

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: P558348

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-UNV-81-96-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: P558348
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-40-UNV-81-96-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

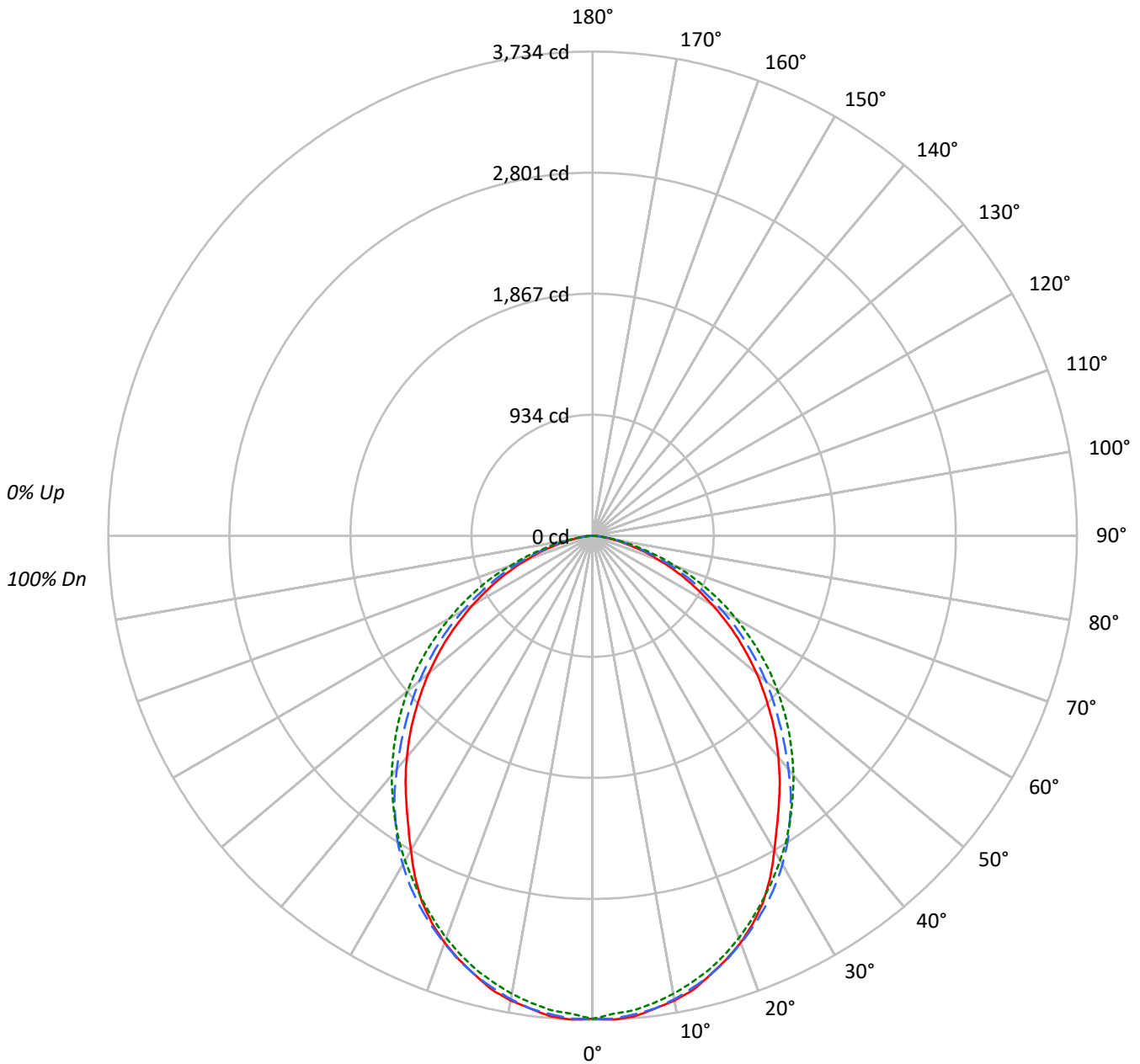
Lumens per Lamp: N/A
Luminaire Lumens: 8612.0 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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					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	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°	10023	10023	10023
5°	10049	10007	9922
10°	9942	9915	9802
15°	9766	9766	9655
20°	9559	9572	9449
25°	9245	9359	9211
30°	8705	9097	8985
35°	8226	8719	8733
40°	7826	8248	8464
45°	7378	7749	8146
50°	6907	7302	7799
55°	6371	6793	7378
60°	5737	6199	6861
65°	5065	5512	6241
70°	4222	4695	5302
75°	3318	3749	4151
80°	2373	2639	2927
85°	1547	1547	1457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.7	4.1
10°-20°	985.1	11.4
20°-30°	1439.6	16.7
30°-40°	1634.1	19.0
40°-50°	1577.5	18.3
50°-60°	1301.3	15.1
60°-70°	866.6	10.1
70°-80°	387.8	4.5
80°-90°	69.4	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°	2775.4	32.2
0°-40°	4409.5	51.2
0°-60°	7288.3	84.6
0°-90°	8612.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8612.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3724	3724	3724	3724	3724	
5°	3720	3719	3704	3684	3673	352
15°	3506	3514	3506	3490	3466	988
25°	3114	3138	3152	3129	3102	1426
35°	2504	2538	2654	2668	2658	1569
45°	1939	1972	2036	2129	2140	1496
55°	1358	1381	1448	1528	1572	1212
65°	796	817	866	927	980	789
75°	319	336	361	378	399	349
85°	50	50	50	47	47	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3724.5	3724.5	3724.5	3724.5	3724.5
2.5°	3734.5	3735.9	3727.3	3704.4	3690.1
5°	3720.2	3718.7	3704.4	3684.4	3673.0
7.5°	3678.7	3681.5	3677.2	3648.6	3632.9
10°	3638.6	3640.0	3628.6	3605.7	3587.1
12.5°	3587.1	3585.7	3569.9	3558.5	3528.4
15°	3505.5	3514.1	3505.5	3489.8	3465.5
17.5°	3426.9	3426.9	3432.6	3405.4	3386.8
20°	3338.1	3342.4	3342.4	3321.0	3299.5
22.5°	3235.1	3248.0	3252.3	3229.4	3203.6
25°	3113.5	3137.8	3152.1	3129.2	3102.1
27.5°	2966.1	3003.3	3046.3	3029.1	2999.0
30°	2801.6	2855.9	2927.5	2913.2	2891.7
32.5°	2645.6	2700.0	2798.7	2793.0	2781.5
35°	2504.0	2538.3	2654.2	2668.5	2658.5
37.5°	2369.5	2400.9	2509.7	2542.6	2534.0
40°	2227.8	2262.2	2348.0	2406.7	2409.5
42.5°	2087.6	2120.5	2190.6	2275.0	2275.0
45°	1938.8	1971.7	2036.1	2129.1	2140.5
47.5°	1792.8	1827.2	1890.1	1983.1	2001.7
50°	1649.8	1681.2	1744.2	1834.3	1862.9
52.5°	1500.9	1535.3	1596.8	1679.8	1721.3
55°	1357.9	1380.8	1448.0	1528.1	1572.5
57.5°	1209.1	1230.5	1306.4	1375.0	1420.8
60°	1066.0	1093.2	1151.8	1221.9	1274.9
62.5°	928.6	957.2	1007.3	1068.8	1128.9
65°	795.5	817.0	865.7	927.2	980.1
67.5°	666.8	685.4	734.0	776.9	832.7
70°	536.6	560.9	596.7	638.2	673.9
72.5°	432.1	442.1	472.2	502.2	539.4
75°	319.1	336.2	360.6	377.7	399.2
77.5°	228.9	238.9	253.3	267.6	287.6
80°	153.1	157.4	170.3	173.1	188.9
82.5°	93.0	95.9	98.7	100.2	105.9
85°	50.1	50.1	50.1	47.2	47.2
87.5°	28.6	28.6	24.3	20.0	14.3
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)