

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: P556191

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-82-97-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: P556191
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-82-97-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

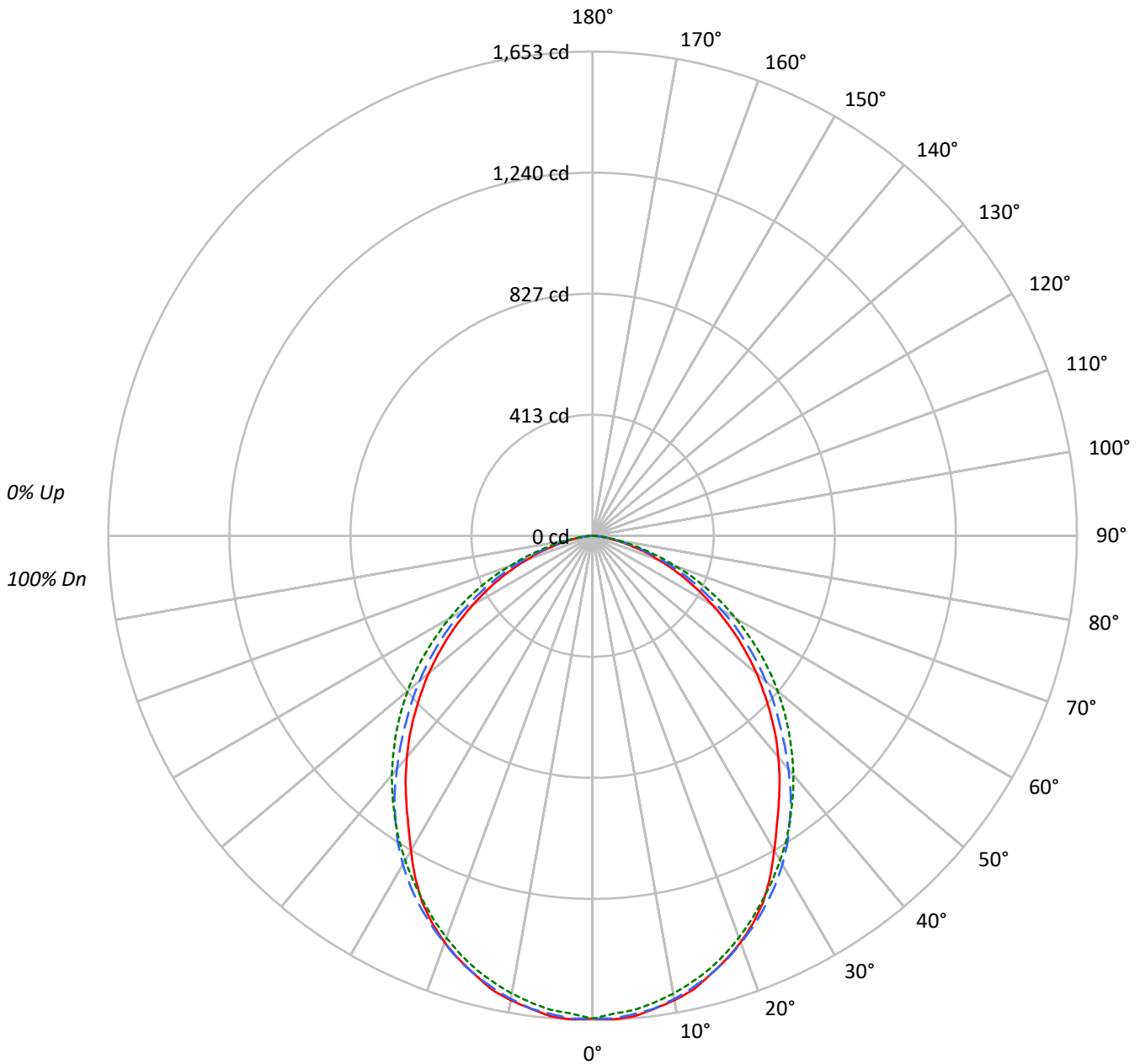
Lumens per Lamp: N/A
Luminaire Lumens: 3811.0 lumens
Efficiency: N/A
Efficacy: 88.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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°	4435	4435	4435
5°	4447	4428	4391
10°	4400	4388	4338
15°	4322	4322	4272
20°	4230	4236	4181
25°	4091	4142	4076
30°	3852	4025	3976
35°	3640	3858	3865
40°	3463	3650	3746
45°	3265	3429	3605
50°	3057	3231	3451
55°	2819	3006	3265
60°	2539	2743	3037
65°	2241	2439	2762
70°	1868	2077	2346
75°	1468	1659	1837
80°	1049	1167	1296
85°	685	685	645



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.2	4.1
10°-20°	435.9	11.4
20°-30°	637.1	16.7
30°-40°	723.1	19.0
40°-50°	698.1	18.3
50°-60°	575.8	15.1
60°-70°	383.5	10.1
70°-80°	171.6	4.5
80°-90°	30.7	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°	1228.2	32.2
0°-40°	1951.3	51.2
0°-60°	3225.2	84.6
0°-90°	3811.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3811.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1648	1648	1648	1648	1648	
5°	1646	1646	1639	1630	1625	156
15°	1551	1555	1551	1544	1534	437
25°	1378	1389	1395	1385	1373	631
35°	1108	1123	1174	1181	1176	694
45°	858	872	901	942	947	662
55°	601	611	641	676	696	536
65°	352	362	383	410	434	349
75°	141	149	160	167	177	154
85°	22	22	22	21	21	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1648.2	1648.2	1648.2	1648.2	1648.2
2.5°	1652.6	1653.2	1649.4	1639.3	1633.0
5°	1646.3	1645.6	1639.3	1630.4	1625.4
7.5°	1627.9	1629.2	1627.3	1614.6	1607.6
10°	1610.2	1610.8	1605.7	1595.6	1587.4
12.5°	1587.4	1586.7	1579.8	1574.7	1561.4
15°	1551.3	1555.1	1551.3	1544.3	1533.6
17.5°	1516.5	1516.5	1519.0	1507.0	1498.7
20°	1477.2	1479.1	1479.1	1469.6	1460.1
22.5°	1431.6	1437.3	1439.2	1429.1	1417.7
25°	1377.8	1388.6	1394.9	1384.8	1372.7
27.5°	1312.6	1329.0	1348.0	1340.4	1327.1
30°	1239.8	1263.8	1295.5	1289.1	1279.7
32.5°	1170.7	1194.8	1238.5	1236.0	1230.9
35°	1108.1	1123.3	1174.5	1180.9	1176.4
37.5°	1048.5	1062.5	1110.6	1125.2	1121.4
40°	985.9	1001.1	1039.0	1065.0	1066.3
42.5°	923.8	938.4	969.4	1006.8	1006.8
45°	858.0	872.5	901.0	942.2	947.2
47.5°	793.4	808.6	836.4	877.6	885.8
50°	730.1	744.0	771.8	811.7	824.4
52.5°	664.2	679.4	706.6	743.3	761.7
55°	600.9	611.0	640.8	676.2	695.9
57.5°	535.0	544.5	578.1	608.5	628.7
60°	471.7	483.7	509.7	540.7	564.2
62.5°	410.9	423.6	445.8	473.0	499.6
65°	352.0	361.5	383.1	410.3	433.7
67.5°	295.1	303.3	324.8	343.8	368.5
70°	237.4	248.2	264.0	282.4	298.2
72.5°	191.2	195.7	208.9	222.2	238.7
75°	141.2	148.8	159.6	167.2	176.7
77.5°	101.3	105.7	112.1	118.4	127.3
80°	67.7	69.6	75.3	76.6	83.6
82.5°	41.2	42.4	43.7	44.3	46.9
85°	22.2	22.2	22.2	20.9	20.9
87.5°	12.7	12.7	10.8	8.9	6.3
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)