

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: P556857

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-80-88-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: P556857  
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-80-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

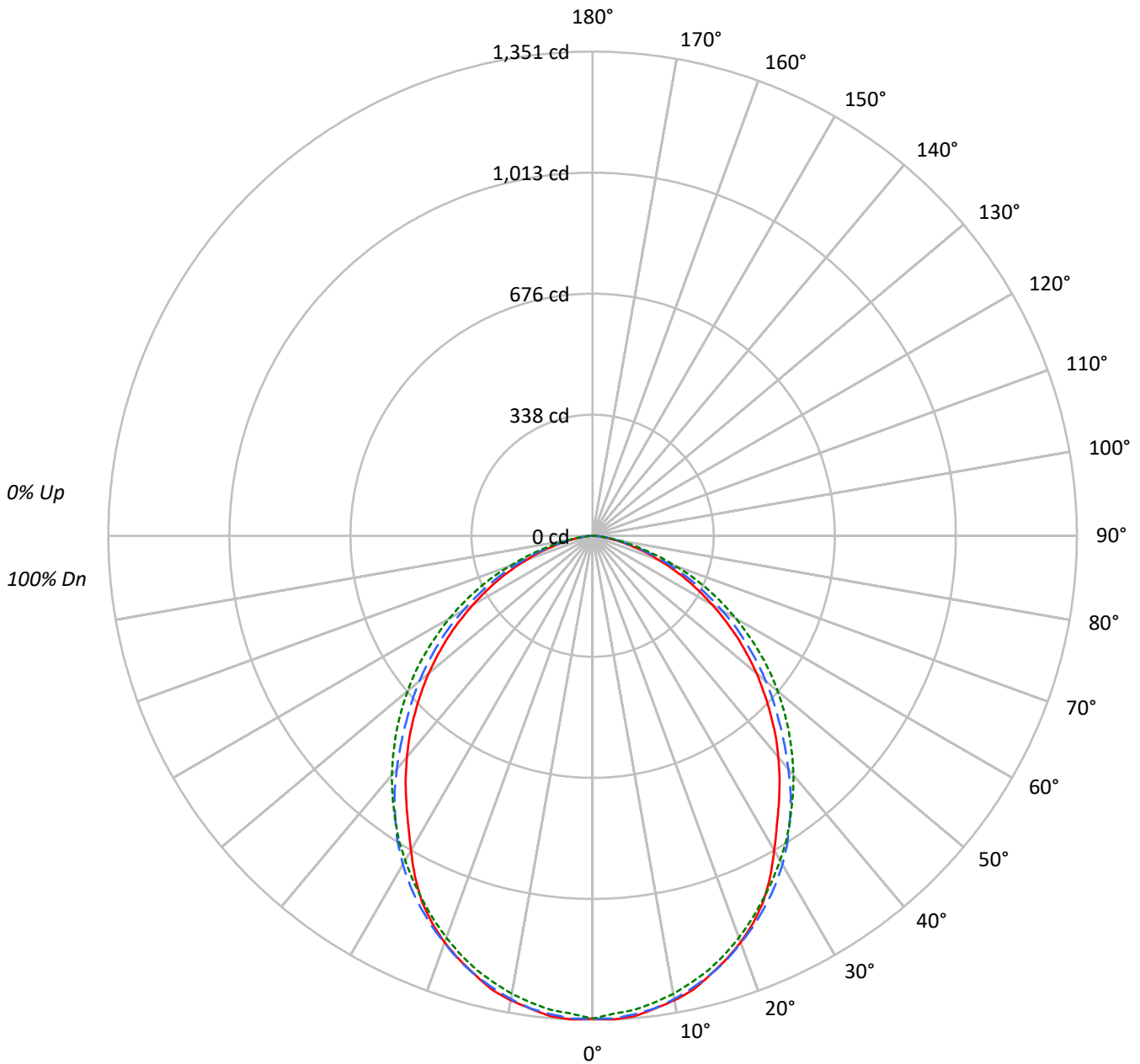
Lumens per Lamp: N/A  
Luminaire Lumens: 3115.0 lumens  
Efficiency: N/A  
Efficacy: 93.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
Input Voltage (V): NR  
Input Current (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°	3625	3625	3625
5°	3635	3619	3589
10°	3596	3586	3545
15°	3533	3533	3492
20°	3458	3462	3418
25°	3344	3385	3331
30°	3149	3290	3250
35°	2975	3154	3159
40°	2831	2983	3061
45°	2669	2803	2946
50°	2498	2641	2821
55°	2304	2457	2669
60°	2075	2242	2482
65°	1833	1994	2257
70°	1527	1698	1918
75°	1200	1356	1501
80°	859	955	1058
85°	559	559	528



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.8	4.1
10°-20°	356.3	11.4
20°-30°	520.7	16.7
30°-40°	591.1	19.0
40°-50°	570.6	18.3
50°-60°	470.7	15.1
60°-70°	313.4	10.1
70°-80°	140.3	4.5
80°-90°	25.1	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°	1003.9	32.2
0°-40°	1594.9	51.2
0°-60°	2636.2	84.6
0°-90°	3115.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3115.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1347	1347	1347	1347	1347	
5°	1346	1345	1340	1333	1328	127
15°	1268	1271	1268	1262	1254	357
25°	1126	1135	1140	1132	1122	516
35°	906	918	960	965	962	567
45°	701	713	736	770	774	541
55°	491	499	524	553	569	438
65°	288	296	313	335	354	285
75°	115	122	130	137	144	126
85°	18	18	18	17	17	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1347.2	1347.2	1347.2	1347.2	1347.2
2.5°	1350.8	1351.3	1348.2	1339.9	1334.7
5°	1345.6	1345.1	1339.9	1332.7	1328.5
7.5°	1330.6	1331.6	1330.1	1319.7	1314.0
10°	1316.1	1316.6	1312.5	1304.2	1297.5
12.5°	1297.5	1297.0	1291.3	1287.1	1276.3
15°	1268.0	1271.1	1268.0	1262.3	1253.5
17.5°	1239.5	1239.5	1241.6	1231.7	1225.0
20°	1207.4	1209.0	1209.0	1201.2	1193.4
22.5°	1170.2	1174.8	1176.4	1168.1	1158.8
25°	1126.2	1135.0	1140.1	1131.9	1122.0
27.5°	1072.9	1086.3	1101.8	1095.6	1084.8
30°	1013.3	1033.0	1058.9	1053.7	1045.9
32.5°	956.9	976.6	1012.3	1010.2	1006.1
35°	905.7	918.1	960.0	965.2	961.6
37.5°	857.0	868.4	907.8	919.7	916.6
40°	805.8	818.2	849.3	870.5	871.5
42.5°	755.1	767.0	792.4	822.9	822.9
45°	701.3	713.2	736.5	770.1	774.2
47.5°	648.5	660.9	683.7	717.3	724.0
50°	596.7	608.1	630.9	663.5	673.8
52.5°	542.9	555.3	577.6	607.6	622.6
55°	491.1	499.4	523.8	552.7	568.8
57.5°	437.3	445.1	472.5	497.4	513.9
60°	385.6	395.4	416.6	442.0	461.1
62.5°	335.9	346.2	364.3	386.6	408.3
65°	287.8	295.5	313.1	335.4	354.5
67.5°	241.2	247.9	265.5	281.0	301.2
70°	194.1	202.9	215.8	230.8	243.8
72.5°	156.3	159.9	170.8	181.7	195.1
75°	115.4	121.6	130.4	136.6	144.4
77.5°	82.8	86.4	91.6	96.8	104.0
80°	55.4	56.9	61.6	62.6	68.3
82.5°	33.6	34.7	35.7	36.2	38.3
85°	18.1	18.1	18.1	17.1	17.1
87.5°	10.4	10.4	8.8	7.2	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)