

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: P589927

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589927
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-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2215.0 lumens
Efficiency: N/A
Efficacy: 102.5 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

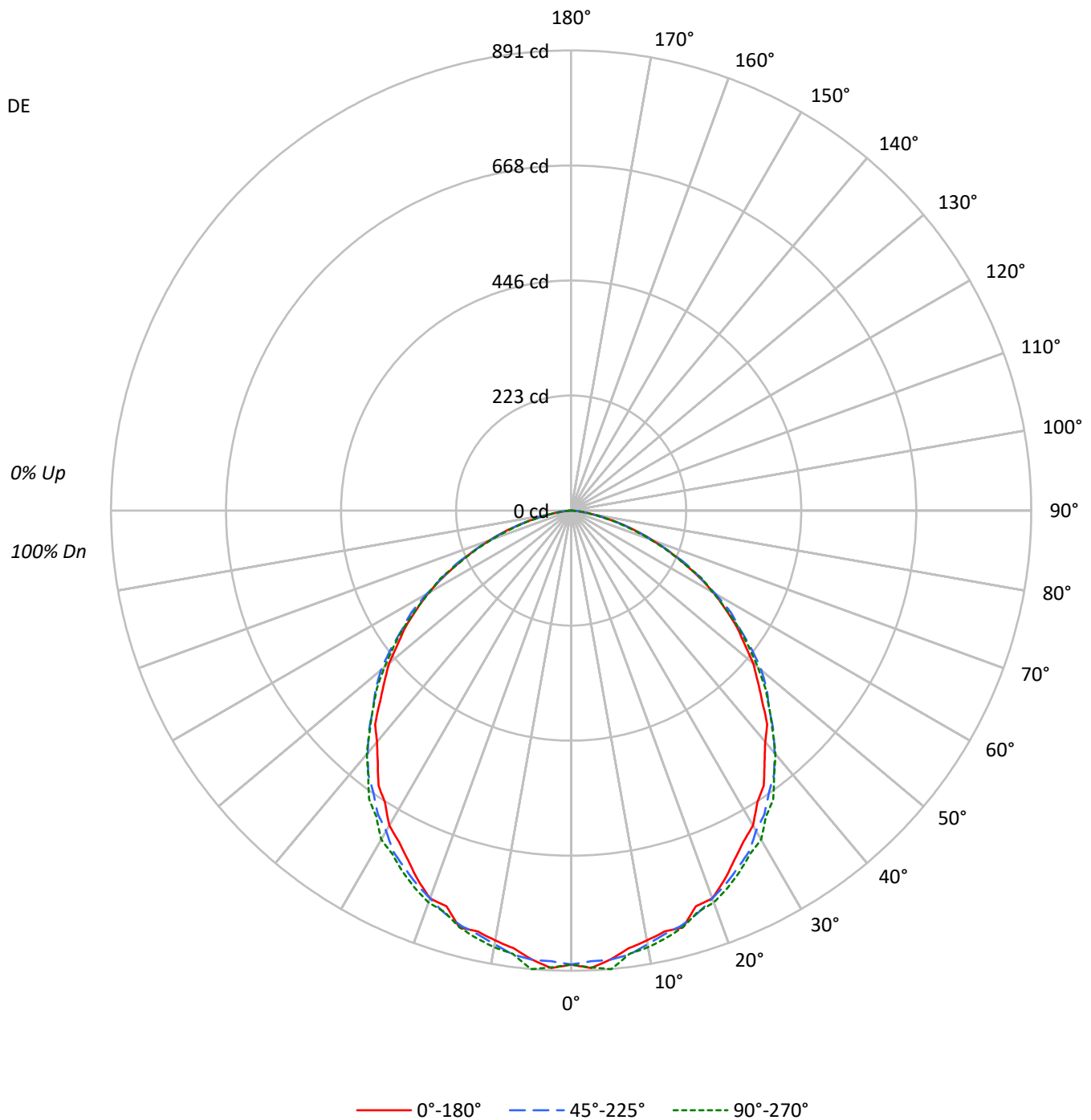
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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°	2365	2365	2365
5°	2357	2358	2408
10°	2310	2329	2346
15°	2328	2315	2328
20°	2288	2288	2313
25°	2218	2266	2291
30°	2188	2226	2285
35°	2136	2192	2241
40°	2053	2152	2161
45°	1991	2062	2065
50°	1925	2012	1974
55°	1834	1870	1857
60°	1715	1732	1701
65°	1529	1569	1519
70°	1312	1317	1280
75°	1040	1037	997
80°	696	677	651
85°	380	374	349

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2115 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.7	3.7
10°-20°	234.3	10.6
20°-30°	351.0	15.8
30°-40°	416.0	18.8
40°-50°	416.8	18.8
50°-60°	353.8	16.0
60°-70°	238.5	10.8
70°-80°	104.8	4.7
80°-90°	17.0	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°	668.0	30.2
0°-40°	1084.0	48.9
0°-60°	1854.6	83.7
0°-90°	2215.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2215.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	879	879	879	879	879	
5°	873	871	873	870	891	82
15°	836	826	831	835	836	233
25°	747	751	763	773	772	345
35°	650	652	667	683	682	404
45°	523	533	542	556	542	405
55°	391	388	399	396	396	348
65°	240	237	246	237	238	239
75°	100	98	100	93	96	107
85°	12	12	12	12	11	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	878.9	878.9	878.9	878.9	878.9
2.5°	886.5	879.8	873.5	880.8	885.2
5°	872.6	870.6	873.0	870.3	891.3
7.5°	854.7	862.5	867.1	864.2	865.5
10°	845.2	842.4	852.5	859.6	858.5
12.5°	834.9	839.0	839.6	847.2	847.9
15°	835.5	825.9	831.0	835.3	835.6
17.5°	803.1	813.5	817.0	826.9	814.6
20°	799.1	791.5	799.1	809.2	807.6
22.5°	774.7	766.2	782.5	791.5	790.9
25°	747.0	751.1	763.3	773.3	771.7
27.5°	722.7	727.5	745.0	758.7	749.8
30°	704.0	701.6	716.4	728.6	735.4
32.5°	670.5	679.1	696.4	708.5	702.1
35°	650.2	652.1	667.2	682.7	682.2
37.5°	614.7	623.7	644.9	649.2	645.2
40°	584.4	593.4	612.5	617.2	615.3
42.5°	562.0	563.6	580.1	585.4	576.9
45°	523.1	532.9	541.7	555.7	542.5
47.5°	490.0	494.5	513.6	517.3	510.4
50°	459.9	461.5	480.7	476.0	471.5
52.5°	422.1	428.8	439.6	438.7	433.4
55°	391.0	388.4	398.6	395.9	395.8
57.5°	353.7	358.2	366.6	362.3	355.4
60°	318.7	318.9	321.9	317.0	316.1
62.5°	279.8	281.2	281.9	275.9	285.6
65°	240.2	237.0	246.4	236.9	238.5
67.5°	203.8	205.4	204.5	198.6	200.8
70°	166.8	168.8	167.4	160.7	162.7
72.5°	133.0	130.5	132.1	123.7	127.5
75°	100.0	97.9	99.7	92.7	95.9
77.5°	68.1	69.7	68.5	64.8	66.9
80°	44.9	43.7	43.7	41.5	42.0
82.5°	26.2	25.0	24.6	23.9	25.0
85°	12.3	11.9	12.1	11.8	11.3
87.5°	4.4	4.5	4.5	4.3	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)