

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: P556831

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-82-97-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: P556831  
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-40-UNV-82-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

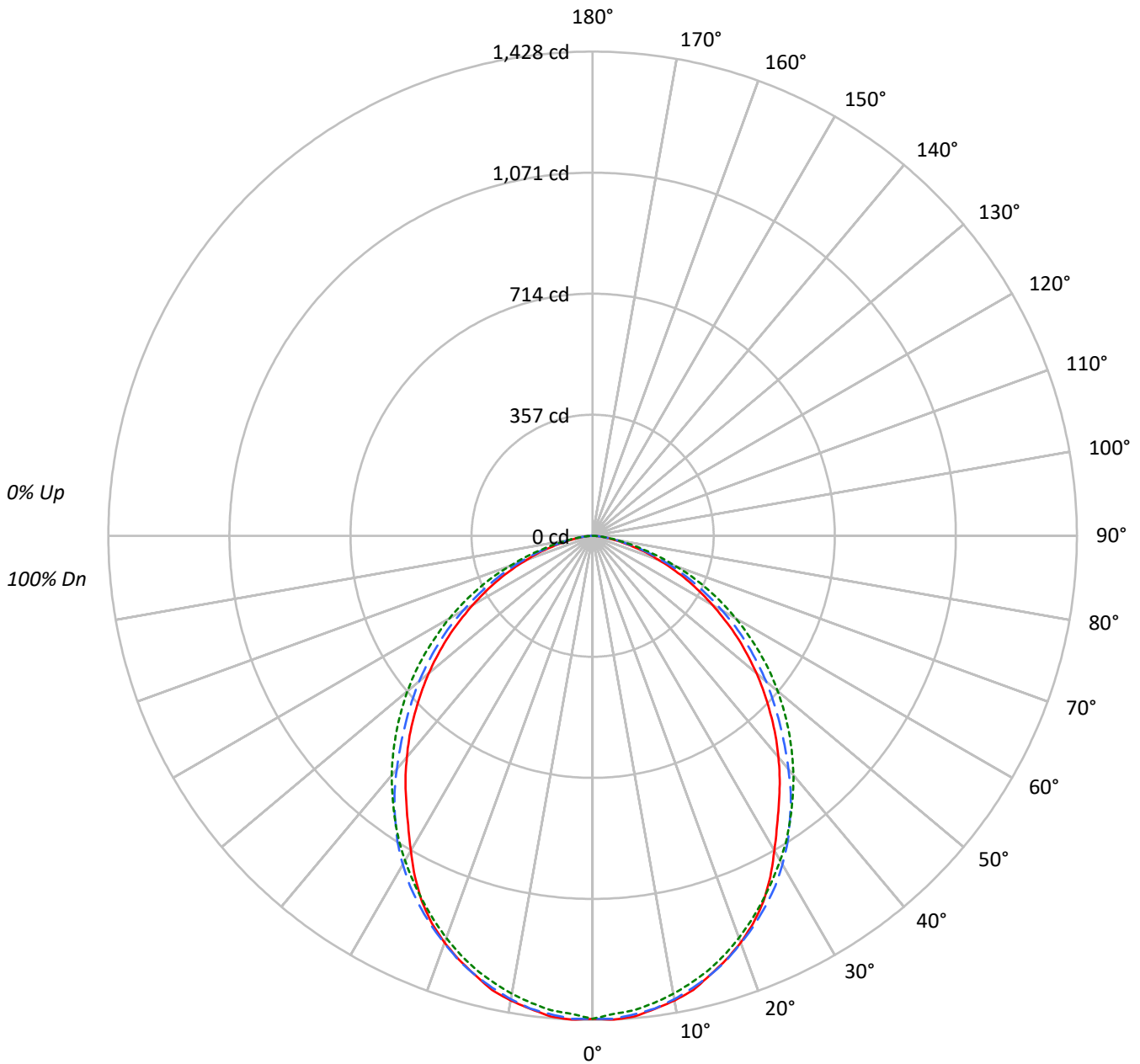
Lumens per Lamp: N/A  
Luminaire Lumens: 3294.0 lumens  
Efficiency: N/A  
Efficacy: 98.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3834	3834	3834
5°	3844	3827	3795
10°	3803	3792	3749
15°	3735	3735	3693
20°	3656	3661	3614
25°	3536	3580	3523
30°	3330	3479	3437
35°	3146	3335	3340
40°	2993	3155	3237
45°	2822	2964	3116
50°	2642	2793	2983
55°	2437	2598	2822
60°	2194	2371	2624
65°	1938	2108	2387
70°	1614	1795	2028
75°	1268	1434	1588
80°	908	1009	1119
85°	593	593	559



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.1	4.1
10°-20°	376.8	11.4
20°-30°	550.6	16.7
30°-40°	625.0	19.0
40°-50°	603.4	18.3
50°-60°	497.7	15.1
60°-70°	331.4	10.1
70°-80°	148.3	4.5
80°-90°	26.5	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°	1061.6	32.2
0°-40°	1686.6	51.2
0°-60°	2787.7	84.6
0°-90°	3294.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3294.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1425	1425	1425	1425	1425	
5°	1423	1422	1417	1409	1405	135
15°	1341	1344	1341	1335	1326	378
25°	1191	1200	1206	1197	1186	545
35°	958	971	1015	1021	1017	600
45°	742	754	779	814	819	572
55°	519	528	554	584	602	464
65°	304	312	331	355	375	302
75°	122	129	138	144	153	133
85°	19	19	19	18	18	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1424.6	1424.6	1424.6	1424.6	1424.6
2.5°	1428.4	1428.9	1425.7	1416.9	1411.4
5°	1422.9	1422.4	1416.9	1409.2	1404.9
7.5°	1407.1	1408.2	1406.5	1395.6	1389.5
10°	1391.7	1392.3	1387.9	1379.1	1372.0
12.5°	1372.0	1371.5	1365.5	1361.1	1349.6
15°	1340.8	1344.1	1340.8	1334.8	1325.5
17.5°	1310.7	1310.7	1312.9	1302.5	1295.4
20°	1276.8	1278.4	1278.4	1270.2	1262.0
22.5°	1237.4	1242.3	1244.0	1235.2	1225.4
25°	1190.9	1200.2	1205.7	1196.9	1186.5
27.5°	1134.5	1148.7	1165.2	1158.6	1147.1
30°	1071.6	1092.4	1119.7	1114.3	1106.1
32.5°	1011.9	1032.7	1070.5	1068.3	1063.9
35°	957.7	970.9	1015.2	1020.7	1016.8
37.5°	906.3	918.3	959.9	972.5	969.2
40°	852.1	865.2	898.1	920.5	921.6
42.5°	798.5	811.1	837.9	870.2	870.2
45°	741.6	754.2	778.8	814.4	818.7
47.5°	685.7	698.9	723.0	758.5	765.6
50°	631.0	643.1	667.1	701.6	712.6
52.5°	574.1	587.2	610.8	642.5	658.4
55°	519.4	528.1	553.8	584.5	601.5
57.5°	462.5	470.7	499.7	525.9	543.4
60°	407.7	418.1	440.6	467.4	487.6
62.5°	355.2	366.1	385.3	408.8	431.8
65°	304.3	312.5	331.1	354.6	374.9
67.5°	255.0	262.1	280.8	297.2	318.5
70°	205.2	214.5	228.2	244.1	257.8
72.5°	165.3	169.1	180.6	192.1	206.3
75°	122.0	128.6	137.9	144.5	152.7
77.5°	87.6	91.4	96.9	102.3	110.0
80°	58.6	60.2	65.1	66.2	72.2
82.5°	35.6	36.7	37.8	38.3	40.5
85°	19.2	19.2	19.2	18.1	18.1
87.5°	10.9	10.9	9.3	7.7	5.5
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)