

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: P558414

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-81-97-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: P558414  
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-50-UNV-81-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

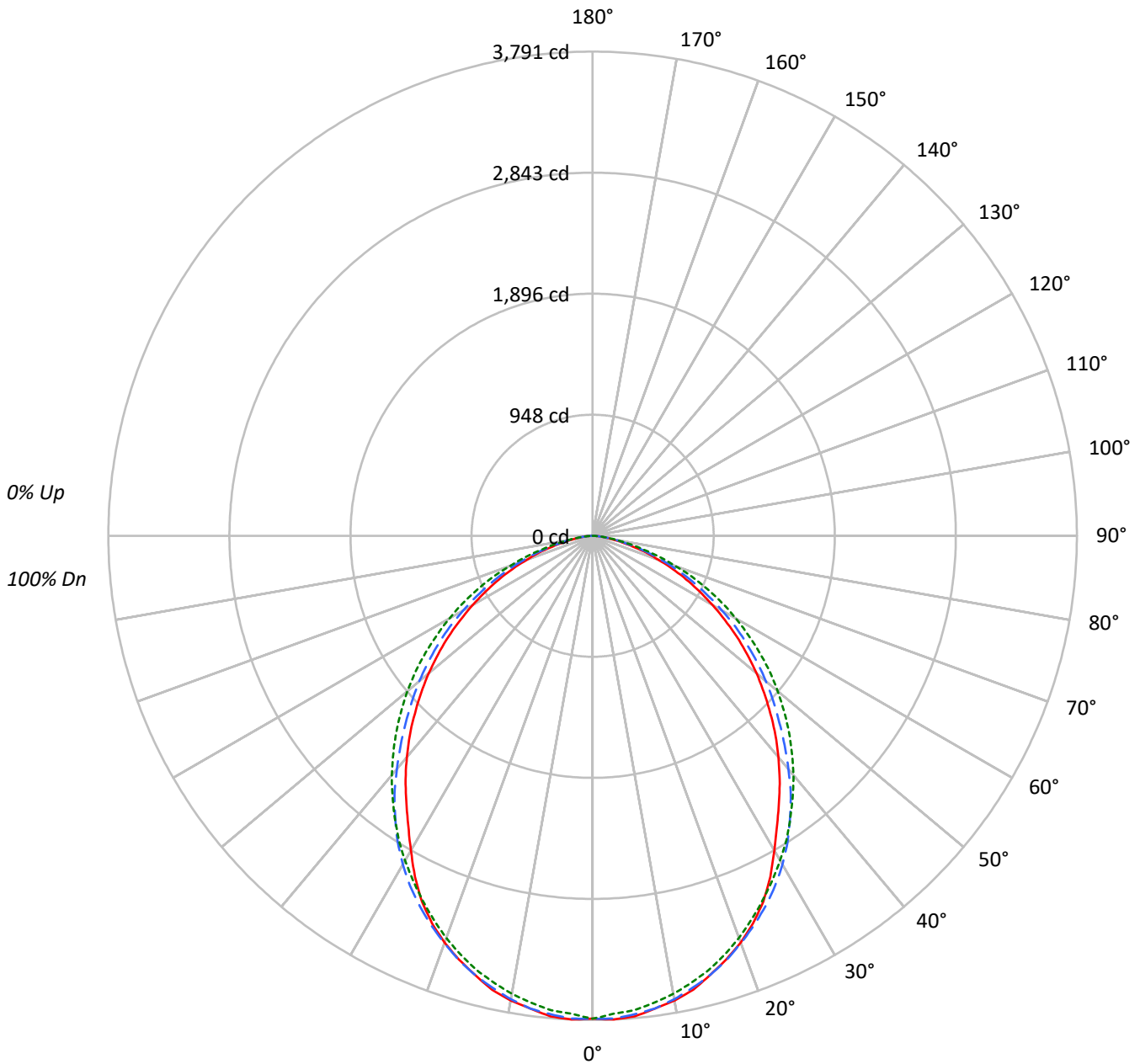
Lumens per Lamp: N/A  
Luminaire Lumens: 8743.0 lumens  
Efficiency: N/A  
Efficacy: 87.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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					20					
RC	80					70					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10175	10175	10175
5°	10202	10159	10072
10°	10094	10066	9951
15°	9915	9915	9801
20°	9705	9717	9592
25°	9385	9502	9350
30°	8838	9235	9122
35°	8351	8852	8866
40°	7945	8374	8593
45°	7491	7867	8270
50°	7011	7413	7918
55°	6467	6897	7490
60°	5824	6293	6966
65°	5142	5596	6336
70°	4286	4766	5383
75°	3368	3806	4214
80°	2408	2679	2971
85°	1568	1568	1479



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	356.0	4.1
10°-20°	1000.1	11.4
20°-30°	1461.5	16.7
30°-40°	1659.0	19.0
40°-50°	1601.5	18.3
50°-60°	1321.1	15.1
60°-70°	879.7	10.1
70°-80°	393.7	4.5
80°-90°	70.4	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°	2817.6	32.2
0°-40°	4476.6	51.2
0°-60°	7399.2	84.6
0°-90°	8743.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8743.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3781	3781	3781	3781	3781	
5°	3777	3775	3761	3740	3729	357
15°	3559	3568	3559	3543	3518	1003
25°	3161	3186	3200	3177	3149	1448
35°	2542	2577	2695	2709	2699	1593
45°	1968	2002	2067	2162	2173	1519
55°	1378	1402	1470	1551	1596	1230
65°	808	829	879	941	995	801
75°	324	341	366	384	405	354
85°	51	51	51	48	48	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3781.1	3781.1	3781.1	3781.1	3781.1
2.5°	3791.3	3792.7	3784.0	3760.8	3746.3
5°	3776.8	3775.3	3760.8	3740.4	3728.8
7.5°	3734.6	3737.5	3733.2	3704.1	3688.2
10°	3694.0	3695.4	3683.8	3660.6	3641.7
12.5°	3641.7	3640.2	3624.2	3612.6	3582.1
15°	3558.9	3567.6	3558.9	3542.9	3518.2
17.5°	3479.0	3479.0	3484.8	3457.2	3438.3
20°	3388.9	3393.3	3393.3	3371.5	3349.7
22.5°	3284.3	3297.4	3301.8	3278.5	3252.4
25°	3160.9	3185.6	3200.1	3176.8	3149.2
27.5°	3011.2	3049.0	3092.6	3075.2	3044.7
30°	2844.2	2899.4	2972.0	2957.5	2935.7
32.5°	2685.9	2741.1	2841.3	2835.5	2823.9
35°	2542.1	2576.9	2694.6	2709.1	2698.9
37.5°	2405.5	2437.5	2547.9	2581.3	2572.6
40°	2261.7	2296.6	2383.7	2443.3	2446.2
42.5°	2119.3	2152.8	2223.9	2309.6	2309.6
45°	1968.3	2001.7	2067.1	2161.5	2173.1
47.5°	1820.1	1855.0	1918.9	2013.3	2032.2
50°	1674.8	1706.8	1770.7	1862.2	1891.3
52.5°	1523.8	1558.6	1621.1	1705.4	1747.5
55°	1378.5	1401.8	1470.0	1551.4	1596.4
57.5°	1227.4	1249.2	1326.2	1396.0	1442.4
60°	1082.2	1109.8	1169.3	1240.5	1294.3
62.5°	942.7	971.8	1022.6	1085.1	1146.1
65°	807.6	829.4	878.8	941.3	995.0
67.5°	676.9	695.8	745.2	788.8	845.4
70°	544.7	569.4	605.7	647.9	684.2
72.5°	438.7	448.9	479.4	509.9	547.6
75°	323.9	341.4	366.1	383.5	405.3
77.5°	232.4	242.6	257.1	271.6	292.0
80°	155.4	159.8	172.9	175.8	191.7
82.5°	94.4	97.3	100.2	101.7	107.5
85°	50.8	50.8	50.8	47.9	47.9
87.5°	29.1	29.1	24.7	20.3	14.5
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)