

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: P589934

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-93-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589934
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-LD4-1HI-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: 2414.0 lumens
Efficiency: N/A
Efficacy: 111.8 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

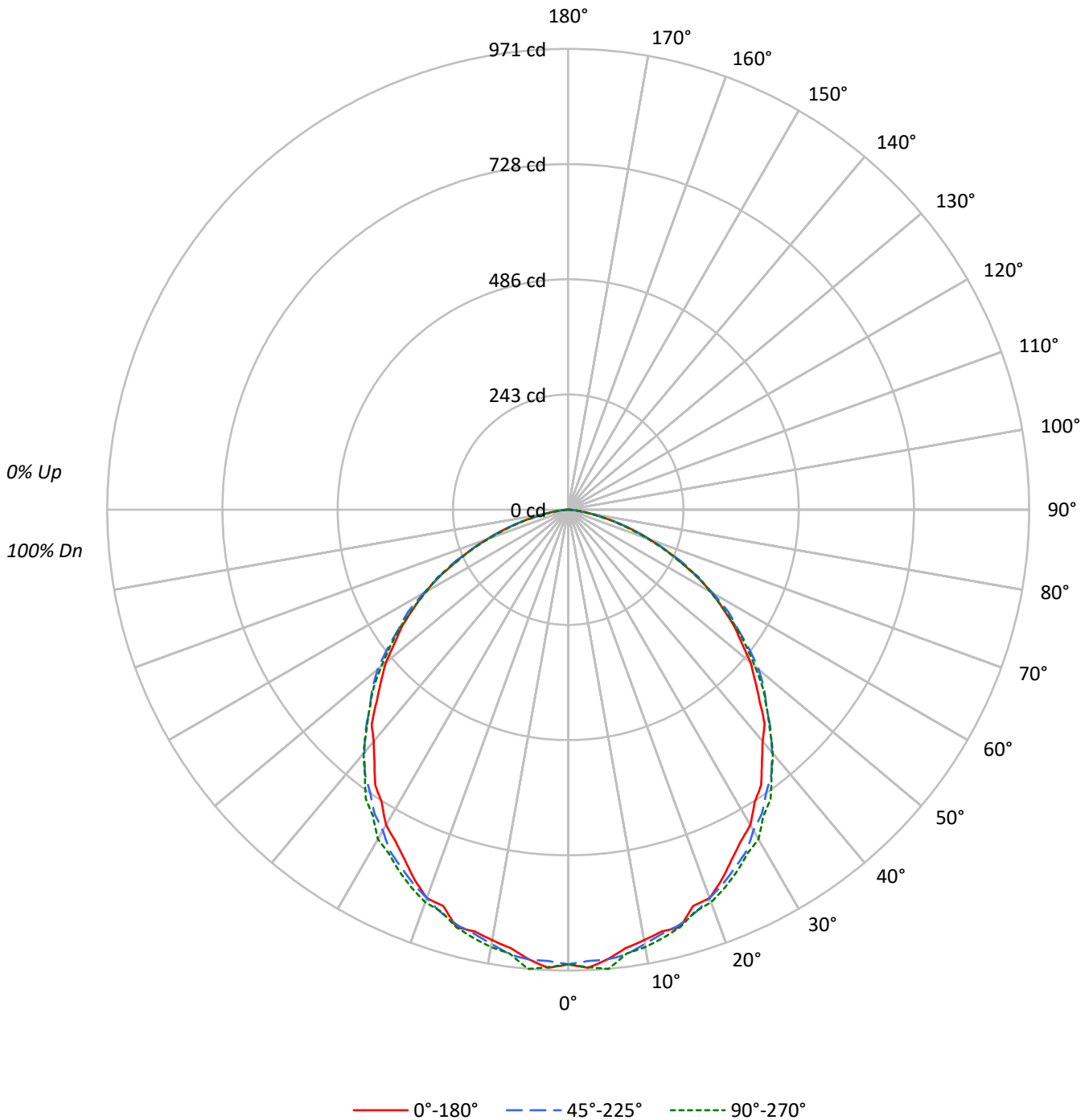
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	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°	2577	2577	2577
5°	2569	2570	2624
10°	2517	2539	2557
15°	2537	2523	2537
20°	2494	2494	2521
25°	2417	2470	2497
30°	2384	2426	2490
35°	2328	2389	2442
40°	2237	2345	2355
45°	2170	2247	2250
50°	2098	2193	2151
55°	2000	2038	2024
60°	1870	1888	1854
65°	1667	1710	1656
70°	1430	1435	1395
75°	1133	1130	1087
80°	759	738	710
85°	414	408	383

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2305 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.1	3.7
10°-20°	255.3	10.6
20°-30°	382.6	15.8
30°-40°	453.4	18.8
40°-50°	454.2	18.8
50°-60°	385.6	16.0
60°-70°	260.0	10.8
70°-80°	114.2	4.7
80°-90°	18.6	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°	728.0	30.2
0°-40°	1181.4	48.9
0°-60°	2021.2	83.7
0°-90°	2414.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2414.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	951	949	951	948	971	90
15°	911	900	906	910	911	254
25°	814	819	832	843	841	376
35°	709	711	727	744	744	440
45°	570	581	590	606	591	441
55°	426	423	434	432	431	379
65°	262	258	268	258	260	260
75°	109	107	109	101	104	117
85°	13	13	13	13	12	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	957.8	957.8	957.8	957.8	957.8
2.5°	966.1	958.8	952.0	959.9	964.7
5°	951.0	948.8	951.4	948.5	971.4
7.5°	931.5	940.0	945.0	941.9	943.2
10°	921.1	918.1	929.1	936.8	935.7
12.5°	910.0	914.4	915.0	923.3	924.1
15°	910.6	900.1	905.6	910.3	910.7
17.5°	875.2	886.6	890.4	901.2	887.8
20°	870.9	862.6	870.9	881.9	880.2
22.5°	844.3	835.0	852.8	862.6	862.0
25°	814.1	818.6	831.9	842.8	841.1
27.5°	787.6	792.8	811.9	826.8	817.2
30°	767.2	764.6	780.7	794.1	801.5
32.5°	730.8	740.2	759.0	772.2	765.1
35°	708.6	710.7	727.2	744.0	743.5
37.5°	669.9	679.7	702.8	707.5	703.2
40°	636.9	646.7	667.6	672.6	670.5
42.5°	612.5	614.3	632.2	638.0	628.7
45°	570.1	580.7	590.4	605.6	591.3
47.5°	534.0	538.9	559.7	563.8	556.3
50°	501.2	503.0	523.9	518.8	513.8
52.5°	460.0	467.3	479.1	478.1	472.3
55°	426.2	423.3	434.4	431.5	431.4
57.5°	385.5	390.4	399.6	394.9	387.3
60°	347.4	347.5	350.8	345.5	344.5
62.5°	305.0	306.5	307.2	300.6	311.3
65°	261.8	258.3	268.5	258.2	260.0
67.5°	222.1	223.8	222.9	216.4	218.9
70°	181.8	184.0	182.4	175.1	177.3
72.5°	144.9	142.2	144.0	134.8	139.0
75°	109.0	106.7	108.7	101.0	104.5
77.5°	74.2	75.9	74.7	70.6	73.0
80°	49.0	47.6	47.6	45.3	45.8
82.5°	28.6	27.2	26.8	26.1	27.2
85°	13.4	13.0	13.2	12.9	12.4
87.5°	4.8	4.9	4.9	4.7	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)