

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: P561076

Luminaire Tested: FSR-12-4-LD4-1LO-50-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561076
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-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2148.0 lumens
Efficiency: N/A
Efficacy: 91.8 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

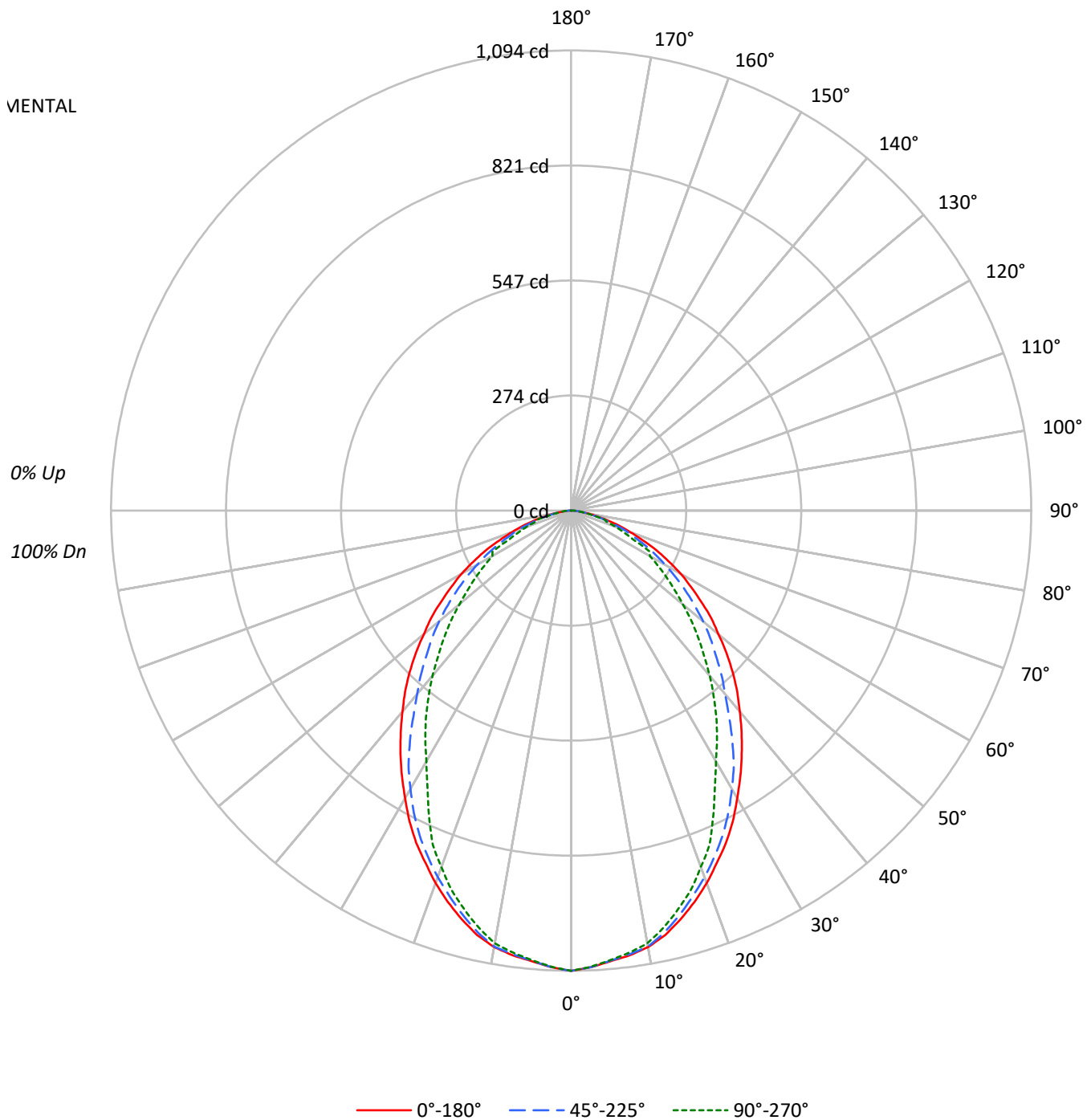
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	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°	2944	2944	2944
5°	2904	2901	2898
10°	2879	2876	2855
15°	2802	2773	2735
20°	2699	2655	2583
25°	2588	2532	2374
30°	2453	2374	2138
35°	2323	2194	1978
40°	2191	1999	1800
45°	2065	1848	1627
50°	1912	1716	1451
55°	1768	1555	1300
60°	1621	1389	1164
65°	1426	1216	1031
70°	1175	1065	876
75°	934	815	855
80°	628	587	549
85°	389	469	546

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2065 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.9	4.7
10°-20°	279.5	13.0
20°-30°	387.0	18.0
30°-40°	412.6	19.2
40°-50°	376.4	17.5
50°-60°	294.9	13.7
60°-70°	192.2	8.9
70°-80°	85.2	4.0
80°-90°	18.3	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°	768.4	35.8
0°-40°	1181.0	55.0
0°-60°	1852.3	86.2
0°-90°	2148.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2148.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1094	1094	1094	1094	1094	
5°	1075	1074	1074	1073	1073	102
15°	1006	1006	996	985	982	283
25°	872	866	853	822	799	400
35°	707	702	668	617	602	442
45°	543	531	486	445	428	418
55°	377	366	331	292	277	338
65°	224	211	191	195	162	221
75°	90	84	78	75	82	96
85°	13	14	15	16	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1094.2	1094.2	1094.2	1094.2	1094.2
2.5°	1086.6	1086.6	1086.6	1085.3	1085.3
5°	1075.2	1073.9	1073.9	1072.7	1072.7
7.5°	1066.3	1065.1	1063.8	1062.5	1060.0
10°	1053.7	1053.7	1052.4	1046.1	1044.8
12.5°	1033.4	1032.2	1027.1	1018.3	1015.7
15°	1005.6	1005.6	995.5	985.4	981.6
17.5°	975.3	974.0	961.3	951.2	946.2
20°	942.4	939.8	927.2	910.7	901.9
22.5°	905.7	905.7	890.5	869.0	860.2
25°	871.5	866.5	852.6	822.2	799.4
27.5°	832.3	824.7	809.6	766.5	740.0
30°	789.3	785.5	764.0	708.4	688.1
32.5°	748.8	742.5	719.7	661.6	645.1
35°	707.1	702.0	667.9	617.3	602.1
37.5°	665.4	659.0	616.0	575.5	556.6
40°	623.6	616.0	569.2	532.5	512.3
42.5°	584.4	574.3	528.7	489.5	466.8
45°	542.7	531.3	485.7	445.3	427.5
47.5°	500.9	490.8	449.0	407.3	387.1
50°	456.6	447.8	409.8	368.1	346.6
52.5°	420.0	406.0	369.4	327.6	309.9
55°	376.9	365.6	331.4	292.2	277.0
57.5°	337.7	326.4	294.7	258.0	245.4
60°	301.1	284.6	258.0	226.4	216.3
62.5°	260.6	247.9	225.2	198.6	211.2
65°	223.9	211.2	191.0	194.8	161.9
67.5°	183.4	177.1	159.4	141.7	136.6
70°	149.3	141.7	135.3	116.4	111.3
72.5°	118.9	111.3	102.5	92.3	88.5
75°	89.8	83.5	78.4	74.6	82.2
77.5°	62.0	59.5	55.7	51.9	50.6
80°	40.5	39.2	37.9	36.7	35.4
82.5°	24.0	24.0	24.0	24.0	24.0
85°	12.6	13.9	15.2	16.4	17.7
87.5°	7.6	7.6	8.9	10.1	11.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)