

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: P557034

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-93-94-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: P557034  
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-93-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

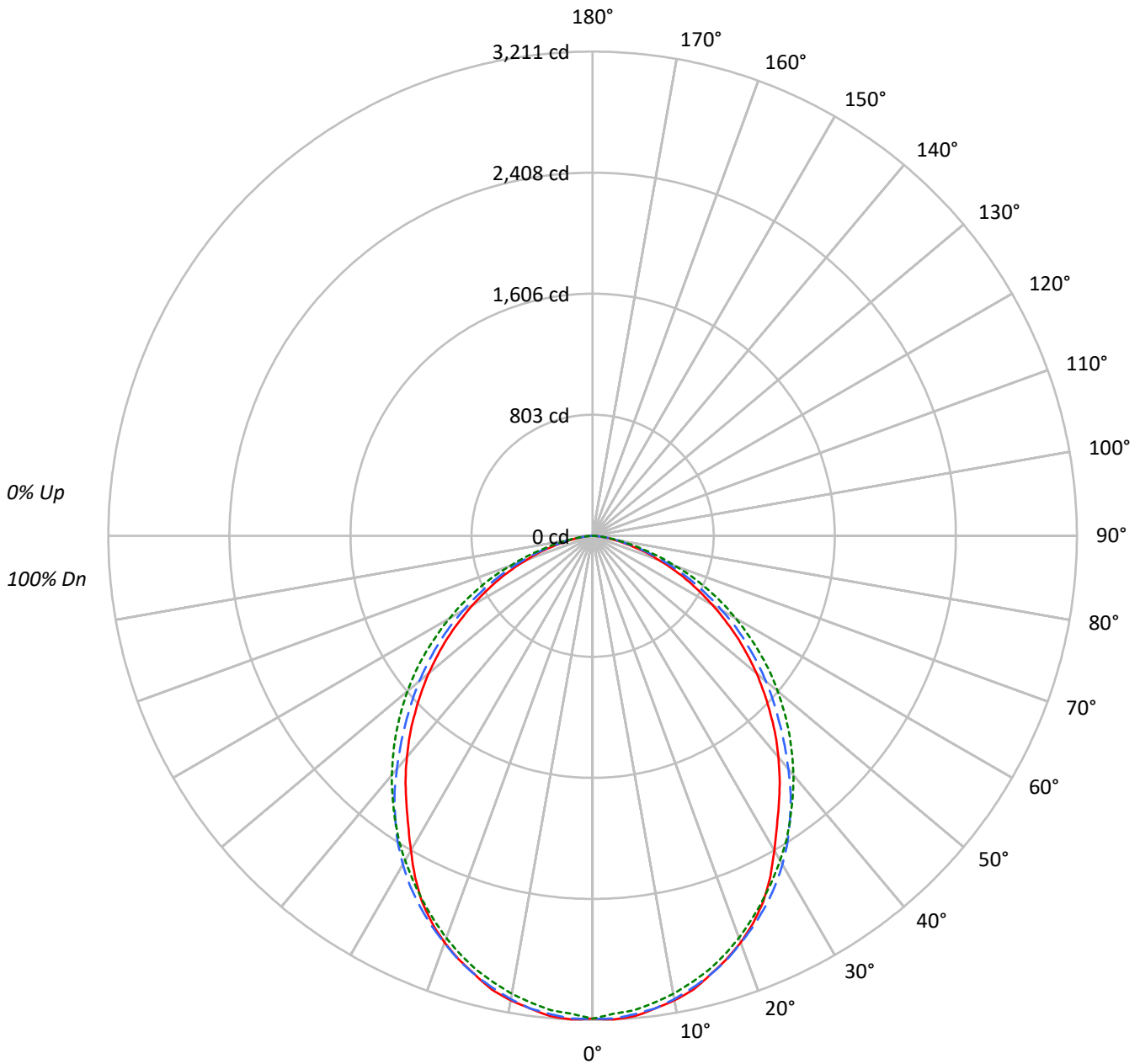
Lumens per Lamp: N/A  
Luminaire Lumens: 7405.0 lumens  
Efficiency: N/A  
Efficacy: 85.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	8618	8618	8618
5°	8641	8604	8531
10°	8549	8525	8428
15°	8397	8397	8301
20°	8220	8230	8125
25°	7949	8048	7920
30°	7485	7822	7726
35°	7073	7497	7509
40°	6729	7092	7278
45°	6344	6662	7004
50°	5938	6278	6706
55°	5478	5841	6343
60°	4933	5330	5900
65°	4355	4739	5366
70°	3630	4036	4559
75°	2853	3223	3569
80°	2039	2269	2517
85°	1331	1331	1254



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	301.5	4.1
10°-20°	847.1	11.4
20°-30°	1237.8	16.7
30°-40°	1405.1	19.0
40°-50°	1356.4	18.3
50°-60°	1118.9	15.1
60°-70°	745.1	10.1
70°-80°	333.4	4.5
80°-90°	59.7	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°	2386.4	32.2
0°-40°	3791.5	51.2
0°-60°	6266.8	84.6
0°-90°	7405.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7405.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3202	3202	3202	3202	3202	
5°	3199	3198	3185	3168	3158	303
15°	3014	3022	3014	3001	2980	850
25°	2677	2698	2710	2691	2667	1226
35°	2153	2183	2282	2294	2286	1349
45°	1667	1695	1751	1831	1840	1286
55°	1168	1187	1245	1314	1352	1042
65°	684	702	744	797	843	678
75°	274	289	310	325	343	300
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°	3202.5	3202.5	3202.5	3202.5	3202.5
2.5°	3211.1	3212.3	3204.9	3185.2	3172.9
5°	3198.8	3197.6	3185.2	3168.0	3158.2
7.5°	3163.1	3165.6	3161.9	3137.3	3123.7
10°	3128.7	3129.9	3120.0	3100.4	3084.4
12.5°	3084.4	3083.1	3069.6	3059.8	3033.9
15°	3014.2	3021.6	3014.2	3000.7	2979.8
17.5°	2946.6	2946.6	2951.5	2928.1	2912.1
20°	2870.3	2874.0	2874.0	2855.5	2837.1
22.5°	2781.7	2792.8	2796.5	2776.8	2754.6
25°	2677.1	2698.0	2710.4	2690.7	2667.3
27.5°	2550.4	2582.4	2619.3	2604.5	2578.7
30°	2408.9	2455.7	2517.2	2504.9	2486.4
32.5°	2274.8	2321.6	2406.5	2401.5	2391.7
35°	2153.0	2182.6	2282.2	2294.5	2285.9
37.5°	2037.4	2064.4	2157.9	2186.2	2178.9
40°	1915.6	1945.1	2018.9	2069.4	2071.8
42.5°	1795.0	1823.3	1883.6	1956.2	1956.2
45°	1667.1	1695.4	1750.7	1830.7	1840.5
47.5°	1541.6	1571.1	1625.2	1705.2	1721.2
50°	1418.5	1445.6	1499.7	1577.2	1601.9
52.5°	1290.6	1320.1	1373.0	1444.4	1480.1
55°	1167.6	1187.2	1245.1	1314.0	1352.1
57.5°	1039.6	1058.1	1123.3	1182.3	1221.7
60°	916.6	939.9	990.4	1050.7	1096.2
62.5°	798.5	823.1	866.1	919.0	970.7
65°	684.0	702.5	744.3	797.2	842.8
67.5°	573.3	589.3	631.1	668.1	716.0
70°	461.4	482.3	513.0	548.7	579.5
72.5°	371.6	380.2	406.0	431.8	463.8
75°	274.4	289.1	310.0	324.8	343.3
77.5°	196.8	205.5	217.8	230.1	247.3
80°	131.6	135.3	146.4	148.9	162.4
82.5°	80.0	82.4	84.9	86.1	91.0
85°	43.1	43.1	43.1	40.6	40.6
87.5°	24.6	24.6	20.9	17.2	12.3
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)