

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: P556900

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-93-86-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: P556900
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-50-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

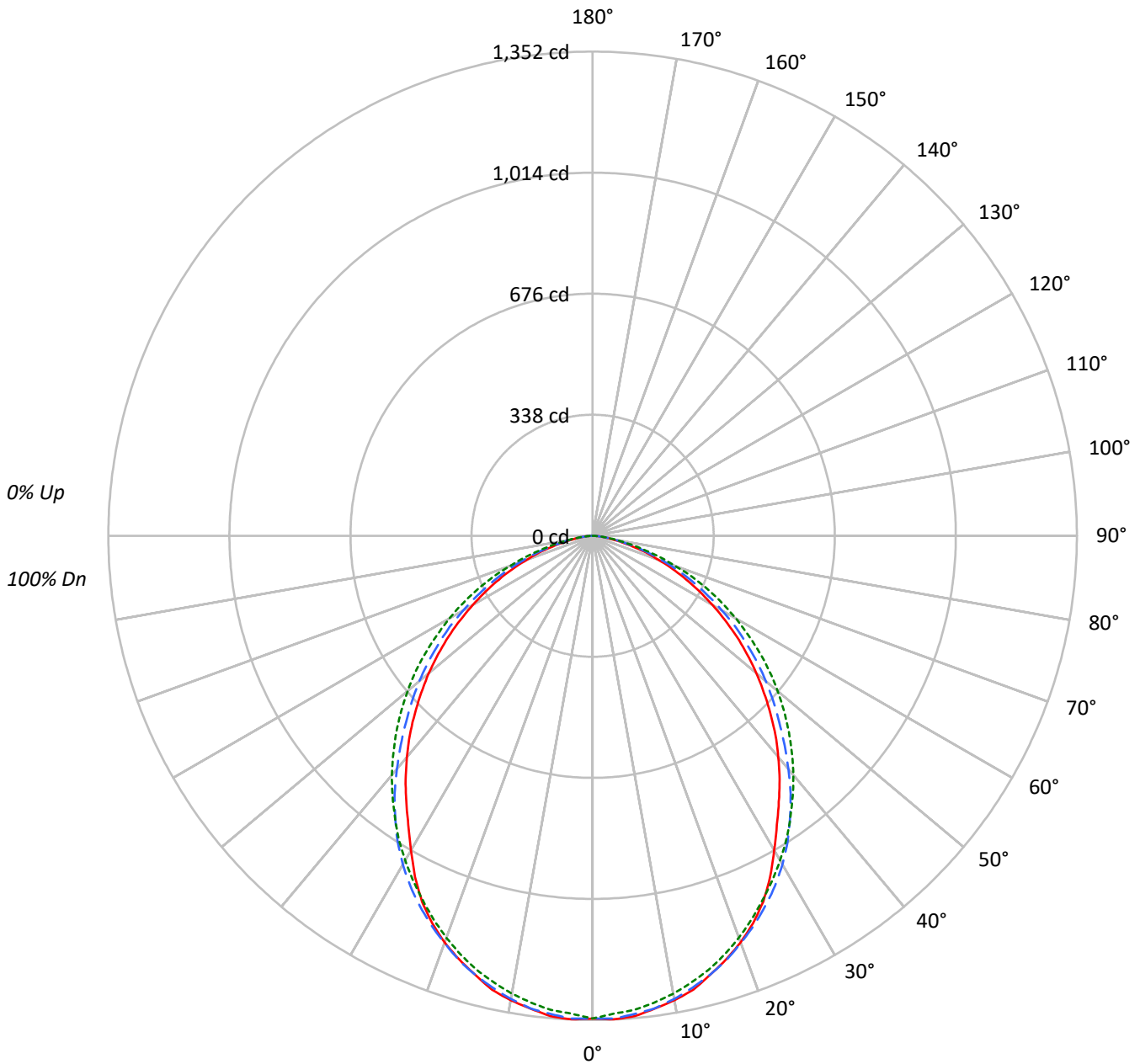
Lumens per Lamp: N/A
Luminaire Lumens: 3117.0 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3627	3627	3627
5°	3637	3622	3591
10°	3598	3589	3548
15°	3535	3535	3494
20°	3460	3464	3420
25°	3346	3388	3333
30°	3151	3292	3252
35°	2977	3156	3161
40°	2832	2985	3064
45°	2670	2804	2948
50°	2500	2643	2823
55°	2306	2459	2670
60°	2076	2244	2483
65°	1833	1995	2259
70°	1528	1699	1919
75°	1201	1357	1502
80°	859	955	1060
85°	559	559	528



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.9	4.1
10°-20°	356.6	11.4
20°-30°	521.0	16.7
30°-40°	591.4	19.0
40°-50°	570.9	18.3
50°-60°	471.0	15.1
60°-70°	313.7	10.1
70°-80°	140.4	4.5
80°-90°	25.1	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°	1004.5	32.2
0°-40°	1596.0	51.2
0°-60°	2637.9	84.6
0°-90°	3117.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3117.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1348	1348	1348	1348	1348	
5°	1346	1346	1341	1334	1329	127
15°	1269	1272	1269	1263	1254	358
25°	1127	1136	1141	1133	1123	516
35°	906	919	961	966	962	568
45°	702	714	737	771	775	541
55°	492	500	524	553	569	439
65°	288	296	313	336	355	285
75°	116	122	130	137	144	126
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°	1348.0	1348.0	1348.0	1348.0	1348.0
2.5°	1351.6	1352.2	1349.1	1340.8	1335.6
5°	1346.5	1346.0	1340.8	1333.5	1329.4
7.5°	1331.5	1332.5	1330.9	1320.6	1314.9
10°	1316.9	1317.5	1313.3	1305.0	1298.3
12.5°	1298.3	1297.8	1292.1	1287.9	1277.1
15°	1268.8	1271.9	1268.8	1263.1	1254.3
17.5°	1240.3	1240.3	1242.4	1232.5	1225.8
20°	1208.2	1209.8	1209.8	1202.0	1194.2
22.5°	1170.9	1175.6	1177.1	1168.8	1159.5
25°	1126.9	1135.7	1140.9	1132.6	1122.7
27.5°	1073.5	1087.0	1102.6	1096.3	1085.5
30°	1014.0	1033.7	1059.6	1054.4	1046.6
32.5°	957.5	977.2	1013.0	1010.9	1006.7
35°	906.3	918.7	960.7	965.8	962.2
37.5°	857.6	869.0	908.3	920.3	917.2
40°	806.3	818.8	849.8	871.1	872.1
42.5°	755.6	767.5	792.9	823.4	823.4
45°	701.7	713.6	736.9	770.6	774.7
47.5°	648.9	661.3	684.1	717.8	724.5
50°	597.1	608.5	631.3	663.9	674.3
52.5°	543.2	555.7	577.9	608.0	623.0
55°	491.5	499.7	524.1	553.1	569.1
57.5°	437.6	445.4	472.8	497.7	514.2
60°	385.8	395.7	416.9	442.3	461.4
62.5°	336.1	346.5	364.6	386.9	408.6
65°	287.9	295.7	313.3	335.6	354.7
67.5°	241.3	248.1	265.7	281.2	301.4
70°	194.2	203.0	216.0	231.0	243.9
72.5°	156.4	160.0	170.9	181.8	195.2
75°	115.5	121.7	130.5	136.7	144.5
77.5°	82.9	86.5	91.7	96.8	104.1
80°	55.4	57.0	61.6	62.7	68.4
82.5°	33.7	34.7	35.7	36.3	38.3
85°	18.1	18.1	18.1	17.1	17.1
87.5°	10.4	10.4	8.8	7.3	5.2
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)