

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: P558434

Luminaire Tested: **FUSL-12-4-LD4-3STD-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: P558434
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-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

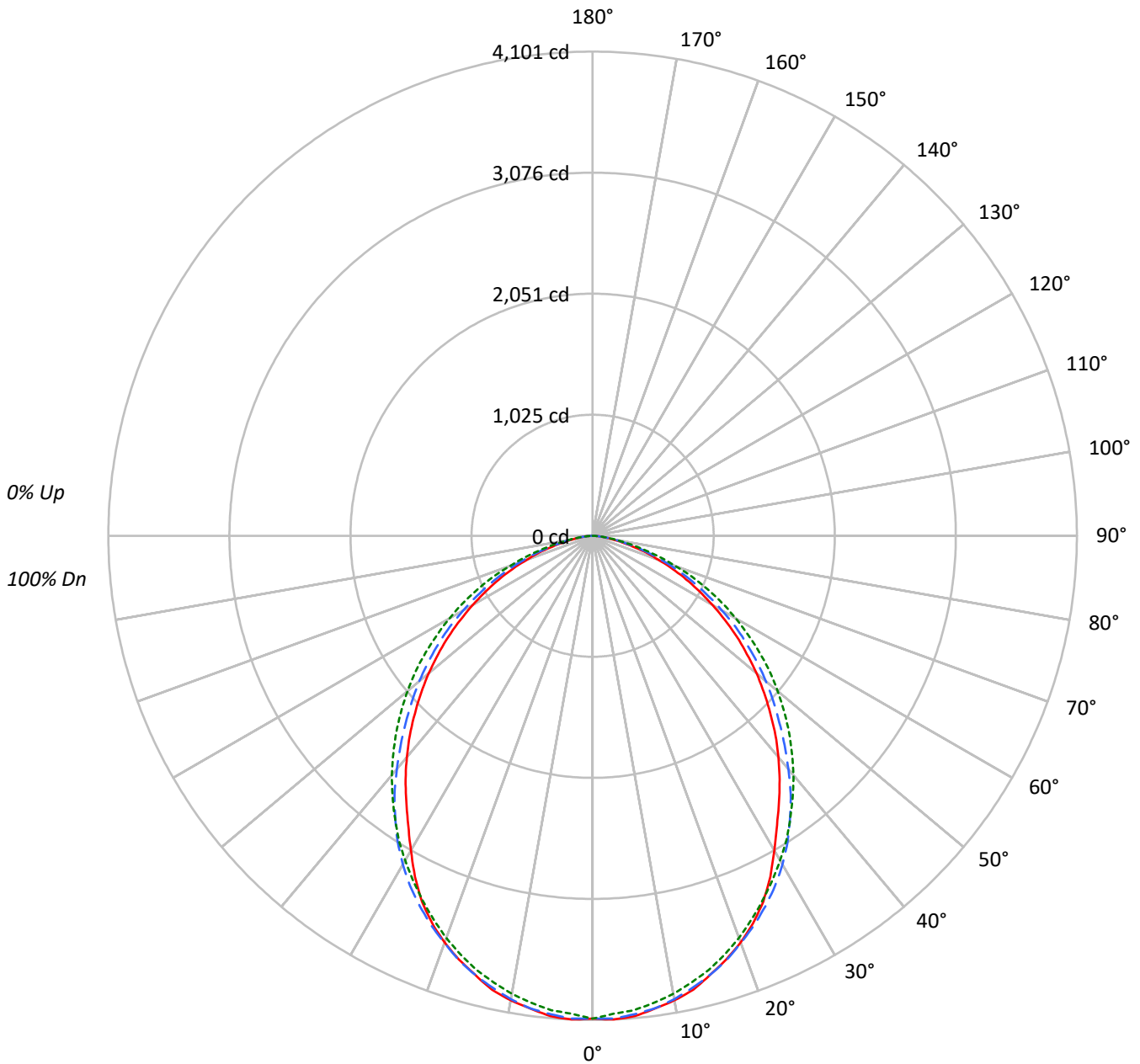
Lumens per Lamp: N/A
Luminaire Lumens: 9457.0 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	11006	11006	11006
5°	11035	10988	10895
10°	10918	10888	10764
15°	10724	10724	10602
20°	10497	10511	10376
25°	10152	10277	10114
30°	9560	9989	9867
35°	9033	9575	9590
40°	8594	9057	9295
45°	8102	8509	8945
50°	7584	8018	8564
55°	6996	7460	8101
60°	6300	6807	7535
65°	5563	6053	6853
70°	4636	5155	5822
75°	3643	4116	4558
80°	2605	2898	3214
85°	1698	1698	1602



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.1	4.1
10°-20°	1081.8	11.4
20°-30°	1580.9	16.7
30°-40°	1794.4	19.0
40°-50°	1732.3	18.3
50°-60°	1429.0	15.1
60°-70°	951.6	10.1
70°-80°	425.8	4.5
80°-90°	76.2	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°	3047.7	32.2
0°-40°	4842.2	51.2
0°-60°	8003.4	84.6
0°-90°	9457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9457.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4090	4090	4090	4090	4090	
5°	4085	4084	4068	4046	4033	387
15°	3850	3859	3850	3832	3806	1085
25°	3419	3446	3461	3436	3406	1566
35°	2750	2787	2915	2930	2919	1723
45°	2129	2165	2236	2338	2351	1643
55°	1491	1516	1590	1678	1727	1331
65°	874	897	951	1018	1076	866
75°	350	369	396	415	438	383
85°	55	55	55	52	52	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4089.9	4089.9	4089.9	4089.9	4089.9
2.5°	4100.9	4102.5	4093.1	4067.9	4052.2
5°	4085.2	4083.6	4067.9	4045.9	4033.3
7.5°	4039.6	4042.8	4038.1	4006.6	3989.3
10°	3995.6	3997.2	3984.6	3959.5	3939.1
12.5°	3939.1	3937.5	3920.2	3907.6	3874.6
15°	3849.5	3858.9	3849.5	3832.2	3805.5
17.5°	3763.1	3763.1	3769.4	3739.5	3719.1
20°	3665.7	3670.4	3670.4	3646.8	3623.3
22.5°	3552.5	3566.7	3571.4	3546.3	3518.0
25°	3419.0	3445.7	3461.4	3436.3	3406.4
27.5°	3257.2	3298.0	3345.1	3326.3	3293.3
30°	3076.5	3136.2	3214.7	3199.0	3175.5
32.5°	2905.2	2964.9	3073.3	3067.0	3054.5
35°	2749.7	2787.4	2914.6	2930.3	2919.3
37.5°	2602.0	2636.5	2755.9	2792.1	2782.6
40°	2446.4	2484.1	2578.4	2642.8	2645.9
42.5°	2292.4	2328.6	2405.6	2498.3	2498.3
45°	2129.0	2165.2	2235.9	2338.0	2350.6
47.5°	1968.7	2006.5	2075.6	2177.7	2198.1
50°	1811.6	1846.2	1915.3	2014.3	2045.7
52.5°	1648.2	1685.9	1753.5	1844.6	1890.2
55°	1491.1	1516.2	1590.1	1678.1	1726.8
57.5°	1327.7	1351.3	1434.5	1510.0	1560.2
60°	1170.6	1200.4	1264.8	1341.8	1400.0
62.5°	1019.7	1051.2	1106.1	1173.7	1239.7
65°	873.6	897.2	950.6	1018.2	1076.3
67.5°	732.2	752.6	806.0	853.2	914.5
70°	589.2	615.9	655.2	700.8	740.0
72.5°	474.5	485.5	518.5	551.5	592.4
75°	350.4	369.2	395.9	414.8	438.4
77.5°	251.4	262.4	278.1	293.8	315.8
80°	168.1	172.8	187.0	190.1	207.4
82.5°	102.1	105.3	108.4	110.0	116.3
85°	55.0	55.0	55.0	51.9	51.9
87.5°	31.4	31.4	26.7	22.0	15.7
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)