

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: P557090

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-93-85-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: P557090
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-LD4-2HI-40-UNV-93-85-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

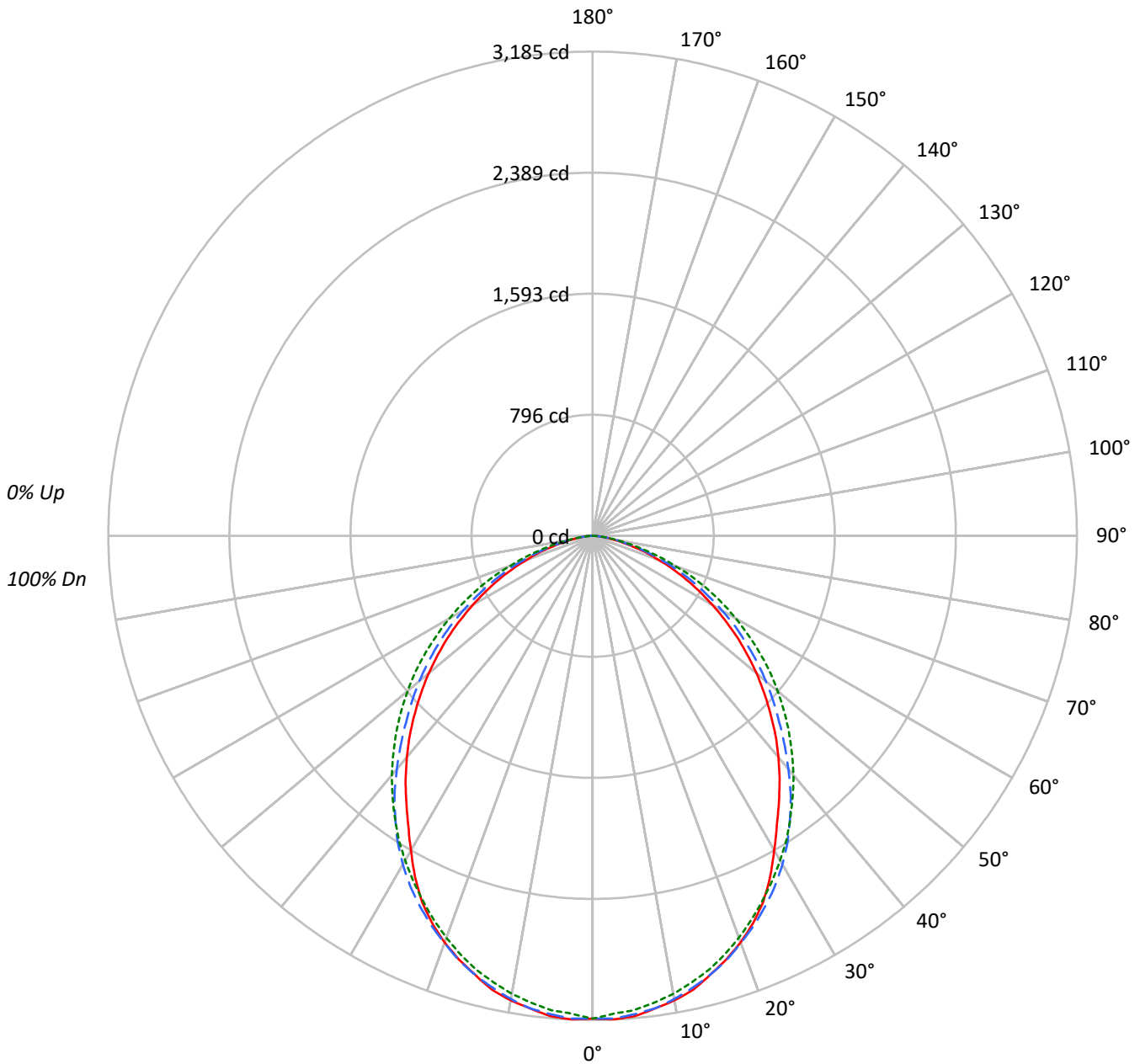
Lumens per Lamp: N/A
Luminaire Lumens: 7344.0 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	8547	8547	8547
5°	8569	8533	8461
10°	8479	8455	8359
15°	8328	8328	8233
20°	8152	8162	8058
25°	7883	7981	7854
30°	7424	7757	7663
35°	7015	7435	7448
40°	6674	7034	7218
45°	6292	6608	6947
50°	5890	6227	6651
55°	5432	5793	6291
60°	4892	5286	5851
65°	4320	4700	5322
70°	3600	4003	4522
75°	2829	3197	3539
80°	2024	2250	2497
85°	1318	1318	1244



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.0	4.1
10°-20°	840.1	11.4
20°-30°	1227.6	16.7
30°-40°	1393.5	19.0
40°-50°	1345.2	18.3
50°-60°	1109.7	15.1
60°-70°	739.0	10.1
70°-80°	330.7	4.5
80°-90°	59.2	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°	2366.8	32.2
0°-40°	3760.3	51.2
0°-60°	6215.2	84.6
0°-90°	7344.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7344.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3176	3176	3176	3176	3176	
5°	3172	3171	3159	3142	3132	300
15°	2989	2997	2989	2976	2955	843
25°	2655	2676	2688	2668	2645	1216
35°	2135	2165	2263	2276	2267	1338
45°	1653	1681	1736	1816	1825	1276
55°	1158	1178	1235	1303	1341	1033
65°	678	697	738	791	836	673
75°	272	287	308	322	340	298
85°	43	43	43	40	40	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3176.1	3176.1	3176.1	3176.1	3176.1
2.5°	3184.6	3185.9	3178.5	3159.0	3146.8
5°	3172.4	3171.2	3159.0	3141.9	3132.2
7.5°	3137.0	3139.5	3135.8	3111.4	3098.0
10°	3102.9	3104.1	3094.3	3074.8	3059.0
12.5°	3059.0	3057.7	3044.3	3034.6	3008.9
15°	2989.4	2996.7	2989.4	2976.0	2955.2
17.5°	2922.3	2922.3	2927.2	2904.0	2888.1
20°	2846.6	2850.3	2850.3	2832.0	2813.7
22.5°	2758.8	2769.8	2773.4	2753.9	2732.0
25°	2655.1	2675.8	2688.0	2668.5	2645.3
27.5°	2529.4	2561.1	2597.7	2583.1	2557.5
30°	2389.1	2435.4	2496.5	2484.3	2466.0
32.5°	2256.1	2302.5	2386.6	2381.8	2372.0
35°	2135.3	2164.6	2263.4	2275.6	2267.1
37.5°	2020.6	2047.4	2140.2	2168.2	2160.9
40°	1899.8	1929.1	2002.3	2052.3	2054.8
42.5°	1780.2	1808.3	1868.1	1940.1	1940.1
45°	1653.3	1681.4	1736.3	1815.6	1825.4
47.5°	1528.9	1558.2	1611.8	1691.1	1707.0
50°	1406.9	1433.7	1487.4	1564.3	1588.7
52.5°	1280.0	1309.2	1361.7	1432.5	1467.9
55°	1157.9	1177.5	1234.8	1303.1	1341.0
57.5°	1031.0	1049.3	1114.0	1172.6	1211.6
60°	909.0	932.2	982.2	1042.0	1087.2
62.5°	791.9	816.3	859.0	911.5	962.7
65°	678.4	696.7	738.2	790.7	835.8
67.5°	568.6	584.5	625.9	662.5	710.1
70°	457.6	478.3	508.8	544.2	574.7
72.5°	368.5	377.0	402.7	428.3	460.0
75°	272.1	286.7	307.5	322.1	340.4
77.5°	195.2	203.8	216.0	228.2	245.3
80°	130.6	134.2	145.2	147.6	161.1
82.5°	79.3	81.8	84.2	85.4	90.3
85°	42.7	42.7	42.7	40.3	40.3
87.5°	24.4	24.4	20.7	17.1	12.2
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)