

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: P557837

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-81-96-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: P557837  
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-81-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

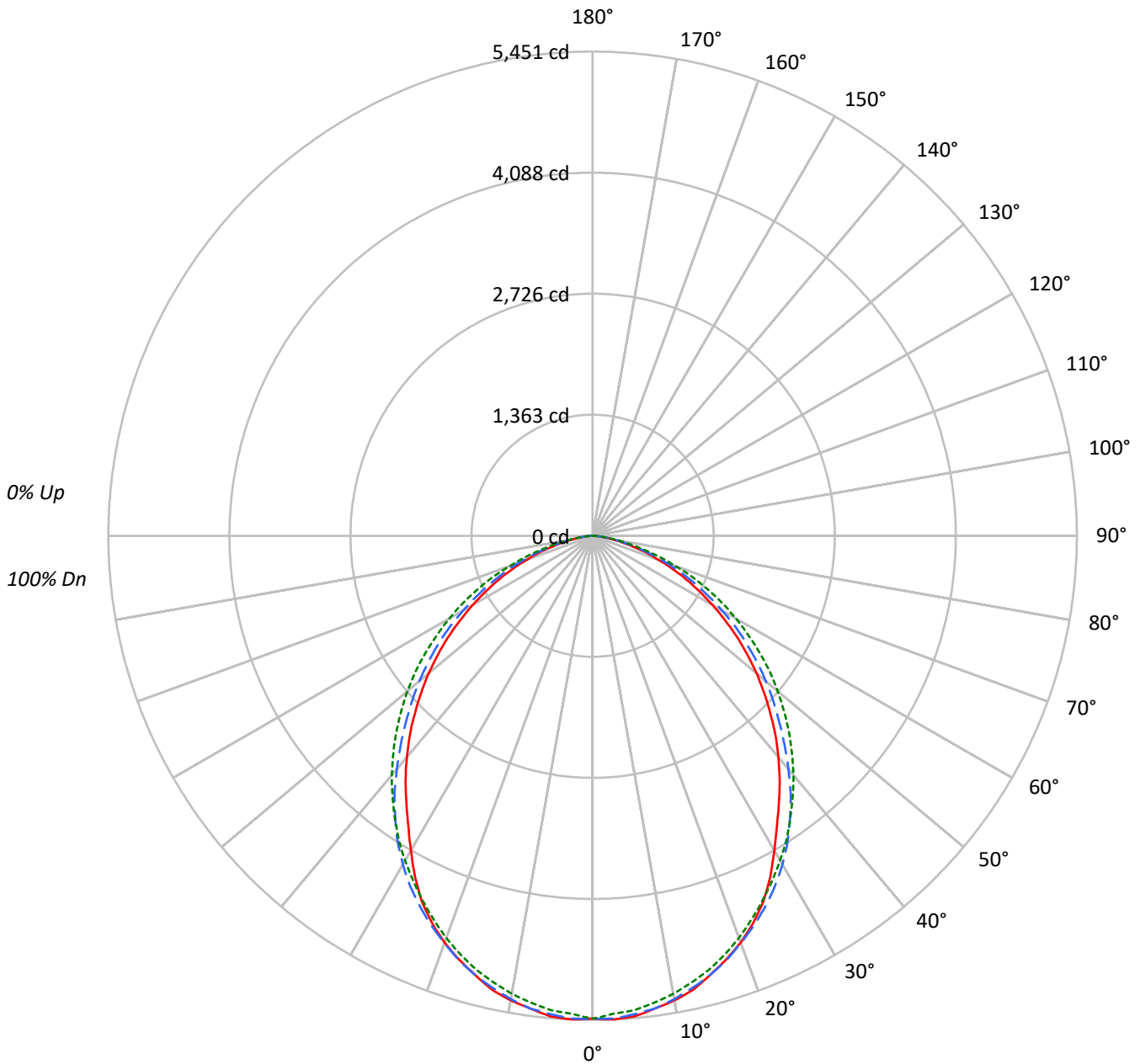
Lumens per Lamp: N/A  
Luminaire Lumens: 12571.0 lumens  
Efficiency: N/A  
Efficacy: 97.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	14630	14630	14630
5°	14669	14607	14483
10°	14513	14473	14308
15°	14256	14256	14093
20°	13954	13972	13792
25°	13494	13662	13445
30°	12707	13278	13116
35°	12007	12728	12748
40°	11424	12040	12355
45°	10770	11311	11891
50°	10082	10659	11385
55°	9299	9917	10769
60°	8374	9049	10015
65°	7394	8046	9110
70°	6162	6852	7740
75°	4843	5472	6058
80°	3464	3851	4272
85°	2257	2257	2127



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	511.9	4.1
10°-20°	1438.0	11.4
20°-30°	2101.4	16.7
30°-40°	2385.3	19.0
40°-50°	2302.6	18.3
50°-60°	1899.5	15.1
60°-70°	1264.9	10.1
70°-80°	566.0	4.5
80°-90°	101.3	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°	4051.3	32.2
0°-40°	6436.6	51.2
0°-60°	10638.8	84.6
0°-90°	12571.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12571.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5437	5437	5437	5437	5437	
5°	5430	5428	5407	5378	5361	514
15°	5117	5130	5117	5094	5059	1443
25°	4545	4580	4601	4568	4528	2081
35°	3655	3705	3874	3895	3881	2290
45°	2830	2878	2972	3108	3124	2184
55°	1982	2016	2114	2231	2295	1769
65°	1161	1193	1264	1353	1431	1151
75°	466	491	526	551	583	509
85°	73	73	73	69	69	99
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5436.6	5436.6	5436.6	5436.6	5436.6
2.5°	5451.3	5453.3	5440.8	5407.4	5386.5
5°	5430.4	5428.3	5407.4	5378.2	5361.4
7.5°	5369.8	5374.0	5367.7	5325.9	5303.0
10°	5311.3	5313.4	5296.7	5263.3	5236.1
12.5°	5236.1	5234.0	5211.1	5194.4	5150.5
15°	5117.1	5129.6	5117.1	5094.1	5058.6
17.5°	5002.2	5002.2	5010.6	4970.9	4943.7
20°	4872.7	4879.0	4879.0	4847.6	4816.3
22.5°	4722.3	4741.1	4747.4	4714.0	4676.4
25°	4544.8	4580.3	4601.2	4567.8	4528.1
27.5°	4329.7	4384.0	4446.6	4421.6	4377.7
30°	4089.5	4168.9	4273.3	4252.4	4221.1
32.5°	3861.8	3941.2	4085.3	4077.0	4060.2
35°	3655.1	3705.2	3874.4	3895.2	3880.6
37.5°	3458.7	3504.7	3663.4	3711.4	3698.9
40°	3252.0	3302.1	3427.4	3513.0	3517.2
42.5°	3047.3	3095.3	3197.7	3320.9	3320.9
45°	2830.1	2878.1	2972.1	3107.8	3124.5
47.5°	2617.0	2667.1	2759.0	2894.8	2922.0
50°	2408.2	2454.1	2546.0	2677.6	2719.4
52.5°	2190.9	2241.1	2330.9	2452.0	2512.6
55°	1982.1	2015.5	2113.7	2230.6	2295.4
57.5°	1764.9	1796.2	1906.9	2007.1	2074.0
60°	1556.0	1595.7	1681.3	1783.7	1860.9
62.5°	1355.5	1397.3	1470.4	1560.2	1647.9
65°	1161.3	1192.6	1263.6	1353.4	1430.7
67.5°	973.3	1000.4	1071.5	1134.1	1215.6
70°	783.2	818.7	870.9	931.5	983.7
72.5°	630.8	645.4	689.2	733.1	787.4
75°	465.8	490.8	526.3	551.4	582.7
77.5°	334.2	348.8	369.7	390.6	419.8
80°	223.5	229.7	248.5	252.7	275.7
82.5°	135.8	139.9	144.1	146.2	154.6
85°	73.1	73.1	73.1	68.9	68.9
87.5°	41.8	41.8	35.5	29.2	20.9
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)