

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: P556945

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-82-84-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: P556945  
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-30-UNV-82-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC 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**

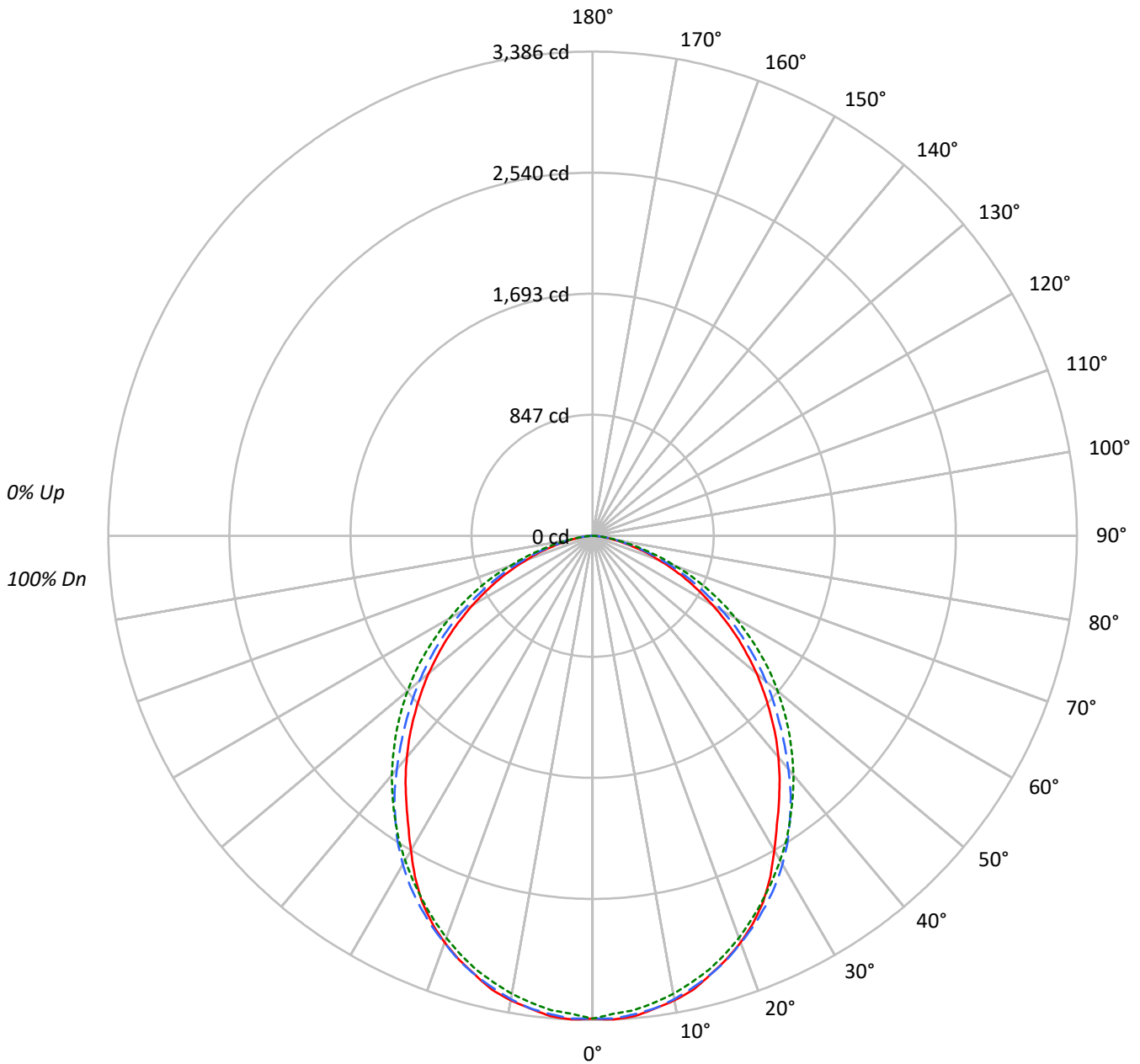
Lumens per Lamp: N/A  
Luminaire Lumens: 7808.0 lumens  
Efficiency: N/A  
Efficacy: 90.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	9087	9087	9087
5°	9111	9072	8995
10°	9014	8989	8887
15°	8854	8854	8753
20°	8667	8678	8567
25°	8381	8486	8351
30°	7892	8247	8147
35°	7458	7905	7918
40°	7095	7478	7674
45°	6690	7025	7386
50°	6262	6620	7071
55°	5776	6159	6689
60°	5202	5620	6221
65°	4593	4997	5658
70°	3828	4257	4807
75°	3008	3399	3763
80°	2151	2393	2653
85°	1402	1402	1321



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	317.9	4.1
10°-20°	893.2	11.4
20°-30°	1305.2	16.7
30°-40°	1481.5	19.0
40°-50°	1430.2	18.3
50°-60°	1179.8	15.1
60°-70°	785.7	10.1
70°-80°	351.6	4.5
80°-90°	62.9	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°	2516.3	32.2
0°-40°	3997.8	51.2
0°-60°	6607.9	84.6
0°-90°	7808.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7808.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3377	3377	3377	3377	3377	
5°	3373	3372	3359	3340	3330	319
15°	3178	3186	3178	3164	3142	896
25°	2823	2845	2858	2837	2812	1293
35°	2270	2301	2406	2419	2410	1422
45°	1758	1788	1846	1930	1941	1356
55°	1231	1252	1313	1386	1426	1099
65°	721	741	785	841	889	715
75°	289	305	327	342	362	316
85°	45	45	45	43	43	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3376.8	3376.8	3376.8	3376.8	3376.8
2.5°	3385.8	3387.1	3379.4	3358.6	3345.6
5°	3372.9	3371.6	3358.6	3340.4	3330.1
7.5°	3335.2	3337.8	3333.9	3308.0	3293.7
10°	3298.9	3300.2	3289.8	3269.1	3252.2
12.5°	3252.2	3250.9	3236.7	3226.3	3199.0
15°	3178.3	3186.1	3178.3	3164.0	3142.0
17.5°	3106.9	3106.9	3112.1	3087.5	3070.6
20°	3026.5	3030.4	3030.4	3010.9	2991.5
22.5°	2933.1	2944.8	2948.7	2927.9	2904.6
25°	2822.8	2844.9	2857.9	2837.1	2812.5
27.5°	2689.2	2722.9	2761.9	2746.3	2719.0
30°	2540.0	2589.3	2654.2	2641.2	2621.8
32.5°	2398.6	2447.9	2537.4	2532.2	2521.9
35°	2270.2	2301.3	2406.4	2419.4	2410.3
37.5°	2148.3	2176.8	2275.4	2305.2	2297.4
40°	2019.8	2051.0	2128.8	2182.0	2184.6
42.5°	1892.7	1922.5	1986.1	2062.6	2062.6
45°	1757.8	1787.6	1846.0	1930.3	1940.7
47.5°	1625.5	1656.6	1713.7	1798.0	1814.9
50°	1495.7	1524.3	1581.4	1663.1	1689.0
52.5°	1360.8	1392.0	1447.7	1523.0	1560.6
55°	1231.1	1251.9	1312.8	1385.5	1425.7
57.5°	1096.2	1115.6	1184.4	1246.7	1288.2
60°	966.5	991.1	1044.3	1107.9	1155.9
62.5°	841.9	867.9	913.3	969.1	1023.5
65°	721.3	740.7	784.8	840.6	888.6
67.5°	604.5	621.4	665.5	704.4	755.0
70°	486.5	508.5	541.0	578.6	611.0
72.5°	391.8	400.9	428.1	455.3	489.1
75°	289.3	304.9	326.9	342.5	361.9
77.5°	207.6	216.6	229.6	242.6	260.7
80°	138.8	142.7	154.4	157.0	171.2
82.5°	84.3	86.9	89.5	90.8	96.0
85°	45.4	45.4	45.4	42.8	42.8
87.5°	25.9	25.9	22.1	18.2	13.0
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)