

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: P557925

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-UNV-93-86-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: P557925  
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-50-UNV-93-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

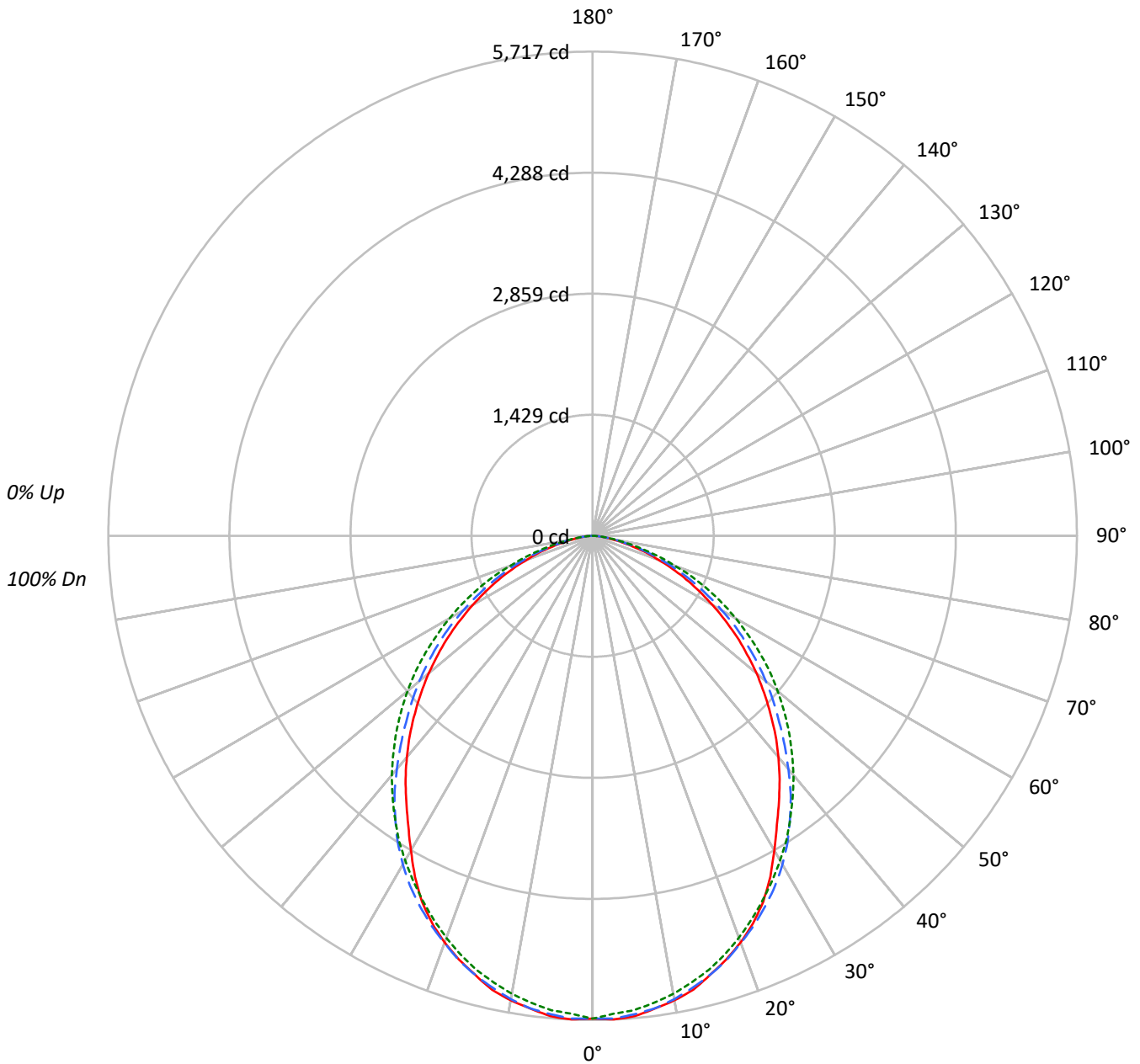
Lumens per Lamp: N/A  
Luminaire Lumens: 13183.0 lumens  
Efficiency: N/A  
Efficacy: 101.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	15342	15342	15342
5°	15383	15318	15188
10°	15220	15178	15004
15°	14950	14950	14779
20°	14633	14652	14464
25°	14151	14327	14099
30°	13326	13925	13755
35°	12592	13347	13369
40°	11980	12626	12957
45°	11294	11861	12470
50°	10572	11178	11938
55°	9752	10399	11293
60°	8782	9489	10503
65°	7754	8437	9553
70°	6463	7186	8117
75°	5078	5739	6354
80°	3632	4038	4480
85°	2368	2368	2232



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	536.8	4.1
10°-20°	1508.0	11.4
20°-30°	2203.7	16.7
30°-40°	2501.4	19.0
40°-50°	2414.8	18.3
50°-60°	1992.0	15.1
60°-70°	1326.5	10.1
70°-80°	593.6	4.5
80°-90°	106.2	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°	4248.5	32.2
0°-40°	6749.9	51.2
0°-60°	11156.7	84.6
0°-90°	13183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13183.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5701	5701	5701	5701	5701	
5°	5695	5692	5671	5640	5622	539
15°	5366	5379	5366	5342	5305	1513
25°	4766	4803	4825	4790	4748	2183
35°	3833	3886	4063	4085	4070	2402
45°	2968	3018	3117	3259	3277	2290
55°	2079	2114	2217	2339	2407	1855
65°	1218	1251	1325	1419	1500	1208
75°	488	515	552	578	611	534
85°	77	77	77	72	72	103
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5701.3	5701.3	5701.3	5701.3	5701.3
2.5°	5716.6	5718.8	5705.7	5670.6	5648.7
5°	5694.7	5692.5	5670.6	5640.0	5622.5
7.5°	5631.2	5635.6	5629.0	5585.2	5561.1
10°	5569.9	5572.1	5554.6	5519.5	5491.0
12.5°	5491.0	5488.8	5464.8	5447.2	5401.2
15°	5366.2	5379.3	5366.2	5342.1	5304.9
17.5°	5245.7	5245.7	5254.5	5212.9	5184.4
20°	5109.9	5116.5	5116.5	5083.6	5050.8
22.5°	4952.2	4971.9	4978.5	4943.5	4904.0
25°	4766.1	4803.3	4825.2	4790.1	4748.5
27.5°	4540.5	4597.4	4663.1	4636.8	4590.8
30°	4288.6	4371.8	4481.3	4459.4	4426.6
32.5°	4049.8	4133.1	4284.2	4275.4	4257.9
35°	3833.0	3885.6	4063.0	4084.9	4069.5
37.5°	3627.1	3675.3	3841.8	3892.1	3879.0
40°	3410.3	3462.8	3594.3	3684.1	3688.4
42.5°	3195.6	3246.0	3353.3	3482.6	3482.6
45°	2967.8	3018.2	3116.8	3259.1	3276.7
47.5°	2744.4	2797.0	2893.4	3035.7	3064.2
50°	2525.4	2573.6	2670.0	2807.9	2851.7
52.5°	2297.6	2350.2	2444.4	2571.4	2634.9
55°	2078.6	2113.6	2216.6	2339.2	2407.1
57.5°	1850.8	1883.6	1999.7	2104.9	2175.0
60°	1631.8	1673.4	1763.2	1870.5	1951.5
62.5°	1421.5	1465.3	1542.0	1636.1	1728.1
65°	1217.8	1250.7	1325.1	1419.3	1500.3
67.5°	1020.7	1049.1	1123.6	1189.3	1274.7
70°	821.4	858.6	913.3	976.9	1031.6
72.5°	661.5	676.8	722.8	768.8	825.7
75°	488.4	514.7	552.0	578.2	611.1
77.5°	350.4	365.8	387.7	409.6	440.2
80°	234.4	240.9	260.6	265.0	289.1
82.5°	142.4	146.7	151.1	153.3	162.1
85°	76.7	76.7	76.7	72.3	72.3
87.5°	43.8	43.8	37.2	30.7	21.9
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)