

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: P558247

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-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: P558247
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-93-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

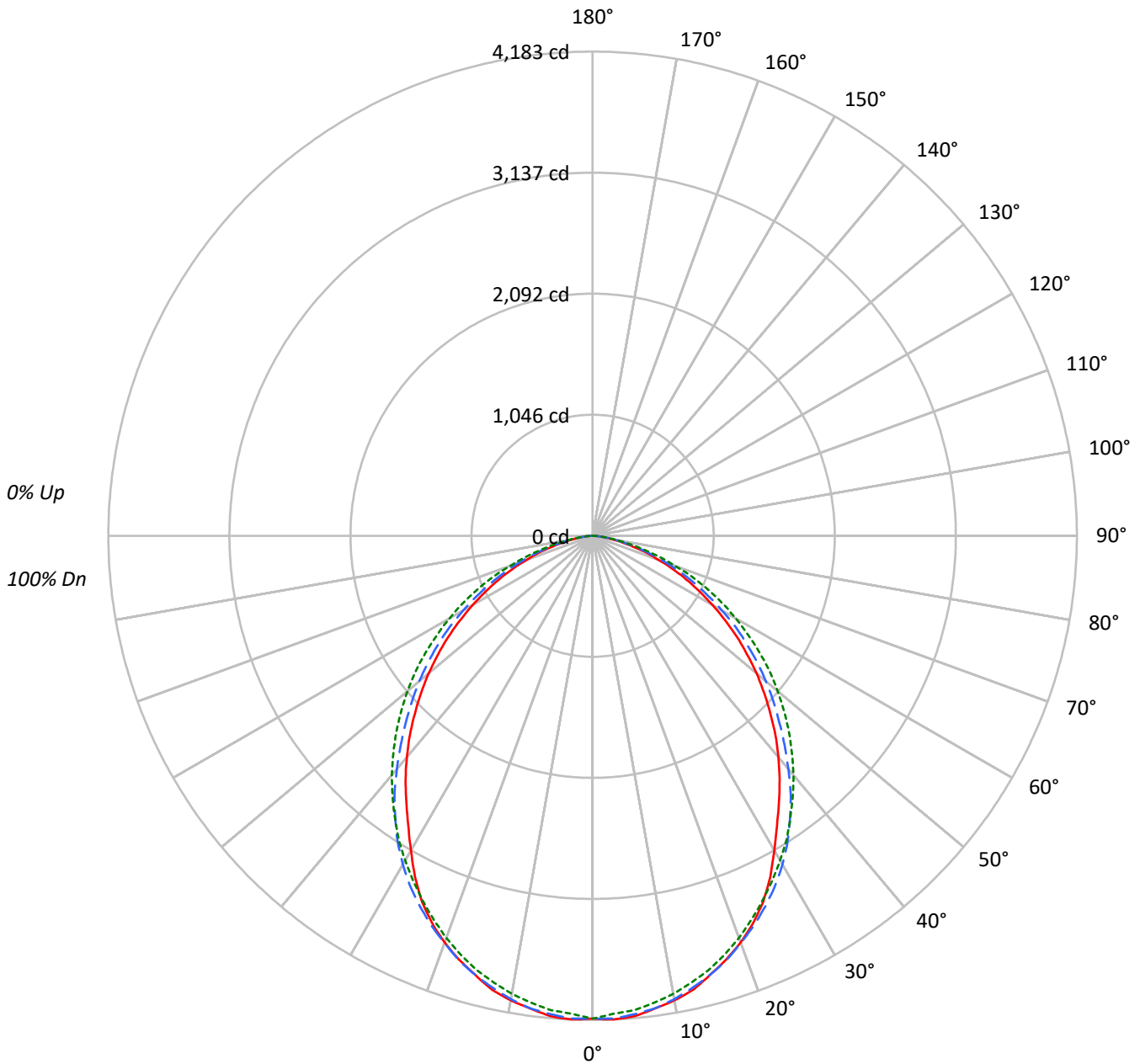
Lumens per Lamp: N/A
Luminaire Lumens: 9646.0 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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: P558247

CATALOG NUMBER: FUSL-12-4-LD4-3STD-30-UNV-93-87-EDD

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°	11226	11226	11226
5°	11256	11208	11113
10°	11136	11106	10979
15°	10939	10939	10814
20°	10707	10721	10583
25°	10354	10483	10316
30°	9750	10189	10064
35°	9213	9766	9782
40°	8766	9238	9480
45°	8264	8679	9124
50°	7736	8179	8735
55°	7135	7609	8263
60°	6426	6943	7685
65°	5674	6174	6990
70°	4729	5258	5939
75°	3716	4199	4649
80°	2658	2955	3278
85°	1732	1732	1633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	392.8	4.1
10°-20°	1103.4	11.4
20°-30°	1612.4	16.7
30°-40°	1830.3	19.0
40°-50°	1766.9	18.3
50°-60°	1457.5	15.1
60°-70°	970.6	10.1
70°-80°	434.3	4.5
80°-90°	77.7	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°	3108.6	32.2
0°-40°	4938.9	51.2
0°-60°	8163.4	84.6
0°-90°	9646.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9646.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4172	4172	4172	4172	4172	
5°	4167	4165	4149	4127	4114	394
15°	3926	3936	3926	3909	3882	1107
25°	3487	3515	3531	3505	3474	1597
35°	2805	2843	2973	2989	2978	1757
45°	2172	2208	2280	2385	2398	1675
55°	1521	1546	1622	1712	1761	1357
65°	891	915	970	1038	1098	884
75°	357	377	404	423	447	391
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°	4171.6	4171.6	4171.6	4171.6	4171.6
2.5°	4182.9	4184.5	4174.9	4149.2	4133.2
5°	4166.8	4165.2	4149.2	4126.8	4114.0
7.5°	4120.4	4123.6	4118.8	4086.7	4069.1
10°	4075.5	4077.1	4064.3	4038.6	4017.8
12.5°	4017.8	4016.2	3998.6	3985.7	3952.1
15°	3926.4	3936.1	3926.4	3908.8	3881.6
17.5°	3838.3	3838.3	3844.7	3814.3	3793.4
20°	3738.9	3743.7	3743.7	3719.7	3695.7
22.5°	3623.5	3638.0	3642.8	3617.1	3588.3
25°	3487.3	3514.6	3530.6	3505.0	3474.5
27.5°	3322.3	3363.9	3412.0	3392.8	3359.1
30°	3137.9	3198.8	3279.0	3263.0	3238.9
32.5°	2963.3	3024.2	3134.7	3128.3	3115.5
35°	2804.6	2843.1	2972.9	2988.9	2977.7
37.5°	2654.0	2689.2	2811.0	2847.9	2838.3
40°	2495.3	2533.8	2629.9	2695.6	2698.8
42.5°	2338.2	2375.1	2453.6	2548.2	2548.2
45°	2171.6	2208.4	2280.5	2384.7	2397.5
47.5°	2008.1	2046.6	2117.1	2221.2	2242.1
50°	1847.8	1883.1	1953.6	2054.6	2086.6
52.5°	1681.2	1719.6	1788.5	1881.5	1928.0
55°	1520.9	1546.5	1621.9	1711.6	1761.3
57.5°	1354.2	1378.3	1463.2	1540.1	1591.4
60°	1194.0	1224.4	1290.1	1368.6	1427.9
62.5°	1040.1	1072.2	1128.3	1197.2	1264.5
65°	891.1	915.1	969.6	1038.5	1097.8
67.5°	746.8	767.7	822.1	870.2	932.7
70°	601.0	628.2	668.3	714.8	754.8
72.5°	484.0	495.2	528.9	562.5	604.2
75°	357.4	376.6	403.9	423.1	447.1
77.5°	256.4	267.6	283.7	299.7	322.1
80°	171.5	176.3	190.7	193.9	211.5
82.5°	104.2	107.4	110.6	112.2	118.6
85°	56.1	56.1	56.1	52.9	52.9
87.5°	32.1	32.1	27.2	22.4	16.0
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)