

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: P556777

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-93-88-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: P556777
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-35-UNV-93-88-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

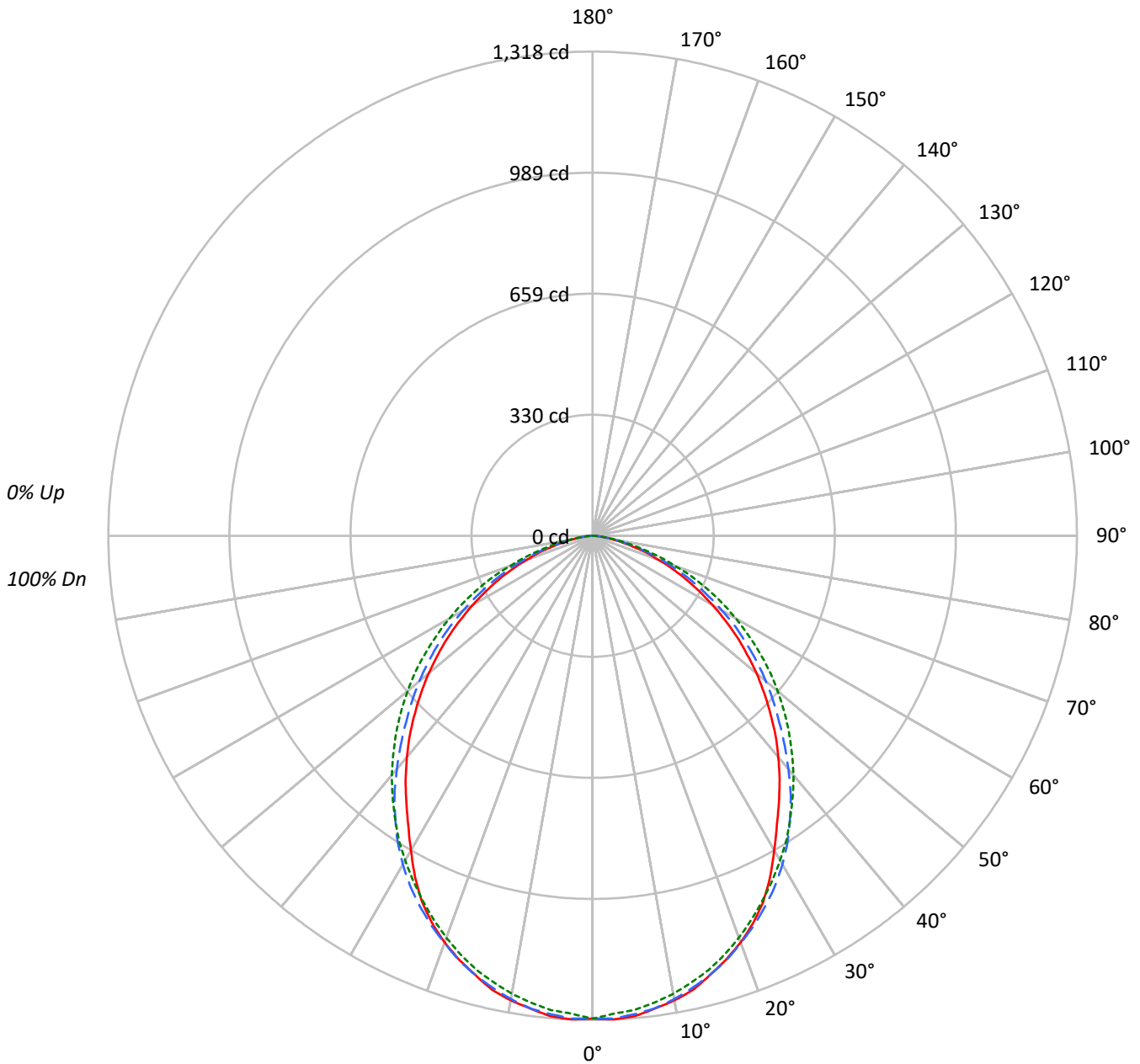
Lumens per Lamp: N/A
Luminaire Lumens: 3039.0 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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: P556777

CATALOG NUMBER: FUSL-12-4-LD4-1STD-35-UNV-93-88-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°	3537	3537	3537
5°	3546	3531	3501
10°	3509	3499	3459
15°	3446	3446	3407
20°	3373	3378	3334
25°	3262	3303	3250
30°	3072	3210	3171
35°	2903	3077	3082
40°	2761	2911	2987
45°	2604	2734	2875
50°	2437	2577	2752
55°	2248	2397	2603
60°	2025	2188	2421
65°	1787	1945	2202
70°	1489	1656	1871
75°	1171	1323	1465
80°	837	931	1032
85°	546	546	516



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.7	4.1
10°-20°	347.6	11.4
20°-30°	508.0	16.7
30°-40°	576.6	19.0
40°-50°	556.7	18.3
50°-60°	459.2	15.1
60°-70°	305.8	10.1
70°-80°	136.8	4.5
80°-90°	24.5	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°	979.4	32.2
0°-40°	1556.0	51.2
0°-60°	2571.9	84.6
0°-90°	3039.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3039.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1314	1314	1314	1314	1314	
5°	1313	1312	1307	1300	1296	124
15°	1237	1240	1237	1232	1223	349
25°	1099	1107	1112	1104	1095	503
35°	884	896	937	942	938	554
45°	684	696	718	751	755	528
55°	479	487	511	539	555	428
65°	281	288	306	327	346	278
75°	113	119	127	133	141	123
85°	18	18	18	17	17	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1314.3	<i>1314.3</i>	1314.3	1314.3	1314.3
2.5°	<i>1317.8</i>	<i>1318.3</i>	<i>1315.3</i>	<i>1307.2</i>	<i>1302.2</i>
5°	1312.8	<i>1312.3</i>	1307.2	1300.2	1296.1
7.5°	1298.1	<i>1299.1</i>	1297.6	1287.5	1282.0
10°	1284.0	<i>1284.5</i>	1280.5	1272.4	1265.8
12.5°	1265.8	<i>1265.3</i>	1259.8	1255.7	1245.1
15°	1237.0	<i>1240.1</i>	1237.0	1231.5	1222.9
17.5°	1209.3	<i>1209.3</i>	1211.3	1201.7	1195.1
20°	1178.0	<i>1179.5</i>	1179.5	1171.9	1164.3
22.5°	1141.6	<i>1146.2</i>	1147.7	1139.6	1130.5
25°	1098.7	<i>1107.3</i>	1112.3	1104.2	1094.7
27.5°	1046.7	<i>1059.8</i>	1075.0	1068.9	1058.3
30°	988.6	<i>1007.8</i>	1033.1	1028.0	1020.4
32.5°	933.6	<i>952.8</i>	987.6	985.6	981.6
35°	883.6	<i>895.7</i>	936.6	941.7	938.1
37.5°	836.1	<i>847.2</i>	885.6	897.2	894.2
40°	786.1	<i>798.3</i>	828.6	849.3	850.3
42.5°	736.7	<i>748.3</i>	773.0	802.8	802.8
45°	684.2	<i>695.8</i>	718.5	751.3	755.4
47.5°	632.7	<i>644.8</i>	667.0	699.8	706.4
50°	582.2	<i>593.3</i>	615.5	647.3	657.4
52.5°	529.7	<i>541.8</i>	563.5	592.8	607.4
55°	479.2	<i>487.2</i>	511.0	539.2	554.9
57.5°	426.7	<i>434.2</i>	461.0	485.2	501.4
60°	376.2	<i>385.8</i>	406.5	431.2	449.9
62.5°	327.7	<i>337.8</i>	355.5	377.2	398.4
65°	280.7	<i>288.3</i>	305.5	327.2	345.9
67.5°	235.3	<i>241.9</i>	259.0	274.2	293.9
70°	189.3	<i>197.9</i>	210.5	225.2	237.8
72.5°	152.5	<i>156.0</i>	166.6	177.2	190.4
75°	112.6	<i>118.7</i>	127.2	133.3	140.9
77.5°	80.8	<i>84.3</i>	89.4	94.4	101.5
80°	54.0	<i>55.5</i>	60.1	61.1	66.6
82.5°	32.8	<i>33.8</i>	34.8	35.3	37.4
85°	17.7	<i>17.7</i>	17.7	16.7	16.7
87.5°	10.1	<i>10.1</i>	8.6	7.1	5.0
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)