

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: P556388

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-93-86-EDD-90**

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: P556388
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-50-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

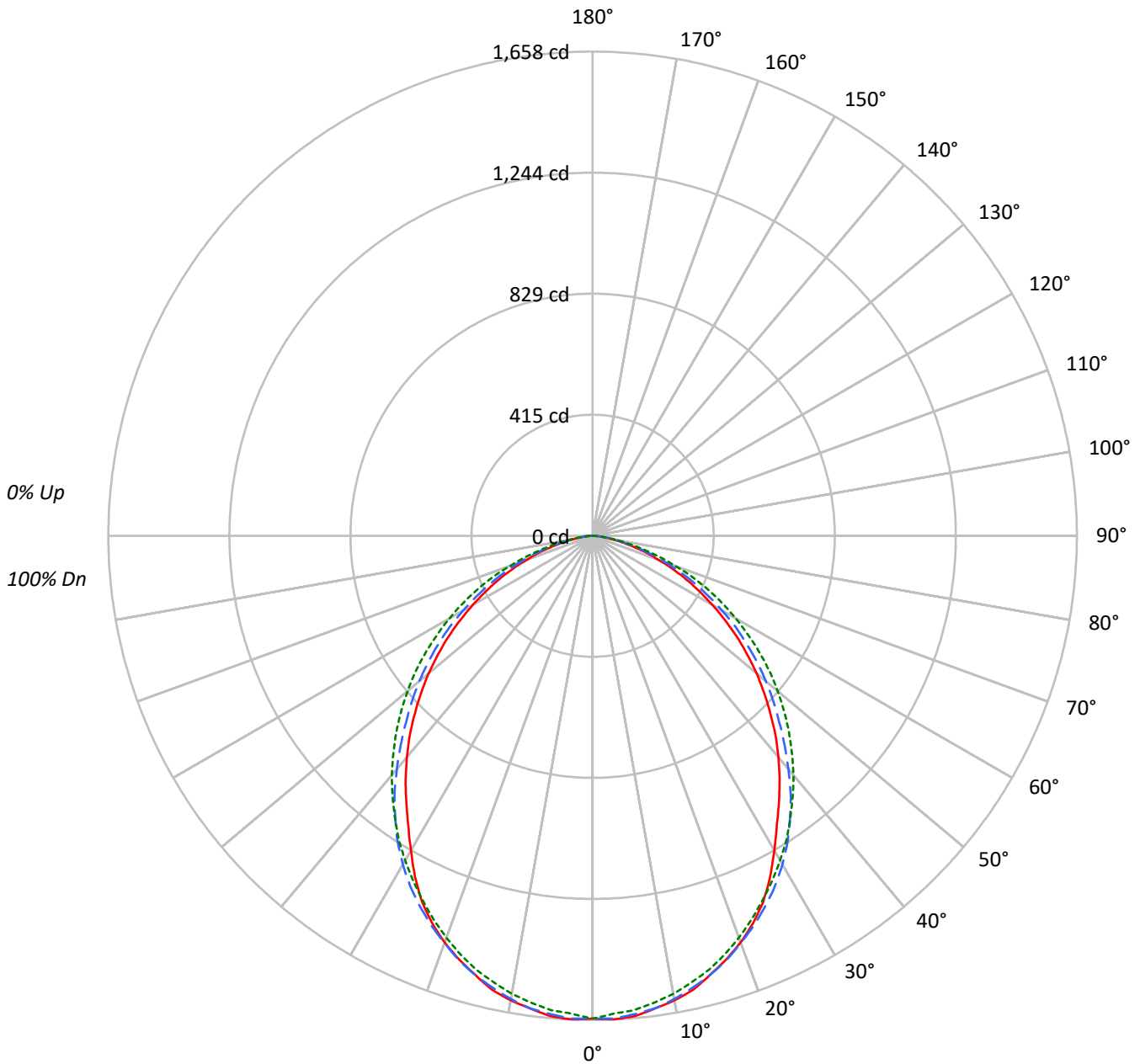
Lumens per Lamp: N/A
Luminaire Lumens: 3823.0 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4449	4449	4449
5°	4461	4442	4404
10°	4414	4401	4351
15°	4335	4335	4286
20°	4244	4249	4194
25°	4104	4155	4089
30°	3865	4038	3989
35°	3651	3870	3877
40°	3474	3661	3757
45°	3275	3440	3616
50°	3066	3242	3462
55°	2828	3016	3275
60°	2547	2752	3046
65°	2249	2447	2770
70°	1874	2084	2354
75°	1472	1665	1842
80°	1054	1172	1299
85°	685	685	648



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.7	4.1
10°-20°	437.3	11.4
20°-30°	639.1	16.7
30°-40°	725.4	19.0
40°-50°	700.3	18.3
50°-60°	577.7	15.1
60°-70°	384.7	10.1
70°-80°	172.2	4.5
80°-90°	30.8	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°	1232.0	32.2
0°-40°	1957.4	51.2
0°-60°	3235.4	84.6
0°-90°	3823.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3823.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1653	1653	1653	1653	1653	
5°	1651	1651	1644	1636	1630	156
15°	1556	1560	1556	1549	1538	439
25°	1382	1393	1399	1389	1377	633
35°	1112	1127	1178	1185	1180	696
45°	861	875	904	945	950	664
55°	603	613	643	678	698	538
65°	353	363	384	412	435	350
75°	142	149	160	168	177	155
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°	1653.3	1653.3	1653.3	1653.3	1653.3
2.5°	1657.8	1658.4	1654.6	1644.5	1638.1
5°	1651.4	1650.8	1644.5	1635.6	1630.5
7.5°	1633.0	1634.3	1632.4	1619.7	1612.7
10°	1615.2	1615.9	1610.8	1600.6	1592.4
12.5°	1592.4	1591.7	1584.8	1579.7	1566.3
15°	1556.2	1560.0	1556.2	1549.2	1538.4
17.5°	1521.2	1521.2	1523.8	1511.7	1503.4
20°	1481.9	1483.8	1483.8	1474.2	1464.7
22.5°	1436.1	1441.8	1443.7	1433.6	1422.1
25°	1382.1	1392.9	1399.3	1389.1	1377.0
27.5°	1316.7	1333.2	1352.3	1344.7	1331.3
30°	1243.7	1267.8	1299.6	1293.2	1283.7
32.5°	1174.4	1198.6	1242.4	1239.9	1234.8
35°	1111.5	1126.8	1178.2	1184.6	1180.1
37.5°	1051.8	1065.8	1114.1	1128.7	1124.9
40°	989.0	1004.2	1042.3	1068.4	1069.6
42.5°	926.7	941.3	972.4	1009.9	1009.9
45°	860.7	875.3	903.8	945.1	950.2
47.5°	795.9	811.1	839.1	880.3	888.6
50°	732.4	746.3	774.3	814.3	827.0
52.5°	666.3	681.5	708.9	745.7	764.1
55°	602.8	612.9	642.8	678.4	698.1
57.5°	536.7	546.2	579.9	610.4	630.7
60°	473.2	485.3	511.3	542.4	565.9
62.5°	412.2	424.9	447.2	474.5	501.1
65°	353.2	362.7	384.3	411.6	435.1
67.5°	296.0	304.2	325.8	344.9	369.7
70°	238.2	249.0	264.9	283.3	299.2
72.5°	191.8	196.3	209.6	222.9	239.5
75°	141.6	149.3	160.1	167.7	177.2
77.5°	101.6	106.1	112.4	118.8	127.7
80°	68.0	69.9	75.6	76.9	83.8
82.5°	41.3	42.6	43.8	44.5	47.0
85°	22.2	22.2	22.2	21.0	21.0
87.5°	12.7	12.7	10.8	8.9	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)