

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: P556557

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-81-96-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: P556557
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-40-UNV-81-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

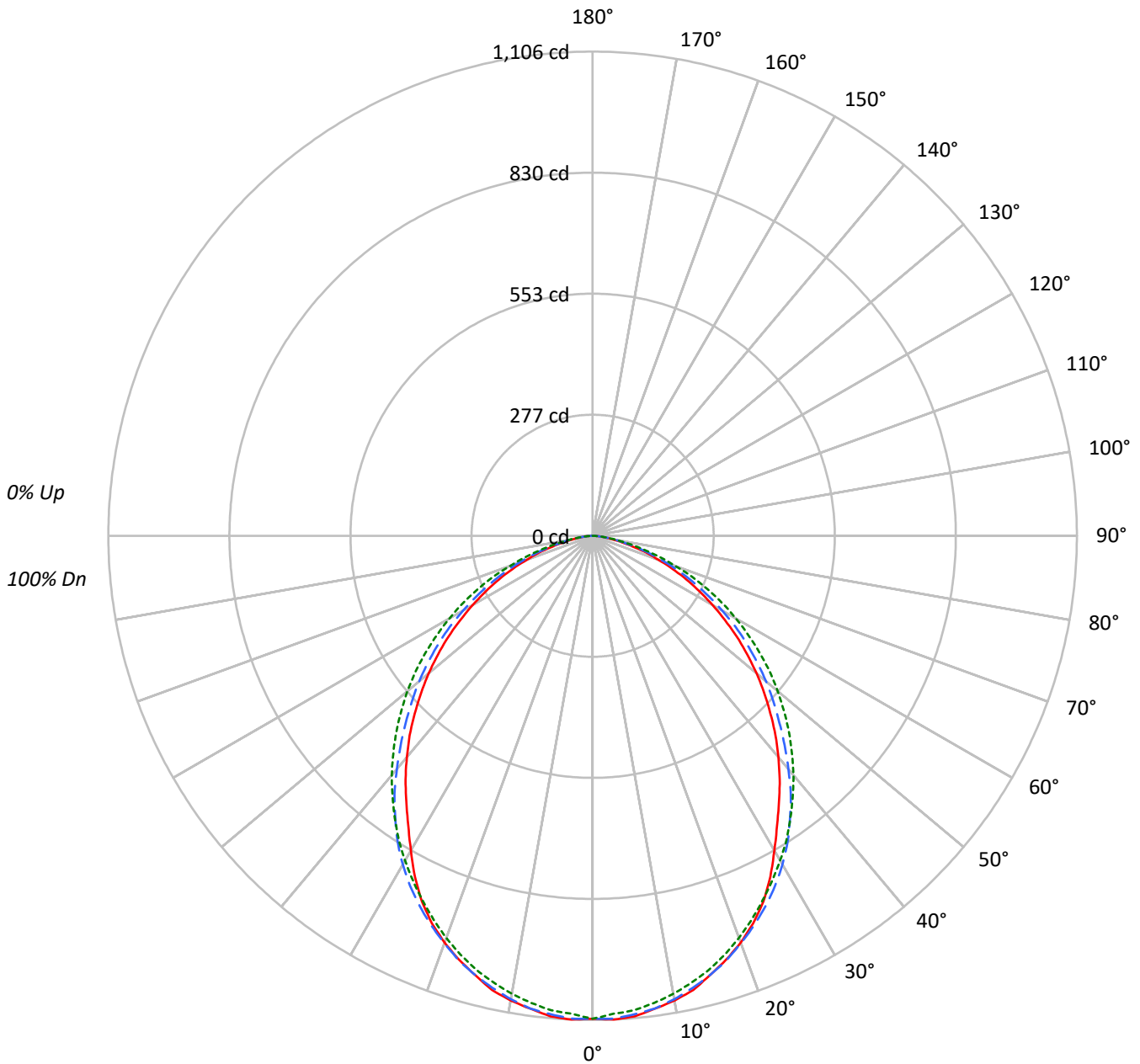
Lumens per Lamp: N/A
Luminaire Lumens: 2551.0 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2969	2969	2969
5°	2977	2964	2939
10°	2945	2937	2904
15°	2893	2893	2860
20°	2832	2835	2799
25°	2738	2772	2728
30°	2579	2695	2662
35°	2437	2583	2587
40°	2318	2443	2507
45°	2186	2295	2413
50°	2046	2163	2310
55°	1887	2012	2185
60°	1700	1836	2032
65°	1501	1633	1848
70°	1250	1390	1570
75°	983	1110	1229
80°	704	781	866
85°	457	457	432



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.9	4.1
10°-20°	291.8	11.4
20°-30°	426.4	16.7
30°-40°	484.0	19.0
40°-50°	467.3	18.3
50°-60°	385.5	15.1
60°-70°	256.7	10.1
70°-80°	114.9	4.5
80°-90°	20.5	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°	822.1	32.2
0°-40°	1306.2	51.2
0°-60°	2158.9	84.6
0°-90°	2551.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2551.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1103	1103	1103	1103	1103	
5°	1102	1102	1097	1091	1088	104
15°	1038	1041	1038	1034	1026	293
25°	922	930	934	927	919	422
35°	742	752	786	790	788	465
45°	574	584	603	631	634	443
55°	402	409	429	453	466	359
65°	236	242	256	275	290	234
75°	94	100	107	112	118	103
85°	15	15	15	14	14	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1103.2	1103.2	1103.2	1103.2	1103.2
2.5°	1106.2	1106.6	1104.1	1097.3	1093.1
5°	1102.0	1101.5	1097.3	1091.4	1088.0
7.5°	1089.7	1090.5	1089.3	1080.8	1076.1
10°	1077.8	1078.2	1074.8	1068.1	1062.6
12.5°	1062.6	1062.1	1057.5	1054.1	1045.2
15°	1038.4	1040.9	1038.4	1033.7	1026.5
17.5°	1015.1	1015.1	1016.8	1008.7	1003.2
20°	988.8	990.1	990.1	983.7	977.4
22.5°	958.3	962.1	963.4	956.6	949.0
25°	922.3	929.5	933.7	926.9	918.9
27.5°	878.6	889.6	902.3	897.3	888.4
30°	829.9	846.0	867.2	862.9	856.6
32.5°	783.7	799.8	829.0	827.3	823.9
35°	741.7	751.9	786.2	790.5	787.5
37.5°	701.9	711.2	743.4	753.2	750.6
40°	659.9	670.1	695.5	712.9	713.7
42.5°	618.4	628.1	648.9	673.9	673.9
45°	574.3	584.0	603.1	630.7	634.1
47.5°	531.1	541.2	559.9	587.4	592.9
50°	488.7	498.0	516.7	543.4	551.8
52.5°	444.6	454.8	473.0	497.6	509.9
55°	402.2	409.0	428.9	452.7	465.8
57.5°	358.1	364.5	387.0	407.3	420.9
60°	315.8	323.8	341.2	362.0	377.6
62.5°	275.1	283.5	298.4	316.6	334.4
65°	235.7	242.0	256.4	274.6	290.3
67.5°	197.5	203.0	217.4	230.1	246.7
70°	158.9	166.1	176.7	189.0	199.6
72.5°	128.0	131.0	139.9	148.8	159.8
75°	94.5	99.6	106.8	111.9	118.2
77.5°	67.8	70.8	75.0	79.3	85.2
80°	45.4	46.6	50.4	51.3	55.9
82.5°	27.5	28.4	29.2	29.7	31.4
85°	14.8	14.8	14.8	14.0	14.0
87.5°	8.5	8.5	7.2	5.9	4.2
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)