

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: P556194

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-93-85-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: P556194
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-93-85-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

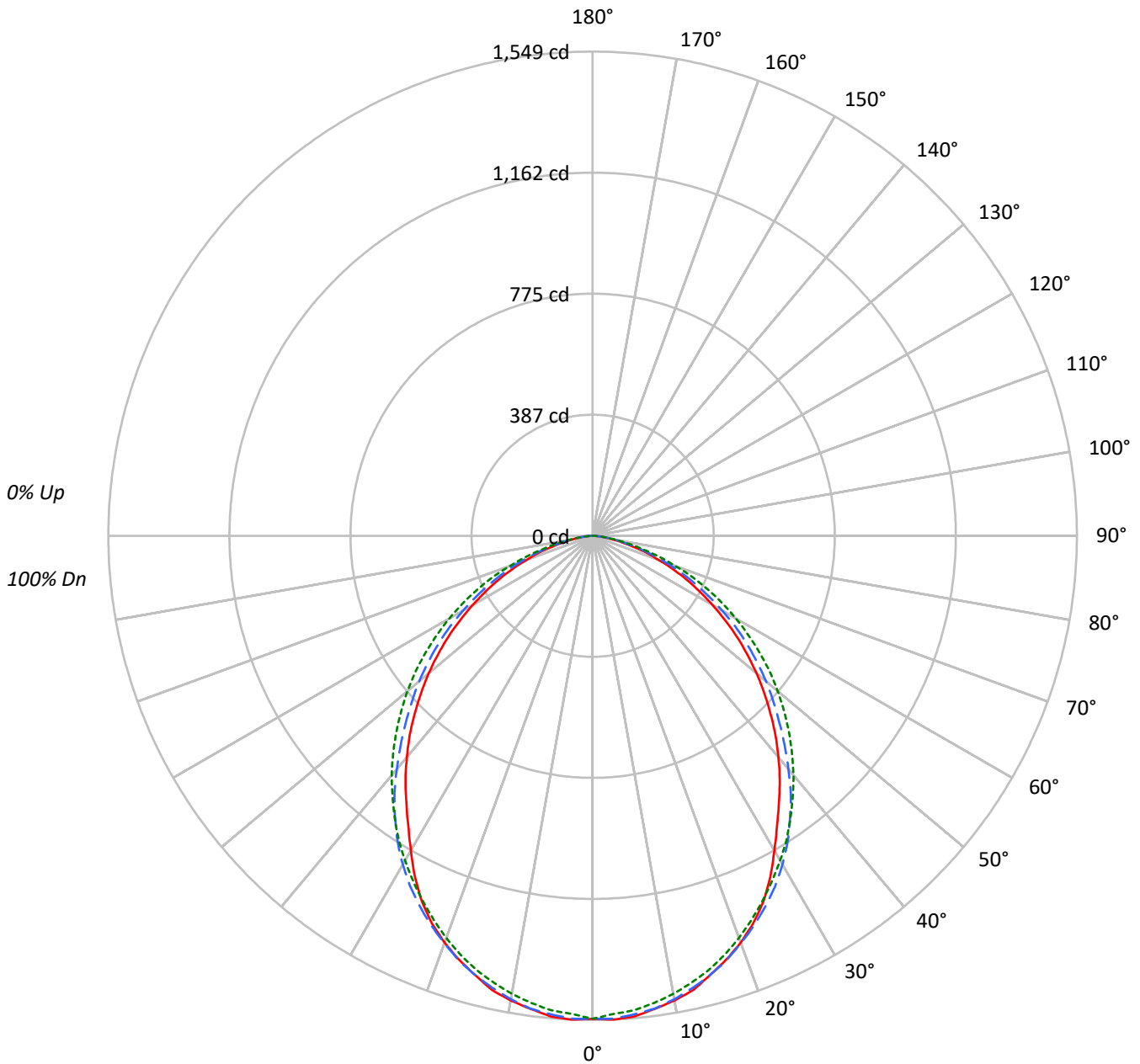
Lumens per Lamp: N/A
Luminaire Lumens: 3573.0 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P556194

CATALOG NUMBER: FUSL-12-4-LD4-1HI-30-UNV-93-85-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P556194

CATALOG NUMBER: FUSL-12-4-LD4-1HI-30-UNV-93-85-EDD-90

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°	4158	4158	4158
5°	4169	4152	4116
10°	4125	4114	4066
15°	4052	4052	4006
20°	3966	3971	3920
25°	3835	3883	3821
30°	3612	3774	3728
35°	3413	3618	3623
40°	3247	3422	3512
45°	3061	3215	3380
50°	2866	3029	3236
55°	2643	2819	3061
60°	2380	2572	2847
65°	2102	2287	2589
70°	1751	1947	2200
75°	1377	1555	1722
80°	984	1094	1215
85°	642	642	605



TEST NUMBER: P556194

CATALOG NUMBER: FUSL-12-4-LD4-1HI-30-UNV-93-85-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.5	4.1
10°-20°	408.7	11.4
20°-30°	597.3	16.7
30°-40°	678.0	19.0
40°-50°	654.5	18.3
50°-60°	539.9	15.1
60°-70°	359.5	10.1
70°-80°	160.9	4.5
80°-90°	28.8	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°	1151.5	32.2
0°-40°	1829.4	51.2
0°-60°	3023.8	84.6
0°-90°	3573.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3573.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1545	1545	1545	1545	1545	
5°	1543	1543	1537	1529	1524	146
15°	1454	1458	1454	1448	1438	410
25°	1292	1302	1308	1298	1287	592
35°	1039	1053	1101	1107	1103	651
45°	804	818	845	883	888	621
55°	563	573	601	634	652	503
65°	330	339	359	385	407	327
75°	132	140	150	157	166	145
85°	21	21	21	20	20	28
90°	0	0	0	0	0	



TEST NUMBER: P556194

CATALOG NUMBER: FUSL-12-4-LD4-1HI-30-UNV-93-85-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1545.2	1545.2	1545.2	1545.2	1545.2
2.5°	1549.4	1550.0	1546.4	1536.9	1531.0
5°	1543.4	1542.9	1536.9	1528.6	1523.9
7.5°	1526.2	1527.4	1525.6	1513.8	1507.2
10°	1509.6	1510.2	1505.5	1496.0	1488.2
12.5°	1488.2	1487.6	1481.1	1476.4	1463.9
15°	1454.4	1458.0	1454.4	1447.9	1437.8
17.5°	1421.8	1421.8	1424.1	1412.8	1405.1
20°	1384.9	1386.7	1386.7	1377.8	1368.9
22.5°	1342.2	1347.5	1349.3	1339.8	1329.1
25°	1291.7	1301.8	1307.8	1298.3	1287.0
27.5°	1230.6	1246.0	1263.8	1256.7	1244.3
30°	1162.3	1184.9	1214.6	1208.6	1199.7
32.5°	1097.6	1120.2	1161.1	1158.8	1154.0
35°	1038.9	1053.1	1101.2	1107.1	1103.0
37.5°	983.1	996.1	1041.2	1054.9	1051.3
40°	924.3	938.5	974.2	998.5	999.7
42.5°	866.1	879.8	908.9	943.9	943.9
45°	804.4	818.0	844.7	883.3	888.1
47.5°	743.8	758.1	784.2	822.8	830.5
50°	684.5	697.5	723.6	761.0	772.9
52.5°	622.7	637.0	662.5	696.9	714.1
55°	563.4	572.9	600.8	634.0	652.4
57.5°	501.6	510.5	542.0	570.5	589.5
60°	442.3	453.5	477.9	507.0	528.9
62.5°	385.3	397.1	417.9	443.4	468.4
65°	330.1	339.0	359.1	384.7	406.6
67.5°	276.6	284.4	304.5	322.3	345.5
70°	222.6	232.7	247.5	264.8	279.6
72.5°	179.3	183.4	195.9	208.4	223.8
75°	132.4	139.5	149.6	156.7	165.6
77.5°	95.0	99.1	105.1	111.0	119.3
80°	63.5	65.3	70.6	71.8	78.4
82.5°	38.6	39.8	41.0	41.6	43.9
85°	20.8	20.8	20.8	19.6	19.6
87.5°	11.9	11.9	10.1	8.3	5.9
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)