

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: P556694

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-82-87-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: P556694  
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-LD4-1STD-30-UNV-82-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

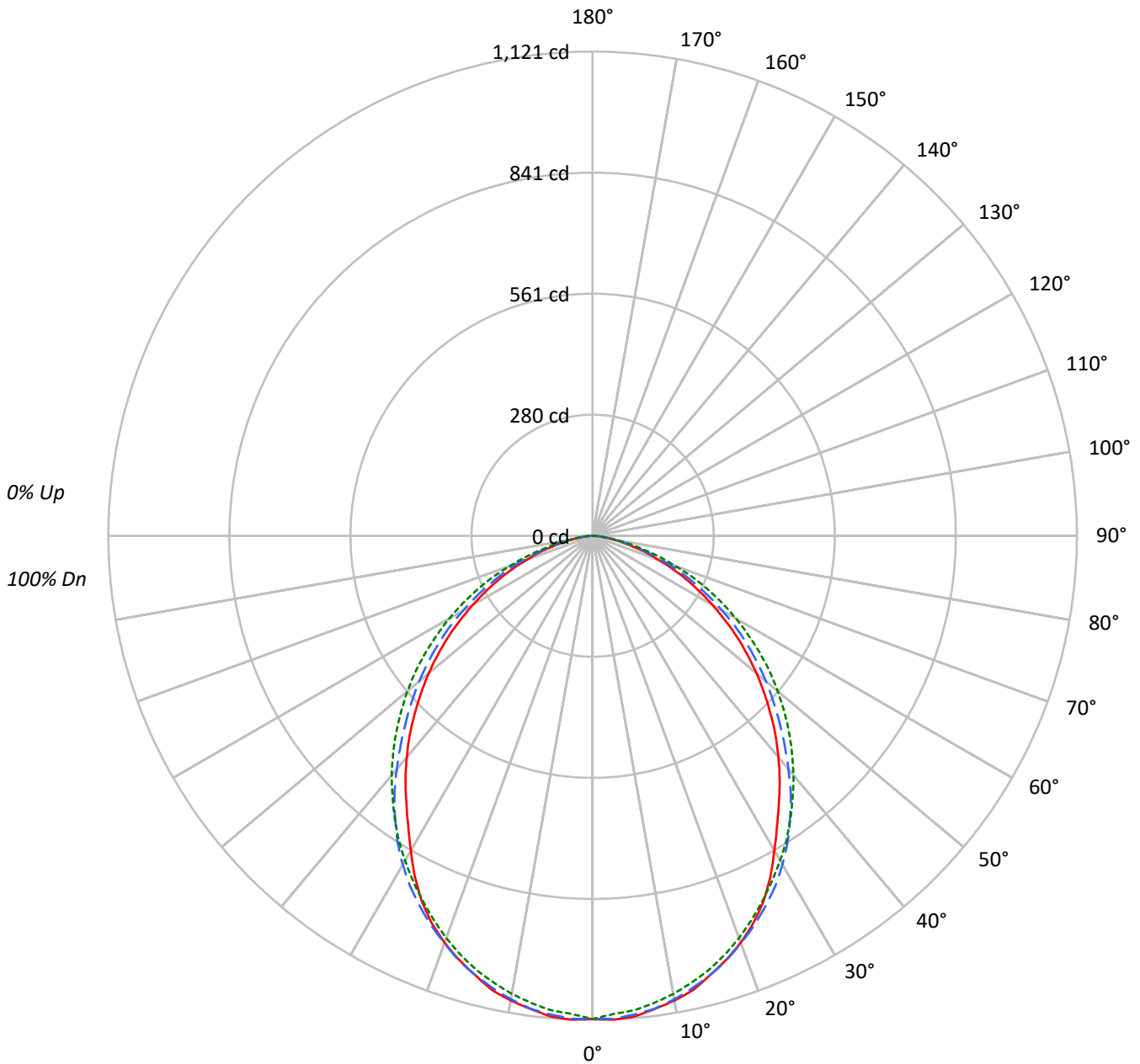
Lumens per Lamp: N/A  
Luminaire Lumens: 2586.0 lumens  
Efficiency: N/A  
Efficacy: 77.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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					20					
RC	80					70					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3010	3010	3010
5°	3018	3005	2979
10°	2986	2977	2943
15°	2932	2932	2899
20°	2871	2874	2837
25°	2776	2810	2766
30°	2614	2732	2698
35°	2470	2618	2622
40°	2350	2477	2542
45°	2216	2327	2446
50°	2074	2192	2342
55°	1913	2040	2215
60°	1723	1862	2060
65°	1521	1655	1874
70°	1268	1410	1592
75°	996	1126	1247
80°	713	792	879
85°	463	463	438



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.3	4.1
10°-20°	295.8	11.4
20°-30°	432.3	16.7
30°-40°	490.7	19.0
40°-50°	473.7	18.3
50°-60°	390.8	15.1
60°-70°	260.2	10.1
70°-80°	116.4	4.5
80°-90°	20.8	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°	833.4	32.2
0°-40°	1324.1	51.2
0°-60°	2188.5	84.6
0°-90°	2586.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2586.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1118	1118	1118	1118	1118	
5°	1117	1117	1112	1106	1103	106
15°	1053	1055	1053	1048	1041	297
25°	935	942	946	940	932	428
35°	752	762	797	801	798	471
45°	582	592	611	639	643	449
55°	408	415	435	459	472	364
65°	239	245	260	278	294	237
75°	96	101	108	113	120	105
85°	15	15	15	14	14	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1118.4	1118.4	1118.4	1118.4	1118.4
2.5°	1121.4	1121.8	1119.2	1112.4	1108.1
5°	1117.1	1116.7	1112.4	1106.3	1102.9
7.5°	1104.6	1105.5	1104.2	1095.6	1090.9
10°	1092.6	1093.0	1089.6	1082.7	1077.1
12.5°	1077.1	1076.7	1072.0	1068.5	1059.5
15°	1052.6	1055.2	1052.6	1047.9	1040.6
17.5°	1029.0	1029.0	1030.7	1022.6	1017.0
20°	1002.4	1003.7	1003.7	997.2	990.8
22.5°	971.4	975.3	976.6	969.7	962.0
25°	934.9	942.2	946.5	939.6	931.5
27.5°	890.7	901.8	914.7	909.6	900.5
30°	841.3	857.6	879.1	874.8	868.3
32.5°	794.4	810.7	840.4	838.7	835.2
35°	751.9	762.2	797.0	801.3	798.3
37.5°	711.5	721.0	753.6	763.5	760.9
40°	669.0	679.3	705.1	722.7	723.5
42.5°	626.9	636.7	657.8	683.1	683.1
45°	582.2	592.1	611.4	639.3	642.8
47.5°	538.4	548.7	567.6	595.5	601.1
50°	495.4	504.8	523.7	550.8	559.4
52.5°	450.7	461.0	479.5	504.4	516.9
55°	407.7	414.6	434.8	458.9	472.2
57.5°	363.1	369.5	392.3	412.9	426.6
60°	320.1	328.3	345.9	366.9	382.8
62.5°	278.8	287.4	302.5	320.9	339.0
65°	238.9	245.3	259.9	278.4	294.3
67.5°	200.2	205.8	220.4	233.3	250.1
70°	161.1	168.4	179.2	191.6	202.4
72.5°	129.8	132.8	141.8	150.8	162.0
75°	95.8	101.0	108.3	113.4	119.9
77.5°	68.7	71.8	76.0	80.3	86.4
80°	46.0	47.3	51.1	52.0	56.7
82.5°	27.9	28.8	29.6	30.1	31.8
85°	15.0	15.0	15.0	14.2	14.2
87.5°	8.6	8.6	7.3	6.0	4.3
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)