

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: P590250

Luminaire Tested: FSR-24-2-LD4-2LO-35-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590250
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2716.0 lumens
Efficiency: N/A
Efficacy: 116.1 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

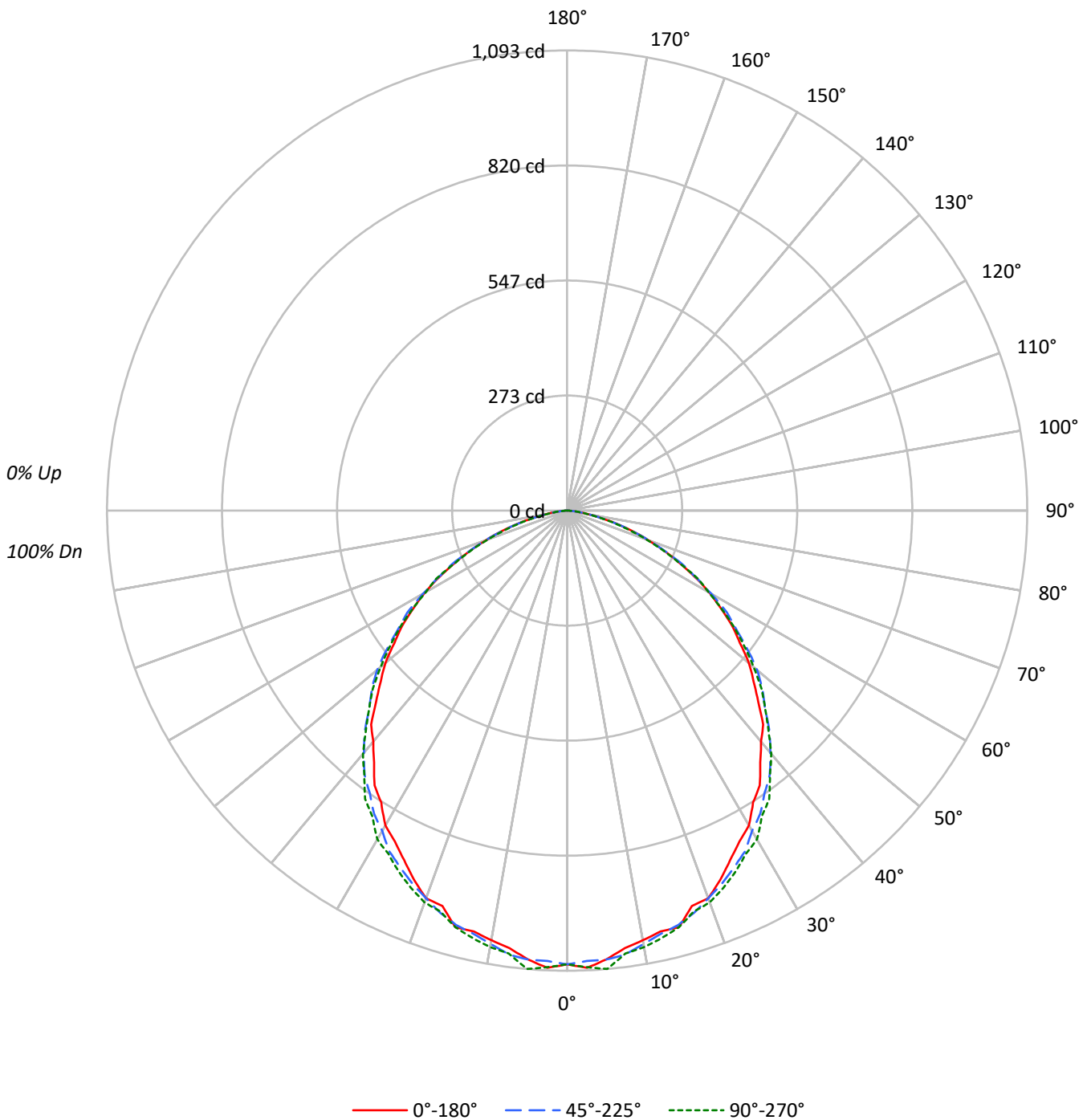
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2900	2900	2900
5°	2890	2891	2952
10°	2832	2857	2876
15°	2854	2839	2854
20°	2806	2806	2836
25°	2720	2779	2810
30°	2682	2729	2802
35°	2619	2688	2748
40°	2517	2638	2650
45°	2441	2528	2531
50°	2361	2467	2420
55°	2250	2293	2277
60°	2103	2124	2086
65°	1876	1924	1862
70°	1609	1614	1570
75°	1275	1272	1223
80°	854	831	798
85°	463	460	429

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2593 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.4	3.7
10°-20°	287.3	10.6
20°-30°	430.4	15.8
30°-40°	510.1	18.8
40°-50°	511.1	18.8
50°-60°	433.8	16.0
60°-70°	292.5	10.8
70°-80°	128.5	4.7
80°-90°	20.9	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°	819.1	30.2
0°-40°	1329.2	48.9
0°-60°	2274.1	83.7
0°-90°	2716.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2716.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1078	1078	1078	1078	1078	
5°	1070	1068	1070	1067	1093	101
15°	1024	1013	1019	1024	1025	285
25°	916	921	936	948	946	423
35°	797	800	818	837	836	495
45°	641	653	664	681	665	496
55°	480	476	489	486	485	427
65°	295	291	302	290	292	293
75°	123	120	122	114	118	131
85°	15	15	15	14	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1077.6	1077.6	1077.6	1077.6	1077.6
2.5°	1087.0	1078.8	1071.1	1080.0	1085.4
5°	1070.0	1067.5	1070.4	1067.2	1092.9
7.5°	1048.0	1057.6	1063.2	1059.7	1061.2
10°	1036.3	1033.0	1045.4	1054.0	1052.7
12.5°	1023.8	1028.8	1029.5	1038.8	1039.7
15°	1024.5	1012.7	1018.9	1024.2	1024.6
17.5°	984.7	997.5	1001.8	1013.9	998.9
20°	979.8	970.5	979.8	992.2	990.3
22.5°	949.9	939.5	959.5	970.5	969.8
25°	916.0	921.0	936.0	948.2	946.3
27.5°	886.2	892.0	913.5	930.3	919.4
30°	863.2	860.3	878.4	893.4	901.8
32.5°	822.2	832.8	853.9	868.8	860.9
35°	797.3	799.6	818.1	837.1	836.5
37.5°	753.7	764.7	790.7	796.0	791.2
40°	716.6	727.6	751.1	756.8	754.4
42.5°	689.2	691.1	711.3	717.8	707.4
45°	641.4	653.4	664.3	681.4	665.2
47.5°	600.8	606.4	629.7	634.3	625.9
50°	563.9	565.9	589.4	583.7	578.1
52.5°	517.6	525.8	539.0	537.9	531.4
55°	479.5	476.3	488.8	485.5	485.3
57.5°	433.7	439.3	449.6	444.3	435.8
60°	390.8	391.0	394.7	388.8	387.6
62.5°	343.1	344.8	345.6	338.2	350.2
65°	294.6	290.7	302.1	290.5	292.5
67.5°	249.9	251.8	250.7	243.5	246.3
70°	204.5	207.0	205.2	197.0	199.5
72.5°	163.1	160.0	162.0	151.7	156.4
75°	122.6	120.1	122.3	113.7	117.6
77.5°	83.5	85.4	84.0	79.4	82.1
80°	55.1	53.6	53.6	50.9	51.5
82.5°	32.1	30.6	30.2	29.4	30.6
85°	15.0	14.6	14.9	14.5	13.9
87.5°	5.4	5.6	5.6	5.3	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)