

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: P590020

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-81-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590020
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-81-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1359.0 lumens
Efficiency: N/A
Efficacy: 116.2 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

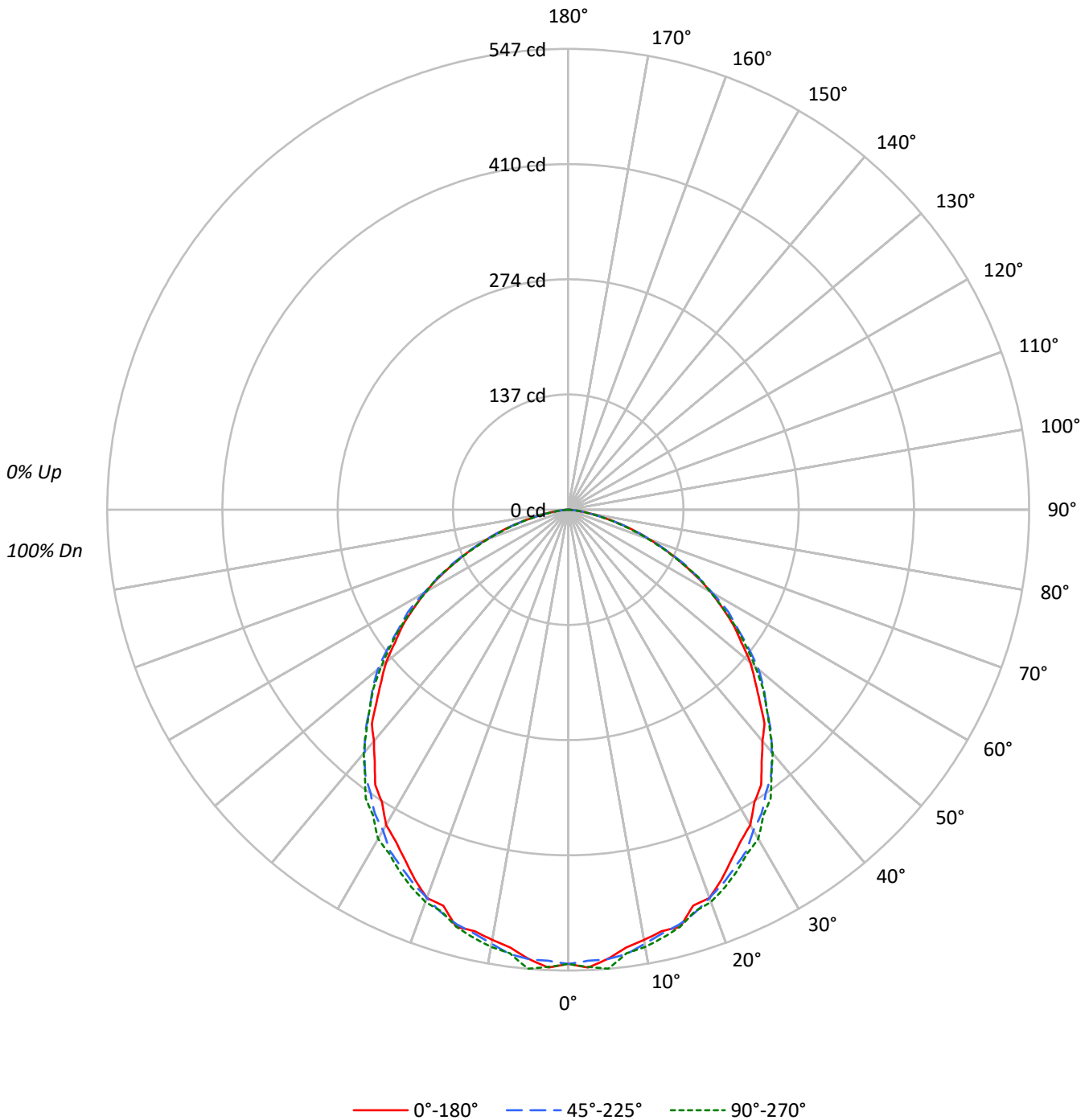
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1451	1451	1451
5°	1446	1447	1477
10°	1417	1429	1439
15°	1428	1420	1428
20°	1404	1404	1419
25°	1361	1390	1406
30°	1342	1366	1402
35°	1310	1345	1375
40°	1259	1320	1326
45°	1222	1265	1267
50°	1181	1235	1211
55°	1126	1148	1139
60°	1053	1063	1044
65°	939	962	932
70°	805	808	785
75°	637	636	611
80°	428	415	400
85°	232	228	216

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1297 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.7	3.7
10°-20°	143.8	10.6
20°-30°	215.4	15.8
30°-40°	255.3	18.8
40°-50°	255.7	18.8
50°-60°	217.1	16.0
60°-70°	146.3	10.8
70°-80°	64.3	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°	409.8	30.2
0°-40°	665.1	48.9
0°-60°	1137.9	83.7
0°-90°	1359.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1359.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	539	539	539	539	539	
5°	535	534	536	534	547	50
15°	513	507	510	512	513	143
25°	458	461	468	474	474	212
35°	399	400	409	419	419	248
45°	321	327	332	341	333	248
55°	240	238	245	243	243	213
65°	147	145	151	145	146	147
75°	61	60	61	57	59	66
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°	539.2	539.2	539.2	539.2	539.2
2.5°	543.9	539.8	535.9	540.4	543.1
5°	535.4	534.1	535.6	534.0	546.9
7.5°	524.4	529.2	532.0	530.2	531.0
10°	518.5	516.9	523.1	527.4	526.8
12.5°	512.3	514.8	515.1	519.8	520.2
15°	512.6	506.7	509.8	512.5	512.7
17.5°	492.7	499.1	501.3	507.3	499.8
20°	490.3	485.6	490.3	496.5	495.5
22.5°	475.3	470.1	480.1	485.6	485.3
25°	458.3	460.8	468.3	474.5	473.5
27.5°	443.4	446.3	457.1	465.5	460.1
30°	431.9	430.5	439.5	447.0	451.2
32.5°	411.4	416.7	427.3	434.7	430.7
35°	398.9	400.1	409.4	418.8	418.6
37.5°	377.1	382.6	395.7	398.3	395.9
40°	358.5	364.0	375.8	378.7	377.5
42.5°	344.8	345.8	355.9	359.2	354.0
45°	321.0	326.9	332.4	340.9	332.9
47.5°	300.6	303.4	315.1	317.4	313.2
50°	282.2	283.1	294.9	292.1	289.3
52.5°	259.0	263.1	269.7	269.2	265.9
55°	239.9	238.3	244.6	242.9	242.8
57.5°	217.0	219.8	224.9	222.3	218.1
60°	195.6	195.6	197.5	194.5	194.0
62.5°	171.7	172.5	172.9	169.2	175.2
65°	147.4	145.4	151.1	145.4	146.3
67.5°	125.0	126.0	125.5	121.8	123.2
70°	102.3	103.6	102.7	98.6	99.8
72.5°	81.6	80.1	81.0	75.9	78.3
75°	61.3	60.1	61.2	56.9	58.8
77.5°	41.8	42.7	42.1	39.8	41.1
80°	27.6	26.8	26.8	25.5	25.8
82.5°	16.1	15.3	15.1	14.7	15.3
85°	7.5	7.3	7.4	7.2	7.0
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)