

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: P557028

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-93-86-EDD-90**

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: P557028
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-LD4-2HI-35-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

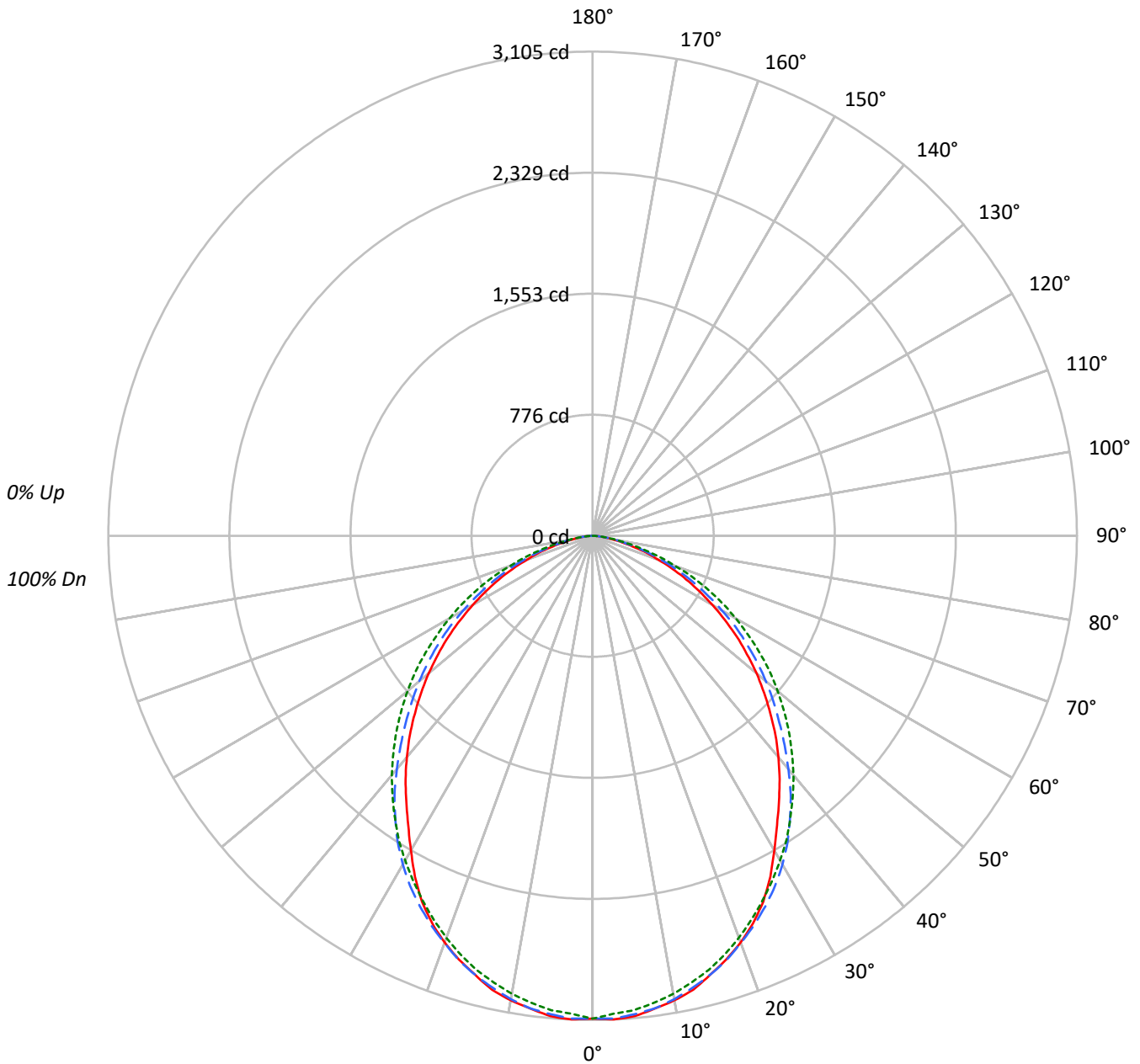
Lumens per Lamp: N/A
Luminaire Lumens: 7160.0 lumens
Efficiency: N/A
Efficacy: 82.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	8333	8333	8333
5°	8355	8320	8249
10°	8266	8243	8149
15°	8120	8120	8027
20°	7948	7958	7856
25°	7686	7781	7657
30°	7237	7563	7471
35°	6839	7249	7261
40°	6506	6857	7037
45°	6134	6442	6772
50°	5742	6071	6484
55°	5296	5648	6134
60°	4769	5154	5704
65°	4211	4583	5189
70°	3510	3903	4408
75°	2758	3117	3451
80°	1973	2194	2433
85°	1284	1284	1213



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	291.5	4.1
10°-20°	819.0	11.4
20°-30°	1196.9	16.7
30°-40°	1358.6	19.0
40°-50°	1311.5	18.3
50°-60°	1081.9	15.1
60°-70°	720.5	10.1
70°-80°	322.4	4.5
80°-90°	57.7	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°	2307.5	32.2
0°-40°	3666.0	51.2
0°-60°	6059.5	84.6
0°-90°	7160.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7160.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3096	3096	3096	3096	3096	
5°	3093	3092	3080	3063	3054	293
15°	2914	2922	2914	2901	2881	822
25°	2589	2609	2621	2602	2579	1185
35°	2082	2110	2207	2219	2210	1304
45°	1612	1639	1693	1770	1780	1244
55°	1129	1148	1204	1270	1307	1008
65°	661	679	720	771	815	656
75°	265	280	300	314	332	290
85°	42	42	42	39	39	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3096.5	3096.5	3096.5	3096.5	3096.5
2.5°	3104.8	3106.0	3098.9	3079.9	3068.0
5°	3092.9	3091.8	3079.9	3063.2	3053.7
7.5°	3058.4	3060.8	3057.3	3033.5	3020.4
10°	3025.1	3026.3	3016.8	2997.8	2982.3
12.5°	2982.3	2981.1	2968.0	2958.5	2933.5
15°	2914.5	2921.6	2914.5	2901.4	2881.2
17.5°	2849.1	2849.1	2853.8	2831.2	2815.8
20°	2775.3	2778.9	2778.9	2761.0	2743.2
22.5°	2689.7	2700.4	2703.9	2684.9	2663.5
25°	2588.6	2608.8	2620.7	2601.6	2579.0
27.5°	2466.0	2497.0	2532.6	2518.4	2493.4
30°	2329.2	2374.4	2433.9	2422.0	2404.2
32.5°	2199.6	2244.8	2326.8	2322.1	2312.6
35°	2081.8	2110.3	2206.7	2218.6	2210.3
37.5°	1970.0	1996.1	2086.5	2113.9	2106.8
40°	1852.2	1880.7	1952.1	2000.9	2003.3
42.5°	1735.6	1763.0	1821.3	1891.5	1891.5
45°	1611.9	1639.3	1692.8	1770.1	1779.6
47.5°	1490.6	1519.1	1571.5	1648.8	1664.2
50°	1371.6	1397.8	1450.1	1525.1	1548.9
52.5°	1247.9	1276.4	1327.6	1396.6	1431.1
55°	1128.9	1148.0	1203.9	1270.5	1307.4
57.5°	1005.2	1023.1	1086.1	1143.2	1181.3
60°	886.2	908.9	957.6	1015.9	1059.9
62.5°	772.0	795.8	837.5	888.6	938.6
65°	661.4	679.3	719.7	770.9	814.9
67.5°	554.4	569.8	610.3	645.9	692.3
70°	446.1	466.3	496.1	530.6	560.3
72.5°	359.3	367.6	392.6	417.5	448.5
75°	265.3	279.6	299.8	314.1	331.9
77.5°	190.3	198.7	210.6	222.5	239.1
80°	127.3	130.9	141.6	143.9	157.0
82.5°	77.3	79.7	82.1	83.3	88.0
85°	41.6	41.6	41.6	39.3	39.3
87.5°	23.8	23.8	20.2	16.7	11.9
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)