

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: P556897

Luminaire Tested: **FUSL-12-4-LD4-1STD-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: P556897
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-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

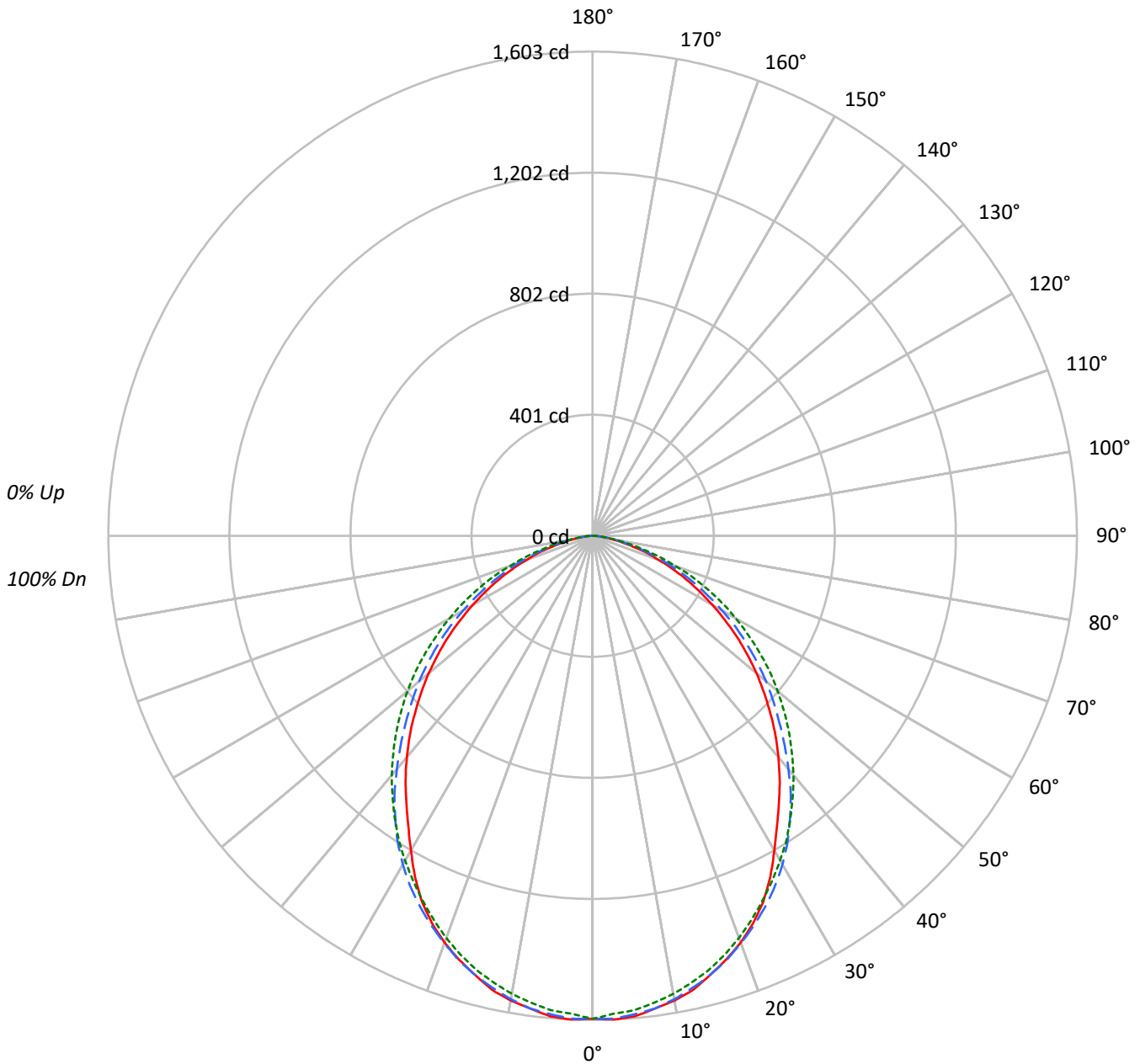
Lumens per Lamp: N/A
Luminaire Lumens: 3697.0 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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

TEST NUMBER: P556897

CATALOG NUMBER: FUSL-12-4-LD4-1STD-50-UNV-93-84-EDD

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°	4303	4303	4303
5°	4314	4296	4259
10°	4268	4256	4208
15°	4193	4193	4145
20°	4104	4109	4056
25°	3969	4018	3954
30°	3737	3905	3857
35°	3531	3743	3749
40°	3360	3541	3634
45°	3167	3326	3497
50°	2965	3135	3348
55°	2735	2916	3167
60°	2463	2661	2946
65°	2174	2366	2679
70°	1812	2015	2276
75°	1424	1609	1782
80°	1018	1133	1257
85°	664	664	627



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.5	4.1
10°-20°	422.9	11.4
20°-30°	618.0	16.7
30°-40°	701.5	19.0
40°-50°	677.2	18.3
50°-60°	558.6	15.1
60°-70°	372.0	10.1
70°-80°	166.5	4.5
80°-90°	29.8	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°	1191.4	32.2
0°-40°	1892.9	51.2
0°-60°	3128.8	84.6
0°-90°	3697.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3697.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1599	1599	1599	1599	1599	
5°	1597	1596	1590	1582	1577	151
15°	1505	1509	1505	1498	1488	424
25°	1337	1347	1353	1343	1332	612
35°	1075	1090	1139	1146	1141	673
45°	832	846	874	914	919	642
55°	583	593	622	656	675	520
65°	342	351	372	398	421	339
75°	137	144	155	162	171	150
85°	22	22	22	20	20	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1598.9	1598.9	1598.9	1598.9	1598.9
2.5°	1603.2	1603.8	1600.1	1590.3	1584.1
5°	1597.0	1596.4	1590.3	1581.7	1576.7
7.5°	1579.2	1580.4	1578.6	1566.3	1559.5
10°	1562.0	1562.6	1557.7	1547.9	1539.9
12.5°	1539.9	1539.3	1532.5	1527.6	1514.7
15°	1504.9	1508.6	1504.9	1498.1	1487.7
17.5°	1471.1	1471.1	1473.6	1461.9	1453.9
20°	1433.0	1434.9	1434.9	1425.6	1416.4
22.5°	1388.8	1394.3	1396.2	1386.3	1375.3
25°	1336.6	1347.0	1353.2	1343.3	1331.7
27.5°	1273.3	1289.3	1307.7	1300.3	1287.4
30°	1202.7	1226.0	1256.7	1250.6	1241.4
32.5°	1135.7	1159.1	1201.4	1199.0	1194.1
35°	1074.9	1089.7	1139.4	1145.6	1141.3
37.5°	1017.2	1030.7	1077.4	1091.5	1087.8
40°	956.4	971.1	1008.0	1033.1	1034.4
42.5°	896.2	910.3	940.4	976.6	976.6
45°	832.3	846.4	874.1	914.0	918.9
47.5°	769.6	784.4	811.4	851.3	859.3
50°	708.2	721.7	748.8	787.5	799.7
52.5°	644.3	659.1	685.5	721.1	738.9
55°	582.9	592.7	621.6	656.0	675.0
57.5°	519.0	528.2	560.8	590.3	609.9
60°	457.6	469.3	494.5	524.6	547.3
62.5°	398.6	410.9	432.4	458.8	484.6
65°	341.5	350.7	371.6	398.0	420.8
67.5°	286.2	294.2	315.1	333.5	357.5
70°	230.3	240.8	256.1	273.9	289.3
72.5°	185.5	189.8	202.7	215.6	231.6
75°	137.0	144.3	154.8	162.2	171.4
77.5°	98.3	102.6	108.7	114.9	123.5
80°	65.7	67.6	73.1	74.3	81.1
82.5°	39.9	41.2	42.4	43.0	45.5
85°	21.5	21.5	21.5	20.3	20.3
87.5°	12.3	12.3	10.4	8.6	6.1
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)