

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: P557715

Luminaire Tested: **FUSL-12-4-LD4-3HI-30-UNV-82-85-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: P557715  
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-30-UNV-82-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

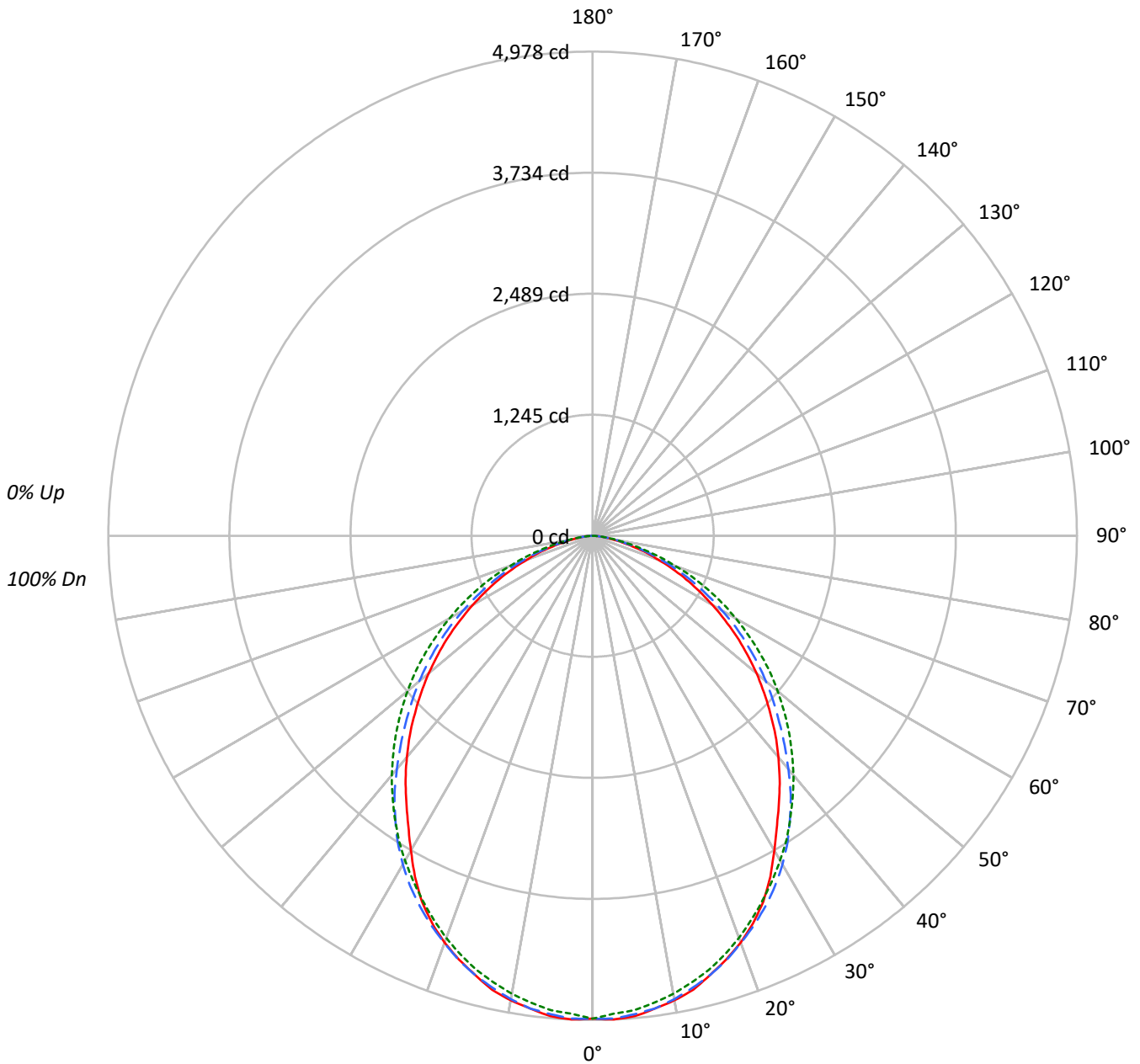
Lumens per Lamp: N/A  
Luminaire Lumens: 11480.0 lumens  
Efficiency: N/A  
Efficacy: 88.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
Input Voltage (V): NR  
Input Current (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°	13360	13360	13360
5°	13396	13339	13226
10°	13254	13217	13066
15°	13019	13019	12870
20°	12743	12759	12595
25°	12323	12476	12278
30°	11604	12126	11978
35°	10965	11623	11642
40°	10432	10995	11283
45°	9835	10329	10859
50°	9207	9733	10397
55°	8492	9056	9834
60°	7648	8263	9146
65°	6753	7347	8319
70°	5628	6258	7069
75°	4422	4997	5532
80°	3163	3518	3902
85°	2062	2062	1942



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	467.5	4.1
10°-20°	1313.2	11.4
20°-30°	1919.0	16.7
30°-40°	2178.3	19.0
40°-50°	2102.8	18.3
50°-60°	1734.7	15.1
60°-70°	1155.2	10.1
70°-80°	516.9	4.5
80°-90°	92.5	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°	3699.7	32.2
0°-40°	5878.0	51.2
0°-60°	9715.5	84.6
0°-90°	11480.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11480.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4965	4965	4965	4965	4965	
5°	4959	4957	4938	4911	4896	469
15°	4673	4684	4673	4652	4620	1317
25°	4150	4183	4202	4171	4135	1901
35°	3338	3384	3538	3557	3544	2091
45°	2584	2628	2714	2838	2853	1994
55°	1810	1841	1930	2037	2096	1616
65°	1060	1089	1154	1236	1306	1052
75°	425	448	481	504	532	465
85°	67	67	67	63	63	90
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4964.8	4964.8	4964.8	4964.8	4964.8
2.5°	4978.2	4980.1	4968.6	4938.1	4919.0
5°	4959.1	4957.2	4938.1	4911.4	4896.1
7.5°	4903.8	4907.6	4901.9	4863.7	4842.7
10°	4850.4	4852.3	4837.0	4806.5	4781.7
12.5°	4781.7	4779.8	4758.8	4743.6	4703.5
15°	4673.0	4684.4	4673.0	4652.0	4619.6
17.5°	4568.1	4568.1	4575.7	4539.5	4514.7
20°	4449.8	4455.5	4455.5	4426.9	4398.3
22.5°	4312.5	4329.7	4335.4	4304.9	4270.5
25°	4150.4	4182.8	4201.9	4171.4	4135.1
27.5°	3953.9	4003.5	4060.7	4037.8	3997.8
30°	3734.6	3807.0	3902.4	3883.3	3854.7
32.5°	3526.7	3599.1	3730.8	3723.1	3707.9
35°	3337.8	3383.6	3538.1	3557.2	3543.8
37.5°	3158.6	3200.5	3345.5	3389.3	3377.9
40°	2969.7	3015.5	3129.9	3208.1	3212.0
42.5°	2782.8	2826.7	2920.1	3032.7	3032.7
45°	2584.4	2628.3	2714.1	2838.1	2853.4
47.5°	2389.9	2435.7	2519.6	2643.6	2668.4
50°	2199.2	2241.1	2325.0	2445.2	2483.4
52.5°	2000.8	2046.6	2128.6	2239.2	2294.5
55°	1810.1	1840.6	1930.2	2037.0	2096.2
57.5°	1611.7	1640.3	1741.4	1833.0	1894.0
60°	1421.0	1457.2	1535.4	1628.9	1699.4
62.5°	1237.9	1276.0	1342.8	1424.8	1504.9
65°	1060.5	1089.1	1153.9	1236.0	1306.5
67.5°	888.8	913.6	978.5	1035.7	1110.1
70°	715.3	747.7	795.4	850.7	898.4
72.5°	576.0	589.4	629.4	669.5	719.1
75°	425.3	448.2	480.6	503.5	532.1
77.5°	305.2	318.5	337.6	356.7	383.4
80°	204.1	209.8	227.0	230.8	251.8
82.5°	124.0	127.8	131.6	133.5	141.1
85°	66.8	66.8	66.8	62.9	62.9
87.5°	38.1	38.1	32.4	26.7	19.1
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)