306.7	297.9
32.5°	324.2	321.5	311.6	286.4	279.3
35°	306.1	304.0	289.2	267.3	260.7
37.5°	288.1	285.3	266.7	249.2	241.0
40°	270.0	266.7	246.4	230.6	221.8
42.5°	253.0	248.6	228.9	211.9	202.1
45°	234.9	230.0	210.3	192.8	185.1
47.5°	216.9	212.5	194.4	176.3	167.6
50°	197.7	193.9	177.4	159.4	150.1
52.5°	181.8	175.8	159.9	141.8	134.2
55°	163.2	158.3	143.5	126.5	119.9
57.5°	146.2	141.3	127.6	111.7	106.2
60°	130.3	123.2	111.7	98.0	93.7
62.5°	112.8	107.3	97.5	86.0	91.5
65°	96.9	91.5	82.7	84.3	70.1
67.5°	79.4	76.7	69.0	61.3	59.1
70°	64.6	61.3	58.6	50.4	48.2
72.5°	51.5	48.2	44.4	40.0	38.3
75°	38.9	36.1	34.0	32.3	35.6
77.5°	26.8	25.7	24.1	22.5	21.9
80°	17.5	17.0	16.4	15.9	15.3
82.5°	10.4	10.4	10.4	10.4	10.4
85°	5.5	6.0	6.6	7.1	7.7
87.5°	3.3	3.3	3.8	4.4	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)