

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: P563963

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563963
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-50-UNV-80-94-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12000.0 lumens
Efficiency: N/A
Efficacy: 128.2 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

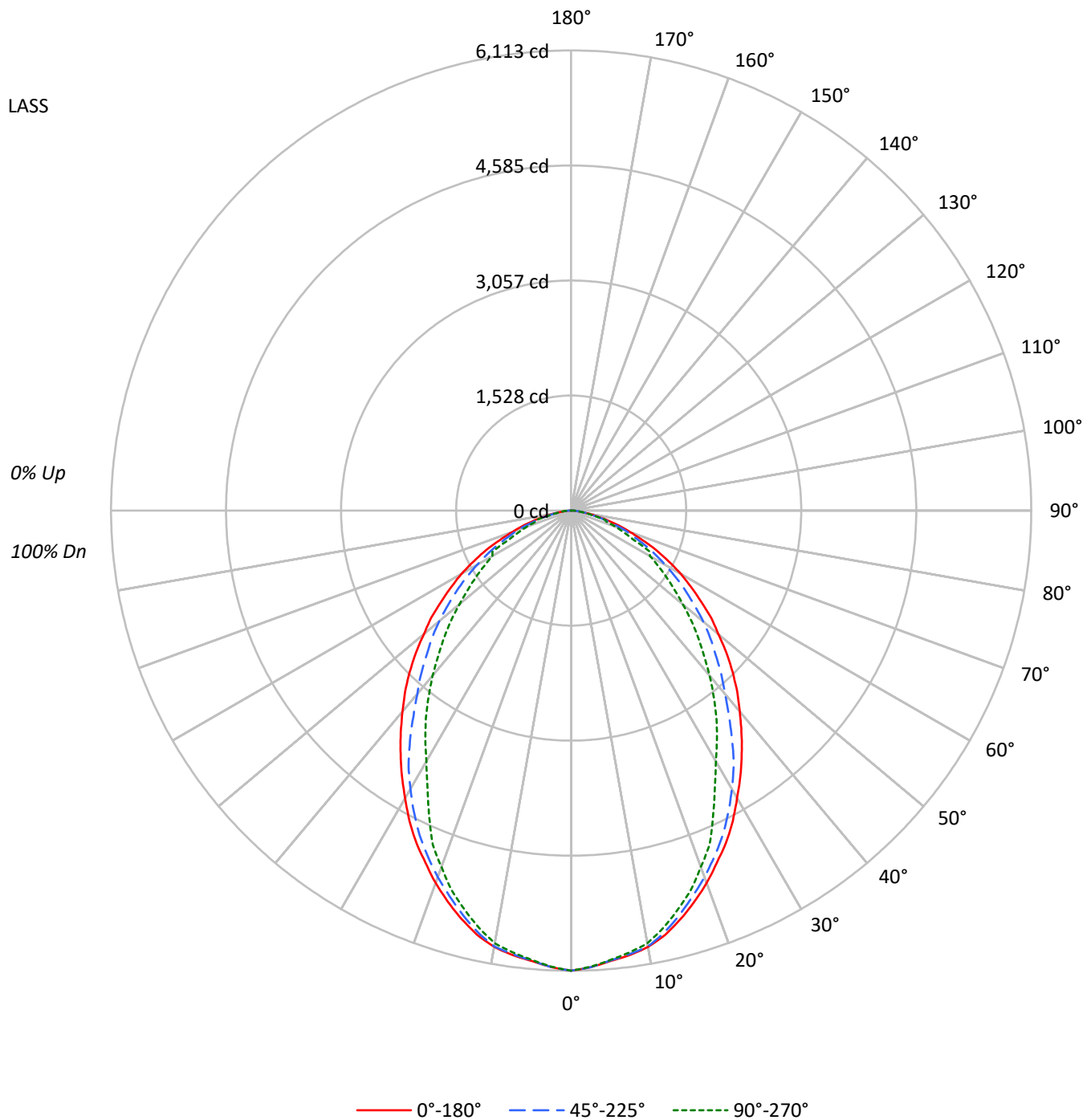
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8224	8224	8224
5°	8113	8103	8094
10°	8042	8033	7975
15°	7826	7747	7639
20°	7538	7417	7214
25°	7228	7071	6630
30°	6851	6631	5972
35°	6488	6129	5525
40°	6119	5585	5027
45°	5769	5163	4545
50°	5340	4793	4053
55°	4940	4343	3630
60°	4526	3879	3252
65°	3982	3397	2880
70°	3281	2974	2447
75°	2608	2277	2388
80°	1752	1643	1533
85°	1091	1309	1527

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5769 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	569.0	4.7
10°-20°	1561.6	13.0
20°-30°	2161.9	18.0
30°-40°	2305.2	19.2
40°-50°	2103.1	17.5
50°-60°	1647.6	13.7
60°-70°	1073.8	8.9
70°-80°	475.7	4.0
80°-90°	102.2	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°	4292.5	35.8
0°-40°	6597.7	55.0
0°-60°	10348.3	86.2
0°-90°	12000.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12000.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6113	6113	6113	6113	6113	
5°	6007	6000	6000	5992	5992	570
15°	5618	5618	5561	5505	5484	1579
25°	4869	4841	4763	4593	4466	2235
35°	3950	3922	3731	3448	3364	2470
45°	3032	2968	2714	2488	2388	2335
55°	2106	2042	1852	1632	1548	1889
65°	1251	1180	1067	1088	904	1233
75°	502	466	438	417	459	538
85°	71	78	85	92	99	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6112.6	6112.6	6112.6	6112.6	6112.6
2.5°	6070.2	6070.2	6070.2	6063.2	6063.2
5°	6006.6	5999.6	5999.6	5992.5	5992.5
7.5°	5957.2	5950.1	5943.0	5936.0	5921.8
10°	5886.5	5886.5	5879.4	5844.1	5837.0
12.5°	5773.4	5766.4	5738.1	5688.6	5674.5
15°	5618.0	5618.0	5561.4	5504.9	5483.7
17.5°	5448.4	5441.3	5370.6	5314.1	5285.8
20°	5264.6	5250.5	5179.8	5088.0	5038.5
22.5°	5059.7	5059.7	4974.9	4854.8	4805.3
25°	4868.9	4840.6	4762.9	4593.3	4466.1
27.5°	4649.8	4607.4	4522.6	4282.4	4134.0
30°	4409.6	4388.4	4268.2	3957.3	3844.2
32.5°	4183.4	4148.1	4020.9	3695.9	3604.0
35°	3950.2	3922.0	3731.2	3448.5	3363.7
37.5°	3717.1	3681.7	3441.5	3215.3	3109.3
40°	3483.9	3441.5	3180.0	2975.1	2862.0
42.5°	3264.8	3208.3	2953.9	2734.8	2607.6
45°	3031.6	2968.0	2713.6	2487.5	2388.5
47.5°	2798.4	2741.9	2508.7	2275.5	2162.4
50°	2551.1	2501.6	2289.6	2056.4	1936.3
52.5°	2346.1	2268.4	2063.5	1830.3	1731.3
55°	2105.9	2042.3	1851.5	1632.4	1547.6
57.5°	1886.8	1823.2	1646.5	1441.6	1370.9
60°	1681.9	1590.0	1441.6	1264.9	1208.4
62.5°	1455.7	1385.1	1257.9	1109.5	1180.1
65°	1250.8	1180.1	1067.1	1088.3	904.5
67.5°	1024.7	989.3	890.4	791.5	763.2
70°	833.9	791.5	756.1	650.1	621.9
72.5°	664.3	621.9	572.4	515.9	494.7
75°	501.7	466.4	438.1	416.9	459.3
77.5°	346.3	332.1	310.9	289.7	282.7
80°	226.1	219.1	212.0	204.9	197.9
82.5°	134.3	134.3	134.3	134.3	134.3
85°	70.7	77.7	84.8	91.9	98.9
87.5°	42.4	42.4	49.5	56.5	63.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)