

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: P556621

Luminaire Tested: **FUSL-12-4-LD4-1LO-50-UNV-81-96-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: P556621
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-50-UNV-81-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

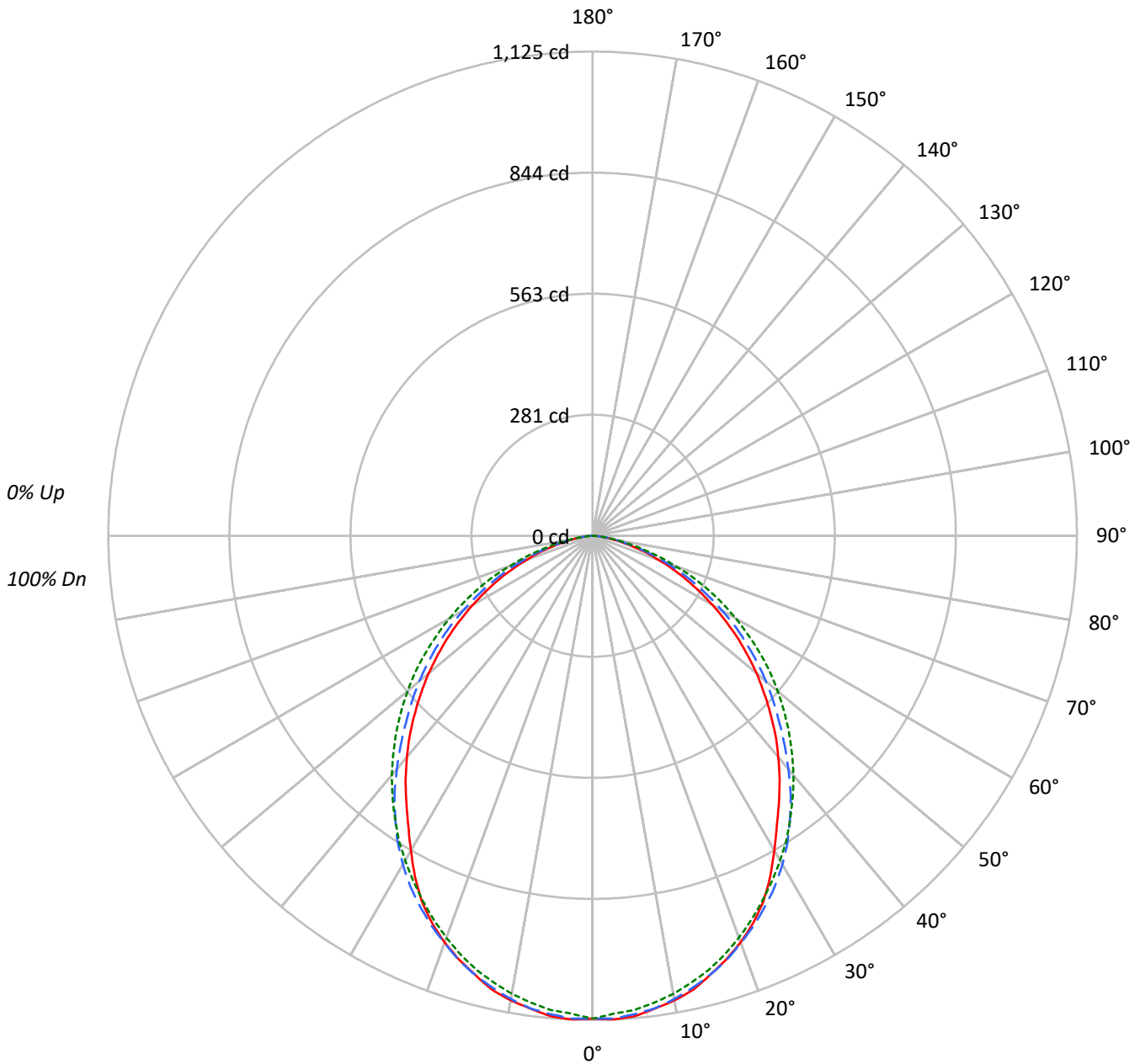
Lumens per Lamp: N/A
Luminaire Lumens: 2594.0 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P556621

CATALOG NUMBER: FUSL-12-4-LD4-1LO-50-UNV-81-96-EDD

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°	3019	3019	3019
5°	3027	3014	2988
10°	2995	2987	2952
15°	2942	2942	2908
20°	2879	2883	2846
25°	2784	2819	2774
30°	2622	2740	2706
35°	2478	2626	2631
40°	2357	2484	2550
45°	2222	2334	2453
50°	2080	2200	2349
55°	1919	2046	2222
60°	1728	1867	2067
65°	1526	1660	1880
70°	1271	1414	1597
75°	999	1129	1250
80°	714	795	882
85°	466	466	438



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	4.1
10°-20°	296.7	11.4
20°-30°	433.6	16.7
30°-40°	492.2	19.0
40°-50°	475.1	18.3
50°-60°	392.0	15.1
60°-70°	261.0	10.1
70°-80°	116.8	4.5
80°-90°	20.9	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°	836.0	32.2
0°-40°	1328.2	51.2
0°-60°	2195.3	84.6
0°-90°	2594.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2594.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1122	1122	1122	1122	1122	
5°	1120	1120	1116	1110	1106	106
15°	1056	1058	1056	1051	1044	298
25°	938	945	949	943	934	429
35°	754	765	800	804	801	473
45°	584	594	613	641	645	451
55°	409	416	436	460	474	365
65°	240	246	261	279	295	238
75°	96	101	109	114	120	105
85°	15	15	15	14	14	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1121.8	<i>1121.8</i>	1121.8	1121.8	1121.8
2.5°	<i>1124.9</i>	<i>1125.3</i>	<i>1122.7</i>	<i>1115.8</i>	<i>1111.5</i>
5°	1120.5	<i>1120.1</i>	1115.8	1109.8	1106.3
7.5°	1108.0	<i>1108.9</i>	1107.6	1099.0	1094.3
10°	1096.0	<i>1096.4</i>	1093.0	1086.1	1080.5
12.5°	1080.5	<i>1080.0</i>	1075.3	1071.8	1062.8
15°	1055.9	<i>1058.5</i>	1055.9	1051.2	1043.8
17.5°	1032.2	<i>1032.2</i>	1033.9	1025.7	1020.1
20°	1005.5	<i>1006.8</i>	1006.8	1000.3	993.8
22.5°	974.4	<i>978.3</i>	979.6	972.7	965.0
25°	937.8	<i>945.1</i>	949.4	942.6	934.4
27.5°	893.4	<i>904.6</i>	917.6	912.4	903.3
30°	843.9	<i>860.2</i>	881.8	877.5	871.0
32.5°	796.9	<i>813.3</i>	843.0	841.3	837.8
35°	754.2	<i>764.6</i>	799.5	803.8	800.8
37.5°	713.7	<i>723.2</i>	755.9	765.8	763.3
40°	671.0	<i>681.4</i>	707.2	724.9	725.8
42.5°	628.8	<i>638.7</i>	659.8	685.3	685.3
45°	584.0	<i>593.9</i>	613.3	641.3	644.7
47.5°	540.0	<i>550.4</i>	569.3	597.3	602.9
50°	496.9	<i>506.4</i>	525.4	552.5	561.1
52.5°	452.1	<i>462.4</i>	481.0	506.0	518.5
55°	409.0	<i>415.9</i>	436.2	460.3	473.6
57.5°	364.2	<i>370.6</i>	393.5	414.2	428.0
60°	321.1	<i>329.3</i>	346.9	368.1	384.0
62.5°	279.7	<i>288.3</i>	303.4	321.9	340.0
65°	239.6	<i>246.1</i>	260.7	279.3	295.2
67.5°	200.8	<i>206.4</i>	221.1	234.0	250.8
70°	161.6	<i>168.9</i>	179.7	192.2	203.0
72.5°	130.2	<i>133.2</i>	142.2	151.3	162.5
75°	96.1	<i>101.3</i>	108.6	113.8	120.2
77.5°	69.0	<i>72.0</i>	76.3	80.6	86.6
80°	46.1	<i>47.4</i>	51.3	52.1	56.9
82.5°	28.0	<i>28.9</i>	29.7	30.2	31.9
85°	15.1	<i>15.1</i>	15.1	14.2	14.2
87.5°	8.6	<i>8.6</i>	7.3	6.0	4.3
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







(END OF REPORT)