

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: P561225

Luminaire Tested: FSR-12-4-LD4-1STD-40-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561225
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-LD4-1STD-40-UNV-81-88-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2691.0 lumens
Efficiency: N/A
Efficacy: 80.8 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

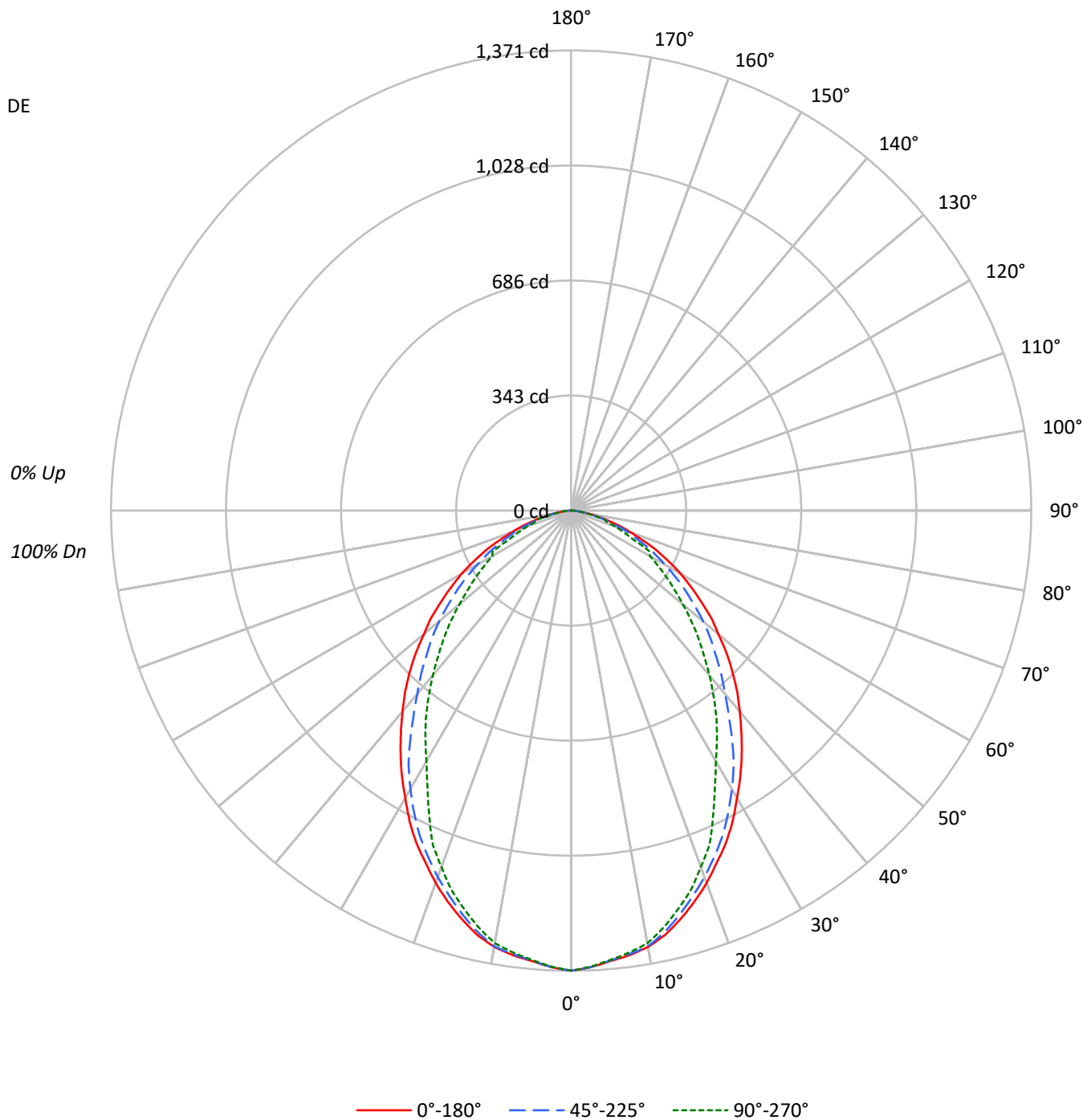
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3689	3689	3689
5°	3639	3634	3630
10°	3607	3603	3577
15°	3510	3475	3426
20°	3381	3326	3236
25°	3242	3171	2974
30°	3072	2974	2679
35°	2910	2749	2478
40°	2745	2505	2255
45°	2587	2316	2038
50°	2395	2149	1818
55°	2215	1948	1628
60°	2030	1740	1459
65°	1786	1524	1291
70°	1471	1334	1098
75°	1170	1022	1071
80°	786	736	688
85°	488	587	685

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2587 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.6	4.7
10°-20°	350.2	13.0
20°-30°	484.8	18.0
30°-40°	516.9	19.2
40°-50°	471.6	17.5
50°-60°	369.5	13.7
60°-70°	240.8	8.9
70°-80°	106.7	4.0
80°-90°	22.9	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°	962.6	35.8
0°-40°	1479.5	55.0
0°-60°	2320.6	86.2
0°-90°	2691.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2691.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1371	1371	1371	1371	1371	
5°	1347	1345	1345	1344	1344	128
15°	1260	1260	1247	1234	1230	354
25°	1092	1086	1068	1030	1002	501
35°	886	880	837	773	754	554
45°	680	666	608	558	536	524
55°	472	458	415	366	347	424
65°	280	265	239	244	203	276
75°	112	105	98	94	103	121
85°	16	17	19	21	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1370.8	1370.8	1370.8	1370.8	1370.8
2.5°	1361.3	1361.3	1361.3	1359.7	1359.7
5°	1347.0	1345.4	1345.4	1343.8	1343.8
7.5°	1335.9	1334.3	1332.7	1331.1	1328.0
10°	1320.0	1320.0	1318.5	1310.5	1309.0
12.5°	1294.7	1293.1	1286.8	1275.7	1272.5
15°	1259.8	1259.8	1247.2	1234.5	1229.7
17.5°	1221.8	1220.2	1204.4	1191.7	1185.4
20°	1180.6	1177.4	1161.6	1141.0	1129.9
22.5°	1134.6	1134.6	1115.6	1088.7	1077.6
25°	1091.9	1085.5	1068.1	1030.1	1001.5
27.5°	1042.7	1033.2	1014.2	960.3	927.0
30°	988.8	984.1	957.2	887.4	862.1
32.5°	938.1	930.2	901.7	828.8	808.2
35°	885.8	879.5	836.7	773.3	754.3
37.5°	833.5	825.6	771.7	721.0	697.3
40°	781.3	771.7	713.1	667.2	641.8
42.5°	732.1	719.5	662.4	613.3	584.8
45°	679.8	665.6	608.5	557.8	535.6
47.5°	627.5	614.9	562.6	510.3	484.9
50°	572.1	561.0	513.4	461.1	434.2
52.5°	526.1	508.7	462.7	410.4	388.2
55°	472.2	458.0	415.2	366.1	347.0
57.5°	423.1	408.9	369.2	323.3	307.4
60°	377.2	356.6	323.3	283.7	271.0
62.5°	326.4	310.6	282.1	248.8	264.6
65°	280.5	264.6	239.3	244.0	202.8
67.5°	229.8	221.9	199.7	177.5	171.1
70°	187.0	177.5	169.6	145.8	139.5
72.5°	149.0	139.5	128.4	115.7	110.9
75°	112.5	104.6	98.3	93.5	103.0
77.5°	77.6	74.5	69.7	65.0	63.4
80°	50.7	49.1	47.5	46.0	44.4
82.5°	30.1	30.1	30.1	30.1	30.1
85°	15.8	17.4	19.0	20.6	22.2
87.5°	9.5	9.5	11.1	12.7	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)