

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: P558210

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-81-85-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: P558210
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-81-85-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

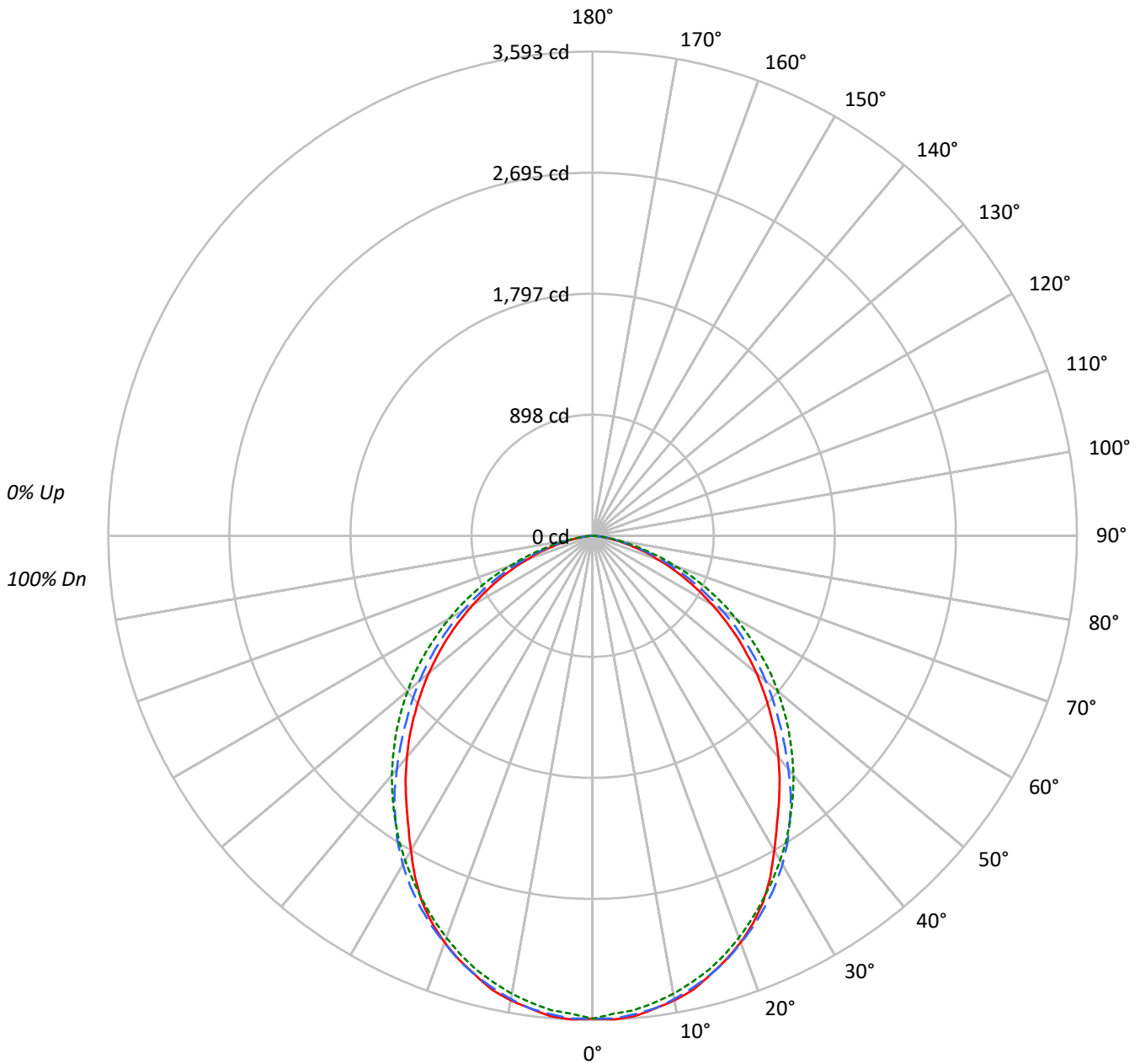
Lumens per Lamp: N/A
Luminaire Lumens: 8285.0 lumens
Efficiency: N/A
Efficacy: 82.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	9642	9642	9642
5°	9668	9627	9545
10°	9565	9539	9430
15°	9395	9395	9288
20°	9196	9208	9090
25°	8894	9004	8861
30°	8375	8751	8644
35°	7913	8388	8402
40°	7529	7935	8143
45°	7098	7454	7837
50°	6644	7025	7503
55°	6129	6535	7097
60°	5519	5964	6601
65°	4873	5303	6004
70°	4061	4516	5101
75°	3192	3607	3993
80°	2283	2538	2816
85°	1488	1488	1402



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	337.4	4.1
10°-20°	947.7	11.4
20°-30°	1384.9	16.7
30°-40°	1572.1	19.0
40°-50°	1517.6	18.3
50°-60°	1251.9	15.1
60°-70°	833.7	10.1
70°-80°	373.0	4.5
80°-90°	66.7	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°	2670.0	32.2
0°-40°	4242.1	51.2
0°-60°	7011.5	84.6
0°-90°	8285.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8285.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3583	3583	3583	3583	3583	
5°	3579	3578	3564	3544	3534	339
15°	3372	3381	3372	3357	3334	951
25°	2995	3019	3032	3010	2984	1372
35°	2409	2442	2553	2567	2558	1509
45°	1865	1897	1959	2048	2059	1439
55°	1306	1328	1393	1470	1513	1166
65°	765	786	833	892	943	759
75°	307	324	347	363	384	336
85°	48	48	48	45	45	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3583.0	<i>3583.0</i>	3583.0	3583.0	3583.0
2.5°	<i>3592.7</i>	<i>3594.1</i>	<i>3585.8</i>	<i>3563.8</i>	<i>3550.0</i>
5°	3578.9	<i>3577.5</i>	3563.8	3544.5	3533.5
7.5°	3539.0	<i>3541.8</i>	3537.6	3510.1	3495.0
10°	3500.5	<i>3501.8</i>	3490.8	3468.8	3450.9
12.5°	3450.9	<i>3449.5</i>	3434.4	3423.4	3394.5
15°	3372.4	<i>3380.7</i>	3372.4	3357.3	3333.9
17.5°	3296.7	<i>3296.7</i>	3302.2	3276.1	3258.2
20°	3211.4	<i>3215.5</i>	3215.5	3194.9	3174.2
22.5°	3112.3	<i>3124.7</i>	3128.8	3106.8	3082.0
25°	2995.3	<i>3018.7</i>	3032.4	3010.4	2984.3
27.5°	2853.5	<i>2889.3</i>	2930.6	2914.1	2885.2
30°	2695.2	<i>2747.5</i>	2816.3	2802.6	2781.9
32.5°	2545.2	<i>2597.5</i>	2692.4	2686.9	2675.9
35°	2408.9	<i>2441.9</i>	2553.4	2567.2	2557.6
37.5°	2279.5	<i>2309.8</i>	2414.4	2446.1	2437.8
40°	2143.2	<i>2176.3</i>	2258.8	2315.3	2318.0
42.5°	2008.3	<i>2040.0</i>	2107.4	2188.6	2188.6
45°	1865.2	<i>1896.8</i>	1958.8	2048.2	2059.3
47.5°	1724.8	<i>1757.8</i>	1818.4	1907.8	1925.7
50°	1587.1	<i>1617.4</i>	1678.0	1764.7	1792.2
52.5°	1444.0	<i>1477.0</i>	1536.2	1616.0	1655.9
55°	1306.3	<i>1328.3</i>	1393.0	1470.1	1512.8
57.5°	1163.1	<i>1183.8</i>	1256.8	1322.8	1366.9
60°	1025.5	<i>1051.7</i>	1108.1	1175.5	1226.5
62.5°	893.4	<i>920.9</i>	969.1	1028.3	1086.1
65°	765.3	<i>786.0</i>	832.8	892.0	942.9
67.5°	641.5	<i>659.3</i>	706.1	747.4	801.1
70°	516.2	<i>539.6</i>	574.0	613.9	648.3
72.5°	415.7	<i>425.3</i>	454.2	483.2	518.9
75°	307.0	<i>323.5</i>	346.9	363.4	384.0
77.5°	220.2	<i>229.9</i>	243.6	257.4	276.7
80°	147.3	<i>151.4</i>	163.8	166.6	181.7
82.5°	89.5	<i>92.2</i>	95.0	96.4	101.9
85°	48.2	<i>48.2</i>	48.2	45.4	45.4
87.5°	27.5	<i>27.5</i>	23.4	19.3	13.8
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)