

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: P589961

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589961
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-35-UNV-82-88-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1144.0 lumens
Efficiency: N/A
Efficacy: 97.8 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

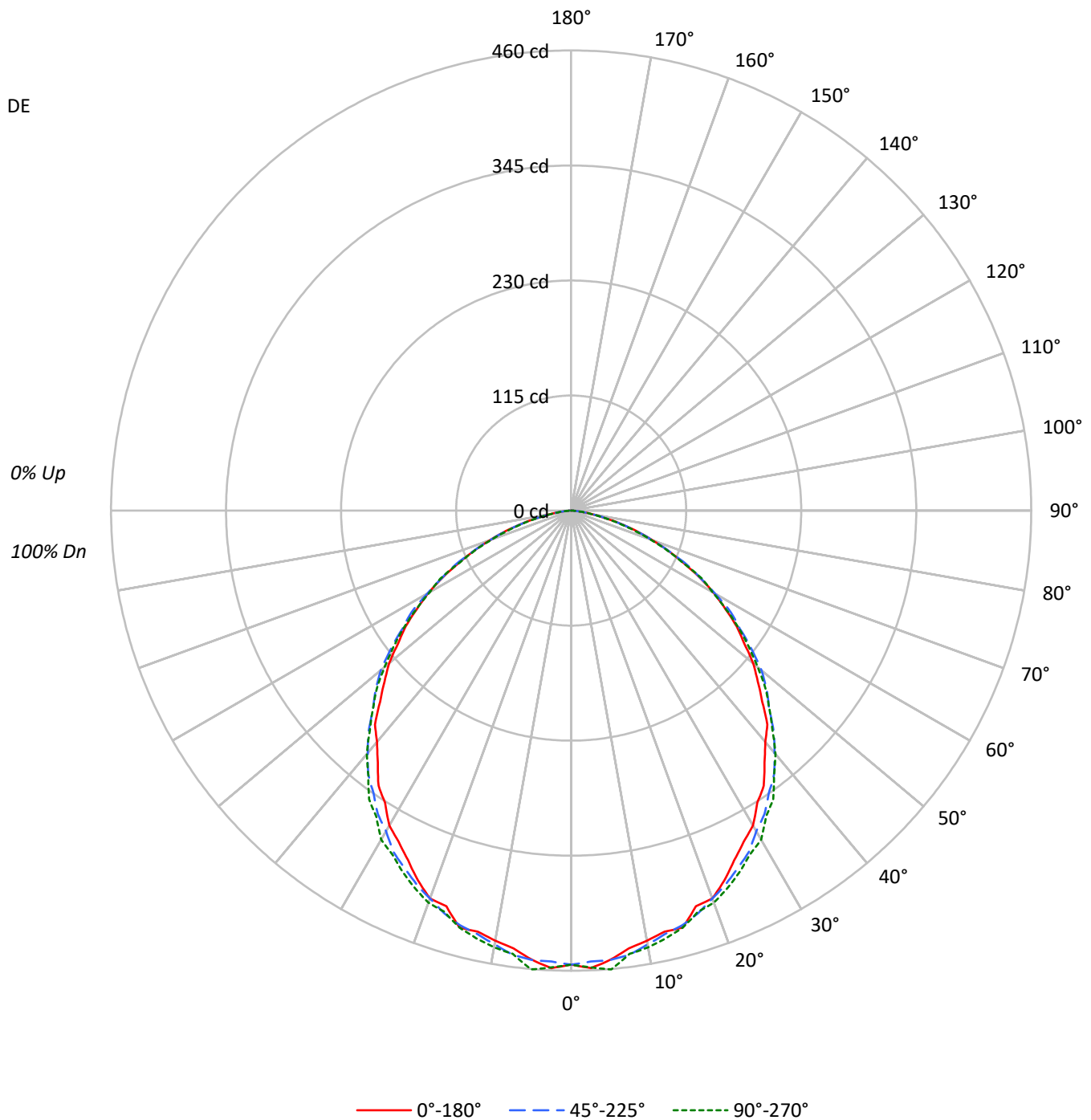
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	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°	1221	1221	1221
5°	1217	1218	1244
10°	1193	1203	1212
15°	1202	1196	1202
20°	1182	1182	1194
25°	1146	1170	1184
30°	1130	1150	1180
35°	1103	1132	1157
40°	1060	1111	1116
45°	1028	1065	1066
50°	994	1039	1019
55°	948	966	959
60°	886	895	879
65°	790	810	784
70°	678	680	661
75°	536	535	515
80°	360	350	336
85°	195	195	182

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1092 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.7	3.7
10°-20°	121.0	10.6
20°-30°	181.3	15.8
30°-40°	214.9	18.8
40°-50°	215.3	18.8
50°-60°	182.7	16.0
60°-70°	123.2	10.8
70°-80°	54.1	4.7
80°-90°	8.8	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°	345.0	30.2
0°-40°	559.9	48.9
0°-60°	957.9	83.7
0°-90°	1144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1144.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	454	454	454	454	454	
5°	451	450	451	450	460	42
15°	432	426	429	431	432	120
25°	386	388	394	399	399	178
35°	336	337	345	353	352	209
45°	270	275	280	287	280	209
55°	202	201	206	204	204	180
65°	124	122	127	122	123	123
75°	52	51	52	48	50	55
85°	6	6	6	6	6	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	453.9	453.9	453.9	453.9	453.9
2.5°	457.8	454.4	451.2	454.9	457.2
5°	450.7	449.6	450.9	449.5	460.4
7.5°	441.4	445.5	447.8	446.4	447.0
10°	436.5	435.1	440.3	443.9	443.4
12.5°	431.2	433.3	433.6	437.6	437.9
15°	431.5	426.5	429.2	431.4	431.6
17.5°	414.8	420.2	422.0	427.1	420.7
20°	412.7	408.8	412.7	417.9	417.1
22.5°	400.1	395.7	404.2	408.8	408.5
25°	385.8	387.9	394.2	399.4	398.6
27.5°	373.3	375.7	384.8	391.8	387.3
30°	363.6	362.4	370.0	376.3	379.8
32.5°	346.3	350.8	359.7	365.9	362.6
35°	335.8	336.8	344.6	352.6	352.3
37.5°	317.5	322.1	333.1	335.3	333.2
40°	301.8	306.5	316.4	318.8	317.8
42.5°	290.3	291.1	299.6	302.4	298.0
45°	270.2	275.2	279.8	287.0	280.2
47.5°	253.1	255.4	265.3	267.2	263.6
50°	237.5	238.4	248.3	245.9	243.5
52.5°	218.0	221.5	227.0	226.6	223.8
55°	202.0	200.6	205.9	204.5	204.4
57.5°	182.7	185.0	189.4	187.1	183.6
60°	164.6	164.7	166.3	163.7	163.3
62.5°	144.5	145.2	145.6	142.5	147.5
65°	124.1	122.4	127.2	122.4	123.2
67.5°	105.3	106.1	105.6	102.6	103.7
70°	86.2	87.2	86.4	83.0	84.0
72.5°	68.7	67.4	68.2	63.9	65.9
75°	51.6	50.6	51.5	47.9	49.5
77.5°	35.2	36.0	35.4	33.5	34.6
80°	23.2	22.6	22.6	21.5	21.7
82.5°	13.5	12.9	12.7	12.4	12.9
85°	6.3	6.2	6.3	6.1	5.9
87.5°	2.3	2.3	2.3	2.2	2.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)