

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: P556449

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-93-84-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: P556449
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-93-84-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

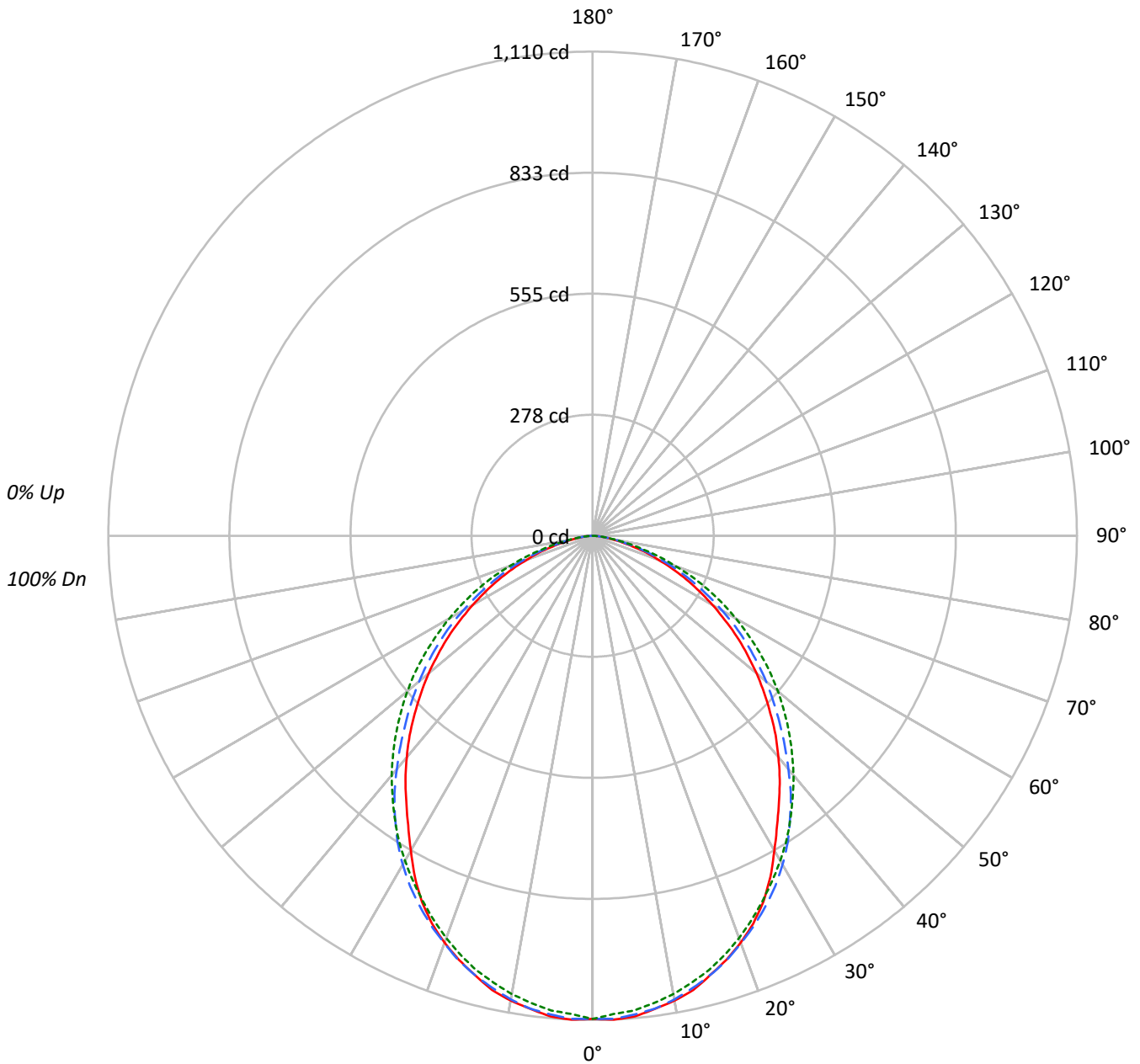
Lumens per Lamp: N/A
Luminaire Lumens: 2561.0 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (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: 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°	2981	2981	2981
5°	2988	2976	2950
10°	2957	2949	2915
15°	2904	2904	2871
20°	2843	2846	2810
25°	2749	2783	2739
30°	2589	2705	2672
35°	2446	2593	2597
40°	2327	2453	2517
45°	2194	2304	2422
50°	2054	2171	2319
55°	1894	2020	2194
60°	1706	1843	2040
65°	1507	1639	1856
70°	1256	1396	1577
75°	987	1115	1234
80°	705	784	871
85°	460	460	432



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.3	4.1
10°-20°	293.0	11.4
20°-30°	428.1	16.7
30°-40°	485.9	19.0
40°-50°	469.1	18.3
50°-60°	387.0	15.1
60°-70°	257.7	10.1
70°-80°	115.3	4.5
80°-90°	20.6	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°	825.3	32.2
0°-40°	1311.3	51.2
0°-60°	2167.4	84.6
0°-90°	2561.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2561.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1108	1108	1108	1108	1108	
5°	1106	1106	1102	1096	1092	105
15°	1042	1045	1042	1038	1031	294
25°	926	933	937	931	922	424
35°	745	755	789	794	791	467
45°	576	586	606	633	636	445
55°	404	411	431	454	468	360
65°	237	243	257	276	292	235
75°	95	100	107	112	119	104
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°	1107.6	1107.6	1107.6	1107.6	1107.6
2.5°	1110.5	1111.0	1108.4	1101.6	1097.4
5°	1106.3	1105.9	1101.6	1095.7	1092.2
7.5°	1094.0	1094.8	1093.5	1085.0	1080.3
10°	1082.0	1082.5	1079.1	1072.3	1066.7
12.5°	1066.7	1066.3	1061.6	1058.2	1049.3
15°	1042.5	1045.0	1042.5	1037.8	1030.6
17.5°	1019.1	1019.1	1020.8	1012.7	1007.1
20°	992.7	994.0	994.0	987.6	981.2
22.5°	962.0	965.9	967.2	960.3	952.7
25°	925.9	933.1	937.4	930.6	922.5
27.5°	882.1	893.1	905.9	900.8	891.8
30°	833.1	849.3	870.6	866.3	859.9
32.5°	786.7	802.9	832.3	830.6	827.2
35°	744.6	754.8	789.3	793.6	790.6
37.5°	704.6	714.0	746.3	756.1	753.6
40°	662.5	672.7	698.2	715.7	716.5
42.5°	620.8	630.6	651.4	676.5	676.5
45°	576.5	586.3	605.5	633.1	636.5
47.5°	533.1	543.4	562.1	589.7	595.3
50°	490.6	500.0	518.7	545.5	554.0
52.5°	446.3	456.6	474.9	499.5	511.9
55°	403.8	410.6	430.6	454.4	467.6
57.5°	359.5	365.9	388.5	408.9	422.5
60°	317.0	325.1	342.5	363.4	379.1
62.5°	276.1	284.7	299.5	317.8	335.7
65°	236.6	243.0	257.4	275.7	291.5
67.5°	198.3	203.8	218.3	231.0	247.6
70°	159.6	166.8	177.4	189.8	200.4
72.5°	128.5	131.5	140.4	149.3	160.4
75°	94.9	100.0	107.2	112.3	118.7
77.5°	68.1	71.1	75.3	79.6	85.5
80°	45.5	46.8	50.6	51.5	56.2
82.5°	27.7	28.5	29.4	29.8	31.5
85°	14.9	14.9	14.9	14.0	14.0
87.5°	8.5	8.5	7.2	6.0	4.3
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)