

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: P590277

Luminaire Tested: FSR-24-2-LD4-2LO-40-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590277
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-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2737.0 lumens
Efficiency: N/A
Efficacy: 117.0 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

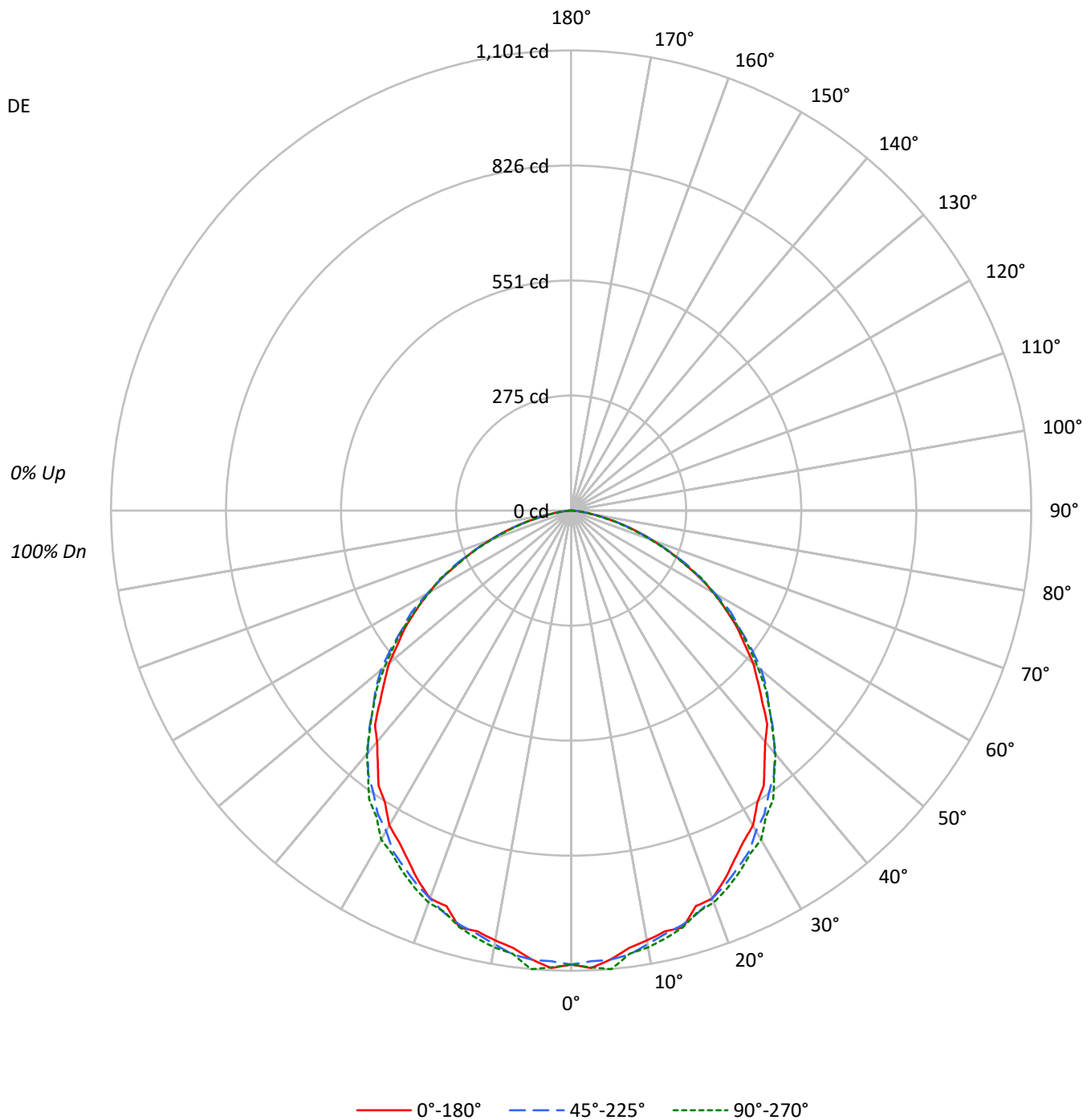
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2922	2922	2922
5°	2913	2914	2975
10°	2854	2878	2899
15°	2876	2861	2877
20°	2828	2828	2858
25°	2741	2801	2831
30°	2703	2751	2824
35°	2639	2709	2769
40°	2537	2659	2671
45°	2460	2547	2551
50°	2379	2487	2439
55°	2267	2311	2295
60°	2120	2141	2102
65°	1890	1938	1876
70°	1622	1627	1582
75°	1284	1281	1232
80°	860	837	804
85°	466	463	432

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2613 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.2	3.7
10°-20°	289.5	10.6
20°-30°	433.7	15.8
30°-40°	514.1	18.8
40°-50°	515.0	18.8
50°-60°	437.2	16.0
60°-70°	294.7	10.8
70°-80°	129.5	4.7
80°-90°	21.0	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°	825.4	30.2
0°-40°	1339.5	48.9
0°-60°	2291.7	83.7
0°-90°	2737.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2737.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1078	1076	1079	1076	1101	102
15°	1032	1020	1027	1032	1033	288
25°	923	928	943	956	954	427
35°	803	806	824	844	843	499
45°	646	658	669	687	670	500
55°	483	480	493	489	489	430
65°	297	293	304	293	295	295
75°	124	121	123	115	118	132
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°	1086.0	1086.0	1086.0	1086.0	1086.0
2.5°	1095.4	1087.1	1079.4	1088.4	1093.8
5°	1078.3	1075.7	1078.7	1075.5	1101.4
7.5°	1056.1	1065.8	1071.4	1067.9	1069.4
10°	1044.3	1041.0	1053.4	1062.1	1060.9
12.5°	1031.7	1036.8	1037.5	1046.9	1047.7
15°	1032.4	1020.5	1026.8	1032.1	1032.6
17.5°	992.3	1005.2	1009.6	1021.8	1006.6
20°	987.4	978.0	987.4	999.9	997.9
22.5°	957.3	946.7	966.9	978.0	977.3
25°	923.0	928.1	943.2	955.6	953.6
27.5°	893.0	898.9	920.5	937.5	926.5
30°	869.9	867.0	885.2	900.3	908.7
32.5°	828.5	839.2	860.5	875.5	867.5
35°	803.4	805.8	824.5	843.5	843.0
37.5°	759.5	770.6	796.8	802.2	797.3
40°	722.1	733.2	756.9	762.6	760.3
42.5°	694.5	696.5	716.8	723.4	712.9
45°	646.4	658.5	669.4	686.6	670.4
47.5°	605.5	611.1	634.6	639.2	630.7
50°	568.3	570.3	594.0	588.2	582.6
52.5°	521.6	529.9	543.2	542.1	535.5
55°	483.2	480.0	492.6	489.2	489.1
57.5°	437.1	442.7	453.0	447.7	439.2
60°	393.9	394.0	397.8	391.8	390.6
62.5°	345.8	347.5	348.3	340.9	352.9
65°	296.8	292.9	304.4	292.8	294.7
67.5°	251.8	253.8	252.7	245.4	248.2
70°	206.1	208.6	206.8	198.5	201.1
72.5°	164.3	161.2	163.2	152.8	157.6
75°	123.5	121.0	123.2	114.6	118.5
77.5°	84.1	86.1	84.7	80.1	82.7
80°	55.5	54.0	54.0	51.3	51.9
82.5°	32.4	30.8	30.4	29.6	30.8
85°	15.1	14.7	15.0	14.6	14.0
87.5°	5.5	5.6	5.6	5.3	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)