

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: P561084

Luminaire Tested: FSR-12-4-LD4-1LO-50-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561084
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-12-4-LD4-1LO-50-UNV-80-96-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2197.0 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

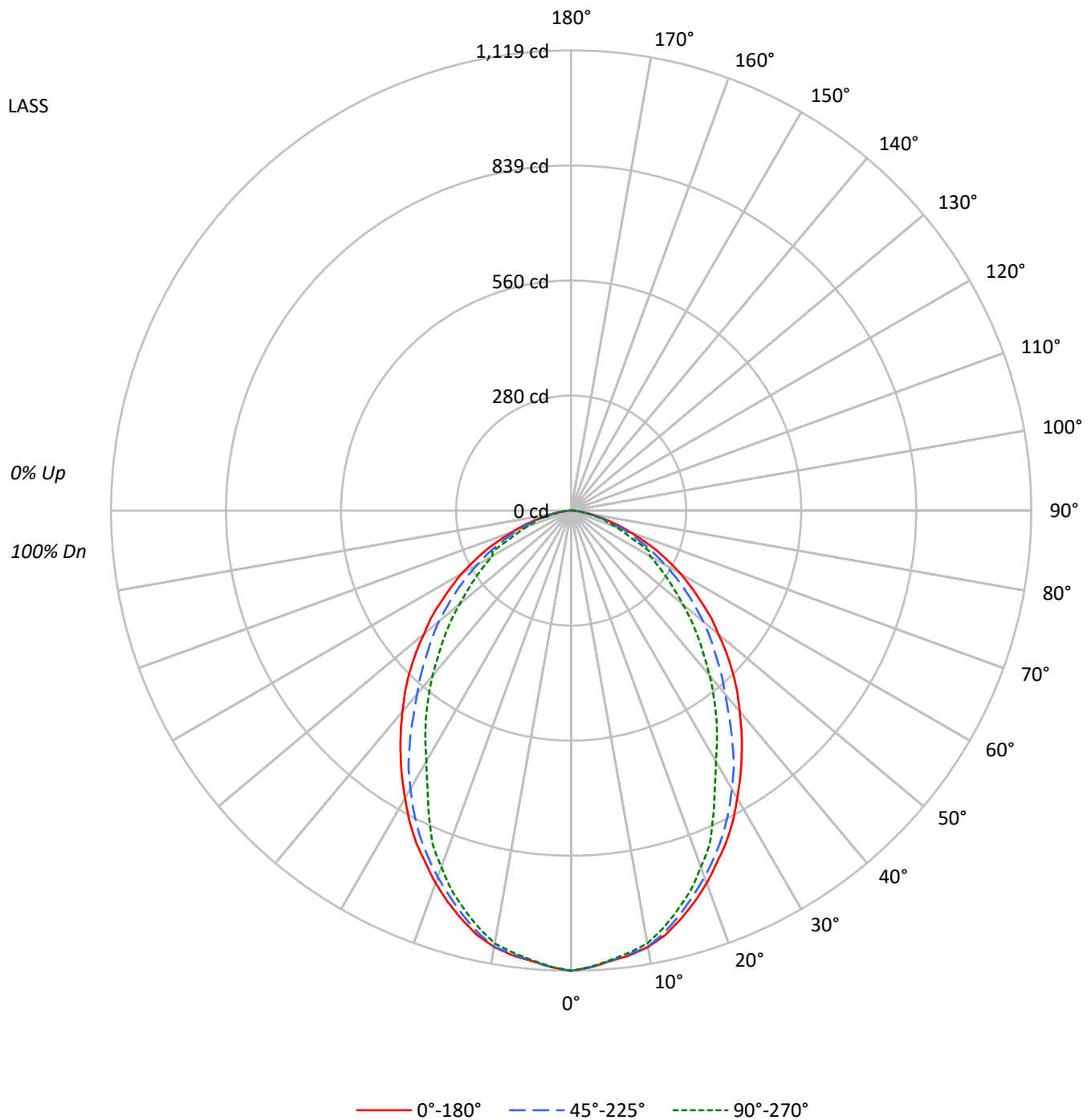
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3011	3011	3011
5°	2971	2967	2964
10°	2945	2941	2920
15°	2866	2837	2797
20°	2760	2716	2642
25°	2647	2589	2428
30°	2509	2428	2187
35°	2376	2244	2023
40°	2240	2045	1841
45°	2112	1891	1664
50°	1955	1755	1484
55°	1809	1590	1329
60°	1657	1420	1190
65°	1458	1244	1054
70°	1201	1089	896
75°	955	834	874
80°	642	601	561
85°	398	479	559

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2112 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.2	4.7
10°-20°	285.9	13.0
20°-30°	395.8	18.0
30°-40°	422.0	19.2
40°-50°	385.0	17.5
50°-60°	301.6	13.7
60°-70°	196.6	8.9
70°-80°	87.1	4.0
80°-90°	18.7	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°	785.9	35.8
0°-40°	1207.9	55.0
0°-60°	1894.6	86.2
0°-90°	2197.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2197.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1119	1119	1119	1119	1119	
5°	1100	1098	1098	1097	1097	104
15°	1029	1029	1018	1008	1004	289
25°	891	886	872	841	818	409
35°	723	718	683	631	616	452
45°	555	543	497	455	437	428
55°	386	374	339	299	283	346
65°	229	216	195	199	166	226
75°	92	85	80	76	84	98
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1119.1	1119.1	1119.1	1119.1	1119.1
2.5°	1111.4	1111.4	1111.4	1110.1	1110.1
5°	1099.7	1098.4	1098.4	1097.1	1097.1
7.5°	1090.7	1089.4	1088.1	1086.8	1084.2
10°	1077.7	1077.7	1076.4	1070.0	1068.7
12.5°	1057.0	1055.7	1050.6	1041.5	1038.9
15°	1028.6	1028.6	1018.2	1007.9	1004.0
17.5°	997.5	996.2	983.3	972.9	967.7
20°	963.9	961.3	948.3	931.5	922.5
22.5°	926.3	926.3	910.8	888.8	879.8
25°	891.4	886.2	872.0	841.0	817.7
27.5°	851.3	843.5	828.0	784.0	756.9
30°	807.3	803.4	781.4	724.5	703.8
32.5°	765.9	759.5	736.2	676.6	659.8
35°	723.2	718.0	683.1	631.4	615.8
37.5°	680.5	674.1	630.1	588.7	569.3
40°	637.8	630.1	582.2	544.7	524.0
42.5°	597.7	587.4	540.8	500.7	477.4
45°	555.0	543.4	496.8	455.4	437.3
47.5°	512.3	502.0	459.3	416.6	395.9
50°	467.1	458.0	419.2	376.5	354.5
52.5°	429.5	415.3	377.8	335.1	317.0
55°	385.5	373.9	339.0	298.9	283.3
57.5°	345.4	333.8	301.5	263.9	251.0
60°	307.9	291.1	263.9	231.6	221.2
62.5°	266.5	253.6	230.3	203.1	216.1
65°	229.0	216.1	195.4	199.2	165.6
67.5°	187.6	181.1	163.0	144.9	139.7
70°	152.7	144.9	138.4	119.0	113.9
72.5°	121.6	113.9	104.8	94.4	90.6
75°	91.9	85.4	80.2	76.3	84.1
77.5°	63.4	60.8	56.9	53.0	51.8
80°	41.4	40.1	38.8	37.5	36.2
82.5°	24.6	24.6	24.6	24.6	24.6
85°	12.9	14.2	15.5	16.8	18.1
87.5°	7.8	7.8	9.1	10.4	11.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)