

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: P590034

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590034
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-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1503.0 lumens
Efficiency: N/A
Efficacy: 128.5 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

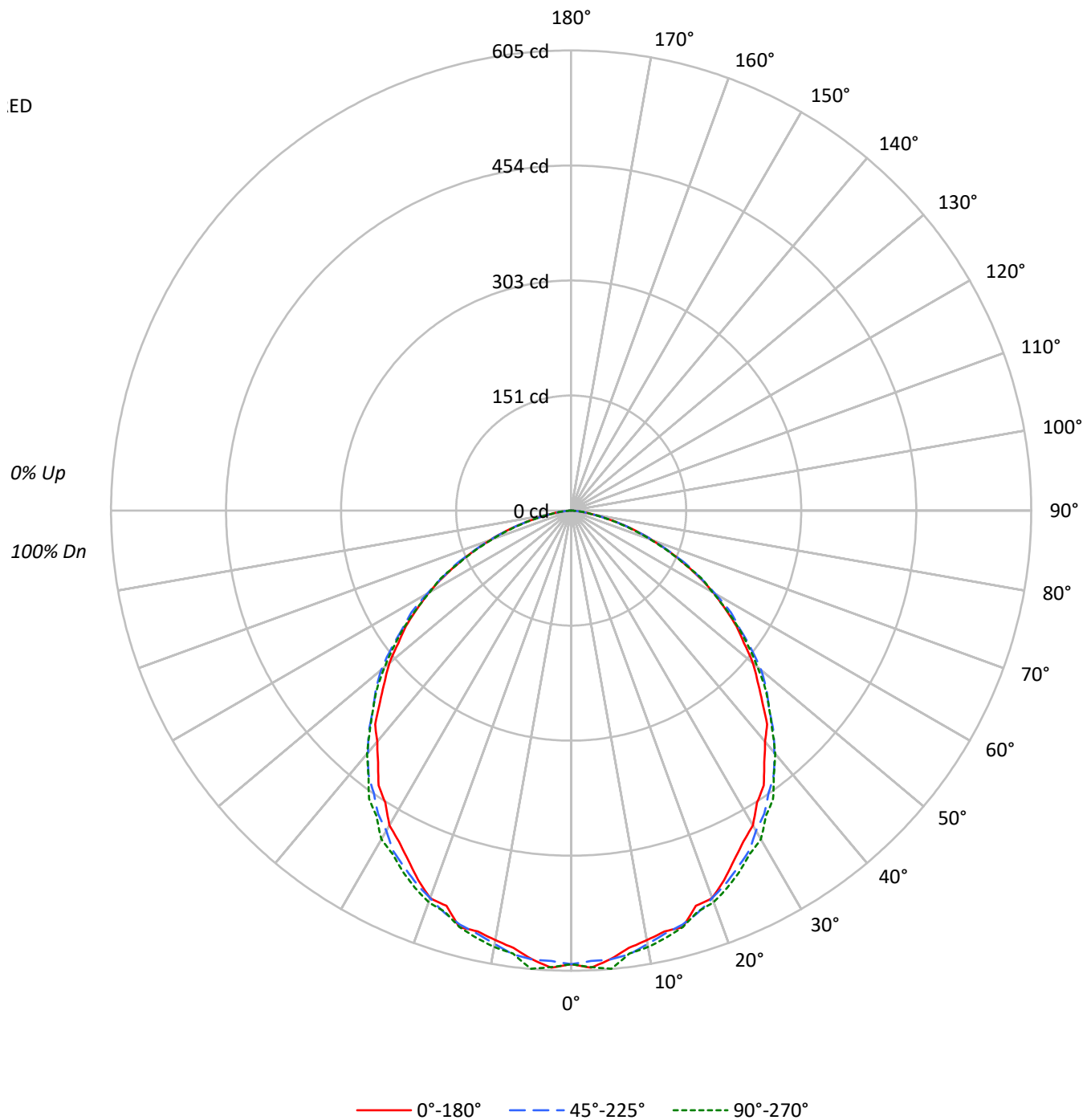
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1605	1605	1605
5°	1599	1600	1634
10°	1567	1581	1592
15°	1579	1571	1580
20°	1553	1553	1569
25°	1505	1538	1555
30°	1484	1510	1551
35°	1449	1487	1521
40°	1393	1460	1467
45°	1351	1399	1401
50°	1307	1366	1339
55°	1245	1269	1260
60°	1164	1175	1154
65°	1038	1065	1031
70°	891	894	869
75°	705	704	677
80°	473	459	442
85°	256	253	238

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1435 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.1	3.7
10°-20°	159.0	10.6
20°-30°	238.2	15.8
30°-40°	282.3	18.8
40°-50°	282.8	18.8
50°-60°	240.1	16.0
60°-70°	161.9	10.8
70°-80°	71.1	4.7
80°-90°	11.5	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°	453.3	30.2
0°-40°	735.6	48.9
0°-60°	1258.5	83.7
0°-90°	1503.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1503.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	596	596	596	596	596	
5°	592	591	592	591	605	56
15°	567	560	564	567	567	158
25°	507	510	518	525	524	234
35°	441	442	453	463	463	274
45°	355	362	368	377	368	275
55°	265	264	270	269	269	236
65°	163	161	167	161	162	162
75°	68	66	68	63	65	73
85°	8	8	8	8	8	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	596.4	596.4	596.4	596.4	596.4
2.5°	601.5	597.0	592.7	597.7	600.7
5°	592.1	590.7	592.3	590.6	604.8
7.5°	580.0	585.3	588.3	586.4	587.3
10°	573.5	571.6	578.5	583.3	582.6
12.5°	566.6	569.3	569.7	574.9	575.3
15°	566.9	560.4	563.9	566.8	567.0
17.5°	544.9	552.0	554.4	561.1	552.8
20°	542.2	537.1	542.2	549.1	548.0
22.5°	525.7	519.9	531.0	537.1	536.7
25°	506.9	509.7	518.0	524.7	523.7
27.5°	490.4	493.6	505.5	514.8	508.8
30°	477.7	476.1	486.1	494.4	499.0
32.5°	455.0	460.8	472.5	480.8	476.4
35°	441.2	442.5	452.8	463.2	462.9
37.5°	417.1	423.2	437.6	440.5	437.8
40°	396.5	402.6	415.6	418.8	417.5
42.5°	381.4	382.5	393.6	397.2	391.5
45°	355.0	361.6	367.6	377.1	368.1
47.5°	332.5	335.6	348.5	351.0	346.3
50°	312.1	313.2	326.2	323.0	319.9
52.5°	286.4	291.0	298.3	297.7	294.1
55°	265.3	263.6	270.5	268.6	268.6
57.5°	240.0	243.1	248.8	245.9	241.2
60°	216.3	216.4	218.4	215.1	214.5
62.5°	189.9	190.8	191.3	187.2	193.8
65°	163.0	160.8	167.2	160.8	161.9
67.5°	138.3	139.4	138.8	134.7	136.3
70°	113.2	114.6	113.6	109.0	110.4
72.5°	90.2	88.5	89.6	83.9	86.5
75°	67.8	66.4	67.7	62.9	65.1
77.5°	46.2	47.3	46.5	44.0	45.4
80°	30.5	29.6	29.6	28.2	28.5
82.5°	17.8	16.9	16.7	16.2	16.9
85°	8.3	8.1	8.2	8.0	7.7
87.5°	3.0	3.1	3.1	2.9	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)