

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: P590320

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590320
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-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2812.0 lumens
Efficiency: N/A
Efficacy: 120.2 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

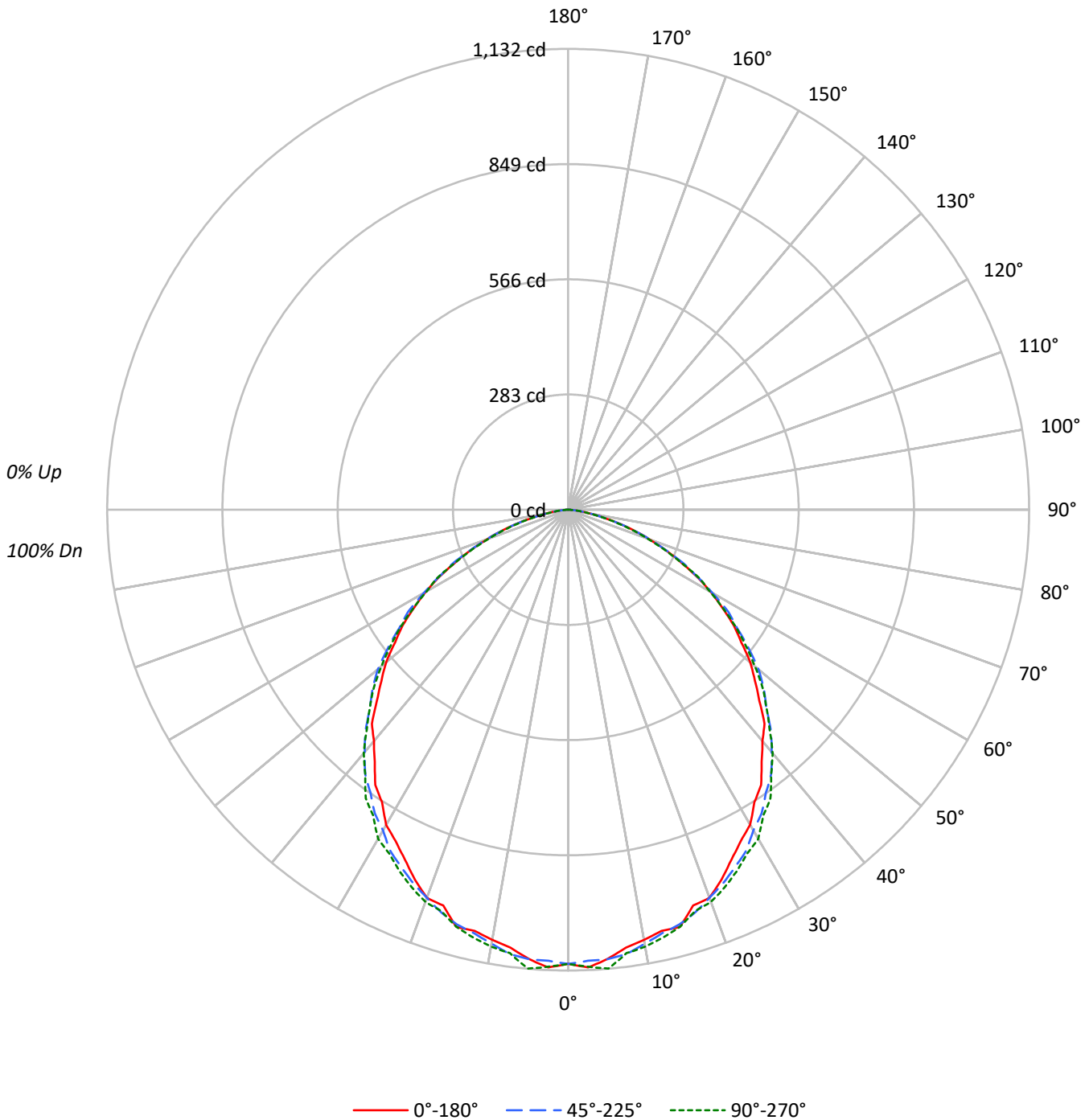
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3002	3002	3002
5°	2992	2994	3057
10°	2932	2957	2978
15°	2955	2939	2955
20°	2905	2905	2936
25°	2816	2877	2909
30°	2777	2826	2901
35°	2712	2783	2845
40°	2606	2732	2744
45°	2527	2617	2621
50°	2444	2555	2506
55°	2329	2374	2358
60°	2178	2200	2160
65°	1942	1992	1928
70°	1666	1672	1626
75°	1319	1316	1265
80°	883	860	826
85°	482	475	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2685 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.9	3.7
10°-20°	297.4	10.6
20°-30°	445.6	15.8
30°-40°	528.2	18.8
40°-50°	529.1	18.8
50°-60°	449.2	16.0
60°-70°	302.8	10.8
70°-80°	133.1	4.7
80°-90°	21.6	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°	848.0	30.2
0°-40°	1376.2	48.9
0°-60°	2354.5	83.7
0°-90°	2812.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2812.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1108	1105	1108	1105	1132	104
15°	1061	1048	1055	1060	1061	296
25°	948	954	969	982	980	438
35°	826	828	847	867	866	513
45°	664	676	688	706	689	514
55°	496	493	506	503	502	442
65°	305	301	313	301	303	303
75°	127	124	127	118	122	136
85°	16	15	15	15	14	23
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1115.7	1115.7	1115.7	1115.7	1115.7
2.5°	1125.4	1116.9	1109.0	1118.2	1123.8
5°	1107.8	1105.2	1108.2	1104.9	1131.6
7.5°	1085.0	1095.0	1100.7	1097.1	1098.7
10°	1072.9	1069.5	1082.3	1091.2	1089.9
12.5°	1060.0	1065.2	1065.9	1075.5	1076.4
15°	1060.7	1048.5	1054.9	1060.4	1060.8
17.5°	1019.5	1032.8	1037.2	1049.8	1034.2
20°	1014.5	1004.8	1014.5	1027.3	1025.3
22.5°	983.5	972.7	993.4	1004.8	1004.1
25°	948.3	953.5	969.1	981.8	979.7
27.5°	917.5	923.6	945.7	963.2	951.9
30°	893.7	890.7	909.4	925.0	933.6
32.5°	851.2	862.2	884.1	899.5	891.3
35°	825.5	827.9	847.1	866.7	866.1
37.5°	780.4	791.7	818.7	824.2	819.1
40°	741.9	753.3	777.6	783.5	781.1
42.5°	713.5	715.5	736.4	743.2	732.4
45°	664.1	676.5	687.7	705.5	688.7
47.5°	622.0	627.8	652.0	656.8	648.0
50°	583.9	585.9	610.2	604.3	598.6
52.5°	535.9	544.4	558.1	556.9	550.2
55°	496.4	493.1	506.1	502.6	502.5
57.5°	449.0	454.8	465.5	460.0	451.2
60°	404.7	404.8	408.7	402.5	401.3
62.5°	355.2	357.0	357.8	350.2	362.6
65°	305.0	300.9	312.8	300.8	302.8
67.5°	258.7	260.7	259.6	252.1	255.0
70°	211.8	214.4	212.5	204.0	206.6
72.5°	168.8	165.7	167.7	157.0	161.9
75°	126.9	124.3	126.6	117.7	121.7
77.5°	86.4	88.5	87.0	82.3	85.0
80°	57.0	55.5	55.5	52.7	53.3
82.5°	33.3	31.7	31.3	30.4	31.7
85°	15.6	15.1	15.4	15.0	14.4
87.5°	5.6	5.8	5.8	5.5	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)