

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: P558442

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-93-94-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: P558442
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-93-94-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

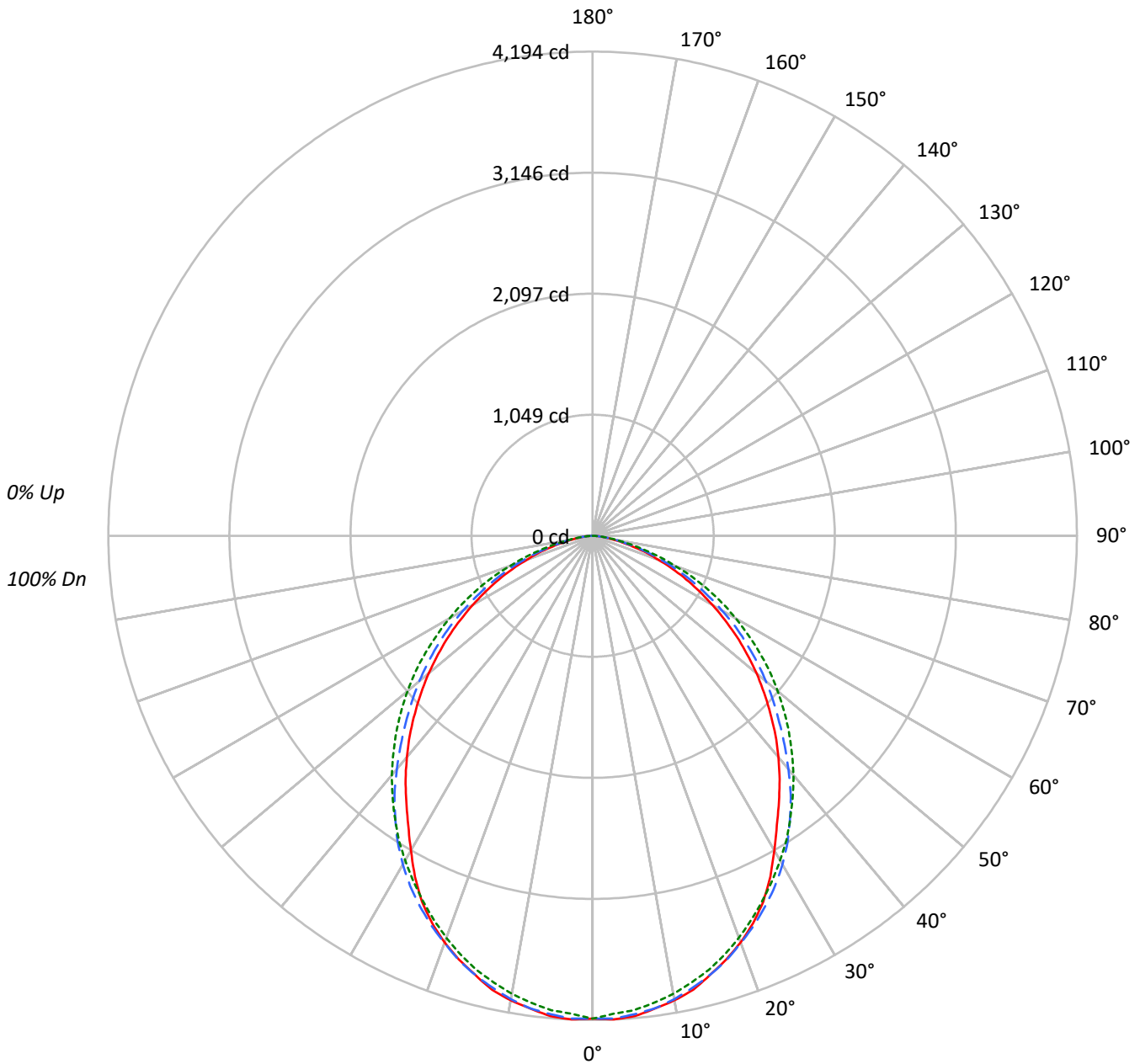
Lumens per Lamp: N/A
Luminaire Lumens: 9671.0 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (A_{in}): 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°	11255	11255	11255
5°	11285	11237	11142
10°	11165	11134	11007
15°	10967	10967	10842
20°	10735	10749	10611
25°	10381	10510	10343
30°	9776	10215	10090
35°	9237	9792	9807
40°	8788	9262	9505
45°	8286	8702	9148
50°	7756	8200	8758
55°	7154	7629	8285
60°	6443	6962	7705
65°	5689	6190	7008
70°	4740	5271	5954
75°	3725	4210	4661
80°	2664	2963	3287
85°	1735	1735	1636



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	393.8	4.1
10°-20°	1106.3	11.4
20°-30°	1616.6	16.7
30°-40°	1835.0	19.0
40°-50°	1771.5	18.3
50°-60°	1461.3	15.1
60°-70°	973.1	10.1
70°-80°	435.5	4.5
80°-90°	77.9	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°	3116.7	32.2
0°-40°	4951.7	51.2
0°-60°	8184.5	84.6
0°-90°	9671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9671.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4182	4182	4182	4182	4182	
5°	4178	4176	4160	4138	4125	395
15°	3937	3946	3937	3919	3892	1110
25°	3496	3524	3540	3514	3484	1601
35°	2812	2850	2981	2997	2985	1762
45°	2177	2214	2286	2391	2404	1680
55°	1525	1550	1626	1716	1766	1361
65°	893	918	972	1041	1101	886
75°	358	378	405	424	448	392
85°	56	56	56	53	53	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4182.5	4182.5	4182.5	4182.5	4182.5
2.5°	4193.7	4195.3	4185.7	4160.0	4143.9
5°	4177.6	4176.0	4160.0	4137.5	4124.6
7.5°	4131.0	4134.3	4129.4	4097.3	4079.6
10°	4086.1	4087.7	4074.8	4049.1	4028.2
12.5°	4028.2	4026.6	4008.9	3996.1	3962.3
15°	3936.6	3946.3	3936.6	3918.9	3891.6
17.5°	3848.2	3848.2	3854.7	3824.1	3803.3
20°	3748.6	3753.4	3753.4	3729.3	3705.2
22.5°	3632.9	3647.4	3652.2	3626.5	3597.6
25°	3496.4	3523.7	3539.7	3514.0	3483.5
27.5°	3330.9	3372.6	3420.8	3401.6	3367.8
30°	3146.1	3207.1	3287.5	3271.4	3247.3
32.5°	2970.9	3032.0	3142.9	3136.4	3123.6
35°	2811.9	2850.4	2980.6	2996.7	2985.4
37.5°	2660.8	2696.2	2818.3	2855.3	2845.6
40°	2501.8	2540.3	2636.7	2702.6	2705.8
42.5°	2344.3	2381.3	2460.0	2554.8	2554.8
45°	2177.2	2214.1	2286.5	2390.9	2403.7
47.5°	2013.3	2051.9	2122.6	2227.0	2247.9
50°	1852.6	1888.0	1958.7	2059.9	2092.0
52.5°	1685.5	1724.1	1793.2	1886.4	1933.0
55°	1524.8	1550.5	1626.1	1716.0	1765.9
57.5°	1357.7	1381.8	1467.0	1544.1	1595.5
60°	1197.1	1227.6	1293.5	1372.2	1431.6
62.5°	1042.8	1074.9	1131.2	1200.3	1267.8
65°	893.4	917.5	972.1	1041.2	1100.6
67.5°	748.8	769.6	824.3	872.5	935.1
70°	602.5	629.9	670.0	716.6	756.8
72.5°	485.2	496.5	530.2	564.0	605.8
75°	358.3	377.6	404.9	424.2	448.3
77.5°	257.1	268.3	284.4	300.5	323.0
80°	171.9	176.7	191.2	194.4	212.1
82.5°	104.4	107.7	110.9	112.5	118.9
85°	56.2	56.2	56.2	53.0	53.0
87.5°	32.1	32.1	27.3	22.5	16.1
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)