

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: P558312

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-93-88-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: P558312
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-35-UNV-93-88-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

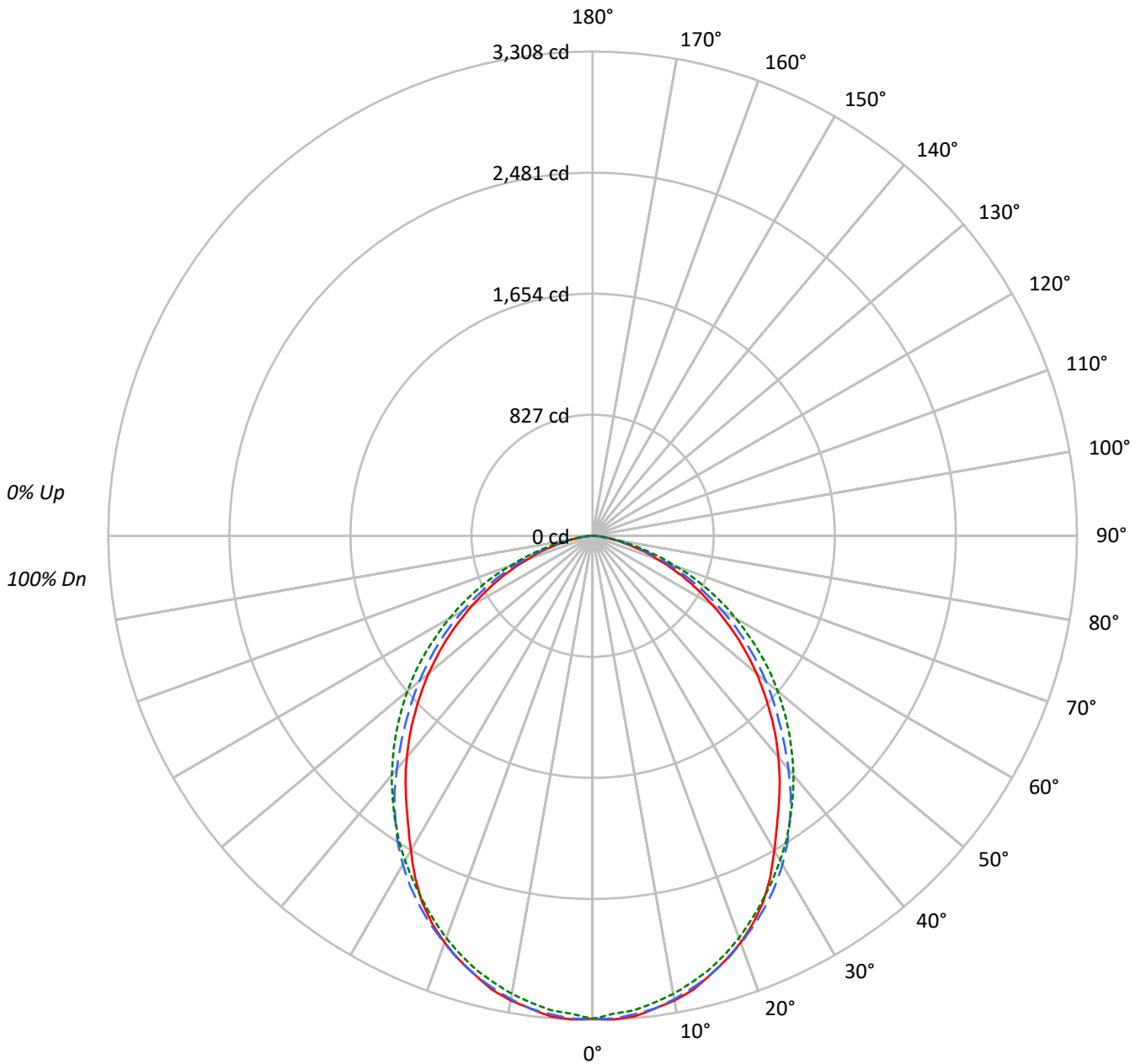
Lumens per Lamp: N/A
Luminaire Lumens: 7629.0 lumens
Efficiency: N/A
Efficacy: 76.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	8878	8878	8878
5°	8902	8864	8789
10°	8808	8783	8683
15°	8651	8651	8552
20°	8468	8479	8370
25°	8189	8291	8159
30°	7712	8058	7960
35°	7287	7724	7736
40°	6933	7307	7498
45°	6536	6864	7216
50°	6118	6468	6909
55°	5643	6018	6535
60°	5082	5492	6078
65°	4487	4883	5528
70°	3740	4159	4697
75°	2939	3321	3676
80°	2101	2337	2593
85°	1371	1371	1291



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.6	4.1
10°-20°	872.7	11.4
20°-30°	1275.3	16.7
30°-40°	1447.6	19.0
40°-50°	1397.4	18.3
50°-60°	1152.8	15.1
60°-70°	767.7	10.1
70°-80°	343.5	4.5
80°-90°	61.5	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°	2458.6	32.2
0°-40°	3906.2	51.2
0°-60°	6456.4	84.6
0°-90°	7629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7629.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3299	3299	3299	3299	3299	
5°	3296	3294	3282	3264	3254	312
15°	3105	3113	3105	3092	3070	875
25°	2758	2780	2792	2772	2748	1263
35°	2218	2249	2351	2364	2355	1390
45°	1718	1747	1804	1886	1896	1325
55°	1203	1223	1283	1354	1393	1074
65°	705	724	767	821	868	699
75°	283	298	319	335	354	309
85°	44	44	44	42	42	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3299.3	3299.3	3299.3	3299.3	3299.3
2.5°	3308.2	3309.5	3301.9	3281.6	3268.9
5°	3295.5	3294.3	3281.6	3263.9	3253.7
7.5°	3258.8	3261.3	3257.5	3232.2	3218.2
10°	3223.3	3224.6	3214.4	3194.1	3177.7
12.5°	3177.7	3176.4	3162.5	3152.3	3125.7
15°	3105.4	3113.0	3105.4	3091.5	3069.9
17.5°	3035.7	3035.7	3040.8	3016.7	3000.2
20°	2957.1	2960.9	2960.9	2941.9	2922.9
22.5°	2865.9	2877.3	2881.1	2860.8	2838.0
25°	2758.1	2779.7	2792.3	2772.1	2748.0
27.5°	2627.6	2660.5	2698.5	2683.3	2656.7
30°	2481.8	2530.0	2593.3	2580.7	2561.7
32.5°	2343.6	2391.8	2479.3	2474.2	2464.1
35°	2218.2	2248.6	2351.2	2363.9	2355.0
37.5°	2099.0	2126.9	2223.2	2252.4	2244.8
40°	1973.5	2003.9	2080.0	2132.0	2134.5
42.5°	1849.3	1878.5	1940.6	2015.4	2015.4
45°	1717.5	1746.6	1803.7	1886.1	1896.2
47.5°	1588.2	1618.6	1674.4	1756.8	1773.3
50°	1461.4	1489.3	1545.1	1625.0	1650.3
52.5°	1329.6	1360.0	1414.5	1488.1	1524.8
55°	1202.9	1223.2	1282.7	1353.7	1393.0
57.5°	1071.1	1090.1	1157.2	1218.1	1258.6
60°	944.3	968.4	1020.4	1082.5	1129.4
62.5°	822.6	848.0	892.3	946.8	1000.1
65°	704.7	723.8	766.8	821.4	868.2
67.5°	590.7	607.1	650.2	688.3	737.7
70°	475.3	496.9	528.6	565.3	597.0
72.5°	382.8	391.7	418.3	444.9	477.9
75°	282.7	297.9	319.4	334.6	353.6
77.5°	202.8	211.7	224.4	237.0	254.8
80°	135.6	139.4	150.8	153.4	167.3
82.5°	82.4	84.9	87.5	88.7	93.8
85°	44.4	44.4	44.4	41.8	41.8
87.5°	25.4	25.4	21.5	17.7	12.7
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)