

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: P557033

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-93-88-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: P557033  
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-93-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

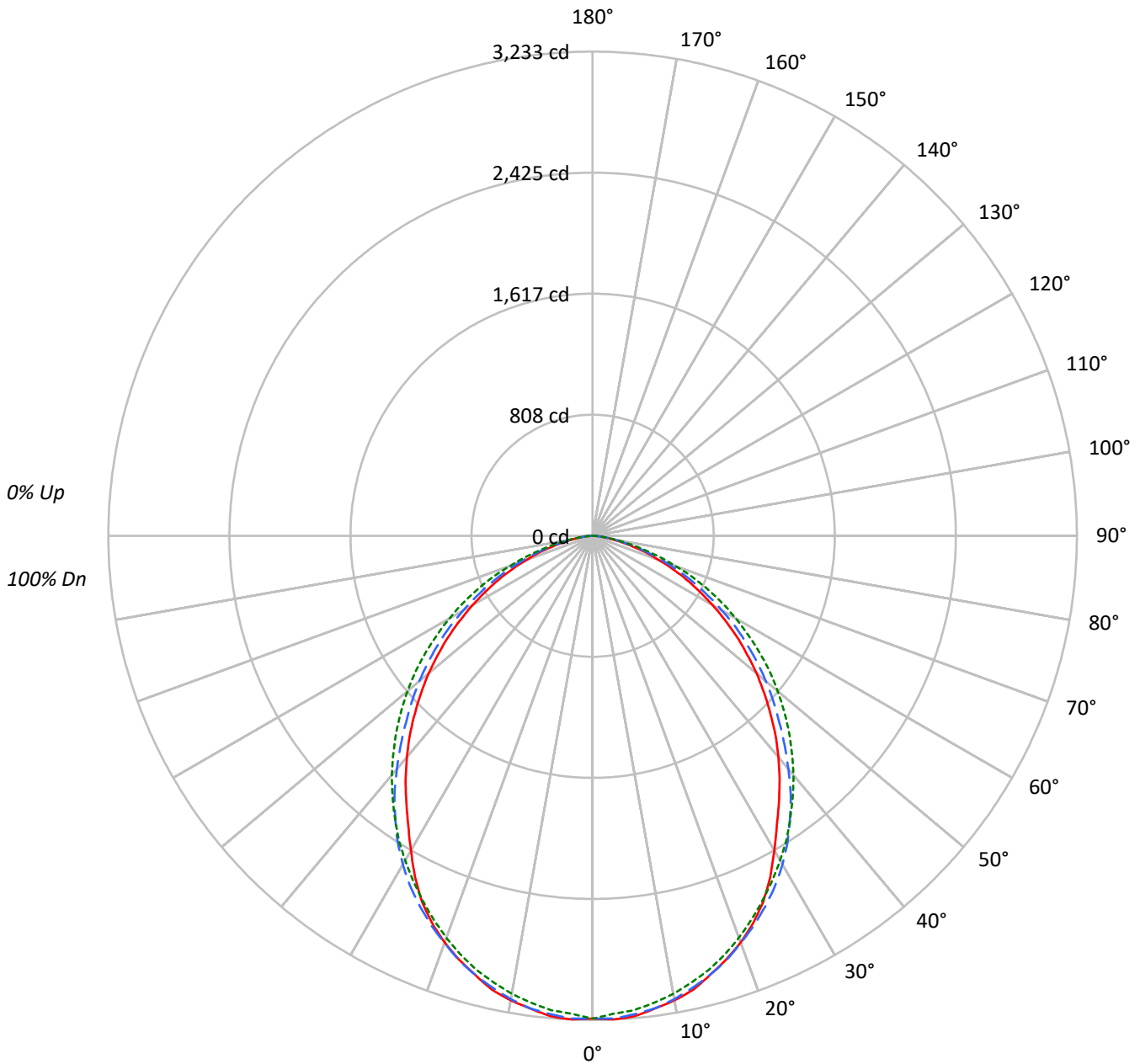
Lumens per Lamp: N/A  
Luminaire Lumens: 7455.0 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	8676	8676	8676
5°	8699	8662	8589
10°	8607	8583	8485
15°	8454	8454	8357
20°	8275	8286	8179
25°	8002	8102	7973
30°	7536	7874	7778
35°	7121	7548	7560
40°	6774	7140	7327
45°	6387	6707	7052
50°	5979	6321	6751
55°	5514	5881	6386
60°	4966	5366	5940
65°	4385	4772	5402
70°	3655	4064	4590
75°	2872	3245	3593
80°	2053	2284	2534
85°	1340	1340	1263



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	303.6	4.1
10°-20°	852.8	11.4
20°-30°	1246.2	16.7
30°-40°	1414.6	19.0
40°-50°	1365.5	18.3
50°-60°	1126.5	15.1
60°-70°	750.1	10.1
70°-80°	335.7	4.5
80°-90°	60.1	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°	2402.5	32.2
0°-40°	3817.1	51.2
0°-60°	6309.1	84.6
0°-90°	7455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7455.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3224	3224	3224	3224	3224	
5°	3220	3219	3207	3189	3180	305
15°	3035	3042	3035	3021	3000	855
25°	2695	2716	2729	2709	2685	1234
35°	2168	2197	2298	2310	2301	1358
45°	1678	1707	1762	1843	1853	1295
55°	1175	1195	1254	1323	1361	1049
65°	689	707	749	803	848	683
75°	276	291	312	327	346	302
85°	43	43	43	41	41	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3224.1	3224.1	3224.1	3224.1	3224.1
2.5°	3232.8	3234.0	3226.6	3206.8	3194.4
5°	3220.4	3219.1	3206.8	3189.4	3179.5
7.5°	3184.5	3186.9	3183.2	3158.4	3144.8
10°	3149.8	3151.0	3141.1	3121.3	3105.2
12.5°	3105.2	3104.0	3090.3	3080.4	3054.4
15°	3034.6	3042.0	3034.6	3021.0	2999.9
17.5°	2966.5	2966.5	2971.4	2947.9	2931.8
20°	2889.7	2893.4	2893.4	2874.8	2856.2
22.5°	2800.5	2811.6	2815.4	2795.5	2773.2
25°	2695.2	2716.3	2728.7	2708.8	2685.3
27.5°	2567.6	2599.8	2637.0	2622.1	2596.1
30°	2425.2	2472.3	2534.2	2521.8	2503.2
32.5°	2290.2	2337.3	2422.7	2417.8	2407.9
35°	2167.6	2197.3	2297.6	2310.0	2301.3
37.5°	2051.1	2078.4	2172.5	2201.0	2193.6
40°	1928.5	1958.2	2032.6	2083.3	2085.8
42.5°	1807.1	1835.6	1896.3	1969.4	1969.4
45°	1678.3	1706.8	1762.5	1843.0	1853.0
47.5°	1552.0	1581.7	1636.2	1716.7	1732.8
50°	1428.1	1455.4	1509.9	1587.9	1612.7
52.5°	1299.3	1329.0	1382.3	1454.1	1490.0
55°	1175.4	1195.3	1253.5	1322.8	1361.2
57.5°	1046.6	1065.2	1130.8	1190.3	1229.9
60°	922.8	946.3	997.1	1057.8	1103.6
62.5°	803.9	828.6	872.0	925.2	977.3
65°	688.7	707.2	749.4	802.6	848.4
67.5°	577.2	593.3	635.4	672.6	720.9
70°	464.5	485.5	516.5	552.4	583.4
72.5°	374.1	382.7	408.7	434.8	467.0
75°	276.2	291.1	312.1	327.0	345.6
77.5°	198.2	206.8	219.2	231.6	249.0
80°	132.5	136.2	147.4	149.9	163.5
82.5°	80.5	83.0	85.5	86.7	91.7
85°	43.4	43.4	43.4	40.9	40.9
87.5°	24.8	24.8	21.1	17.3	12.4
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)