

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: P589910

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589910
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-50-UNV-80-85-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2409.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

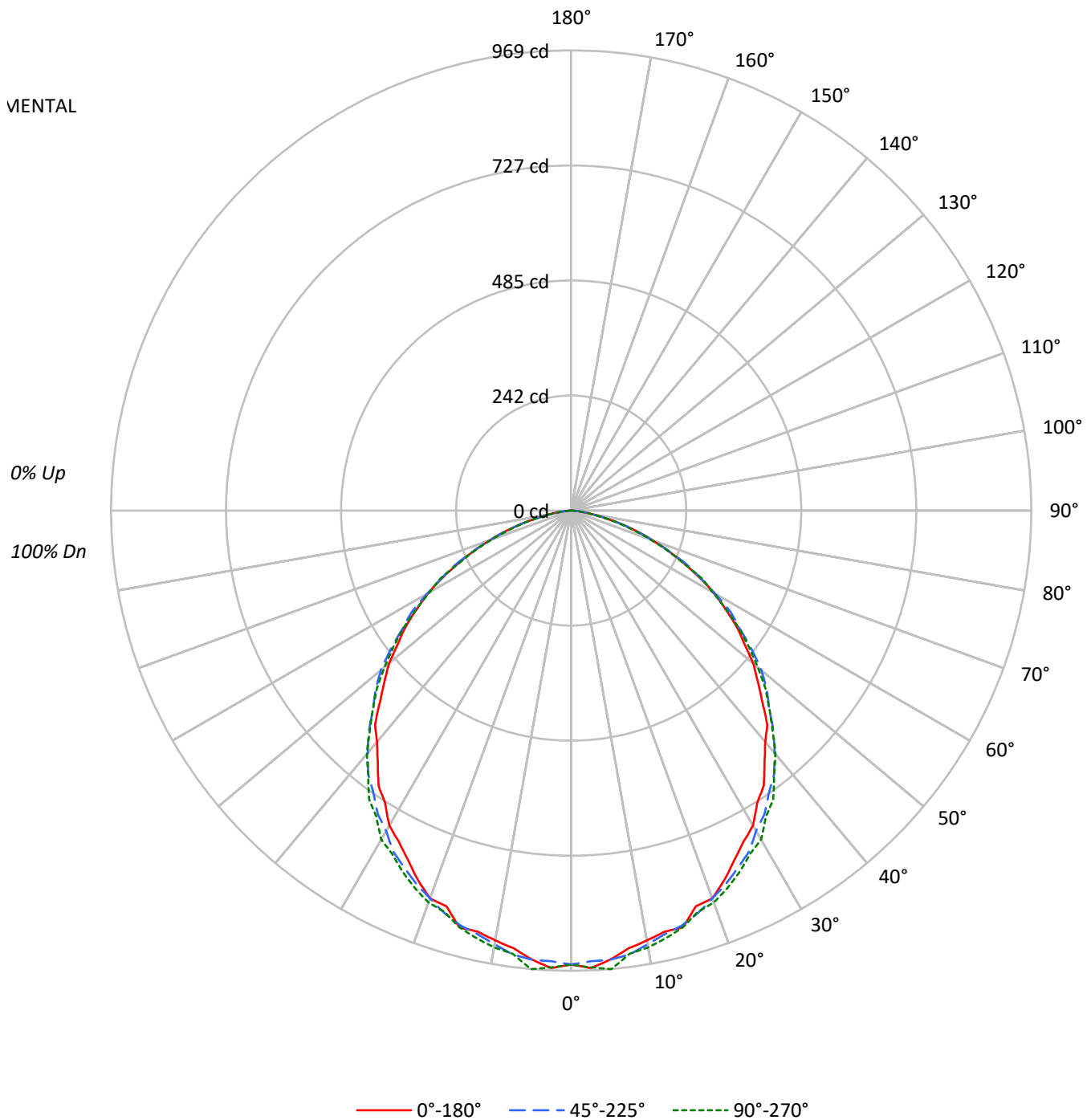
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2572	2572	2572
5°	2563	2565	2619
10°	2512	2534	2551
15°	2532	2518	2532
20°	2489	2489	2515
25°	2412	2465	2492
30°	2379	2421	2485
35°	2323	2384	2438
40°	2233	2340	2350
45°	2165	2242	2245
50°	2094	2189	2147
55°	1995	2034	2020
60°	1866	1884	1850
65°	1664	1706	1652
70°	1427	1432	1393
75°	1130	1128	1084
80°	758	736	708
85°	411	408	380

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2300 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	3.7
10°-20°	254.8	10.6
20°-30°	381.8	15.8
30°-40°	452.5	18.8
40°-50°	453.3	18.8
50°-60°	384.8	16.0
60°-70°	259.4	10.8
70°-80°	114.0	4.7
80°-90°	18.5	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°	726.5	30.2
0°-40°	1179.0	48.9
0°-60°	2017.1	83.7
0°-90°	2409.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2409.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	956	956	956	956	956	
5°	949	947	949	947	969	89
15°	909	898	904	908	909	253
25°	812	817	830	841	839	376
35°	707	709	726	742	742	439
45°	569	580	589	604	590	440
55°	425	422	434	431	430	378
65°	261	258	268	258	259	260
75°	109	106	108	101	104	116
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°	955.8	955.8	955.8	955.8	955.8
2.5°	964.1	956.8	950.0	957.9	962.7
5°	949.0	946.8	949.4	946.6	969.4
7.5°	929.5	938.1	943.0	939.9	941.3
10°	919.2	916.2	927.2	934.9	933.7
12.5°	908.1	912.5	913.1	921.4	922.1
15°	908.7	898.2	903.8	908.4	908.8
17.5°	873.4	884.7	888.6	899.3	886.0
20°	869.1	860.8	869.1	880.1	878.3
22.5°	842.5	833.3	851.1	860.8	860.2
25°	812.4	816.9	830.2	841.1	839.3
27.5°	786.0	791.2	810.2	825.1	815.5
30°	765.7	763.1	779.1	792.4	799.8
32.5°	729.2	738.6	757.4	770.6	763.6
35°	707.2	709.3	725.7	742.5	742.0
37.5°	668.5	678.3	701.4	706.0	701.7
40°	635.6	645.3	666.2	671.2	669.1
42.5°	611.3	613.0	630.9	636.7	627.4
45°	568.9	579.5	589.2	604.4	590.0
47.5°	532.9	537.8	558.6	562.6	555.1
50°	500.2	501.9	522.8	517.7	512.8
52.5°	459.1	466.4	478.1	477.1	471.3
55°	425.3	422.4	433.5	430.6	430.5
57.5°	384.7	389.6	398.7	394.1	386.5
60°	346.7	346.8	350.1	344.8	343.8
62.5°	304.3	305.8	306.6	300.0	310.6
65°	261.3	257.8	267.9	257.7	259.4
67.5°	221.6	223.4	222.4	216.0	218.4
70°	181.4	183.6	182.0	174.8	177.0
72.5°	144.6	141.9	143.7	134.5	138.7
75°	108.7	106.5	108.5	100.8	104.3
77.5°	74.0	75.8	74.5	70.5	72.8
80°	48.9	47.5	47.5	45.2	45.7
82.5°	28.5	27.2	26.8	26.0	27.2
85°	13.3	13.0	13.2	12.8	12.3
87.5°	4.8	4.9	4.9	4.7	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)