

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: P561006

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561006
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-1LO-35-UNV-93-97-EDD-90
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1987.0 lumens
Efficiency: N/A
Efficacy: 84.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

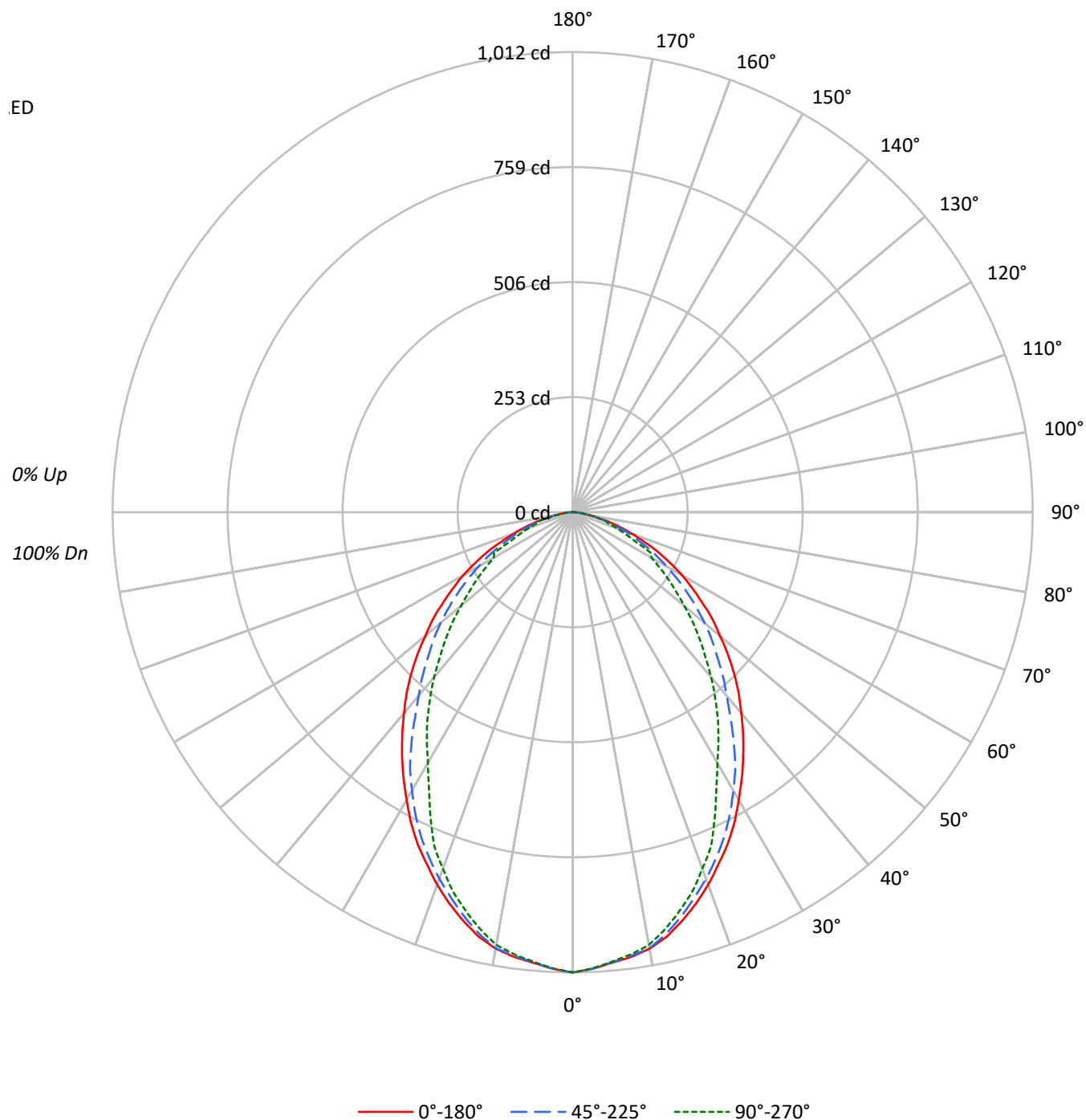
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				0
RW	70	50	30	10	70	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		100
1	110	106	102	99	108	104	100	97	100	97	94		96	94	91		87
2	101	94	88	83	99	92	87	82	89	84	80		86	82	78		75
3	93	84	77	71	91	82	76	70	79	74	69		77	72	68		65
4	86	75	67	61	84	74	66	61	72	65	60		69	64	59		56
5	80	68	60	54	78	67	59	53	65	58	53		63	57	52		50
6	74	62	53	48	72	61	53	47	59	52	47		57	51	47		44
7	69	56	48	43	67	56	48	42	54	47	42		53	46	42		40
8	65	52	44	38	63	51	44	38	50	43	38		49	42	38		36
9	61	48	40	35	59	47	40	35	46	39	35		45	39	34		33
10	57	44	37	32	56	44	37	32	43	36	32		42	36	32		30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2724	2724	2724
5°	2687	2683	2680
10°	2663	2660	2641
15°	2591	2566	2530
20°	2496	2456	2389
25°	2394	2342	2196
30°	2269	2196	1978
35°	2149	2030	1830
40°	2027	1850	1665
45°	1910	1710	1505
50°	1768	1587	1342
55°	1636	1438	1202
60°	1499	1285	1077
65°	1319	1125	954
70°	1087	985	810
75°	864	754	791
80°	580	544	508
85°	361	432	506

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1910 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.2	4.7
10°-20°	258.6	13.0
20°-30°	358.0	18.0
30°-40°	381.7	19.2
40°-50°	348.2	17.5
50°-60°	272.8	13.7
60°-70°	177.8	8.9
70°-80°	78.8	4.0
80°-90°	16.9	0.9
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°	710.8	35.8
0°-40°	1092.5	55.0
0°-60°	1713.5	86.2
0°-90°	1987.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1987.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1012	1012	1012	1012	1012	
5°	995	993	993	992	992	94
15°	930	930	921	912	908	262
25°	806	802	789	761	740	370
35°	654	649	618	571	557	409
45°	502	491	449	412	396	387
55°	349	338	307	270	256	313
65°	207	195	177	180	150	204
75°	83	77	72	69	76	89
85°	12	13	14	15	16	16
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1012.2	1012.2	1012.2	1012.2	1012.2
2.5°	1005.1	1005.1	1005.1	1004.0	1004.0
5°	994.6	993.4	993.4	992.3	992.3
7.5°	986.4	985.2	984.1	982.9	980.6
10°	974.7	974.7	973.5	967.7	966.5
12.5°	956.0	954.8	950.1	941.9	939.6
15°	930.2	930.2	920.9	911.5	908.0
17.5°	902.2	901.0	889.3	879.9	875.2
20°	871.7	869.4	857.7	842.5	834.3
22.5°	837.8	837.8	823.8	803.9	795.7
25°	806.2	801.5	788.7	760.6	739.5
27.5°	769.9	762.9	748.9	709.1	684.5
30°	730.2	726.6	706.8	655.3	636.5
32.5°	692.7	686.9	665.8	612.0	596.8
35°	654.1	649.4	617.8	571.0	557.0
37.5°	615.5	609.6	569.8	532.4	514.9
40°	576.9	569.8	526.6	492.6	473.9
42.5°	540.6	531.2	489.1	452.8	431.8
45°	502.0	491.4	449.3	411.9	395.5
47.5°	463.4	454.0	415.4	376.8	358.1
50°	422.4	414.2	379.1	340.5	320.6
52.5°	388.5	375.6	341.7	303.1	286.7
55°	348.7	338.2	306.6	270.3	256.3
57.5°	312.4	301.9	272.6	238.7	227.0
60°	278.5	263.3	238.7	209.5	200.1
62.5°	241.0	229.3	208.3	183.7	195.4
65°	207.1	195.4	176.7	180.2	149.8
67.5°	169.7	163.8	147.4	131.1	126.4
70°	138.1	131.1	125.2	107.7	103.0
72.5°	110.0	103.0	94.8	85.4	81.9
75°	83.1	77.2	72.5	69.0	76.1
77.5°	57.3	55.0	51.5	48.0	46.8
80°	37.4	36.3	35.1	33.9	32.8
82.5°	22.2	22.2	22.2	22.2	22.2
85°	11.7	12.9	14.0	15.2	16.4
87.5°	7.0	7.0	8.2	9.4	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)