

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P556453

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-93-86-EDD**

Issue Date: 7/16/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P556453
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-257-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FUSL-12-4-LD4-1LO-30-UNV-93-86-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

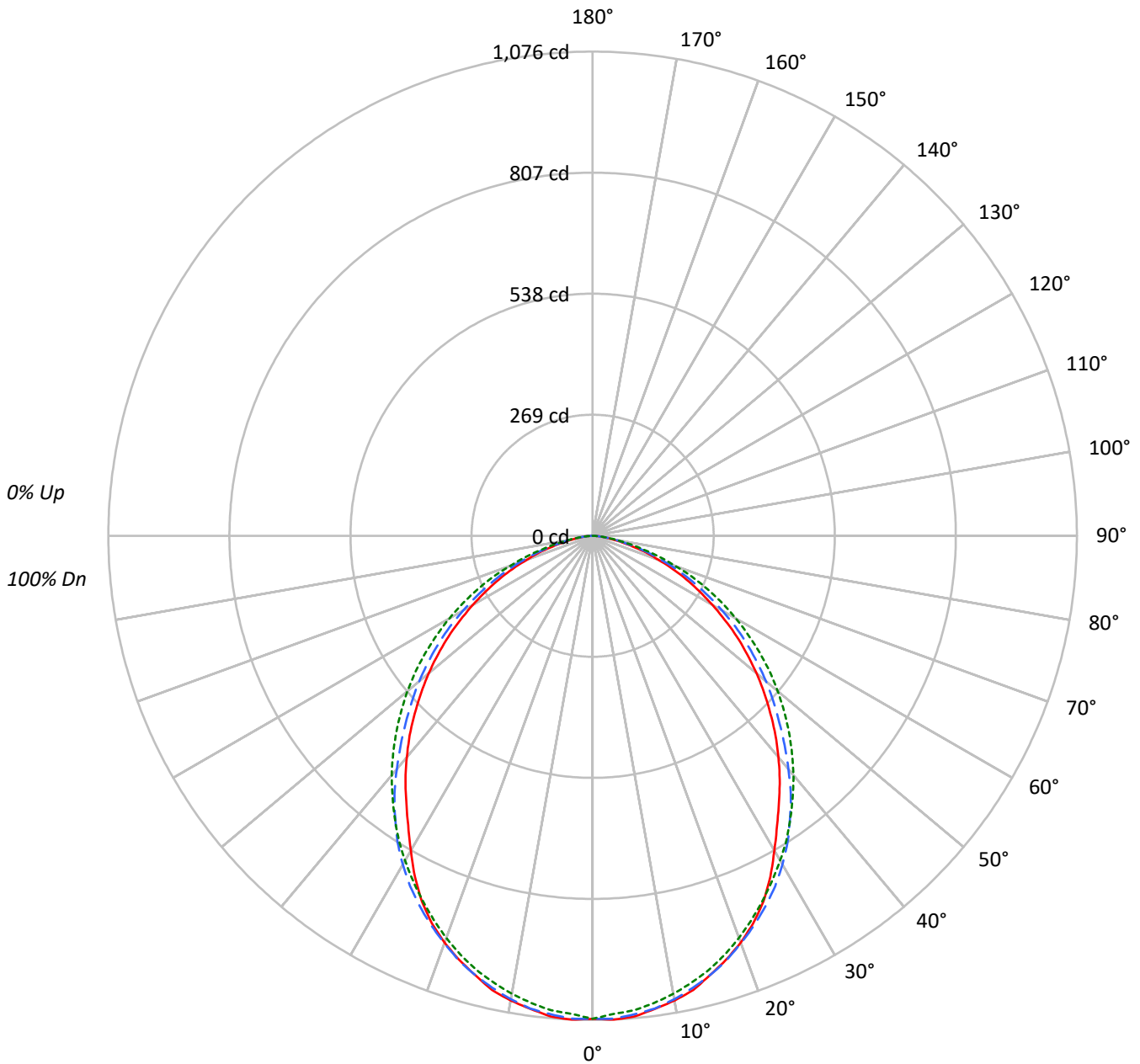
Lumens per Lamp: N/A
Luminaire Lumens: 2482.0 lumens
Efficiency: N/A
Efficacy: 106.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): 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: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73																			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63																			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54																			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47																			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42																			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37																			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2888	2888	2888
5°	2896	2884	2860
10°	2866	2858	2825
15°	2815	2815	2783
20°	2755	2759	2723
25°	2664	2697	2654
30°	2509	2622	2590
35°	2371	2513	2517
40°	2256	2377	2439
45°	2127	2233	2348
50°	1991	2105	2248
55°	1836	1958	2126
60°	1653	1787	1977
65°	1460	1589	1799
70°	1216	1353	1528
75°	957	1080	1197
80°	683	761	843
85°	445	445	420



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.1	4.1
10°-20°	283.9	11.4
20°-30°	414.9	16.7
30°-40°	470.9	19.0
40°-50°	454.6	18.3
50°-60°	375.0	15.1
60°-70°	249.7	10.1
70°-80°	111.8	4.5
80°-90°	20.0	0.8
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°	799.9	32.2
0°-40°	1270.8	51.2
0°-60°	2100.5	84.6
0°-90°	2482.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2482.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1073	1073	1073	1073	1073	
5°	1072	1072	1068	1062	1059	101
15°	1010	1013	1010	1006	999	285
25°	897	904	908	902	894	411
35°	722	732	765	769	766	452
45°	559	568	587	614	617	431
55°	391	398	417	440	453	349
65°	229	236	250	267	282	227
75°	92	97	104	109	115	101
85°	14	14	14	14	14	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1073.4	1073.4	1073.4	1073.4	1073.4
2.5°	1076.3	1076.7	1074.2	1067.6	1063.5
5°	1072.2	1071.8	1067.6	1061.9	1058.6
7.5°	1060.2	1061.0	1059.8	1051.5	1047.0
10°	1048.7	1049.1	1045.8	1039.2	1033.8
12.5°	1033.8	1033.4	1028.9	1025.6	1016.9
15°	1010.3	1012.8	1010.3	1005.8	998.8
17.5°	987.6	987.6	989.3	981.4	976.1
20°	962.1	963.3	963.3	957.1	950.9
22.5°	932.4	936.1	937.3	930.7	923.3
25°	897.3	904.3	908.5	901.9	894.0
27.5°	854.8	865.6	877.9	873.0	864.3
30°	807.4	823.1	843.7	839.6	833.4
32.5°	762.5	778.1	806.6	804.9	801.6
35°	721.6	731.5	764.9	769.1	766.2
37.5°	682.9	692.0	723.3	732.8	730.3
40°	642.1	652.0	676.7	693.6	694.4
42.5°	601.6	611.1	631.3	655.7	655.7
45°	558.8	568.2	586.8	613.6	616.9
47.5°	516.7	526.6	544.7	571.5	576.9
50°	475.5	484.5	502.7	528.7	536.9
52.5°	432.6	442.5	460.2	484.1	496.1
55°	391.3	397.9	417.3	440.4	453.2
57.5°	348.5	354.6	376.5	396.3	409.5
60°	307.2	315.1	332.0	352.2	367.4
62.5°	267.6	275.9	290.3	308.0	325.4
65°	229.3	235.5	249.5	267.2	282.5
67.5°	192.2	197.5	211.5	223.9	240.0
70°	154.6	161.6	172.0	183.9	194.2
72.5°	124.5	127.4	136.1	144.7	155.5
75°	92.0	96.9	103.9	108.9	115.1
77.5°	66.0	68.9	73.0	77.1	82.9
80°	44.1	45.4	49.1	49.9	54.4
82.5°	26.8	27.6	28.5	28.9	30.5
85°	14.4	14.4	14.4	13.6	13.6
87.5°	8.2	8.2	7.0	5.8	4.1
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)