

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: P558309

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-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: P558309  
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-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

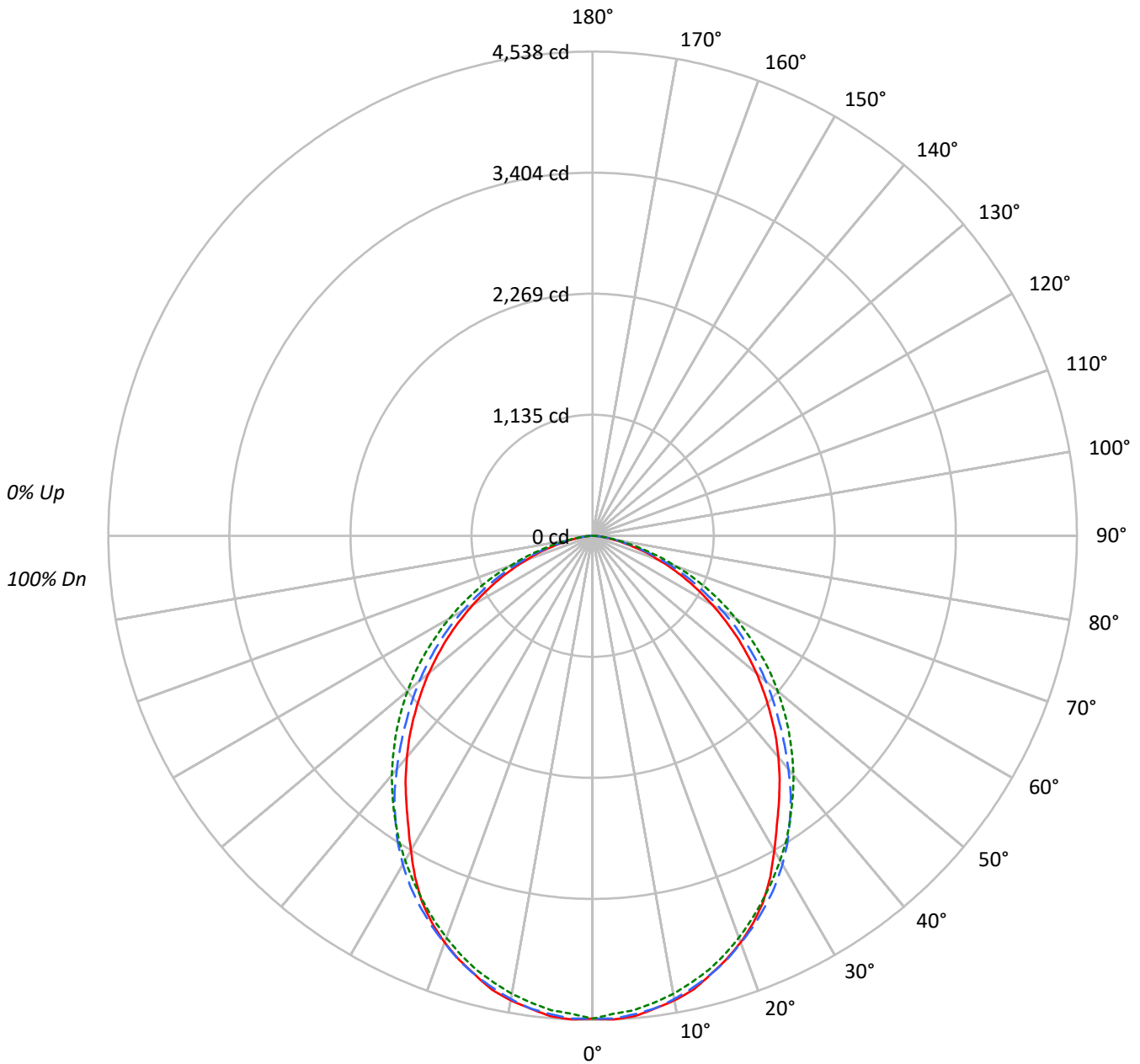
Lumens per Lamp: N/A  
Luminaire Lumens: 10464.0 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	12178	12178	12178
5°	12210	12159	12055
10°	12081	12047	11910
15°	11866	11866	11731
20°	11615	11630	11481
25°	11233	11372	11191
30°	10577	11053	10918
35°	9995	10594	10611
40°	9509	10022	10284
45°	8965	9415	9898
50°	8392	8872	9476
55°	7741	8254	8964
60°	6971	7532	8337
65°	6155	6697	7583
70°	5130	5704	6443
75°	4031	4555	5044
80°	2882	3206	3556
85°	1877	1877	1772



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	426.1	4.1
10°-20°	1197.0	11.4
20°-30°	1749.2	16.7
30°-40°	1985.5	19.0
40°-50°	1916.7	18.3
50°-60°	1581.1	15.1
60°-70°	1052.9	10.1
70°-80°	471.2	4.5
80°-90°	84.3	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°	3372.2	32.2
0°-40°	5357.8	51.2
0°-60°	8855.6	84.6
0°-90°	10464.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10464.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4525	4525	4525	4525	4525	
5°	4520	4518	4501	4477	4463	428
15°	4259	4270	4259	4240	4211	1201
25°	3783	3813	3830	3802	3769	1732
35°	3042	3084	3225	3242	3230	1906
45°	2356	2396	2474	2587	2601	1818
55°	1650	1678	1759	1857	1911	1473
65°	967	993	1052	1127	1191	958
75°	388	409	438	459	485	424
85°	61	61	61	57	57	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4525.4	4525.4	4525.4	4525.4	4525.4
2.5°	4537.6	4539.3	4528.9	4501.1	4483.7
5°	4520.2	4518.5	4501.1	4476.7	4462.8
7.5°	4469.8	4473.3	4468.0	4433.3	4414.1
10°	4421.1	4422.8	4408.9	4381.1	4358.5
12.5°	4358.5	4356.8	4337.6	4323.7	4287.2
15°	4259.4	4269.8	4259.4	4240.3	4210.7
17.5°	4163.8	4163.8	4170.7	4137.7	4115.1
20°	4056.0	4061.2	4061.2	4035.1	4009.1
22.5°	3930.8	3946.5	3951.7	3923.9	3892.6
25°	3783.1	3812.6	3830.0	3802.2	3769.1
27.5°	3604.0	3649.2	3701.3	3680.5	3644.0
30°	3404.1	3470.1	3557.0	3539.7	3513.6
32.5°	3214.6	3280.6	3400.6	3393.6	3379.7
35°	3042.4	3084.2	3225.0	3242.4	3230.2
37.5°	2879.0	2917.3	3049.4	3089.4	3078.9
40°	2706.9	2748.6	2852.9	2924.2	2927.7
42.5°	2536.5	2576.5	2661.7	2764.3	2764.3
45°	2355.7	2395.7	2473.9	2586.9	2600.9
47.5°	2178.4	2220.1	2296.6	2409.6	2432.2
50°	2004.5	2042.8	2119.3	2228.8	2263.6
52.5°	1823.7	1865.4	1940.2	2041.0	2091.5
55°	1649.9	1677.7	1759.4	1856.8	1910.7
57.5°	1469.1	1495.1	1587.3	1670.7	1726.4
60°	1295.2	1328.2	1399.5	1484.7	1549.0
62.5°	1128.3	1163.1	1223.9	1298.7	1371.7
65°	966.6	992.7	1051.8	1126.6	1190.9
67.5°	810.2	832.8	891.9	944.0	1011.8
70°	652.0	681.5	725.0	775.4	818.9
72.5°	525.0	537.2	573.7	610.2	655.4
75°	387.7	408.6	438.1	459.0	485.1
77.5°	278.2	290.3	307.7	325.1	349.4
80°	186.0	191.2	206.9	210.4	229.5
82.5°	113.0	116.5	120.0	121.7	128.7
85°	60.8	60.8	60.8	57.4	57.4
87.5°	34.8	34.8	29.6	24.3	17.4
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)