

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: P590306

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590306
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-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 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: 2850.0 lumens
Efficiency: N/A
Efficacy: 121.8 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

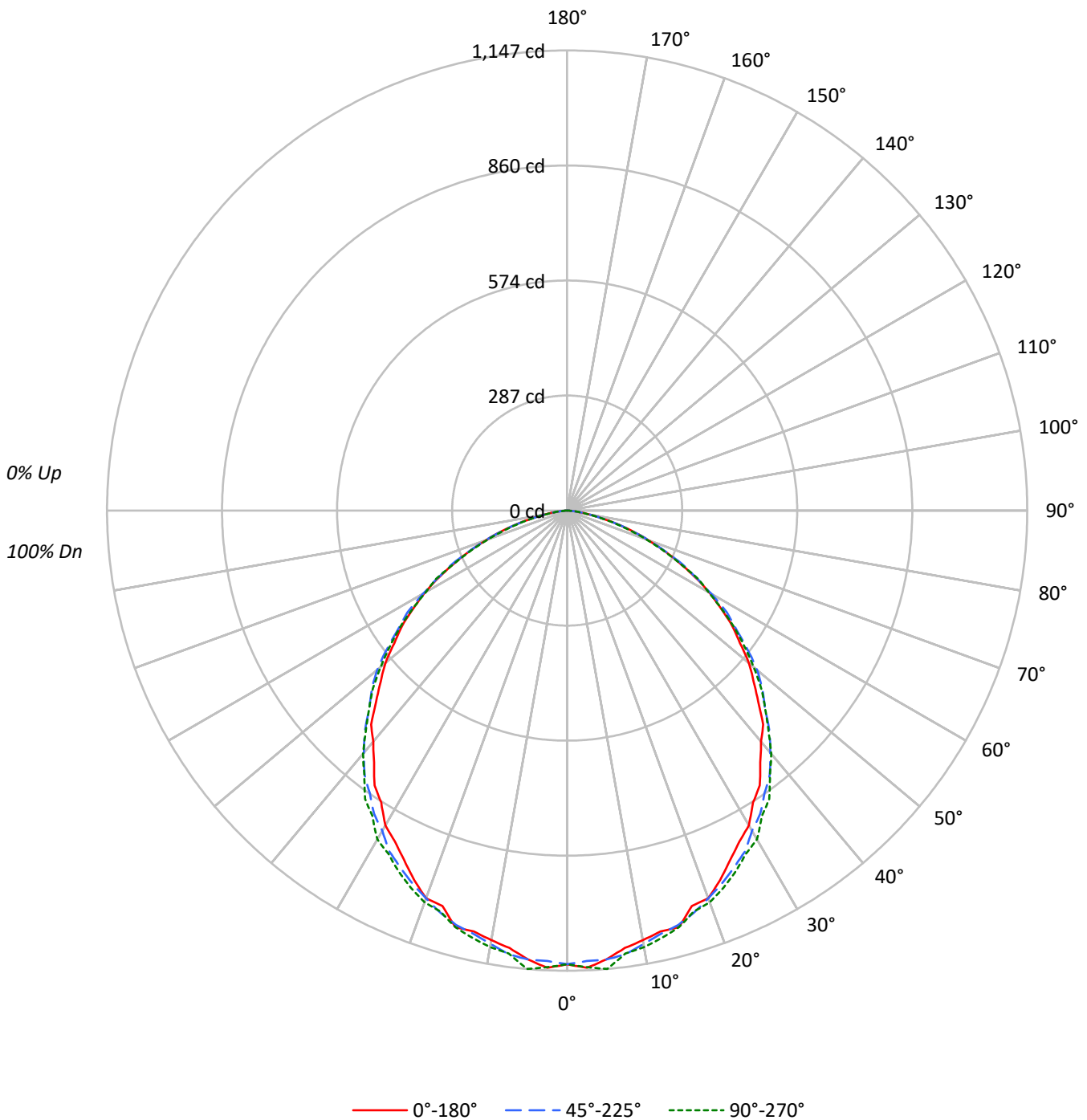
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3043	3043	3043
5°	3033	3034	3098
10°	2971	2997	3019
15°	2995	2979	2995
20°	2944	2944	2976
25°	2854	2916	2948
30°	2815	2864	2940
35°	2748	2820	2884
40°	2641	2768	2781
45°	2562	2653	2656
50°	2478	2589	2540
55°	2360	2406	2389
60°	2207	2229	2189
65°	1968	2018	1954
70°	1688	1695	1648
75°	1337	1334	1283
80°	896	871	837
85°	488	482	451

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2721 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	3.7
10°-20°	301.5	10.6
20°-30°	451.7	15.8
30°-40°	535.3	18.8
40°-50°	536.3	18.8
50°-60°	455.2	16.0
60°-70°	306.9	10.8
70°-80°	134.8	4.7
80°-90°	21.9	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°	859.5	30.2
0°-40°	1394.8	48.9
0°-60°	2386.3	83.7
0°-90°	2850.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2850.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1131	1131	1131	1131	1131	
5°	1123	1120	1123	1120	1147	106
15°	1075	1063	1069	1075	1075	300
25°	961	966	982	995	993	444
35°	837	839	858	878	878	519
45°	673	686	697	715	698	521
55°	503	500	513	509	509	448
65°	309	305	317	305	307	307
75°	129	126	128	119	123	138
85°	16	15	16	15	15	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1130.8	1130.8	1130.8	1130.8	1130.8
2.5°	1140.6	1132.0	1123.9	1133.3	1139.0
5°	1122.8	1120.1	1123.2	1119.9	1146.9
7.5°	1099.7	1109.8	1115.6	1112.0	1113.6
10°	1087.4	1083.9	1096.9	1106.0	1104.7
12.5°	1074.3	1079.6	1080.3	1090.1	1090.9
15°	1075.0	1062.6	1069.2	1074.7	1075.2
17.5°	1033.3	1046.7	1051.2	1063.9	1048.2
20°	1028.2	1018.4	1028.2	1041.2	1039.1
22.5°	996.8	985.8	1006.8	1018.4	1017.7
25°	961.2	966.4	982.2	995.0	993.0
27.5°	929.9	936.0	958.5	976.2	964.8
30°	905.8	902.7	921.7	937.5	946.3
32.5°	862.7	873.8	896.0	911.7	903.3
35°	836.6	839.1	858.5	878.4	877.8
37.5°	790.9	802.4	829.7	835.3	830.2
40°	751.9	763.5	788.1	794.1	791.6
42.5°	723.2	725.2	746.4	753.2	742.3
45°	673.1	685.6	697.0	715.0	698.0
47.5°	630.4	636.3	660.8	665.6	656.7
50°	591.8	593.8	618.5	612.5	606.7
52.5°	543.1	551.8	565.6	564.5	557.6
55°	503.1	499.8	512.9	509.4	509.3
57.5°	455.1	460.9	471.7	466.2	457.3
60°	410.1	410.3	414.2	407.9	406.8
62.5°	360.0	361.8	362.7	354.9	367.5
65°	309.1	305.0	317.0	304.9	306.9
67.5°	262.2	264.3	263.1	255.5	258.4
70°	214.6	217.3	215.4	206.7	209.4
72.5°	171.1	167.9	169.9	159.1	164.1
75°	128.6	126.0	128.3	119.3	123.4
77.5°	87.6	89.6	88.2	83.4	86.1
80°	57.8	56.2	56.2	53.4	54.0
82.5°	33.7	32.1	31.7	30.8	32.1
85°	15.8	15.3	15.6	15.2	14.6
87.5°	5.7	5.8	5.8	5.5	5.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)