

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: P558304

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-93-84-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: P558304
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-35-UNV-93-84-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

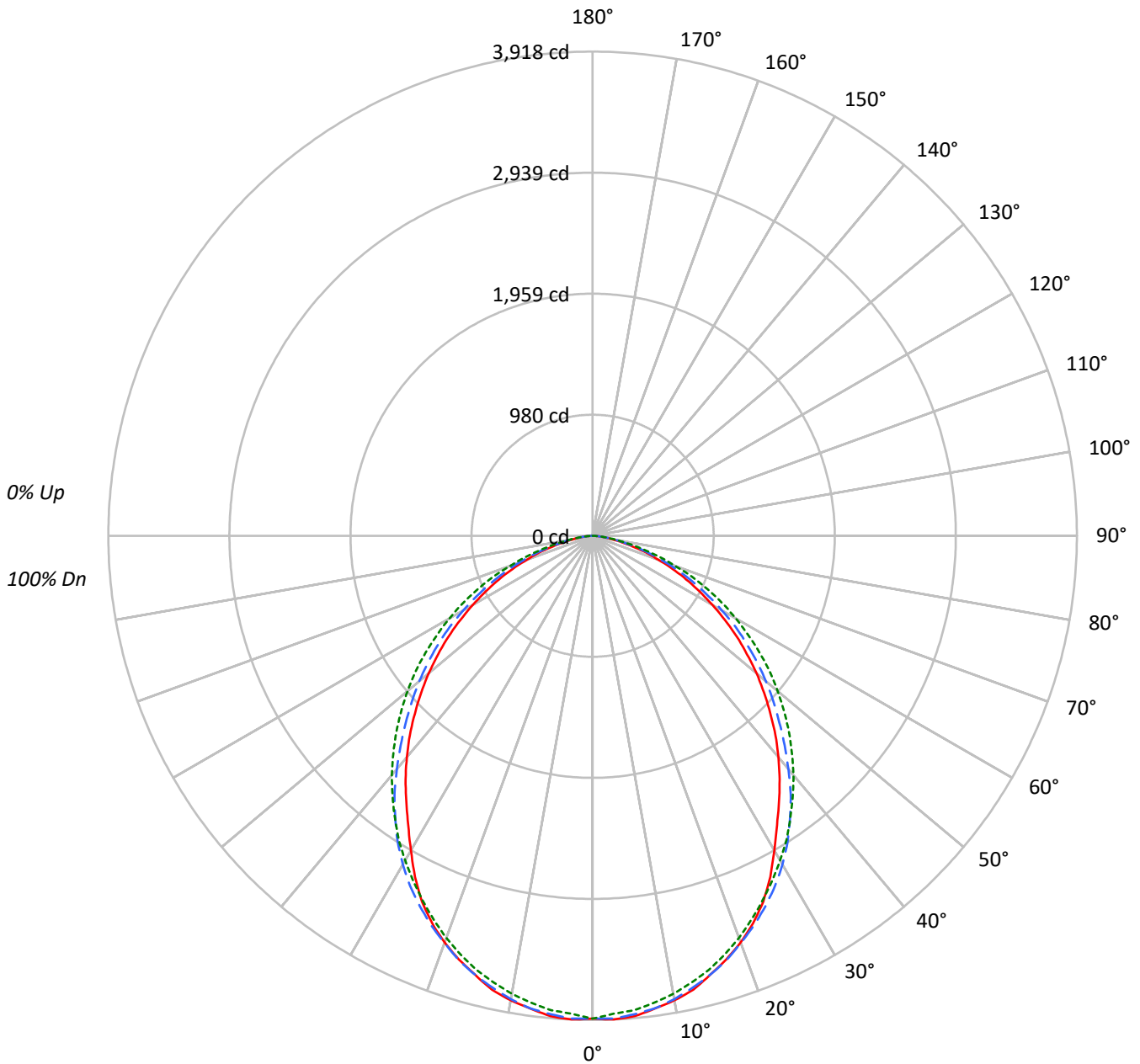
Lumens per Lamp: N/A
Luminaire Lumens: 9035.0 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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				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	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°	10515	10515	10515
5°	10543	10498	10409
10°	10431	10402	10283
15°	10246	10246	10129
20°	10029	10042	9913
25°	9698	9819	9663
30°	9133	9543	9427
35°	8630	9148	9162
40°	8210	8653	8880
45°	7741	8129	8546
50°	7246	7661	8182
55°	6684	7127	7740
60°	6019	6504	7198
65°	5314	5783	6548
70°	4429	4925	5563
75°	3480	3933	4354
80°	2489	2768	3070
85°	1621	1621	1528



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	367.9	4.1
10°-20°	1033.5	11.4
20°-30°	1510.3	16.7
30°-40°	1714.4	19.0
40°-50°	1655.0	18.3
50°-60°	1365.2	15.1
60°-70°	909.1	10.1
70°-80°	406.8	4.5
80°-90°	72.8	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°	2911.7	32.2
0°-40°	4626.1	51.2
0°-60°	7646.3	84.6
0°-90°	9035.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9035.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3907	3907	3907	3907	3907	
5°	3903	3901	3886	3865	3853	369
15°	3678	3687	3678	3661	3636	1037
25°	3266	3292	3307	3283	3254	1496
35°	2627	2663	2785	2800	2789	1646
45°	2034	2068	2136	2234	2246	1569
55°	1425	1449	1519	1603	1650	1271
65°	835	857	908	973	1028	828
75°	335	353	378	396	419	366
85°	52	52	52	50	50	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3907.4	3907.4	3907.4	3907.4	3907.4
2.5°	3917.9	3919.4	3910.4	3886.4	3871.4
5°	3902.9	3901.4	3886.4	3865.4	3853.4
7.5°	3859.4	3862.4	3857.9	3827.8	3811.3
10°	3817.3	3818.8	3806.8	3782.8	3763.3
12.5°	3763.3	3761.8	3745.3	3733.3	3701.8
15°	3677.7	3686.7	3677.7	3661.2	3635.7
17.5°	3595.2	3595.2	3601.2	3572.7	3553.1
20°	3502.1	3506.6	3506.6	3484.1	3461.6
22.5°	3394.0	3407.5	3412.0	3388.0	3361.0
25°	3266.4	3291.9	3307.0	3282.9	3254.4
27.5°	3111.8	3150.8	3195.9	3177.9	3146.3
30°	2939.2	2996.2	3071.3	3056.3	3033.8
32.5°	2775.6	2832.6	2936.2	2930.2	2918.2
35°	2627.0	2663.0	2784.6	2799.6	2789.1
37.5°	2485.8	2518.9	2633.0	2667.5	2658.5
40°	2337.2	2373.3	2463.3	2524.9	2527.9
42.5°	2190.1	2224.7	2298.2	2386.8	2386.8
45°	2034.0	2068.5	2136.1	2233.7	2245.7
47.5°	1880.9	1916.9	1983.0	2080.5	2100.1
50°	1730.8	1763.8	1829.9	1924.4	1954.5
52.5°	1574.7	1610.7	1675.2	1762.3	1805.8
55°	1424.6	1448.6	1519.1	1603.2	1649.7
57.5°	1268.4	1291.0	1370.5	1442.6	1490.6
60°	1118.3	1146.9	1208.4	1282.0	1337.5
62.5°	974.2	1004.2	1056.8	1121.3	1184.4
65°	834.6	857.1	908.2	972.7	1028.3
67.5°	699.5	719.0	770.1	815.1	873.6
70°	562.9	588.4	626.0	669.5	707.0
72.5°	453.3	463.8	495.4	526.9	565.9
75°	334.7	352.8	378.3	396.3	418.8
77.5°	240.2	250.7	265.7	280.7	301.7
80°	160.6	165.1	178.6	181.6	198.1
82.5°	97.6	100.6	103.6	105.1	111.1
85°	52.5	52.5	52.5	49.5	49.5
87.5°	30.0	30.0	25.5	21.0	15.0
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)