

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: P557791

Luminaire Tested: **FUSL-12-4-LD4-3HI-35-UNV-82-97-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: P557791  
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-35-UNV-82-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

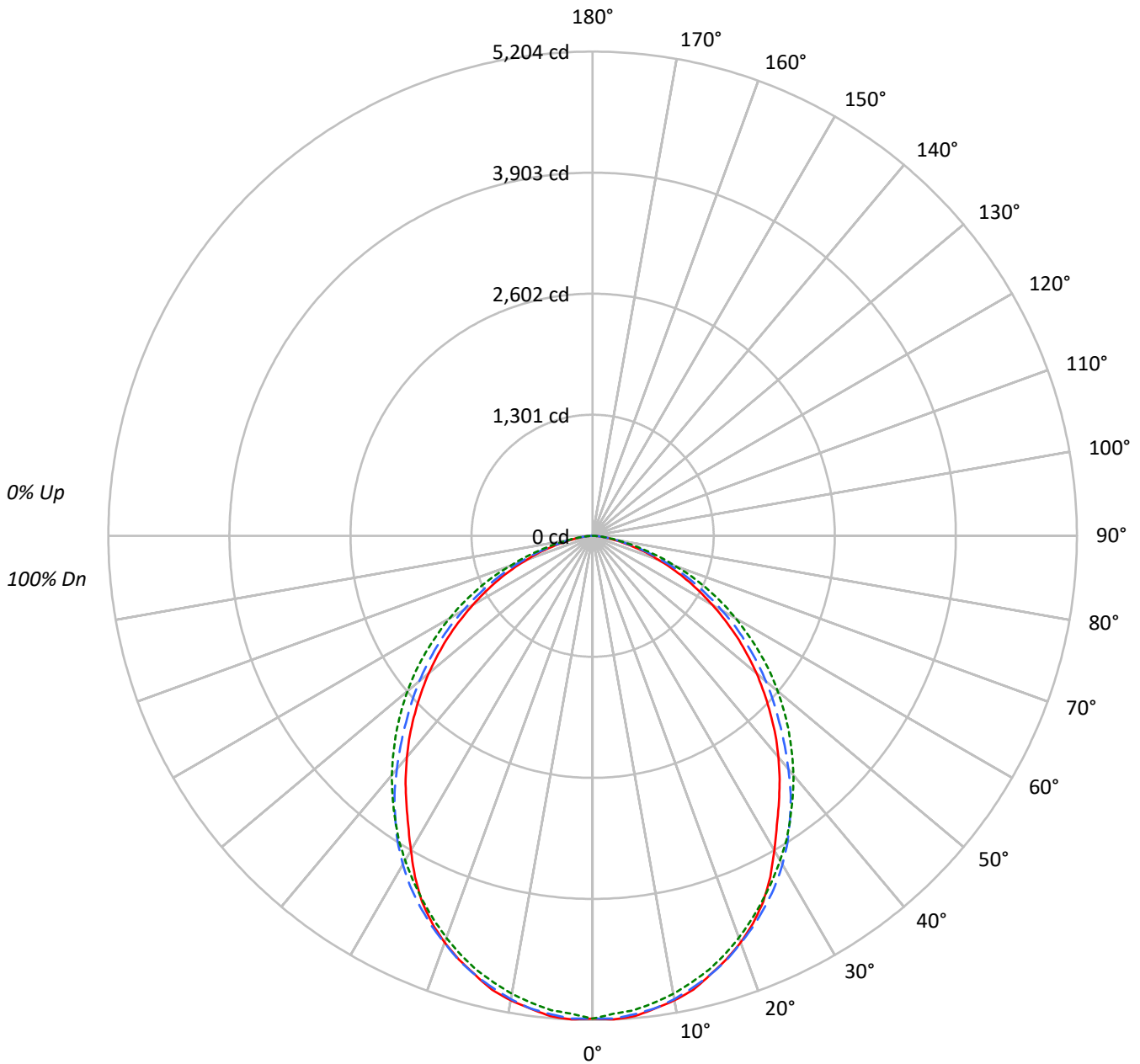
Lumens per Lamp: N/A  
Luminaire Lumens: 12000.0 lumens  
Efficiency: N/A  
Efficacy: 92.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	13965	13965	13965
5°	14003	13943	13825
10°	13854	13816	13658
15°	13608	13608	13453
20°	13320	13337	13166
25°	12881	13041	12834
30°	12130	12675	12520
35°	11462	12150	12169
40°	10905	11493	11794
45°	10281	10797	11351
50°	9624	10175	10867
55°	8877	9466	10280
60°	7994	8638	9561
65°	7058	7680	8696
70°	5883	6541	7388
75°	4623	5224	5784
80°	3305	3677	4079
85°	2155	2155	2032



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	488.6	4.1
10°-20°	1372.7	11.4
20°-30°	2005.9	16.7
30°-40°	2277.0	19.0
40°-50°	2198.1	18.3
50°-60°	1813.3	15.1
60°-70°	1207.5	10.1
70°-80°	540.3	4.5
80°-90°	96.7	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°	3867.3	32.2
0°-40°	6144.2	51.2
0°-60°	10155.5	84.6
0°-90°	12000.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12000.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5190	5190	5190	5190	5190	
5°	5184	5182	5162	5134	5118	491
15°	4885	4897	4885	4863	4829	1377
25°	4338	4372	4392	4360	4322	1987
35°	3489	3537	3698	3718	3704	2186
45°	2702	2747	2837	2967	2983	2084
55°	1892	1924	2018	2129	2191	1689
65°	1108	1138	1206	1292	1366	1099
75°	445	468	502	526	556	486
85°	70	70	70	66	66	94
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5189.7	5189.7	5189.7	5189.7	5189.7
2.5°	5203.6	5205.6	5193.7	5161.8	5141.8
5°	5183.7	5181.7	5161.8	5133.9	5117.9
7.5°	5125.9	5129.9	5123.9	5084.0	5062.1
10°	5070.1	5072.1	5056.1	5024.2	4998.3
12.5°	4998.3	4996.3	4974.4	4958.4	4916.5
15°	4884.6	4896.6	4884.6	4862.7	4828.8
17.5°	4775.0	4775.0	4783.0	4745.1	4719.2
20°	4651.4	4657.4	4657.4	4627.5	4597.6
22.5°	4507.8	4525.8	4531.8	4499.9	4464.0
25°	4338.4	4372.3	4392.2	4360.3	4322.4
27.5°	4133.0	4184.8	4244.7	4220.7	4178.9
30°	3903.7	3979.5	4079.2	4059.2	4029.3
32.5°	3686.4	3762.2	3899.7	3891.8	3875.8
35°	3489.0	3536.9	3698.4	3718.3	3704.4
37.5°	3301.6	3345.5	3497.0	3542.9	3530.9
40°	3104.2	3152.1	3271.7	3353.5	3357.4
42.5°	2908.9	2954.7	3052.4	3170.0	3170.0
45°	2701.5	2747.4	2837.1	2966.7	2982.6
47.5°	2498.1	2546.0	2633.7	2763.3	2789.2
50°	2298.8	2342.6	2430.4	2556.0	2595.8
52.5°	2091.4	2139.3	2225.0	2340.6	2398.5
55°	1892.1	1924.0	2017.7	2129.3	2191.1
57.5°	1684.7	1714.6	1820.3	1916.0	1979.8
60°	1485.3	1523.2	1605.0	1702.6	1776.4
62.5°	1293.9	1333.8	1403.6	1489.3	1573.1
65°	1108.5	1138.4	1206.2	1291.9	1365.7
67.5°	929.1	955.0	1022.8	1082.6	1160.4
70°	747.7	781.5	831.4	889.2	939.0
72.5°	602.1	616.1	657.9	699.8	751.6
75°	444.6	468.5	502.4	526.3	556.3
77.5°	319.0	333.0	352.9	372.8	400.7
80°	213.3	219.3	237.3	241.2	263.2
82.5°	129.6	133.6	137.6	139.6	147.5
85°	69.8	69.8	69.8	65.8	65.8
87.5°	39.9	39.9	33.9	27.9	19.9
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)