

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: P558429

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-82-96-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: P558429  
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-LD4-3STD-50-UNV-82-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

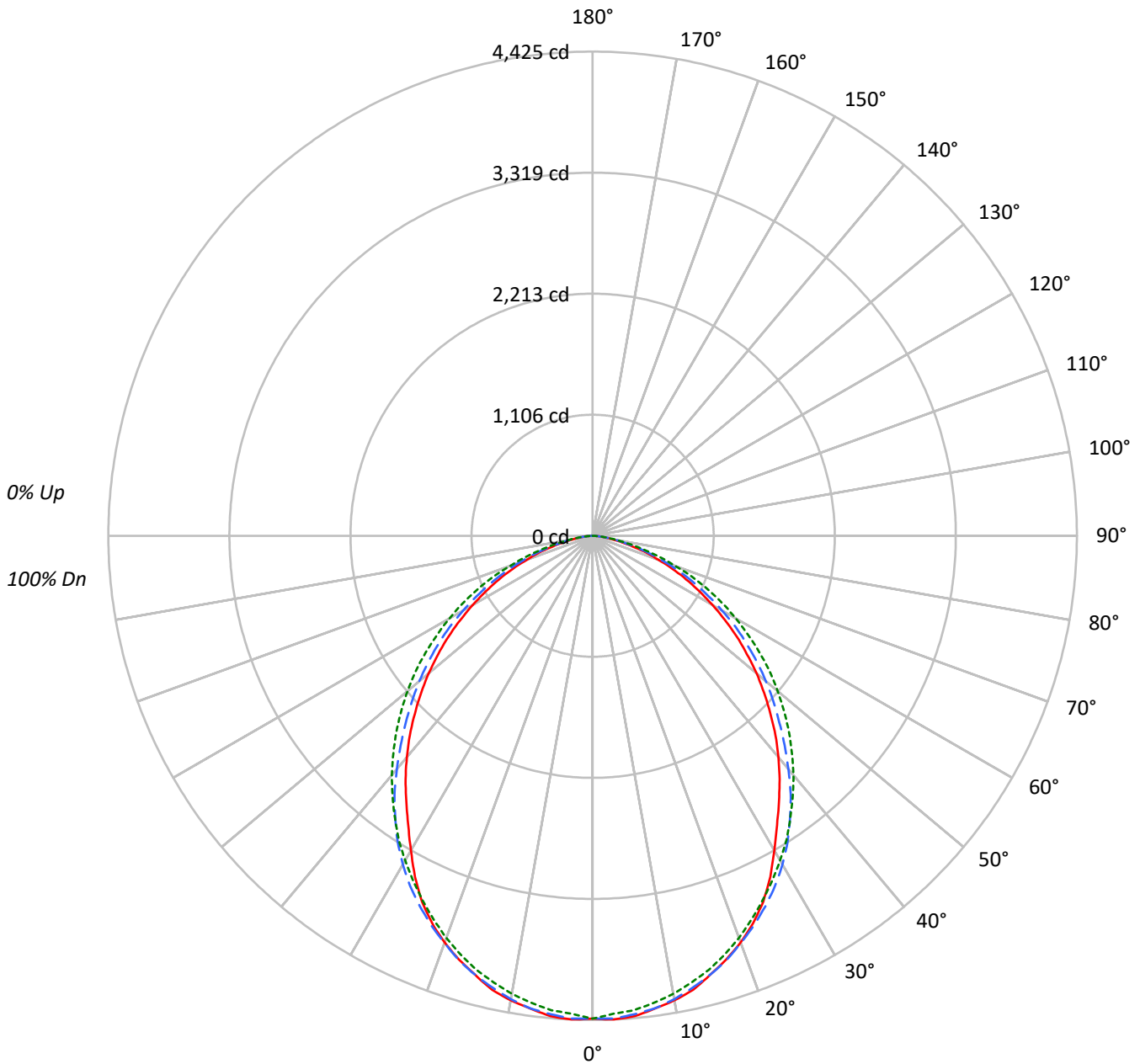
Lumens per Lamp: N/A  
Luminaire Lumens: 10204.0 lumens  
Efficiency: N/A  
Efficacy: 102.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	11875	11875	11875
5°	11907	11856	11756
10°	11780	11748	11614
15°	11572	11572	11439
20°	11326	11341	11196
25°	10954	11089	10913
30°	10315	10778	10646
35°	9746	10331	10348
40°	9272	9773	10029
45°	8742	9181	9652
50°	8183	8652	9241
55°	7548	8049	8741
60°	6797	7345	8129
65°	6002	6531	7394
70°	5002	5563	6283
75°	3931	4442	4918
80°	2811	3126	3468
85°	1831	1831	1726



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	415.5	4.1
10°-20°	1167.2	11.4
20°-30°	1705.7	16.7
30°-40°	1936.2	19.0
40°-50°	1869.1	18.3
50°-60°	1541.9	15.1
60°-70°	1026.8	10.1
70°-80°	459.5	4.5
80°-90°	82.2	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°	3288.5	32.2
0°-40°	5224.6	51.2
0°-60°	8635.6	84.6
0°-90°	10204.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10204.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4413	4413	4413	4413	4413	
5°	4408	4406	4389	4366	4352	417
15°	4154	4164	4154	4135	4106	1171
25°	3689	3718	3735	3708	3676	1689
35°	2967	3008	3145	3162	3150	1859
45°	2297	2336	2412	2523	2536	1772
55°	1609	1636	1716	1811	1863	1436
65°	943	968	1026	1099	1161	935
75°	378	398	427	448	473	413
85°	59	59	59	56	56	80
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4413.0	4413.0	4413.0	4413.0	4413.0
2.5°	4424.8	4426.5	4416.4	4389.2	4372.3
5°	4407.9	4406.2	4389.2	4365.5	4351.9
7.5°	4358.7	4362.1	4357.0	4323.1	4304.5
10°	4311.2	4312.9	4299.4	4272.3	4250.2
12.5°	4250.2	4248.5	4229.9	4216.3	4180.7
15°	4153.6	4163.8	4153.6	4134.9	4106.1
17.5°	4060.3	4060.3	4067.1	4034.9	4012.9
20°	3955.2	3960.3	3960.3	3934.9	3909.5
22.5°	3833.2	3848.4	3853.5	3826.4	3795.9
25°	3689.1	3717.9	3734.8	3707.7	3675.5
27.5°	3514.4	3558.5	3609.4	3589.0	3553.4
30°	3319.5	3383.9	3468.7	3451.7	3426.3
32.5°	3134.7	3199.1	3316.1	3309.3	3295.7
35°	2966.8	3007.5	3144.9	3161.8	3149.9
37.5°	2807.5	2844.8	2973.6	3012.6	3002.4
40°	2639.6	2680.3	2782.1	2851.6	2855.0
42.5°	2473.5	2512.5	2595.6	2695.6	2695.6
45°	2297.2	2336.2	2412.5	2522.7	2536.2
47.5°	2124.3	2164.9	2239.5	2349.7	2371.8
50°	1954.7	1992.0	2066.6	2173.4	2207.3
52.5°	1778.4	1819.1	1892.0	1990.3	2039.5
55°	1608.9	1636.0	1715.7	1810.6	1863.2
57.5°	1432.6	1458.0	1547.8	1629.2	1683.5
60°	1263.0	1295.2	1364.7	1447.8	1510.5
62.5°	1100.3	1134.2	1193.5	1266.4	1337.6
65°	942.6	968.0	1025.7	1098.6	1161.3
67.5°	790.0	812.1	869.7	920.6	986.7
70°	635.8	664.6	707.0	756.1	798.5
72.5°	512.0	523.9	559.5	595.1	639.1
75°	378.1	398.4	427.2	447.6	473.0
77.5°	271.3	283.1	300.1	317.0	340.8
80°	181.4	186.5	201.7	205.1	223.8
82.5°	110.2	113.6	117.0	118.7	125.5
85°	59.3	59.3	59.3	55.9	55.9
87.5°	33.9	33.9	28.8	23.7	17.0
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)