

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: P556962

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-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: P556962
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-93-85-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 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

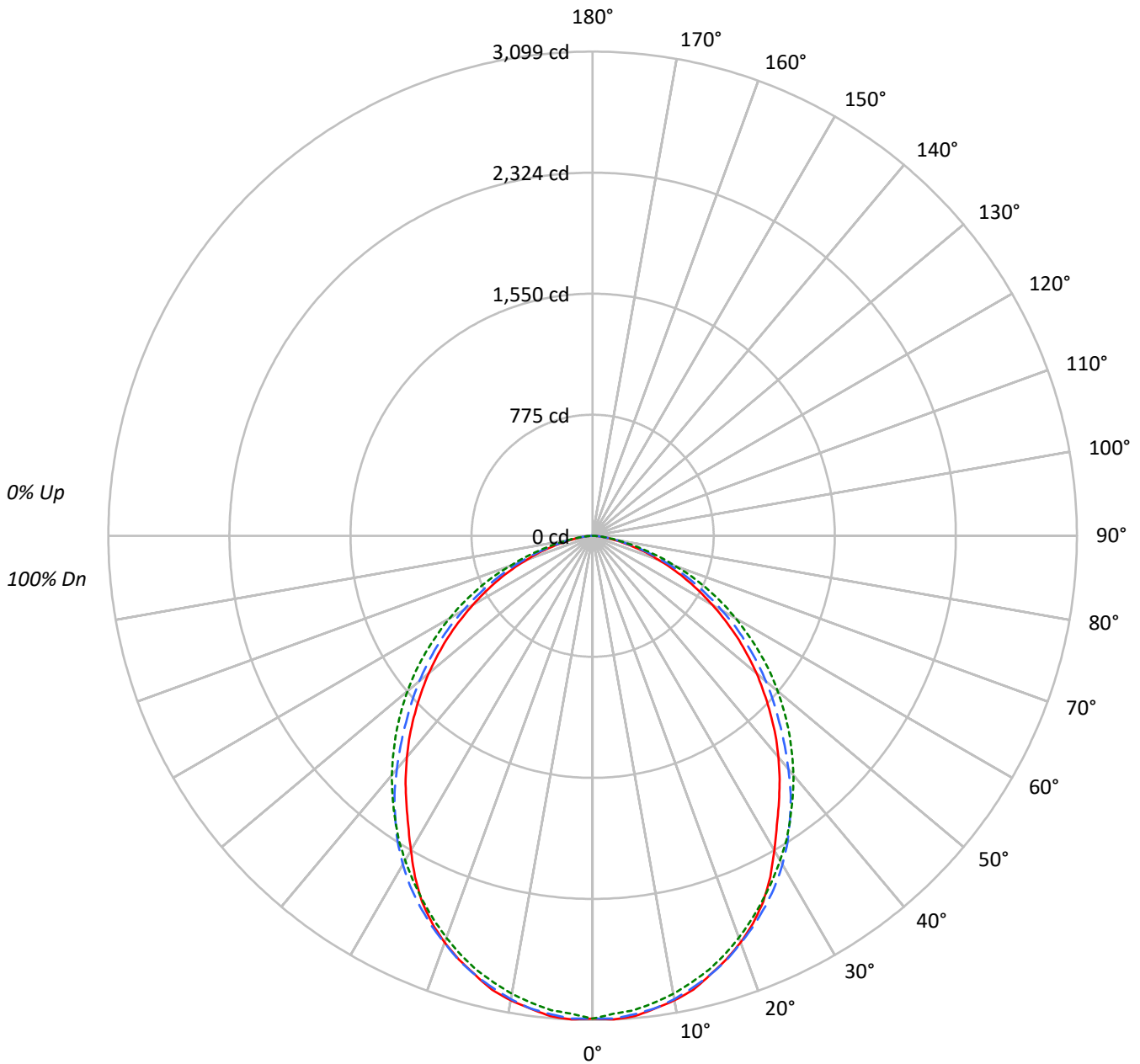
Lumens per Lamp: N/A
Luminaire Lumens: 7146.0 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8316	8316	8316
5°	8339	8303	8233
10°	8250	8227	8133
15°	8104	8104	8011
20°	7932	7942	7840
25°	7671	7766	7643
30°	7223	7548	7456
35°	6825	7235	7247
40°	6494	6844	7024
45°	6122	6430	6760
50°	5731	6059	6471
55°	5286	5637	6122
60°	4760	5144	5694
65°	4203	4574	5179
70°	3503	3895	4400
75°	2753	3111	3444
80°	1968	2190	2428
85°	1284	1284	1210



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	291.0	4.1
10°-20°	817.4	11.4
20°-30°	1194.5	16.7
30°-40°	1355.9	19.0
40°-50°	1309.0	18.3
50°-60°	1079.8	15.1
60°-70°	719.1	10.1
70°-80°	321.8	4.5
80°-90°	57.6	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°	2303.0	32.2
0°-40°	3658.9	51.2
0°-60°	6047.6	84.6
0°-90°	7146.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7146.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3090	3090	3090	3090	3090	
5°	3087	3086	3074	3057	3048	292
15°	2909	2916	2909	2896	2876	820
25°	2584	2604	2616	2597	2574	1183
35°	2078	2106	2202	2214	2206	1302
45°	1609	1636	1690	1767	1776	1241
55°	1127	1146	1202	1268	1305	1006
65°	660	678	718	769	813	655
75°	265	279	299	313	331	290
85°	42	42	42	39	39	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3090.5	3090.5	3090.5	3090.5	3090.5
2.5°	3098.8	3100.0	3092.8	3073.8	3062.0
5°	3086.9	3085.7	3073.8	3057.2	3047.7
7.5°	3052.5	3054.8	3051.3	3027.5	3014.5
10°	3019.2	3020.4	3010.9	2991.9	2976.5
12.5°	2976.5	2975.3	2962.2	2952.7	2927.8
15°	2908.8	2915.9	2908.8	2895.7	2875.6
17.5°	2843.5	2843.5	2848.3	2825.7	2810.3
20°	2769.9	2773.5	2773.5	2755.7	2737.8
22.5°	2684.4	2695.1	2698.7	2679.7	2658.3
25°	2583.5	2603.7	2615.6	2596.6	2574.0
27.5°	2461.2	2492.1	2527.7	2513.4	2488.5
30°	2324.7	2369.8	2429.2	2417.3	2399.5
32.5°	2195.3	2240.4	2322.3	2317.5	2308.1
35°	2077.7	2106.2	2202.4	2214.3	2205.9
37.5°	1966.1	1992.2	2082.5	2109.8	2102.7
40°	1848.6	1877.1	1948.3	1997.0	1999.4
42.5°	1732.2	1759.5	1817.7	1887.8	1887.8
45°	1608.7	1636.1	1689.5	1766.7	1776.2
47.5°	1487.6	1516.1	1568.4	1645.6	1661.0
50°	1368.9	1395.0	1447.3	1522.1	1545.8
52.5°	1245.4	1273.9	1325.0	1393.9	1428.3
55°	1126.7	1145.7	1201.5	1268.0	1304.8
57.5°	1003.2	1021.1	1084.0	1141.0	1179.0
60°	884.5	907.1	955.8	1013.9	1057.9
62.5°	770.5	794.3	835.8	886.9	936.8
65°	660.1	677.9	718.3	769.4	813.3
67.5°	553.3	568.7	609.1	644.7	691.0
70°	445.2	465.4	495.1	529.5	559.2
72.5°	358.6	366.9	391.8	416.7	447.6
75°	264.8	279.0	299.2	313.4	331.2
77.5°	190.0	198.3	210.1	222.0	238.6
80°	127.0	130.6	141.3	143.7	156.7
82.5°	77.2	79.5	81.9	83.1	87.9
85°	41.6	41.6	41.6	39.2	39.2
87.5°	23.7	23.7	20.2	16.6	11.9
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)