

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: P556189

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-82-96-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: P556189
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-82-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

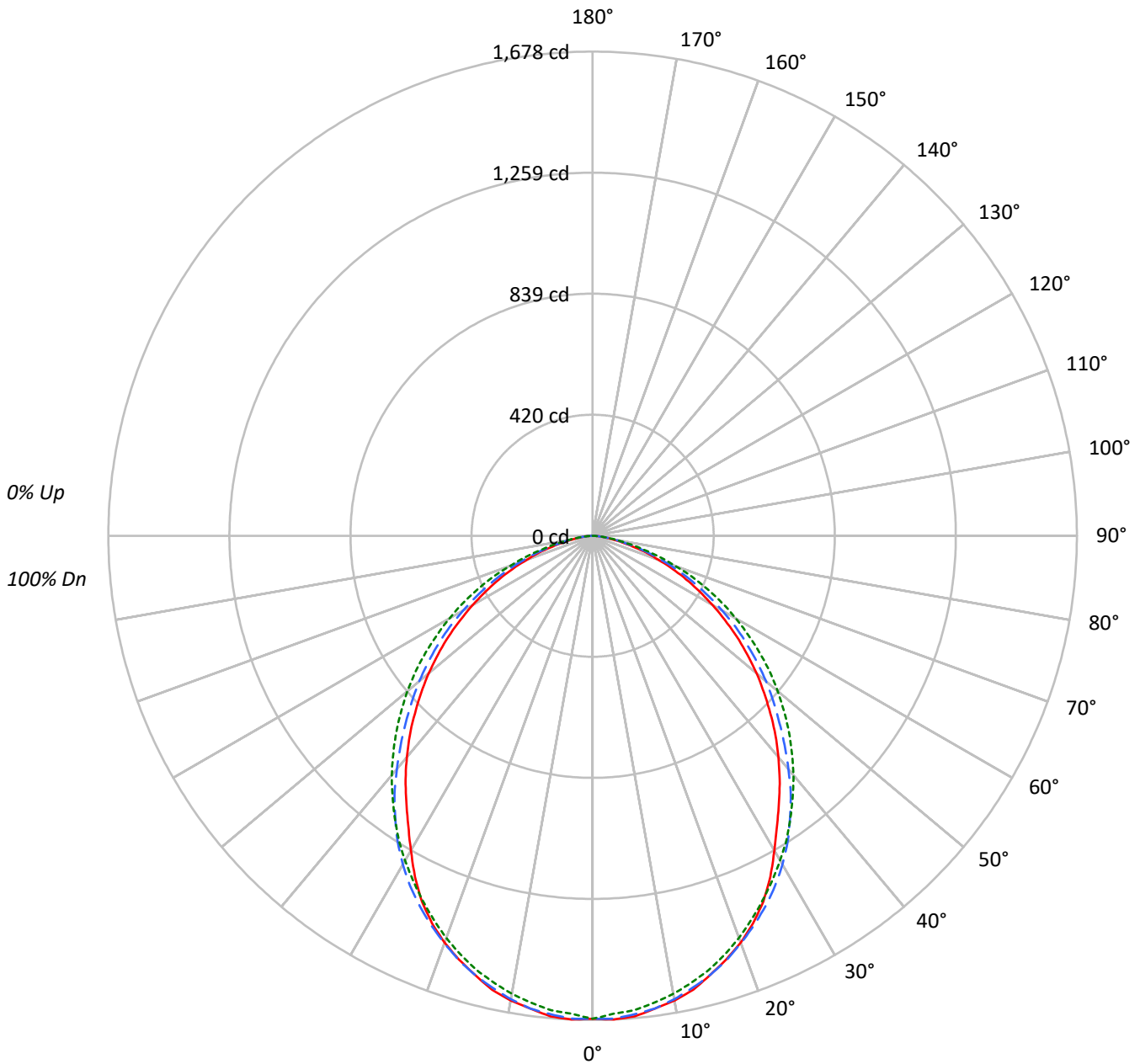
Lumens per Lamp: N/A
Luminaire Lumens: 3870.0 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4504	4504	4504
5°	4516	4497	4458
10°	4468	4456	4405
15°	4389	4389	4338
20°	4296	4301	4246
25°	4154	4206	4139
30°	3912	4088	4038
35°	3696	3918	3925
40°	3517	3706	3804
45°	3315	3482	3661
50°	3104	3281	3505
55°	2863	3053	3315
60°	2578	2786	3083
65°	2276	2477	2804
70°	1897	2109	2382
75°	1491	1684	1865
80°	1066	1185	1316
85°	695	695	655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.6	4.1
10°-20°	442.7	11.4
20°-30°	646.9	16.7
30°-40°	734.3	19.0
40°-50°	708.9	18.3
50°-60°	584.8	15.1
60°-70°	389.4	10.1
70°-80°	174.3	4.5
80°-90°	31.2	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°	1247.2	32.2
0°-40°	1981.5	51.2
0°-60°	3275.2	84.6
0°-90°	3870.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3870.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1674	1674	1674	1674	1674	
5°	1672	1671	1665	1656	1650	158
15°	1575	1579	1575	1568	1557	444
25°	1399	1410	1416	1406	1394	641
35°	1125	1141	1193	1199	1195	705
45°	871	886	915	957	962	672
55°	610	620	651	687	707	545
65°	358	367	389	417	440	354
75°	143	151	162	170	179	157
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°	1673.7	1673.7	1673.7	1673.7	1673.7
2.5°	1678.2	1678.8	1675.0	1664.7	1658.2
5°	1671.7	1671.1	1664.7	1655.7	1650.5
7.5°	1653.1	1654.4	1652.5	1639.6	1632.5
10°	1635.1	1635.7	1630.6	1620.3	1611.9
12.5°	1611.9	1611.3	1604.2	1599.1	1585.6
15°	1575.3	1579.2	1575.3	1568.2	1557.3
17.5°	1539.9	1539.9	1542.5	1530.3	1521.9
20°	1500.1	1502.0	1502.0	1492.4	1482.7
22.5°	1453.8	1459.6	1461.5	1451.2	1439.6
25°	1399.1	1410.1	1416.5	1406.2	1394.0
27.5°	1332.9	1349.6	1368.9	1361.2	1347.7
30°	1259.0	1283.4	1315.5	1309.1	1299.5
32.5°	1188.9	1213.3	1257.7	1255.1	1250.0
35°	1125.2	1140.6	1192.7	1199.2	1194.7
37.5°	1064.8	1078.9	1127.8	1142.6	1138.7
40°	1001.1	1016.6	1055.1	1081.5	1082.8
42.5°	938.1	952.9	984.4	1022.3	1022.3
45°	871.2	886.0	915.0	956.8	961.9
47.5°	805.7	821.1	849.4	891.2	899.5
50°	741.4	755.5	783.8	824.3	837.2
52.5°	674.5	689.9	717.6	754.9	773.5
55°	610.2	620.5	650.7	686.7	706.6
57.5°	543.3	553.0	587.0	617.9	638.5
60°	479.0	491.2	517.6	549.1	572.9
62.5°	417.3	430.2	452.7	480.3	507.3
65°	357.5	367.1	389.0	416.7	440.4
67.5°	299.6	308.0	329.8	349.1	374.2
70°	241.1	252.0	268.1	286.8	302.8
72.5°	194.2	198.7	212.2	225.7	242.4
75°	143.4	151.1	162.0	169.7	179.4
77.5°	102.9	107.4	113.8	120.2	129.2
80°	68.8	70.7	76.5	77.8	84.9
82.5°	41.8	43.1	44.4	45.0	47.6
85°	22.5	22.5	22.5	21.2	21.2
87.5°	12.9	12.9	10.9	9.0	6.4
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)