

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: P589916

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589916
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-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2349.0 lumens
Efficiency: N/A
Efficacy: 108.8 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

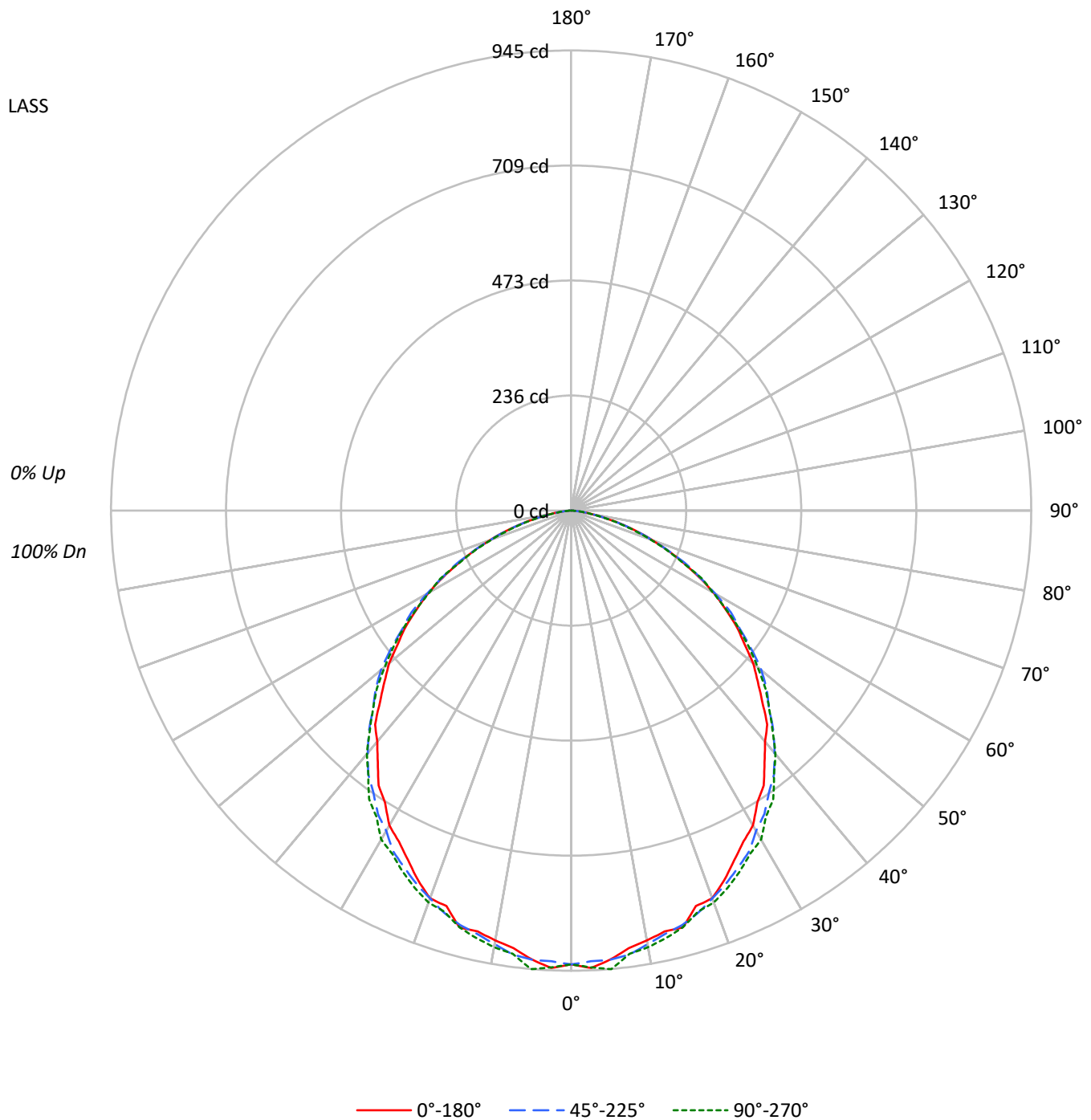
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	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°	2508	2508	2508
5°	2500	2501	2553
10°	2449	2470	2488
15°	2469	2455	2469
20°	2427	2427	2453
25°	2352	2404	2430
30°	2320	2361	2423
35°	2265	2325	2377
40°	2177	2282	2292
45°	2111	2186	2189
50°	2042	2134	2093
55°	1946	1984	1969
60°	1819	1837	1805
65°	1622	1664	1611
70°	1392	1397	1358
75°	1102	1100	1057
80°	739	717	690
85°	401	398	371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2243 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.7	3.7
10°-20°	248.5	10.6
20°-30°	372.3	15.8
30°-40°	441.2	18.8
40°-50°	442.0	18.8
50°-60°	375.2	16.0
60°-70°	253.0	10.8
70°-80°	111.2	4.7
80°-90°	18.1	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°	708.4	30.2
0°-40°	1149.6	48.9
0°-60°	1966.8	83.7
0°-90°	2349.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2349.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	932	932	932	932	932	
5°	925	923	926	923	945	87
15°	886	876	881	886	886	247
25°	792	796	810	820	818	366
35°	690	692	708	724	724	428
45°	555	565	574	589	575	429
55°	415	412	423	420	420	369
65°	255	251	261	251	253	253
75°	106	104	106	98	102	114
85°	13	13	13	12	12	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	932.0	932.0	932.0	932.0	932.0
2.5°	940.1	933.0	926.4	934.1	938.8
5°	925.4	923.2	925.8	923.0	945.3
7.5°	906.4	914.7	919.5	916.5	917.8
10°	896.3	893.4	904.1	911.6	910.5
12.5°	885.5	889.8	890.4	898.4	899.2
15°	886.1	875.8	881.2	885.8	886.2
17.5°	851.6	862.7	866.4	876.9	863.9
20°	847.4	839.4	847.4	858.1	856.5
22.5°	821.6	812.5	829.9	839.4	838.8
25°	792.2	796.5	809.5	820.1	818.4
27.5°	766.4	771.5	790.0	804.6	795.2
30°	746.6	744.1	759.7	772.7	779.9
32.5°	711.1	720.2	738.5	751.4	744.5
35°	689.5	691.6	707.6	724.0	723.5
37.5°	651.9	661.4	683.9	688.5	684.2
40°	619.7	629.3	649.6	654.5	652.5
42.5°	596.0	597.7	615.2	620.8	611.8
45°	554.8	565.1	574.5	589.3	575.3
47.5°	519.6	524.4	544.7	548.6	541.3
50°	487.7	489.4	509.8	504.8	500.0
52.5°	447.7	454.8	466.2	465.2	459.6
55°	414.7	411.9	422.8	419.9	419.7
57.5°	375.1	379.9	388.8	384.2	376.9
60°	338.0	338.2	341.4	336.2	335.3
62.5°	296.8	298.2	298.9	292.5	302.9
65°	254.8	251.4	261.3	251.3	253.0
67.5°	216.1	217.8	216.9	210.6	213.0
70°	176.9	179.1	177.5	170.4	172.6
72.5°	141.0	138.4	140.1	131.2	135.3
75°	106.0	103.9	105.8	98.3	101.7
77.5°	72.2	73.9	72.7	68.7	71.0
80°	47.7	46.3	46.3	44.0	44.5
82.5°	27.8	26.5	26.1	25.4	26.5
85°	13.0	12.6	12.9	12.5	12.0
87.5°	4.7	4.8	4.8	4.6	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)