

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: P556757

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-82-86-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: P556757  
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-82-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

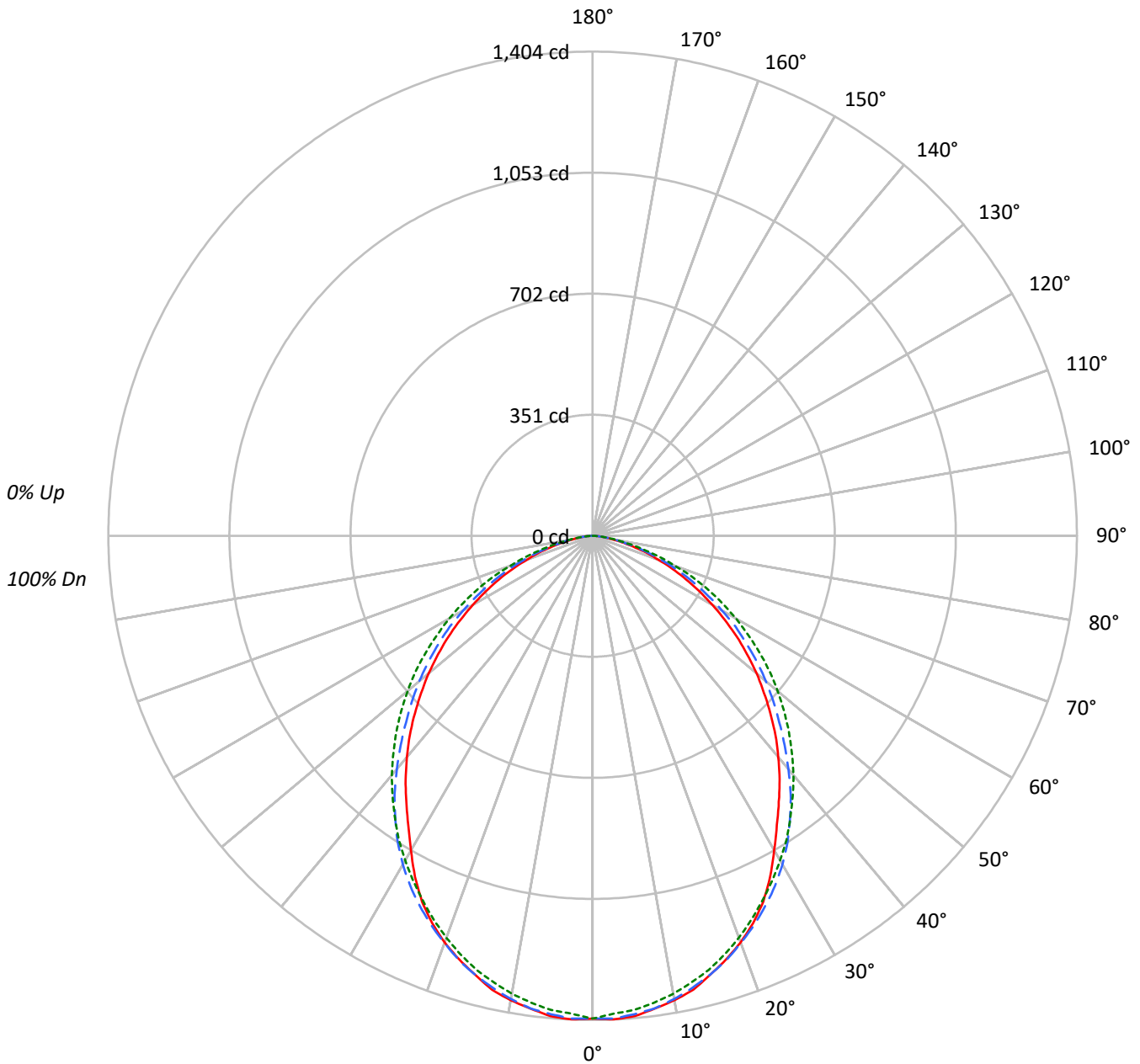
Lumens per Lamp: N/A  
Luminaire Lumens: 3237.0 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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					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								
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°	3767	3767	3767
5°	3777	3761	3729
10°	3737	3727	3684
15°	3671	3671	3629
20°	3593	3598	3552
25°	3475	3518	3462
30°	3272	3419	3377
35°	3092	3277	3283
40°	2942	3100	3182
45°	2773	2912	3062
50°	2596	2745	2931
55°	2395	2554	2773
60°	2157	2330	2579
65°	1904	2072	2346
70°	1587	1765	1993
75°	1247	1409	1560
80°	891	992	1100
85°	580	580	546



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.8	4.1
10°-20°	370.3	11.4
20°-30°	541.1	16.7
30°-40°	614.2	19.0
40°-50°	592.9	18.3
50°-60°	489.1	15.1
60°-70°	325.7	10.1
70°-80°	145.8	4.5
80°-90°	26.1	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°	1043.2	32.2
0°-40°	1657.4	51.2
0°-60°	2739.5	84.6
0°-90°	3237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3237.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1400	1400	1400	1400	1400	
5°	1398	1398	1392	1385	1381	132
15°	1318	1321	1318	1312	1303	371
25°	1170	1179	1185	1176	1166	536
35°	941	954	998	1003	999	590
45°	729	741	765	800	805	562
55°	510	519	544	574	591	456
65°	299	307	325	348	368	296
75°	120	126	136	142	150	131
85°	19	19	19	18	18	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1399.9	1399.9	1399.9	1399.9	1399.9
2.5°	1403.7	1404.2	1401.0	1392.4	1387.0
5°	1398.3	1397.8	1392.4	1384.9	1380.6
7.5°	1382.7	1383.8	1382.2	1371.4	1365.5
10°	1367.7	1368.2	1363.9	1355.3	1348.3
12.5°	1348.3	1347.8	1341.8	1337.5	1326.2
15°	1317.6	1320.9	1317.6	1311.7	1302.6
17.5°	1288.1	1288.1	1290.2	1280.0	1273.0
20°	1254.7	1256.3	1256.3	1248.3	1240.2
22.5°	1216.0	1220.8	1222.4	1213.8	1204.2
25°	1170.3	1179.4	1184.8	1176.2	1166.0
27.5°	1114.9	1128.9	1145.0	1138.5	1127.2
30°	1053.0	1073.5	1100.4	1095.0	1086.9
32.5°	994.4	1014.8	1052.0	1049.8	1045.5
35°	941.2	954.1	997.6	1003.0	999.3
37.5°	890.6	902.4	943.3	955.7	952.5
40°	837.4	850.3	882.5	904.6	905.7
42.5°	784.7	797.0	823.4	855.1	855.1
45°	728.7	741.1	765.3	800.3	804.6
47.5°	673.9	686.8	710.4	745.4	752.4
50°	620.1	631.9	655.6	689.5	700.2
52.5°	564.2	577.1	600.2	631.4	647.0
55°	510.4	519.0	544.3	574.4	591.1
57.5°	454.4	462.5	491.0	516.8	534.0
60°	400.7	410.9	432.9	459.3	479.2
62.5°	349.0	359.8	378.6	401.7	424.3
65°	299.0	307.1	325.4	348.5	368.4
67.5°	250.6	257.6	275.9	292.0	313.0
70°	201.7	210.8	224.3	239.9	253.3
72.5°	162.4	166.2	177.5	188.8	202.8
75°	119.9	126.4	135.5	142.0	150.0
77.5°	86.0	89.8	95.2	100.6	108.1
80°	57.5	59.2	64.0	65.1	71.0
82.5°	35.0	36.0	37.1	37.6	39.8
85°	18.8	18.8	18.8	17.7	17.7
87.5°	10.8	10.8	9.1	7.5	5.4
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)