

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: P558245

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-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: P558245
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-93-86-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

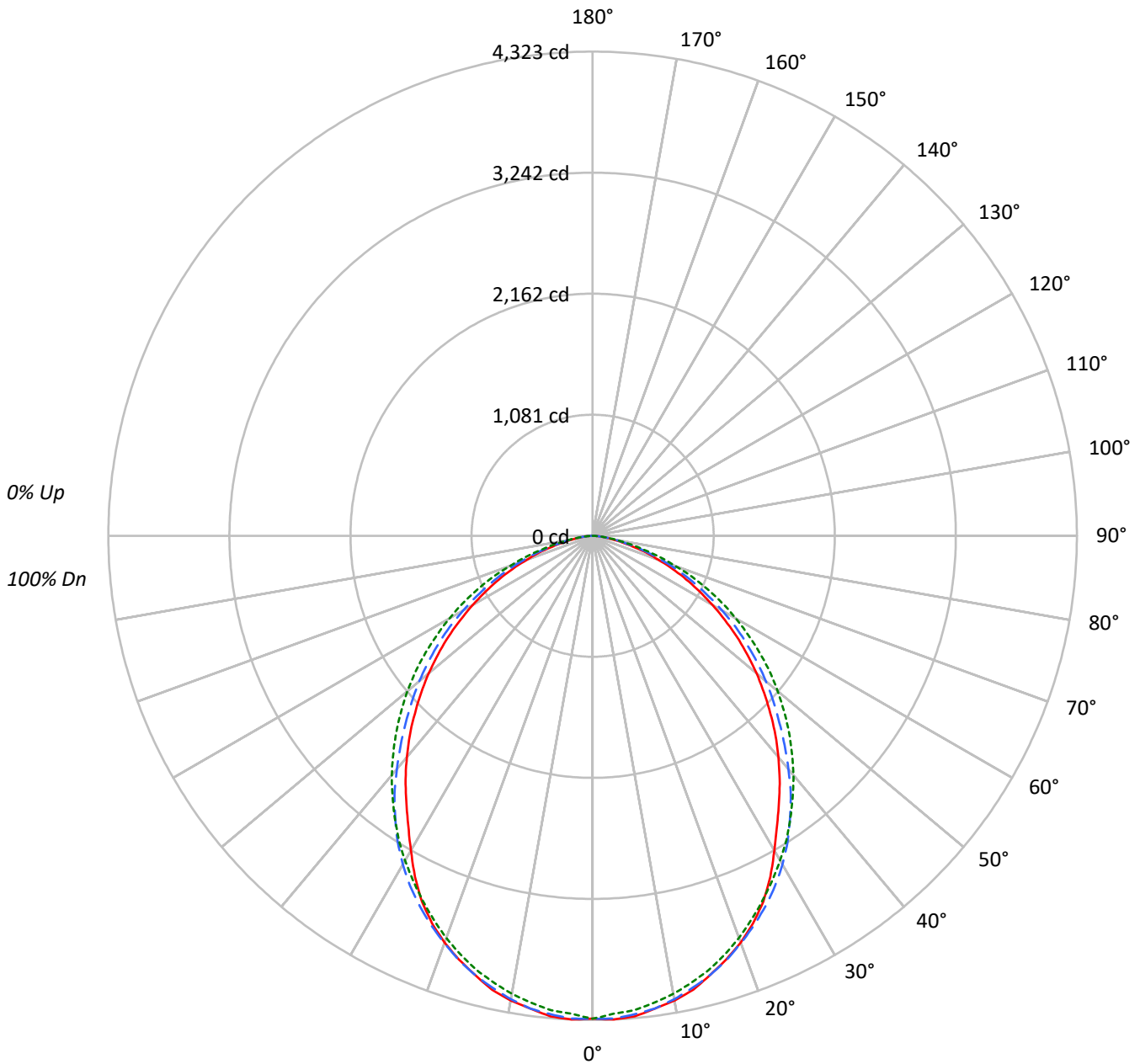
Lumens per Lamp: N/A
Luminaire Lumens: 9970.0 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (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									
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°	11603	11603	11603
5°	11634	11585	11486
10°	11510	11479	11347
15°	11306	11306	11177
20°	11067	11081	10939
25°	10702	10835	10663
30°	10078	10531	10402
35°	9523	10094	10110
40°	9060	9549	9799
45°	8542	8970	9431
50°	7996	8453	9029
55°	7375	7864	8541
60°	6642	7177	7943
65°	5864	6381	7225
70°	4888	5434	6139
75°	3841	4340	4806
80°	2746	3054	3389
85°	1791	1791	1689



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.0	4.1
10°-20°	1140.5	11.4
20°-30°	1666.6	16.7
30°-40°	1891.8	19.0
40°-50°	1826.2	18.3
50°-60°	1506.5	15.1
60°-70°	1003.2	10.1
70°-80°	448.9	4.5
80°-90°	80.3	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°	3213.0	32.2
0°-40°	5104.8	51.2
0°-60°	8437.5	84.6
0°-90°	9970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9970.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4312	4312	4312	4312	4312	
5°	4307	4305	4289	4265	4252	408
15°	4058	4068	4058	4040	4012	1144
25°	3604	3633	3649	3623	3591	1651
35°	2899	2939	3073	3089	3078	1816
45°	2244	2283	2357	2465	2478	1732
55°	1572	1598	1676	1769	1820	1403
65°	921	946	1002	1073	1135	913
75°	369	389	417	437	462	404
85°	58	58	58	55	55	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4311.8	<i>4311.8</i>	4311.8	4311.8	4311.8
2.5°	<i>4323.4</i>	<i>4325.0</i>	<i>4315.1</i>	<i>4288.6</i>	<i>4272.0</i>
5°	4306.8	<i>4305.1</i>	4288.6	4265.4	4252.1
7.5°	4258.8	<i>4262.1</i>	4257.1	4224.0	4205.8
10°	4212.4	<i>4214.0</i>	4200.8	4174.3	4152.7
12.5°	4152.7	<i>4151.1</i>	4132.9	4119.6	4084.8
15°	4058.3	<i>4068.3</i>	4058.3	4040.1	4011.9
17.5°	3967.2	<i>3967.2</i>	3973.8	3942.4	3920.8
20°	3864.5	<i>3869.5</i>	3869.5	3844.6	3819.8
22.5°	3745.3	<i>3760.2</i>	3765.1	3738.6	3708.8
25°	3604.5	<i>3632.6</i>	3649.2	3622.7	3591.2
27.5°	3433.8	<i>3476.9</i>	3526.6	3506.7	3471.9
30°	3243.4	<i>3306.3</i>	3389.1	3372.6	3347.7
32.5°	3062.8	<i>3125.7</i>	3240.0	3233.4	3220.2
35°	2898.8	<i>2938.6</i>	3072.7	3089.3	3077.7
37.5°	2743.1	<i>2779.5</i>	2905.4	2943.5	2933.6
40°	2579.1	<i>2618.9</i>	2718.3	2786.2	2789.5
42.5°	2416.8	<i>2454.9</i>	2536.0	2633.8	2633.8
45°	2244.5	<i>2282.6</i>	2357.1	2464.8	2478.1
47.5°	2075.5	<i>2115.3</i>	2188.2	2295.9	2317.4
50°	1909.9	<i>1946.3</i>	2019.2	2123.6	2156.7
52.5°	1737.6	<i>1777.4</i>	1848.6	1944.7	1992.7
55°	1572.0	<i>1598.5</i>	1676.3	1769.1	1820.5
57.5°	1399.7	<i>1424.6</i>	1512.3	1591.9	1644.9
60°	1234.1	<i>1265.5</i>	1333.5	1414.6	1475.9
62.5°	1075.0	<i>1108.2</i>	1166.1	1237.4	1306.9
65°	921.0	<i>945.8</i>	1002.2	1073.4	1134.7
67.5°	771.9	<i>793.4</i>	849.8	899.5	964.1
70°	621.2	<i>649.3</i>	690.7	738.8	780.2
72.5°	500.3	<i>511.8</i>	546.6	581.4	624.5
75°	369.4	<i>389.3</i>	417.4	437.3	462.2
77.5°	265.0	<i>276.6</i>	293.2	309.8	332.9
80°	177.2	<i>182.2</i>	197.1	200.4	218.7
82.5°	107.7	<i>111.0</i>	114.3	116.0	122.6
85°	58.0	<i>58.0</i>	58.0	54.7	54.7
87.5°	33.1	<i>33.1</i>	28.2	23.2	16.6
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)