

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: P590275

Luminaire Tested: FSR-24-2-LD4-2LO-40-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590275
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-40-UNV-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

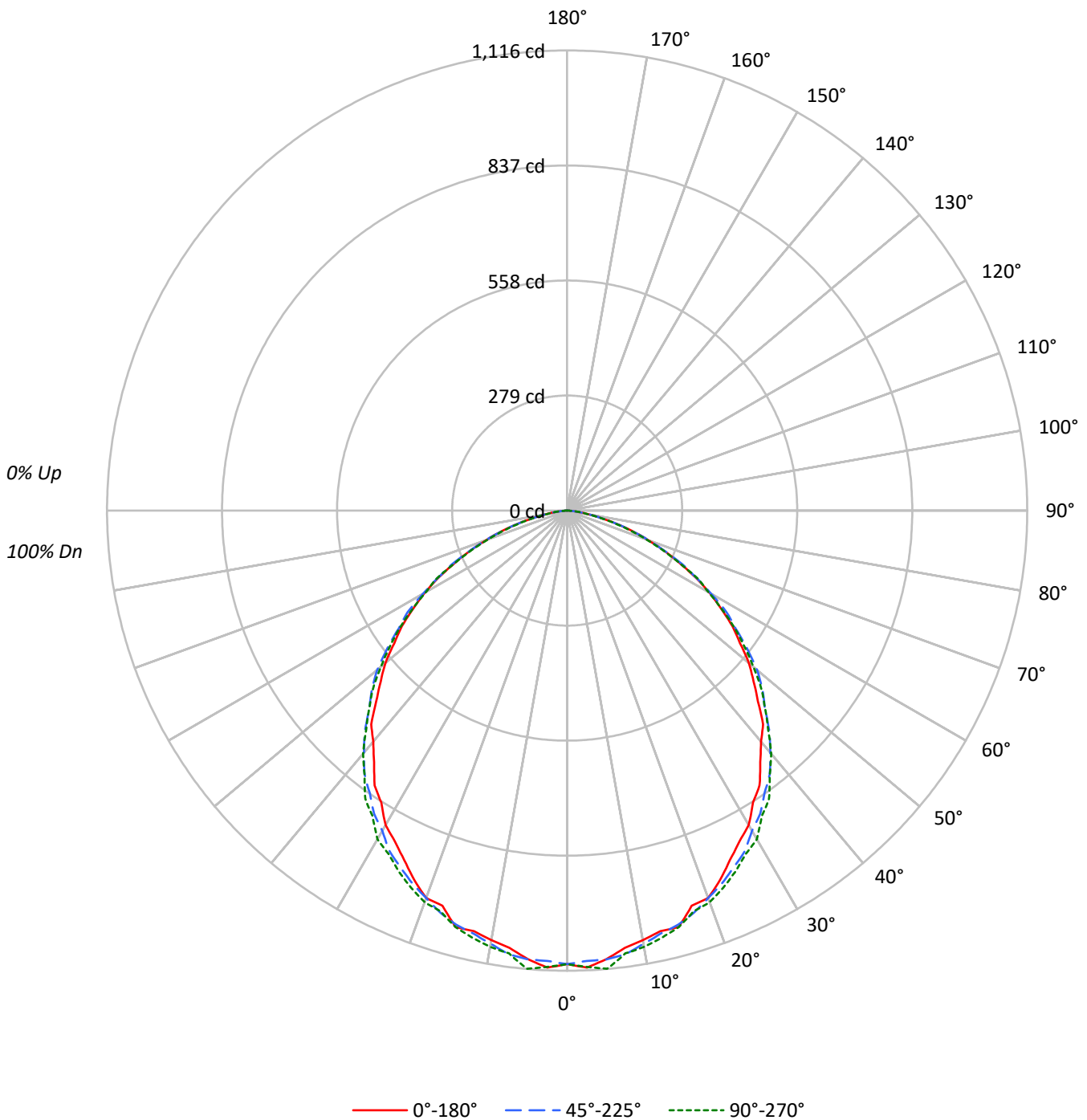
Lumens per Lamp: N/A
Luminaire Lumens: 2772.0 lumens
Efficiency: N/A
Efficacy: 118.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	2960	2960	2960
5°	2950	2951	3013
10°	2890	2915	2936
15°	2913	2897	2914
20°	2864	2864	2894
25°	2776	2836	2868
30°	2738	2786	2860
35°	2673	2743	2805
40°	2569	2693	2705
45°	2492	2580	2584
50°	2410	2519	2470
55°	2296	2341	2324
60°	2147	2168	2129
65°	1914	1963	1901
70°	1643	1648	1602
75°	1301	1298	1248
80°	871	848	814
85°	472	469	438

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2646 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.5	3.7
10°-20°	293.2	10.6
20°-30°	439.3	15.8
30°-40°	520.6	18.8
40°-50°	521.6	18.8
50°-60°	442.8	16.0
60°-70°	298.5	10.8
70°-80°	131.2	4.7
80°-90°	21.3	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°	836.0	30.2
0°-40°	1356.6	48.9
0°-60°	2321.0	83.7
0°-90°	2772.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2772.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1092	1090	1092	1089	1116	103
15°	1046	1034	1040	1045	1046	291
25°	935	940	955	968	966	432
35°	814	816	835	854	854	505
45°	655	667	678	695	679	506
55°	489	486	499	496	495	435
65°	301	297	308	296	298	299
75°	125	123	125	116	120	134
85°	15	15	15	15	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1099.9	1099.9	1099.9	1099.9	1099.9
2.5°	1109.4	1101.0	1093.2	1102.3	1107.8
5°	1092.0	1089.5	1092.5	1089.2	1115.5
7.5°	1069.6	1079.4	1085.1	1081.5	1083.1
10°	1057.7	1054.3	1066.9	1075.7	1074.4
12.5°	1044.9	1050.0	1050.7	1060.2	1061.1
15°	1045.6	1033.5	1039.9	1045.3	1045.8
17.5°	1005.0	1018.1	1022.5	1034.8	1019.5
20°	1000.0	990.5	1000.0	1012.7	1010.7
22.5°	969.5	958.8	979.3	990.5	989.8
25°	934.8	940.0	955.3	967.8	965.8
27.5°	904.5	910.4	932.3	949.5	938.4
30°	881.0	878.0	896.5	911.8	920.4
32.5°	839.1	849.9	871.5	886.7	878.6
35°	813.7	816.1	835.0	854.3	853.8
37.5°	769.3	780.5	807.0	812.4	807.5
40°	731.3	742.6	766.6	772.4	770.0
42.5°	703.4	705.4	725.9	732.6	722.0
45°	654.7	666.9	678.0	695.4	678.9
47.5°	613.2	618.9	642.7	647.4	638.8
50°	575.6	577.6	601.6	595.7	590.0
52.5°	528.3	536.7	550.1	549.0	542.3
55°	489.4	486.1	498.9	495.5	495.3
57.5°	442.6	448.3	458.8	453.4	444.8
60°	398.9	399.0	402.9	396.8	395.6
62.5°	350.2	351.9	352.8	345.2	357.4
65°	300.6	296.7	308.3	296.5	298.5
67.5°	255.0	257.0	255.9	248.5	251.4
70°	208.8	211.3	209.5	201.1	203.6
72.5°	166.4	163.3	165.3	154.8	159.6
75°	125.1	122.6	124.8	116.0	120.0
77.5°	85.2	87.2	85.8	81.1	83.8
80°	56.2	54.7	54.7	52.0	52.5
82.5°	32.8	31.2	30.8	30.0	31.2
85°	15.3	14.9	15.2	14.8	14.2
87.5°	5.5	5.7	5.7	5.4	5.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)