

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: P557831

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-81-87-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: P557831  
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-81-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

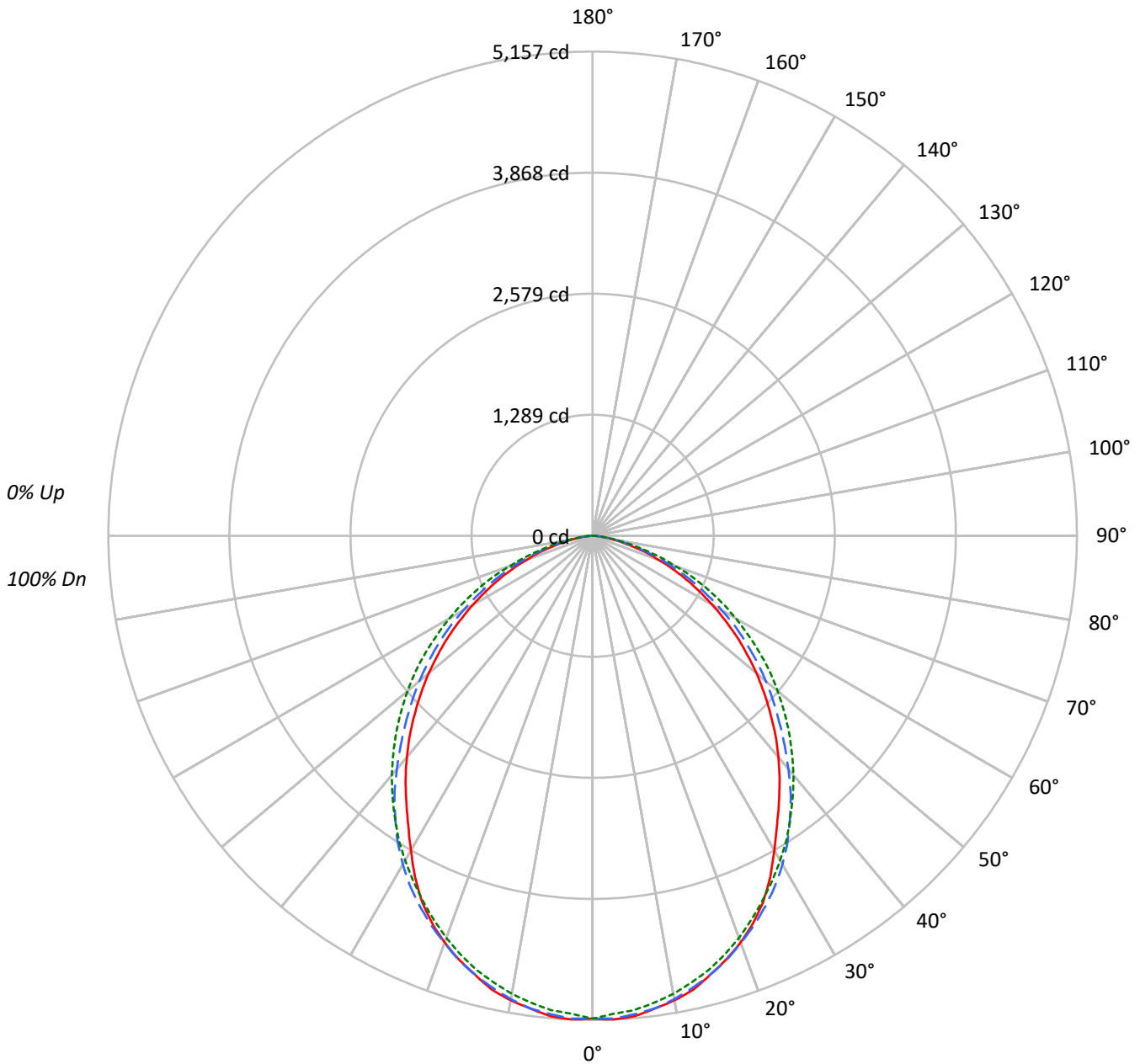
Lumens per Lamp: N/A  
Luminaire Lumens: 11892.0 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	13840	13840	13840
5°	13877	13818	13701
10°	13729	13691	13535
15°	13486	13486	13332
20°	13200	13217	13047
25°	12765	12924	12718
30°	12021	12561	12408
35°	11358	12040	12060
40°	10806	11390	11688
45°	10188	10700	11249
50°	9537	10083	10770
55°	8797	9381	10187
60°	7922	8560	9474
65°	6995	7612	8618
70°	5829	6482	7322
75°	4581	5177	5731
80°	3276	3643	4042
85°	2137	2137	2013



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	484.2	4.1
10°-20°	1360.3	11.4
20°-30°	1987.9	16.7
30°-40°	2256.5	19.0
40°-50°	2178.3	18.3
50°-60°	1796.9	15.1
60°-70°	1196.6	10.1
70°-80°	535.5	4.5
80°-90°	95.8	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°	3832.5	32.2
0°-40°	6088.9	51.2
0°-60°	10064.1	84.6
0°-90°	11892.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11892.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5143	5143	5143	5143	5143	
5°	5137	5135	5115	5088	5072	486
15°	4841	4852	4841	4819	4785	1365
25°	4299	4333	4353	4321	4284	1969
35°	3458	3505	3665	3685	3671	2166
45°	2677	2723	2812	2940	2956	2066
55°	1875	1907	2000	2110	2171	1674
65°	1098	1128	1195	1280	1353	1089
75°	441	464	498	522	551	482
85°	69	69	69	65	65	93
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5143.0	5143.0	5143.0	5143.0	5143.0
2.5°	5156.8	5158.8	5146.9	5115.3	5095.6
5°	5137.1	5135.1	5115.3	5087.7	5071.9
7.5°	5079.8	5083.7	5077.8	5038.3	5016.5
10°	5024.4	5026.4	5010.6	4979.0	4953.3
12.5°	4953.3	4951.3	4929.6	4913.8	4872.3
15°	4840.7	4852.5	4840.7	4819.0	4785.4
17.5°	4732.0	4732.0	4739.9	4702.4	4676.7
20°	4609.5	4615.4	4615.4	4585.8	4556.2
22.5°	4467.3	4485.0	4491.0	4459.4	4423.8
25°	4299.3	4332.9	4352.7	4321.1	4283.5
27.5°	4095.8	4147.2	4206.5	4182.7	4141.3
30°	3868.6	3943.7	4042.5	4022.7	3993.1
32.5°	3653.2	3728.3	3864.6	3856.7	3840.9
35°	3457.6	3505.1	3665.1	3684.8	3671.0
37.5°	3271.9	3315.4	3465.5	3511.0	3499.1
40°	3076.3	3123.7	3242.3	3323.3	3327.2
42.5°	2882.7	2928.1	3024.9	3141.5	3141.5
45°	2677.2	2722.6	2811.6	2940.0	2955.8
47.5°	2475.7	2523.1	2610.0	2738.4	2764.1
50°	2278.1	2321.6	2408.5	2533.0	2572.5
52.5°	2072.6	2120.0	2205.0	2319.6	2376.9
55°	1875.0	1906.6	1999.5	2110.1	2171.4
57.5°	1669.5	1699.2	1803.9	1898.7	1962.0
60°	1472.0	1509.5	1590.5	1687.3	1760.4
62.5°	1282.3	1321.8	1391.0	1475.9	1558.9
65°	1098.5	1128.2	1195.4	1280.3	1353.4
67.5°	920.7	946.4	1013.6	1072.9	1149.9
70°	740.9	774.5	823.9	881.2	930.6
72.5°	596.7	610.5	652.0	693.5	744.9
75°	440.6	464.3	497.9	521.6	551.2
77.5°	316.1	330.0	349.7	369.5	397.1
80°	211.4	217.3	235.1	239.1	260.8
82.5°	128.4	132.4	136.3	138.3	146.2
85°	69.2	69.2	69.2	65.2	65.2
87.5°	39.5	39.5	33.6	27.7	19.8
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)