

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: P590713

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590713
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-35-UNV-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8083.0 lumens
Efficiency: N/A
Efficacy: 93.6 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

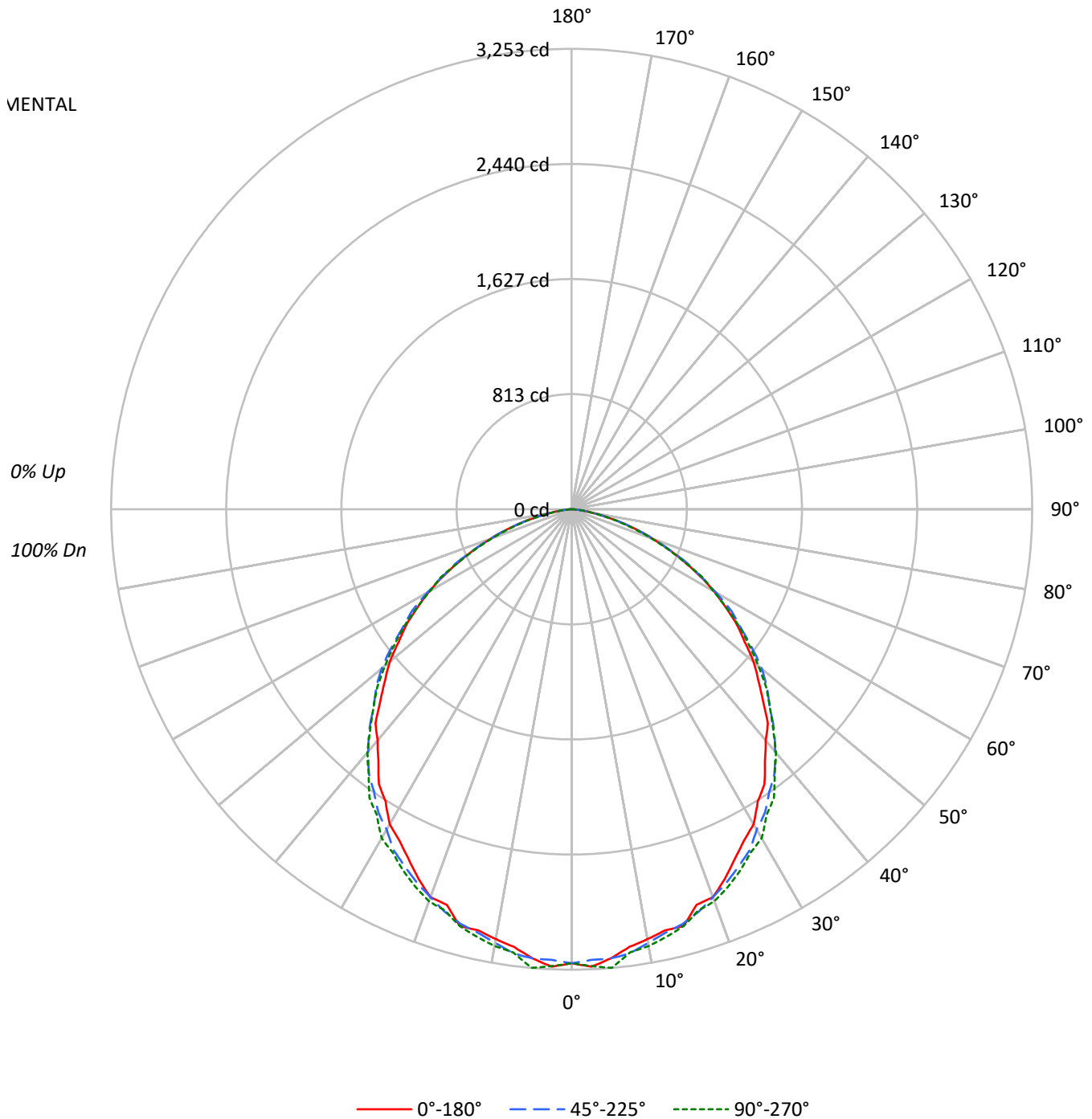
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8630	8630	8630
5°	8602	8605	8786
10°	8427	8501	8561
15°	8494	8448	8495
20°	8350	8350	8440
25°	8094	8271	8362
30°	7983	8123	8339
35°	7795	7999	8178
40°	7491	7852	7887
45°	7265	7523	7534
50°	7026	7343	7203
55°	6695	6825	6776
60°	6260	6323	6209
65°	5582	5724	5542
70°	4789	4806	4672
75°	3793	3785	3638
80°	2541	2470	2374
85°	1380	1368	1278

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7717 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	301.7	3.7
10°-20°	855.0	10.6
20°-30°	1281.0	15.8
30°-40°	1518.2	18.8
40°-50°	1521.0	18.8
50°-60°	1291.1	16.0
60°-70°	870.5	10.8
70°-80°	382.5	4.7
80°-90°	62.2	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°	2437.6	30.2
0°-40°	3955.8	48.9
0°-60°	6767.9	83.7
0°-90°	8083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8083.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3207	3207	3207	3207	3207	
5°	3184	3177	3186	3176	3253	300
15°	3049	3014	3032	3048	3049	849
25°	2726	2741	2786	2822	2816	1260
35°	2373	2380	2435	2491	2490	1473
45°	1909	1945	1977	2028	1980	1477
55°	1427	1417	1455	1445	1444	1269
65°	877	865	899	865	870	872
75°	365	357	364	338	350	391
85°	45	44	44	43	41	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3207.1	3207.1	3207.1	3207.1	3207.1
2.5°	3234.9	3210.4	3187.7	3214.2	3230.3
5°	3184.4	3176.9	3185.6	3176.1	3252.7
7.5°	3118.9	3147.5	3164.1	3153.7	3158.3
10°	3084.1	3074.2	3111.1	3136.7	3133.0
12.5°	3046.9	3061.8	3063.9	3091.6	3094.1
15°	3048.9	3013.8	3032.4	3048.1	3049.4
17.5°	2930.5	2968.6	2981.5	3017.5	2972.8
20°	2916.0	2888.3	2916.0	2952.9	2947.1
22.5°	2827.0	2795.9	2855.6	2888.3	2886.2
25°	2726.0	2740.9	2785.6	2822.0	2816.2
27.5°	2637.3	2654.7	2718.5	2768.6	2736.3
30°	2569.0	2560.3	2614.2	2658.9	2683.7
32.5°	2446.9	2478.3	2541.3	2585.6	2562.0
35°	2372.7	2379.8	2434.9	2491.2	2489.5
37.5°	2243.1	2275.8	2353.3	2369.0	2354.5
40°	2132.6	2165.3	2235.3	2252.2	2245.2
42.5°	2051.0	2056.8	2116.8	2136.3	2105.2
45°	1909.0	1944.6	1976.9	2027.8	1979.8
47.5°	1788.0	1804.6	1874.2	1887.8	1862.6
50°	1678.3	1684.1	1754.1	1737.1	1720.5
52.5°	1540.4	1564.8	1604.2	1600.9	1581.4
55°	1427.0	1417.4	1454.7	1444.8	1444.3
57.5°	1290.7	1307.3	1337.9	1322.2	1296.9
60°	1163.2	1163.6	1174.8	1157.0	1153.7
62.5°	1021.1	1026.1	1028.6	1006.7	1042.3
65°	876.6	865.0	899.0	864.6	870.4
67.5°	743.7	749.5	746.2	724.7	732.9
70°	608.7	616.2	610.8	586.4	593.8
72.5°	485.3	476.2	482.0	451.4	465.4
75°	364.8	357.4	364.0	338.3	349.9
77.5°	248.5	254.3	250.1	236.4	244.3
80°	164.0	159.4	159.4	151.6	153.2
82.5°	95.7	91.1	89.9	87.4	91.1
85°	44.7	43.5	44.3	43.1	41.4
87.5°	16.1	16.6	16.6	15.7	14.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)