

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: P557153

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-93-84-EDD**

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: P557153
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-93-84-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

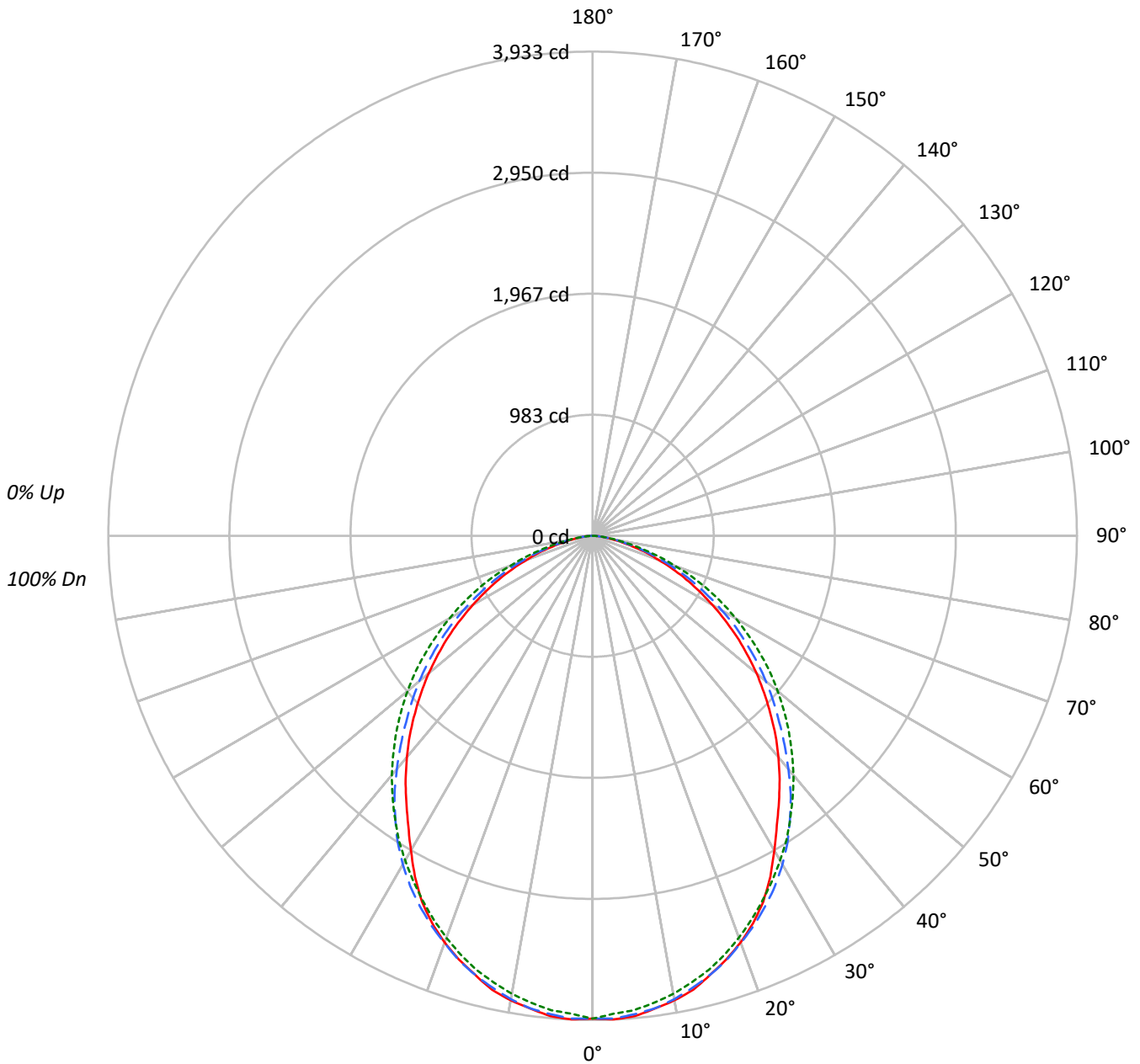
Lumens per Lamp: N/A
Luminaire Lumens: 9069.0 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10554	10554	10554
5°	10582	10538	10448
10°	10470	10441	10322
15°	10284	10284	10167
20°	10067	10080	9950
25°	9735	9856	9699
30°	9167	9579	9462
35°	8662	9182	9197
40°	8241	8686	8913
45°	7770	8160	8578
50°	7273	7689	8213
55°	6708	7154	7769
60°	6041	6528	7225
65°	5335	5805	6572
70°	4445	4943	5584
75°	3493	3948	4371
80°	2498	2779	3082
85°	1627	1627	1535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	369.3	4.1
10°-20°	1037.4	11.4
20°-30°	1516.0	16.7
30°-40°	1720.8	19.0
40°-50°	1661.2	18.3
50°-60°	1370.3	15.1
60°-70°	912.6	10.1
70°-80°	408.4	4.5
80°-90°	73.0	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°	2922.7	32.2
0°-40°	4643.5	51.2
0°-60°	7675.0	84.6
0°-90°	9069.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9069.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3922	3922	3922	3922	3922	
5°	3918	3916	3901	3880	3868	371
15°	3692	3701	3692	3675	3649	1041
25°	3279	3304	3319	3295	3267	1501
35°	2637	2673	2795	2810	2800	1652
45°	2042	2076	2144	2242	2254	1575
55°	1430	1454	1525	1609	1656	1276
65°	838	860	912	976	1032	831
75°	336	354	380	398	420	367
85°	53	53	53	50	50	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3922.1	3922.1	3922.1	3922.1	3922.1
2.5°	3932.7	3934.2	3925.1	3901.0	3885.9
5°	3917.6	3916.1	3901.0	3879.9	3867.9
7.5°	3873.9	3876.9	3872.4	3842.2	3825.7
10°	3831.7	3833.2	3821.2	3797.0	3777.5
12.5°	3777.5	3776.0	3759.4	3747.3	3715.7
15°	3691.6	3700.6	3691.6	3675.0	3649.4
17.5°	3608.7	3608.7	3614.7	3586.1	3566.5
20°	3515.3	3519.8	3519.8	3497.2	3474.6
22.5°	3406.8	3420.4	3424.9	3400.8	3373.6
25°	3278.7	3304.3	3319.4	3295.3	3266.7
27.5°	3123.5	3162.7	3207.9	3189.8	3158.2
30°	2950.2	3007.5	3082.8	3067.8	3045.2
32.5°	2786.0	2843.3	2947.2	2941.2	2929.2
35°	2636.8	2673.0	2795.0	2810.1	2799.6
37.5°	2495.2	2528.4	2642.9	2677.5	2668.5
40°	2346.0	2382.2	2472.6	2534.4	2537.4
42.5°	2198.4	2233.0	2306.9	2395.8	2395.8
45°	2041.7	2076.3	2144.1	2242.1	2254.1
47.5°	1888.0	1924.1	1990.4	2088.4	2108.0
50°	1737.3	1770.4	1836.7	1931.7	1961.8
52.5°	1580.6	1616.8	1681.5	1768.9	1812.6
55°	1429.9	1454.0	1524.8	1609.2	1655.9
57.5°	1273.2	1295.8	1375.7	1448.0	1496.2
60°	1122.5	1151.2	1212.9	1286.8	1342.5
62.5°	977.9	1008.0	1060.8	1125.6	1188.8
65°	837.8	860.4	911.6	976.4	1032.1
67.5°	702.2	721.7	773.0	818.2	876.9
70°	565.0	590.7	628.3	672.0	709.7
72.5°	455.0	465.6	497.2	528.9	568.1
75°	336.0	354.1	379.7	397.8	420.4
77.5°	241.1	251.6	266.7	281.8	302.9
80°	161.2	165.7	179.3	182.3	198.9
82.5°	97.9	101.0	104.0	105.5	111.5
85°	52.7	52.7	52.7	49.7	49.7
87.5°	30.1	30.1	25.6	21.1	15.1
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)