

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: P557097

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-93-88-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: P557097  
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-40-UNV-93-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

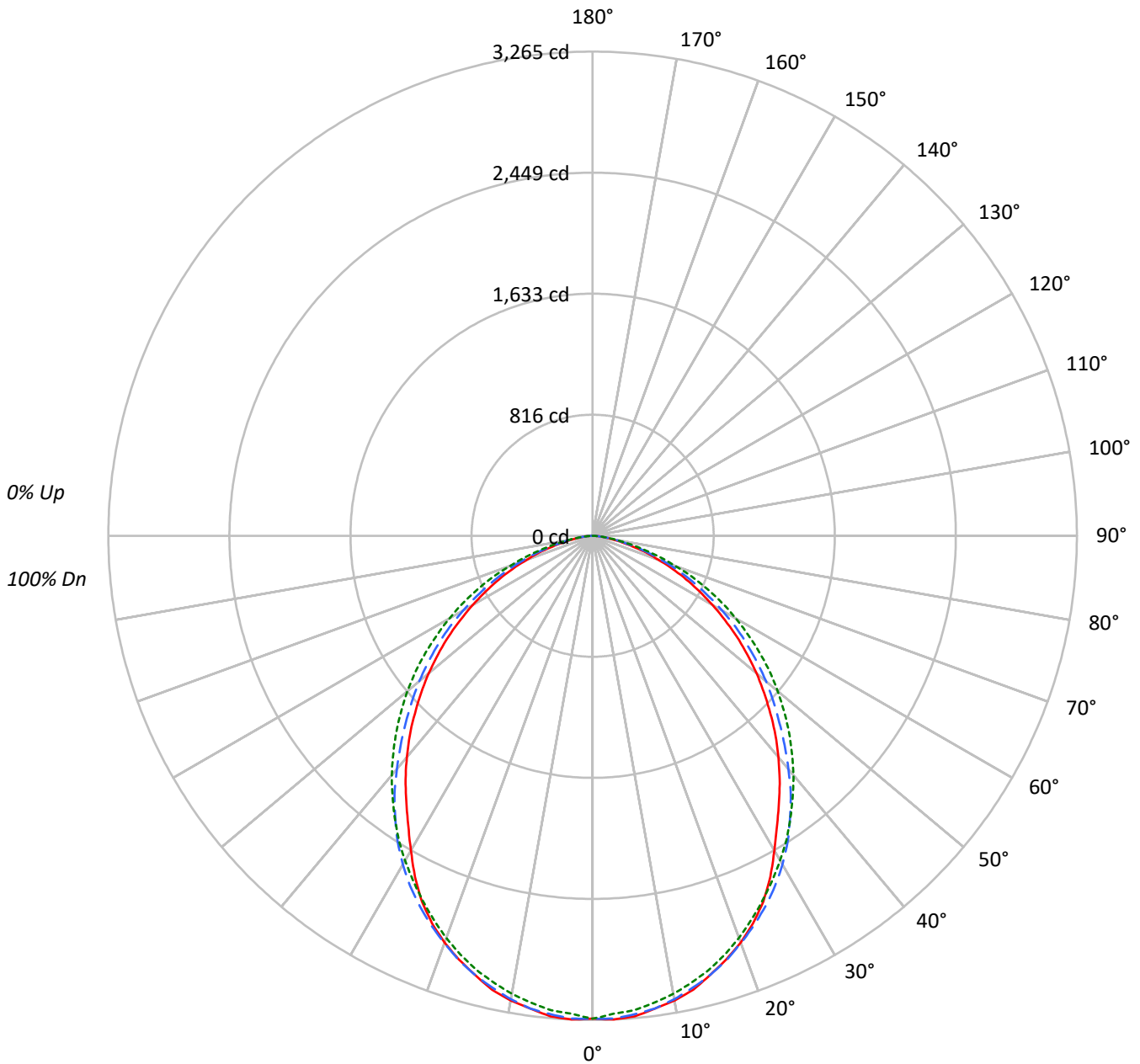
Lumens per Lamp: N/A  
Luminaire Lumens: 7530.0 lumens  
Efficiency: N/A  
Efficacy: 87.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
Input Voltage (V): NR  
Input Current (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									
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°	8763	8763	8763
5°	8787	8749	8675
10°	8693	8669	8570
15°	8539	8539	8442
20°	8358	8369	8262
25°	8083	8183	8053
30°	7612	7954	7856
35°	7192	7624	7636
40°	6843	7212	7401
45°	6451	6775	7123
50°	6039	6385	6819
55°	5570	5940	6450
60°	5016	5420	5999
65°	4429	4819	5457
70°	3692	4105	4637
75°	2901	3278	3629
80°	2075	2307	2559
85°	1352	1352	1275



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	306.6	4.1
10°-20°	861.4	11.4
20°-30°	1258.7	16.7
30°-40°	1428.8	19.0
40°-50°	1379.3	18.3
50°-60°	1137.8	15.1
60°-70°	757.7	10.1
70°-80°	339.1	4.5
80°-90°	60.7	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°	2426.7	32.2
0°-40°	3855.5	51.2
0°-60°	6372.6	84.6
0°-90°	7530.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7530.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3256	3256	3256	3256	3256	
5°	3253	3252	3239	3222	3212	308
15°	3065	3073	3065	3051	3030	864
25°	2722	2744	2756	2736	2712	1247
35°	2189	2219	2321	2333	2324	1372
45°	1695	1724	1780	1862	1872	1308
55°	1187	1207	1266	1336	1375	1060
65°	696	714	757	811	857	690
75°	279	294	315	330	349	305
85°	44	44	44	41	41	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3256.5	3256.5	3256.5	3256.5	3256.5
2.5°	3265.3	3266.5	3259.0	3239.0	3226.5
5°	3252.8	3251.5	3239.0	3221.5	3211.5
7.5°	3216.5	3219.0	3215.2	3190.2	3176.5
10°	3181.5	3182.7	3172.7	3152.7	3136.4
12.5°	3136.4	3135.2	3121.4	3111.4	3085.1
15°	3065.1	3072.6	3065.1	3051.4	3030.1
17.5°	2996.3	2996.3	3001.3	2977.5	2961.3
20°	2918.7	2922.5	2922.5	2903.7	2885.0
22.5°	2828.7	2839.9	2843.7	2823.7	2801.1
25°	2722.3	2743.6	2756.1	2736.1	2712.3
27.5°	2593.5	2626.0	2663.5	2648.5	2622.2
30°	2449.6	2497.1	2559.7	2547.2	2528.4
32.5°	2313.2	2360.8	2447.1	2442.1	2432.1
35°	2189.4	2219.4	2320.7	2333.2	2324.5
37.5°	2071.8	2099.3	2194.4	2223.1	2215.6
40°	1947.9	1977.9	2053.0	2104.3	2106.8
42.5°	1825.3	1854.1	1915.4	1989.2	1989.2
45°	1695.2	1724.0	1780.3	1861.6	1871.6
47.5°	1567.6	1597.6	1652.7	1734.0	1750.2
50°	1442.5	1470.0	1525.1	1603.9	1628.9
52.5°	1312.4	1342.4	1396.2	1468.8	1505.0
55°	1187.3	1207.3	1266.1	1336.1	1374.9
57.5°	1057.2	1075.9	1142.2	1202.3	1242.3
60°	932.0	955.8	1007.1	1068.4	1114.7
62.5°	811.9	837.0	880.8	934.5	987.1
65°	695.6	714.4	756.9	810.7	857.0
67.5°	583.0	599.3	641.8	679.3	728.1
70°	469.2	490.4	521.7	558.0	589.3
72.5°	377.8	386.6	412.9	439.1	471.7
75°	279.0	294.0	315.3	330.3	349.0
77.5°	200.2	208.9	221.4	233.9	251.5
80°	133.9	137.6	148.9	151.4	165.1
82.5°	81.3	83.8	86.3	87.6	92.6
85°	43.8	43.8	43.8	41.3	41.3
87.5°	25.0	25.0	21.3	17.5	12.5
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)