

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: P558375

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-UNV-93-87-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: P558375  
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-40-UNV-93-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

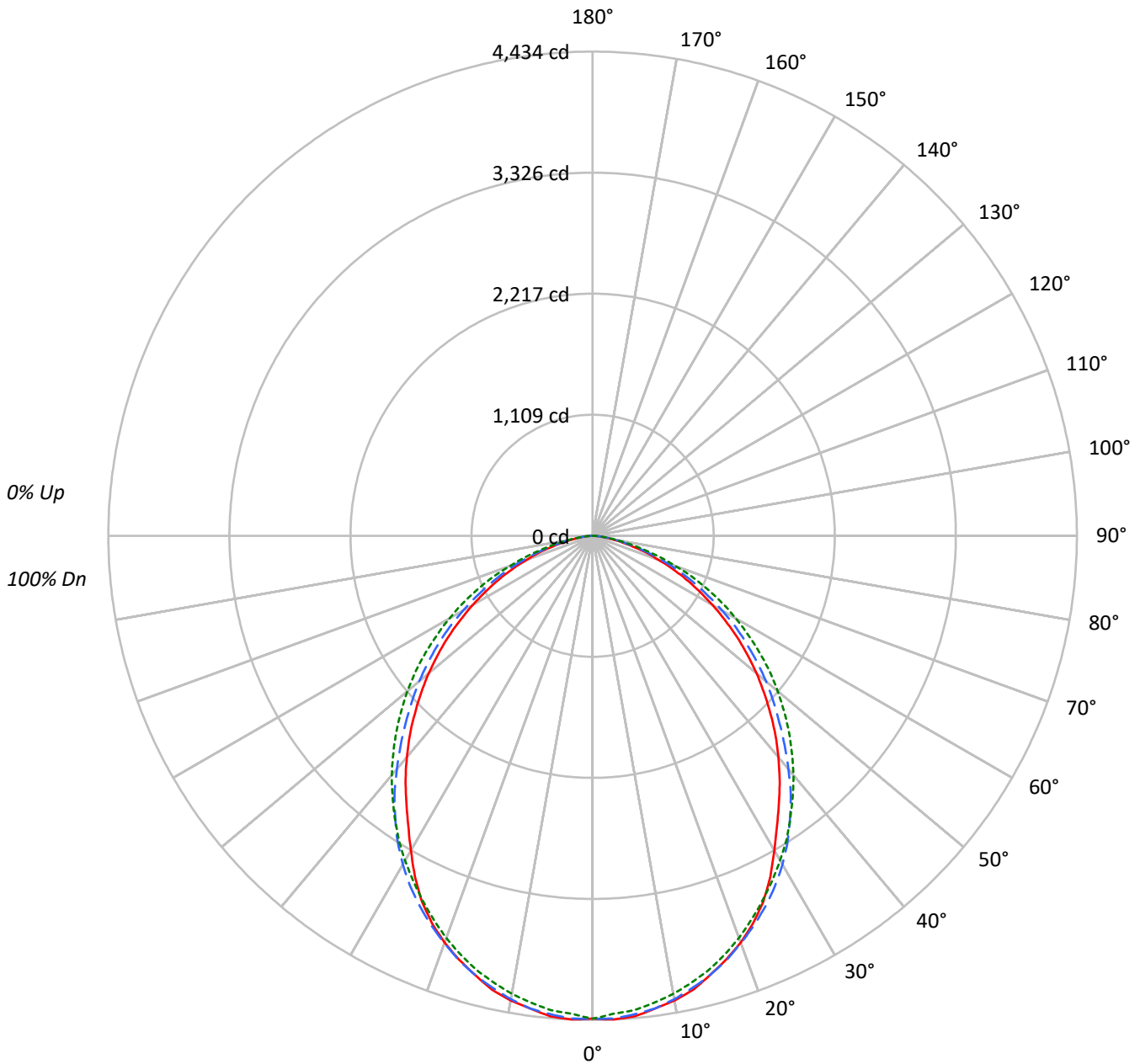
Lumens per Lamp: N/A  
Luminaire Lumens: 10226.0 lumens  
Efficiency: N/A  
Efficacy: 102.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	11901	11901	11901
5°	11933	11882	11781
10°	11806	11773	11639
15°	11596	11596	11464
20°	11351	11365	11220
25°	10977	11113	10937
30°	10337	10801	10669
35°	9767	10353	10370
40°	9292	9794	10051
45°	8761	9201	9673
50°	8201	8670	9261
55°	7564	8067	8760
60°	6812	7361	8147
65°	6015	6545	7410
70°	5013	5574	6296
75°	3939	4451	4928
80°	2817	3133	3476
85°	1837	1837	1732



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	416.4	4.1
10°-20°	1169.8	11.4
20°-30°	1709.4	16.7
30°-40°	1940.3	19.0
40°-50°	1873.1	18.3
50°-60°	1545.2	15.1
60°-70°	1029.0	10.1
70°-80°	460.4	4.5
80°-90°	82.4	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°	3295.5	32.2
0°-40°	5235.9	51.2
0°-60°	8654.2	84.6
0°-90°	10226.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10226.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4422	4422	4422	4422	4422	
5°	4417	4416	4399	4375	4361	418
15°	4162	4173	4162	4144	4115	1173
25°	3697	3726	3743	3716	3683	1693
35°	2973	3014	3152	3169	3157	1863
45°	2302	2341	2418	2528	2542	1776
55°	1612	1640	1719	1814	1867	1439
65°	945	970	1028	1101	1164	937
75°	379	399	428	448	474	414
85°	60	60	60	56	56	80
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4422.5	4422.5	4422.5	4422.5	4422.5
2.5°	4434.4	4436.1	4425.9	4398.7	4381.7
5°	4417.4	4415.7	4398.7	4374.9	4361.3
7.5°	4368.1	4371.5	4366.4	4332.4	4313.7
10°	4320.5	4322.2	4308.6	4281.5	4259.4
12.5°	4259.4	4257.7	4239.0	4225.4	4189.7
15°	4162.5	4172.7	4162.5	4143.8	4115.0
17.5°	4069.1	4069.1	4075.9	4043.6	4021.5
20°	3963.8	3968.8	3968.8	3943.4	3917.9
22.5°	3841.4	3856.7	3861.8	3834.6	3804.0
25°	3697.0	3725.9	3742.9	3715.7	3683.4
27.5°	3522.0	3566.2	3617.2	3596.8	3561.1
30°	3326.6	3391.2	3476.1	3459.2	3433.7
32.5°	3141.4	3206.0	3323.2	3316.4	3302.8
35°	2973.2	3014.0	3151.6	3168.6	3156.7
37.5°	2813.5	2850.9	2980.0	3019.1	3008.9
40°	2645.3	2686.1	2788.0	2857.7	2861.1
42.5°	2478.8	2517.9	2601.2	2701.4	2701.4
45°	2302.1	2341.2	2417.7	2528.1	2541.7
47.5°	2128.8	2169.6	2244.4	2354.8	2376.9
50°	1958.9	1996.3	2071.1	2178.1	2212.1
52.5°	1782.2	1823.0	1896.1	1994.6	2043.9
55°	1612.3	1639.5	1719.4	1814.5	1867.2
57.5°	1435.6	1461.1	1551.2	1632.7	1687.1
60°	1265.8	1298.0	1367.7	1450.9	1513.8
62.5°	1102.6	1136.6	1196.1	1269.1	1340.5
65°	944.6	970.1	1027.9	1100.9	1163.8
67.5°	791.7	813.8	871.6	922.6	988.8
70°	637.1	666.0	708.5	757.8	800.2
72.5°	513.1	525.0	560.7	596.3	640.5
75°	378.9	399.3	428.1	448.5	474.0
77.5°	271.8	283.7	300.7	317.7	341.5
80°	181.8	186.9	202.2	205.6	224.3
82.5°	110.4	113.8	117.2	118.9	125.7
85°	59.5	59.5	59.5	56.1	56.1
87.5°	34.0	34.0	28.9	23.8	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)