

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: P590314

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590314
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-LD4-2LO-50-UNV-82-94-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2790.0 lumens
Efficiency: N/A
Efficacy: 119.2 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

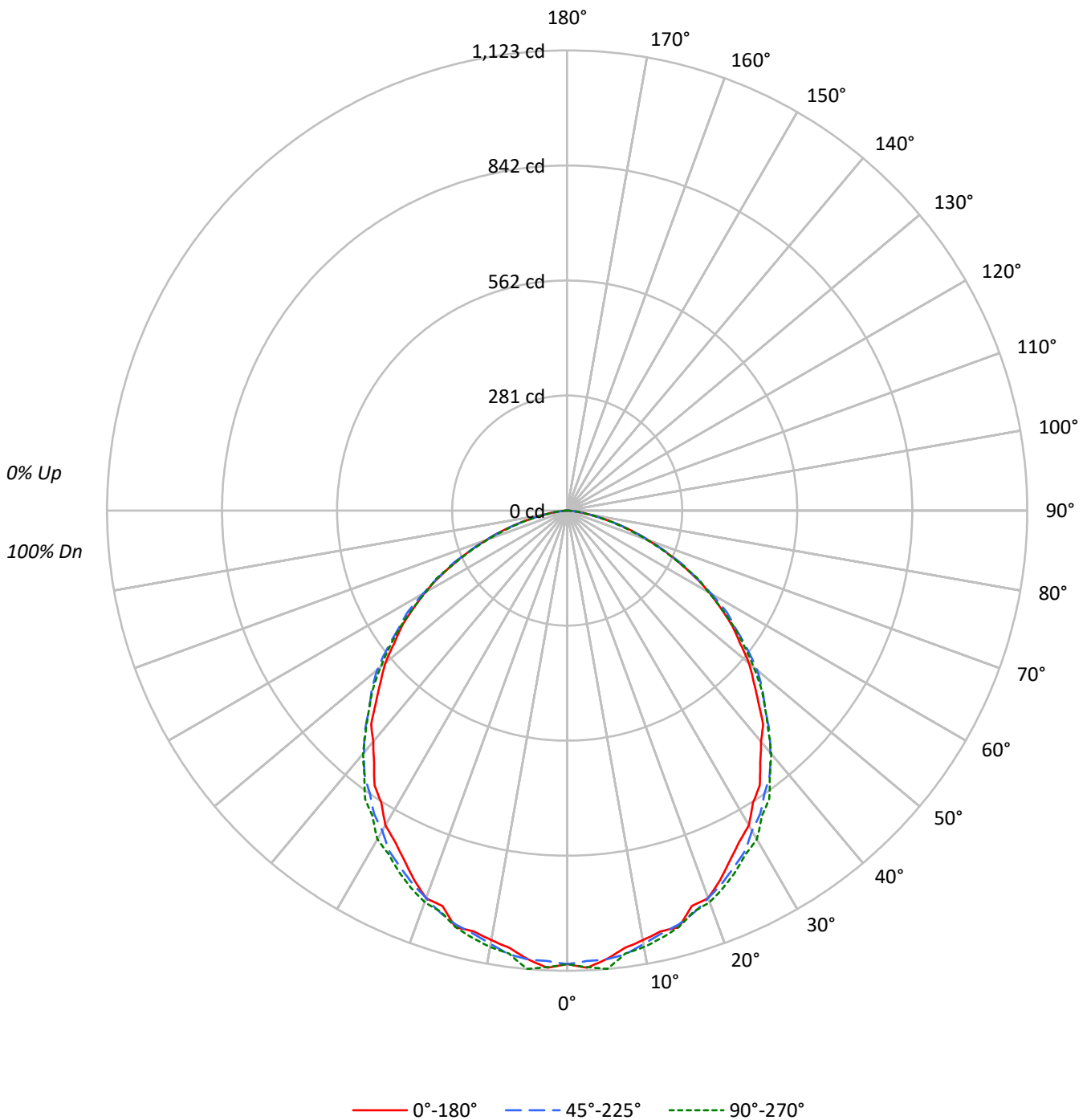
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2979	2979	2979
5°	2969	2970	3033
10°	2909	2934	2955
15°	2932	2916	2932
20°	2882	2882	2913
25°	2794	2855	2886
30°	2755	2804	2878
35°	2690	2761	2823
40°	2586	2710	2722
45°	2508	2597	2601
50°	2425	2535	2486
55°	2311	2356	2339
60°	2161	2182	2143
65°	1927	1976	1913
70°	1653	1659	1613
75°	1309	1306	1256
80°	877	852	820
85°	475	472	442

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2664 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.1	3.7
10°-20°	295.1	10.6
20°-30°	442.1	15.8
30°-40°	524.0	18.8
40°-50°	525.0	18.8
50°-60°	445.6	16.0
60°-70°	300.5	10.8
70°-80°	132.0	4.7
80°-90°	21.4	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°	841.4	30.2
0°-40°	1365.4	48.9
0°-60°	2336.1	83.7
0°-90°	2790.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2790.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1107	1107	1107	1107	1107	
5°	1099	1097	1100	1096	1123	104
15°	1052	1040	1047	1052	1052	293
25°	941	946	962	974	972	435
35°	819	821	840	860	859	509
45°	659	671	682	700	683	510
55°	492	489	502	499	498	438
65°	303	299	310	298	300	301
75°	126	123	126	117	121	135
85°	15	15	15	15	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1107.0	1107.0	1107.0	1107.0	1107.0
2.5°	1116.6	1108.1	1100.3	1109.4	1115.0
5°	1099.1	1096.6	1099.6	1096.3	1122.7
7.5°	1076.6	1086.4	1092.1	1088.6	1090.1
10°	1064.6	1061.1	1073.8	1082.7	1081.4
12.5°	1051.7	1056.8	1057.5	1067.1	1068.0
15°	1052.4	1040.3	1046.7	1052.1	1052.5
17.5°	1011.5	1024.7	1029.1	1041.5	1026.1
20°	1006.5	996.9	1006.5	1019.2	1017.2
22.5°	975.8	965.1	985.7	996.9	996.2
25°	940.9	946.1	961.5	974.1	972.1
27.5°	910.3	916.3	938.3	955.6	944.5
30°	886.7	883.7	902.3	917.8	926.3
32.5°	844.6	855.4	877.2	892.5	884.3
35°	819.0	821.4	840.4	859.9	859.3
37.5°	774.3	785.5	812.3	817.7	812.7
40°	736.1	747.4	771.5	777.4	775.0
42.5°	707.9	709.9	730.7	737.4	726.7
45°	658.9	671.2	682.4	699.9	683.4
47.5°	617.2	622.9	646.9	651.6	642.9
50°	579.3	581.3	605.5	599.6	593.9
52.5°	531.7	540.1	553.7	552.6	545.9
55°	492.5	489.3	502.1	498.7	498.5
57.5°	445.5	451.2	461.8	456.4	447.7
60°	401.5	401.6	405.5	399.3	398.2
62.5°	352.5	354.2	355.0	347.5	359.8
65°	302.6	298.6	310.3	298.4	300.4
67.5°	256.7	258.7	257.6	250.1	253.0
70°	210.1	212.7	210.8	202.4	205.0
72.5°	167.5	164.4	166.4	155.8	160.7
75°	125.9	123.3	125.6	116.8	120.8
77.5°	85.8	87.8	86.3	81.6	84.3
80°	56.6	55.0	55.0	52.3	52.9
82.5°	33.0	31.4	31.0	30.2	31.4
85°	15.4	15.0	15.3	14.9	14.3
87.5°	5.6	5.7	5.7	5.4	5.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)