

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: P560462

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-81-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560462  
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-LD4-2LO-40-UNV-81-97-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

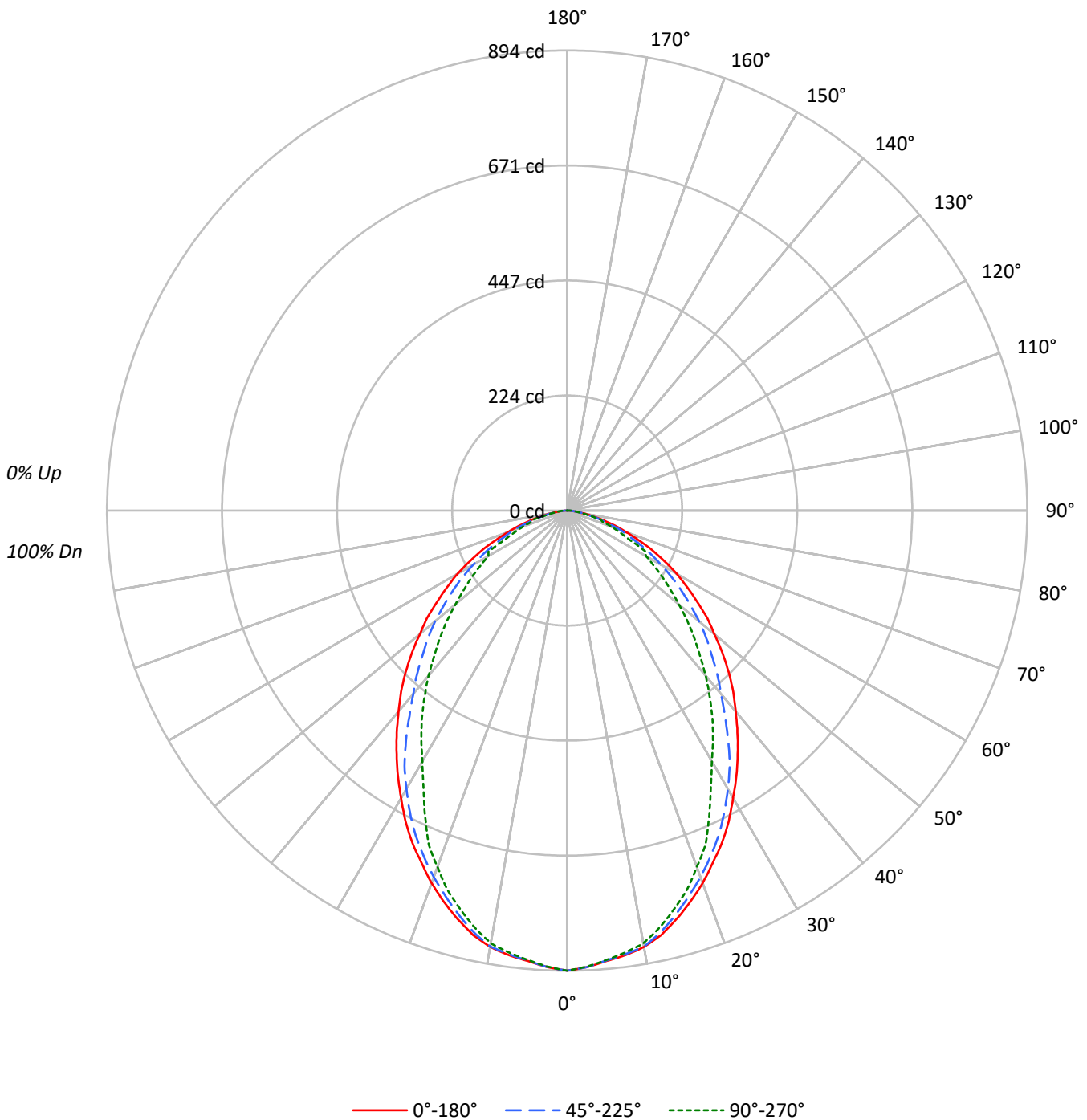
Lumens per Lamp: N/A  
Luminaire Lumens: 1755.0 lumens  
Efficiency: N/A  
Efficacy: 75.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4811	4811	4811
5°	4746	4740	4735
10°	4705	4699	4665
15°	4578	4532	4469
20°	4410	4339	4220
25°	4229	4137	3879
30°	4008	3879	3494
35°	3796	3585	3232
40°	3580	3268	2941
45°	3375	3021	2659
50°	3124	2804	2371
55°	2890	2541	2123
60°	2648	2269	1902
65°	2329	1988	1685
70°	1920	1740	1430
75°	1526	1333	1397
80°	1026	961	896
85°	636	766	895

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3375 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.2	4.7
10°-20°	228.4	13.0
20°-30°	316.2	18.0
30°-40°	337.1	19.2
40°-50°	307.6	17.5
50°-60°	241.0	13.7
60°-70°	157.1	8.9
70°-80°	69.6	4.0
80°-90°	14.9	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°	627.8	35.8
0°-40°	964.9	55.0
0°-60°	1513.5	86.2
0°-90°	1755.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1755.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	878	877	877	876	876	83
15°	822	822	813	805	802	231
25°	712	708	697	672	653	327
35°	578	574	546	504	492	361
45°	443	434	397	364	349	342
55°	308	299	271	239	226	276
65°	183	173	156	159	132	180
75°	73	68	64	61	67	79
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	894.0	894.0	894.0	894.0	894.0
2.5°	887.8	887.8	887.8	886.7	886.7
5°	878.5	877.4	877.4	876.4	876.4
7.5°	871.2	870.2	869.2	868.1	866.1
10°	860.9	860.9	859.9	854.7	853.7
12.5°	844.4	843.3	839.2	832.0	829.9
15°	821.6	821.6	813.4	805.1	802.0
17.5°	796.8	795.8	785.5	777.2	773.1
20°	770.0	767.9	757.6	744.1	736.9
22.5°	740.0	740.0	727.6	710.0	702.8
25°	712.1	707.9	696.6	671.8	653.2
27.5°	680.0	673.8	661.4	626.3	604.6
30°	644.9	641.8	624.2	578.8	562.2
32.5°	611.8	606.7	588.1	540.5	527.1
35°	577.7	573.6	545.7	504.3	491.9
37.5°	543.6	538.5	503.3	470.2	454.7
40°	509.5	503.3	465.1	435.1	418.6
42.5°	477.5	469.2	432.0	400.0	381.4
45°	443.4	434.1	396.9	363.8	349.3
47.5°	409.3	401.0	366.9	332.8	316.2
50°	373.1	365.9	334.9	300.7	283.2
52.5°	343.1	331.8	301.8	267.7	253.2
55°	308.0	298.7	270.8	238.7	226.3
57.5°	275.9	266.6	240.8	210.8	200.5
60°	246.0	232.5	210.8	185.0	176.7
62.5°	212.9	202.6	184.0	162.3	172.6
65°	182.9	172.6	156.1	159.2	132.3
67.5°	149.9	144.7	130.2	115.8	111.6
70°	122.0	115.8	110.6	95.1	90.9
72.5°	97.1	90.9	83.7	75.4	72.3
75°	73.4	68.2	64.1	61.0	67.2
77.5°	50.6	48.6	45.5	42.4	41.3
80°	33.1	32.0	31.0	30.0	28.9
82.5°	19.6	19.6	19.6	19.6	19.6
85°	10.3	11.4	12.4	13.4	14.5
87.5°	6.2	6.2	7.2	8.3	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)