

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: P563867

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563867
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-4LO-35-UNV-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10865.0 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

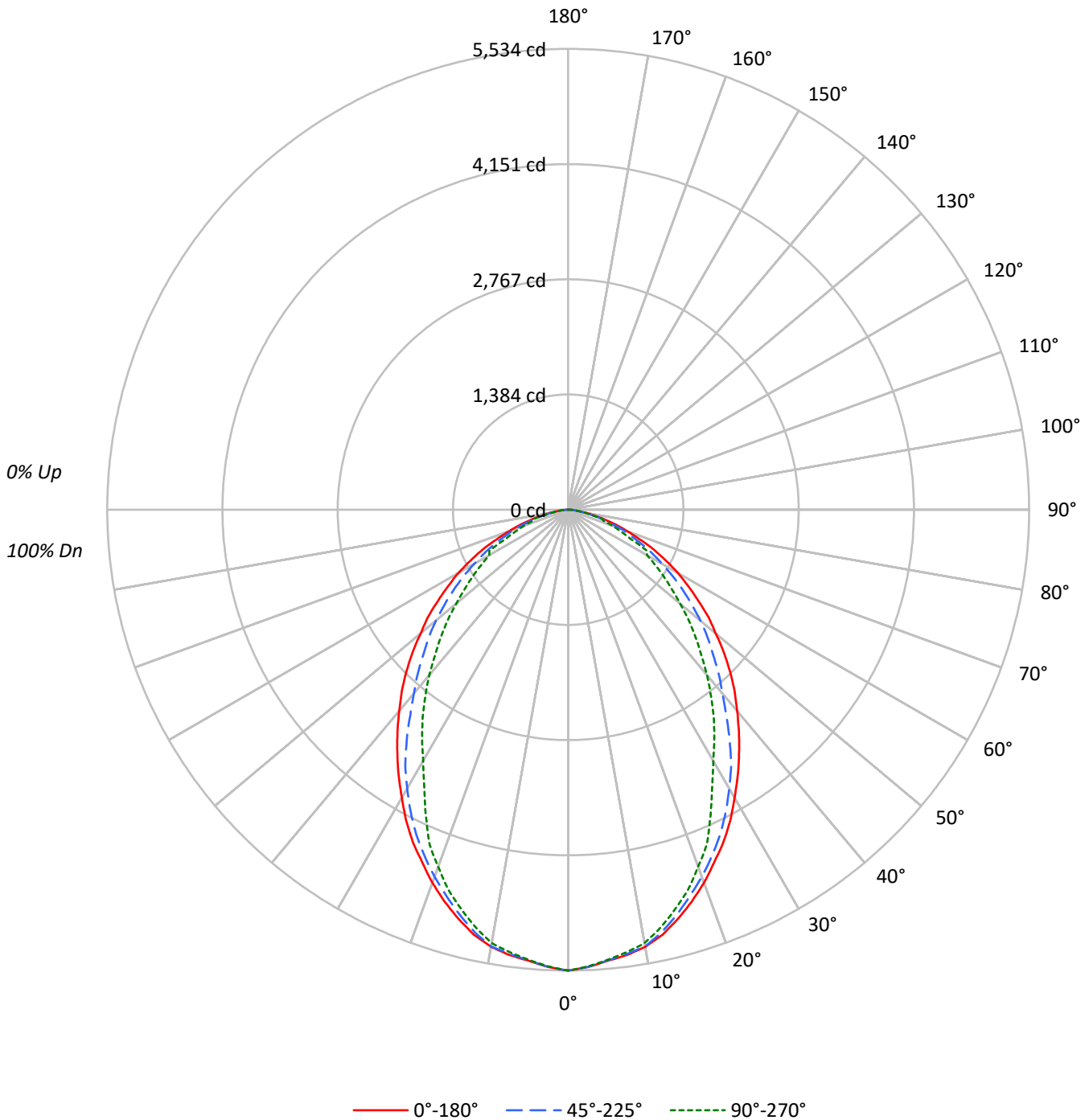
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7447	7447	7447
5°	7345	7337	7328
10°	7282	7273	7221
15°	7085	7014	6916
20°	6825	6715	6532
25°	6545	6402	6003
30°	6203	6004	5408
35°	5875	5549	5003
40°	5540	5057	4551
45°	5223	4675	4115
50°	4835	4339	3670
55°	4473	3932	3287
60°	4098	3512	2944
65°	3606	3076	2607
70°	2970	2693	2215
75°	2362	2062	2162
80°	1586	1487	1389
85°	988	1186	1383

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5223 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	515.2	4.7
10°-20°	1413.9	13.0
20°-30°	1957.4	18.0
30°-40°	2087.2	19.2
40°-50°	1904.1	17.5
50°-60°	1491.7	13.7
60°-70°	972.2	8.9
70°-80°	430.7	4.0
80°-90°	92.5	0.9
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°	3886.5	35.8
0°-40°	5973.7	55.0
0°-60°	9369.5	86.2
0°-90°	10865.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10865.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5534	5534	5534	5534	5534	
5°	5438	5432	5432	5426	5426	516
15°	5087	5087	5035	4984	4965	1430
25°	4408	4383	4312	4159	4044	2024
35°	3577	3551	3378	3122	3046	2236
45°	2745	2687	2457	2252	2163	2114
55°	1907	1849	1676	1478	1401	1710
65°	1132	1068	966	985	819	1116
75°	454	422	397	378	416	487
85°	64	70	77	83	90	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5534.5	5534.5	5534.5	5534.5	5534.5
2.5°	5496.1	5496.1	5496.1	5489.7	5489.7
5°	5438.5	5432.1	5432.1	5425.7	5425.7
7.5°	5393.7	5387.3	5380.9	5374.5	5361.7
10°	5329.7	5329.7	5323.3	5291.4	5285.0
12.5°	5227.4	5221.0	5195.4	5150.6	5137.8
15°	5086.6	5086.6	5035.4	4984.2	4965.0
17.5°	4933.1	4926.7	4862.7	4811.5	4785.9
20°	4766.7	4753.9	4689.9	4606.7	4562.0
22.5°	4581.1	4581.1	4504.4	4395.6	4350.8
25°	4408.4	4382.8	4312.4	4158.9	4043.7
27.5°	4210.0	4171.7	4094.9	3877.3	3743.0
30°	3992.5	3973.3	3864.5	3583.0	3480.6
32.5°	3787.8	3755.8	3640.6	3346.3	3263.1
35°	3576.6	3551.0	3378.3	3122.3	3045.6
37.5°	3365.5	3333.5	3115.9	2911.2	2815.2
40°	3154.3	3115.9	2879.2	2693.7	2591.3
42.5°	2956.0	2904.8	2674.5	2476.1	2361.0
45°	2744.8	2687.3	2456.9	2252.2	2162.6
47.5°	2533.7	2482.5	2271.4	2060.2	1957.9
50°	2309.8	2265.0	2073.0	1861.9	1753.1
52.5°	2124.2	2053.8	1868.3	1657.1	1567.6
55°	1906.7	1849.1	1676.3	1478.0	1401.2
57.5°	1708.3	1650.7	1490.8	1305.2	1241.3
60°	1522.8	1439.6	1305.2	1145.3	1094.1
62.5°	1318.0	1254.1	1138.9	1004.5	1068.5
65°	1132.5	1068.5	966.1	985.3	819.0
67.5°	927.7	895.8	806.2	716.6	691.0
70°	755.0	716.6	684.6	588.6	563.0
72.5°	601.4	563.0	518.3	467.1	447.9
75°	454.3	422.3	396.7	377.5	415.9
77.5°	313.5	300.7	281.5	262.3	255.9
80°	204.7	198.3	191.9	185.5	179.2
82.5°	121.6	121.6	121.6	121.6	121.6
85°	64.0	70.4	76.8	83.2	89.6
87.5°	38.4	38.4	44.8	51.2	57.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)