

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: P590714

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-80-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590714
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-80-94-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9595.0 lumens
Efficiency: N/A
Efficacy: 111.1 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

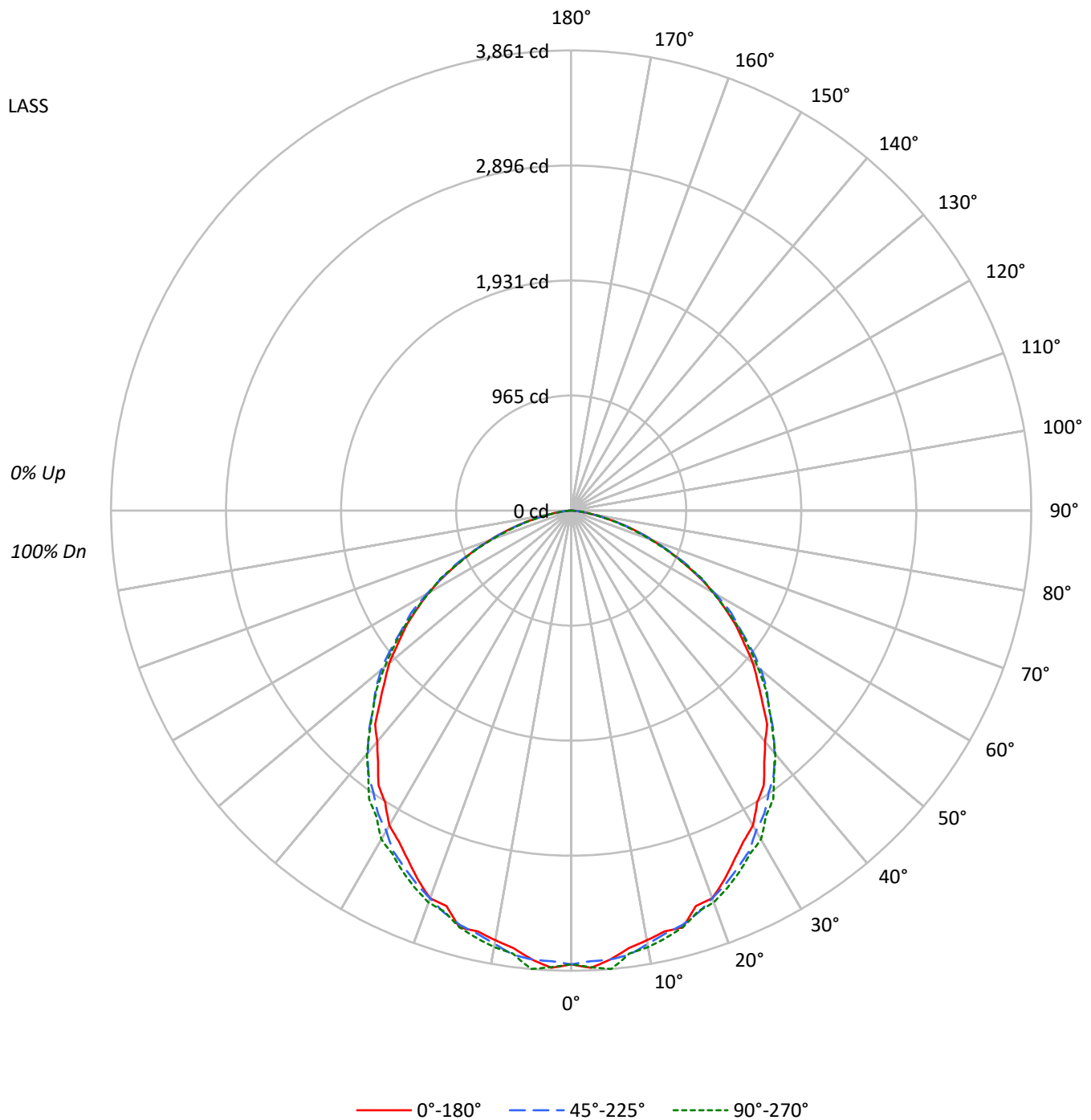
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	10245	10245	10245
5°	10211	10215	10430
10°	10004	10091	10162
15°	10083	10028	10084
20°	9913	9913	10018
25°	9608	9818	9926
30°	9476	9642	9899
35°	9253	9495	9708
40°	8893	9321	9362
45°	8624	8931	8944
50°	8341	8717	8550
55°	7947	8101	8044
60°	7431	7505	7371
65°	6626	6795	6579
70°	5685	5704	5546
75°	4503	4493	4319
80°	3017	2932	2819
85°	1639	1624	1519

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9161 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.1	3.7
10°-20°	1014.9	10.6
20°-30°	1520.6	15.8
30°-40°	1802.2	18.8
40°-50°	1805.5	18.8
50°-60°	1532.6	16.0
60°-70°	1033.3	10.8
70°-80°	454.0	4.7
80°-90°	73.8	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°	2893.6	30.2
0°-40°	4695.8	48.9
0°-60°	8033.9	83.7
0°-90°	9595.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9595.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3807	3807	3807	3807	3807	
5°	3780	3771	3782	3770	3861	356
15°	3619	3578	3600	3618	3620	1008
25°	3236	3254	3307	3350	3343	1496
35°	2817	2825	2890	2957	2955	1749
45°	2266	2308	2347	2407	2350	1753
55°	1694	1683	1727	1715	1714	1507
65°	1041	1027	1067	1026	1033	1035
75°	433	424	432	402	415	464
85°	53	52	53	51	49	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3807.1	3807.1	3807.1	3807.1	3807.1
2.5°	3840.0	3811.0	3784.0	3815.4	3834.6
5°	3780.0	3771.2	3781.5	3770.2	3861.1
7.5°	3702.4	3736.3	3755.9	3743.6	3749.1
10°	3661.1	3649.3	3693.0	3723.5	3719.1
12.5°	3616.8	3634.5	3637.0	3669.9	3672.9
15°	3619.3	3577.5	3599.6	3618.3	3619.8
17.5°	3478.7	3523.9	3539.2	3581.9	3528.8
20°	3461.5	3428.6	3461.5	3505.2	3498.4
22.5°	3355.8	3318.9	3389.7	3428.6	3426.1
25°	3235.9	3253.6	3306.7	3349.9	3343.0
27.5°	3130.7	3151.3	3227.0	3286.5	3248.2
30°	3049.6	3039.3	3103.2	3156.2	3185.7
32.5°	2904.6	2941.9	3016.6	3069.2	3041.2
35°	2816.6	2824.9	2890.3	2957.2	2955.2
37.5°	2662.7	2701.6	2793.5	2812.2	2795.0
40°	2531.5	2570.3	2653.4	2673.5	2665.2
42.5°	2434.6	2441.5	2512.8	2535.9	2499.0
45°	2266.0	2308.3	2346.7	2407.1	2350.1
47.5°	2122.5	2142.2	2224.8	2241.0	2211.0
50°	1992.3	1999.1	2082.2	2062.1	2042.4
52.5°	1828.6	1857.6	1904.3	1900.3	1877.2
55°	1693.9	1682.6	1726.8	1715.0	1714.5
57.5°	1532.2	1551.8	1588.2	1569.5	1539.5
60°	1380.8	1381.3	1394.5	1373.4	1369.5
62.5°	1212.2	1218.1	1221.0	1195.0	1237.2
65°	1040.6	1026.8	1067.2	1026.4	1033.2
67.5°	882.8	889.7	885.8	860.2	870.0
70°	722.6	731.4	725.0	696.0	704.9
72.5°	576.1	565.3	572.2	535.8	552.5
75°	433.1	424.2	432.1	401.6	415.4
77.5°	294.9	301.8	296.9	280.7	290.0
80°	194.7	189.2	189.2	179.9	181.9
82.5°	113.5	108.1	106.7	103.7	108.1
85°	53.1	51.6	52.6	51.1	49.2
87.5°	19.2	19.7	19.7	18.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)