

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: P556839

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-93-87-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: P556839
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-93-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

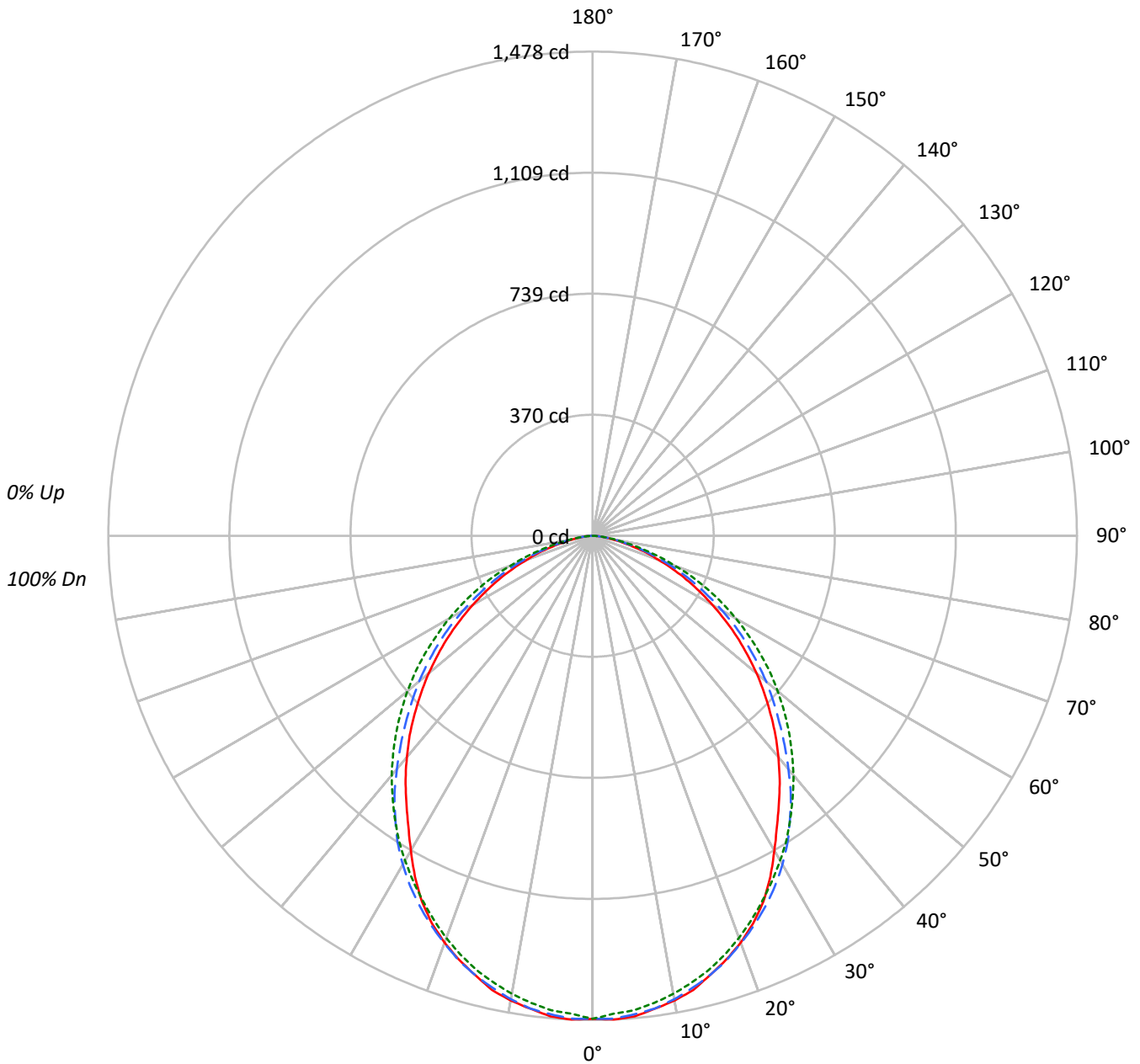
Lumens per Lamp: N/A
Luminaire Lumens: 3409.0 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P556839

CATALOG NUMBER: FUSL-12-4-LD4-1STD-40-UNV-93-87-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°	3967	3967	3967
5°	3978	3961	3927
10°	3936	3925	3880
15°	3866	3866	3822
20°	3784	3789	3740
25°	3659	3705	3646
30°	3446	3601	3557
35°	3256	3451	3457
40°	3098	3265	3351
45°	2921	3067	3225
50°	2734	2890	3087
55°	2522	2689	2921
60°	2271	2454	2716
65°	2005	2182	2471
70°	1671	1858	2099
75°	1313	1484	1643
80°	939	1044	1159
85°	611	611	577



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.8	4.1
10°-20°	390.0	11.4
20°-30°	569.9	16.7
30°-40°	646.9	19.0
40°-50°	624.4	18.3
50°-60°	515.1	15.1
60°-70°	343.0	10.1
70°-80°	153.5	4.5
80°-90°	27.4	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°	1098.6	32.2
0°-40°	1745.5	51.2
0°-60°	2885.0	84.6
0°-90°	3409.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3409.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1474	1474	1474	1474	1474	
5°	1473	1472	1466	1458	1454	139
15°	1388	1391	1388	1381	1372	391
25°	1232	1242	1248	1239	1228	564
35°	991	1005	1051	1056	1052	621
45°	768	780	806	843	847	592
55°	538	547	573	605	622	480
65°	315	323	343	367	388	312
75°	126	133	143	150	158	138
85°	20	20	20	19	19	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1474.3	1474.3	1474.3	1474.3	1474.3
2.5°	1478.3	1478.8	1475.4	1466.4	1460.7
5°	1472.6	1472.0	1466.4	1458.4	1453.9
7.5°	1456.2	1457.3	1455.6	1444.3	1438.1
10°	1440.3	1440.9	1436.4	1427.3	1419.9
12.5°	1419.9	1419.4	1413.1	1408.6	1396.7
15°	1387.6	1391.0	1387.6	1381.4	1371.8
17.5°	1356.5	1356.5	1358.8	1348.0	1340.6
20°	1321.4	1323.1	1323.1	1314.6	1306.1
22.5°	1280.6	1285.7	1287.4	1278.3	1268.1
25°	1232.5	1242.1	1247.7	1238.7	1227.9
27.5°	1174.1	1188.8	1205.8	1199.0	1187.1
30°	1109.0	1130.5	1158.8	1153.2	1144.7
32.5°	1047.2	1068.8	1107.9	1105.6	1101.1
35°	991.2	1004.8	1050.6	1056.3	1052.3
37.5°	937.9	950.4	993.4	1006.5	1003.1
40°	881.9	895.5	929.4	952.7	953.8
42.5°	826.4	839.4	867.1	900.6	900.6
45°	767.5	780.5	806.0	842.8	847.3
47.5°	709.7	723.3	748.2	785.0	792.4
50°	653.0	665.5	690.4	726.1	737.4
52.5°	594.1	607.7	632.1	664.9	681.4
55°	537.5	546.6	573.2	604.9	622.5
57.5°	478.6	487.1	517.1	544.3	562.4
60°	422.0	432.7	455.9	483.7	504.7
62.5°	367.6	378.9	398.7	423.1	446.9
65°	314.9	323.4	342.7	367.0	388.0
67.5°	263.9	271.3	290.6	307.5	329.6
70°	212.4	222.0	236.2	252.6	266.8
72.5°	171.0	175.0	186.9	198.8	213.5
75°	126.3	133.1	142.7	149.5	158.0
77.5°	90.6	94.6	100.3	105.9	113.8
80°	60.6	62.3	67.4	68.5	74.8
82.5°	36.8	37.9	39.1	39.6	41.9
85°	19.8	19.8	19.8	18.7	18.7
87.5°	11.3	11.3	9.6	7.9	5.7
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)