

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: P590279

Luminaire Tested: FSR-24-2-LD4-2LO-40-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590279
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-40-UNV-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2653.0 lumens
Efficiency: N/A
Efficacy: 113.4 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

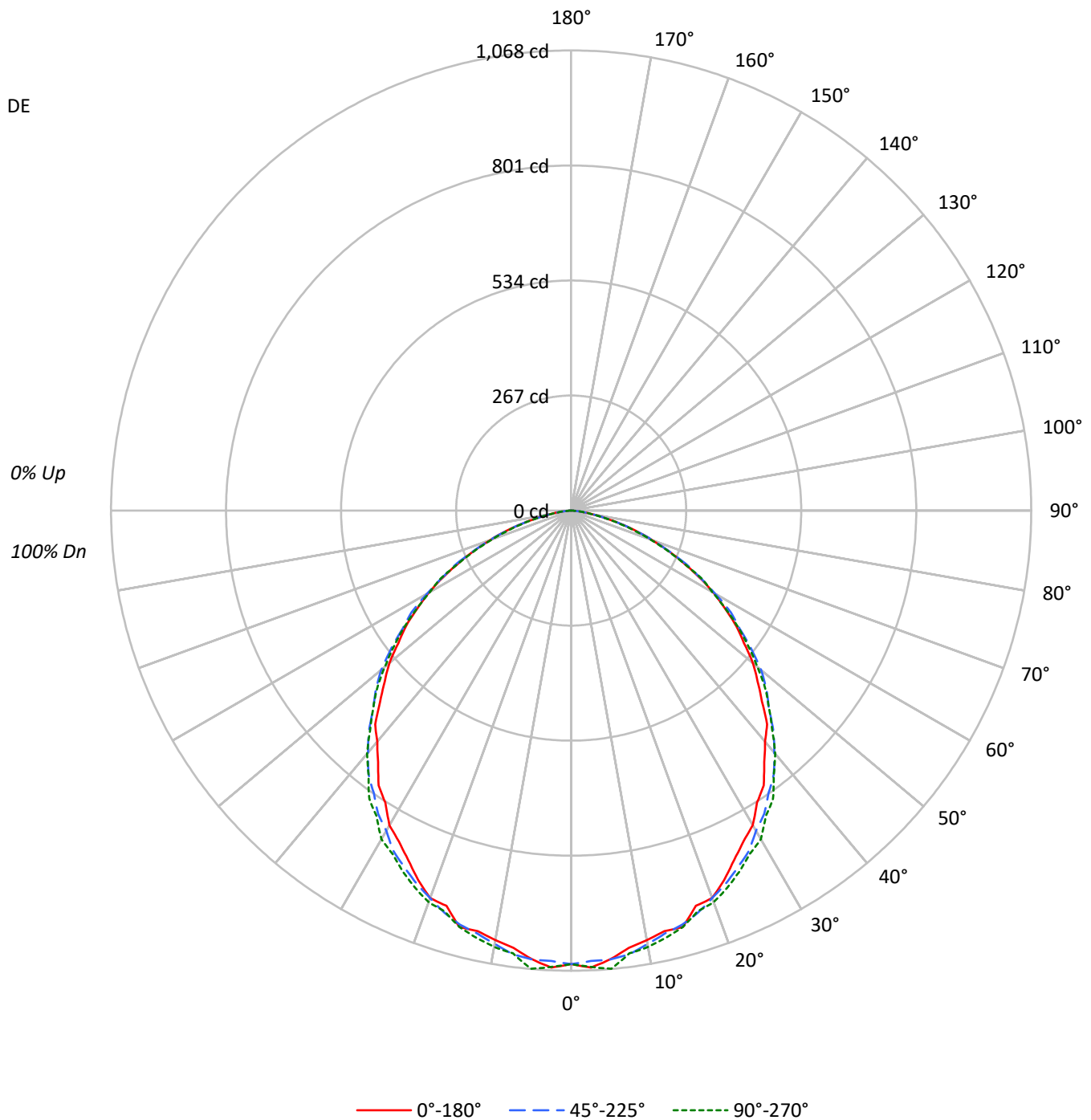
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2833	2833	2833
5°	2823	2824	2884
10°	2766	2790	2810
15°	2788	2773	2788
20°	2741	2741	2770
25°	2657	2715	2744
30°	2620	2666	2737
35°	2558	2625	2684
40°	2459	2577	2589
45°	2385	2469	2473
50°	2306	2410	2364
55°	2198	2240	2224
60°	2055	2075	2038
65°	1832	1879	1819
70°	1572	1578	1533
75°	1245	1242	1194
80°	834	810	779
85°	454	448	420

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2533 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.0	3.7
10°-20°	280.6	10.6
20°-30°	420.4	15.8
30°-40°	498.3	18.8
40°-50°	499.2	18.8
50°-60°	423.8	16.0
60°-70°	285.7	10.8
70°-80°	125.5	4.7
80°-90°	20.4	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°	800.1	30.2
0°-40°	1298.4	48.9
0°-60°	2221.4	83.7
0°-90°	2653.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2653.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1053	1053	1053	1053	1053	
5°	1045	1043	1046	1042	1068	99
15°	1001	989	995	1000	1001	279
25°	895	900	914	926	924	414
35°	779	781	799	818	817	484
45°	627	638	649	666	650	485
55°	468	465	478	474	474	417
65°	288	284	295	284	286	286
75°	120	117	120	111	115	128
85°	15	14	14	14	14	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1061.7	1053.7	1046.3	1055.0	1060.3
5°	1045.2	1042.7	1045.6	1042.4	1067.6
7.5°	1023.7	1033.1	1038.5	1035.1	1036.6
10°	1012.3	1009.0	1021.1	1029.5	1028.3
12.5°	1000.0	1004.9	1005.6	1014.7	1015.5
15°	1000.7	989.2	995.3	1000.5	1000.9
17.5°	961.9	974.4	978.6	990.4	975.7
20°	957.1	948.0	957.1	969.2	967.3
22.5°	927.9	917.7	937.3	948.0	947.3
25°	894.7	899.6	914.3	926.2	924.3
27.5°	865.6	871.3	892.3	908.7	898.1
30°	843.2	840.3	858.0	872.7	880.8
32.5°	803.1	813.4	834.1	848.6	840.9
35°	778.8	781.1	799.2	817.7	817.1
37.5°	736.2	747.0	772.4	777.6	772.8
40°	700.0	710.7	733.7	739.2	736.9
42.5°	673.2	675.1	694.8	701.2	691.0
45°	626.6	638.2	648.8	665.6	649.8
47.5°	586.9	592.3	615.1	619.6	611.3
50°	550.9	552.8	575.7	570.2	564.7
52.5°	505.6	513.6	526.5	525.4	519.1
55°	468.4	465.2	477.5	474.2	474.1
57.5°	423.6	429.1	439.1	434.0	425.7
60°	381.8	381.9	385.6	379.7	378.7
62.5°	335.2	336.8	337.6	330.4	342.1
65°	287.7	283.9	295.1	283.8	285.7
67.5°	244.1	246.0	244.9	237.8	240.6
70°	199.8	202.2	200.5	192.5	194.9
72.5°	159.3	156.3	158.2	148.1	152.8
75°	119.7	117.3	119.5	111.0	114.8
77.5°	81.5	83.5	82.1	77.6	80.2
80°	53.8	52.3	52.3	49.7	50.3
82.5°	31.4	29.9	29.5	28.7	29.9
85°	14.7	14.3	14.5	14.1	13.6
87.5°	5.3	5.4	5.4	5.2	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)