

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: P556683

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-81-94-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: P556683  
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-30-UNV-81-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEADS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

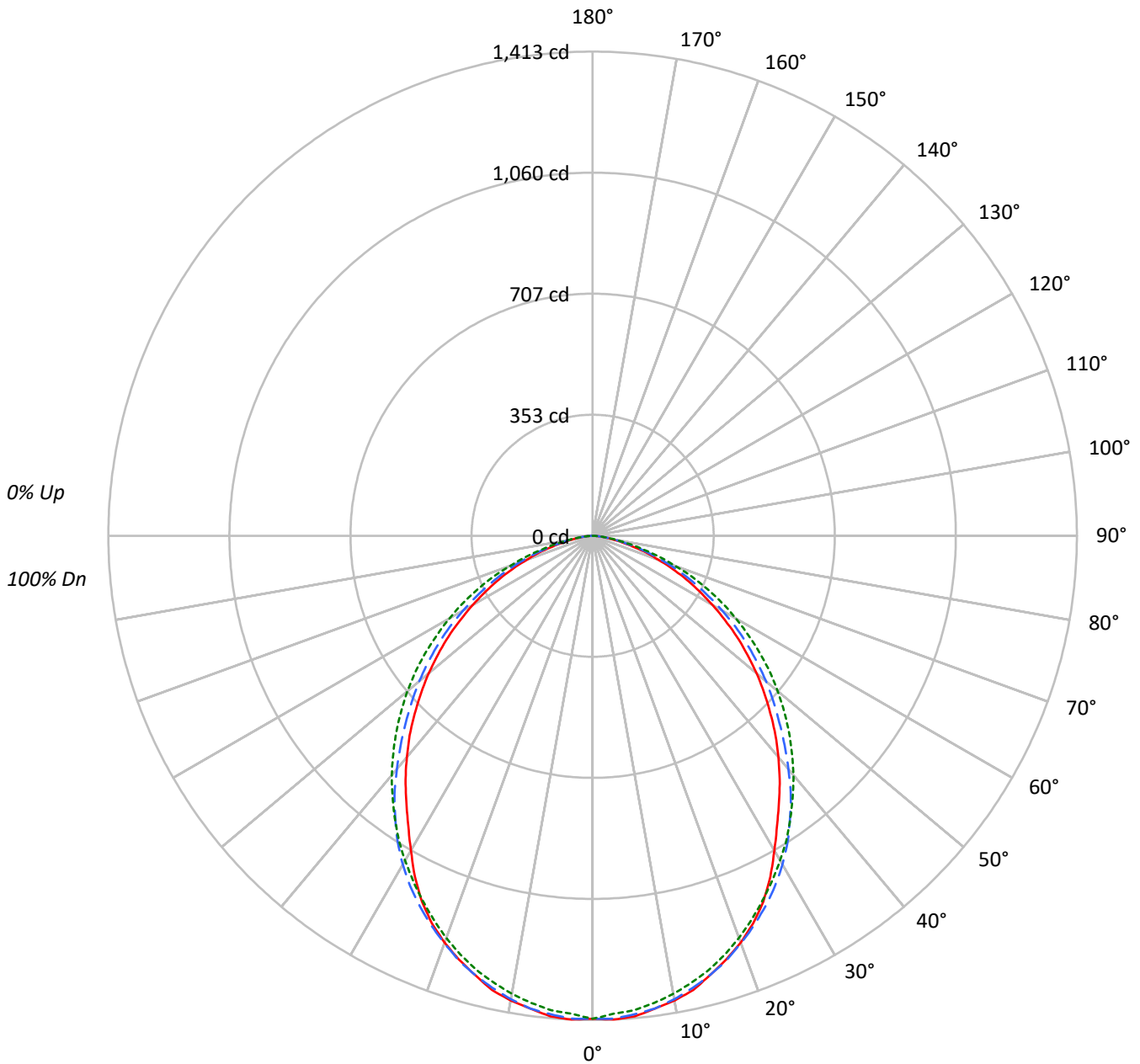
Lumens per Lamp: N/A  
Luminaire Lumens: 3259.0 lumens  
Efficiency: N/A  
Efficacy: 97.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
Input Voltage (V): NR  
Input Current (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									
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°	3793	3793	3793
5°	3803	3787	3754
10°	3762	3752	3709
15°	3696	3696	3653
20°	3617	3622	3576
25°	3498	3542	3486
30°	3294	3442	3400
35°	3113	3300	3305
40°	2962	3121	3203
45°	2792	2932	3083
50°	2614	2763	2951
55°	2411	2571	2792
60°	2171	2346	2596
65°	1917	2086	2362
70°	1597	1777	2006
75°	1255	1418	1571
80°	897	998	1108
85°	587	587	553



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.7	4.1
10°-20°	372.8	11.4
20°-30°	544.8	16.7
30°-40°	618.4	19.0
40°-50°	597.0	18.3
50°-60°	492.5	15.1
60°-70°	327.9	10.1
70°-80°	146.7	4.5
80°-90°	26.3	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°	1050.3	32.2
0°-40°	1668.7	51.2
0°-60°	2758.1	84.6
0°-90°	3259.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3259.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1409	1409	1409	1409	1409	
5°	1408	1407	1402	1394	1390	133
15°	1327	1330	1327	1321	1311	374
25°	1178	1187	1193	1184	1174	540
35°	948	961	1004	1010	1006	594
45°	734	746	770	806	810	566
55°	514	522	548	578	595	459
65°	301	309	328	351	371	299
75°	121	127	136	143	151	132
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°	1409.4	1409.4	1409.4	1409.4	1409.4
2.5°	1413.2	1413.8	1410.5	1401.9	1396.4
5°	1407.8	1407.3	1401.9	1394.3	1389.9
7.5°	1392.1	1393.2	1391.6	1380.7	1374.8
10°	1376.9	1377.5	1373.2	1364.5	1357.5
12.5°	1357.5	1356.9	1351.0	1346.6	1335.3
15°	1326.6	1329.8	1326.6	1320.6	1311.4
17.5°	1296.8	1296.8	1299.0	1288.7	1281.6
20°	1263.2	1264.9	1264.9	1256.7	1248.6
22.5°	1224.3	1229.1	1230.7	1222.1	1212.3
25°	1178.2	1187.4	1192.8	1184.2	1173.9
27.5°	1122.5	1136.5	1152.8	1146.3	1134.9
30°	1060.2	1080.8	1107.8	1102.4	1094.3
32.5°	1001.2	1021.7	1059.1	1056.9	1052.6
35°	947.6	960.6	1004.4	1009.8	1006.0
37.5°	896.7	908.6	949.7	962.2	958.9
40°	843.1	856.1	888.5	910.7	911.8
42.5°	790.0	802.5	829.0	860.9	860.9
45°	733.7	746.1	770.5	805.7	810.0
47.5°	678.5	691.5	715.3	750.5	757.5
50°	624.3	636.2	660.0	694.2	705.0
52.5°	568.0	581.0	604.3	635.7	651.4
55°	513.9	522.5	548.0	578.3	595.1
57.5°	457.5	465.7	494.4	520.3	537.7
60°	403.4	413.7	435.9	462.4	482.4
62.5°	351.4	362.2	381.2	404.5	427.2
65°	301.1	309.2	327.6	350.9	370.9
67.5°	252.3	259.4	277.8	294.0	315.1
70°	203.0	212.3	225.8	241.5	255.0
72.5°	163.5	167.3	178.7	190.1	204.1
75°	120.7	127.2	136.4	142.9	151.1
77.5°	86.6	90.4	95.8	101.3	108.8
80°	57.9	59.6	64.4	65.5	71.5
82.5°	35.2	36.3	37.4	37.9	40.1
85°	19.0	19.0	19.0	17.9	17.9
87.5°	10.8	10.8	9.2	7.6	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)