

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: P556642

Luminaire Tested: **FUSL-12-4-LD4-1LO-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: P556642
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-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

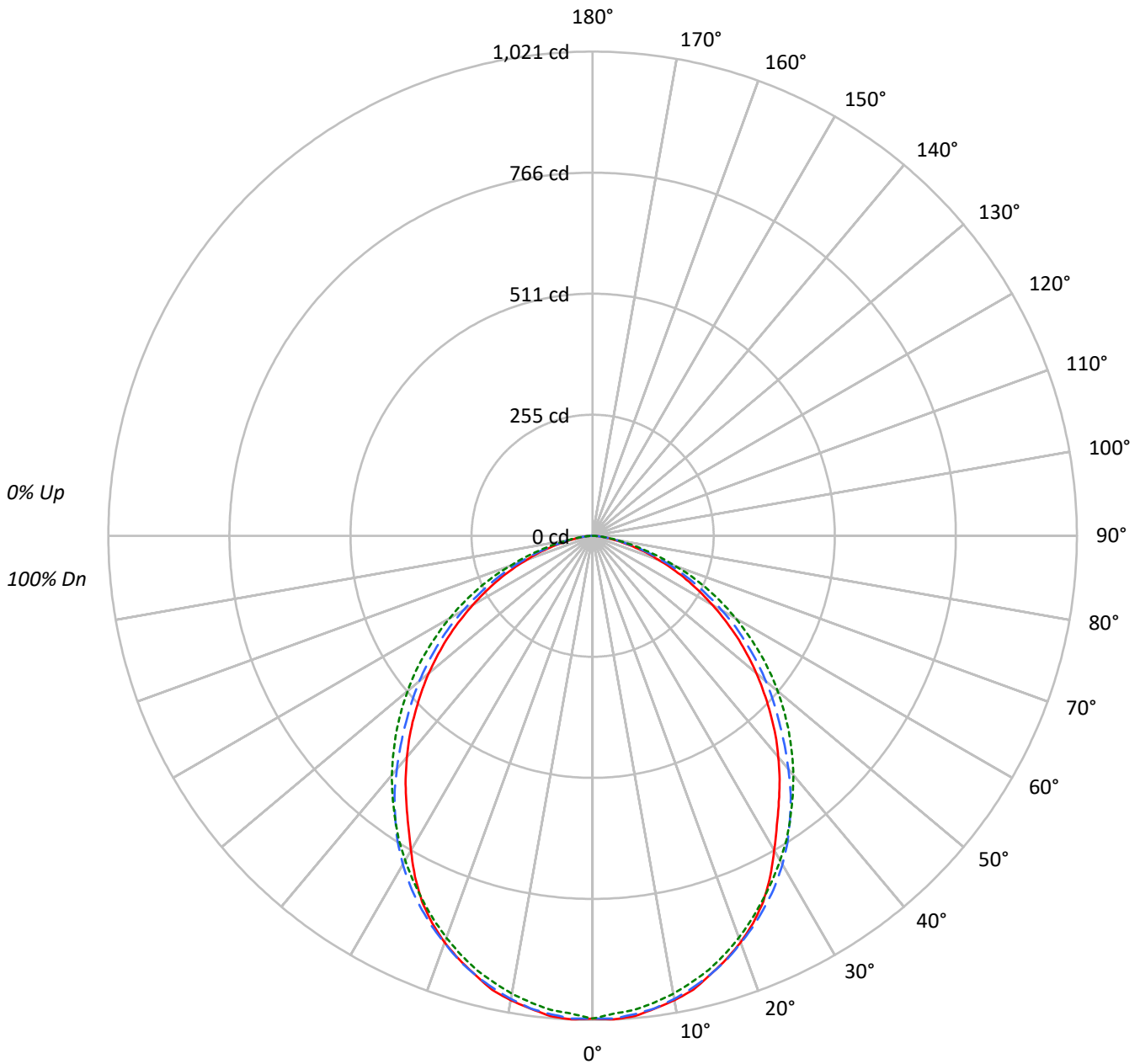
Lumens per Lamp: N/A
Luminaire Lumens: 2354.0 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2739	2739	2739
5°	2747	2735	2712
10°	2718	2710	2679
15°	2669	2669	2639
20°	2613	2616	2583
25°	2527	2558	2518
30°	2380	2486	2456
35°	2248	2383	2387
40°	2139	2255	2314
45°	2017	2118	2227
50°	1888	1996	2132
55°	1742	1857	2016
60°	1568	1694	1876
65°	1385	1507	1706
70°	1154	1283	1449
75°	907	1025	1134
80°	648	721	800
85°	423	423	398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.9	4.1
10°-20°	269.3	11.4
20°-30°	393.5	16.7
30°-40°	446.7	19.0
40°-50°	431.2	18.3
50°-60°	355.7	15.1
60°-70°	236.9	10.1
70°-80°	106.0	4.5
80°-90°	19.0	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°	758.6	32.2
0°-40°	1205.3	51.2
0°-60°	1992.2	84.6
0°-90°	2354.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2354.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1018	1018	1018	1018	1018	
5°	1017	1016	1013	1007	1004	96
15°	958	961	958	954	947	270
25°	851	858	862	855	848	390
35°	684	694	726	729	727	429
45°	530	539	556	582	585	409
55°	371	377	396	418	430	331
65°	218	223	237	253	268	216
75°	87	92	99	103	109	95
85°	14	14	14	13	13	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1018.0	1018.0	1018.0	1018.0	1018.0
2.5°	1020.8	1021.2	1018.8	1012.6	1008.7
5°	1016.9	1016.5	1012.6	1007.1	1004.0
7.5°	1005.5	1006.3	1005.1	997.3	993.0
10°	994.6	995.0	991.8	985.6	980.5
12.5°	980.5	980.1	975.8	972.7	964.5
15°	958.2	960.6	958.2	953.9	947.3
17.5°	936.7	936.7	938.3	930.8	925.7
20°	912.4	913.6	913.6	907.8	901.9
22.5°	884.3	887.8	889.0	882.7	875.7
25°	851.0	857.7	861.6	855.3	847.9
27.5°	810.8	820.9	832.7	828.0	819.8
30°	765.8	780.6	800.2	796.3	790.4
32.5°	723.2	738.0	765.0	763.4	760.3
35°	684.4	693.8	725.5	729.4	726.7
37.5°	647.7	656.3	686.0	695.0	692.6
40°	608.9	618.3	641.8	657.8	658.6
42.5°	570.6	579.6	598.8	621.9	621.9
45°	529.9	538.9	556.5	582.0	585.1
47.5°	490.1	499.4	516.6	542.1	547.2
50°	450.9	459.5	476.8	501.4	509.2
52.5°	410.3	419.7	436.5	459.2	470.5
55°	371.2	377.4	395.8	417.7	429.8
57.5°	330.5	336.3	357.1	375.9	388.4
60°	291.4	298.8	314.8	334.0	348.5
62.5°	253.8	261.6	275.3	292.2	308.6
65°	217.5	223.3	236.6	253.4	267.9
67.5°	182.3	187.3	200.6	212.4	227.6
70°	146.7	153.3	163.1	174.4	184.2
72.5°	118.1	120.9	129.1	137.3	147.4
75°	87.2	91.9	98.6	103.3	109.1
77.5°	62.6	65.3	69.2	73.1	78.6
80°	41.8	43.0	46.5	47.3	51.6
82.5°	25.4	26.2	27.0	27.4	28.9
85°	13.7	13.7	13.7	12.9	12.9
87.5°	7.8	7.8	6.6	5.5	3.9
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)