

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: P556970

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-93-94-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: P556970
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-30-UNV-93-94-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE
AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND
3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

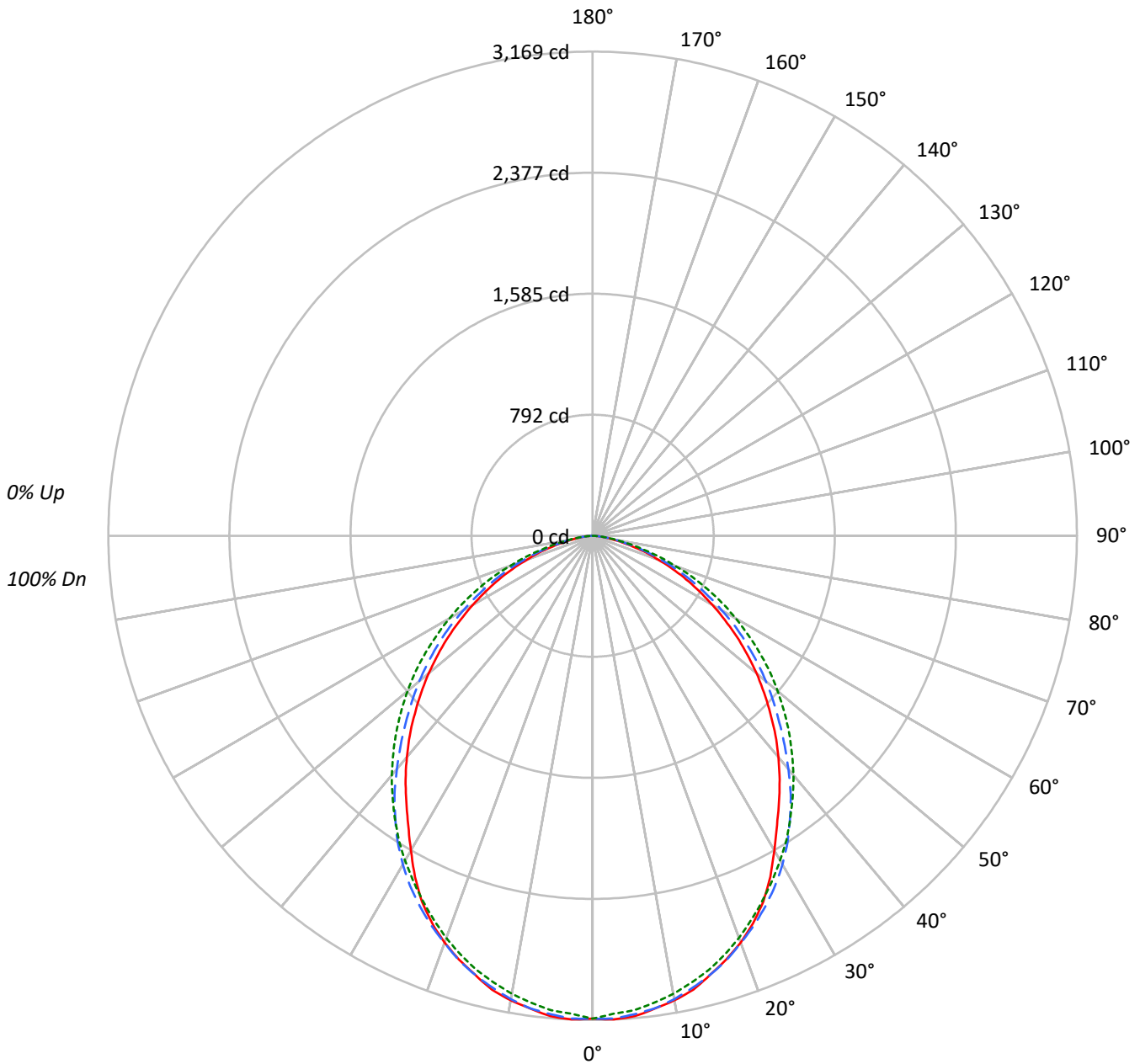
Lumens per Lamp: N/A
Luminaire Lumens: 7308.0 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	8505	8505	8505
5°	8528	8491	8419
10°	8437	8414	8318
15°	8288	8288	8193
20°	8112	8122	8018
25°	7845	7942	7816
30°	7387	7719	7625
35°	6980	7399	7411
40°	6641	6999	7183
45°	6261	6575	6913
50°	5861	6196	6618
55°	5406	5765	6260
60°	4869	5260	5822
65°	4299	4677	5296
70°	3582	3984	4500
75°	2816	3182	3523
80°	2013	2239	2484
85°	1312	1312	1238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.6	4.1
10°-20°	836.0	11.4
20°-30°	1221.6	16.7
30°-40°	1386.7	19.0
40°-50°	1338.6	18.3
50°-60°	1104.3	15.1
60°-70°	735.4	10.1
70°-80°	329.1	4.5
80°-90°	58.9	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°	2355.2	32.2
0°-40°	3741.8	51.2
0°-60°	6184.7	84.6
0°-90°	7308.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7308.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3160	3160	3160	3160	3160	
5°	3157	3156	3144	3126	3117	299
15°	2975	2982	2975	2961	2941	839
25°	2642	2663	2675	2655	2632	1210
35°	2125	2154	2252	2264	2256	1331
45°	1645	1673	1728	1807	1816	1269
55°	1152	1172	1229	1297	1334	1028
65°	675	693	735	787	832	669
75°	271	285	306	320	339	296
85°	42	42	42	40	40	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3160.5	3160.5	3160.5	3160.5	3160.5
2.5°	3169.0	3170.2	3162.9	3143.5	3131.4
5°	3156.9	3155.7	3143.5	3126.5	3116.8
7.5°	3121.7	3124.1	3120.5	3096.2	3082.8
10°	3087.7	3088.9	3079.2	3059.7	3044.0
12.5°	3044.0	3042.7	3029.4	3019.7	2994.2
15°	2974.8	2982.0	2974.8	2961.4	2940.8
17.5°	2908.0	2908.0	2912.8	2889.8	2874.0
20°	2832.7	2836.3	2836.3	2818.1	2799.9
22.5°	2745.3	2756.2	2759.8	2740.4	2718.6
25°	2642.1	2662.7	2674.8	2655.4	2632.4
27.5°	2517.0	2548.6	2585.0	2570.4	2544.9
30°	2377.4	2423.5	2484.2	2472.1	2453.9
32.5°	2245.0	2291.2	2374.9	2370.1	2360.4
35°	2124.8	2154.0	2252.3	2264.5	2256.0
37.5°	2010.7	2037.4	2129.7	2157.6	2150.3
40°	1890.5	1919.6	1992.5	2042.3	2044.7
42.5°	1771.5	1799.4	1858.9	1930.6	1930.6
45°	1645.2	1673.1	1727.8	1806.7	1816.4
47.5°	1521.4	1550.5	1603.9	1682.9	1698.6
50°	1400.0	1426.7	1480.1	1556.6	1580.9
52.5°	1273.7	1302.8	1355.0	1425.5	1460.7
55°	1152.3	1171.7	1228.8	1296.7	1334.4
57.5°	1026.0	1044.2	1108.6	1166.8	1205.7
60°	904.6	927.6	977.4	1036.9	1081.8
62.5°	788.0	812.3	854.8	907.0	958.0
65°	675.1	693.3	734.6	786.8	831.7
67.5°	565.8	581.6	622.9	659.3	706.7
70°	455.3	476.0	506.3	541.5	571.9
72.5°	366.7	375.2	400.7	426.2	457.7
75°	270.8	285.3	306.0	320.5	338.8
77.5°	194.3	202.8	214.9	227.1	244.1
80°	129.9	133.6	144.5	146.9	160.3
82.5°	78.9	81.4	83.8	85.0	89.8
85°	42.5	42.5	42.5	40.1	40.1
87.5°	24.3	24.3	20.6	17.0	12.1
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)