

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: P556641

Luminaire Tested: **FUSL-12-4-LD4-1LO-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: P556641
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-93-84-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

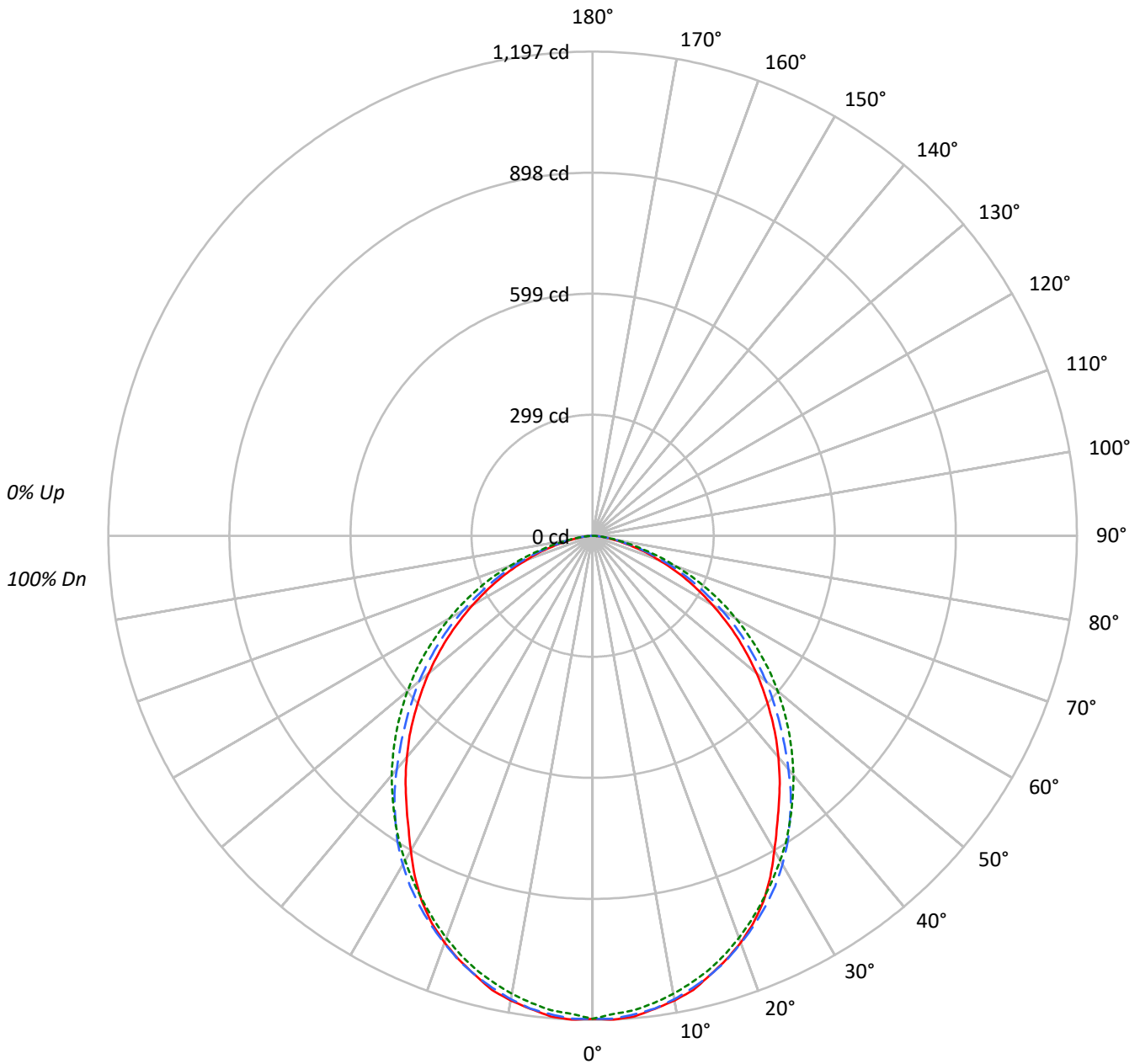
Lumens per Lamp: N/A
Luminaire Lumens: 2761.0 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3213	3213	3213
5°	3222	3208	3181
10°	3187	3179	3142
15°	3131	3131	3095
20°	3065	3069	3029
25°	2964	3001	2953
30°	2791	2916	2881
35°	2637	2795	2800
40°	2509	2644	2714
45°	2366	2484	2612
50°	2214	2341	2501
55°	2042	2178	2365
60°	1840	1988	2200
65°	1624	1767	2001
70°	1353	1505	1700
75°	1064	1202	1331
80°	761	846	939
85°	497	497	466



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	4.1
10°-20°	315.8	11.4
20°-30°	461.5	16.7
30°-40°	523.9	19.0
40°-50°	505.7	18.3
50°-60°	417.2	15.1
60°-70°	277.8	10.1
70°-80°	124.3	4.5
80°-90°	22.2	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°	889.8	32.2
0°-40°	1413.7	51.2
0°-60°	2336.6	84.6
0°-90°	2761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1194	1194	1194	1194	1194	
5°	1193	1192	1188	1181	1178	113
15°	1124	1127	1124	1119	1111	317
25°	998	1006	1011	1003	994	457
35°	803	814	851	856	852	503
45°	622	632	653	683	686	480
55°	435	443	464	490	504	389
65°	255	262	278	297	314	253
75°	102	108	116	121	128	112
85°	16	16	16	15	15	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1194.1	1194.1	1194.1	1194.1	1194.1
2.5°	1197.3	1197.7	1195.0	1187.6	1183.1
5°	1192.7	1192.2	1187.6	1181.2	1177.5
7.5°	1179.4	1180.3	1178.9	1169.7	1164.7
10°	1166.5	1167.0	1163.3	1156.0	1150.0
12.5°	1150.0	1149.6	1144.5	1140.8	1131.2
15°	1123.9	1126.6	1123.9	1118.8	1111.0
17.5°	1098.6	1098.6	1100.5	1091.8	1085.8
20°	1070.2	1071.6	1071.6	1064.7	1057.8
22.5°	1037.2	1041.3	1042.7	1035.3	1027.1
25°	998.2	1006.0	1010.6	1003.2	994.5
27.5°	950.9	962.9	976.6	971.1	961.5
30°	898.2	915.6	938.6	934.0	927.1
32.5°	848.2	865.6	897.3	895.4	891.8
35°	802.8	813.8	850.9	855.5	852.3
37.5°	759.6	769.7	804.6	815.2	812.4
40°	714.2	725.2	752.8	771.6	772.5
42.5°	669.3	679.8	702.3	729.4	729.4
45°	621.6	632.1	652.8	682.6	686.3
47.5°	574.8	585.8	606.0	635.8	641.8
50°	528.9	539.0	559.2	588.1	597.3
52.5°	481.2	492.2	511.9	538.5	551.8
55°	435.3	442.7	464.2	489.9	504.1
57.5°	387.6	394.5	418.8	440.8	455.5
60°	341.8	350.5	369.3	391.8	408.7
62.5°	297.7	306.9	322.9	342.7	361.9
65°	255.1	261.9	277.5	297.3	314.2
67.5°	213.8	219.7	235.3	249.1	267.0
70°	172.0	179.8	191.3	204.6	216.1
72.5°	138.5	141.7	151.4	161.0	172.9
75°	102.3	107.8	115.6	121.1	128.0
77.5°	73.4	76.6	81.2	85.8	92.2
80°	49.1	50.5	54.6	55.5	60.6
82.5°	29.8	30.7	31.7	32.1	33.9
85°	16.1	16.1	16.1	15.1	15.1
87.5°	9.2	9.2	7.8	6.4	4.6
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)