

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: P590001

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590001
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-40-UNV-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1245.0 lumens
Efficiency: N/A
Efficacy: 106.4 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

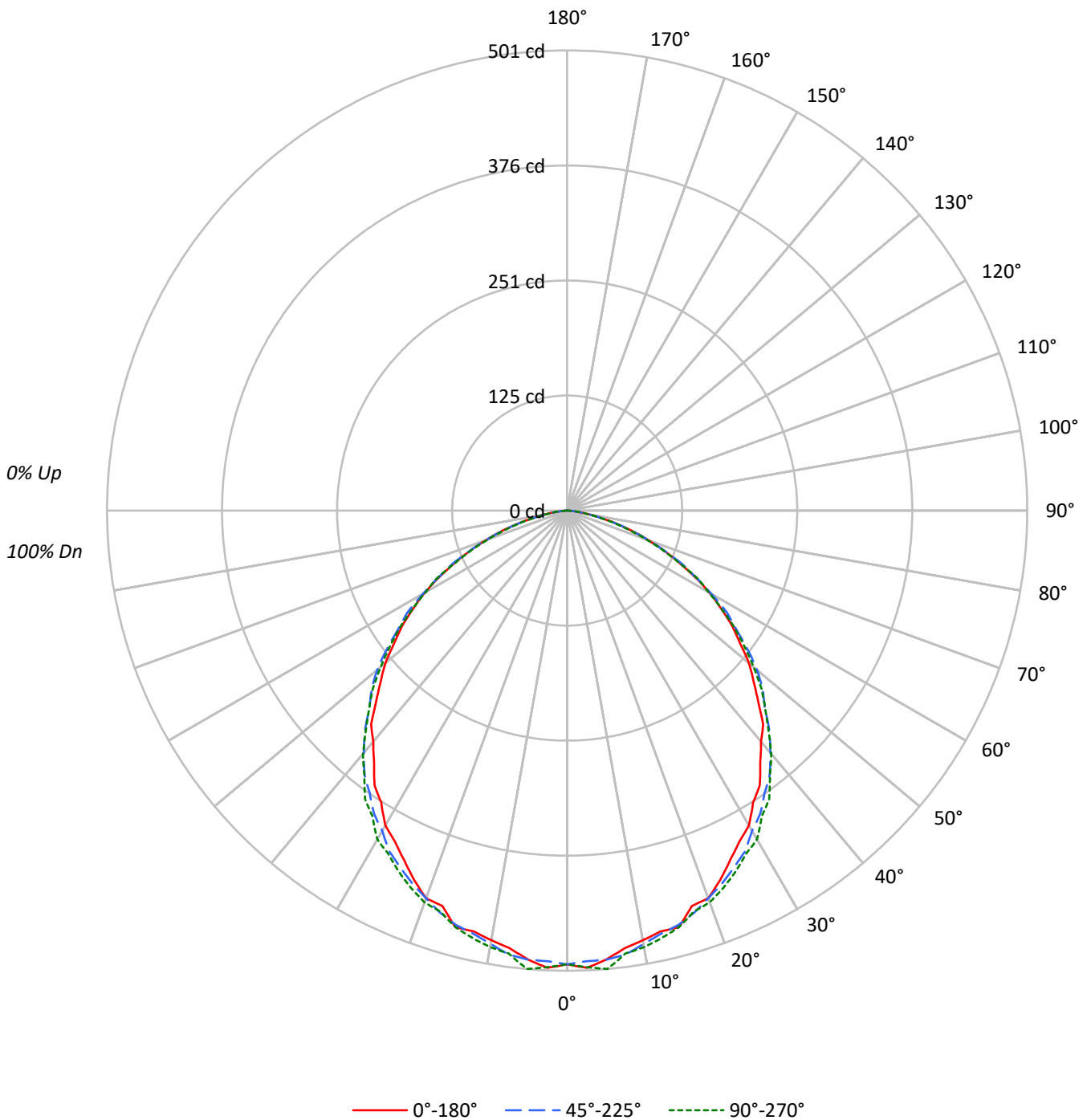
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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					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°	1329	1329	1329
5°	1325	1326	1353
10°	1298	1309	1319
15°	1308	1301	1309
20°	1286	1286	1300
25°	1247	1274	1288
30°	1230	1251	1285
35°	1201	1232	1260
40°	1154	1209	1215
45°	1119	1159	1160
50°	1082	1131	1109
55°	1031	1051	1044
60°	964	974	956
65°	860	882	854
70°	738	740	720
75°	584	583	560
80°	392	381	366
85°	213	210	198

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1188 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.5	3.7
10°-20°	131.7	10.6
20°-30°	197.3	15.8
30°-40°	233.8	18.8
40°-50°	234.3	18.8
50°-60°	198.9	16.0
60°-70°	134.1	10.8
70°-80°	58.9	4.7
80°-90°	9.6	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°	375.5	30.2
0°-40°	609.3	48.9
0°-60°	1042.4	83.7
0°-90°	1245.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1245.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	494	494	494	494	494	
5°	490	489	491	489	501	46
15°	470	464	467	470	470	131
25°	420	422	429	435	434	194
35°	366	366	375	384	384	227
45°	294	300	304	312	305	227
55°	220	218	224	222	222	196
65°	135	133	138	133	134	134
75°	56	55	56	52	54	60
85°	7	7	7	7	6	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	494.0	494.0	494.0	494.0	494.0
2.5°	498.3	494.5	491.0	495.1	497.6
5°	490.5	489.3	490.7	489.2	501.0
7.5°	480.4	484.8	487.4	485.8	486.5
10°	475.0	473.5	479.2	483.1	482.6
12.5°	469.3	471.6	471.9	476.2	476.6
15°	469.6	464.2	467.1	469.5	469.7
17.5°	451.4	457.2	459.2	464.8	457.9
20°	449.1	444.9	449.1	454.8	453.9
22.5°	435.4	430.6	439.8	444.9	444.6
25°	419.9	422.2	429.1	434.7	433.8
27.5°	406.2	408.9	418.7	426.4	421.5
30°	395.7	394.4	402.7	409.5	413.4
32.5°	376.9	381.7	391.4	398.2	394.6
35°	365.5	366.5	375.0	383.7	383.5
37.5°	345.5	350.5	362.5	364.9	362.7
40°	328.5	333.5	344.3	346.9	345.8
42.5°	315.9	316.8	326.0	329.0	324.3
45°	294.0	299.5	304.5	312.3	304.9
47.5°	275.4	278.0	288.7	290.8	286.9
50°	258.5	259.4	270.2	267.6	265.0
52.5°	237.3	241.0	247.1	246.6	243.6
55°	219.8	218.3	224.1	222.5	222.5
57.5°	198.8	201.4	206.1	203.7	199.8
60°	179.2	179.2	180.9	178.2	177.7
62.5°	157.3	158.0	158.4	155.1	160.5
65°	135.0	133.2	138.5	133.2	134.1
67.5°	114.6	115.4	114.9	111.6	112.9
70°	93.8	94.9	94.1	90.3	91.5
72.5°	74.8	73.3	74.2	69.5	71.7
75°	56.2	55.0	56.1	52.1	53.9
77.5°	38.3	39.2	38.5	36.4	37.6
80°	25.3	24.6	24.6	23.3	23.6
82.5°	14.7	14.0	13.8	13.5	14.0
85°	6.9	6.7	6.8	6.6	6.4
87.5°	2.5	2.6	2.6	2.4	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)