

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: P556837

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-93-86-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: P556837
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-LD4-1STD-40-UNV-93-86-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

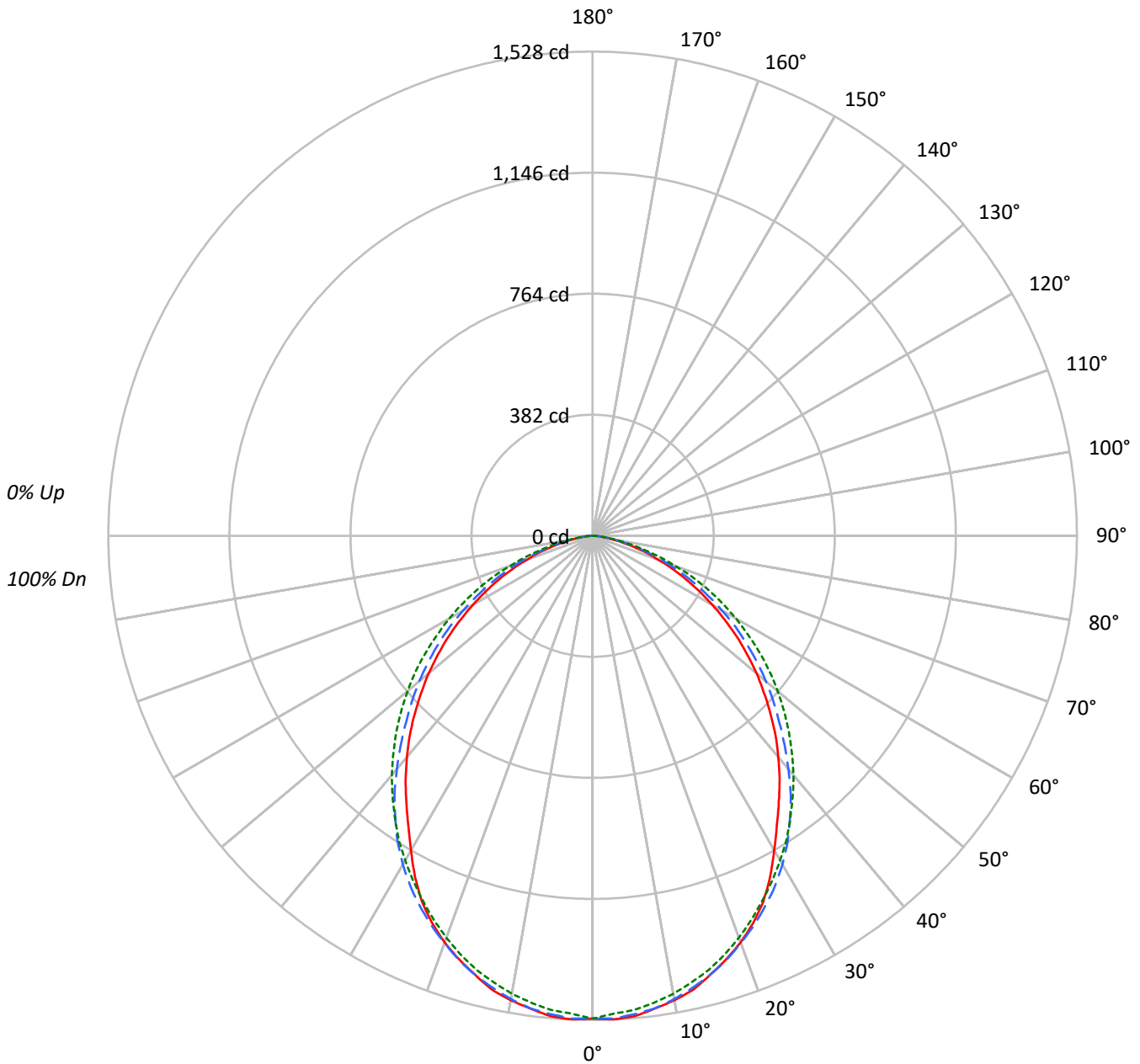
Lumens per Lamp: N/A
Luminaire Lumens: 3523.0 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	4100	4100	4100
5°	4111	4093	4059
10°	4067	4056	4010
15°	3995	3995	3950
20°	3911	3916	3865
25°	3782	3829	3768
30°	3561	3721	3676
35°	3365	3567	3573
40°	3202	3374	3463
45°	3018	3170	3332
50°	2825	2987	3190
55°	2606	2779	3018
60°	2347	2536	2807
65°	2072	2255	2553
70°	1727	1921	2169
75°	1357	1534	1698
80°	970	1080	1198
85°	633	633	596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.5	4.1
10°-20°	403.0	11.4
20°-30°	588.9	16.7
30°-40°	668.5	19.0
40°-50°	645.3	18.3
50°-60°	532.3	15.1
60°-70°	354.5	10.1
70°-80°	158.6	4.5
80°-90°	28.4	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°	1135.4	32.2
0°-40°	1803.8	51.2
0°-60°	2981.5	84.6
0°-90°	3523.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3523.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1524	1524	1524	1524	1524	
5°	1522	1521	1515	1507	1502	144
15°	1434	1438	1434	1428	1418	404
25°	1274	1284	1290	1280	1269	583
35°	1024	1038	1086	1092	1088	642
45°	793	807	833	871	876	612
55°	556	565	592	625	643	496
65°	325	334	354	379	401	323
75°	130	138	148	154	163	143
85°	20	20	20	19	19	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1523.6	1523.6	1523.6	1523.6	1523.6
2.5°	1527.7	1528.3	1524.8	1515.4	1509.6
5°	1521.9	1521.3	1515.4	1507.2	1502.5
7.5°	1504.9	1506.0	1504.3	1492.6	1486.1
10°	1488.5	1489.1	1484.4	1475.0	1467.4
12.5°	1467.4	1466.8	1460.4	1455.7	1443.4
15°	1434.1	1437.6	1434.1	1427.6	1417.7
17.5°	1401.9	1401.9	1404.2	1393.1	1385.5
20°	1365.6	1367.3	1367.3	1358.5	1349.8
22.5°	1323.4	1328.7	1330.4	1321.1	1310.5
25°	1273.7	1283.6	1289.5	1280.1	1269.0
27.5°	1213.4	1228.6	1246.2	1239.1	1226.8
30°	1146.1	1168.3	1197.6	1191.7	1182.9
32.5°	1082.3	1104.5	1144.9	1142.6	1137.9
35°	1024.3	1038.4	1085.8	1091.6	1087.5
37.5°	969.3	982.2	1026.7	1040.1	1036.6
40°	911.4	925.4	960.5	984.5	985.7
42.5°	854.0	867.5	896.1	930.7	930.7
45°	793.1	806.6	832.9	871.0	875.6
47.5°	733.4	747.5	773.2	811.3	818.9
50°	674.9	687.8	713.5	750.4	762.1
52.5°	614.0	628.1	653.2	687.2	704.1
55°	555.5	564.8	592.4	625.1	643.3
57.5°	494.6	503.4	534.4	562.5	581.2
60°	436.1	447.2	471.2	499.9	521.5
62.5°	379.9	391.6	412.1	437.2	461.8
65°	325.4	334.2	354.1	379.3	400.9
67.5°	272.8	280.4	300.3	317.8	340.7
70°	219.5	229.4	244.1	261.1	275.7
72.5°	176.8	180.9	193.2	205.4	220.7
75°	130.5	137.6	147.5	154.5	163.3
77.5°	93.7	97.7	103.6	109.5	117.7
80°	62.6	64.4	69.7	70.8	77.3
82.5°	38.0	39.2	40.4	41.0	43.3
85°	20.5	20.5	20.5	19.3	19.3
87.5°	11.7	11.7	10.0	8.2	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)