

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: P557026

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-93-85-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: P557026  
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-LD4-2HI-35-UNV-93-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

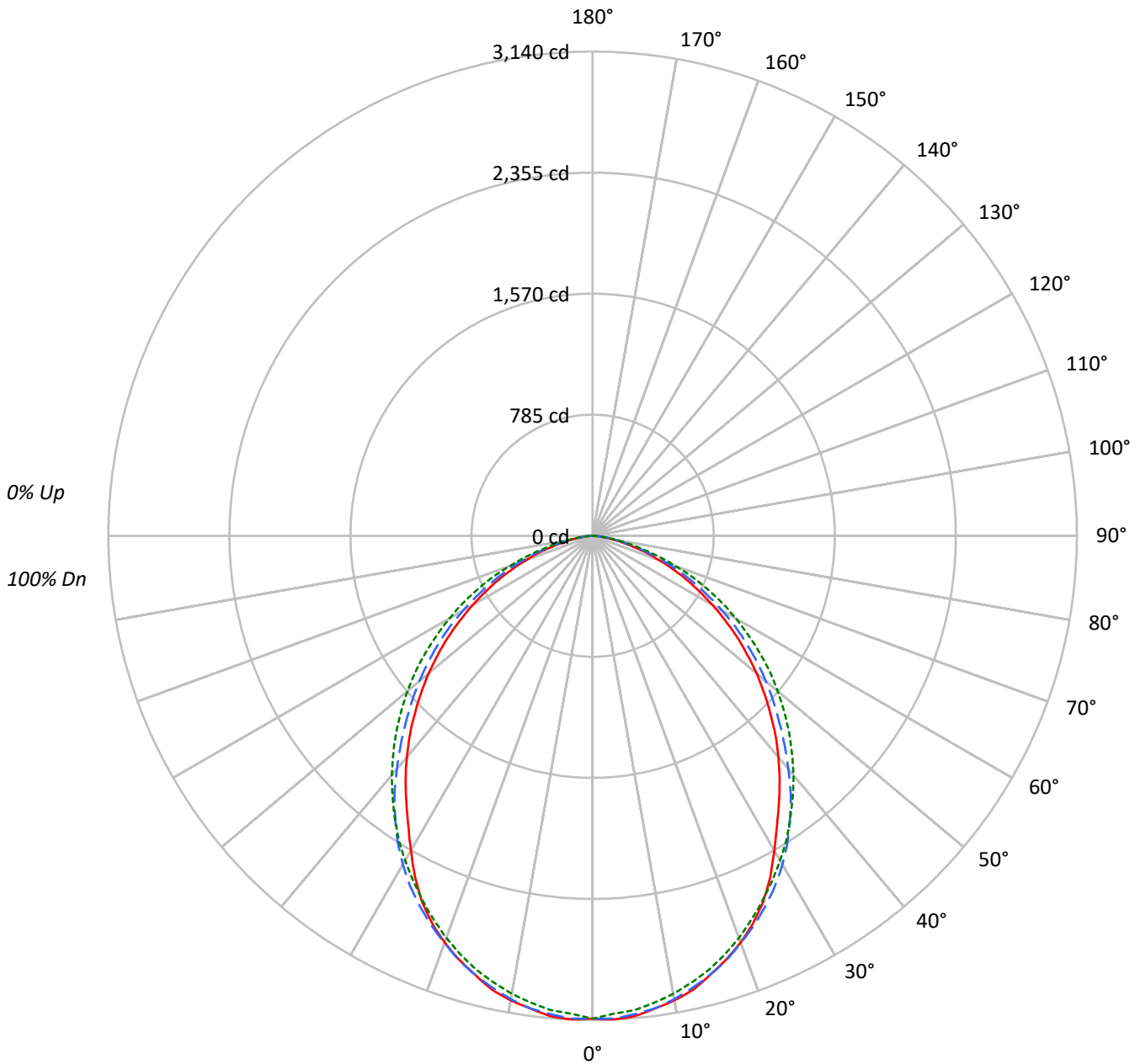
Lumens per Lamp: N/A  
Luminaire Lumens: 7241.0 lumens  
Efficiency: N/A  
Efficacy: 83.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	8427	8427	8427
5°	8449	8414	8342
10°	8360	8337	8241
15°	8211	8211	8118
20°	8037	8048	7944
25°	7773	7869	7744
30°	7319	7648	7555
35°	6916	7331	7343
40°	6580	6935	7117
45°	6204	6515	6849
50°	5807	6139	6558
55°	5356	5712	6203
60°	4824	5212	5769
65°	4259	4634	5247
70°	3549	3947	4458
75°	2790	3152	3490
80°	1994	2219	2461
85°	1300	1300	1226



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	294.8	4.1
10°-20°	828.3	11.4
20°-30°	1210.4	16.7
30°-40°	1374.0	19.0
40°-50°	1326.3	18.3
50°-60°	1094.1	15.1
60°-70°	728.6	10.1
70°-80°	326.0	4.5
80°-90°	58.3	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°	2333.6	32.2
0°-40°	3707.5	51.2
0°-60°	6128.0	84.6
0°-90°	7241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7241.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3132	3132	3132	3132	3132	
5°	3128	3127	3115	3098	3088	296
15°	2948	2955	2948	2934	2914	831
25°	2618	2638	2650	2631	2608	1199
35°	2105	2134	2232	2244	2235	1319
45°	1630	1658	1712	1790	1800	1258
55°	1142	1161	1218	1285	1322	1019
65°	669	687	728	780	824	663
75°	268	283	303	318	336	293
85°	42	42	42	40	40	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3131.5	3131.5	3131.5	3131.5	3131.5
2.5°	3140.0	3141.2	3134.0	3114.7	3102.7
5°	3127.9	3126.7	3114.7	3097.9	3088.2
7.5°	3093.0	3095.5	3091.8	3067.8	3054.6
10°	3059.4	3060.6	3050.9	3031.7	3016.1
12.5°	3016.1	3014.8	3001.6	2992.0	2966.7
15°	2947.5	2954.7	2947.5	2934.2	2913.8
17.5°	2881.3	2881.3	2886.1	2863.3	2847.6
20°	2806.7	2810.3	2810.3	2792.3	2774.2
22.5°	2720.1	2730.9	2734.5	2715.3	2693.6
25°	2617.8	2638.3	2650.3	2631.1	2608.2
27.5°	2493.9	2525.2	2561.3	2546.9	2521.6
30°	2355.6	2401.3	2461.4	2449.4	2431.4
32.5°	2224.4	2270.2	2353.2	2348.4	2338.7
35°	2105.3	2134.2	2231.7	2243.7	2235.3
37.5°	1992.3	2018.7	2110.2	2137.8	2130.6
40°	1873.2	1902.0	1974.2	2023.5	2025.9
42.5°	1755.3	1782.9	1841.9	1912.9	1912.9
45°	1630.1	1657.8	1711.9	1790.1	1799.8
47.5°	1507.4	1536.3	1589.2	1667.4	1683.1
50°	1387.1	1413.6	1466.5	1542.3	1566.4
52.5°	1262.0	1290.9	1342.6	1412.4	1447.3
55°	1141.7	1160.9	1217.5	1284.9	1322.2
57.5°	1016.6	1034.6	1098.4	1156.1	1194.6
60°	896.3	919.1	968.5	1027.4	1071.9
62.5°	780.8	804.8	846.9	898.7	949.2
65°	668.9	686.9	727.8	779.6	824.1
67.5°	560.6	576.3	617.2	653.3	700.2
70°	451.1	471.6	501.7	536.6	566.6
72.5°	363.3	371.7	397.0	422.3	453.6
75°	268.3	282.7	303.2	317.6	335.7
77.5°	192.5	200.9	212.9	225.0	241.8
80°	128.7	132.3	143.2	145.6	158.8
82.5°	78.2	80.6	83.0	84.2	89.0
85°	42.1	42.1	42.1	39.7	39.7
87.5°	24.1	24.1	20.5	16.8	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)