

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: P556190

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-82-97-EDD-90**

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: P556190  
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-LD4-1HI-30-UNV-82-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

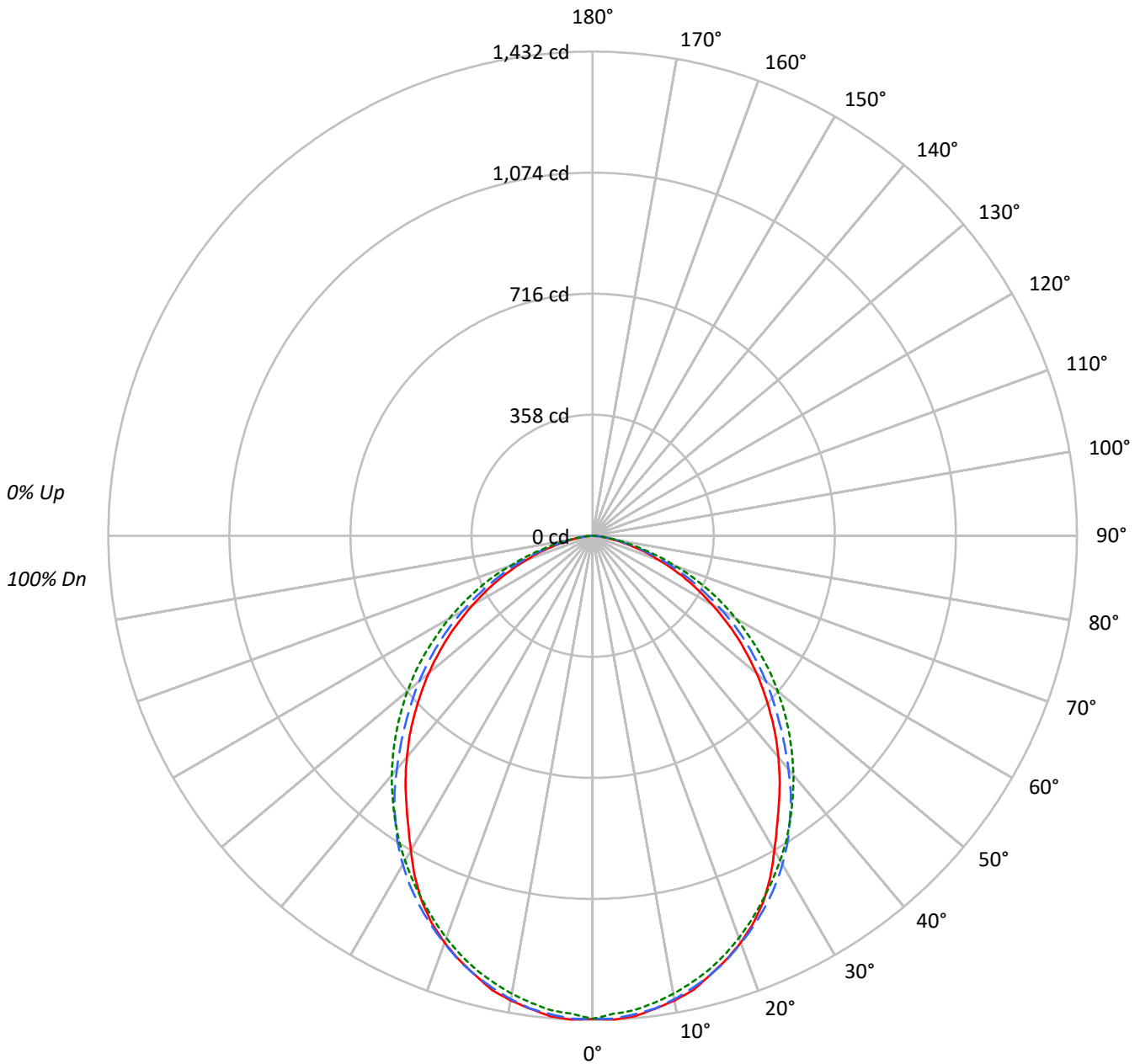
Lumens per Lamp: N/A  
Luminaire Lumens: 3303.0 lumens  
Efficiency: N/A  
Efficacy: 76.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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°	3844	3844	3844
5°	3854	3838	3805
10°	3813	3803	3759
15°	3746	3746	3703
20°	3666	3671	3624
25°	3545	3590	3532
30°	3339	3489	3446
35°	3155	3344	3349
40°	3001	3163	3246
45°	2830	2972	3124
50°	2649	2801	2991
55°	2443	2606	2829
60°	2200	2378	2632
65°	1943	2114	2394
70°	1619	1800	2034
75°	1273	1438	1592
80°	910	1012	1122
85°	593	593	559



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.5	4.1
10°-20°	377.8	11.4
20°-30°	552.1	16.7
30°-40°	626.7	19.0
40°-50°	605.0	18.3
50°-60°	499.1	15.1
60°-70°	332.4	10.1
70°-80°	148.7	4.5
80°-90°	26.6	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°	1064.5	32.2
0°-40°	1691.2	51.2
0°-60°	2795.3	84.6
0°-90°	3303.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3303.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1428	1428	1428	1428	1428	
5°	1427	1426	1421	1413	1409	135
15°	1344	1348	1344	1338	1329	379
25°	1194	1204	1209	1200	1190	547
35°	960	974	1018	1024	1020	602
45°	744	756	781	817	821	574
55°	521	530	555	586	603	465
65°	305	313	332	356	376	303
75°	122	129	138	145	153	134
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°	1428.5	1428.5	1428.5	1428.5	1428.5
2.5°	1432.3	1432.9	1429.6	1420.8	1415.3
5°	1426.8	1426.3	1420.8	1413.1	1408.7
7.5°	1410.9	1412.0	1410.4	1399.4	1393.3
10°	1395.5	1396.1	1391.7	1382.9	1375.8
12.5°	1375.8	1375.2	1369.2	1364.8	1353.3
15°	1344.5	1347.8	1344.5	1338.5	1329.1
17.5°	1314.3	1314.3	1316.5	1306.1	1299.0
20°	1280.3	1281.9	1281.9	1273.7	1265.5
22.5°	1240.8	1245.7	1247.4	1238.6	1228.7
25°	1194.1	1203.5	1209.0	1200.2	1189.7
27.5°	1137.6	1151.9	1168.3	1161.8	1150.2
30°	1074.5	1095.4	1122.8	1117.3	1109.1
32.5°	1014.7	1035.5	1073.4	1071.2	1066.8
35°	960.4	973.5	1018.0	1023.5	1019.6
37.5°	908.8	920.8	962.6	975.2	971.9
40°	854.4	867.6	900.5	923.0	924.1
42.5°	800.7	813.3	840.2	872.6	872.6
45°	743.6	756.2	780.9	816.6	821.0
47.5°	687.6	700.8	724.9	760.6	767.7
50°	632.7	644.8	669.0	703.5	714.5
52.5°	575.7	588.8	612.4	644.3	660.2
55°	520.8	529.6	555.4	586.1	603.1
57.5°	463.7	471.9	501.0	527.4	544.9
60°	408.8	419.3	441.8	468.7	489.0
62.5°	356.2	367.1	386.3	409.9	433.0
65°	305.1	313.4	332.0	355.6	375.9
67.5°	255.7	262.9	281.5	298.0	319.4
70°	205.8	215.1	228.8	244.8	258.5
72.5°	165.7	169.6	181.1	192.6	206.9
75°	122.4	129.0	138.3	144.9	153.1
77.5°	87.8	91.6	97.1	102.6	110.3
80°	58.7	60.4	65.3	66.4	72.4
82.5°	35.7	36.8	37.9	38.4	40.6
85°	19.2	19.2	19.2	18.1	18.1
87.5°	11.0	11.0	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)