

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: P561077

Luminaire Tested: FSR-12-4-LD4-1LO-50-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561077
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-80-86-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2469.0 lumens
Efficiency: N/A
Efficacy: 105.5 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

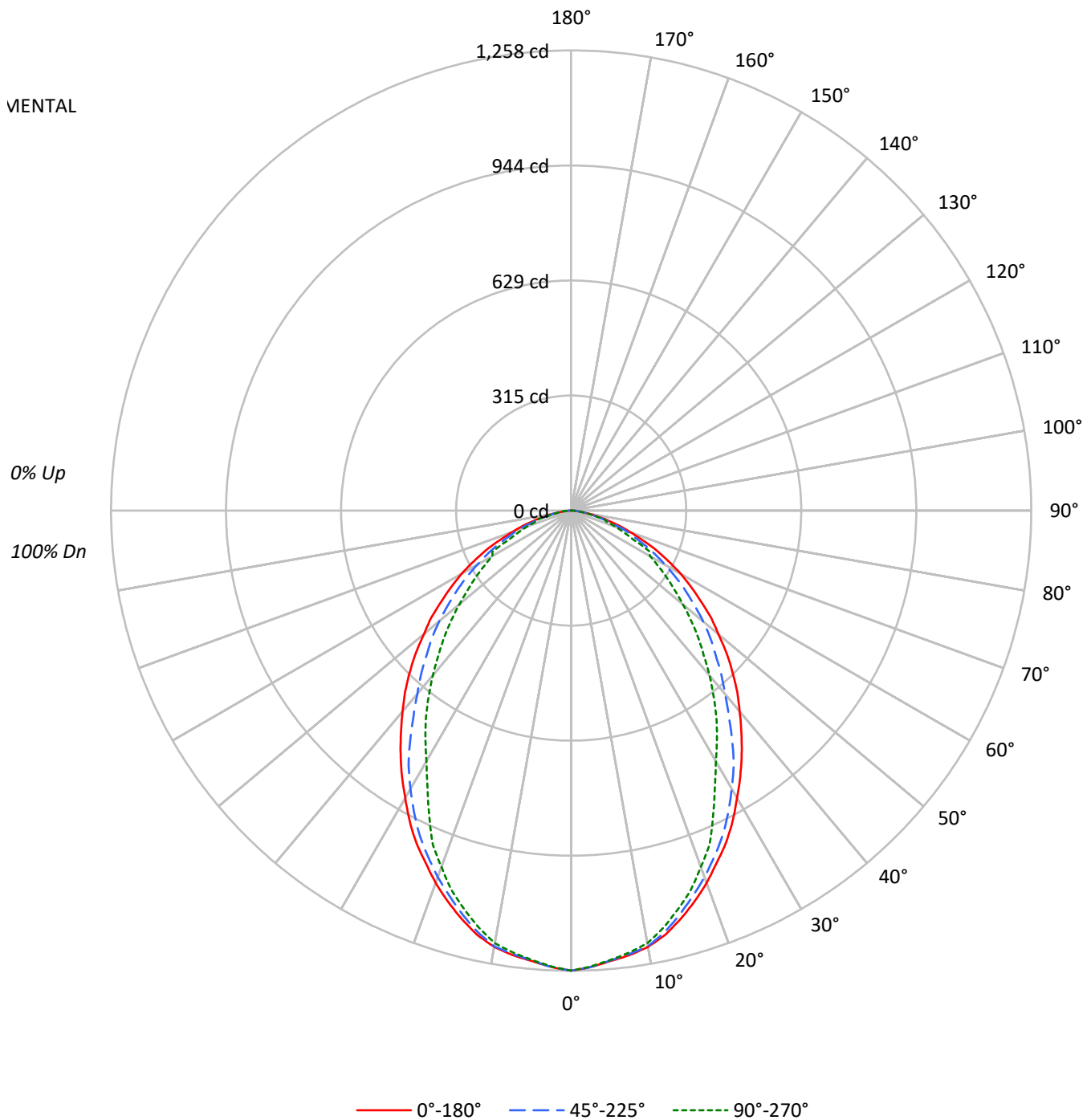
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561077

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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	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°	3384	3384	3384
5°	3338	3334	3331
10°	3309	3305	3282
15°	3220	3188	3143
20°	3102	3052	2969
25°	2975	2910	2728
30°	2819	2729	2458
35°	2670	2522	2274
40°	2518	2298	2069
45°	2374	2125	1870
50°	2197	1972	1668
55°	2033	1787	1494
60°	1862	1596	1338
65°	1639	1398	1185
70°	1350	1224	1006
75°	1073	937	983
80°	721	676	631
85°	448	537	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2374 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.1	4.7
10°-20°	321.3	13.0
20°-30°	444.8	18.0
30°-40°	474.3	19.2
40°-50°	432.7	17.5
50°-60°	339.0	13.7
60°-70°	220.9	8.9
70°-80°	97.9	4.0
80°-90°	21.0	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°	883.2	35.8
0°-40°	1357.5	55.0
0°-60°	2129.2	86.2
0°-90°	2469.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2469.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1258	1258	1258	1258	1258	
5°	1236	1234	1234	1233	1233	117
15°	1156	1156	1144	1133	1128	325
25°	1002	996	980	945	919	460
35°	813	807	768	710	692	508
45°	624	611	558	512	491	480
55°	433	420	381	336	318	389
65°	257	243	220	224	186	254
75°	103	96	90	86	94	111
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1257.7	1257.7	1257.7	1257.7	1257.7
2.5°	1249.0	1249.0	1249.0	1247.5	1247.5
5°	1235.9	1234.4	1234.4	1233.0	1233.0
7.5°	1225.7	1224.2	1222.8	1221.3	1218.4
10°	1211.1	1211.1	1209.7	1202.4	1201.0
12.5°	1187.9	1186.4	1180.6	1170.4	1167.5
15°	1155.9	1155.9	1144.3	1132.6	1128.3
17.5°	1121.0	1119.5	1105.0	1093.4	1087.6
20°	1083.2	1080.3	1065.8	1046.9	1036.7
22.5°	1041.0	1041.0	1023.6	998.9	988.7
25°	1001.8	996.0	980.0	945.1	918.9
27.5°	956.7	948.0	930.5	881.1	850.6
30°	907.3	902.9	878.2	814.2	791.0
32.5°	860.7	853.5	827.3	760.4	741.5
35°	812.8	806.9	767.7	709.5	692.1
37.5°	764.8	757.5	708.1	661.6	639.7
40°	716.8	708.1	654.3	612.1	588.9
42.5°	671.7	660.1	607.8	562.7	536.5
45°	623.7	610.7	558.3	511.8	491.4
47.5°	575.8	564.1	516.2	468.2	444.9
50°	524.9	514.7	471.1	423.1	398.4
52.5°	482.7	466.7	424.6	376.6	356.2
55°	433.3	420.2	380.9	335.9	318.4
57.5°	388.2	375.1	338.8	296.6	282.1
60°	346.0	327.1	296.6	260.3	248.6
62.5°	299.5	285.0	258.8	228.3	242.8
65°	257.4	242.8	219.5	223.9	186.1
67.5°	210.8	203.6	183.2	162.8	157.0
70°	171.6	162.8	155.6	133.8	127.9
72.5°	136.7	127.9	117.8	106.1	101.8
75°	103.2	96.0	90.1	85.8	94.5
77.5°	71.2	68.3	64.0	59.6	58.2
80°	46.5	45.1	43.6	42.2	40.7
82.5°	27.6	27.6	27.6	27.6	27.6
85°	14.5	16.0	17.4	18.9	20.4
87.5°	8.7	8.7	10.2	11.6	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)