

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: P556644

Luminaire Tested: **FUSL-12-4-LD4-1LO-50-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: P556644
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-93-86-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

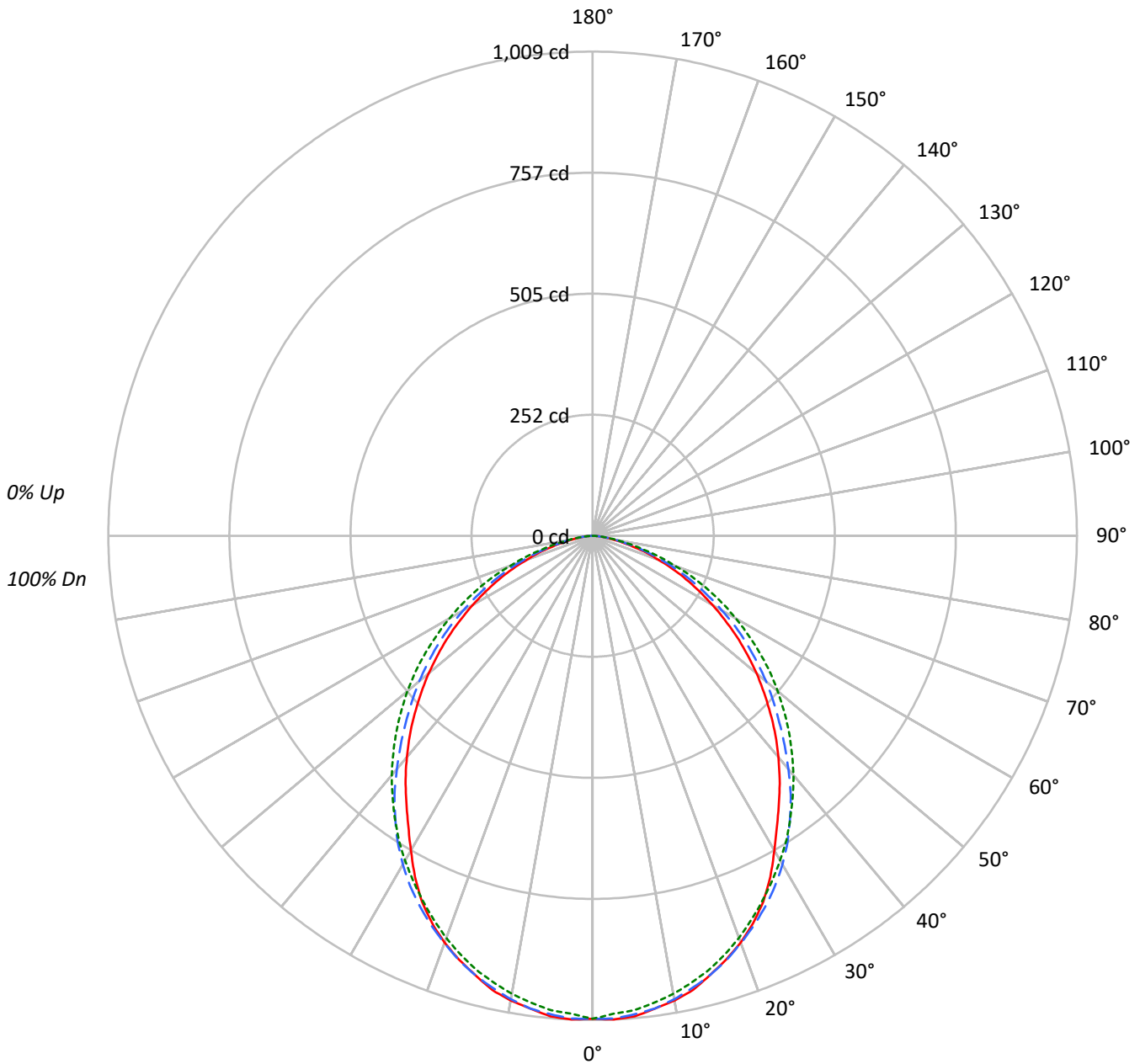
Lumens per Lamp: N/A
Luminaire Lumens: 2327.0 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): 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°	2708	2708	2708
5°	2715	2704	2681
10°	2687	2679	2649
15°	2639	2639	2609
20°	2583	2586	2553
25°	2498	2529	2489
30°	2352	2458	2428
35°	2223	2356	2360
40°	2115	2229	2287
45°	1994	2094	2201
50°	1866	1973	2107
55°	1721	1836	1993
60°	1550	1675	1854
65°	1369	1489	1686
70°	1141	1268	1433
75°	896	1013	1122
80°	642	713	790
85°	417	417	395



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.8	4.1
10°-20°	266.2	11.4
20°-30°	389.0	16.7
30°-40°	441.5	19.0
40°-50°	426.2	18.3
50°-60°	351.6	15.1
60°-70°	234.1	10.1
70°-80°	104.8	4.5
80°-90°	18.7	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°	749.9	32.2
0°-40°	1191.5	51.2
0°-60°	1969.3	84.6
0°-90°	2327.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2327.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1006	1006	1006	1006	1006	
5°	1005	1005	1001	996	992	95
15°	947	950	947	943	936	267
25°	841	848	852	846	838	385
35°	677	686	717	721	718	424
45°	524	533	550	575	578	404
55°	367	373	391	413	425	327
65°	215	221	234	250	265	213
75°	86	91	97	102	108	94
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°	1006.4	1006.4	1006.4	1006.4	1006.4
2.5°	1009.1	1009.5	1007.1	1001.0	997.1
5°	1005.2	1004.8	1001.0	995.5	992.4
7.5°	994.0	994.8	993.6	985.9	981.6
10°	983.2	983.6	980.5	974.3	969.3
12.5°	969.3	968.9	964.6	961.5	953.4
15°	947.2	949.5	947.2	943.0	936.4
17.5°	926.0	926.0	927.5	920.2	915.1
20°	902.0	903.1	903.1	897.3	891.5
22.5°	874.1	877.6	878.8	872.6	865.6
25°	841.3	847.9	851.7	845.5	838.2
27.5°	801.5	811.5	823.1	818.5	810.4
30°	757.0	771.7	791.0	787.2	781.4
32.5°	714.9	729.5	756.2	754.7	751.6
35°	676.6	685.9	717.2	721.0	718.3
37.5°	640.2	648.7	678.1	687.0	684.7
40°	602.0	611.2	634.4	650.3	651.1
42.5°	564.1	573.0	591.9	614.7	614.7
45°	523.9	532.8	550.2	575.3	578.4
47.5°	484.4	493.7	510.7	535.9	540.9
50°	445.8	454.3	471.3	495.6	503.4
52.5°	405.6	414.8	431.5	453.9	465.1
55°	366.9	373.1	391.3	412.9	424.9
57.5°	326.7	332.5	353.0	371.5	383.9
60°	288.0	295.4	311.2	330.2	344.5
62.5°	250.9	258.6	272.2	288.8	305.0
65°	215.0	220.8	233.9	250.5	264.8
67.5°	180.2	185.2	198.3	209.9	225.0
70°	145.0	151.6	161.2	172.4	182.1
72.5°	116.8	119.5	127.6	135.7	145.8
75°	86.2	90.9	97.4	102.1	107.9
77.5°	61.9	64.6	68.4	72.3	77.7
80°	41.4	42.5	46.0	46.8	51.0
82.5°	25.1	25.9	26.7	27.1	28.6
85°	13.5	13.5	13.5	12.8	12.8
87.5°	7.7	7.7	6.6	5.4	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)