

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: P556766

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-82-97-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: P556766
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-LD4-1STD-35-UNV-82-97-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

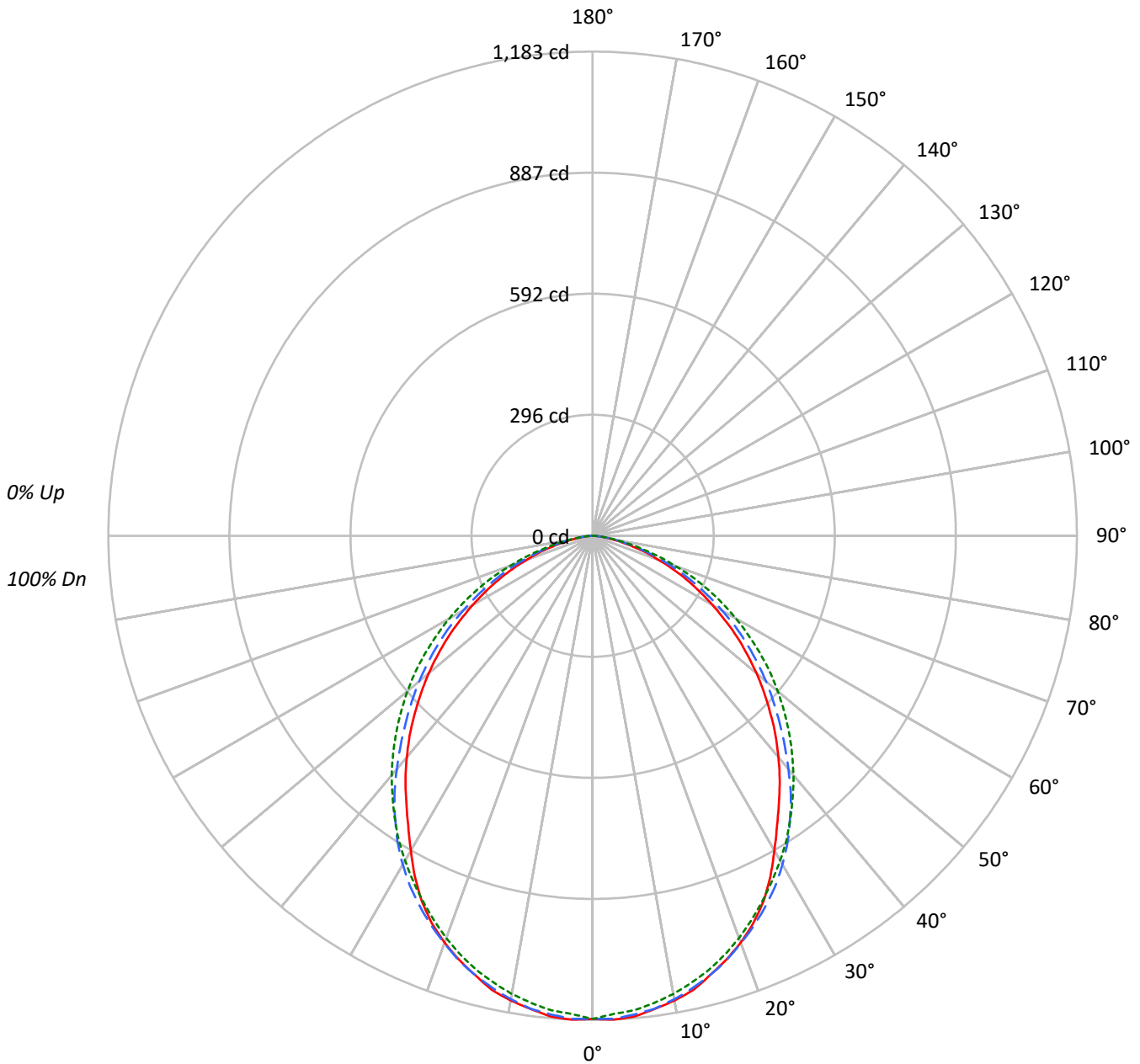
Lumens per Lamp: N/A
Luminaire Lumens: 2729.0 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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: P556766

CATALOG NUMBER: FUSL-12-4-LD4-1STD-35-UNV-82-97-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P556766

CATALOG NUMBER: FUSL-12-4-LD4-1STD-35-UNV-82-97-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°	3176	3176	3176
5°	3185	3171	3144
10°	3151	3142	3106
15°	3095	3095	3059
20°	3029	3033	2994
25°	2929	2966	2919
30°	2759	2883	2847
35°	2607	2763	2767
40°	2480	2614	2682
45°	2338	2455	2581
50°	2189	2314	2471
55°	2019	2152	2338
60°	1818	1964	2174
65°	1605	1747	1978
70°	1338	1488	1681
75°	1051	1188	1315
80°	752	837	927
85°	491	491	463



TEST NUMBER: P556766

CATALOG NUMBER: FUSL-12-4-LD4-1STD-35-UNV-82-97-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.1	4.1
10°-20°	312.2	11.4
20°-30°	456.2	16.7
30°-40°	517.8	19.0
40°-50°	499.9	18.3
50°-60°	412.4	15.1
60°-70°	274.6	10.1
70°-80°	122.9	4.5
80°-90°	22.0	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°	879.5	32.2
0°-40°	1397.3	51.2
0°-60°	2309.5	84.6
0°-90°	2729.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2729.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1180	1180	1180	1180	1180	
5°	1179	1178	1174	1168	1164	112
15°	1111	1114	1111	1106	1098	313
25°	987	994	999	992	983	452
35°	794	804	841	846	842	497
45°	614	625	645	675	678	474
55°	430	438	459	484	498	384
65°	252	259	274	294	311	250
75°	101	107	114	120	126	111
85°	16	16	16	15	15	21
90°	0	0	0	0	0	



TEST NUMBER: P556766

CATALOG NUMBER: FUSL-12-4-LD4-1STD-35-UNV-82-97-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1180.2	1180.2	1180.2	1180.2	1180.2
2.5°	1183.4	1183.8	1181.1	1173.9	1169.3
5°	1178.9	1178.4	1173.9	1167.5	1163.9
7.5°	1165.7	1166.6	1165.3	1156.2	1151.2
10°	1153.0	1153.5	1149.8	1142.6	1136.7
12.5°	1136.7	1136.2	1131.3	1127.6	1118.1
15°	1110.9	1113.6	1110.9	1105.9	1098.2
17.5°	1085.9	1085.9	1087.7	1079.1	1073.2
20°	1057.8	1059.2	1059.2	1052.4	1045.6
22.5°	1025.2	1029.2	1030.6	1023.3	1015.2
25°	986.6	994.3	998.9	991.6	983.0
27.5°	939.9	951.7	965.3	959.9	950.3
30°	887.8	905.0	927.7	923.1	916.3
32.5°	838.4	855.6	886.9	885.1	881.4
35°	793.5	804.3	841.1	845.6	842.4
37.5°	750.8	760.8	795.3	805.7	803.0
40°	706.0	716.8	744.0	762.6	763.5
42.5°	661.5	672.0	694.2	720.9	720.9
45°	614.4	624.8	645.2	674.7	678.3
47.5°	568.1	579.0	599.0	628.4	634.3
50°	522.8	532.8	552.7	581.3	590.3
52.5°	475.6	486.5	506.0	532.3	545.5
55°	430.3	437.5	458.8	484.2	498.3
57.5°	383.1	389.9	414.0	435.7	450.2
60°	337.8	346.4	365.0	387.2	404.0
62.5°	294.3	303.3	319.2	338.7	357.7
65°	252.1	258.9	274.3	293.8	310.6
67.5°	211.3	217.2	232.6	246.2	263.9
70°	170.0	177.7	189.1	202.2	213.6
72.5°	136.9	140.1	149.6	159.1	170.9
75°	101.1	106.6	114.3	119.7	126.5
77.5°	72.5	75.7	80.3	84.8	91.1
80°	48.5	49.9	54.0	54.9	59.8
82.5°	29.5	30.4	31.3	31.7	33.6
85°	15.9	15.9	15.9	15.0	15.0
87.5°	9.1	9.1	7.7	6.3	4.5
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)