

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: P590304

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590304
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-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

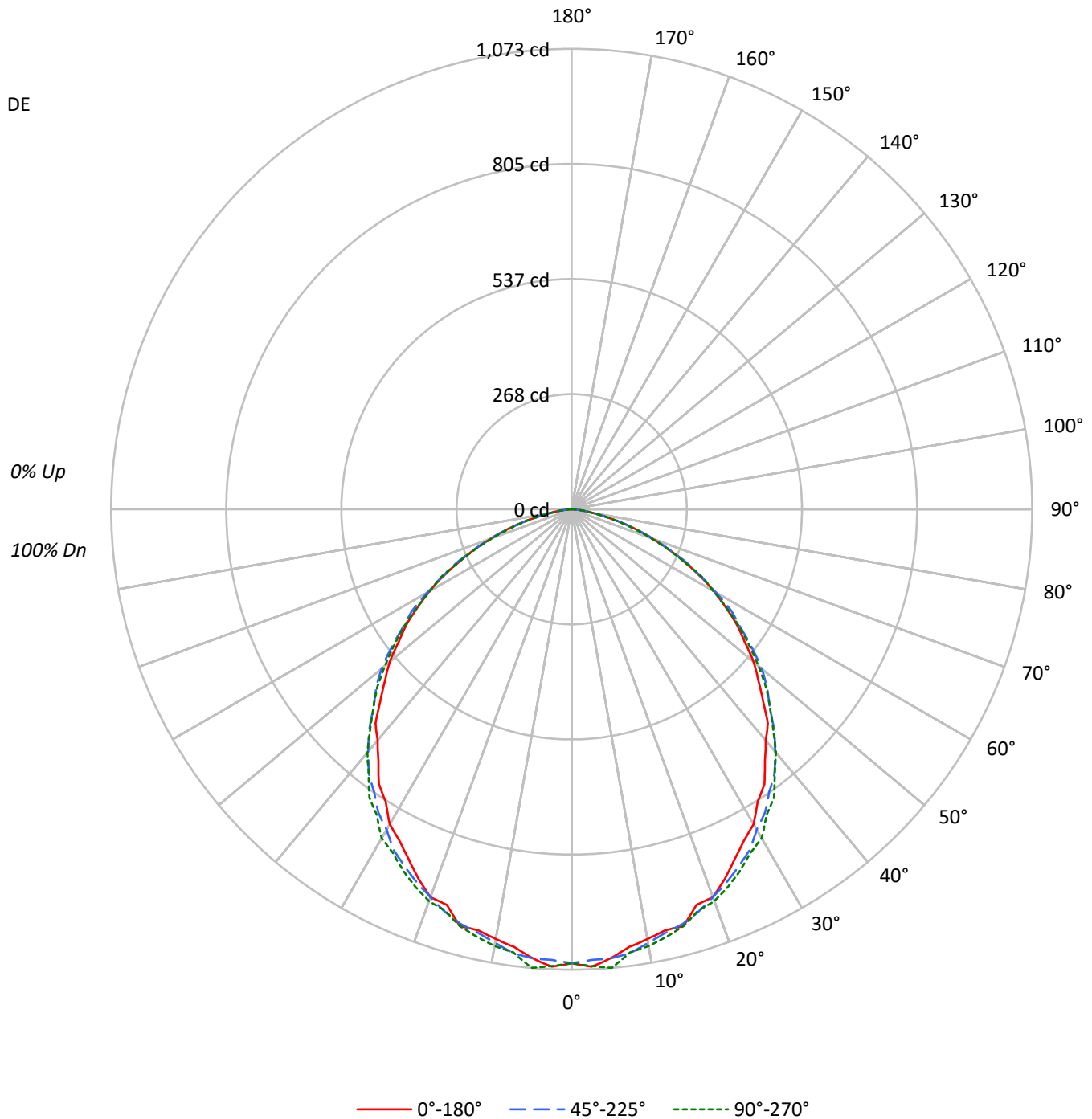
Lumens per Lamp: N/A
Luminaire Lumens: 2666.0 lumens
Efficiency: N/A
Efficacy: 113.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	2847	2847	2847
5°	2837	2838	2898
10°	2779	2804	2824
15°	2802	2786	2802
20°	2754	2754	2783
25°	2670	2728	2758
30°	2633	2679	2751
35°	2571	2638	2697
40°	2471	2590	2601
45°	2396	2481	2485
50°	2318	2422	2376
55°	2208	2251	2235
60°	2065	2086	2048
65°	1841	1888	1828
70°	1580	1585	1541
75°	1251	1249	1200
80°	838	815	783
85°	457	451	423

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2545 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.5	3.7
10°-20°	282.0	10.6
20°-30°	422.5	15.8
30°-40°	500.7	18.8
40°-50°	501.7	18.8
50°-60°	425.8	16.0
60°-70°	287.1	10.8
70°-80°	126.2	4.7
80°-90°	20.5	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°	804.0	30.2
0°-40°	1304.7	48.9
0°-60°	2232.3	83.7
0°-90°	2666.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2666.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1058	1058	1058	1058	1058	
5°	1050	1048	1051	1048	1073	99
15°	1006	994	1000	1005	1006	280
25°	899	904	919	931	929	416
35°	783	785	803	822	821	486
45°	630	641	652	669	653	487
55°	471	468	480	476	476	419
65°	289	285	296	285	287	288
75°	120	118	120	112	115	129
85°	15	14	15	14	14	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1057.8	1057.8	1057.8	1057.8	1057.8
2.5°	1067.0	1058.9	1051.4	1060.1	1065.4
5°	1050.3	1047.8	1050.7	1047.6	1072.8
7.5°	1028.7	1038.1	1043.6	1040.2	1041.7
10°	1017.2	1014.0	1026.1	1034.6	1033.4
12.5°	1004.9	1009.9	1010.5	1019.7	1020.5
15°	1005.6	994.0	1000.2	1005.4	1005.8
17.5°	966.6	979.1	983.4	995.2	980.5
20°	961.8	952.6	961.8	973.9	972.0
22.5°	932.4	922.2	941.8	952.6	952.0
25°	899.1	904.0	918.8	930.8	928.9
27.5°	869.9	875.6	896.6	913.2	902.5
30°	847.3	844.5	862.2	877.0	885.2
32.5°	807.0	817.4	838.2	852.8	845.0
35°	782.6	784.9	803.1	821.7	821.1
37.5°	739.8	750.6	776.2	781.4	776.6
40°	703.4	714.2	737.3	742.9	740.5
42.5°	676.5	678.4	698.2	704.6	694.4
45°	629.6	641.4	652.0	668.8	653.0
47.5°	589.7	595.2	618.2	622.7	614.3
50°	553.6	555.5	578.5	572.9	567.5
52.5°	508.1	516.1	529.1	528.0	521.6
55°	470.6	467.5	479.8	476.5	476.4
57.5°	425.7	431.2	441.3	436.1	427.8
60°	383.6	383.8	387.5	381.6	380.5
62.5°	336.8	338.4	339.3	332.0	343.8
65°	289.1	285.3	296.5	285.2	287.1
67.5°	245.3	247.2	246.1	239.0	241.7
70°	200.8	203.2	201.5	193.4	195.9
72.5°	160.1	157.1	159.0	148.9	153.5
75°	120.3	117.9	120.1	111.6	115.4
77.5°	81.9	83.9	82.5	78.0	80.6
80°	54.1	52.6	52.6	50.0	50.5
82.5°	31.5	30.0	29.6	28.8	30.0
85°	14.8	14.3	14.6	14.2	13.7
87.5°	5.3	5.5	5.5	5.2	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)