

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: P590776

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590776
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-LD4-4HI-50-UNV-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9220.0 lumens
Efficiency: N/A
Efficacy: 106.7 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

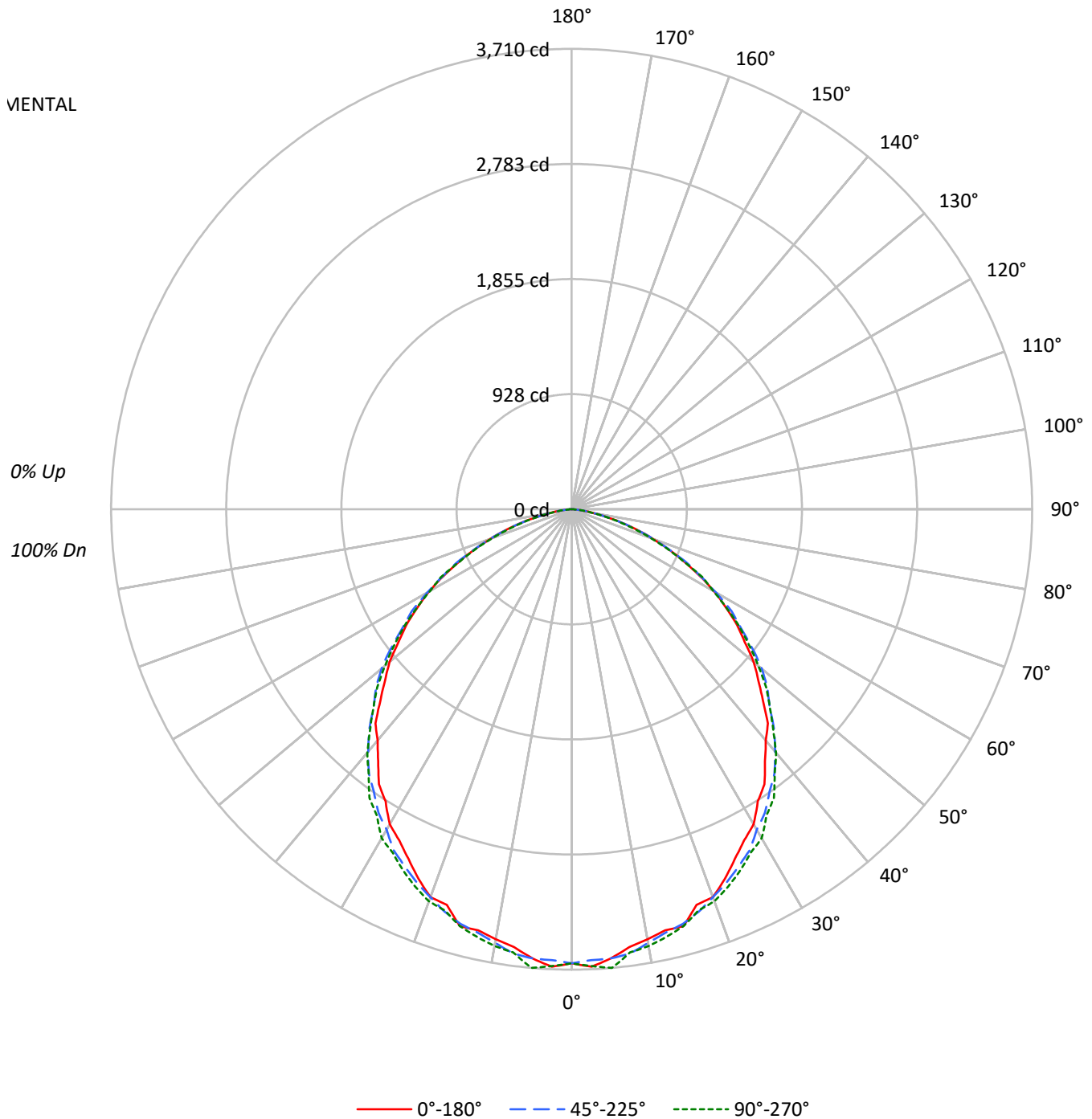
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9844	9844	9844
5°	9812	9816	10022
10°	9613	9697	9765
15°	9689	9636	9690
20°	9525	9525	9627
25°	9232	9434	9538
30°	9106	9266	9512
35°	8891	9124	9329
40°	8545	8957	8996
45°	8287	8581	8594
50°	8014	8376	8216
55°	7636	7785	7729
60°	7141	7212	7082
65°	6367	6529	6322
70°	5463	5482	5329
75°	4326	4317	4149
80°	2898	2819	2709
85°	1575	1559	1457

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8802 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	344.1	3.7
10°-20°	975.3	10.6
20°-30°	1461.2	15.8
30°-40°	1731.8	18.8
40°-50°	1735.0	18.8
50°-60°	1472.7	16.0
60°-70°	992.9	10.8
70°-80°	436.3	4.7
80°-90°	70.9	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°	2780.5	30.2
0°-40°	4512.3	48.9
0°-60°	7719.9	83.7
0°-90°	9220.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9220.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3658	3658	3658	3658	3658	
5°	3632	3624	3634	3623	3710	342
15°	3478	3438	3459	3477	3478	969
25°	3109	3126	3177	3219	3212	1437
35°	2706	2714	2777	2842	2840	1680
45°	2178	2218	2255	2313	2258	1684
55°	1628	1617	1659	1648	1648	1448
65°	1000	987	1025	986	993	994
75°	416	408	415	386	399	446
85°	51	50	50	49	47	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3658.3	3658.3	3658.3	3658.3	3658.3
2.5°	3689.9	3662.0	3636.1	3666.3	3684.7
5°	3632.3	3623.8	3633.7	3622.8	3710.2
7.5°	3557.7	3590.2	3609.1	3597.3	3602.5
10°	3518.0	3506.6	3548.7	3578.0	3573.7
12.5°	3475.5	3492.5	3494.8	3526.5	3529.3
15°	3477.8	3437.7	3458.9	3476.9	3478.3
17.5°	3342.7	3386.2	3400.8	3441.9	3390.9
20°	3326.2	3294.6	3326.2	3368.2	3361.6
22.5°	3224.7	3189.2	3257.2	3294.6	3292.2
25°	3109.4	3126.4	3177.4	3219.0	3212.4
27.5°	3008.3	3028.2	3100.9	3158.1	3121.2
30°	2930.4	2920.5	2981.9	3032.9	3061.2
32.5°	2791.0	2826.9	2898.7	2949.3	2922.4
35°	2706.5	2714.5	2777.4	2841.6	2839.7
37.5°	2558.7	2596.0	2684.3	2702.2	2685.7
40°	2432.5	2469.9	2549.7	2569.1	2561.0
42.5°	2339.5	2346.1	2414.6	2436.8	2401.4
45°	2177.5	2218.1	2254.9	2313.0	2258.3
47.5°	2039.6	2058.5	2137.8	2153.4	2124.6
50°	1914.4	1921.0	2000.8	1981.5	1962.6
52.5°	1757.1	1785.0	1829.8	1826.1	1803.9
55°	1627.7	1616.8	1659.3	1648.0	1647.5
57.5°	1472.3	1491.2	1526.1	1508.2	1479.4
60°	1326.8	1327.3	1340.0	1319.7	1315.9
62.5°	1164.8	1170.5	1173.3	1148.3	1188.9
65°	999.9	986.7	1025.4	986.2	992.9
67.5°	848.3	854.9	851.2	826.6	836.0
70°	694.3	702.8	696.7	668.8	677.3
72.5°	553.6	543.2	549.8	514.8	530.9
75°	416.1	407.6	415.2	385.9	399.1
77.5°	283.4	290.0	285.3	269.7	278.7
80°	187.0	181.9	181.9	172.9	174.8
82.5°	109.1	103.9	102.5	99.7	103.9
85°	51.0	49.6	50.5	49.1	47.2
87.5°	18.4	18.9	18.9	17.9	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)