

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: P590716

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590716
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-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 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: 9149.0 lumens
Efficiency: N/A
Efficacy: 105.9 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

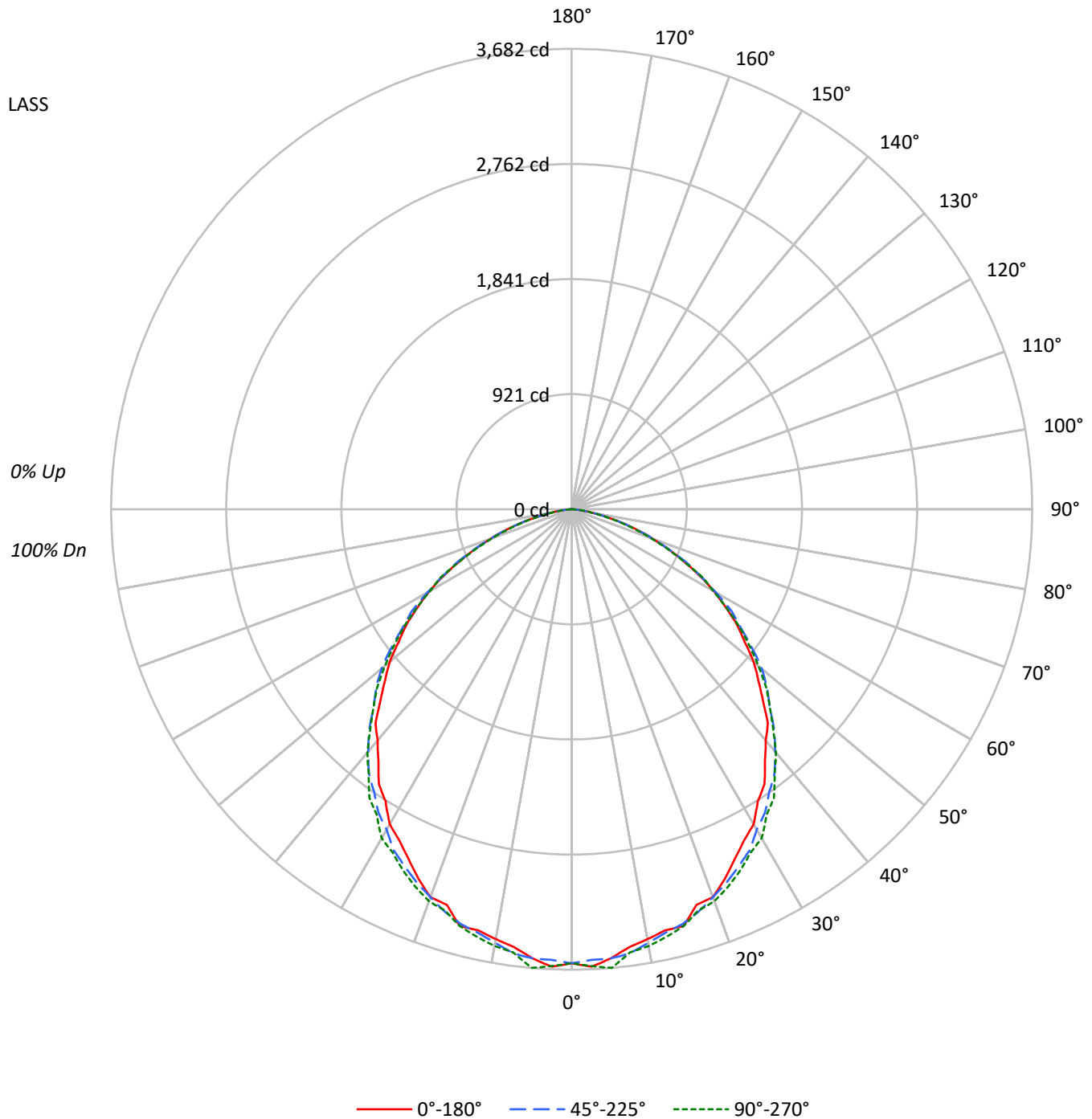
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9769	9769	9769
5°	9736	9740	9945
10°	9539	9622	9690
15°	9614	9562	9616
20°	9452	9452	9552
25°	9161	9362	9465
30°	9035	9194	9439
35°	8823	9054	9257
40°	8479	8887	8927
45°	8223	8515	8528
50°	7953	8312	8153
55°	7577	7725	7670
60°	7086	7156	7028
65°	6318	6479	6273
70°	5421	5439	5288
75°	4293	4284	4118
80°	2876	2797	2687
85°	1562	1550	1448

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8735 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.5	3.7
10°-20°	967.7	10.6
20°-30°	1449.9	15.8
30°-40°	1718.4	18.8
40°-50°	1721.6	18.8
50°-60°	1461.4	16.0
60°-70°	985.2	10.8
70°-80°	432.9	4.7
80°-90°	70.3	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°	2759.1	30.2
0°-40°	4477.5	48.9
0°-60°	7660.5	83.7
0°-90°	9149.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9149.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3630	3630	3630	3630	3630	
5°	3604	3596	3606	3595	3682	340
15°	3451	3411	3432	3450	3452	962
25°	3086	3102	3153	3194	3188	1426
35°	2686	2694	2756	2820	2818	1667
45°	2161	2201	2238	2295	2241	1671
55°	1615	1604	1646	1635	1635	1437
65°	992	979	1018	979	985	987
75°	413	404	412	383	396	443
85°	51	49	50	49	47	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3630.1	3630.1	3630.1	3630.1	3630.1
2.5°	3661.5	3633.8	3608.1	3638.1	3656.3
5°	3604.3	3595.9	3605.7	3594.9	3681.6
7.5°	3530.3	3562.6	3581.3	3569.6	3574.8
10°	3490.9	3479.6	3521.4	3550.4	3546.2
12.5°	3448.7	3465.6	3467.9	3499.3	3502.1
15°	3451.0	3411.2	3432.3	3450.1	3451.5
17.5°	3317.0	3360.1	3374.6	3415.4	3364.8
20°	3300.6	3269.2	3300.6	3342.3	3335.7
22.5°	3199.8	3164.7	3232.2	3269.2	3266.8
25°	3085.5	3102.3	3153.0	3194.2	3187.6
27.5°	2985.2	3004.8	3077.0	3133.7	3097.2
30°	2907.8	2898.0	2958.9	3009.5	3037.7
32.5°	2769.6	2805.2	2876.4	2926.6	2899.9
35°	2685.7	2693.6	2756.0	2819.7	2817.8
37.5°	2539.0	2576.0	2663.6	2681.4	2665.0
40°	2413.8	2450.8	2530.0	2549.3	2541.3
42.5°	2321.5	2328.0	2396.0	2418.0	2382.9
45°	2160.7	2201.0	2237.6	2295.2	2240.9
47.5°	2023.9	2042.6	2121.3	2136.8	2108.2
50°	1899.6	1906.2	1985.4	1966.2	1947.5
52.5°	1743.6	1771.2	1815.7	1812.0	1790.0
55°	1615.1	1604.4	1646.5	1635.3	1634.8
57.5°	1460.9	1479.7	1514.4	1496.6	1468.0
60°	1316.6	1317.1	1329.7	1309.6	1305.8
62.5°	1155.8	1161.4	1164.3	1139.4	1179.7
65°	992.2	979.1	1017.6	978.6	985.2
67.5°	841.8	848.3	844.6	820.2	829.6
70°	689.0	697.4	691.3	663.7	672.1
72.5°	549.3	539.0	545.6	510.9	526.8
75°	412.9	404.5	412.0	382.9	396.1
77.5°	281.2	287.8	283.1	267.6	276.5
80°	185.6	180.5	180.5	171.5	173.4
82.5°	108.3	103.1	101.7	98.9	103.1
85°	50.6	49.2	50.2	48.7	46.9
87.5°	18.3	18.7	18.7	17.8	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)