

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: P556975

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-93-97-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: P556975  
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-93-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

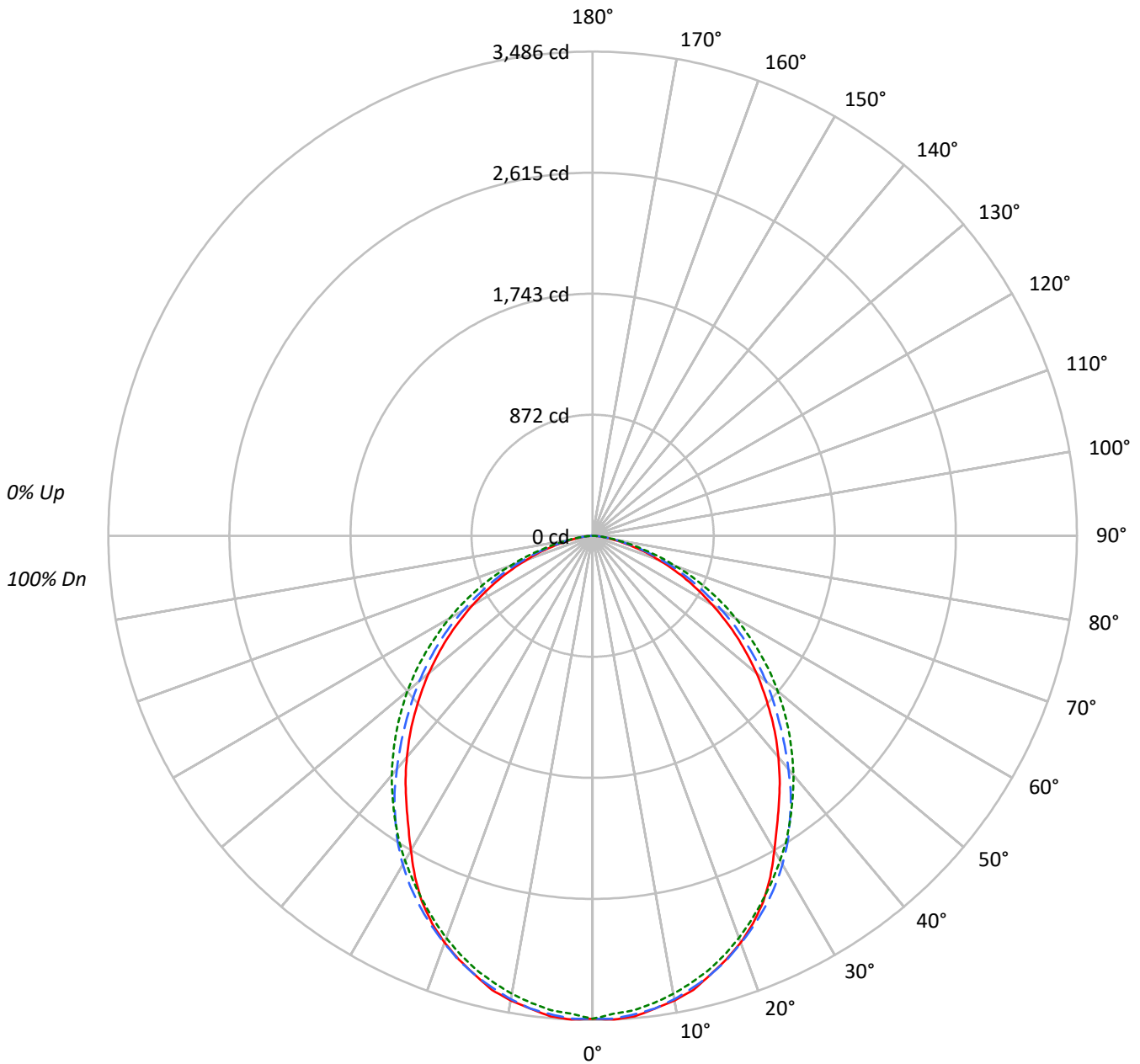
Lumens per Lamp: N/A  
Luminaire Lumens: 8040.0 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	9357	9357	9357
5°	9382	9342	9263
10°	9282	9257	9151
15°	9117	9117	9013
20°	8924	8936	8821
25°	8630	8738	8599
30°	8127	8492	8389
35°	7680	8140	8153
40°	7306	7700	7902
45°	6888	7234	7605
50°	6448	6817	7281
55°	5948	6342	6887
60°	5356	5787	6406
65°	4729	5146	5826
70°	3941	4382	4950
75°	3097	3500	3875
80°	2214	2464	2732
85°	1445	1445	1362



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	327.4	4.1
10°-20°	919.7	11.4
20°-30°	1344.0	16.7
30°-40°	1525.6	19.0
40°-50°	1472.7	18.3
50°-60°	1214.9	15.1
60°-70°	809.0	10.1
70°-80°	362.0	4.5
80°-90°	64.8	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°	2591.1	32.2
0°-40°	4116.6	51.2
0°-60°	6804.2	84.6
0°-90°	8040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8040.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3477	3477	3477	3477	3477	
5°	3473	3472	3458	3440	3429	329
15°	3273	3281	3273	3258	3235	923
25°	2907	2929	2943	2921	2896	1331
35°	2338	2370	2478	2491	2482	1465
45°	1810	1841	1901	1988	1998	1397
55°	1268	1289	1352	1427	1468	1131
65°	743	763	808	866	915	736
75°	298	314	337	353	373	326
85°	47	47	47	44	44	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3477.1	3477.1	3477.1	3477.1	3477.1
2.5°	3486.4	3487.8	3479.8	3458.4	3445.0
5°	3473.1	3471.7	3458.4	3439.7	3429.0
7.5°	3434.3	3437.0	3433.0	3406.3	3391.6
10°	3396.9	3398.3	3387.6	3366.2	3348.9
12.5°	3348.9	3347.5	3332.8	3322.1	3294.1
15°	3272.7	3280.7	3272.7	3258.0	3235.3
17.5°	3199.2	3199.2	3204.6	3179.2	3161.8
20°	3116.4	3120.4	3120.4	3100.4	3080.4
22.5°	3020.2	3032.3	3036.3	3014.9	2990.9
25°	2906.7	2929.4	2942.8	2921.4	2896.0
27.5°	2769.1	2803.8	2843.9	2827.9	2799.8
30°	2615.5	2666.3	2733.1	2719.7	2699.7
32.5°	2469.9	2520.7	2612.8	2607.5	2596.8
35°	2337.7	2369.7	2477.9	2491.3	2481.9
37.5°	2212.1	2241.5	2343.0	2373.7	2365.7
40°	2079.8	2111.9	2192.1	2246.8	2249.5
42.5°	1948.9	1979.7	2045.1	2123.9	2123.9
45°	1810.0	1840.7	1900.8	1987.7	1998.4
47.5°	1673.8	1705.8	1764.6	1851.4	1868.8
50°	1540.2	1569.6	1628.3	1712.5	1739.2
52.5°	1401.3	1433.3	1490.8	1568.2	1607.0
55°	1267.7	1289.0	1351.8	1426.6	1468.0
57.5°	1128.8	1148.8	1219.6	1283.7	1326.5
60°	995.2	1020.6	1075.3	1140.8	1190.2
62.5°	866.9	893.7	940.4	997.8	1053.9
65°	742.7	762.7	808.2	865.6	915.0
67.5°	622.5	639.8	685.3	725.3	777.4
70°	500.9	523.6	557.0	595.8	629.2
72.5°	403.4	412.8	440.8	468.9	503.6
75°	297.9	313.9	336.6	352.7	372.7
77.5°	213.7	223.1	236.4	249.8	268.5
80°	142.9	146.9	159.0	161.6	176.3
82.5°	86.8	89.5	92.2	93.5	98.8
85°	46.8	46.8	46.8	44.1	44.1
87.5°	26.7	26.7	22.7	18.7	13.4
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)