

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: P590319

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590319
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-93-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2906.0 lumens
Efficiency: N/A
Efficacy: 124.2 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

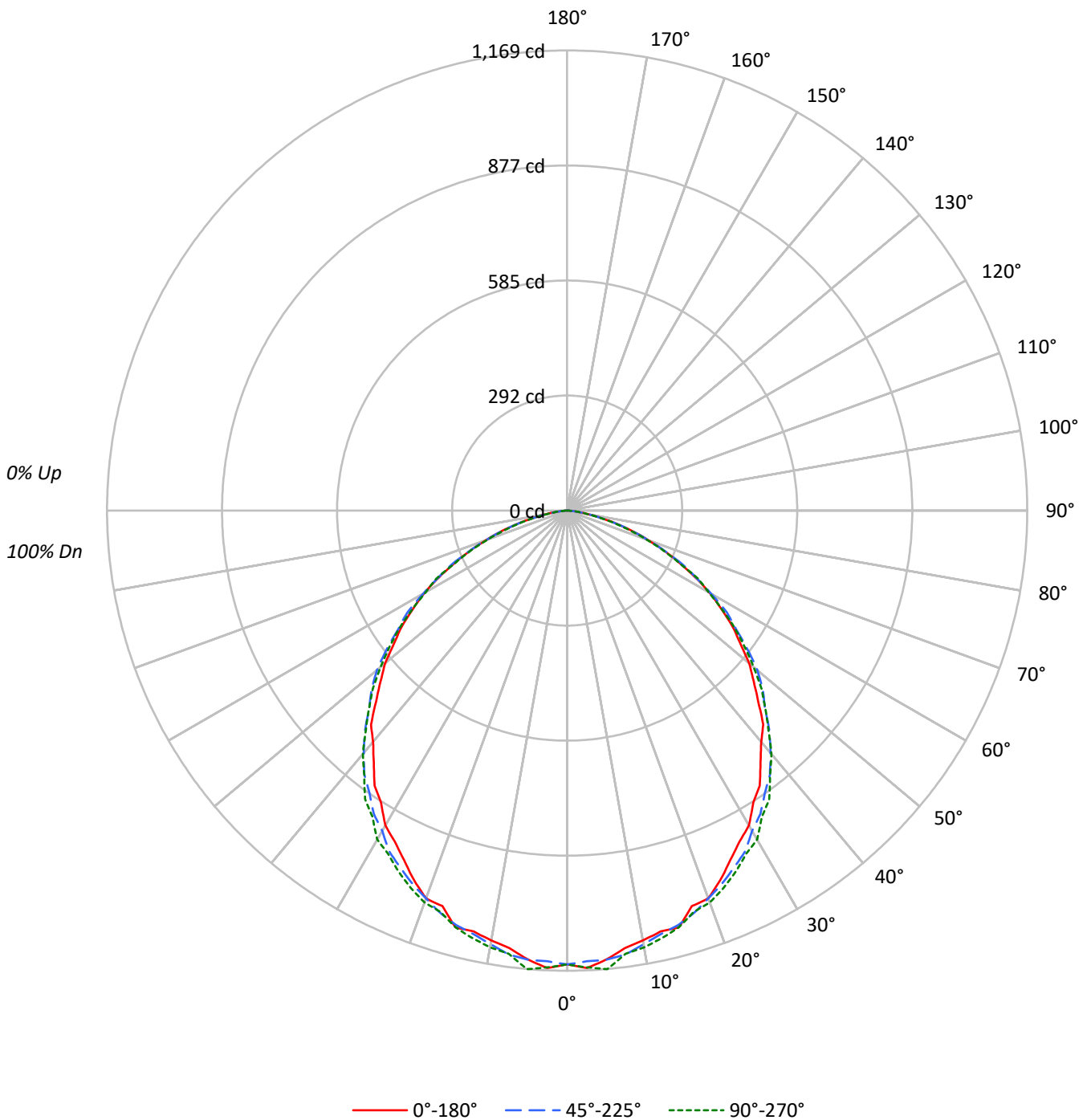
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3103	3103	3103
5°	3092	3094	3159
10°	3030	3056	3078
15°	3054	3037	3054
20°	3002	3002	3034
25°	2910	2974	3006
30°	2870	2920	2998
35°	2802	2876	2940
40°	2693	2823	2836
45°	2612	2705	2709
50°	2526	2640	2590
55°	2407	2454	2436
60°	2251	2273	2232
65°	2007	2058	1992
70°	1721	1728	1680
75°	1364	1361	1308
80°	914	888	854
85°	497	491	460

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2774 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.5	3.7
10°-20°	307.4	10.6
20°-30°	460.5	15.8
30°-40°	545.8	18.8
40°-50°	546.8	18.8
50°-60°	464.2	16.0
60°-70°	312.9	10.8
70°-80°	137.5	4.7
80°-90°	22.4	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°	876.4	30.2
0°-40°	1422.2	48.9
0°-60°	2433.2	83.7
0°-90°	2906.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2906.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1153	1153	1153	1153	1153	
5°	1145	1142	1145	1142	1169	108
15°	1096	1084	1090	1096	1096	305
25°	980	985	1002	1015	1012	453
35°	853	856	875	896	895	530
45°	686	699	711	729	712	531
55°	513	510	523	519	519	456
65°	315	311	323	311	313	313
75°	131	128	131	122	126	141
85°	16	16	16	16	15	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1153.0	1153.0	1153.0	1153.0	1153.0
2.5°	1163.0	1154.2	1146.0	1155.6	1161.4
5°	1144.8	1142.2	1145.3	1141.9	1169.4
7.5°	1121.3	1131.6	1137.5	1133.8	1135.5
10°	1108.8	1105.2	1118.5	1127.7	1126.4
12.5°	1095.4	1100.8	1101.5	1111.5	1112.4
15°	1096.2	1083.5	1090.2	1095.9	1096.3
17.5°	1053.6	1067.3	1071.9	1084.8	1068.8
20°	1048.4	1038.4	1048.4	1061.6	1059.5
22.5°	1016.4	1005.2	1026.6	1038.4	1037.7
25°	980.0	985.4	1001.5	1014.6	1012.5
27.5°	948.2	954.4	977.4	995.4	983.8
30°	923.6	920.5	939.8	955.9	964.9
32.5°	879.7	891.0	913.6	929.6	921.1
35°	853.0	855.6	875.4	895.6	895.0
37.5°	806.4	818.2	846.0	851.7	846.5
40°	766.7	778.5	803.6	809.7	807.2
42.5°	737.4	739.5	761.0	768.0	756.9
45°	686.3	699.1	710.7	729.0	711.8
47.5°	642.8	648.8	673.8	678.7	669.6
50°	603.4	605.5	630.6	624.5	618.6
52.5°	553.8	562.6	576.7	575.5	568.5
55°	513.0	509.6	523.0	519.4	519.3
57.5°	464.0	470.0	481.0	475.4	466.3
60°	418.2	418.3	422.4	416.0	414.8
62.5°	367.1	368.9	369.8	361.9	374.7
65°	315.2	311.0	323.2	310.8	312.9
67.5°	267.4	269.5	268.3	260.5	263.5
70°	218.8	221.5	219.6	210.8	213.5
72.5°	174.5	171.2	173.3	162.3	167.3
75°	131.2	128.5	130.9	121.6	125.8
77.5°	89.3	91.4	89.9	85.0	87.8
80°	59.0	57.3	57.3	54.5	55.1
82.5°	34.4	32.8	32.3	31.4	32.8
85°	16.1	15.6	15.9	15.5	14.9
87.5°	5.8	6.0	6.0	5.7	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)