

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: P556448

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-93-84-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: P556448
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-93-84-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

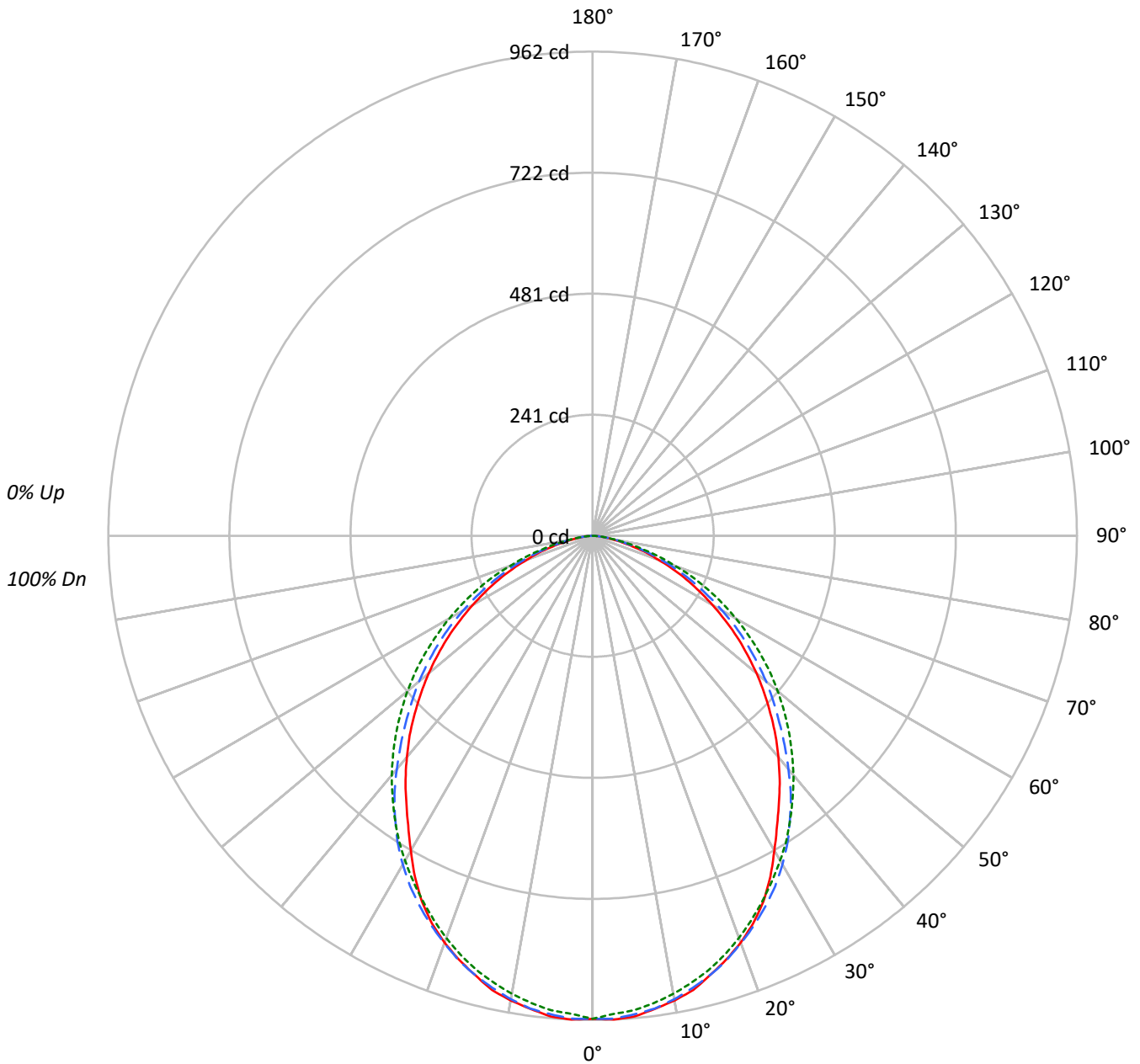
Lumens per Lamp: N/A
Luminaire Lumens: 2219.0 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2583	2583	2583
5°	2589	2578	2556
10°	2562	2555	2526
15°	2517	2517	2488
20°	2463	2466	2435
25°	2382	2412	2373
30°	2243	2344	2315
35°	2120	2247	2250
40°	2016	2125	2181
45°	1901	1996	2099
50°	1780	1881	2009
55°	1642	1750	1901
60°	1478	1597	1768
65°	1305	1420	1608
70°	1088	1209	1366
75°	855	966	1070
80°	611	680	755
85°	398	398	377



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.4	4.1
10°-20°	253.8	11.4
20°-30°	370.9	16.7
30°-40°	421.0	19.0
40°-50°	406.5	18.3
50°-60°	335.3	15.1
60°-70°	223.3	10.1
70°-80°	99.9	4.5
80°-90°	17.9	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°	715.1	32.2
0°-40°	1136.2	51.2
0°-60°	1877.9	84.6
0°-90°	2219.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2219.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	960	960	960	960	960	
5°	959	958	954	949	946	91
15°	903	906	903	899	893	255
25°	802	808	812	806	799	367
35°	645	654	684	688	685	404
45°	500	508	525	549	552	385
55°	350	356	373	394	405	312
65°	205	210	223	239	252	203
75°	82	87	93	97	103	90
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°	959.7	959.7	959.7	959.7	959.7
2.5°	962.2	962.6	960.4	954.5	950.8
5°	958.6	958.2	954.5	949.3	946.4
7.5°	947.9	948.6	947.5	940.1	936.1
10°	937.5	937.9	935.0	929.1	924.3
12.5°	924.3	923.9	919.8	916.9	909.2
15°	903.3	905.5	903.3	899.2	892.9
17.5°	883.0	883.0	884.5	877.4	872.7
20°	860.1	861.2	861.2	855.7	850.2
22.5°	833.6	836.9	838.0	832.1	825.5
25°	802.2	808.5	812.2	806.3	799.3
27.5°	764.3	773.8	784.9	780.5	772.7
30°	721.9	735.9	754.3	750.6	745.1
32.5°	681.7	695.7	721.1	719.7	716.7
35°	645.2	654.0	683.9	687.6	685.0
37.5°	610.5	618.6	646.7	655.1	652.9
40°	574.0	582.9	605.0	620.1	620.8
42.5°	537.9	546.4	564.4	586.2	586.2
45°	499.6	508.0	524.6	548.6	551.5
47.5°	461.9	470.8	487.0	511.0	515.8
50°	425.1	433.2	449.4	472.6	480.0
52.5°	386.7	395.6	411.4	432.8	443.5
55°	349.9	355.8	373.1	393.7	405.2
57.5°	311.5	317.1	336.6	354.3	366.1
60°	274.7	281.7	296.8	314.8	328.5
62.5°	239.3	246.6	259.5	275.4	290.9
65°	205.0	210.5	223.0	238.9	252.5
67.5°	171.8	176.6	189.1	200.2	214.6
70°	138.3	144.5	153.7	164.4	173.6
72.5°	111.3	113.9	121.7	129.4	139.0
75°	82.2	86.6	92.9	97.3	102.9
77.5°	59.0	61.6	65.3	68.9	74.1
80°	39.4	40.6	43.9	44.6	48.7
82.5°	24.0	24.7	25.4	25.8	27.3
85°	12.9	12.9	12.9	12.2	12.2
87.5°	7.4	7.4	6.3	5.2	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)