

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: P557537

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-UNV-93-84-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: P557537  
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-LD4-2STD-35-UNV-93-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

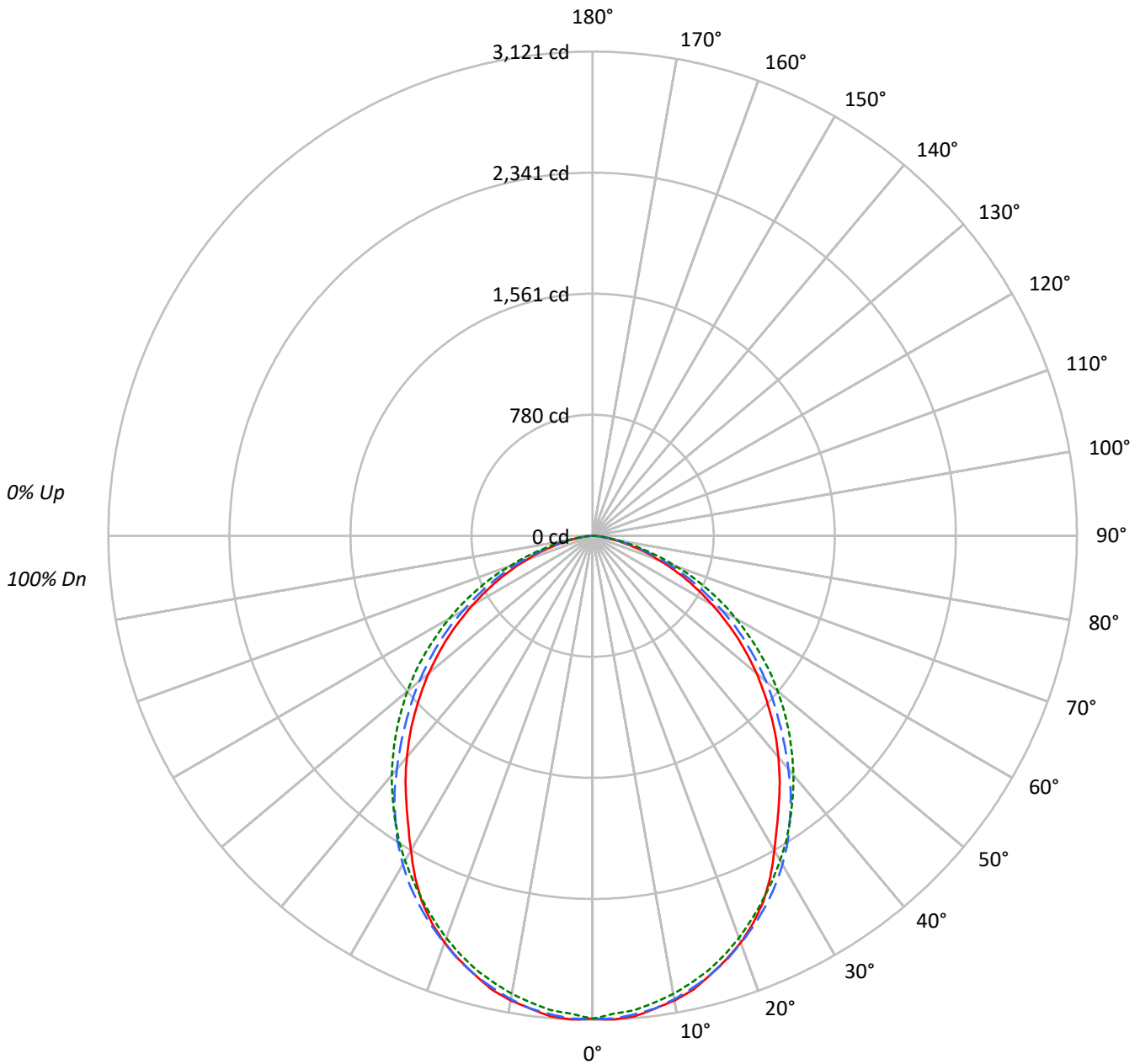
Lumens per Lamp: N/A  
Luminaire Lumens: 7198.0 lumens  
Efficiency: N/A  
Efficacy: 108.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	8377	8377	8377
5°	8399	8364	8293
10°	8310	8287	8192
15°	8163	8163	8069
20°	7990	8000	7897
25°	7727	7823	7698
30°	7276	7603	7510
35°	6875	7288	7299
40°	6541	6894	7074
45°	6167	6476	6809
50°	5773	6103	6519
55°	5324	5678	6166
60°	4795	5181	5735
65°	4234	4607	5216
70°	3529	3924	4432
75°	2773	3134	3470
80°	1984	2205	2447
85°	1294	1294	1220



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	293.1	4.1
10°-20°	823.4	11.4
20°-30°	1203.2	16.7
30°-40°	1365.8	19.0
40°-50°	1318.5	18.3
50°-60°	1087.7	15.1
60°-70°	724.3	10.1
70°-80°	324.1	4.5
80°-90°	58.0	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°	2319.7	32.2
0°-40°	3685.5	51.2
0°-60°	6091.6	84.6
0°-90°	7198.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7198.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3113	3113	3113	3113	3113	
5°	3109	3108	3096	3080	3070	294
15°	2930	2937	2930	2917	2896	826
25°	2602	2623	2635	2616	2593	1192
35°	2093	2122	2218	2230	2222	1311
45°	1620	1648	1702	1780	1789	1250
55°	1135	1154	1210	1277	1314	1013
65°	665	683	724	775	819	659
75°	267	281	301	316	334	292
85°	42	42	42	40	40	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3112.9	3112.9	3112.9	3112.9	3112.9
2.5°	3121.3	3122.5	3115.3	3096.2	3084.2
5°	3109.4	3108.2	3096.2	3079.5	3069.9
7.5°	3074.7	3077.1	3073.5	3049.6	3036.4
10°	3041.2	3042.4	3032.8	3013.7	2998.1
12.5°	2998.1	2996.9	2983.8	2974.2	2949.1
15°	2930.0	2937.2	2930.0	2916.8	2896.5
17.5°	2864.2	2864.2	2869.0	2846.3	2830.7
20°	2790.1	2793.6	2793.6	2775.7	2757.8
22.5°	2703.9	2714.7	2718.3	2699.2	2677.6
25°	2602.3	2622.6	2634.6	2615.5	2592.7
27.5°	2479.1	2510.2	2546.1	2531.7	2506.6
30°	2341.6	2387.0	2446.8	2434.9	2416.9
32.5°	2211.2	2256.7	2339.2	2334.4	2324.8
35°	2092.8	2121.5	2218.4	2230.4	2222.0
37.5°	1980.4	2006.7	2097.6	2125.1	2118.0
40°	1862.0	1890.7	1962.5	2011.5	2013.9
42.5°	1744.8	1772.3	1830.9	1901.5	1901.5
45°	1620.5	1648.0	1701.8	1779.5	1789.1
47.5°	1498.5	1527.2	1579.8	1657.5	1673.1
50°	1378.9	1405.2	1457.8	1533.2	1557.1
52.5°	1254.5	1283.2	1334.6	1404.0	1438.7
55°	1134.9	1154.1	1210.3	1277.2	1314.3
57.5°	1010.5	1028.5	1091.9	1149.3	1187.5
60°	891.0	913.7	962.7	1021.3	1065.6
62.5°	776.1	800.1	841.9	893.3	943.6
65°	664.9	682.9	723.5	774.9	819.2
67.5°	557.3	572.8	613.5	649.4	696.0
70°	448.5	468.8	498.7	533.4	563.3
72.5°	361.2	369.5	394.6	419.8	450.9
75°	266.7	281.0	301.4	315.7	333.7
77.5°	191.3	199.7	211.7	223.6	240.4
80°	128.0	131.5	142.3	144.7	157.9
82.5°	77.7	80.1	82.5	83.7	88.5
85°	41.9	41.9	41.9	39.5	39.5
87.5°	23.9	23.9	20.3	16.7	12.0
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)