

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: P556759

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-82-87-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: P556759  
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-35-UNV-82-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

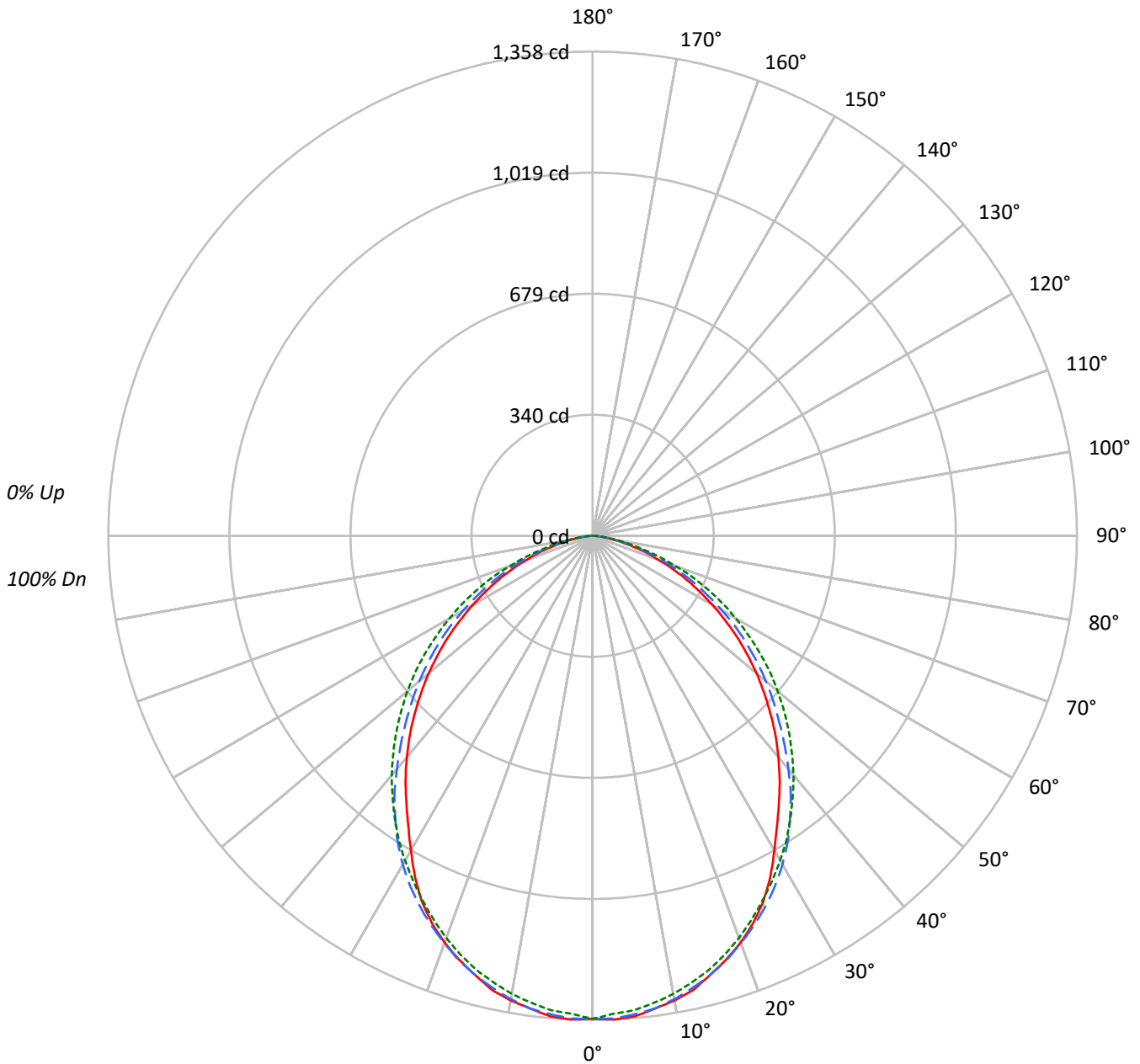
Lumens per Lamp: N/A  
Luminaire Lumens: 3132.0 lumens  
Efficiency: N/A  
Efficacy: 94.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	3645	3645	3645
5°	3655	3639	3608
10°	3616	3606	3565
15°	3552	3552	3511
20°	3477	3481	3436
25°	3362	3404	3350
30°	3166	3308	3268
35°	2991	3171	3176
40°	2846	3000	3078
45°	2683	2818	2963
50°	2512	2655	2836
55°	2317	2471	2683
60°	2087	2255	2495
65°	1842	2004	2269
70°	1535	1707	1928
75°	1206	1363	1510
80°	863	959	1065
85°	562	562	531



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.5	4.1
10°-20°	358.3	11.4
20°-30°	523.6	16.7
30°-40°	594.3	19.0
40°-50°	573.7	18.3
50°-60°	473.3	15.1
60°-70°	315.1	10.1
70°-80°	141.0	4.5
80°-90°	25.2	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°	1009.4	32.2
0°-40°	1603.6	51.2
0°-60°	2650.6	84.6
0°-90°	3132.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3132.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1354	1354	1354	1354	1354	
5°	1353	1352	1347	1340	1336	128
15°	1275	1278	1275	1269	1260	359
25°	1132	1141	1146	1138	1128	519
35°	911	923	965	970	967	571
45°	705	717	740	774	778	544
55°	494	502	527	556	572	441
65°	289	297	315	337	356	287
75°	116	122	131	137	145	127
85°	18	18	18	17	17	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1354.5	1354.5	1354.5	1354.5	1354.5
2.5°	1358.2	1358.7	1355.5	1347.2	1342.0
5°	1352.9	1352.4	1347.2	1339.9	1335.8
7.5°	1337.9	1338.9	1337.3	1326.9	1321.2
10°	1323.3	1323.8	1319.6	1311.3	1304.6
12.5°	1304.6	1304.0	1298.3	1294.1	1283.2
15°	1274.9	1278.0	1274.9	1269.2	1260.3
17.5°	1246.3	1246.3	1248.4	1238.5	1231.7
20°	1214.0	1215.6	1215.6	1207.8	1200.0
22.5°	1176.5	1181.2	1182.8	1174.5	1165.1
25°	1132.3	1141.2	1146.4	1138.0	1128.2
27.5°	1078.7	1092.2	1107.9	1101.6	1090.7
30°	1018.9	1038.6	1064.7	1059.5	1051.7
32.5°	962.2	981.9	1017.8	1015.8	1011.6
35°	910.6	923.1	965.3	970.5	966.8
37.5°	861.7	873.2	912.7	924.7	921.6
40°	810.2	822.7	853.9	875.3	876.3
42.5°	759.2	771.2	796.7	827.4	827.4
45°	705.1	717.1	740.5	774.3	778.5
47.5°	652.0	664.5	687.4	721.2	728.0
50°	600.0	611.4	634.3	667.1	677.5
52.5°	545.9	558.4	580.7	610.9	626.0
55°	493.8	502.2	526.6	555.7	571.9
57.5°	439.7	447.5	475.1	500.1	516.7
60°	387.7	397.6	418.9	444.4	463.6
62.5°	337.7	348.1	366.3	388.7	410.6
65°	289.3	297.1	314.8	337.2	356.4
67.5°	242.5	249.3	266.9	282.6	302.9
70°	195.1	204.0	217.0	232.1	245.1
72.5°	157.2	160.8	171.7	182.6	196.2
75°	116.0	122.3	131.1	137.4	145.2
77.5°	83.3	86.9	92.1	97.3	104.6
80°	55.7	57.2	61.9	63.0	68.7
82.5°	33.8	34.9	35.9	36.4	38.5
85°	18.2	18.2	18.2	17.2	17.2
87.5°	10.4	10.4	8.8	7.3	5.2
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)