

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: P557853

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-82-96-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: P557853  
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-40-UNV-82-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

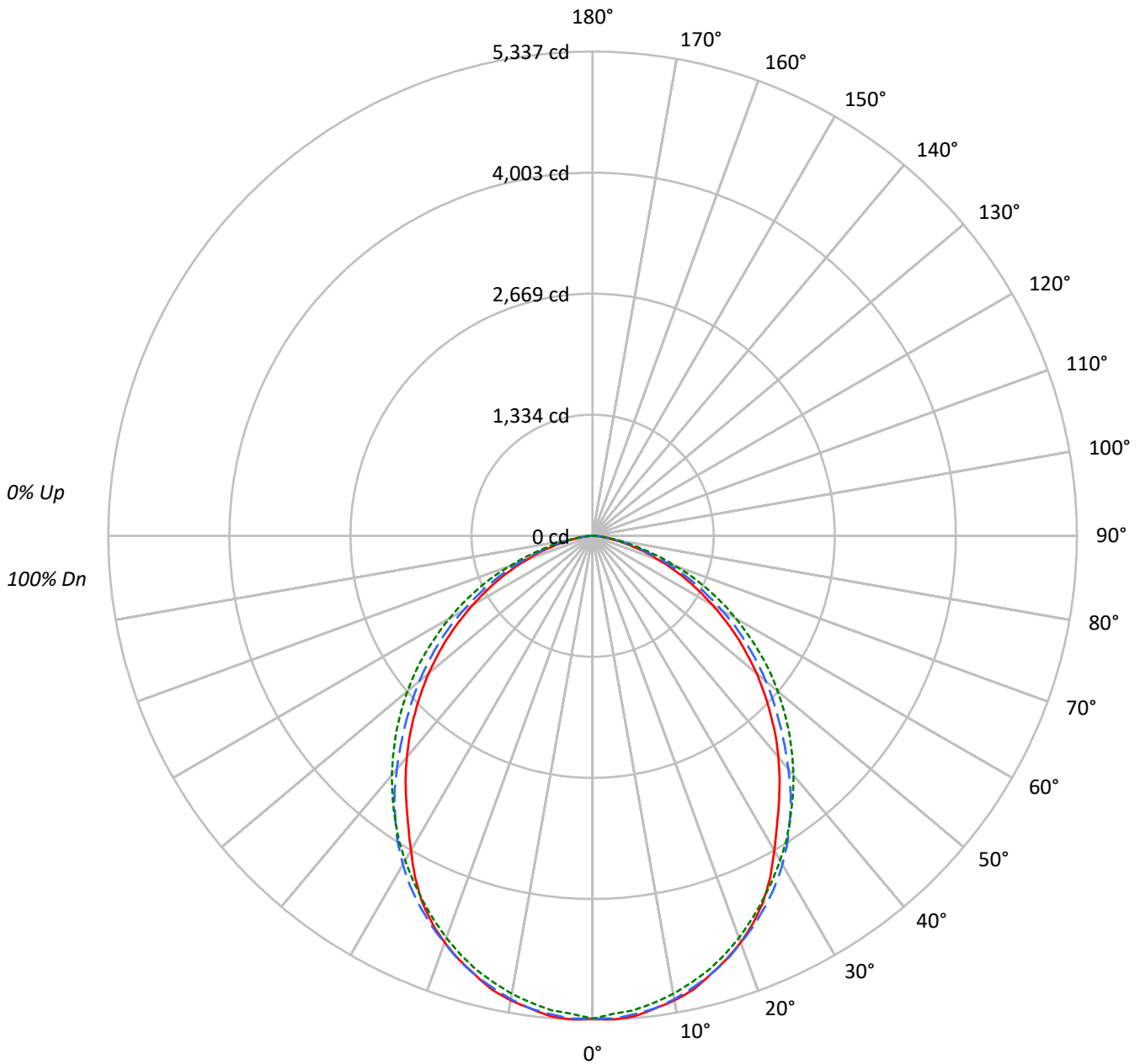
Lumens per Lamp: N/A  
Luminaire Lumens: 12307.0 lumens  
Efficiency: N/A  
Efficacy: 95.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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°	14323	14323	14323
5°	14361	14300	14178
10°	14208	14169	14007
15°	13956	13956	13797
20°	13661	13678	13503
25°	13211	13375	13162
30°	12440	12999	12841
35°	11755	12460	12480
40°	11184	11787	12096
45°	10544	11073	11641
50°	9870	10435	11146
55°	9104	9708	10543
60°	8198	8859	9805
65°	7239	7877	8918
70°	6033	6709	7578
75°	4741	5358	5932
80°	3391	3770	4183
85°	2211	2211	2084



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	501.1	4.1
10°-20°	1407.8	11.4
20°-30°	2057.3	16.7
30°-40°	2335.2	19.0
40°-50°	2254.3	18.3
50°-60°	1859.6	15.1
60°-70°	1238.4	10.1
70°-80°	554.2	4.5
80°-90°	99.1	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°	3966.2	32.2
0°-40°	6301.4	51.2
0°-60°	10415.3	84.6
0°-90°	12307.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12307.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5322	5322	5322	5322	5322	
5°	5316	5314	5294	5265	5249	503
15°	5010	5022	5010	4987	4952	1412
25°	4449	4484	4505	4472	4433	2038
35°	3578	3627	3793	3813	3799	2242
45°	2771	2818	2910	3043	3059	2138
55°	1940	1973	2069	2184	2247	1732
65°	1137	1168	1237	1325	1401	1127
75°	456	480	515	540	570	499
85°	72	72	72	68	68	97
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5322.5	5322.5	5322.5	5322.5	5322.5
2.5°	5336.8	5338.8	5326.5	5293.8	5273.4
5°	5316.3	5314.3	5293.8	5265.2	5248.8
7.5°	5257.0	5261.1	5255.0	5214.1	5191.6
10°	5199.8	5201.8	5185.5	5152.7	5126.2
12.5°	5126.2	5124.1	5101.6	5085.3	5042.3
15°	5009.6	5021.9	5009.6	4987.1	4952.4
17.5°	4897.2	4897.2	4905.3	4866.5	4839.9
20°	4770.4	4776.5	4776.5	4745.8	4715.2
22.5°	4623.2	4641.6	4647.7	4615.0	4578.2
25°	4449.4	4484.1	4504.6	4471.8	4433.0
27.5°	4238.7	4291.9	4353.3	4328.7	4285.8
30°	4003.6	4081.3	4183.5	4163.1	4132.4
32.5°	3780.7	3858.4	3999.5	3991.3	3975.0
35°	3578.3	3627.4	3793.0	3813.4	3799.1
37.5°	3386.1	3431.1	3586.5	3633.5	3621.2
40°	3183.7	3232.7	3355.4	3439.3	3443.3
42.5°	2983.3	3030.3	3130.5	3251.1	3251.1
45°	2770.6	2817.7	2909.7	3042.6	3058.9
47.5°	2562.1	2611.1	2701.1	2834.0	2860.6
50°	2357.6	2402.6	2492.5	2621.4	2662.3
52.5°	2144.9	2194.0	2281.9	2400.5	2459.8
55°	1940.5	1973.2	2069.3	2183.8	2247.2
57.5°	1727.8	1758.5	1866.8	1965.0	2030.4
60°	1523.3	1562.2	1646.0	1746.2	1821.9
62.5°	1327.0	1367.9	1439.5	1527.4	1613.3
65°	1136.9	1167.5	1237.1	1325.0	1400.6
67.5°	952.8	979.4	1049.0	1110.3	1190.0
70°	766.8	801.5	852.7	912.0	963.1
72.5°	617.5	631.8	674.8	717.7	770.9
75°	456.0	480.5	515.3	539.8	570.5
77.5°	327.2	341.5	361.9	382.4	411.0
80°	218.8	224.9	243.3	247.4	269.9
82.5°	132.9	137.0	141.1	143.1	151.3
85°	71.6	71.6	71.6	67.5	67.5
87.5°	40.9	40.9	34.8	28.6	20.4
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)