

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: P558240

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-93-84-EDD-90**

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: P558240  
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-30-UNV-93-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

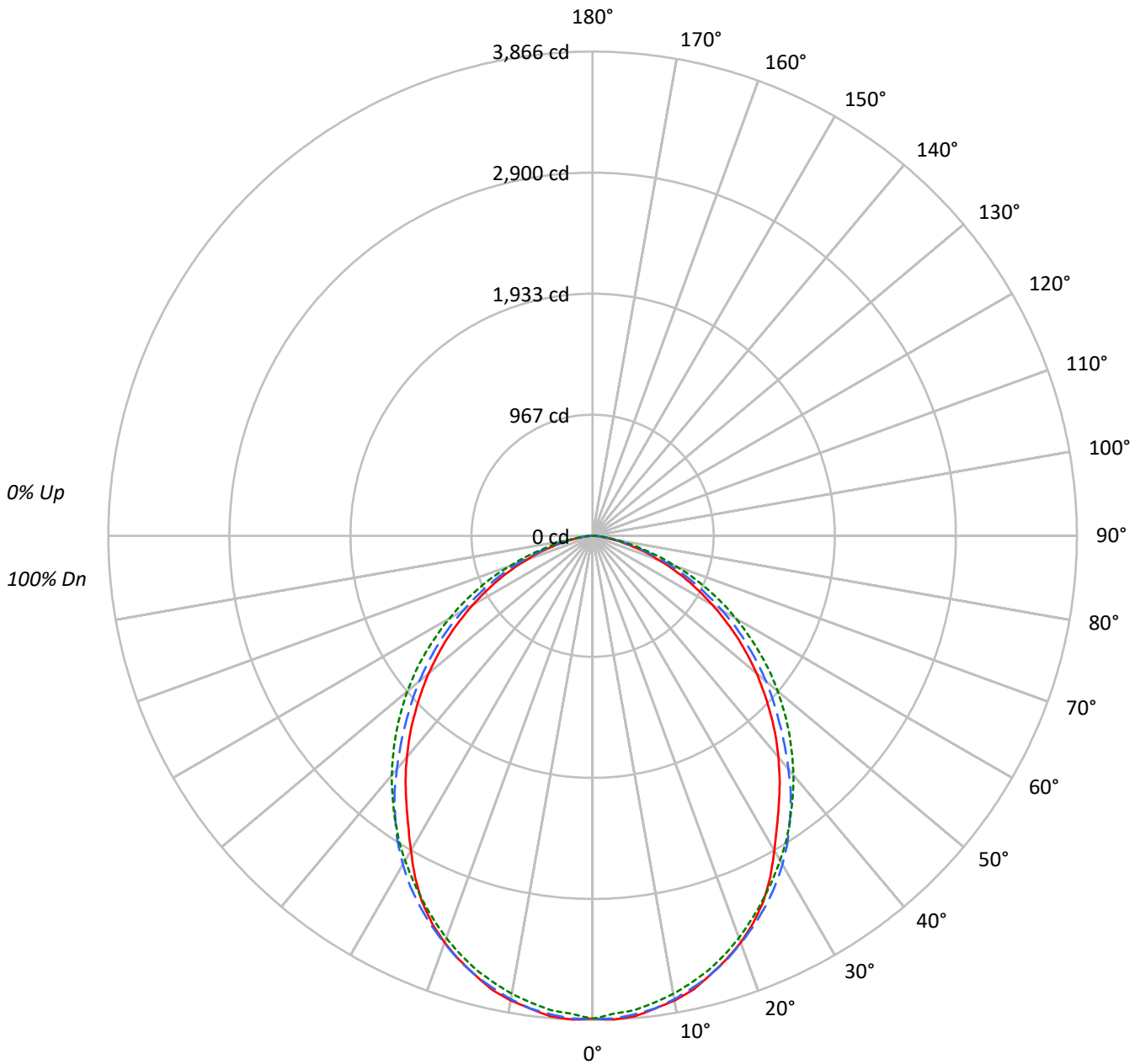
Lumens per Lamp: N/A  
Luminaire Lumens: 8916.0 lumens  
Efficiency: N/A  
Efficacy: 89.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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					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°	10376	10376	10376
5°	10404	10360	10272
10°	10294	10265	10148
15°	10111	10111	9995
20°	9897	9909	9782
25°	9571	9690	9536
30°	9013	9418	9303
35°	8516	9027	9042
40°	8102	8539	8763
45°	7639	8022	8434
50°	7150	7560	8074
55°	6595	7033	7638
60°	5940	6418	7104
65°	5244	5706	6461
70°	4371	4860	5489
75°	3434	3881	4297
80°	2456	2732	3030
85°	1599	1599	1510



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	363.0	4.1
10°-20°	1019.9	11.4
20°-30°	1490.4	16.7
30°-40°	1691.8	19.0
40°-50°	1633.2	18.3
50°-60°	1347.3	15.1
60°-70°	897.2	10.1
70°-80°	401.5	4.5
80°-90°	71.8	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°	2873.4	32.2
0°-40°	4565.2	51.2
0°-60°	7545.6	84.6
0°-90°	8916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8916.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3856	3856	3856	3856	3856	
5°	3852	3850	3835	3814	3803	365
15°	3629	3638	3629	3613	3588	1023
25°	3223	3249	3263	3240	3212	1476
35°	2592	2628	2748	2763	2752	1624
45°	2007	2041	2108	2204	2216	1549
55°	1406	1430	1499	1582	1628	1255
65°	824	846	896	960	1015	817
75°	330	348	373	391	413	361
85°	52	52	52	49	49	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3855.9	3855.9	3855.9	3855.9	3855.9
2.5°	3866.3	3867.8	3858.9	3835.2	3820.4
5°	3851.5	3850.0	3835.2	3814.5	3802.6
7.5°	3808.5	3811.5	3807.1	3777.4	3761.1
10°	3767.1	3768.5	3756.7	3733.0	3713.7
12.5°	3713.7	3712.2	3696.0	3684.1	3653.0
15°	3629.3	3638.2	3629.3	3613.0	3587.8
17.5°	3547.8	3547.8	3553.7	3525.6	3506.3
20°	3456.0	3460.4	3460.4	3438.2	3416.0
22.5°	3349.3	3362.7	3367.1	3343.4	3316.7
25°	3223.4	3248.6	3263.4	3239.7	3211.6
27.5°	3070.8	3109.3	3153.8	3136.0	3104.9
30°	2900.5	2956.8	3030.8	3016.0	2993.8
32.5°	2739.0	2795.3	2897.5	2891.6	2879.7
35°	2592.4	2627.9	2747.9	2762.7	2752.3
37.5°	2453.1	2485.7	2598.3	2632.3	2623.5
40°	2306.5	2342.0	2430.9	2491.6	2494.6
42.5°	2161.3	2195.4	2267.9	2355.3	2355.3
45°	2007.2	2041.3	2108.0	2204.2	2216.1
47.5°	1856.1	1891.7	1956.9	2053.1	2072.4
50°	1708.0	1740.6	1805.8	1899.1	1928.7
52.5°	1553.9	1589.5	1653.2	1739.1	1782.1
55°	1405.8	1429.5	1499.1	1582.1	1628.0
57.5°	1251.7	1274.0	1352.5	1423.6	1471.0
60°	1103.6	1131.7	1192.5	1265.1	1319.9
62.5°	961.4	991.0	1042.9	1106.6	1168.8
65°	823.6	845.8	896.2	959.9	1014.7
67.5°	690.3	709.6	759.9	804.4	862.1
70°	555.5	580.7	617.7	660.7	697.7
72.5°	447.4	457.7	488.8	520.0	558.5
75°	330.3	348.1	373.3	391.1	413.3
77.5°	237.0	247.4	262.2	277.0	297.8
80°	158.5	162.9	176.3	179.2	195.5
82.5°	96.3	99.3	102.2	103.7	109.6
85°	51.8	51.8	51.8	48.9	48.9
87.5°	29.6	29.6	25.2	20.7	14.8
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)