

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: P590273

Luminaire Tested: FSR-24-2-LD4-2LO-40-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590273
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-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2361.0 lumens
Efficiency: N/A
Efficacy: 100.9 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

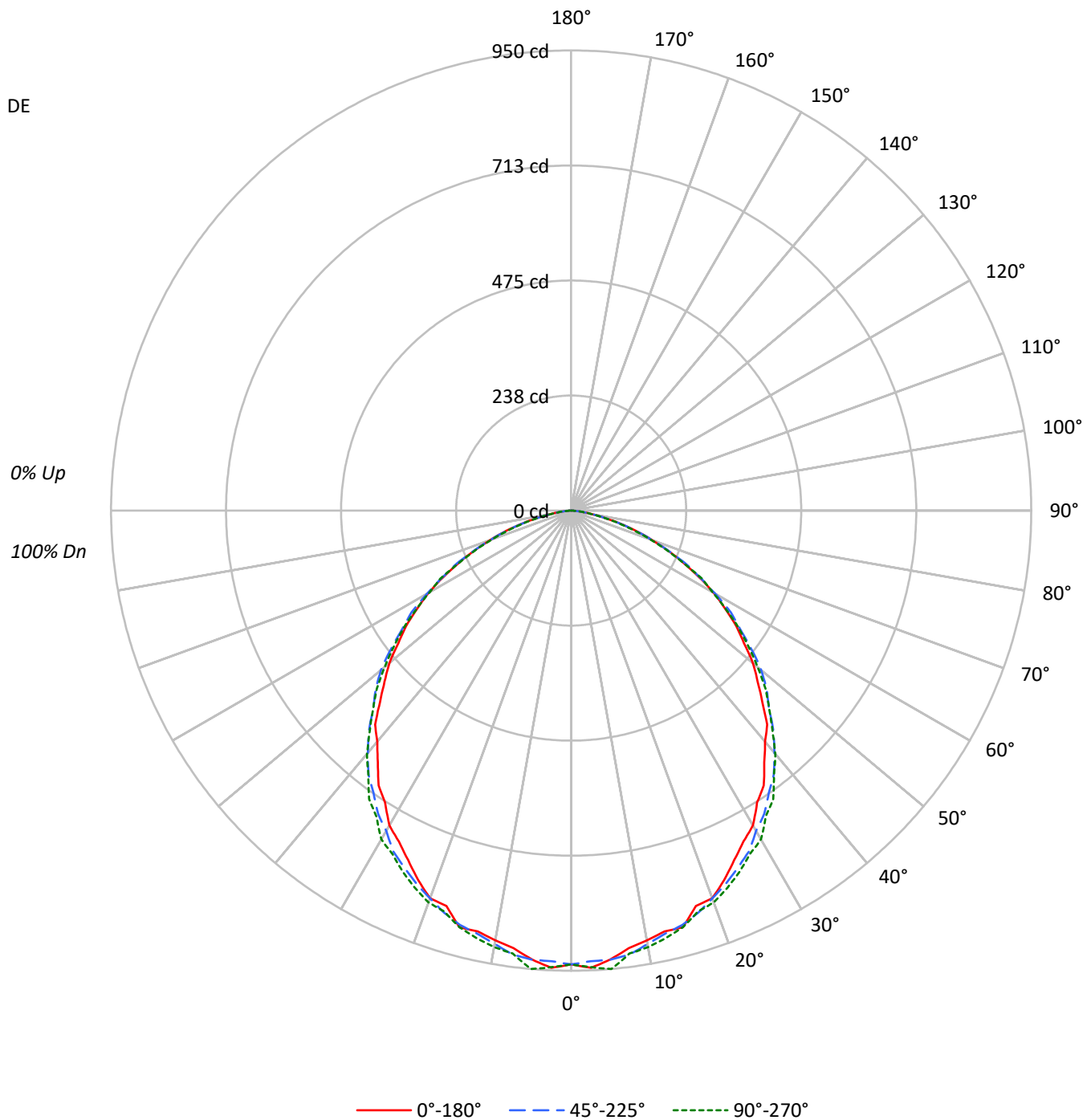
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2521	2521	2521
5°	2512	2514	2566
10°	2462	2483	2501
15°	2481	2467	2481
20°	2439	2439	2465
25°	2364	2416	2442
30°	2332	2373	2436
35°	2277	2336	2389
40°	2188	2294	2304
45°	2122	2197	2201
50°	2052	2145	2104
55°	1955	1993	1979
60°	1829	1847	1814
65°	1631	1672	1619
70°	1399	1404	1364
75°	1108	1105	1063
80°	742	722	694
85°	404	398	374

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2254 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.1	3.7
10°-20°	249.7	10.6
20°-30°	374.2	15.8
30°-40°	443.5	18.8
40°-50°	444.3	18.8
50°-60°	377.1	16.0
60°-70°	254.3	10.8
70°-80°	111.7	4.7
80°-90°	18.1	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°	712.0	30.2
0°-40°	1155.5	48.9
0°-60°	1976.9	83.7
0°-90°	2361.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2361.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	937	937	937	937	937	
5°	930	928	930	928	950	88
15°	891	880	886	890	891	248
25°	796	801	814	824	823	368
35°	693	695	711	728	727	430
45°	558	568	577	592	578	431
55°	417	414	425	422	422	371
65°	256	253	263	253	254	255
75°	107	104	106	99	102	114
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°	936.8	936.8	936.8	936.8	936.8
2.5°	944.9	937.8	931.1	938.8	943.6
5°	930.1	928.0	930.5	927.7	950.1
7.5°	911.0	919.4	924.2	921.2	922.5
10°	900.9	898.0	908.7	916.2	915.1
12.5°	890.0	894.3	894.9	903.0	903.8
15°	890.6	880.3	885.7	890.3	890.7
17.5°	856.0	867.1	870.9	881.4	868.3
20°	851.8	843.7	851.8	862.5	860.8
22.5°	825.7	816.7	834.1	843.7	843.0
25°	796.2	800.6	813.7	824.3	822.6
27.5°	770.4	775.4	794.1	808.7	799.3
30°	750.4	747.9	763.6	776.6	783.9
32.5°	714.7	723.9	742.3	755.2	748.3
35°	693.1	695.1	711.2	727.7	727.2
37.5°	655.2	664.8	687.4	692.0	687.7
40°	622.9	632.5	652.9	657.9	655.8
42.5°	599.1	600.8	618.3	624.0	614.9
45°	557.6	568.0	577.4	592.3	578.3
47.5°	522.3	527.1	547.4	551.4	544.0
50°	490.2	491.9	512.4	507.4	502.6
52.5°	449.9	457.1	468.6	467.6	461.9
55°	416.8	414.0	424.9	422.0	421.9
57.5°	377.0	381.9	390.8	386.2	378.8
60°	339.8	339.9	343.1	337.9	337.0
62.5°	298.3	299.7	300.4	294.0	304.4
65°	256.1	252.7	262.6	252.6	254.2
67.5°	217.2	218.9	218.0	211.7	214.1
70°	177.8	180.0	178.4	171.3	173.4
72.5°	141.8	139.1	140.8	131.8	136.0
75°	106.6	104.4	106.3	98.8	102.2
77.5°	72.6	74.3	73.1	69.1	71.4
80°	47.9	46.6	46.6	44.3	44.8
82.5°	27.9	26.6	26.2	25.5	26.6
85°	13.1	12.7	12.9	12.6	12.1
87.5°	4.7	4.8	4.8	4.6	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)