

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: P589901

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589901
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1HI-40-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2422.0 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

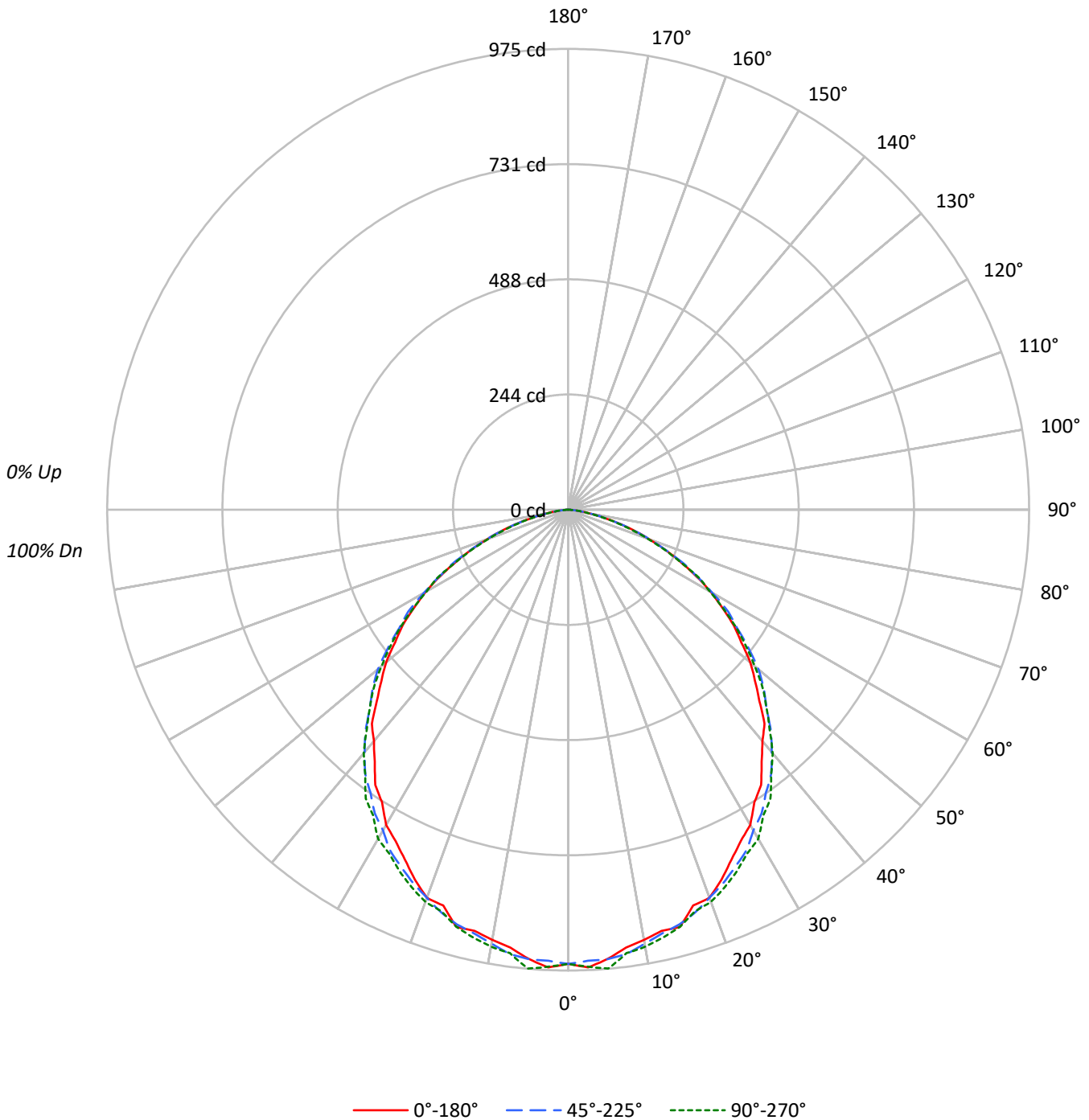
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75					73				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43					41				
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38					36				
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34					32				
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31					29				
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28					26				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2586	2586	2586
5°	2578	2578	2633
10°	2525	2547	2565
15°	2545	2531	2545
20°	2502	2502	2529
25°	2425	2478	2506
30°	2392	2434	2499
35°	2336	2397	2451
40°	2245	2353	2363
45°	2177	2254	2257
50°	2105	2200	2158
55°	2006	2045	2031
60°	1876	1894	1861
65°	1673	1715	1661
70°	1435	1440	1400
75°	1136	1134	1090
80°	761	741	711
85°	414	411	383

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2312 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.4	3.7
10°-20°	256.2	10.6
20°-30°	383.8	15.8
30°-40°	454.9	18.8
40°-50°	455.8	18.8
50°-60°	386.9	16.0
60°-70°	260.8	10.8
70°-80°	114.6	4.7
80°-90°	18.6	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°	730.4	30.2
0°-40°	1185.3	48.9
0°-60°	2028.0	83.7
0°-90°	2422.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2422.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	954	952	954	952	975	90
15°	914	903	909	913	914	255
25°	817	821	835	846	844	378
35°	711	713	730	746	746	441
45°	572	583	592	608	593	442
55°	428	425	436	433	433	380
65°	263	259	269	259	261	261
75°	109	107	109	101	105	117
85°	13	13	13	13	12	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	961.0	961.0	961.0	961.0	961.0
2.5°	969.3	962.0	955.2	963.1	967.9
5°	954.2	951.9	954.5	951.7	974.6
7.5°	934.6	943.1	948.1	945.0	946.3
10°	924.1	921.2	932.2	939.9	938.8
12.5°	913.0	917.4	918.1	926.4	927.1
15°	913.6	903.0	908.6	913.3	913.7
17.5°	878.1	889.5	893.4	904.2	890.8
20°	873.8	865.4	873.8	884.8	883.1
22.5°	847.1	837.8	855.6	865.4	864.8
25°	816.8	821.3	834.7	845.6	843.9
27.5°	790.3	795.5	814.6	829.6	819.9
30°	769.8	767.2	783.3	796.7	804.2
32.5°	733.2	742.6	761.5	774.7	767.7
35°	711.0	713.1	729.6	746.5	746.0
37.5°	672.1	681.9	705.1	709.9	705.5
40°	639.0	648.8	669.8	674.9	672.8
42.5°	614.6	616.3	634.3	640.1	630.8
45°	572.0	582.7	592.4	607.6	593.2
47.5°	535.8	540.7	561.6	565.7	558.1
50°	502.9	504.6	525.6	520.5	515.5
52.5°	461.6	468.9	480.7	479.7	473.9
55°	427.6	424.7	435.9	432.9	432.8
57.5°	386.8	391.7	400.9	396.2	388.6
60°	348.5	348.7	352.0	346.7	345.7
62.5°	306.0	307.5	308.2	301.6	312.3
65°	262.7	259.2	269.4	259.1	260.8
67.5°	222.8	224.6	223.6	217.1	219.6
70°	182.4	184.6	183.0	175.7	177.9
72.5°	145.4	142.7	144.4	135.2	139.5
75°	109.3	107.1	109.1	101.4	104.8
77.5°	74.4	76.2	74.9	70.8	73.2
80°	49.1	47.8	47.8	45.4	45.9
82.5°	28.7	27.3	26.9	26.2	27.3
85°	13.4	13.0	13.3	12.9	12.4
87.5°	4.8	5.0	5.0	4.7	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)