

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: P590933

Luminaire Tested: FSR-24-2-LD4-4STD-40-UNV-80-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590933
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-LD4-4STD-40-UNV-80-84-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7883.0 lumens
Efficiency: N/A
Efficacy: 118.4 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

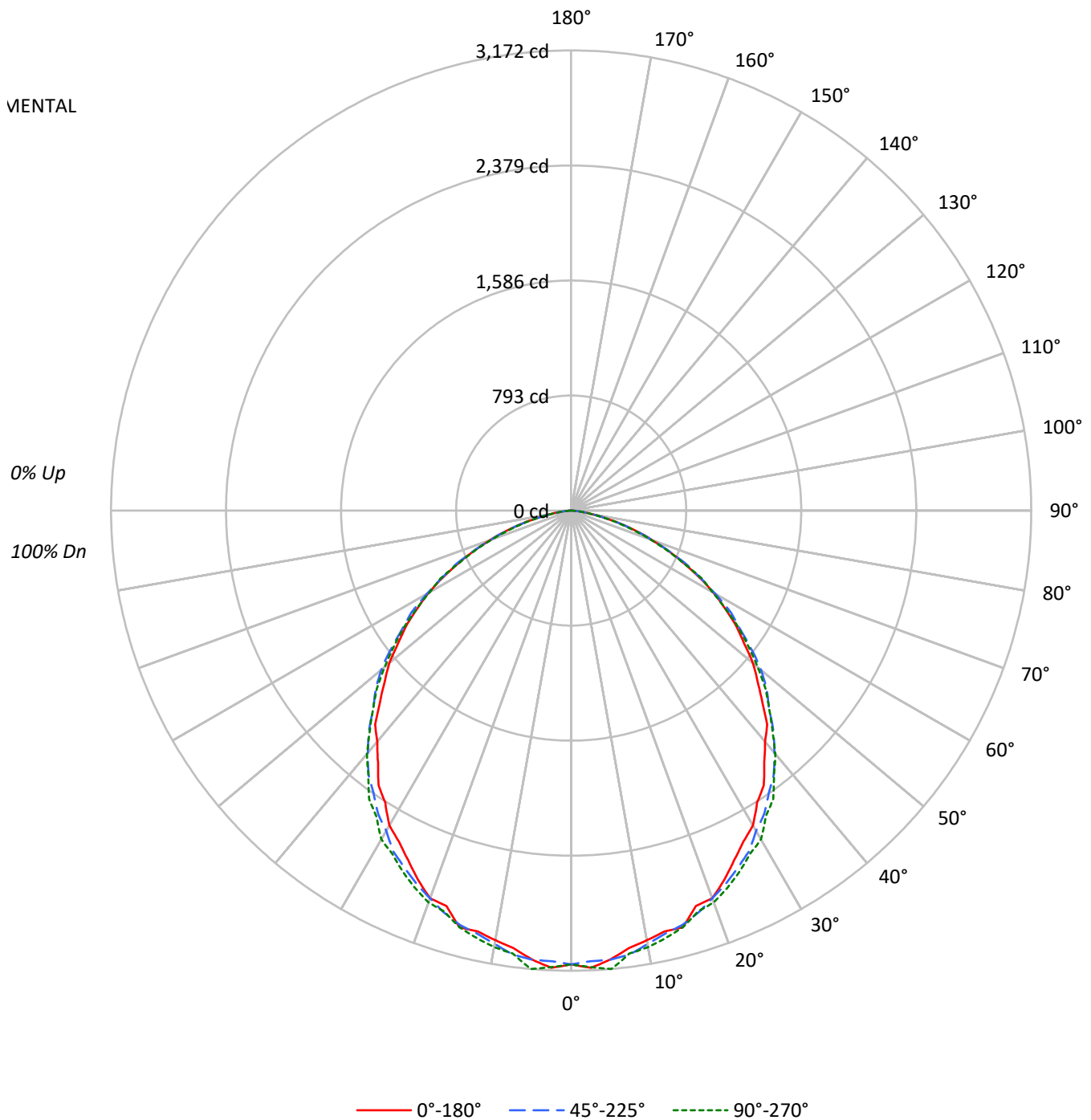
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8417	8417	8417
5°	8389	8392	8569
10°	8219	8291	8349
15°	8284	8239	8285
20°	8144	8144	8231
25°	7894	8066	8155
30°	7785	7922	8133
35°	7602	7801	7976
40°	7306	7658	7692
45°	7085	7337	7348
50°	6852	7162	7025
55°	6529	6656	6609
60°	6105	6166	6055
65°	5443	5582	5405
70°	4671	4687	4556
75°	3699	3691	3548
80°	2478	2410	2315
85°	1346	1334	1247

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7526 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.2	3.7
10°-20°	833.8	10.6
20°-30°	1249.3	15.8
30°-40°	1480.6	18.8
40°-50°	1483.4	18.8
50°-60°	1259.1	16.0
60°-70°	848.9	10.8
70°-80°	373.0	4.7
80°-90°	60.6	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°	2377.3	30.2
0°-40°	3857.9	48.9
0°-60°	6600.5	83.7
0°-90°	7883.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7883.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3128	3128	3128	3128	3128	
5°	3106	3098	3107	3098	3172	293
15°	2974	2939	2957	2973	2974	828
25°	2658	2673	2717	2752	2746	1229
35°	2314	2321	2375	2430	2428	1437
45°	1862	1896	1928	1978	1931	1440
55°	1392	1382	1419	1409	1409	1238
65°	855	844	877	843	849	850
75°	356	348	355	330	341	381
85°	44	42	43	42	40	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3127.8	3127.8	3127.8	3127.8	3127.8
2.5°	3154.8	3131.0	3108.8	3134.6	3150.4
5°	3105.6	3098.3	3106.8	3097.5	3172.2
7.5°	3041.8	3069.6	3085.8	3075.7	3080.1
10°	3007.8	2998.1	3034.1	3059.1	3055.5
12.5°	2971.5	2986.0	2988.0	3015.1	3017.5
15°	2973.5	2939.2	2957.4	2972.7	2973.9
17.5°	2858.0	2895.2	2907.7	2942.8	2899.2
20°	2843.9	2816.8	2843.9	2879.8	2874.2
22.5°	2757.0	2726.8	2784.9	2816.8	2814.8
25°	2658.5	2673.0	2716.7	2752.2	2746.5
27.5°	2572.1	2589.0	2651.2	2700.1	2668.6
30°	2505.5	2497.0	2549.5	2593.1	2617.3
32.5°	2386.3	2417.0	2478.4	2521.6	2498.6
35°	2314.0	2320.9	2374.6	2429.5	2427.9
37.5°	2187.6	2219.5	2295.0	2310.4	2296.3
40°	2079.8	2111.7	2180.0	2196.5	2189.6
42.5°	2000.2	2005.9	2064.5	2083.4	2053.1
45°	1861.7	1896.5	1928.0	1977.6	1930.8
47.5°	1743.8	1760.0	1827.8	1841.1	1816.5
50°	1636.8	1642.4	1710.7	1694.1	1678.0
52.5°	1502.3	1526.1	1564.5	1561.3	1542.3
55°	1391.6	1382.4	1418.7	1409.0	1408.6
57.5°	1258.8	1274.9	1304.8	1289.5	1264.8
60°	1134.4	1134.8	1145.7	1128.3	1125.1
62.5°	995.9	1000.7	1003.1	981.7	1016.5
65°	854.9	843.6	876.7	843.2	848.9
67.5°	725.3	731.0	727.7	706.7	714.8
70°	593.7	600.9	595.7	571.8	579.1
72.5°	473.3	464.4	470.1	440.2	453.9
75°	355.8	348.5	355.0	329.9	341.2
77.5°	242.3	248.0	243.9	230.6	238.3
80°	159.9	155.5	155.5	147.8	149.4
82.5°	93.3	88.8	87.6	85.2	88.8
85°	43.6	42.4	43.2	42.0	40.4
87.5°	15.7	16.2	16.2	15.3	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)