

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: P590023

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590023
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-LD4-1LO-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: 1349.0 lumens
Efficiency: N/A
Efficacy: 115.3 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

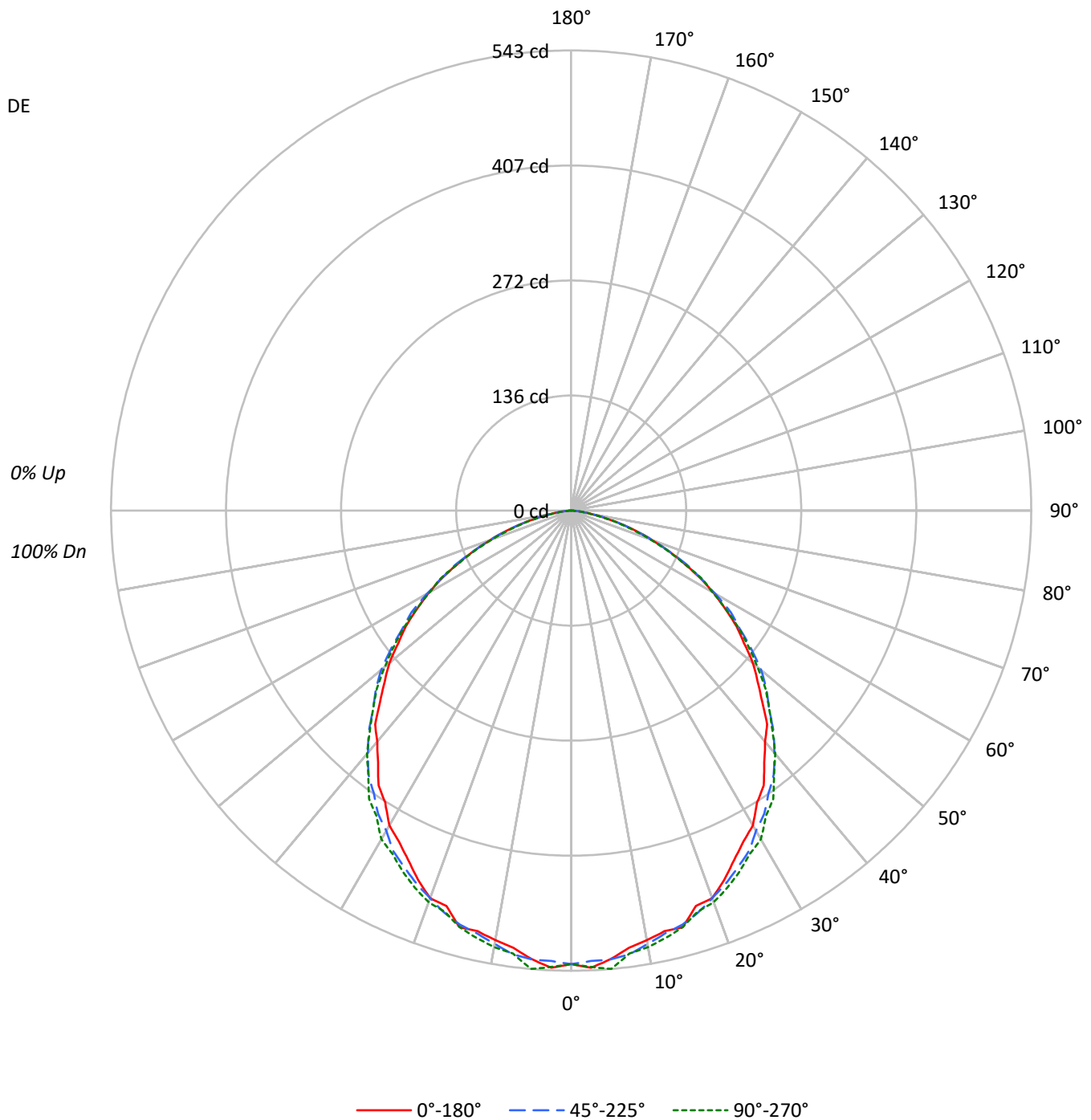
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1440	1440	1440
5°	1435	1436	1467
10°	1406	1419	1429
15°	1417	1410	1418
20°	1394	1394	1408
25°	1351	1380	1396
30°	1332	1356	1392
35°	1301	1335	1365
40°	1250	1311	1316
45°	1212	1255	1257
50°	1173	1225	1202
55°	1117	1139	1131
60°	1045	1055	1036
65°	932	955	925
70°	799	802	780
75°	633	631	607
80°	425	412	397
85°	232	228	213

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1288 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.3	3.7
10°-20°	142.7	10.6
20°-30°	213.8	15.8
30°-40°	253.4	18.8
40°-50°	253.8	18.8
50°-60°	215.5	16.0
60°-70°	145.3	10.8
70°-80°	63.8	4.7
80°-90°	10.4	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°	406.8	30.2
0°-40°	660.2	48.9
0°-60°	1129.5	83.7
0°-90°	1349.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1349.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	535	535	535	535	535	
5°	531	530	532	530	543	50
15°	509	503	506	509	509	142
25°	455	457	465	471	470	210
35°	396	397	406	416	416	246
45°	319	324	330	338	330	246
55°	238	237	243	241	241	212
65°	146	144	150	144	145	145
75°	61	60	61	56	58	65
85°	8	7	7	7	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	535.2	535.2	535.2	535.2	535.2
2.5°	539.9	535.8	532.0	536.4	539.1
5°	531.4	530.2	531.7	530.1	542.9
7.5°	520.5	525.3	528.1	526.3	527.1
10°	514.7	513.1	519.2	523.5	522.9
12.5°	508.5	511.0	511.3	516.0	516.4
15°	508.8	503.0	506.1	508.7	508.9
17.5°	489.1	495.4	497.6	503.6	496.1
20°	486.7	482.0	486.7	492.8	491.8
22.5°	471.8	466.6	476.6	482.0	481.7
25°	454.9	457.4	464.9	471.0	470.0
27.5°	440.2	443.1	453.7	462.1	456.7
30°	428.8	427.3	436.3	443.7	447.9
32.5°	408.4	413.6	424.1	431.5	427.6
35°	396.0	397.2	406.4	415.8	415.5
37.5°	374.4	379.8	392.7	395.4	393.0
40°	355.9	361.4	373.1	375.9	374.7
42.5°	342.3	343.3	353.3	356.5	351.4
45°	318.6	324.5	329.9	338.4	330.4
47.5°	298.4	301.2	312.8	315.1	310.9
50°	280.1	281.1	292.7	289.9	287.1
52.5°	257.1	261.2	267.7	267.2	263.9
55°	238.1	236.6	242.8	241.1	241.1
57.5°	215.4	218.2	223.3	220.7	216.4
60°	194.1	194.2	196.1	193.1	192.5
62.5°	170.4	171.3	171.7	168.0	173.9
65°	146.3	144.4	150.0	144.3	145.3
67.5°	124.1	125.1	124.5	120.9	122.3
70°	101.6	102.8	101.9	97.9	99.1
72.5°	81.0	79.5	80.4	75.3	77.7
75°	60.9	59.6	60.7	56.5	58.4
77.5°	41.5	42.4	41.7	39.5	40.8
80°	27.4	26.6	26.6	25.3	25.6
82.5°	16.0	15.2	15.0	14.6	15.2
85°	7.5	7.3	7.4	7.2	6.9
87.5°	2.7	2.8	2.8	2.6	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)