

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: P557965

Luminaire Tested: **FUSL-12-4-LD4-3LO-30-UNV-81-96-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: P557965  
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-LD4-3LO-30-UNV-81-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

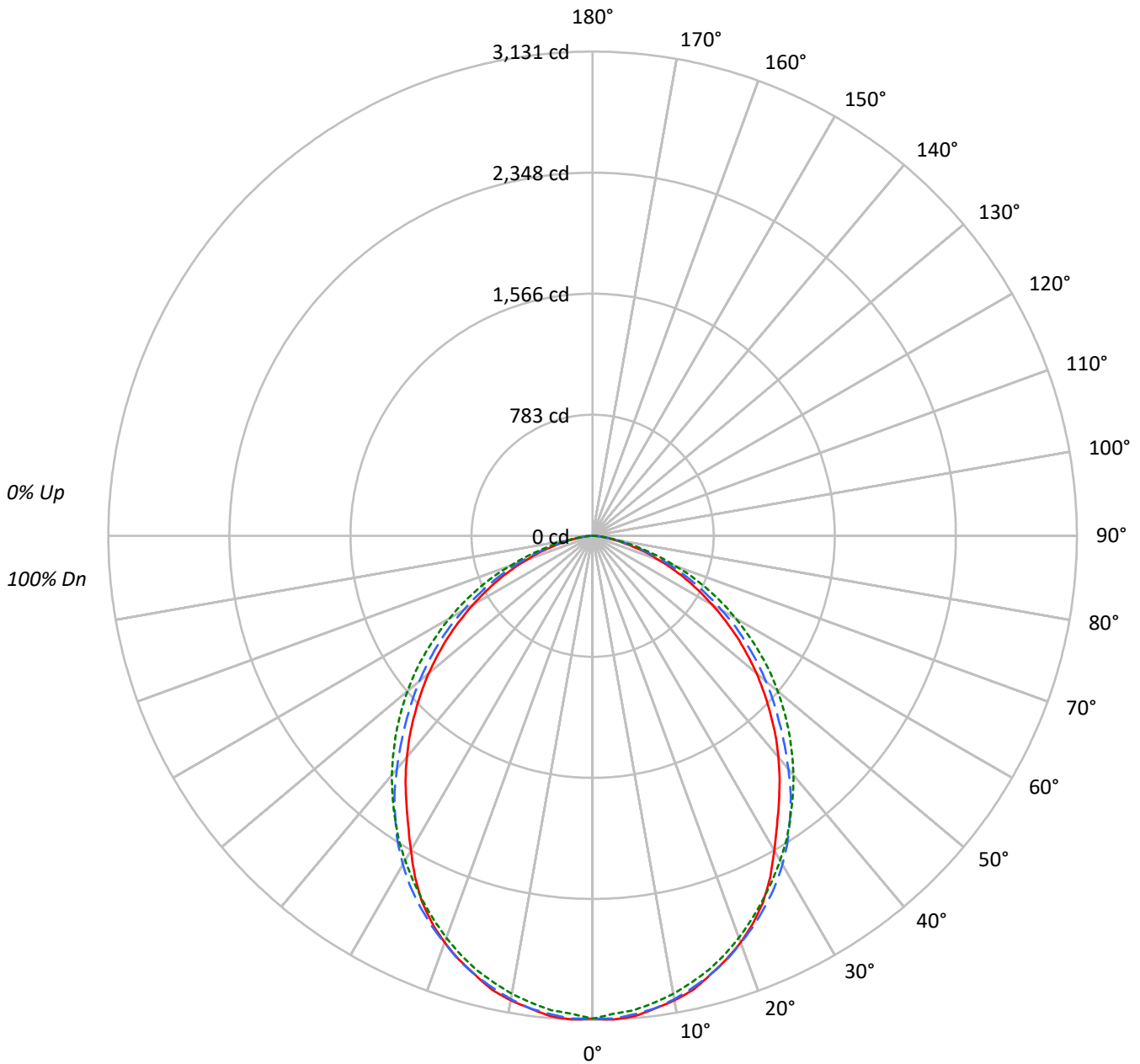
Lumens per Lamp: N/A  
Luminaire Lumens: 7220.0 lumens  
Efficiency: N/A  
Efficacy: 102.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°	8403	8403	8403
5°	8425	8389	8318
10°	8335	8313	8217
15°	8187	8187	8094
20°	8014	8025	7922
25°	7750	7846	7722
30°	7298	7626	7533
35°	6896	7310	7322
40°	6561	6915	7096
45°	6186	6496	6829
50°	5790	6122	6538
55°	5341	5696	6185
60°	4810	5197	5752
65°	4247	4621	5232
70°	3539	3936	4445
75°	2781	3143	3480
80°	1990	2211	2453
85°	1297	1297	1223



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	294.0	4.1
10°-20°	825.9	11.4
20°-30°	1206.9	16.7
30°-40°	1370.0	19.0
40°-50°	1322.5	18.3
50°-60°	1091.0	15.1
60°-70°	726.5	10.1
70°-80°	325.1	4.5
80°-90°	58.2	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°	2326.8	32.2
0°-40°	3696.8	51.2
0°-60°	6110.2	84.6
0°-90°	7220.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7220.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3122	3122	3122	3122	3122	
5°	3119	3118	3106	3089	3079	295
15°	2939	2946	2939	2926	2905	829
25°	2610	2631	2643	2623	2601	1195
35°	2099	2128	2225	2237	2229	1315
45°	1625	1653	1707	1785	1794	1254
55°	1138	1158	1214	1281	1318	1016
65°	667	685	726	777	822	661
75°	268	282	302	317	335	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°	3122.5	3122.5	3122.5	3122.5	3122.5
2.5°	3130.9	3132.1	3124.9	3105.7	3093.7
5°	3118.9	3117.7	3105.7	3088.9	3079.3
7.5°	3084.1	3086.5	3082.9	3058.9	3045.7
10°	3050.5	3051.7	3042.1	3022.9	3007.3
12.5°	3007.3	3006.1	2992.9	2983.3	2958.1
15°	2938.9	2946.1	2938.9	2925.7	2905.3
17.5°	2873.0	2873.0	2877.8	2855.0	2839.4
20°	2798.6	2802.2	2802.2	2784.2	2766.2
22.5°	2712.2	2723.0	2726.6	2707.4	2685.8
25°	2610.2	2630.6	2642.6	2623.4	2600.7
27.5°	2486.7	2517.9	2553.9	2539.5	2514.3
30°	2348.7	2394.3	2454.3	2442.3	2424.3
32.5°	2218.0	2263.6	2346.3	2341.5	2332.0
35°	2099.2	2128.0	2225.2	2237.2	2228.8
37.5°	1986.5	2012.9	2104.0	2131.6	2124.4
40°	1867.7	1896.5	1968.5	2017.7	2020.1
42.5°	1750.2	1777.8	1836.5	1907.3	1907.3
45°	1625.4	1653.0	1707.0	1785.0	1794.5
47.5°	1503.1	1531.8	1584.6	1662.6	1678.2
50°	1383.1	1409.5	1462.3	1537.8	1561.8
52.5°	1258.3	1287.1	1338.7	1408.3	1443.1
55°	1138.4	1157.6	1214.0	1281.1	1318.3
57.5°	1013.6	1031.6	1095.2	1152.8	1191.2
60°	893.7	916.5	965.6	1024.4	1068.8
62.5°	778.5	802.5	844.5	896.1	946.5
65°	667.0	685.0	725.7	777.3	821.7
67.5°	559.0	574.6	615.4	651.4	698.1
70°	449.8	470.2	500.2	535.0	565.0
72.5°	362.3	370.7	395.9	421.0	452.2
75°	267.5	281.9	302.3	316.7	334.7
77.5°	191.9	200.3	212.3	224.3	241.1
80°	128.4	132.0	142.7	145.1	158.3
82.5°	78.0	80.4	82.8	84.0	88.8
85°	42.0	42.0	42.0	39.6	39.6
87.5°	24.0	24.0	20.4	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)