

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: P556169

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-81-88-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: P556169
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-LD4-1HI-30-UNV-81-88-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

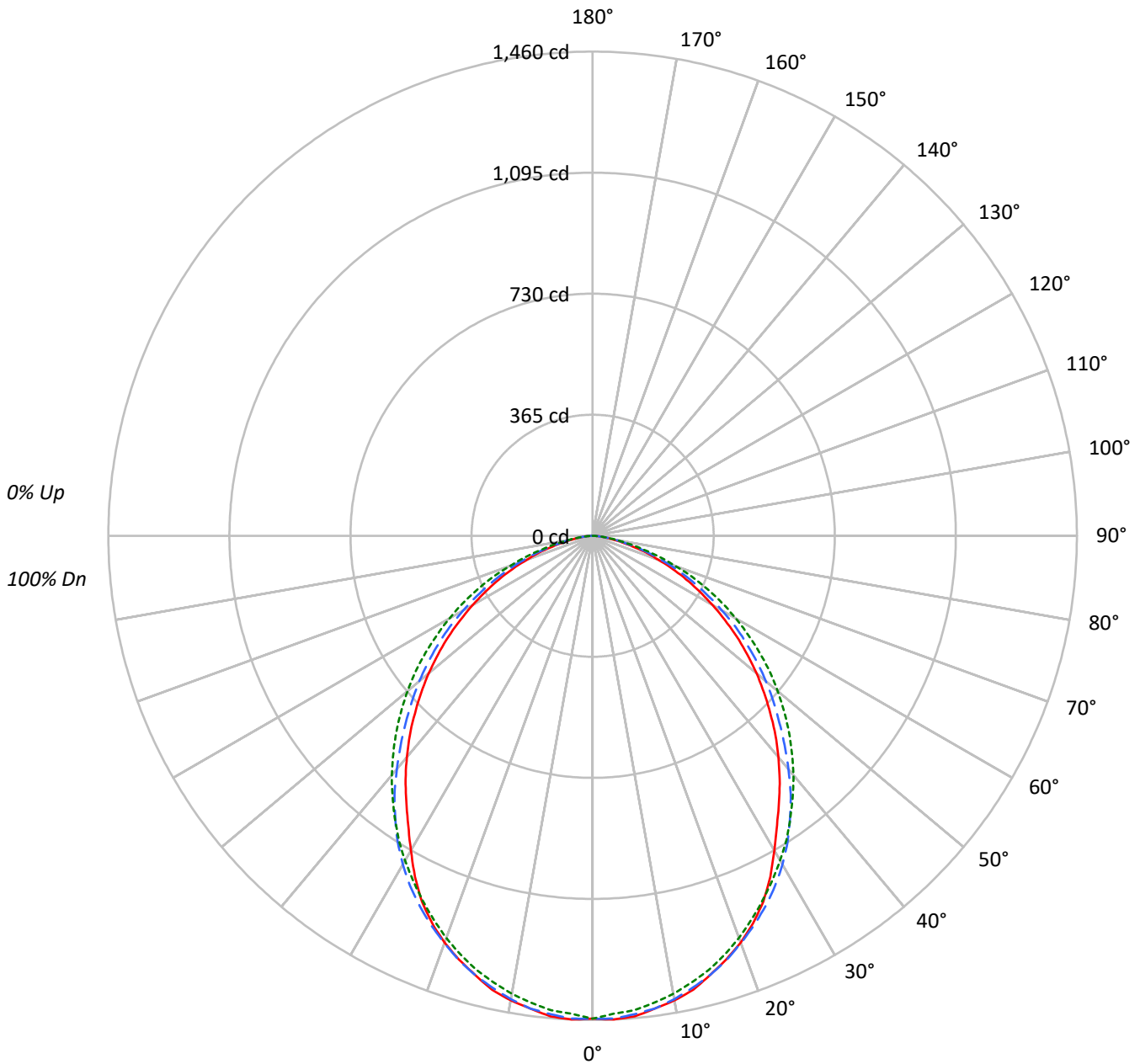
Lumens per Lamp: N/A
Luminaire Lumens: 3367.0 lumens
Efficiency: N/A
Efficacy: 77.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	3918	3918	3918
5°	3929	3912	3879
10°	3887	3877	3832
15°	3818	3818	3775
20°	3737	3742	3694
25°	3614	3659	3601
30°	3403	3556	3513
35°	3216	3409	3415
40°	3060	3225	3309
45°	2885	3029	3185
50°	2700	2855	3049
55°	2491	2656	2884
60°	2243	2423	2682
65°	1980	2155	2440
70°	1651	1836	2073
75°	1297	1466	1623
80°	928	1032	1144
85°	605	605	571



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.1	4.1
10°-20°	385.2	11.4
20°-30°	562.8	16.7
30°-40°	638.9	19.0
40°-50°	616.7	18.3
50°-60°	508.8	15.1
60°-70°	338.8	10.1
70°-80°	151.6	4.5
80°-90°	27.1	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°	1085.1	32.2
0°-40°	1724.0	51.2
0°-60°	2849.5	84.6
0°-90°	3367.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3367.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1456	1456	1456	1456	1456	
5°	1454	1454	1448	1440	1436	138
15°	1371	1374	1371	1364	1355	386
25°	1217	1227	1232	1223	1213	557
35°	979	992	1038	1043	1039	613
45°	758	771	796	832	837	585
55°	531	540	566	597	615	474
65°	311	319	338	362	383	308
75°	125	132	141	148	156	136
85°	20	20	20	18	18	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1456.1	1456.1	1456.1	1456.1	1456.1
2.5°	1460.1	1460.6	1457.3	1448.3	1442.7
5°	1454.5	1453.9	1448.3	1440.5	1436.0
7.5°	1438.2	1439.4	1437.7	1426.5	1420.3
10°	1422.6	1423.1	1418.7	1409.7	1402.4
12.5°	1402.4	1401.9	1395.7	1391.2	1379.5
15°	1370.6	1373.9	1370.6	1364.4	1354.9
17.5°	1339.8	1339.8	1342.0	1331.4	1324.1
20°	1305.1	1306.8	1306.8	1298.4	1290.0
22.5°	1264.8	1269.9	1271.5	1262.6	1252.5
25°	1217.3	1226.8	1232.4	1223.4	1212.8
27.5°	1159.7	1174.2	1191.0	1184.3	1172.5
30°	1095.3	1116.6	1144.5	1139.0	1130.6
32.5°	1034.3	1055.6	1094.2	1092.0	1087.5
35°	979.0	992.4	1037.7	1043.3	1039.4
37.5°	926.4	938.7	981.2	994.1	990.7
40°	871.0	884.4	918.0	940.9	942.0
42.5°	816.2	829.0	856.5	889.5	889.5
45°	758.0	770.9	796.0	832.4	836.9
47.5°	700.9	714.4	739.0	775.3	782.6
50°	645.0	657.3	681.9	717.2	728.3
52.5°	586.8	600.2	624.3	656.7	673.0
55°	530.9	539.8	566.1	597.4	614.8
57.5°	472.7	481.1	510.7	537.6	555.5
60°	416.8	427.4	450.3	477.7	498.4
62.5°	363.1	374.2	393.8	417.9	441.4
65°	311.0	319.4	338.4	362.5	383.2
67.5°	260.7	268.0	287.0	303.8	325.6
70°	209.8	219.3	233.3	249.5	263.5
72.5°	168.9	172.9	184.6	196.4	210.9
75°	124.7	131.5	141.0	147.7	156.1
77.5°	89.5	93.4	99.0	104.6	112.4
80°	59.9	61.5	66.6	67.7	73.8
82.5°	36.4	37.5	38.6	39.2	41.4
85°	19.6	19.6	19.6	18.5	18.5
87.5°	11.2	11.2	9.5	7.8	5.6
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)