

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: P558041

Luminaire Tested: **FUSL-12-4-LD4-3LO-35-UNV-82-88-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: P558041  
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-35-UNV-82-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC 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**

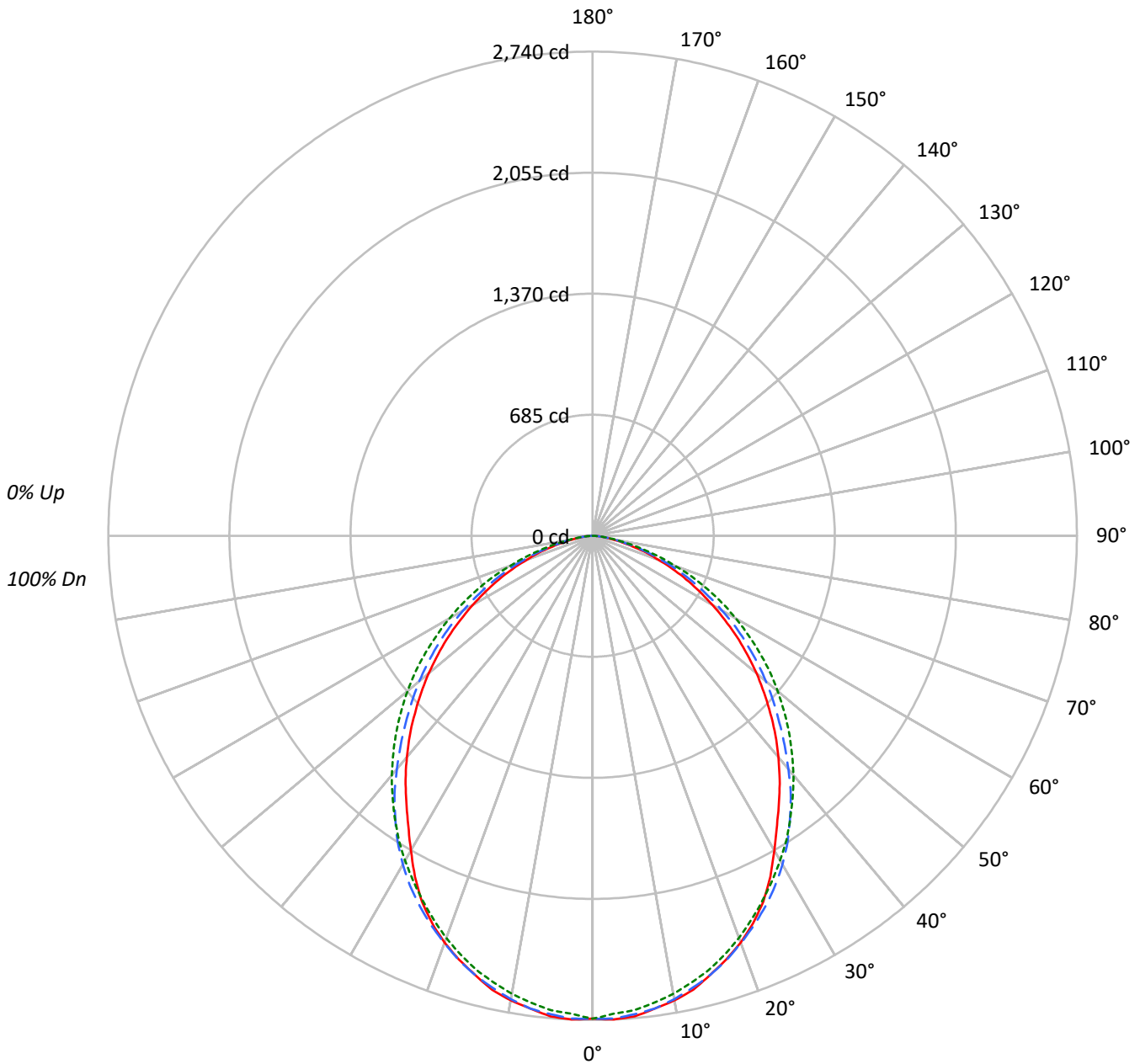
Lumens per Lamp: N/A  
Luminaire Lumens: 6319.0 lumens  
Efficiency: N/A  
Efficacy: 90.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
Input Voltage (V): NR  
Input Current (Ain): 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°	7354	7354	7354
5°	7374	7342	7280
10°	7295	7275	7192
15°	7166	7166	7084
20°	7014	7023	6933
25°	6783	6867	6758
30°	6387	6674	6593
35°	6036	6398	6408
40°	5742	6052	6211
45°	5414	5686	5977
50°	5068	5358	5722
55°	4674	4985	5413
60°	4210	4548	5034
65°	3717	4045	4579
70°	3098	3445	3891
75°	2434	2751	3045
80°	1740	1936	2148
85°	1133	1133	1068



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	257.3	4.1
10°-20°	722.8	11.4
20°-30°	1056.3	16.7
30°-40°	1199.0	19.0
40°-50°	1157.5	18.3
50°-60°	954.8	15.1
60°-70°	635.8	10.1
70°-80°	284.5	4.5
80°-90°	50.9	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°	2036.4	32.2
0°-40°	3235.4	51.2
0°-60°	5347.7	84.6
0°-90°	6319.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6319.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2733	2733	2733	2733	2733	
5°	2730	2729	2718	2703	2695	258
15°	2572	2578	2572	2561	2543	725
25°	2284	2302	2313	2296	2276	1046
35°	1837	1862	1948	1958	1951	1151
45°	1423	1447	1494	1562	1571	1098
55°	996	1013	1062	1121	1154	889
65°	584	600	635	680	719	579
75°	234	247	265	277	293	256
85°	37	37	37	35	35	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2732.8	2732.8	2732.8	2732.8	2732.8
2.5°	2740.2	2741.2	2734.9	2718.1	2707.6
5°	2729.7	2728.6	2718.1	2703.4	2695.0
7.5°	2699.2	2701.3	2698.2	2677.2	2665.6
10°	2669.8	2670.9	2662.5	2645.7	2632.0
12.5°	2632.0	2631.0	2619.4	2611.0	2589.0
15°	2572.2	2578.5	2572.2	2560.6	2542.8
17.5°	2514.4	2514.4	2518.6	2498.7	2485.0
20°	2449.3	2452.5	2452.5	2436.7	2421.0
22.5°	2373.7	2383.2	2386.3	2369.6	2350.7
25°	2284.5	2302.4	2312.9	2296.1	2276.1
27.5°	2176.4	2203.7	2235.2	2222.6	2200.5
30°	2055.6	2095.5	2148.0	2137.5	2121.8
32.5°	1941.2	1981.1	2053.5	2049.3	2040.9
35°	1837.3	1862.5	1947.5	1958.0	1950.7
37.5°	1738.6	1761.7	1841.5	1865.6	1859.3
40°	1634.6	1659.8	1722.8	1765.9	1768.0
42.5°	1531.8	1555.9	1607.3	1669.3	1669.3
45°	1422.6	1446.7	1494.0	1562.2	1570.6
47.5°	1315.5	1340.7	1386.9	1455.1	1468.8
50°	1210.5	1233.6	1279.8	1345.9	1366.9
52.5°	1101.3	1126.5	1171.7	1232.5	1263.0
55°	996.3	1013.1	1062.5	1121.3	1153.8
57.5°	887.1	902.9	958.5	1008.9	1042.5
60°	782.2	802.1	845.1	896.6	935.4
62.5°	681.4	702.4	739.1	784.3	828.3
65°	583.7	599.5	635.2	680.3	719.2
67.5°	489.2	502.9	538.6	570.1	611.0
70°	393.7	411.5	437.8	468.2	494.5
72.5°	317.1	324.4	346.5	368.5	395.8
75°	234.1	246.7	264.6	277.2	292.9
77.5°	168.0	175.3	185.8	196.3	211.0
80°	112.3	115.5	124.9	127.0	138.6
82.5°	68.2	70.3	72.4	73.5	77.7
85°	36.7	36.7	36.7	34.6	34.6
87.5°	21.0	21.0	17.8	14.7	10.5
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)