

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: P556894

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-82-97-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: P556894  
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-LD4-1STD-50-UNV-82-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 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**

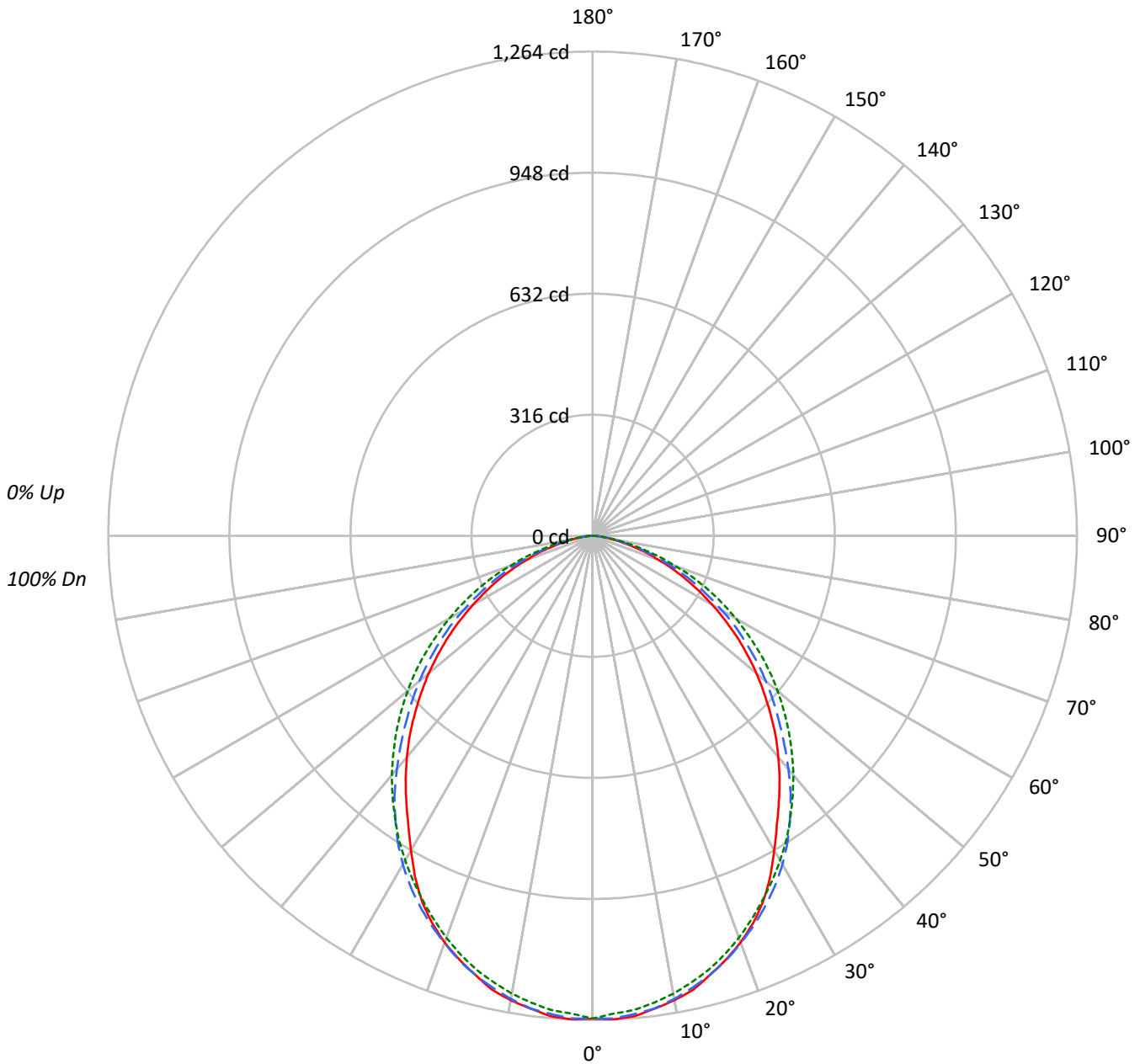
Lumens per Lamp: N/A  
Luminaire Lumens: 2914.0 lumens  
Efficiency: N/A  
Efficacy: 87.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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				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	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°	3391	3391	3391
5°	3400	3386	3357
10°	3364	3355	3317
15°	3305	3305	3267
20°	3235	3239	3197
25°	3128	3167	3116
30°	2946	3078	3040
35°	2783	2950	2955
40°	2648	2791	2864
45°	2496	2622	2756
50°	2337	2471	2639
55°	2156	2299	2496
60°	1941	2097	2322
65°	1714	1865	2111
70°	1429	1589	1794
75°	1123	1268	1405
80°	803	893	990
85°	522	522	494



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.7	4.1
10°-20°	333.3	11.4
20°-30°	487.1	16.7
30°-40°	552.9	19.0
40°-50°	533.8	18.3
50°-60°	440.3	15.1
60°-70°	293.2	10.1
70°-80°	131.2	4.5
80°-90°	23.5	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°	939.1	32.2
0°-40°	1492.0	51.2
0°-60°	2466.1	84.6
0°-90°	2914.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2914.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1259	1258	1254	1247	1243	119
15°	1186	1189	1186	1181	1173	334
25°	1054	1062	1067	1059	1050	482
35°	847	859	898	903	900	531
45°	656	667	689	720	724	506
55°	460	467	490	517	532	410
65°	269	276	293	314	332	267
75°	108	114	122	128	135	118
85°	17	17	17	16	16	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1260.2	1260.2	1260.2	1260.2	1260.2
2.5°	1263.6	1264.1	1261.2	1253.5	1248.6
5°	1258.8	1258.3	1253.5	1246.7	1242.8
7.5°	1244.7	1245.7	1244.3	1234.6	1229.2
10°	1231.2	1231.7	1227.8	1220.0	1213.8
12.5°	1213.8	1213.3	1207.9	1204.1	1193.9
15°	1186.2	1189.1	1186.2	1180.8	1172.6
17.5°	1159.5	1159.5	1161.5	1152.3	1146.0
20°	1129.5	1131.0	1131.0	1123.7	1116.4
22.5°	1094.7	1099.0	1100.5	1092.7	1084.0
25°	1053.5	1061.7	1066.6	1058.8	1049.6
27.5°	1003.6	1016.2	1030.7	1024.9	1014.8
30°	948.0	966.4	990.6	985.7	978.5
32.5°	895.2	913.6	947.0	945.1	941.2
35°	847.3	858.9	898.1	902.9	899.5
37.5°	801.7	812.4	849.2	860.3	857.4
40°	753.8	765.4	794.5	814.3	815.3
42.5°	706.4	717.5	741.2	769.8	769.8
45°	656.0	667.2	688.9	720.4	724.3
47.5°	606.6	618.3	639.6	671.0	677.3
50°	558.2	568.9	590.2	620.7	630.4
52.5°	507.9	519.5	540.3	568.4	582.4
55°	459.5	467.2	490.0	517.1	532.1
57.5°	409.1	416.4	442.0	465.3	480.8
60°	360.7	369.9	389.7	413.5	431.4
62.5°	314.2	323.9	340.8	361.7	382.0
65°	269.2	276.4	292.9	313.7	331.6
67.5°	225.6	231.9	248.4	262.9	281.8
70°	181.6	189.8	201.9	215.9	228.0
72.5°	146.2	149.6	159.8	169.9	182.5
75°	108.0	113.8	122.0	127.8	135.1
77.5°	77.5	80.9	85.7	90.5	97.3
80°	51.8	53.3	57.6	58.6	63.9
82.5°	31.5	32.4	33.4	33.9	35.8
85°	16.9	16.9	16.9	16.0	16.0
87.5°	9.7	9.7	8.2	6.8	4.8
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)