

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: P557459

Luminaire Tested: **FUSL-12-4-LD4-2STD-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: P557459  
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-LD4-2STD-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**

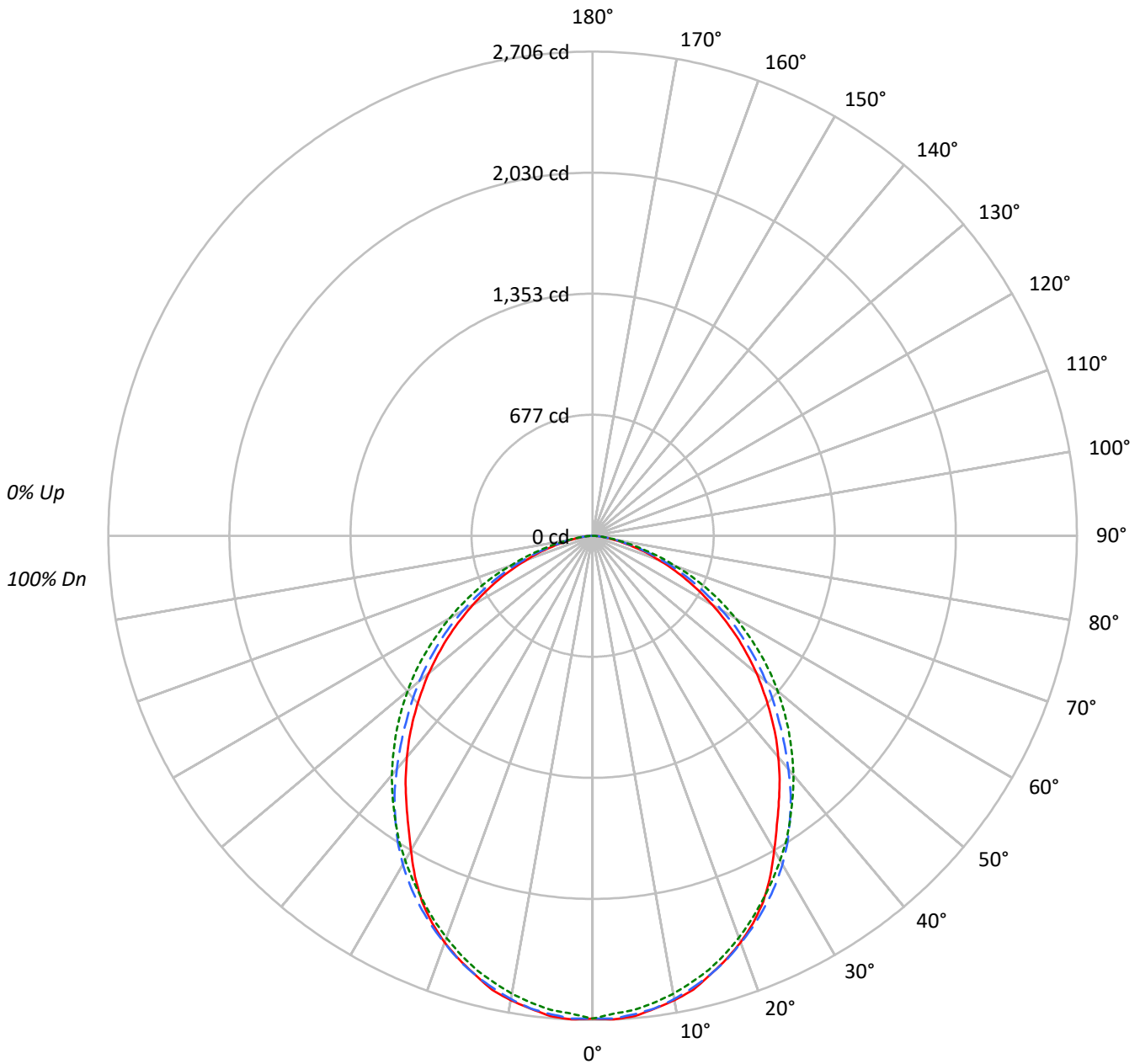
Lumens per Lamp: N/A  
Luminaire Lumens: 6239.0 lumens  
Efficiency: N/A  
Efficacy: 93.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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					20					
RC	80					70					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7261	7261	7261
5°	7280	7249	7188
10°	7203	7183	7101
15°	7075	7075	6994
20°	6925	6934	6845
25°	6697	6780	6673
30°	6307	6590	6509
35°	5959	6317	6327
40°	5669	5975	6132
45°	5345	5613	5901
50°	5004	5290	5650
55°	4615	4921	5345
60°	4156	4491	4971
65°	3670	3993	4521
70°	3058	3401	3841
75°	2404	2716	3007
80°	1719	1912	2120
85°	1121	1121	1056



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	254.0	4.1
10°-20°	713.7	11.4
20°-30°	1042.9	16.7
30°-40°	1183.8	19.0
40°-50°	1142.8	18.3
50°-60°	942.7	15.1
60°-70°	627.8	10.1
70°-80°	280.9	4.5
80°-90°	50.3	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°	2010.7	32.2
0°-40°	3194.5	51.2
0°-60°	5280.0	84.6
0°-90°	6239.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6239.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2698	2698	2698	2698	2698	
5°	2695	2694	2684	2669	2661	255
15°	2540	2546	2540	2528	2511	716
25°	2256	2273	2284	2267	2247	1033
35°	1814	1839	1923	1933	1926	1137
45°	1405	1428	1475	1542	1551	1084
55°	984	1000	1049	1107	1139	878
65°	576	592	627	672	710	571
75°	231	244	261	274	289	253
85°	36	36	36	34	34	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2698.2	2698.2	2698.2	2698.2	2698.2
2.5°	2705.5	2706.5	2700.3	2683.7	2673.3
5°	2695.1	2694.1	2683.7	2669.2	2660.9
7.5°	2665.0	2667.1	2664.0	2643.3	2631.9
10°	2636.0	2637.0	2628.8	2612.2	2598.7
12.5°	2598.7	2597.7	2586.3	2578.0	2556.2
15°	2539.6	2545.8	2539.6	2528.2	2510.6
17.5°	2482.6	2482.6	2486.7	2467.1	2453.6
20°	2418.3	2421.4	2421.4	2405.9	2390.3
22.5°	2343.7	2353.0	2356.1	2339.6	2320.9
25°	2255.6	2273.2	2283.6	2267.0	2247.3
27.5°	2148.8	2175.8	2206.9	2194.4	2172.7
30°	2029.6	2069.0	2120.8	2110.5	2094.9
32.5°	1916.6	1956.0	2027.5	2023.4	2015.1
35°	1814.0	1838.9	1922.8	1933.2	1926.0
37.5°	1716.6	1739.4	1818.2	1842.0	1835.8
40°	1613.9	1638.8	1701.0	1743.5	1745.6
42.5°	1512.4	1536.2	1587.0	1648.2	1648.2
45°	1404.6	1428.4	1475.0	1542.4	1550.7
47.5°	1298.8	1323.7	1369.3	1436.7	1450.2
50°	1195.2	1218.0	1263.6	1328.9	1349.6
52.5°	1087.4	1112.2	1156.8	1216.9	1247.0
55°	983.7	1000.3	1049.0	1107.1	1139.2
57.5°	875.9	891.5	946.4	996.1	1029.3
60°	772.2	791.9	834.4	885.2	923.6
62.5°	672.7	693.5	729.7	774.3	817.9
65°	576.3	591.9	627.1	671.7	710.1
67.5°	483.0	496.5	531.8	562.9	603.3
70°	388.7	406.3	432.3	462.3	488.2
72.5°	313.0	320.3	342.1	363.8	390.8
75°	231.2	243.6	261.2	273.7	289.2
77.5°	165.9	173.1	183.5	193.8	208.4
80°	110.9	114.0	123.4	125.4	136.8
82.5°	67.4	69.5	71.5	72.6	76.7
85°	36.3	36.3	36.3	34.2	34.2
87.5°	20.7	20.7	17.6	14.5	10.4
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)