

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: P563581

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563581
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-LD4-3STD-50-UNV-80-96-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 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: 11919.0 lumens
Efficiency: N/A
Efficacy: 119.3 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

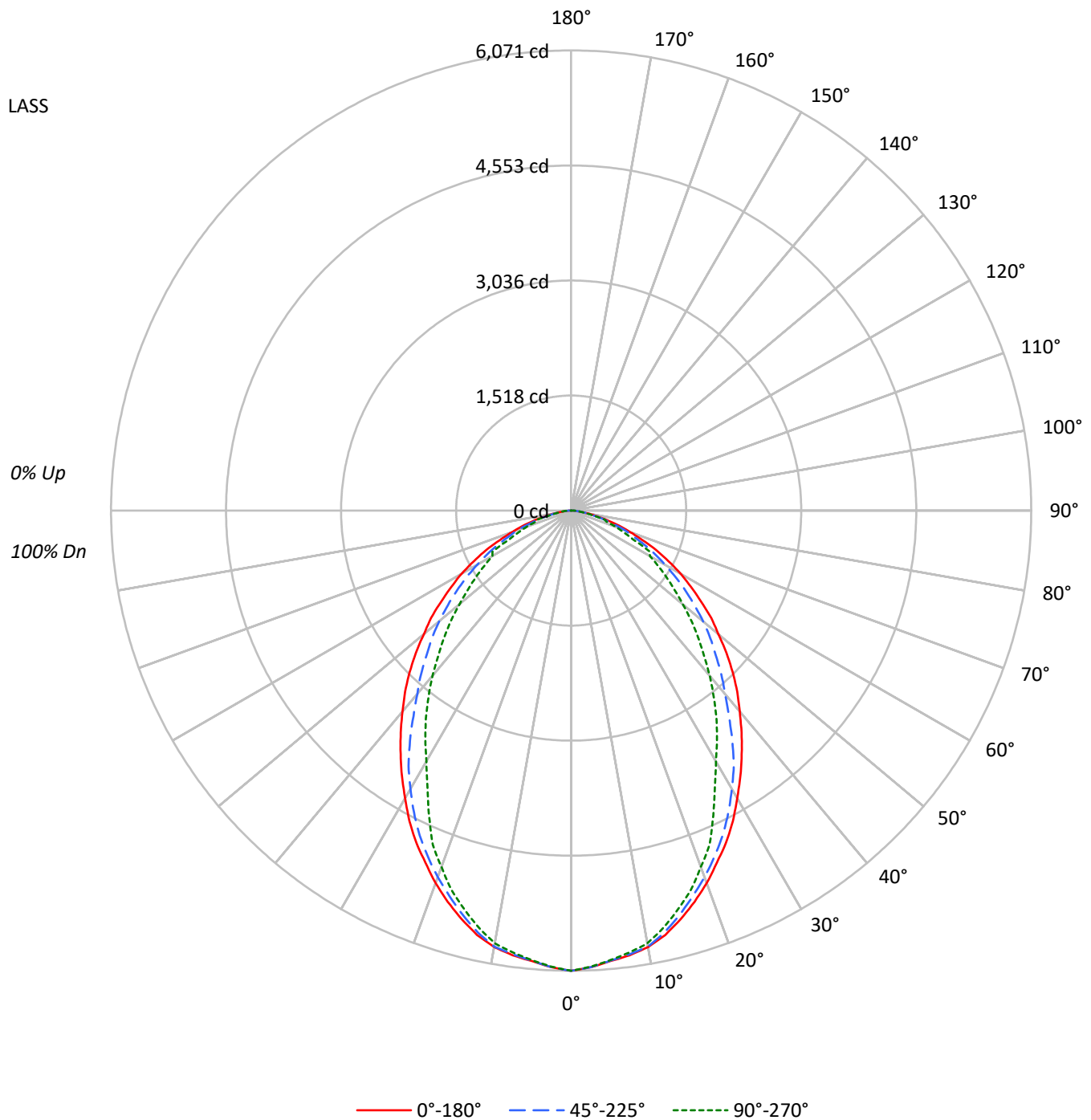
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8169	8169	8169
5°	8058	8049	8039
10°	7988	7979	7921
15°	7773	7695	7587
20°	7487	7367	7166
25°	7179	7023	6586
30°	6805	6586	5932
35°	6445	6087	5488
40°	6078	5548	4993
45°	5730	5129	4514
50°	5304	4760	4026
55°	4906	4314	3606
60°	4495	3853	3230
65°	3955	3374	2860
70°	3258	2954	2430
75°	2590	2262	2372
80°	1740	1632	1523
85°	1084	1300	1518

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5730 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	565.2	4.7
10°-20°	1551.0	13.0
20°-30°	2147.3	18.0
30°-40°	2289.7	19.2
40°-50°	2088.8	17.5
50°-60°	1636.4	13.7
60°-70°	1066.6	8.9
70°-80°	472.5	4.0
80°-90°	101.5	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°	4263.5	35.8
0°-40°	6553.2	55.0
0°-60°	10278.5	86.2
0°-90°	11919.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6071	6071	6071	6071	6071	
5°	5966	5959	5959	5952	5952	566
15°	5580	5580	5524	5468	5447	1569
25°	4836	4808	4731	4562	4436	2220
35°	3924	3896	3706	3425	3341	2453
45°	3011	2948	2695	2471	2372	2319
55°	2092	2028	1839	1621	1537	1876
65°	1242	1172	1060	1081	898	1224
75°	498	463	435	414	456	534
85°	70	77	84	91	98	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6071.4	6071.4	6071.4	6071.4	6071.4
2.5°	6029.3	6029.3	6029.3	6022.2	6022.2
5°	5966.1	5959.1	5959.1	5952.1	5952.1
7.5°	5917.0	5909.9	5902.9	5895.9	5881.9
10°	5846.8	5846.8	5839.8	5804.7	5797.6
12.5°	5734.5	5727.5	5699.4	5650.2	5636.2
15°	5580.1	5580.1	5523.9	5467.8	5446.7
17.5°	5411.6	5404.6	5334.4	5278.2	5250.2
20°	5229.1	5215.1	5144.9	5053.6	5004.5
22.5°	5025.6	5025.6	4941.3	4822.0	4772.9
25°	4836.0	4808.0	4730.8	4562.3	4436.0
27.5°	4618.5	4576.3	4492.1	4253.5	4106.1
30°	4379.8	4358.8	4239.4	3930.6	3818.3
32.5°	4155.2	4120.1	3993.8	3670.9	3579.7
35°	3923.6	3895.5	3706.0	3425.2	3341.0
37.5°	3692.0	3656.9	3418.2	3193.6	3088.3
40°	3460.3	3418.2	3158.5	2955.0	2842.7
42.5°	3242.7	3186.6	2933.9	2716.3	2590.0
45°	3011.1	2948.0	2695.3	2470.7	2372.4
47.5°	2779.5	2723.3	2491.7	2260.1	2147.8
50°	2533.8	2484.7	2274.1	2042.5	1923.2
52.5°	2330.3	2253.1	2049.5	1817.9	1719.6
55°	2091.6	2028.5	1839.0	1621.4	1537.1
57.5°	1874.1	1810.9	1635.4	1431.9	1361.7
60°	1670.5	1579.3	1431.9	1256.4	1200.2
62.5°	1445.9	1375.7	1249.4	1102.0	1172.2
65°	1242.4	1172.2	1059.9	1080.9	898.4
67.5°	1017.7	982.7	884.4	786.1	758.0
70°	828.2	786.1	751.0	645.7	617.7
72.5°	659.8	617.7	568.5	512.4	491.3
75°	498.3	463.2	435.2	414.1	456.2
77.5°	343.9	329.9	308.8	287.8	280.8
80°	224.6	217.6	210.6	203.5	196.5
82.5°	133.4	133.4	133.4	133.4	133.4
85°	70.2	77.2	84.2	91.2	98.3
87.5°	42.1	42.1	49.1	56.2	63.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)