

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: P556303

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-81-97-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: P556303
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-40-UNV-81-97-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

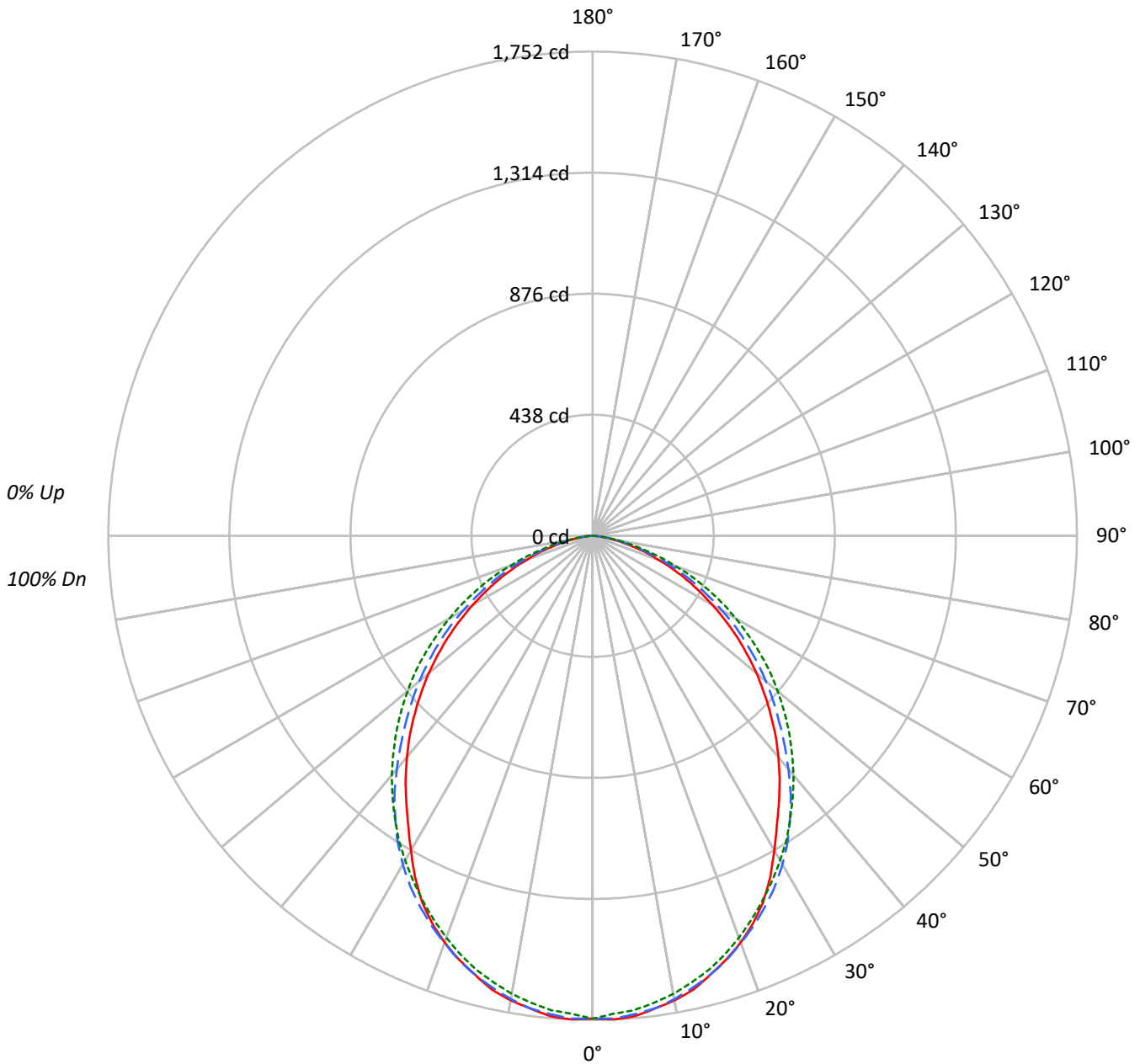
Lumens per Lamp: N/A
Luminaire Lumens: 4040.0 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P556303

CATALOG NUMBER: FUSL-12-4-LD4-1HI-40-UNV-81-97-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°	4702	4702	4702
5°	4714	4694	4654
10°	4664	4651	4598
15°	4581	4581	4529
20°	4485	4490	4432
25°	4337	4391	4321
30°	4084	4267	4215
35°	3859	4090	4097
40°	3671	3869	3971
45°	3461	3635	3822
50°	3240	3425	3659
55°	2989	3187	3461
60°	2692	2908	3219
65°	2376	2586	2928
70°	1980	2202	2487
75°	1556	1758	1947
80°	1113	1238	1373
85°	726	726	685



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.5	4.1
10°-20°	462.1	11.4
20°-30°	675.3	16.7
30°-40°	766.6	19.0
40°-50°	740.0	18.3
50°-60°	610.5	15.1
60°-70°	406.5	10.1
70°-80°	181.9	4.5
80°-90°	32.5	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°	1302.0	32.2
0°-40°	2068.6	51.2
0°-60°	3419.0	84.6
0°-90°	4040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4040.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1747	1747	1747	1747	1747	
5°	1745	1744	1738	1728	1723	165
15°	1644	1648	1644	1637	1626	464
25°	1461	1472	1479	1468	1455	669
35°	1175	1191	1245	1252	1247	736
45°	910	925	955	999	1004	702
55°	637	648	679	717	738	569
65°	373	383	406	435	460	370
75°	150	158	169	177	187	164
85°	24	24	24	22	22	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1747.2	1747.2	1747.2	1747.2	1747.2
2.5°	1751.9	1752.6	1748.5	1737.8	1731.1
5°	1745.2	1744.5	1737.8	1728.4	1723.0
7.5°	1725.7	1727.1	1725.0	1711.6	1704.2
10°	1706.9	1707.6	1702.2	1691.5	1682.8
12.5°	1682.8	1682.1	1674.7	1669.3	1655.2
15°	1644.5	1648.5	1644.5	1637.1	1625.7
17.5°	1607.6	1607.6	1610.3	1597.5	1588.8
20°	1566.0	1568.0	1568.0	1557.9	1547.8
22.5°	1517.6	1523.7	1525.7	1515.0	1502.9
25°	1460.6	1472.0	1478.7	1468.0	1455.2
27.5°	1391.4	1408.9	1429.0	1421.0	1406.9
30°	1314.3	1339.8	1373.3	1366.6	1356.5
32.5°	1241.1	1266.6	1312.9	1310.2	1304.9
35°	1174.6	1190.8	1245.1	1251.8	1247.1
37.5°	1111.5	1126.3	1177.3	1192.8	1188.7
40°	1045.1	1061.2	1101.5	1129.0	1130.3
42.5°	979.3	994.8	1027.6	1067.2	1067.2
45°	909.5	924.9	955.2	998.8	1004.2
47.5°	841.0	857.2	886.7	930.3	939.0
50°	773.9	788.7	818.2	860.5	873.9
52.5°	704.1	720.2	749.1	788.0	807.5
55°	637.0	647.7	679.3	716.9	737.7
57.5°	567.2	577.3	612.8	645.0	666.5
60°	500.1	512.8	540.3	573.2	598.1
62.5°	435.6	449.0	472.5	501.4	529.6
65°	373.2	383.3	406.1	435.0	459.8
67.5°	312.8	321.5	344.3	364.5	390.7
70°	251.7	263.1	279.9	299.4	316.1
72.5°	202.7	207.4	221.5	235.6	253.1
75°	149.7	157.7	169.1	177.2	187.3
77.5°	107.4	112.1	118.8	125.5	134.9
80°	71.8	73.8	79.9	81.2	88.6
82.5°	43.6	45.0	46.3	47.0	49.7
85°	23.5	23.5	23.5	22.2	22.2
87.5°	13.4	13.4	11.4	9.4	6.7
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)