

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: P556200

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-93-88-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: P556200
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-30-UNV-93-88-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

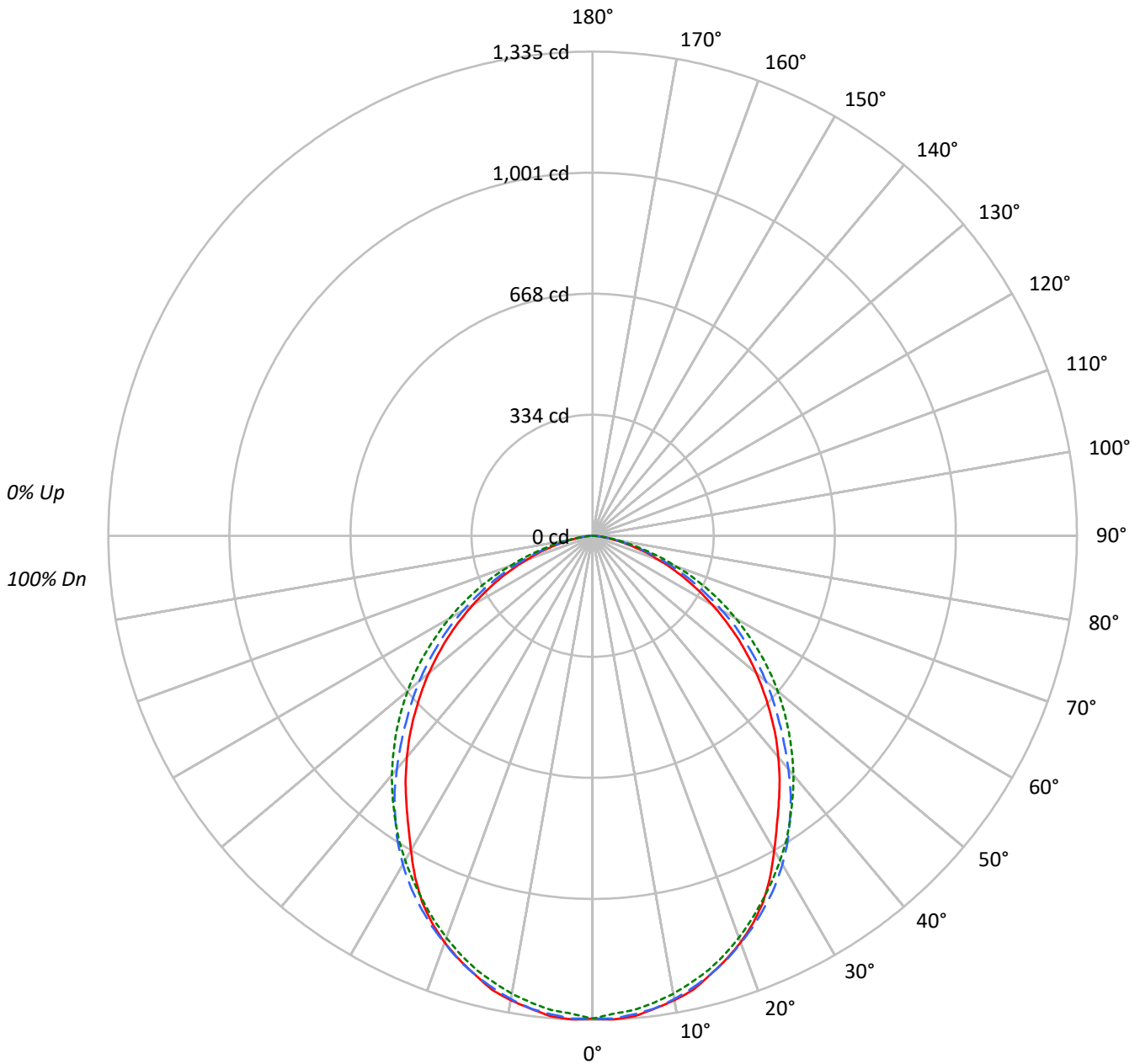
Lumens per Lamp: N/A
Luminaire Lumens: 3078.0 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	3582	3582	3582
5°	3592	3576	3546
10°	3554	3544	3503
15°	3490	3490	3451
20°	3417	3421	3377
25°	3304	3345	3292
30°	3111	3251	3211
35°	2940	3116	3121
40°	2797	2948	3025
45°	2637	2769	2911
50°	2468	2610	2787
55°	2277	2428	2637
60°	2051	2216	2453
65°	1810	1970	2230
70°	1509	1678	1895
75°	1185	1340	1484
80°	848	944	1046
85°	553	553	522



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.3	4.1
10°-20°	352.1	11.4
20°-30°	514.5	16.7
30°-40°	584.0	19.0
40°-50°	563.8	18.3
50°-60°	465.1	15.1
60°-70°	309.7	10.1
70°-80°	138.6	4.5
80°-90°	24.8	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°	992.0	32.2
0°-40°	1576.0	51.2
0°-60°	2604.9	84.6
0°-90°	3078.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3078.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1331	1331	1331	1331	1331	
5°	1330	1329	1324	1317	1313	126
15°	1253	1256	1253	1247	1239	353
25°	1113	1122	1127	1118	1109	510
35°	895	907	949	954	950	561
45°	693	705	728	761	765	535
55°	485	494	518	546	562	433
65°	284	292	309	331	350	282
75°	114	120	129	135	143	125
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°	1331.2	1331.2	1331.2	1331.2	1331.2
2.5°	1334.7	1335.2	1332.2	1324.0	1318.9
5°	1329.6	1329.1	1324.0	1316.8	1312.7
7.5°	1314.8	1315.8	1314.3	1304.1	1298.4
10°	1300.5	1301.0	1296.9	1288.7	1282.1
12.5°	1282.1	1281.6	1275.9	1271.8	1261.1
15°	1252.9	1256.0	1252.9	1247.3	1238.6
17.5°	1224.8	1224.8	1226.8	1217.1	1210.5
20°	1193.1	1194.6	1194.6	1186.9	1179.3
22.5°	1156.3	1160.9	1162.4	1154.2	1145.0
25°	1112.8	1121.5	1126.6	1118.4	1108.7
27.5°	1060.1	1073.4	1088.8	1082.6	1071.9
30°	1001.3	1020.7	1046.3	1041.2	1033.5
32.5°	945.6	965.0	1000.3	998.2	994.1
35°	894.9	907.2	948.6	953.7	950.2
37.5°	846.9	858.1	897.0	908.7	905.7
40°	796.2	808.5	839.2	860.2	861.2
42.5°	746.1	757.9	782.9	813.1	813.1
45°	692.9	704.7	727.7	761.0	765.0
47.5°	640.8	653.0	675.5	708.8	715.4
50°	589.6	600.9	623.4	655.6	665.8
52.5°	536.5	548.7	570.7	600.4	615.2
55°	485.3	493.5	517.5	546.2	562.0
57.5°	432.1	439.8	466.9	491.4	507.8
60°	381.0	390.7	411.7	436.7	455.7
62.5°	331.9	342.1	360.0	382.0	403.5
65°	284.3	292.0	309.4	331.4	350.3
67.5°	238.3	245.0	262.3	277.7	297.6
70°	191.8	200.5	213.3	228.1	240.9
72.5°	154.4	158.0	168.8	179.5	192.8
75°	114.0	120.2	128.9	135.0	142.7
77.5°	81.8	85.4	90.5	95.6	102.8
80°	54.7	56.3	60.9	61.9	67.5
82.5°	33.2	34.3	35.3	35.8	37.8
85°	17.9	17.9	17.9	16.9	16.9
87.5°	10.2	10.2	8.7	7.2	5.1
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)