

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: P556514

Luminaire Tested: **FUSL-12-4-LD4-1LO-35-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: P556514
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-LD4-1LO-35-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 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

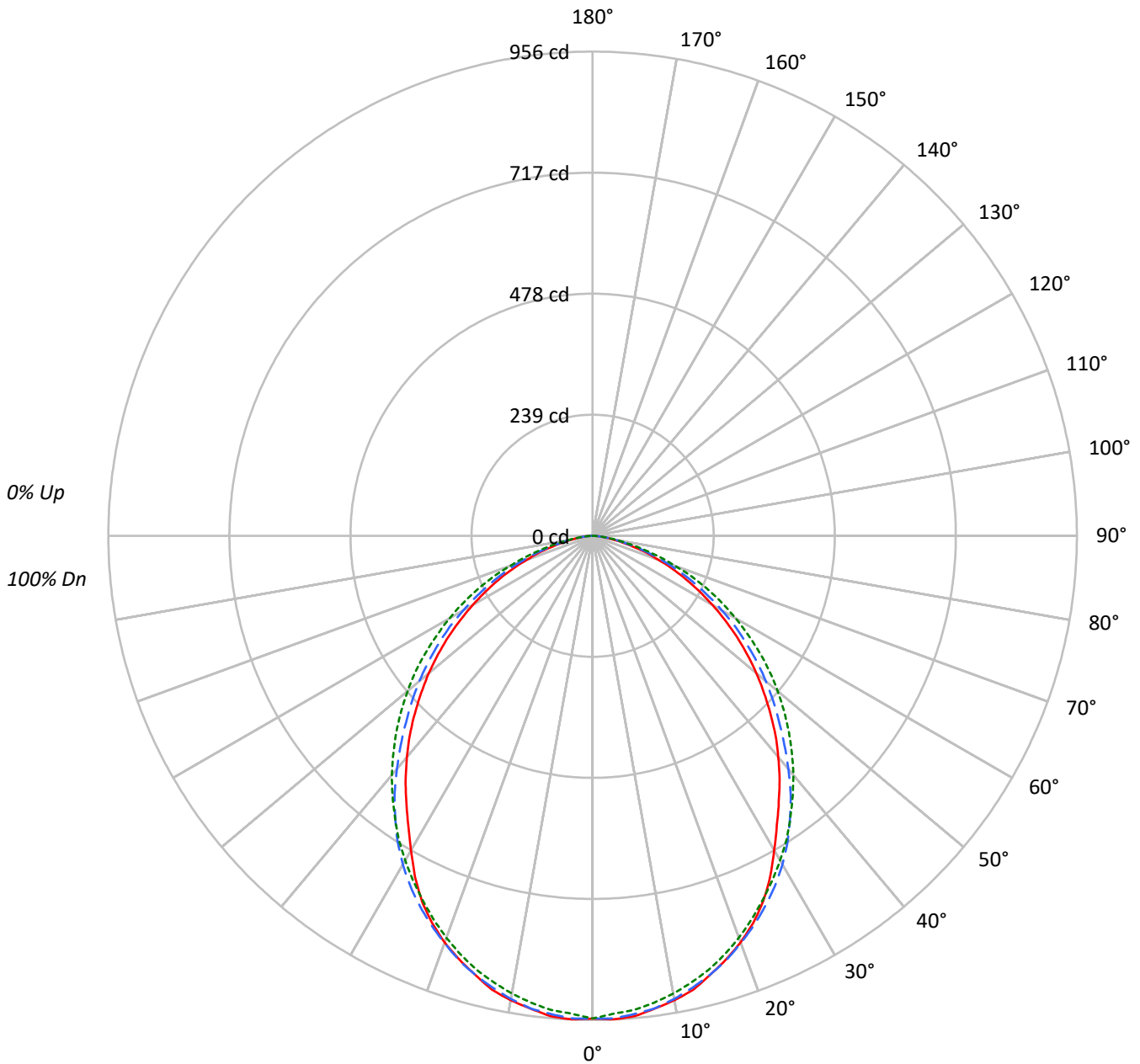
Lumens per Lamp: N/A
Luminaire Lumens: 2204.0 lumens
Efficiency: N/A
Efficacy: 94.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	2565	2565	2565
5°	2572	2561	2539
10°	2544	2537	2508
15°	2499	2499	2471
20°	2446	2450	2418
25°	2366	2395	2357
30°	2228	2328	2300
35°	2105	2232	2235
40°	2003	2111	2166
45°	1888	1983	2085
50°	1768	1869	1996
55°	1630	1739	1888
60°	1468	1587	1756
65°	1296	1410	1597
70°	1080	1201	1357
75°	849	960	1063
80°	607	676	748
85°	395	395	374



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.7	4.1
10°-20°	252.1	11.4
20°-30°	368.4	16.7
30°-40°	418.2	19.0
40°-50°	403.7	18.3
50°-60°	333.0	15.1
60°-70°	221.8	10.1
70°-80°	99.3	4.5
80°-90°	17.7	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°	710.3	32.2
0°-40°	1128.5	51.2
0°-60°	1865.2	84.6
0°-90°	2204.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2204.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	953	953	953	953	953	
5°	952	952	948	943	940	90
15°	897	899	897	893	887	253
25°	797	803	807	801	794	365
35°	641	650	679	683	680	402
45°	496	505	521	545	548	383
55°	348	353	371	391	402	310
65°	204	209	222	237	251	202
75°	82	86	92	97	102	89
85°	13	13	13	12	12	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	953.2	953.2	953.2	953.2	953.2
2.5°	955.7	956.1	953.9	948.0	944.4
5°	952.1	951.7	948.0	942.9	940.0
7.5°	941.5	942.2	941.1	933.8	929.7
10°	931.2	931.6	928.6	922.8	918.0
12.5°	918.0	917.7	913.6	910.7	903.0
15°	897.1	899.3	897.1	893.1	886.9
17.5°	877.0	877.0	878.5	871.5	866.8
20°	854.3	855.4	855.4	849.9	844.4
22.5°	827.9	831.2	832.3	826.5	819.9
25°	796.8	803.0	806.7	800.8	793.9
27.5°	759.1	768.6	779.6	775.2	767.5
30°	717.0	730.9	749.2	745.5	740.1
32.5°	677.1	691.0	716.3	714.8	711.9
35°	640.8	649.6	679.3	682.9	680.4
37.5°	606.4	614.5	642.3	650.7	648.5
40°	570.1	578.9	600.9	615.9	616.7
42.5°	534.3	542.7	560.6	582.2	582.2
45°	496.2	504.6	521.1	544.9	547.8
47.5°	458.8	467.6	483.7	507.5	512.3
50°	422.2	430.3	446.4	469.4	476.8
52.5°	384.1	392.9	408.7	429.9	440.5
55°	347.5	353.4	370.6	391.1	402.4
57.5°	309.4	314.9	334.3	351.9	363.6
60°	272.8	279.8	294.8	312.7	326.3
62.5°	237.7	245.0	257.8	273.5	288.9
65°	203.6	209.1	221.5	237.3	250.8
67.5°	170.6	175.4	187.9	198.8	213.1
70°	137.3	143.5	152.7	163.3	172.5
72.5°	110.6	113.2	120.8	128.5	138.1
75°	81.7	86.1	92.3	96.7	102.2
77.5°	58.6	61.2	64.8	68.5	73.6
80°	39.2	40.3	43.6	44.3	48.3
82.5°	23.8	24.5	25.3	25.6	27.1
85°	12.8	12.8	12.8	12.1	12.1
87.5°	7.3	7.3	6.2	5.1	3.7
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)