

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: P556679

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-81-87-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: P556679
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-LD4-1STD-30-UNV-81-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

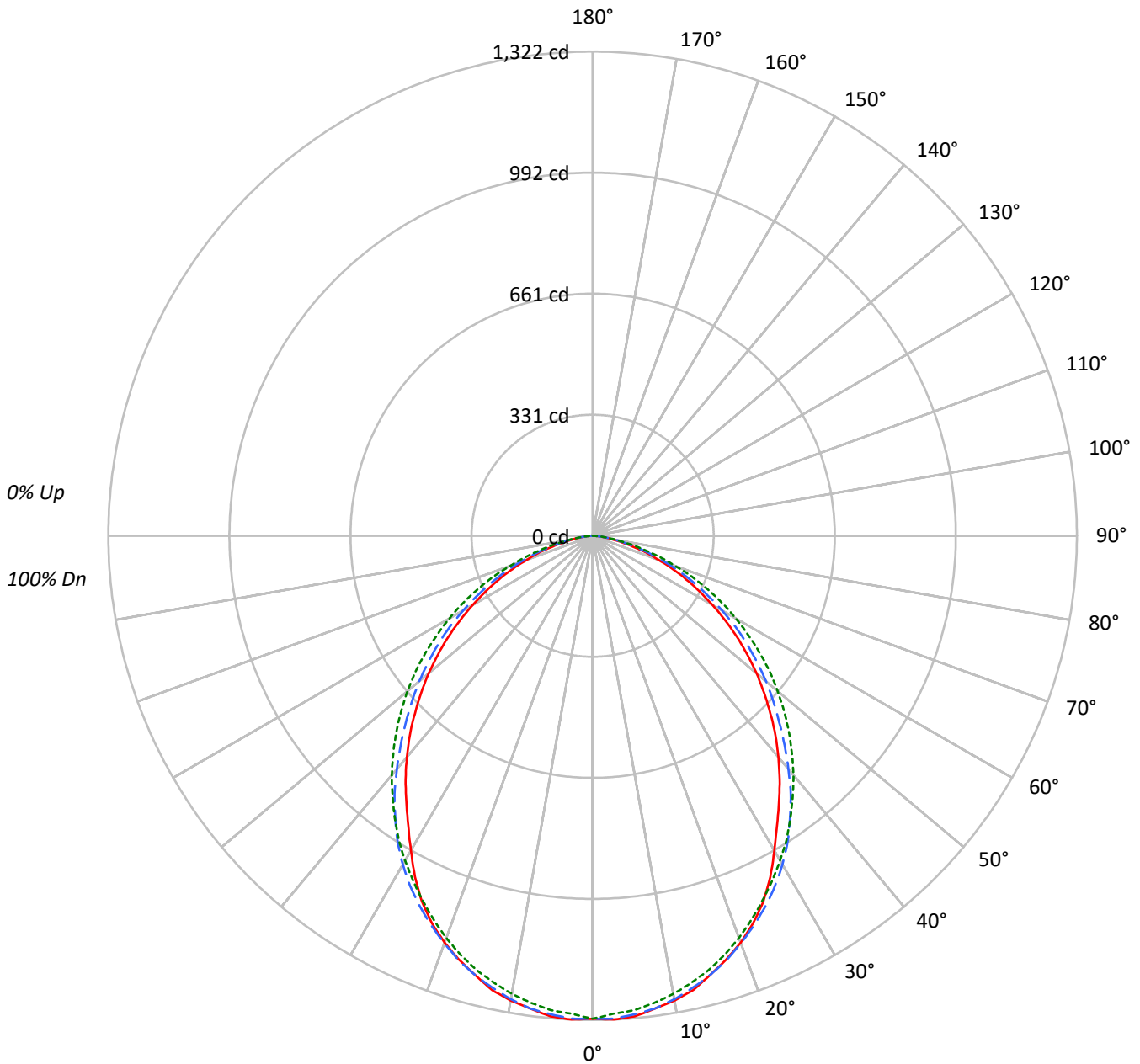
Lumens per Lamp: N/A
Luminaire Lumens: 3049.0 lumens
Efficiency: N/A
Efficacy: 91.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): 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°	3548	3548	3548
5°	3558	3543	3513
10°	3520	3510	3470
15°	3458	3458	3418
20°	3384	3389	3345
25°	3273	3314	3261
30°	3082	3221	3181
35°	2912	3087	3092
40°	2771	2920	2997
45°	2612	2743	2884
50°	2445	2585	2761
55°	2255	2405	2612
60°	2031	2195	2429
65°	1794	1952	2209
70°	1495	1662	1877
75°	1175	1328	1469
80°	840	934	1037
85°	546	546	516



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.2	4.1
10°-20°	348.8	11.4
20°-30°	509.7	16.7
30°-40°	578.5	19.0
40°-50°	558.5	18.3
50°-60°	460.7	15.1
60°-70°	306.8	10.1
70°-80°	137.3	4.5
80°-90°	24.6	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°	982.6	32.2
0°-40°	1561.1	51.2
0°-60°	2580.4	84.6
0°-90°	3049.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3049.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1319	1319	1319	1319	1319	
5°	1317	1317	1312	1304	1300	125
15°	1241	1244	1241	1236	1227	350
25°	1102	1111	1116	1108	1098	505
35°	886	899	940	945	941	555
45°	686	698	721	754	758	530
55°	481	489	513	541	557	429
65°	282	289	306	328	347	279
75°	113	119	128	134	141	124
85°	18	18	18	17	17	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1318.6	1318.6	1318.6	1318.6	1318.6
2.5°	1322.2	1322.7	1319.6	1311.5	1306.5
5°	1317.1	1316.6	1311.5	1304.4	1300.4
7.5°	1302.4	1303.4	1301.9	1291.8	1286.2
10°	1288.2	1288.7	1284.7	1276.6	1270.0
12.5°	1270.0	1269.5	1263.9	1259.9	1249.2
15°	1241.1	1244.1	1241.1	1235.5	1226.9
17.5°	1213.2	1213.2	1215.3	1205.6	1199.1
20°	1181.8	1183.4	1183.4	1175.8	1168.2
22.5°	1145.4	1149.9	1151.4	1143.3	1134.2
25°	1102.3	1110.9	1116.0	1107.9	1098.3
27.5°	1050.1	1063.3	1078.5	1072.4	1061.8
30°	991.9	1011.1	1036.5	1031.4	1023.8
32.5°	936.7	955.9	990.9	988.8	984.8
35°	886.5	898.7	939.7	944.8	941.2
37.5°	838.9	850.0	888.5	900.2	897.1
40°	788.7	800.9	831.3	852.1	853.1
42.5°	739.1	750.7	775.6	805.5	805.5
45°	686.4	698.1	720.9	753.8	757.8
47.5°	634.7	646.9	669.2	702.1	708.7
50°	584.1	595.2	617.5	649.4	659.6
52.5°	531.4	543.6	565.3	594.7	609.4
55°	480.7	488.8	512.7	541.0	556.7
57.5°	428.1	435.7	462.5	486.8	503.0
60°	377.4	387.0	407.8	432.6	451.4
62.5°	328.8	338.9	356.6	378.4	399.7
65°	281.7	289.3	306.5	328.3	347.0
67.5°	236.1	242.6	259.9	275.1	294.8
70°	190.0	198.6	211.2	225.9	238.6
72.5°	153.0	156.5	167.2	177.8	191.0
75°	113.0	119.0	127.7	133.7	141.3
77.5°	81.1	84.6	89.7	94.7	101.8
80°	54.2	55.7	60.3	61.3	66.9
82.5°	32.9	33.9	35.0	35.5	37.5
85°	17.7	17.7	17.7	16.7	16.7
87.5°	10.1	10.1	8.6	7.1	5.1
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)