

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: P558243

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-93-85-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: P558243
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-LD4-3STD-30-UNV-93-85-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

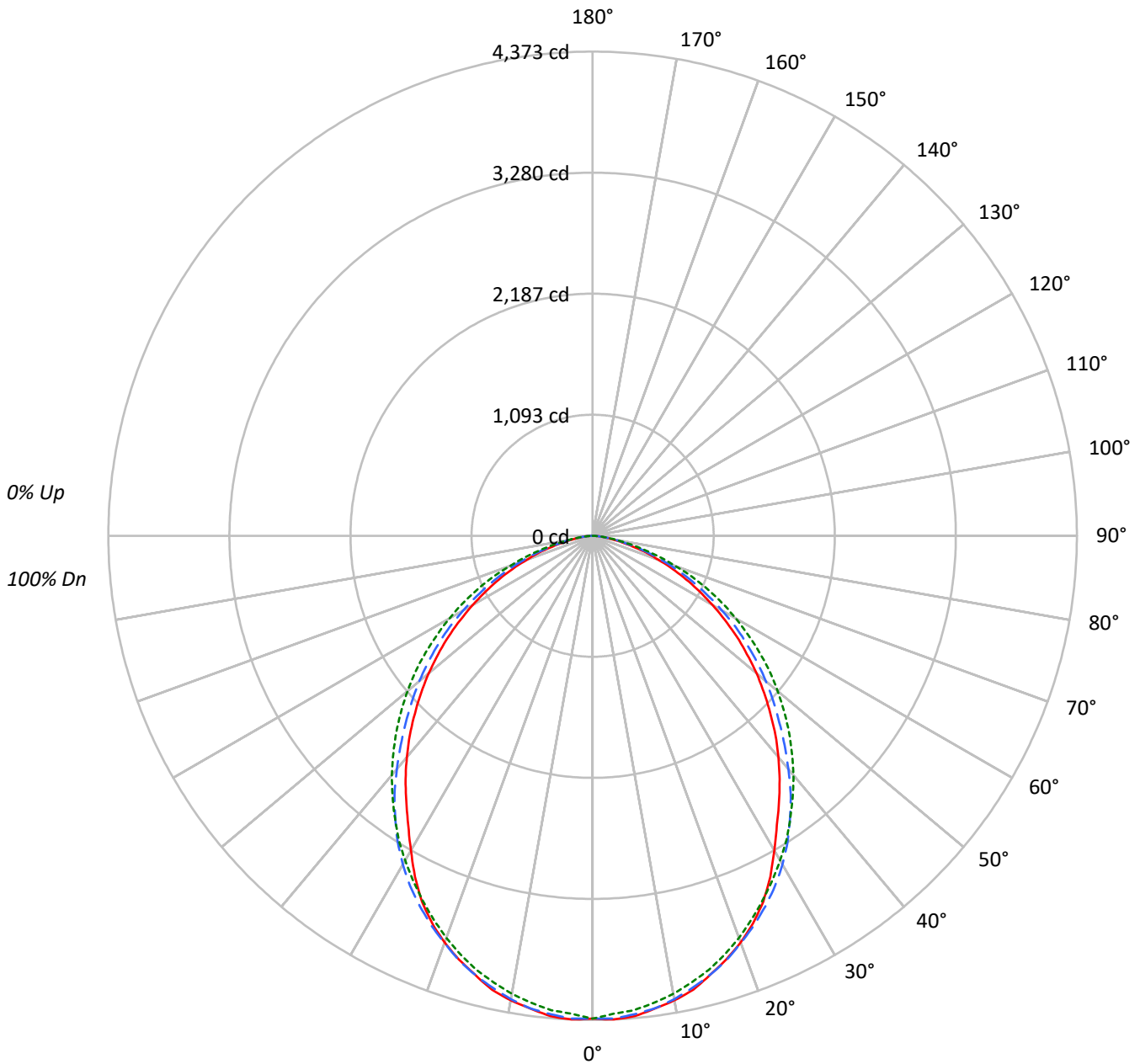
Lumens per Lamp: N/A
Luminaire Lumens: 10084.0 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	11736	11736	11736
5°	11767	11717	11618
10°	11642	11610	11477
15°	11435	11435	11305
20°	11193	11208	11064
25°	10825	10959	10785
30°	10193	10651	10521
35°	9632	10210	10226
40°	9164	9658	9911
45°	8640	9073	9538
50°	8087	8550	9132
55°	7460	7955	8639
60°	6718	7259	8034
65°	5931	6454	7307
70°	4943	5497	6209
75°	3884	4390	4860
80°	2779	3090	3428
85°	1809	1809	1707



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	410.6	4.1
10°-20°	1153.5	11.4
20°-30°	1685.7	16.7
30°-40°	1913.4	19.0
40°-50°	1847.1	18.3
50°-60°	1523.7	15.1
60°-70°	1014.7	10.1
70°-80°	454.1	4.5
80°-90°	81.2	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°	3249.8	32.2
0°-40°	5163.2	51.2
0°-60°	8534.0	84.6
0°-90°	10084.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10084.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4361	4361	4361	4361	4361	
5°	4356	4354	4338	4314	4301	412
15°	4105	4115	4105	4086	4058	1157
25°	3646	3674	3691	3664	3632	1670
35°	2932	2972	3108	3125	3113	1837
45°	2270	2309	2384	2493	2506	1752
55°	1590	1617	1696	1789	1841	1419
65°	932	957	1014	1086	1148	924
75°	374	394	422	442	467	409
85°	59	59	59	55	55	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4361.1	4361.1	4361.1	4361.1	4361.1
2.5°	4372.8	4374.5	4364.4	4337.6	4320.9
5°	4356.0	4354.4	4337.6	4314.2	4300.8
7.5°	4307.5	4310.8	4305.8	4272.3	4253.8
10°	4260.5	4262.2	4248.8	4222.0	4200.2
12.5°	4200.2	4198.6	4180.1	4166.7	4131.5
15°	4104.7	4114.8	4104.7	4086.3	4057.8
17.5°	4012.6	4012.6	4019.3	3987.5	3965.7
20°	3908.7	3913.7	3913.7	3888.6	3863.5
22.5°	3788.1	3803.2	3808.2	3781.4	3751.2
25°	3645.7	3674.2	3690.9	3664.1	3632.3
27.5°	3473.1	3516.7	3566.9	3546.8	3511.6
30°	3280.4	3344.1	3427.9	3411.1	3386.0
32.5°	3097.8	3161.5	3277.1	3270.4	3257.0
35°	2932.0	2972.2	3107.9	3124.6	3112.9
37.5°	2774.5	2811.3	2938.7	2977.2	2967.1
40°	2608.6	2648.8	2749.3	2818.0	2821.4
42.5°	2444.4	2482.9	2565.0	2663.9	2663.9
45°	2270.2	2308.7	2384.1	2493.0	2506.4
47.5°	2099.3	2139.5	2213.2	2322.1	2343.9
50°	1931.7	1968.6	2042.3	2147.9	2181.4
52.5°	1757.5	1797.7	1869.7	1966.9	2015.5
55°	1590.0	1616.8	1695.5	1789.3	1841.3
57.5°	1415.7	1440.8	1529.6	1610.1	1663.7
60°	1248.2	1280.0	1348.7	1430.8	1492.8
62.5°	1087.3	1120.8	1179.5	1251.5	1321.9
65°	931.5	956.7	1013.6	1085.7	1147.6
67.5°	780.7	802.5	859.5	909.7	975.1
70°	628.3	656.8	698.6	747.2	789.1
72.5°	506.0	517.7	552.9	588.1	631.6
75°	373.6	393.7	422.2	442.3	467.4
77.5°	268.1	279.8	296.5	313.3	336.8
80°	179.3	184.3	199.4	202.7	221.2
82.5°	108.9	112.3	115.6	117.3	124.0
85°	58.6	58.6	58.6	55.3	55.3
87.5°	33.5	33.5	28.5	23.5	16.8
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)