

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: P561127

Luminaire Tested: FSR-12-4-LD4-1LO-50-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561127
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-50-UNV-93-87-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2393.0 lumens
Efficiency: N/A
Efficacy: 102.3 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

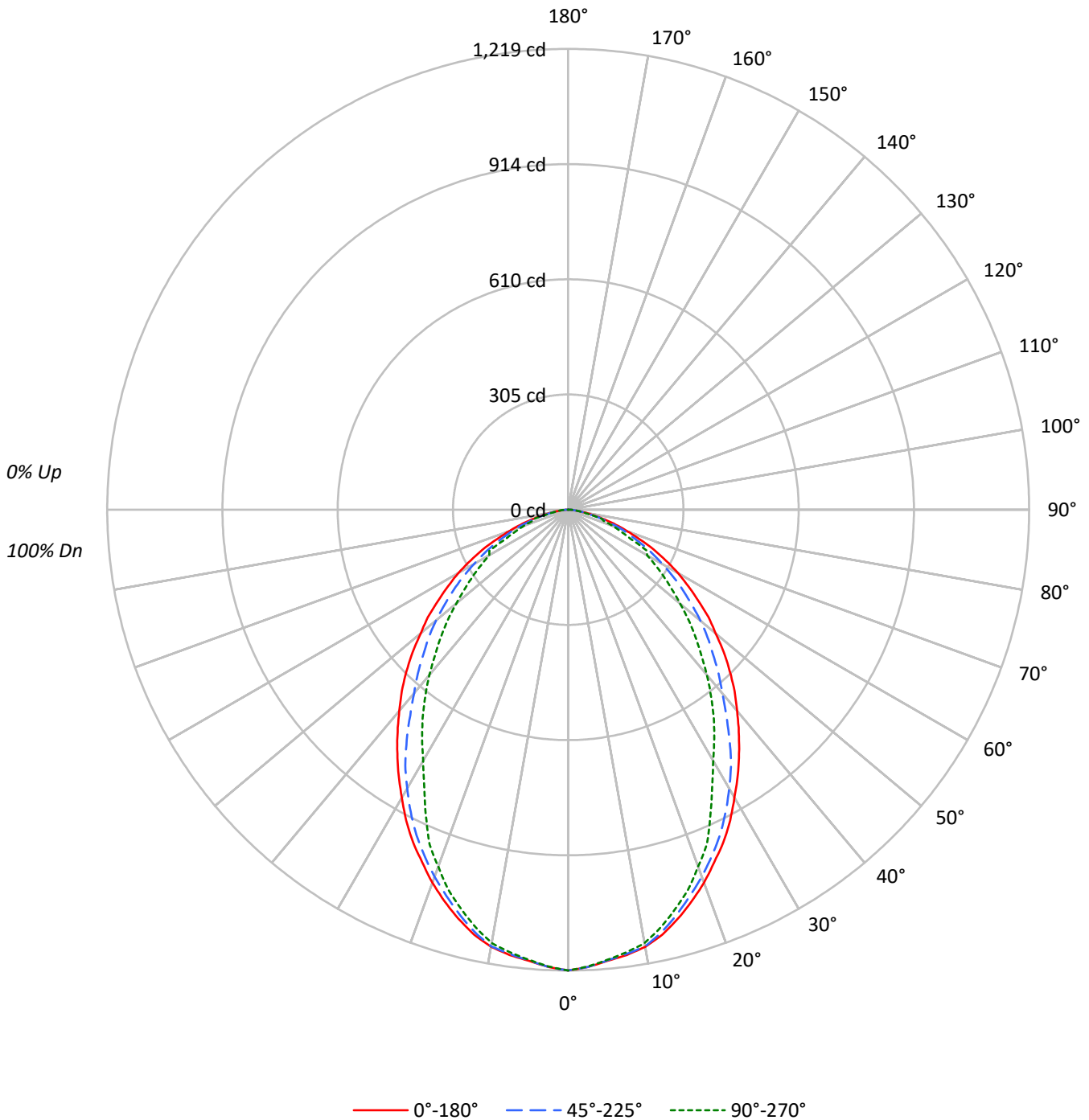
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3280	3280	3280
5°	3236	3232	3228
10°	3208	3204	3181
15°	3121	3090	3046
20°	3007	2958	2877
25°	2883	2820	2644
30°	2732	2645	2382
35°	2588	2444	2204
40°	2440	2227	2005
45°	2300	2059	1813
50°	2130	1912	1616
55°	1970	1732	1448
60°	1805	1547	1297
65°	1588	1355	1149
70°	1308	1186	976
75°	1041	909	952
80°	699	656	612
85°	435	522	608

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2300 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.5	4.7
10°-20°	311.4	13.0
20°-30°	431.1	18.0
30°-40°	459.7	19.2
40°-50°	419.4	17.5
50°-60°	328.6	13.7
60°-70°	214.1	8.9
70°-80°	94.9	4.0
80°-90°	20.4	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°	856.0	35.8
0°-40°	1315.7	55.0
0°-60°	2063.6	86.2
0°-90°	2393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2393.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1219	1219	1219	1219	1219	
5°	1198	1196	1196	1195	1195	114
15°	1120	1120	1109	1098	1094	315
25°	971	965	950	916	891	446
35°	788	782	744	688	671	492
45°	604	592	541	496	476	466
55°	420	407	369	326	309	377
65°	249	235	213	217	180	246
75°	100	93	87	83	92	107
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1219.0	1219.0	1219.0	1219.0	1219.0
2.5°	1210.5	1210.5	1210.5	1209.1	1209.1
5°	1197.8	1196.4	1196.4	1195.0	1195.0
7.5°	1188.0	1186.6	1185.1	1183.7	1180.9
10°	1173.9	1173.9	1172.5	1165.4	1164.0
12.5°	1151.3	1149.9	1144.3	1134.4	1131.6
15°	1120.3	1120.3	1109.0	1097.8	1093.5
17.5°	1086.5	1085.1	1071.0	1059.7	1054.1
20°	1049.9	1047.0	1032.9	1014.6	1004.8
22.5°	1009.0	1009.0	992.1	968.1	958.3
25°	970.9	965.3	949.8	916.0	890.6
27.5°	927.3	918.8	901.9	854.0	824.4
30°	879.3	875.1	851.2	789.2	766.6
32.5°	834.2	827.2	801.8	737.0	718.7
35°	787.7	782.1	744.1	687.7	670.8
37.5°	741.2	734.2	686.3	641.2	620.1
40°	694.7	686.3	634.1	593.3	570.7
42.5°	651.1	639.8	589.0	545.4	520.0
45°	604.5	591.9	541.1	496.0	476.3
47.5°	558.0	546.8	500.3	453.8	431.2
50°	508.7	498.9	456.6	410.1	386.1
52.5°	467.9	452.4	411.5	365.0	345.3
55°	419.9	407.3	369.2	325.5	308.6
57.5°	376.3	363.6	328.3	287.5	273.4
60°	335.4	317.1	287.5	252.2	241.0
62.5°	290.3	276.2	250.8	221.2	235.3
65°	249.4	235.3	212.8	217.0	180.4
67.5°	204.3	197.3	177.6	157.8	152.2
70°	166.3	157.8	150.8	129.6	124.0
72.5°	132.5	124.0	114.1	102.9	98.6
75°	100.1	93.0	87.4	83.1	91.6
77.5°	69.1	66.2	62.0	57.8	56.4
80°	45.1	43.7	42.3	40.9	39.5
82.5°	26.8	26.8	26.8	26.8	26.8
85°	14.1	15.5	16.9	18.3	19.7
87.5°	8.5	8.5	9.9	11.3	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)