

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: P558428

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-82-96-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: P558428
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-82-96-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

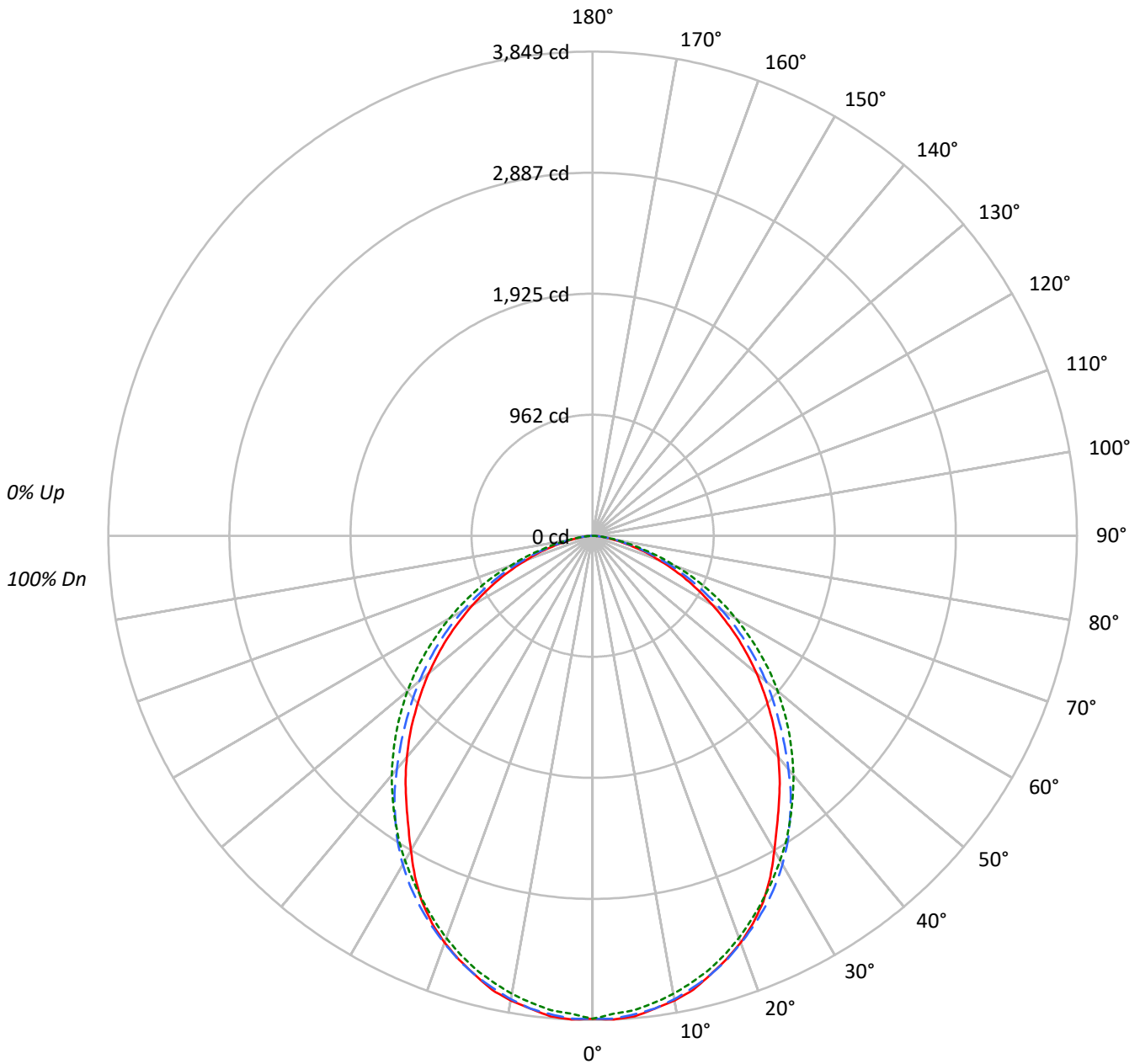
Lumens per Lamp: N/A
Luminaire Lumens: 8877.0 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P558428

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-96-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P558428

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-96-EDD-90

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°	10331	10331	10331
5°	10358	10314	10227
10°	10248	10220	10103
15°	10067	10067	9952
20°	9854	9866	9739
25°	9529	9647	9494
30°	8973	9377	9262
35°	8479	8988	9002
40°	8067	8502	8725
45°	7605	7987	8397
50°	7119	7527	8039
55°	6566	7003	7605
60°	5914	6390	7072
65°	5221	5682	6433
70°	4352	4839	5466
75°	3420	3865	4278
80°	2445	2720	3017
85°	1593	1593	1504



TEST NUMBER: P558428

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-96-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.5	4.1
10°-20°	1015.4	11.4
20°-30°	1483.9	16.7
30°-40°	1684.4	19.0
40°-50°	1626.0	18.3
50°-60°	1341.4	15.1
60°-70°	893.2	10.1
70°-80°	399.7	4.5
80°-90°	71.5	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°	2860.8	32.2
0°-40°	4545.2	51.2
0°-60°	7512.6	84.6
0°-90°	8877.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8877.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3839	3839	3839	3839	3839	
5°	3835	3833	3818	3798	3786	363
15°	3613	3622	3613	3597	3572	1019
25°	3209	3234	3249	3226	3198	1470
35°	2581	2616	2736	2751	2740	1617
45°	1998	2032	2099	2195	2206	1542
55°	1400	1423	1493	1575	1621	1249
65°	820	842	892	956	1010	813
75°	329	347	372	389	412	360
85°	52	52	52	49	49	70
90°	0	0	0	0	0	



TEST NUMBER: P558428

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-96-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3839.1	<i>3839.1</i>	3839.1	3839.1	3839.1
2.5°	<i>3849.4</i>	<i>3850.9</i>	<i>3842.0</i>	<i>3818.4</i>	<i>3803.7</i>
5°	3834.6	<i>3833.2</i>	3818.4	3797.8	3786.0
7.5°	3791.9	<i>3794.8</i>	3790.4	3760.9	3744.7
10°	3750.6	<i>3752.1</i>	3740.3	3716.7	3697.5
12.5°	3697.5	<i>3696.0</i>	3679.8	3668.0	3637.0
15°	3613.4	<i>3622.3</i>	3613.4	3597.2	3572.1
17.5°	3532.3	<i>3532.3</i>	3538.2	3510.2	3491.0
20°	3440.9	<i>3445.3</i>	3445.3	3423.2	3401.0
22.5°	3334.7	<i>3347.9</i>	3352.4	3328.8	3302.2
25°	3209.3	<i>3234.4</i>	3249.1	3225.5	3197.5
27.5°	3057.4	<i>3095.7</i>	3140.0	3122.3	3091.3
30°	2887.8	<i>2943.8</i>	3017.6	3002.8	2980.7
32.5°	2727.0	<i>2783.1</i>	2884.8	2878.9	2867.1
35°	2581.0	<i>2616.4</i>	2735.9	2750.6	2740.3
37.5°	2442.4	<i>2474.8</i>	2586.9	2620.8	2612.0
40°	2296.4	<i>2331.8</i>	2420.3	2480.7	2483.7
42.5°	2151.8	<i>2185.7</i>	2258.0	2345.0	2345.0
45°	1998.4	<i>2032.4</i>	2098.7	2194.6	2206.4
47.5°	1848.0	<i>1883.4</i>	1948.3	2044.2	2063.3
50°	1700.5	<i>1733.0</i>	1797.9	1890.8	1920.3
52.5°	1547.1	<i>1582.5</i>	1645.9	1731.5	1774.3
55°	1399.6	<i>1423.2</i>	1492.6	1575.2	1620.9
57.5°	1246.3	<i>1268.4</i>	1346.6	1417.3	1464.5
60°	1098.8	<i>1126.8</i>	1187.3	1259.5	1314.1
62.5°	957.2	<i>986.7</i>	1038.3	1101.7	1163.7
65°	820.0	<i>842.1</i>	892.3	955.7	1010.3
67.5°	687.3	<i>706.5</i>	756.6	800.9	858.4
70°	553.1	<i>578.1</i>	615.0	657.8	694.7
72.5°	445.4	<i>455.7</i>	486.7	517.7	556.0
75°	328.9	<i>346.6</i>	371.7	389.4	411.5
77.5°	236.0	<i>246.3</i>	261.1	275.8	296.4
80°	157.8	<i>162.2</i>	175.5	178.5	194.7
82.5°	95.9	<i>98.8</i>	101.8	103.2	109.1
85°	51.6	<i>51.6</i>	51.6	48.7	48.7
87.5°	29.5	<i>29.5</i>	25.1	20.6	14.7
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)