

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: P557409

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-93-84-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: P557409
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-LD4-2LO-50-UNV-93-84-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

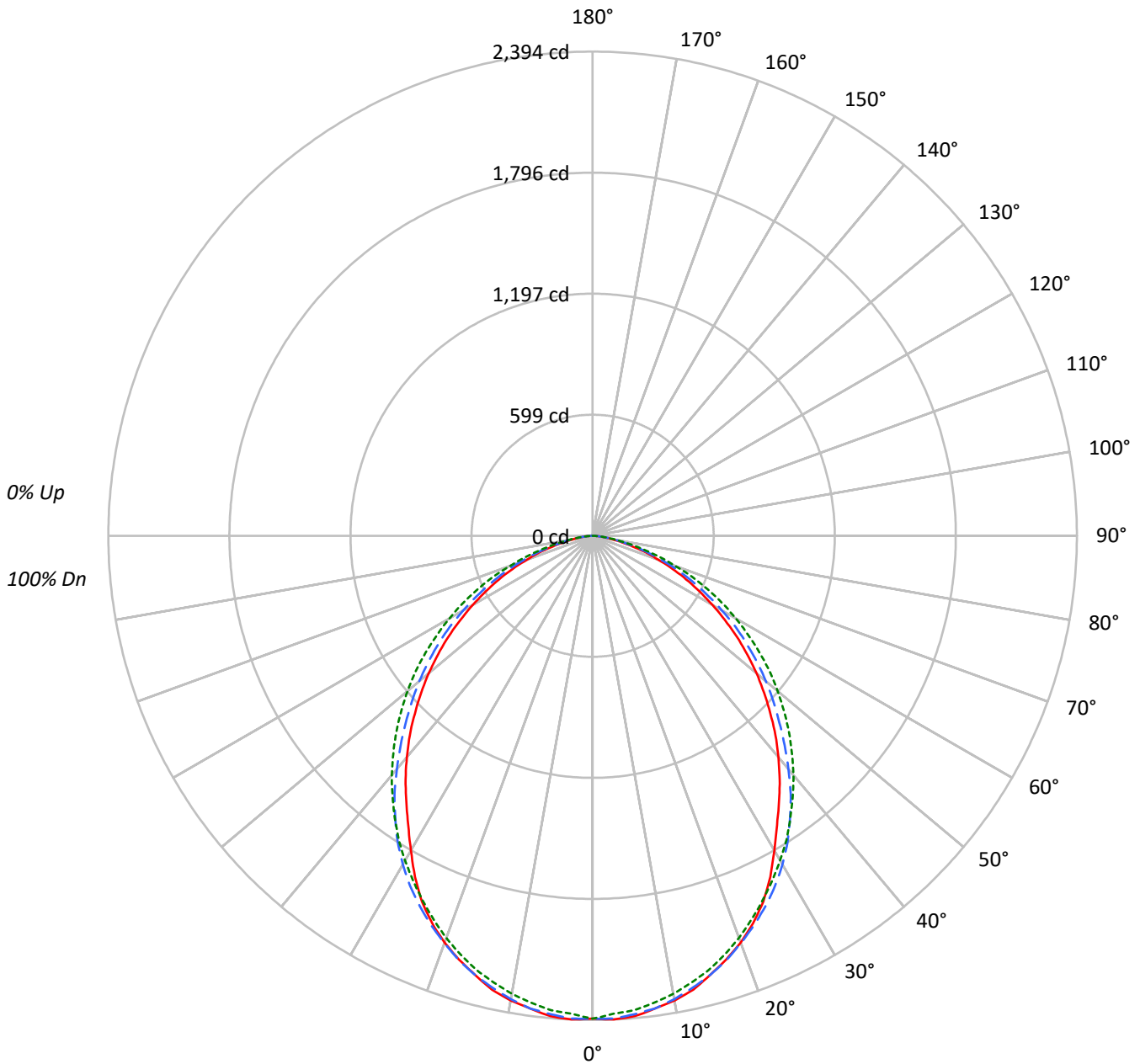
Lumens per Lamp: N/A
Luminaire Lumens: 5521.0 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	6425	6425	6425
5°	6442	6415	6361
10°	6374	6356	6284
15°	6261	6261	6189
20°	6128	6136	6058
25°	5926	6000	5905
30°	5581	5832	5760
35°	5273	5590	5599
40°	5017	5288	5426
45°	4730	4967	5222
50°	4428	4681	5000
55°	4084	4355	4730
60°	3678	3974	4399
65°	3247	3534	4001
70°	2707	3009	3399
75°	2127	2404	2661
80°	1520	1692	1877
85°	991	991	936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.8	4.1
10°-20°	631.5	11.4
20°-30°	922.9	16.7
30°-40°	1047.6	19.0
40°-50°	1011.3	18.3
50°-60°	834.3	15.1
60°-70°	555.6	10.1
70°-80°	248.6	4.5
80°-90°	44.5	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°	1779.3	32.2
0°-40°	2826.9	51.2
0°-60°	4672.4	84.6
0°-90°	5521.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5521.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2388	2388	2388	2388	2388	
5°	2385	2384	2375	2362	2355	226
15°	2247	2253	2247	2237	2222	634
25°	1996	2012	2021	2006	1989	914
35°	1605	1627	1702	1711	1704	1006
45°	1243	1264	1305	1365	1372	959
55°	870	885	928	980	1008	777
65°	510	524	555	594	628	506
75°	205	216	231	242	256	224
85°	32	32	32	30	30	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2387.7	2387.7	2387.7	2387.7	2387.7
2.5°	2394.1	2395.0	2389.5	2374.8	2365.7
5°	2384.9	2384.0	2374.8	2362.0	2354.7
7.5°	2358.3	2360.2	2357.4	2339.1	2329.0
10°	2332.7	2333.6	2326.2	2311.6	2299.6
12.5°	2299.6	2298.7	2288.6	2281.3	2262.0
15°	2247.3	2252.8	2247.3	2237.3	2221.7
17.5°	2196.9	2196.9	2200.6	2183.1	2171.2
20°	2140.0	2142.8	2142.8	2129.0	2115.3
22.5°	2074.0	2082.2	2085.0	2070.3	2053.8
25°	1996.0	2011.6	2020.8	2006.1	1988.7
27.5°	1901.5	1925.4	1952.9	1941.9	1922.6
30°	1796.0	1830.9	1876.8	1867.6	1853.8
32.5°	1696.1	1730.9	1794.2	1790.5	1783.2
35°	1605.2	1627.3	1701.6	1710.7	1704.3
37.5°	1519.0	1539.2	1608.9	1630.0	1624.5
40°	1428.2	1450.2	1505.3	1542.9	1544.7
42.5°	1338.3	1359.4	1404.4	1458.5	1458.5
45°	1242.9	1264.0	1305.3	1364.9	1372.3
47.5°	1149.4	1171.4	1211.7	1271.4	1283.3
50°	1057.6	1077.8	1118.2	1176.0	1194.3
52.5°	962.2	984.2	1023.7	1076.9	1103.5
55°	870.5	885.2	928.3	979.7	1008.1
57.5°	775.1	788.9	837.5	881.5	910.9
60°	683.4	700.8	738.4	783.4	817.3
62.5°	595.3	613.7	645.8	685.2	723.7
65°	510.0	523.8	555.0	594.4	628.3
67.5°	427.5	439.4	470.6	498.1	533.9
70°	344.0	359.6	382.5	409.1	432.0
72.5°	277.0	283.4	302.7	322.0	345.8
75°	204.6	215.6	231.2	242.2	255.9
77.5°	146.8	153.2	162.4	171.5	184.4
80°	98.1	100.9	109.2	111.0	121.1
82.5°	59.6	61.5	63.3	64.2	67.9
85°	32.1	32.1	32.1	30.3	30.3
87.5°	18.3	18.3	15.6	12.8	9.2
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)