

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: P557154

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-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: P557154
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

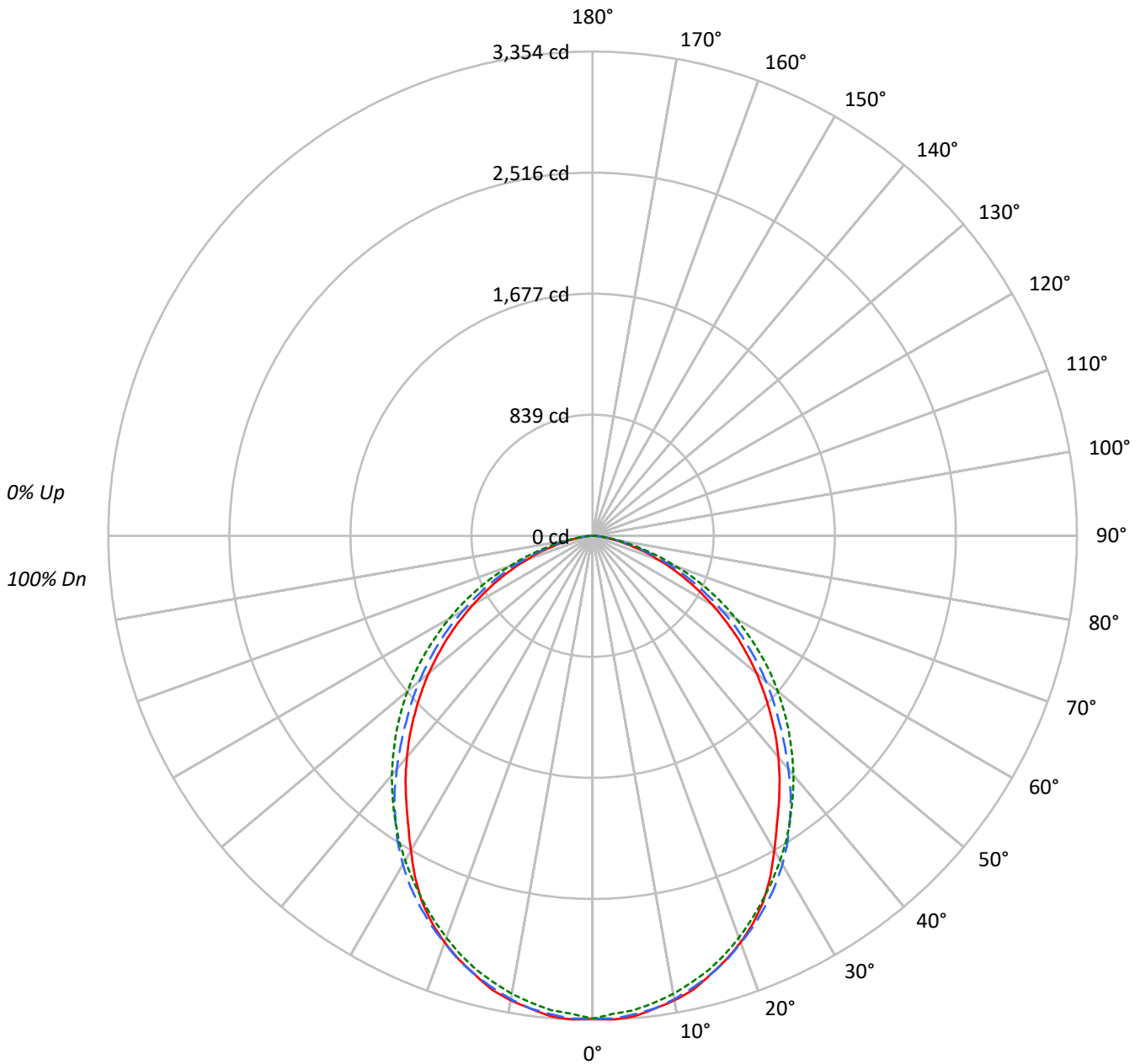
Lumens per Lamp: N/A
Luminaire Lumens: 7734.0 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	9001	9001	9001
5°	9025	8987	8910
10°	8929	8904	8802
15°	8771	8771	8670
20°	8585	8596	8485
25°	8302	8405	8272
30°	7818	8169	8069
35°	7387	7830	7843
40°	7028	7407	7601
45°	6626	6959	7316
50°	6203	6558	7004
55°	5721	6101	6625
60°	5152	5567	6162
65°	4549	4950	5605
70°	3792	4216	4762
75°	2979	3367	3727
80°	2131	2369	2628
85°	1389	1389	1309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.9	4.1
10°-20°	884.7	11.4
20°-30°	1292.8	16.7
30°-40°	1467.5	19.0
40°-50°	1416.7	18.3
50°-60°	1168.6	15.1
60°-70°	778.2	10.1
70°-80°	348.2	4.5
80°-90°	62.3	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°	2492.5	32.2
0°-40°	3960.0	51.2
0°-60°	6545.2	84.6
0°-90°	7734.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7734.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3345	3345	3345	3345	3345	
5°	3341	3340	3327	3309	3298	316
15°	3148	3156	3148	3134	3112	887
25°	2796	2818	2831	2810	2786	1280
35°	2249	2280	2384	2396	2388	1409
45°	1741	1771	1828	1912	1922	1343
55°	1219	1240	1300	1372	1412	1088
65°	714	734	777	833	880	708
75°	286	302	324	339	358	313
85°	45	45	45	42	42	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3344.8	3344.8	3344.8	3344.8	3344.8
2.5°	3353.8	3355.0	3347.3	3326.8	3313.9
5°	3340.9	3339.6	3326.8	3308.8	3298.5
7.5°	3303.6	3306.2	3302.4	3276.7	3262.5
10°	3267.7	3268.9	3258.7	3238.1	3221.4
12.5°	3221.4	3220.1	3206.0	3195.7	3168.7
15°	3148.2	3155.9	3148.2	3134.0	3112.2
17.5°	3077.5	3077.5	3082.6	3058.2	3041.5
20°	2997.8	3001.7	3001.7	2982.4	2963.1
22.5°	2905.3	2916.9	2920.7	2900.2	2877.0
25°	2796.1	2817.9	2830.8	2810.2	2785.8
27.5°	2663.7	2697.1	2735.7	2720.3	2693.3
30°	2516.0	2564.8	2629.0	2616.2	2596.9
32.5°	2375.9	2424.7	2513.4	2508.2	2498.0
35°	2248.7	2279.5	2383.6	2396.5	2387.5
37.5°	2127.9	2156.2	2253.8	2283.4	2275.7
40°	2000.7	2031.5	2108.6	2161.3	2163.9
42.5°	1874.8	1904.3	1967.3	2043.1	2043.1
45°	1741.1	1770.7	1828.5	1912.0	1922.3
47.5°	1610.1	1640.9	1697.4	1781.0	1797.7
50°	1481.6	1509.8	1566.4	1647.3	1673.0
52.5°	1347.9	1378.8	1434.0	1508.5	1545.8
55°	1219.4	1240.0	1300.4	1372.3	1412.2
57.5°	1085.8	1105.1	1173.2	1234.8	1276.0
60°	957.3	981.7	1034.4	1097.4	1144.9
62.5°	833.9	859.6	904.6	959.9	1013.8
65°	714.4	733.7	777.4	832.7	880.2
67.5°	598.8	615.5	659.2	697.7	747.8
70°	481.9	503.7	535.8	573.1	605.2
72.5°	388.1	397.1	424.0	451.0	484.4
75°	286.5	302.0	323.8	339.2	358.5
77.5°	205.6	214.6	227.4	240.3	258.3
80°	137.5	141.3	152.9	155.5	169.6
82.5°	83.5	86.1	88.7	89.9	95.1
85°	45.0	45.0	45.0	42.4	42.4
87.5°	25.7	25.7	21.8	18.0	12.8
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)