

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: P590800

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590800
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-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9238.0 lumens
Efficiency: N/A
Efficacy: 106.9 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

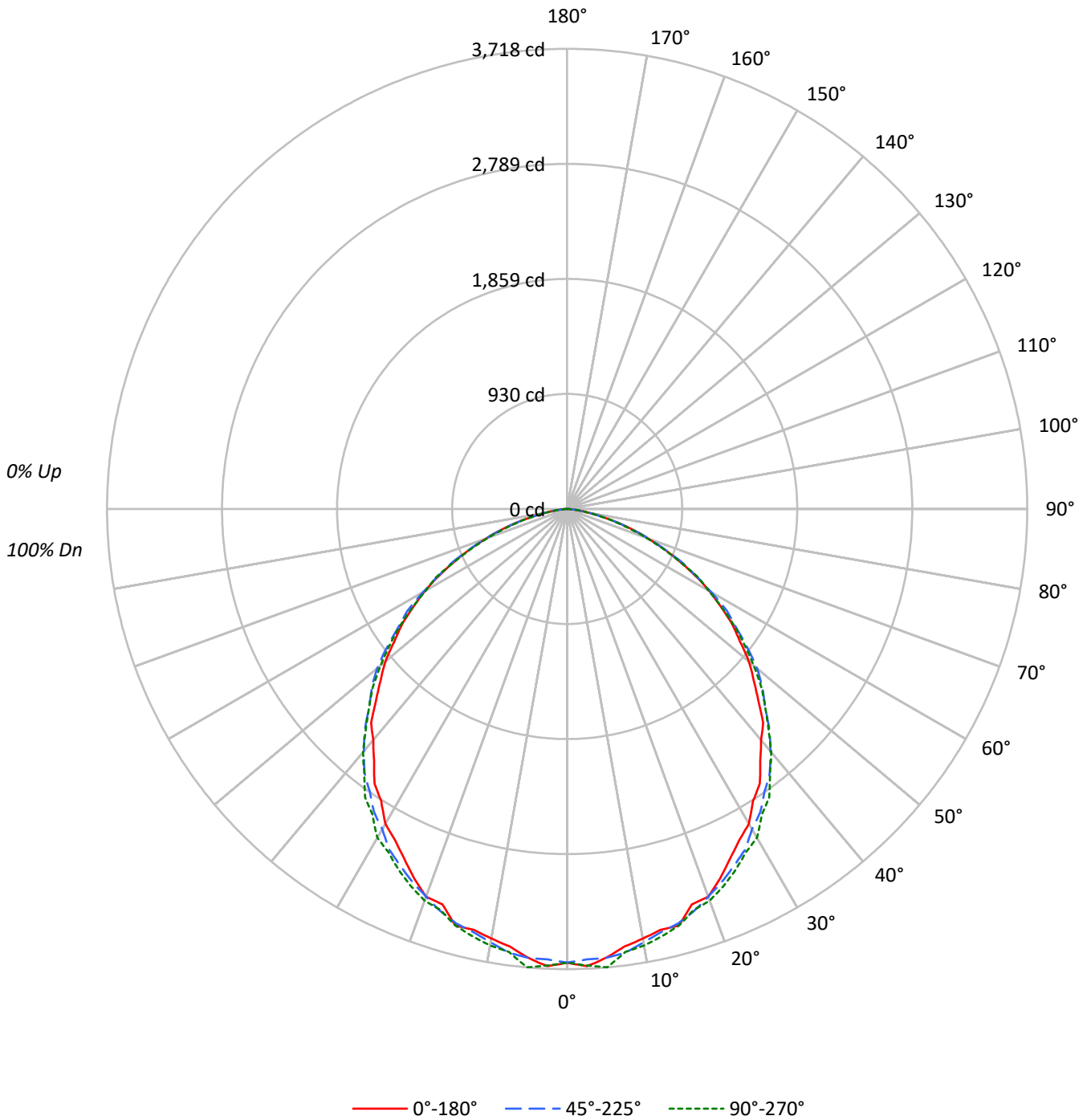
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9864	9864	9864
5°	9831	9835	10042
10°	9631	9716	9784
15°	9708	9655	9709
20°	9544	9544	9645
25°	9250	9453	9557
30°	9123	9284	9531
35°	8908	9142	9347
40°	8562	8974	9014
45°	8303	8598	8611
50°	8030	8393	8232
55°	7651	7800	7744
60°	7155	7226	7096
65°	6379	6542	6334
70°	5474	5493	5340
75°	4335	4325	4158
80°	2904	2824	2713
85°	1578	1562	1460

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8820 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	344.8	3.7
10°-20°	977.2	10.6
20°-30°	1464.0	15.8
30°-40°	1735.1	18.8
40°-50°	1738.4	18.8
50°-60°	1475.6	16.0
60°-70°	994.8	10.8
70°-80°	437.1	4.7
80°-90°	71.0	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°	2786.0	30.2
0°-40°	4521.1	48.9
0°-60°	7735.0	83.7
0°-90°	9238.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9238.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3665	3665	3665	3665	3665	
5°	3639	3631	3641	3630	3718	343
15°	3485	3444	3466	3484	3485	971
25°	3116	3132	3184	3225	3219	1440
35°	2712	2720	2783	2847	2845	1684
45°	2182	2222	2259	2318	2263	1688
55°	1631	1620	1663	1651	1651	1451
65°	1002	989	1027	988	995	996
75°	417	408	416	387	400	447
85°	51	50	51	49	47	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3665.4	3665.4	3665.4	3665.4	3665.4
2.5°	3697.1	3669.2	3643.2	3673.5	3691.9
5°	3639.4	3630.9	3640.8	3629.9	3717.5
7.5°	3564.6	3597.3	3616.2	3604.4	3609.6
10°	3524.8	3513.5	3555.6	3585.0	3580.7
12.5°	3482.3	3499.3	3501.7	3533.4	3536.2
15°	3484.6	3444.4	3465.7	3483.7	3485.1
17.5°	3349.3	3392.8	3407.5	3448.7	3397.5
20°	3332.7	3301.0	3332.7	3374.8	3368.2
22.5°	3231.0	3195.5	3263.6	3301.0	3298.6
25°	3115.5	3132.5	3183.6	3225.3	3218.6
27.5°	3014.2	3034.1	3107.0	3164.2	3127.3
30°	2936.1	2926.2	2987.7	3038.8	3067.2
32.5°	2796.5	2832.5	2904.4	2955.0	2928.1
35°	2711.8	2719.8	2782.8	2847.1	2845.2
37.5°	2563.7	2601.0	2689.5	2707.5	2691.0
40°	2437.3	2474.7	2554.7	2574.1	2566.0
42.5°	2344.1	2350.7	2419.3	2441.6	2406.1
45°	2181.7	2222.4	2259.3	2317.6	2262.7
47.5°	2043.5	2062.5	2142.0	2157.6	2128.7
50°	1918.1	1924.8	2004.7	1985.3	1966.4
52.5°	1760.5	1788.5	1833.4	1829.6	1807.4
55°	1630.9	1620.0	1662.6	1651.2	1650.7
57.5°	1475.2	1494.1	1529.1	1511.1	1482.3
60°	1329.4	1329.9	1342.6	1322.3	1318.5
62.5°	1167.1	1172.7	1175.6	1150.5	1191.2
65°	1001.9	988.6	1027.4	988.2	994.8
67.5°	850.0	856.6	852.8	828.2	837.7
70°	695.7	704.2	698.1	670.1	678.7
72.5°	554.7	544.2	550.9	515.9	531.9
75°	416.9	408.4	416.0	386.7	399.9
77.5°	284.0	290.6	285.8	270.2	279.2
80°	187.4	182.2	182.2	173.2	175.1
82.5°	109.3	104.1	102.7	99.9	104.1
85°	51.1	49.7	50.6	49.2	47.3
87.5°	18.5	18.9	18.9	18.0	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)