

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: P556452

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-93-86-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: P556452
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-30-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

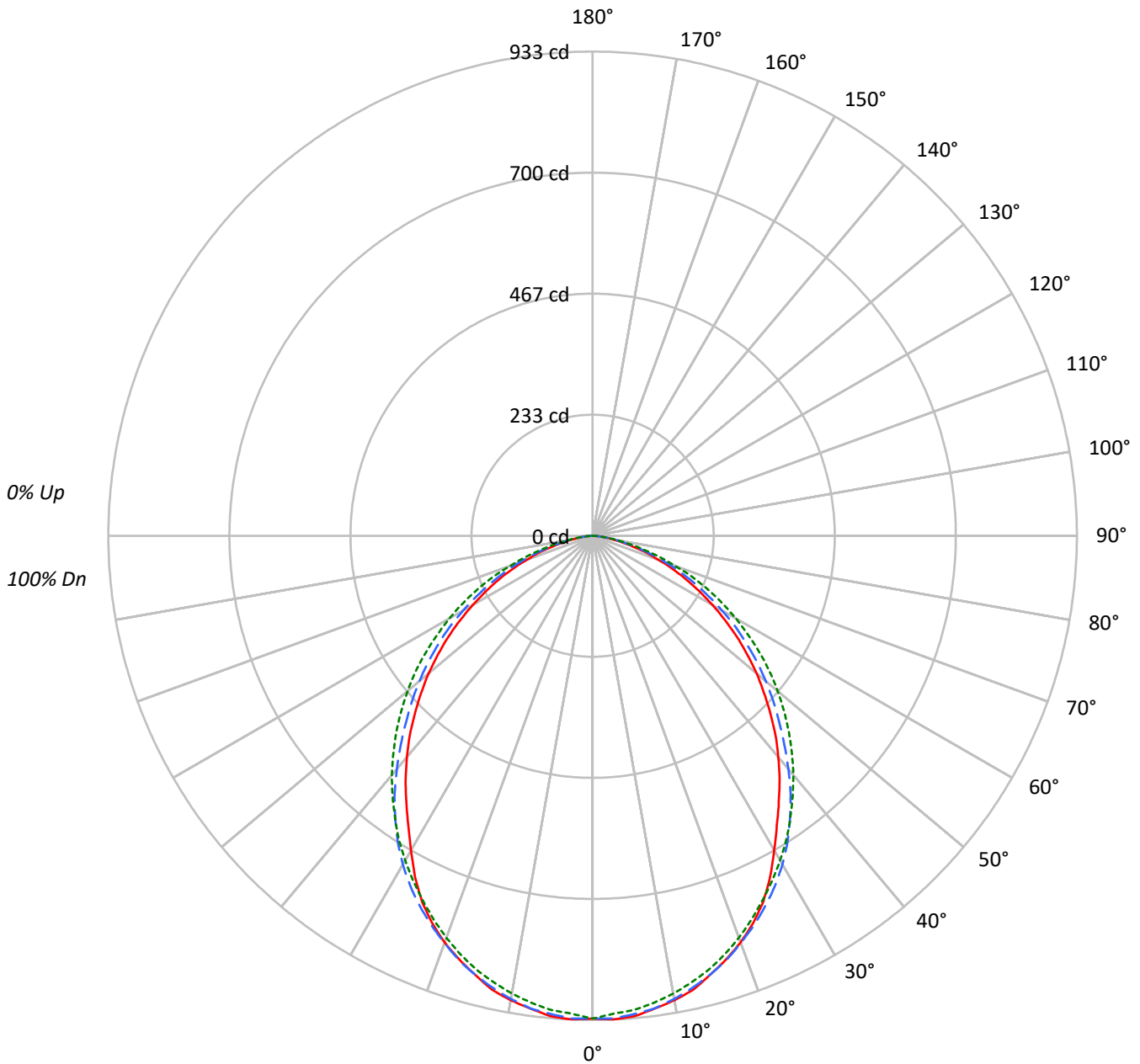
Lumens per Lamp: N/A
Luminaire Lumens: 2151.0 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	2503	2503	2503
5°	2510	2499	2478
10°	2483	2476	2448
15°	2439	2439	2411
20°	2388	2391	2360
25°	2309	2338	2301
30°	2174	2272	2244
35°	2054	2178	2181
40°	1955	2060	2114
45°	1843	1935	2034
50°	1725	1824	1948
55°	1591	1697	1843
60°	1433	1548	1714
65°	1265	1377	1559
70°	1054	1172	1324
75°	829	937	1037
80°	592	659	731
85°	386	386	364



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	4.1
10°-20°	246.1	11.4
20°-30°	359.6	16.7
30°-40°	408.1	19.0
40°-50°	394.0	18.3
50°-60°	325.0	15.1
60°-70°	216.4	10.1
70°-80°	96.8	4.5
80°-90°	17.3	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°	693.2	32.2
0°-40°	1101.3	51.2
0°-60°	1820.4	84.6
0°-90°	2151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2151.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	930	930	930	930	930	
5°	929	929	925	920	917	88
15°	876	878	876	872	866	247
25°	778	784	787	782	775	356
35°	625	634	663	666	664	392
45°	484	492	508	532	535	374
55°	339	345	362	382	393	303
65°	199	204	216	232	245	197
75°	80	84	90	94	100	87
85°	12	12	12	12	12	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	930.3	930.3	930.3	930.3	930.3
2.5°	932.8	933.1	931.0	925.2	921.7
5°	929.2	928.8	925.2	920.2	917.4
7.5°	918.8	919.5	918.5	911.3	907.4
10°	908.8	909.2	906.3	900.6	895.9
12.5°	895.9	895.6	891.7	888.8	881.3
15°	875.6	877.7	875.6	871.6	865.6
17.5°	855.9	855.9	857.3	850.6	845.9
20°	833.8	834.8	834.8	829.5	824.1
22.5°	808.0	811.2	812.3	806.6	800.2
25°	777.7	783.7	787.3	781.6	774.8
27.5°	740.8	750.1	760.9	756.6	749.1
30°	699.7	713.3	731.2	727.6	722.3
32.5°	660.8	674.4	699.0	697.6	694.7
35°	625.4	634.0	662.9	666.5	664.0
37.5°	591.8	599.7	626.8	635.1	632.9
40°	556.4	565.0	586.5	601.1	601.8
42.5°	521.4	529.6	547.1	568.2	568.2
45°	484.2	492.5	508.5	531.8	534.6
47.5°	447.8	456.4	472.1	495.3	500.0
50°	412.1	419.9	435.6	458.2	465.3
52.5°	374.9	383.5	398.8	419.6	429.9
55°	339.2	344.9	361.7	381.7	392.8
57.5°	302.0	307.3	326.3	343.4	354.9
60°	266.2	273.0	287.7	305.2	318.4
62.5°	231.9	239.1	251.6	267.0	282.0
65°	198.7	204.1	216.2	231.6	244.8
67.5°	166.5	171.2	183.3	194.1	208.0
70°	134.0	140.1	149.0	159.4	168.3
72.5°	107.9	110.4	117.9	125.4	134.7
75°	79.7	84.0	90.1	94.3	99.7
77.5°	57.2	59.7	63.3	66.8	71.8
80°	38.2	39.3	42.5	43.2	47.2
82.5°	23.2	23.9	24.7	25.0	26.4
85°	12.5	12.5	12.5	11.8	11.8
87.5°	7.1	7.1	6.1	5.0	3.6
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)