

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: P556455

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-93-87-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: P556455
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-93-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

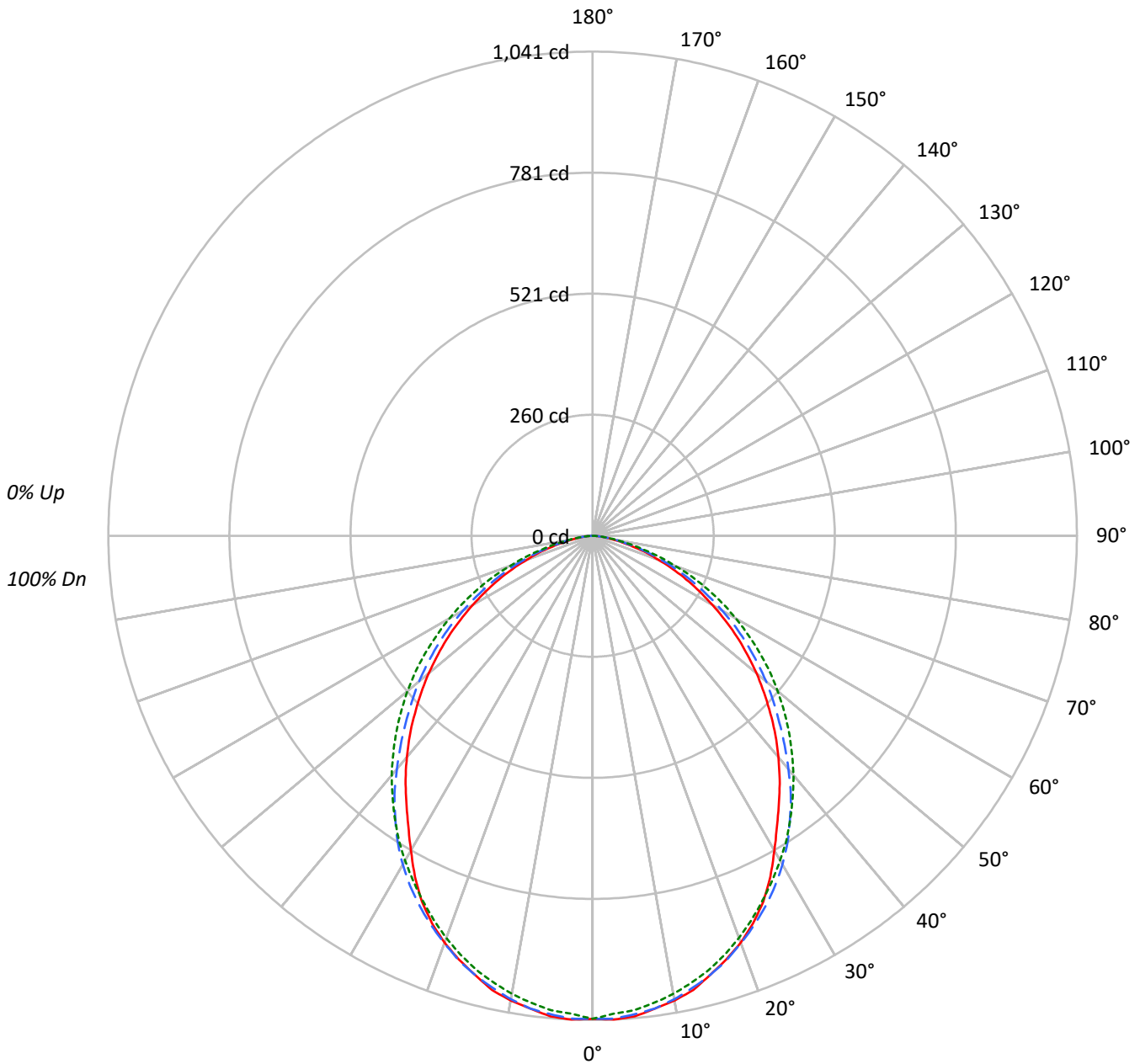
Lumens per Lamp: N/A
Luminaire Lumens: 2401.0 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2794	2794	2794
5°	2802	2790	2766
10°	2772	2764	2733
15°	2723	2723	2692
20°	2665	2669	2634
25°	2577	2609	2568
30°	2427	2536	2505
35°	2293	2431	2435
40°	2182	2299	2360
45°	2057	2160	2271
50°	1925	2036	2174
55°	1776	1894	2057
60°	1600	1728	1913
65°	1412	1536	1740
70°	1177	1308	1478
75°	925	1045	1157
80°	662	736	817
85°	432	432	408



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.8	4.1
10°-20°	274.7	11.4
20°-30°	401.4	16.7
30°-40°	455.6	19.0
40°-50°	439.8	18.3
50°-60°	362.8	15.1
60°-70°	241.6	10.1
70°-80°	108.1	4.5
80°-90°	19.4	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°	773.8	32.2
0°-40°	1229.4	51.2
0°-60°	2032.0	84.6
0°-90°	2401.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2401.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1038	1038	1038	1038	1038	
5°	1037	1037	1033	1027	1024	98
15°	977	980	977	973	966	276
25°	868	875	879	872	865	398
35°	698	708	740	744	741	437
45°	540	550	568	594	597	417
55°	379	385	404	426	438	338
65°	222	228	241	258	273	220
75°	89	94	100	105	111	97
85°	14	14	14	13	13	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1038.4	1038.4	1038.4	1038.4	1038.4
2.5°	1041.2	1041.6	1039.2	1032.8	1028.8
5°	1037.2	1036.8	1032.8	1027.2	1024.0
7.5°	1025.6	1026.4	1025.2	1017.2	1012.8
10°	1014.4	1014.8	1011.6	1005.3	1000.1
12.5°	1000.1	999.7	995.3	992.1	983.7
15°	977.3	979.7	977.3	972.9	966.2
17.5°	955.4	955.4	957.0	949.4	944.2
20°	930.7	931.9	931.9	925.9	919.9
22.5°	901.9	905.5	906.7	900.3	893.2
25°	868.0	874.8	878.8	872.4	864.8
27.5°	826.9	837.3	849.3	844.5	836.1
30°	781.1	796.2	816.2	812.2	806.2
32.5°	737.6	752.7	780.3	778.7	775.5
35°	698.1	707.7	740.0	744.0	741.2
37.5°	660.6	669.4	699.7	708.9	706.5
40°	621.1	630.7	654.6	671.0	671.8
42.5°	582.0	591.2	610.7	634.3	634.3
45°	540.5	549.7	567.7	593.6	596.8
47.5°	499.8	509.4	527.0	552.9	558.1
50°	459.9	468.7	486.3	511.4	519.4
52.5°	418.5	428.0	445.2	468.3	479.9
55°	378.6	385.0	403.7	426.0	438.4
57.5°	337.1	343.1	364.2	383.4	396.1
60°	297.2	304.8	321.1	340.7	355.4
62.5°	258.9	266.9	280.8	298.0	314.7
65°	221.8	227.8	241.3	258.5	273.3
67.5°	185.9	191.1	204.6	216.6	232.2
70°	149.6	156.4	166.3	177.9	187.9
72.5°	120.5	123.3	131.6	140.0	150.4
75°	89.0	93.7	100.5	105.3	111.3
77.5°	63.8	66.6	70.6	74.6	80.2
80°	42.7	43.9	47.5	48.3	52.7
82.5°	25.9	26.7	27.5	27.9	29.5
85°	14.0	14.0	14.0	13.2	13.2
87.5°	8.0	8.0	6.8	5.6	4.0
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)