

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: P590321

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590321
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-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2532.0 lumens
Efficiency: N/A
Efficacy: 108.2 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

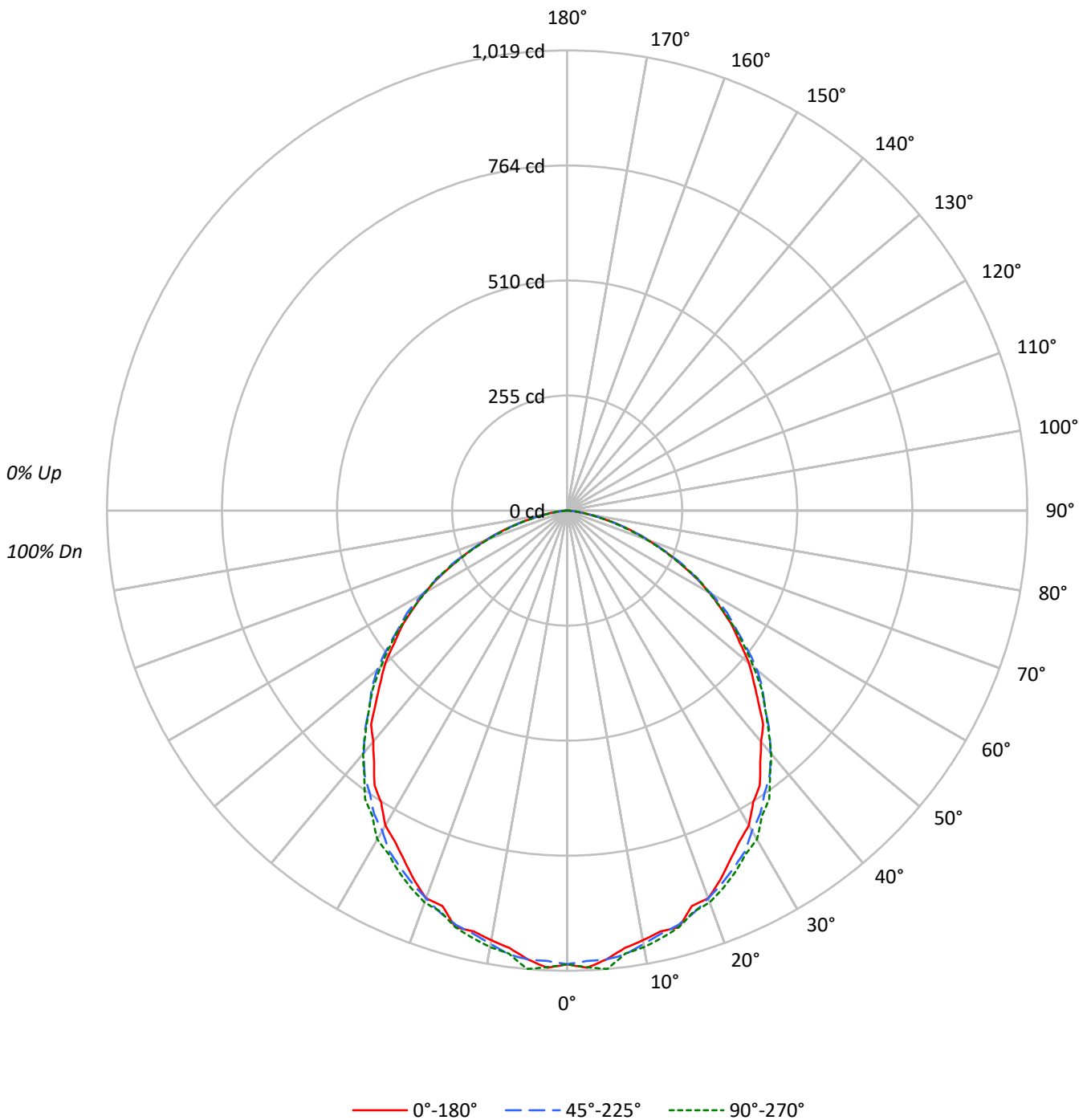
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2703	2703	2703
5°	2695	2696	2752
10°	2640	2663	2682
15°	2661	2646	2661
20°	2616	2616	2644
25°	2535	2591	2619
30°	2500	2545	2612
35°	2442	2506	2562
40°	2347	2460	2471
45°	2276	2357	2360
50°	2201	2300	2256
55°	2097	2138	2122
60°	1961	1981	1945
65°	1748	1793	1736
70°	1500	1505	1463
75°	1188	1185	1140
80°	797	773	744
85°	432	429	401

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2417 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.5	3.7
10°-20°	267.8	10.6
20°-30°	401.3	15.8
30°-40°	475.6	18.8
40°-50°	476.5	18.8
50°-60°	404.4	16.0
60°-70°	272.7	10.8
70°-80°	119.8	4.7
80°-90°	19.5	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°	763.6	30.2
0°-40°	1239.2	48.9
0°-60°	2120.1	83.7
0°-90°	2532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1005	1005	1005	1005	1005	
5°	998	995	998	995	1019	94
15°	955	944	950	955	955	266
25°	854	859	873	884	882	395
35°	743	746	763	780	780	461
45°	598	609	619	635	620	463
55°	447	444	456	453	452	398
65°	275	271	282	271	273	273
75°	114	112	114	106	110	122
85°	14	14	14	14	13	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1004.6	1004.6	1004.6	1004.6	1004.6
2.5°	1013.3	1005.7	998.5	1006.8	1011.9
5°	997.5	995.2	997.9	994.9	1018.9
7.5°	977.0	986.0	991.1	987.9	989.3
10°	966.1	963.0	974.5	982.6	981.4
12.5°	954.4	959.1	959.8	968.4	969.2
15°	955.1	944.1	949.9	954.8	955.2
17.5°	918.0	929.9	933.9	945.2	931.2
20°	913.4	904.8	913.4	925.0	923.2
22.5°	885.6	875.8	894.5	904.8	904.1
25°	853.9	858.6	872.6	884.0	882.2
27.5°	826.1	831.6	851.6	867.3	857.1
30°	804.7	802.0	818.9	832.9	840.7
32.5°	766.5	776.3	796.1	809.9	802.5
35°	743.3	745.5	762.7	780.4	779.8
37.5°	702.7	712.9	737.2	742.1	737.6
40°	668.0	678.3	700.2	705.5	703.3
42.5°	642.5	644.3	663.1	669.2	659.5
45°	598.0	609.1	619.3	635.2	620.2
47.5°	560.1	565.3	587.1	591.4	583.5
50°	525.7	527.5	549.5	544.1	539.0
52.5°	482.5	490.2	502.5	501.5	495.4
55°	447.0	444.0	455.7	452.6	452.4
57.5°	404.3	409.5	419.1	414.2	406.3
60°	364.4	364.5	368.0	362.4	361.4
62.5°	319.9	321.4	322.2	315.3	326.5
65°	274.6	271.0	281.6	270.8	272.7
67.5°	233.0	234.8	233.7	227.0	229.6
70°	190.7	193.0	191.3	183.7	186.0
72.5°	152.0	149.2	151.0	141.4	145.8
75°	114.3	111.9	114.0	106.0	109.6
77.5°	77.8	79.6	78.3	74.1	76.5
80°	51.4	49.9	49.9	47.5	48.0
82.5°	30.0	28.5	28.1	27.4	28.5
85°	14.0	13.6	13.9	13.5	13.0
87.5°	5.1	5.2	5.2	4.9	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)