

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: P590318

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-93-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590318
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-93-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2940.0 lumens
Efficiency: N/A
Efficacy: 125.6 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

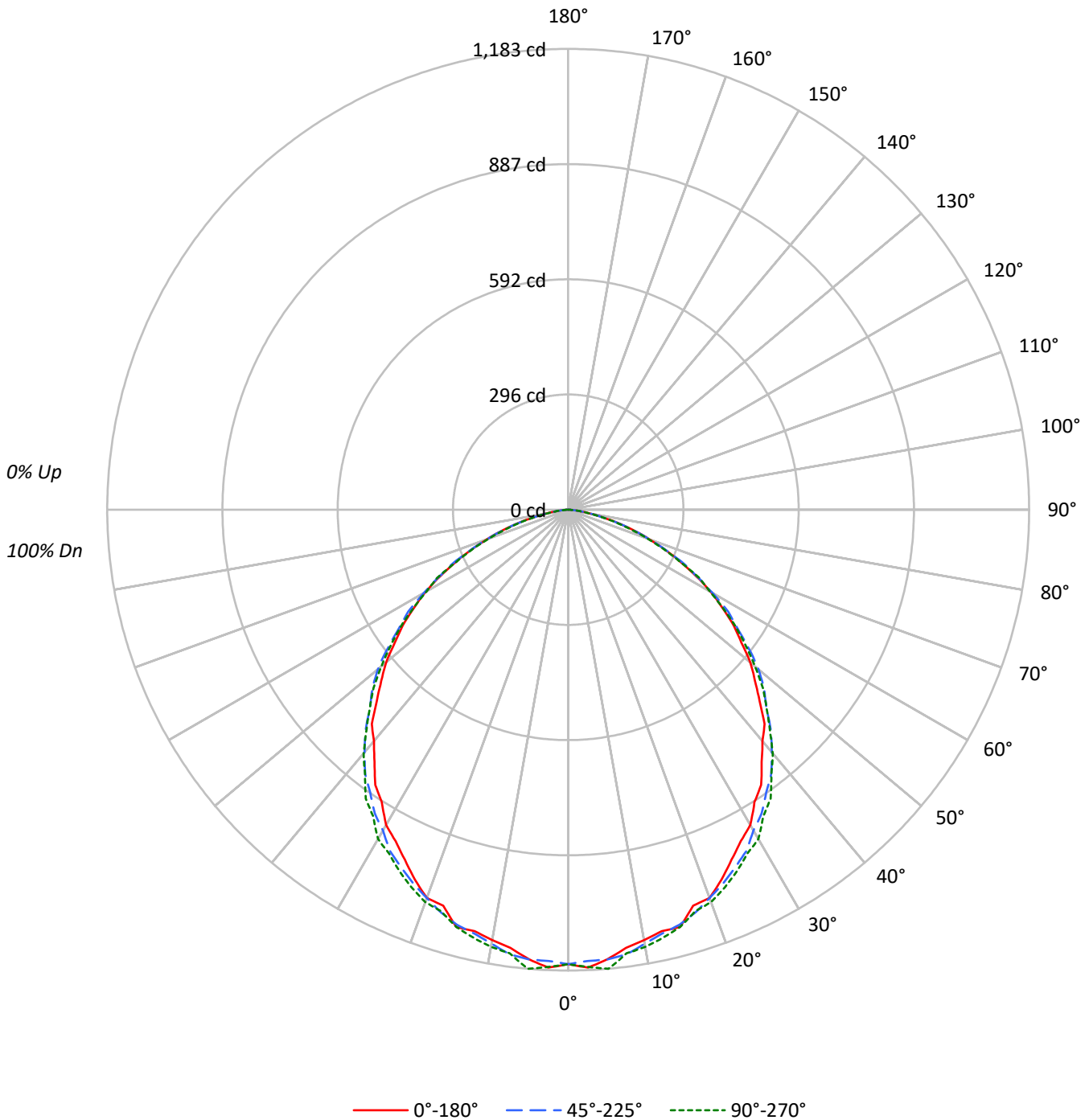
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									70									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	0													
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100														
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86														
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73														
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62														
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53														
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46														
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41														
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36														
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32														
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29														
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3139	3139	3139
5°	3129	3130	3196
10°	3065	3092	3114
15°	3090	3073	3090
20°	3037	3037	3070
25°	2944	3008	3041
30°	2903	2954	3033
35°	2835	2909	2975
40°	2725	2856	2869
45°	2642	2736	2740
50°	2555	2671	2620
55°	2435	2482	2464
60°	2277	2300	2258
65°	2031	2082	2016
70°	1742	1748	1699
75°	1380	1377	1324
80°	924	899	863
85°	503	497	466

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2807 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.7	3.7
10°-20°	311.0	10.6
20°-30°	465.9	15.8
30°-40°	552.2	18.8
40°-50°	553.2	18.8
50°-60°	469.6	16.0
60°-70°	316.6	10.8
70°-80°	139.1	4.7
80°-90°	22.6	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°	886.6	30.2
0°-40°	1438.8	48.9
0°-60°	2461.7	83.7
0°-90°	2940.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2940.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1166	1166	1166	1166	1166	
5°	1158	1156	1159	1155	1183	109
15°	1109	1096	1103	1109	1109	309
25°	992	997	1013	1026	1024	458
35°	863	866	886	906	906	536
45°	694	707	719	738	720	537
55°	519	516	529	526	525	462
65°	319	315	327	314	317	317
75°	133	130	132	123	127	142
85°	16	16	16	16	15	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1166.5	1166.5	1166.5	1166.5	1166.5
2.5°	1176.6	1167.7	1159.4	1169.1	1175.0
5°	1158.2	1155.5	1158.7	1155.2	1183.1
7.5°	1134.4	1144.8	1150.9	1147.1	1148.7
10°	1121.8	1118.2	1131.6	1140.9	1139.6
12.5°	1108.2	1113.7	1114.4	1124.5	1125.4
15°	1109.0	1096.2	1103.0	1108.7	1109.1
17.5°	1065.9	1079.8	1084.4	1097.5	1081.3
20°	1060.6	1050.5	1060.6	1074.0	1071.9
22.5°	1028.3	1017.0	1038.6	1050.5	1049.8
25°	991.5	996.9	1013.2	1026.4	1024.3
27.5°	959.3	965.6	988.8	1007.0	995.3
30°	934.4	931.3	950.8	967.1	976.1
32.5°	890.0	901.4	924.3	940.4	931.9
35°	863.0	865.6	885.6	906.1	905.5
37.5°	815.9	827.8	855.9	861.7	856.4
40°	775.7	787.6	813.0	819.2	816.6
42.5°	746.0	748.1	769.9	777.0	765.7
45°	694.3	707.3	719.0	737.6	720.1
47.5°	650.4	656.4	681.7	686.7	677.5
50°	610.4	612.6	638.0	631.8	625.8
52.5°	560.3	569.2	583.5	582.3	575.2
55°	519.0	515.6	529.1	525.5	525.3
57.5°	469.5	475.5	486.6	480.9	471.7
60°	423.1	423.2	427.3	420.8	419.6
62.5°	371.4	373.2	374.1	366.1	379.1
65°	318.9	314.6	327.0	314.5	316.6
67.5°	270.5	272.6	271.4	263.6	266.6
70°	221.4	224.1	222.2	213.3	216.0
72.5°	176.5	173.2	175.3	164.2	169.3
75°	132.7	130.0	132.4	123.1	127.3
77.5°	90.4	92.5	91.0	86.0	88.9
80°	59.6	58.0	58.0	55.1	55.7
82.5°	34.8	33.1	32.7	31.8	33.1
85°	16.3	15.8	16.1	15.7	15.1
87.5°	5.9	6.0	6.0	5.7	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)