

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: P557913

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-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: P557913  
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-LD4-3HI-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

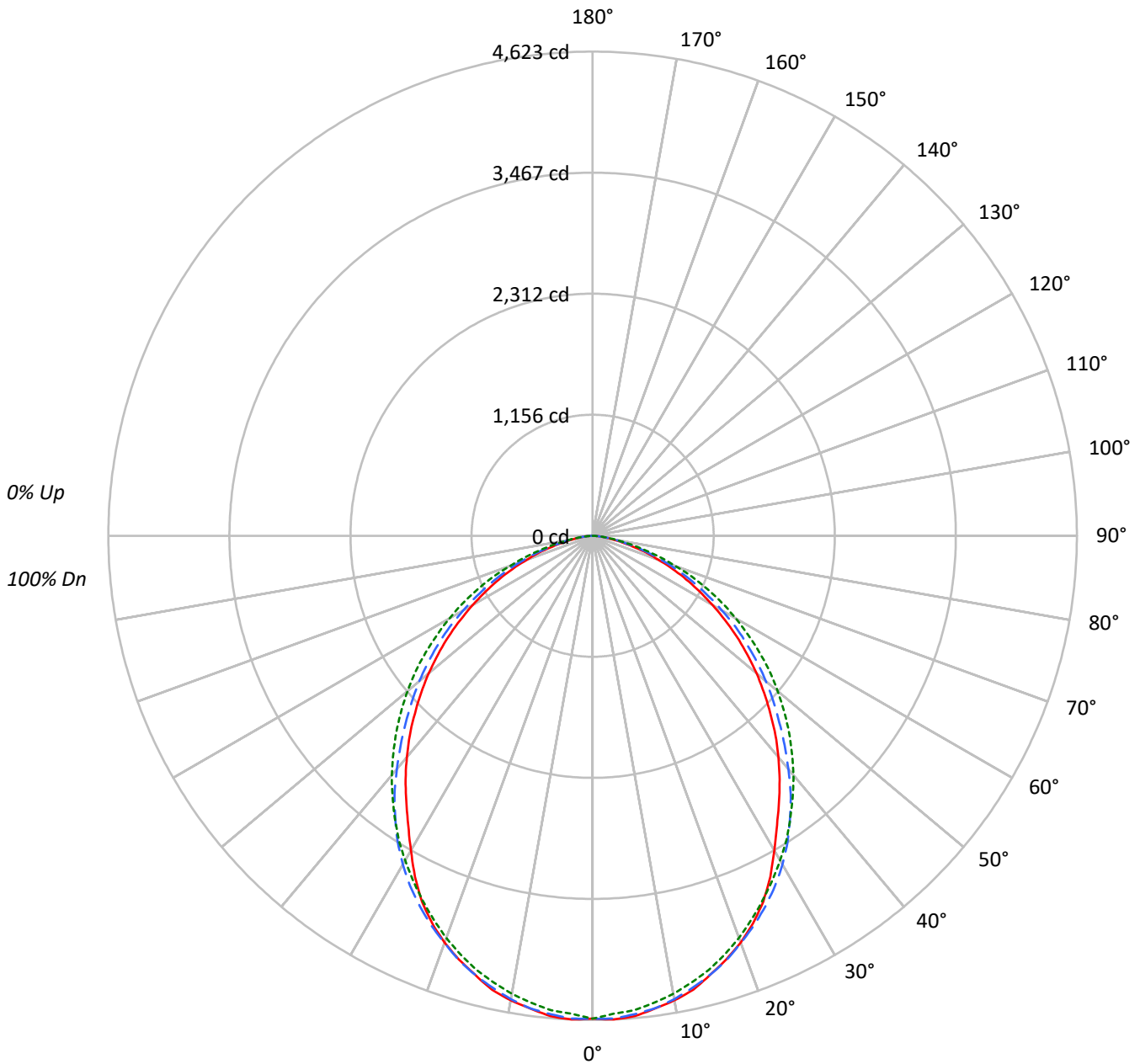
Lumens per Lamp: N/A  
Luminaire Lumens: 10661.0 lumens  
Efficiency: N/A  
Efficacy: 82.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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°	12407	12407	12407
5°	12440	12387	12282
10°	12308	12274	12134
15°	12090	12090	11952
20°	11834	11849	11697
25°	11444	11586	11402
30°	10776	11261	11123
35°	10183	10794	10811
40°	9688	10210	10478
45°	9134	9592	10084
50°	8550	9039	9655
55°	7886	8410	9133
60°	7102	7674	8494
65°	6271	6823	7726
70°	5226	5811	6564
75°	4107	4641	5138
80°	2937	3267	3623
85°	1914	1914	1806



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	434.1	4.1
10°-20°	1219.5	11.4
20°-30°	1782.1	16.7
30°-40°	2022.9	19.0
40°-50°	1952.8	18.3
50°-60°	1610.9	15.1
60°-70°	1072.7	10.1
70°-80°	480.0	4.5
80°-90°	85.9	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°	3435.7	32.2
0°-40°	5458.6	51.2
0°-60°	9022.3	84.6
0°-90°	10661.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10661.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4611	4611	4611	4611	4611	
5°	4605	4604	4586	4561	4547	436
15°	4340	4350	4340	4320	4290	1223
25°	3854	3884	3902	3874	3840	1765
35°	3100	3142	3286	3303	3291	1942
45°	2400	2441	2520	2636	2650	1852
55°	1681	1709	1792	1892	1947	1500
65°	985	1011	1072	1148	1213	977
75°	395	416	446	468	494	432
85°	62	62	62	58	58	84
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4610.6	4610.6	4610.6	4610.6	4610.6
2.5°	4623.0	4624.8	4614.1	4585.8	4568.1
5°	4605.3	4603.5	4585.8	4561.0	4546.8
7.5°	4553.9	4557.5	4552.2	4516.7	4497.2
10°	4504.3	4506.1	4491.9	4463.6	4440.6
12.5°	4440.6	4438.8	4419.3	4405.1	4367.9
15°	4339.6	4350.2	4339.6	4320.1	4290.0
17.5°	4242.2	4242.2	4249.3	4215.6	4192.6
20°	4132.4	4137.7	4137.7	4111.1	4084.5
22.5°	4004.8	4020.8	4026.1	3997.7	3965.9
25°	3854.3	3884.4	3902.1	3873.8	3840.1
27.5°	3671.8	3717.9	3771.0	3749.8	3712.6
30°	3468.1	3535.4	3624.0	3606.3	3579.7
32.5°	3275.1	3342.4	3464.6	3457.5	3443.3
35°	3099.7	3142.2	3285.7	3303.4	3291.0
37.5°	2933.2	2972.2	3106.8	3147.5	3136.9
40°	2757.9	2800.4	2906.6	2979.3	2982.8
42.5°	2584.3	2625.0	2711.8	2816.3	2816.3
45°	2400.1	2440.8	2520.5	2635.6	2649.8
47.5°	2219.4	2261.9	2339.8	2455.0	2478.0
50°	2042.3	2081.2	2159.2	2270.8	2306.2
52.5°	1858.1	1900.6	1976.7	2079.5	2130.8
55°	1680.9	1709.3	1792.5	1891.7	1946.6
57.5°	1496.7	1523.3	1617.2	1702.2	1758.9
60°	1319.6	1353.2	1425.9	1512.7	1578.2
62.5°	1149.6	1185.0	1247.0	1323.1	1397.5
65°	984.8	1011.4	1071.6	1147.8	1213.3
67.5°	825.4	848.4	908.7	961.8	1030.9
70°	664.2	694.3	738.6	790.0	834.3
72.5°	534.9	547.3	584.5	621.7	667.8
75°	395.0	416.2	446.4	467.6	494.2
77.5°	283.4	295.8	313.5	331.2	356.0
80°	189.5	194.8	210.8	214.3	233.8
82.5°	115.1	118.7	122.2	124.0	131.1
85°	62.0	62.0	62.0	58.5	58.5
87.5°	35.4	35.4	30.1	24.8	17.7
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)