

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: P556456

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-93-88-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: P556456
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-93-88-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

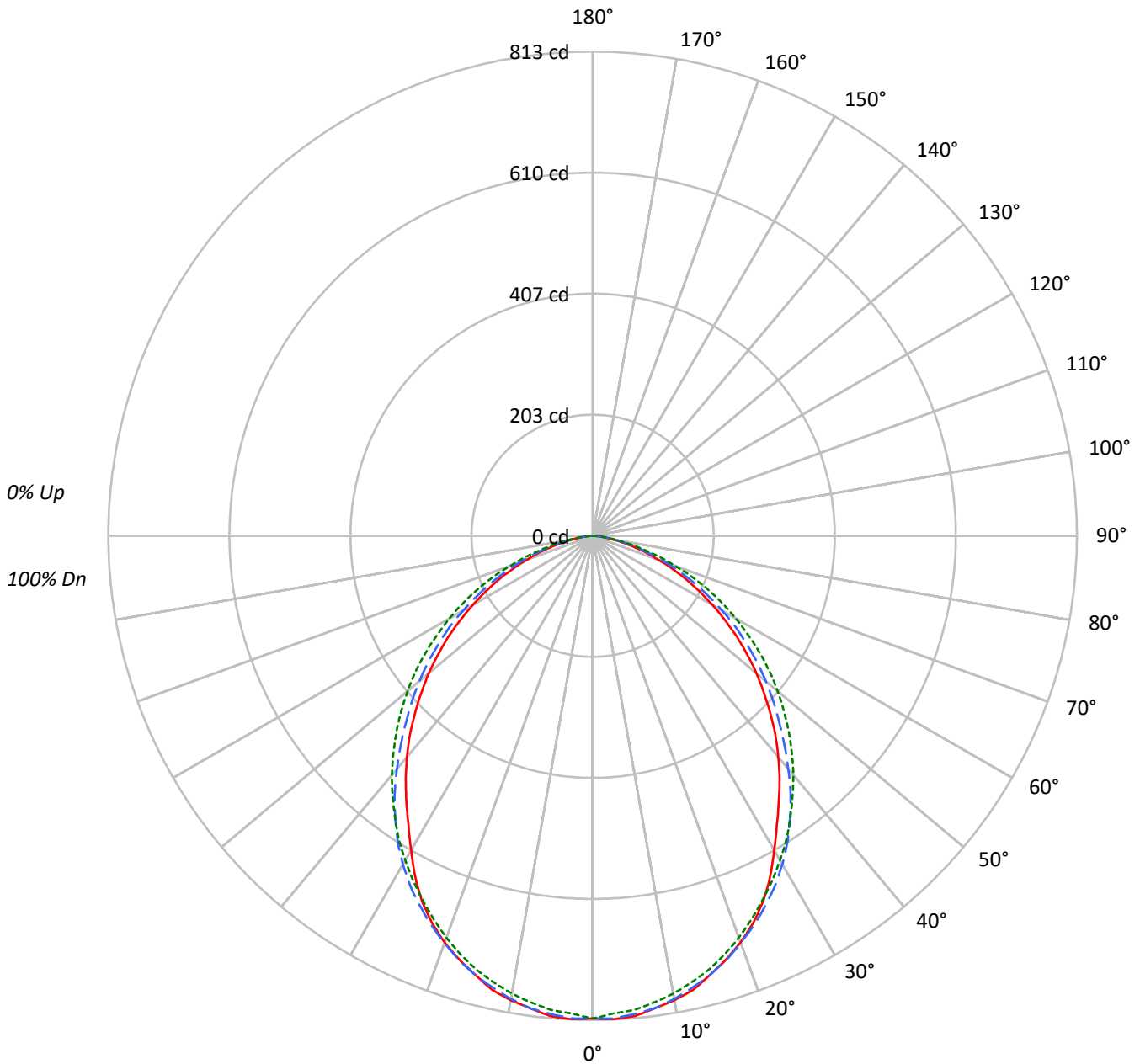
Lumens per Lamp: N/A
Luminaire Lumens: 1874.0 lumens
Efficiency: N/A
Efficacy: 80.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2181	2181	2181
5°	2187	2177	2159
10°	2164	2158	2133
15°	2125	2125	2101
20°	2080	2083	2056
25°	2012	2037	2004
30°	1894	1979	1955
35°	1790	1897	1900
40°	1703	1795	1842
45°	1606	1686	1773
50°	1503	1589	1697
55°	1386	1478	1605
60°	1249	1349	1493
65°	1102	1200	1358
70°	919	1021	1153
75°	722	816	904
80°	516	575	637
85°	337	337	318



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.3	4.1
10°-20°	214.4	11.4
20°-30°	313.3	16.7
30°-40°	355.6	19.0
40°-50°	343.3	18.3
50°-60°	283.2	15.1
60°-70°	188.6	10.1
70°-80°	84.4	4.5
80°-90°	15.1	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°	603.9	32.2
0°-40°	959.5	51.2
0°-60°	1586.0	84.6
0°-90°	1874.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1874.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	810	810	810	810	810	
5°	810	809	806	802	799	77
15°	763	765	763	759	754	215
25°	678	683	686	681	675	310
35°	545	552	578	581	578	341
45°	422	429	443	463	466	326
55°	296	300	315	332	342	264
65°	173	178	188	202	213	172
75°	69	73	78	82	87	76
85°	11	11	11	10	10	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	810.5	810.5	810.5	810.5	810.5
2.5°	812.6	812.9	811.1	806.1	803.0
5°	809.5	809.2	806.1	801.7	799.2
7.5°	800.5	801.1	800.2	794.0	790.5
10°	791.8	792.1	789.6	784.6	780.6
12.5°	780.6	780.3	776.8	774.3	767.8
15°	762.8	764.7	762.8	759.4	754.1
17.5°	745.7	745.7	746.9	741.0	737.0
20°	726.4	727.3	727.3	722.7	718.0
22.5°	704.0	706.8	707.7	702.7	697.1
25°	677.5	682.8	685.9	680.9	675.0
27.5°	645.4	653.5	662.9	659.1	652.6
30°	609.6	621.5	637.0	633.9	629.2
32.5°	575.7	587.5	609.0	607.8	605.3
35°	544.9	552.3	577.6	580.7	578.5
37.5°	515.6	522.5	546.1	553.3	551.4
40°	484.8	492.3	510.9	523.7	524.3
42.5°	454.3	461.4	476.7	495.1	495.1
45°	421.9	429.0	443.1	463.3	465.8
47.5°	390.1	397.6	411.3	431.5	435.6
50°	359.0	365.8	379.5	399.2	405.4
52.5°	326.6	334.1	347.5	365.5	374.6
55°	295.5	300.5	315.1	332.5	342.2
57.5°	263.1	267.8	284.3	299.2	309.2
60°	232.0	237.9	250.6	265.9	277.4
62.5°	202.1	208.3	219.2	232.6	245.7
65°	173.1	177.8	188.4	201.8	213.3
67.5°	145.1	149.1	159.7	169.1	181.2
70°	116.8	122.1	129.8	138.9	146.6
72.5°	94.0	96.2	102.7	109.3	117.4
75°	69.4	73.2	78.5	82.2	86.9
77.5°	49.8	52.0	55.1	58.2	62.6
80°	33.3	34.2	37.1	37.7	41.1
82.5°	20.2	20.9	21.5	21.8	23.0
85°	10.9	10.9	10.9	10.3	10.3
87.5°	6.2	6.2	5.3	4.4	3.1
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)