

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: P558310

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-93-87-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: P558310
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-93-87-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

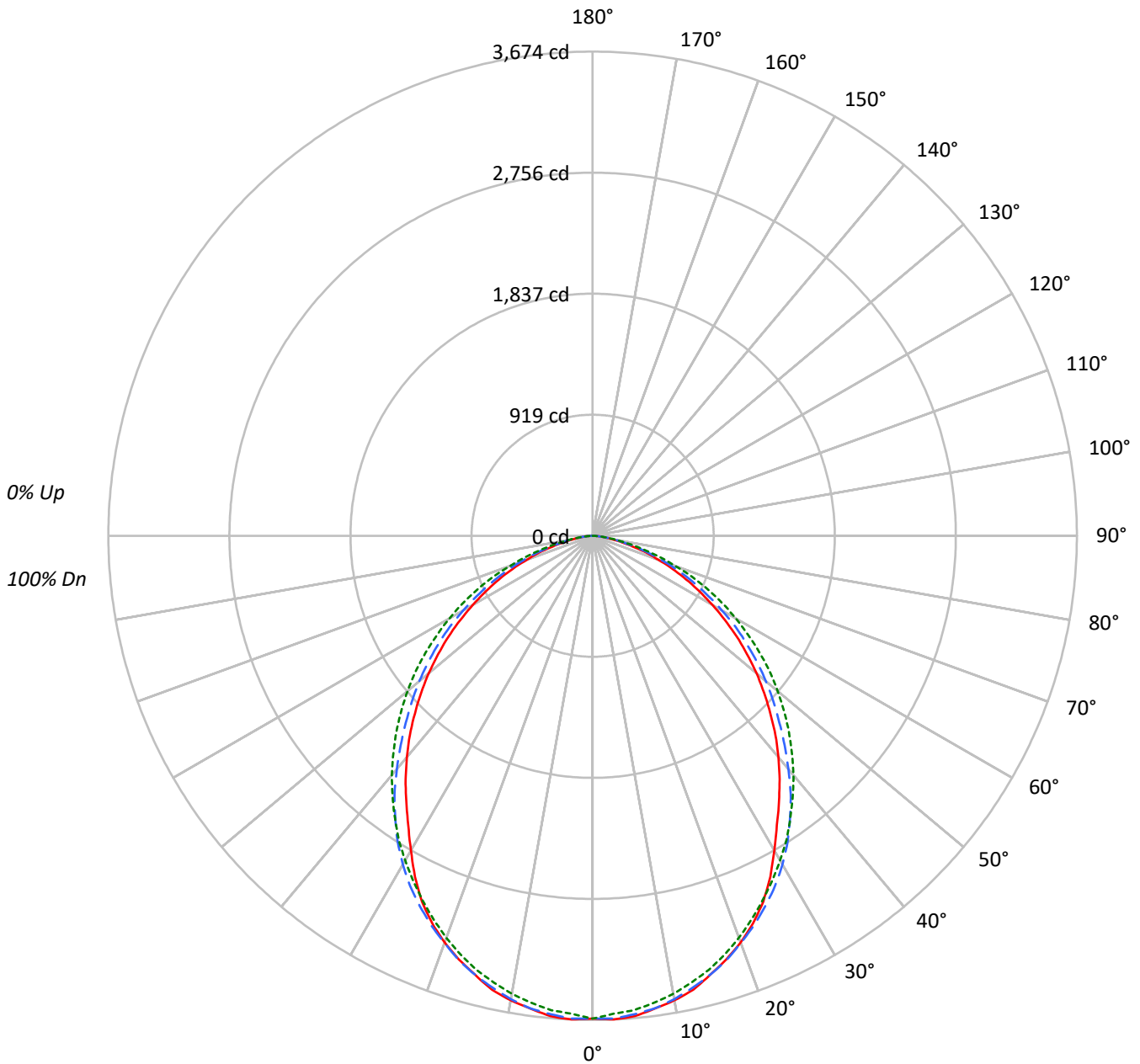
Lumens per Lamp: N/A
Luminaire Lumens: 8472.0 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (Ain): 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°	9859	9859	9859
5°	9886	9844	9760
10°	9781	9754	9642
15°	9607	9607	9497
20°	9404	9416	9295
25°	9094	9207	9061
30°	8564	8949	8839
35°	8092	8578	8591
40°	7699	8114	8327
45°	7258	7623	8013
50°	6794	7183	7672
55°	6267	6683	7257
60°	5644	6098	6750
65°	4983	5422	6139
70°	4153	4618	5216
75°	3264	3688	4083
80°	2334	2596	2879
85°	1522	1522	1436



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.0	4.1
10°-20°	969.1	11.4
20°-30°	1416.2	16.7
30°-40°	1607.5	19.0
40°-50°	1551.8	18.3
50°-60°	1280.2	15.1
60°-70°	852.5	10.1
70°-80°	381.5	4.5
80°-90°	68.3	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°	2730.3	32.2
0°-40°	4337.8	51.2
0°-60°	7169.8	84.6
0°-90°	8472.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8472.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3664	3664	3664	3664	3664	
5°	3660	3658	3644	3624	3613	346
15°	3449	3457	3449	3433	3409	972
25°	3063	3087	3101	3078	3052	1403
35°	2463	2497	2611	2625	2615	1543
45°	1907	1940	2003	2094	2106	1472
55°	1336	1358	1424	1503	1547	1192
65°	783	804	852	912	964	776
75°	314	331	355	372	393	343
85°	49	49	49	46	46	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3663.9	3663.9	3663.9	3663.9	3663.9
2.5°	3673.8	3675.2	3666.7	3644.2	3630.1
5°	3659.7	3658.3	3644.2	3624.5	3613.2
7.5°	3618.9	3621.7	3617.5	3589.3	3573.8
10°	3579.5	3580.9	3569.6	3547.1	3528.8
12.5°	3528.8	3527.4	3511.9	3500.6	3471.1
15°	3448.6	3457.0	3448.6	3433.1	3409.1
17.5°	3371.1	3371.1	3376.8	3350.0	3331.7
20°	3283.9	3288.1	3288.1	3267.0	3245.9
22.5°	3182.5	3195.2	3199.4	3176.9	3151.6
25°	3062.9	3086.8	3100.9	3078.4	3051.6
27.5°	2917.9	2954.5	2996.7	2979.8	2950.3
30°	2756.0	2809.5	2879.9	2865.8	2844.7
32.5°	2602.6	2656.1	2753.2	2747.6	2736.3
35°	2463.3	2497.0	2611.1	2625.1	2615.3
37.5°	2330.9	2361.9	2468.9	2501.3	2492.8
40°	2191.6	2225.4	2309.8	2367.5	2370.4
42.5°	2053.7	2086.0	2155.0	2238.0	2238.0
45°	1907.3	1939.6	2003.0	2094.5	2105.7
47.5°	1763.7	1797.5	1859.4	1950.9	1969.2
50°	1622.9	1653.9	1715.8	1804.5	1832.7
52.5°	1476.5	1510.3	1570.9	1652.5	1693.3
55°	1335.8	1358.3	1424.5	1503.3	1546.9
57.5°	1189.4	1210.5	1285.1	1352.7	1397.7
60°	1048.6	1075.4	1133.1	1202.1	1254.2
62.5°	913.5	941.7	990.9	1051.5	1110.6
65°	782.6	803.7	851.6	912.1	964.2
67.5°	655.9	674.2	722.1	764.3	819.2
70°	527.8	551.8	587.0	627.8	663.0
72.5°	425.1	434.9	464.5	494.1	530.7
75°	313.9	330.8	354.7	371.6	392.7
77.5°	225.2	235.1	249.1	263.2	282.9
80°	150.6	154.8	167.5	170.3	185.8
82.5°	91.5	94.3	97.1	98.5	104.2
85°	49.3	49.3	49.3	46.5	46.5
87.5°	28.2	28.2	23.9	19.7	14.1
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)