

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: P556238

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-UNV-81-97-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: P556238
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-35-UNV-81-97-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

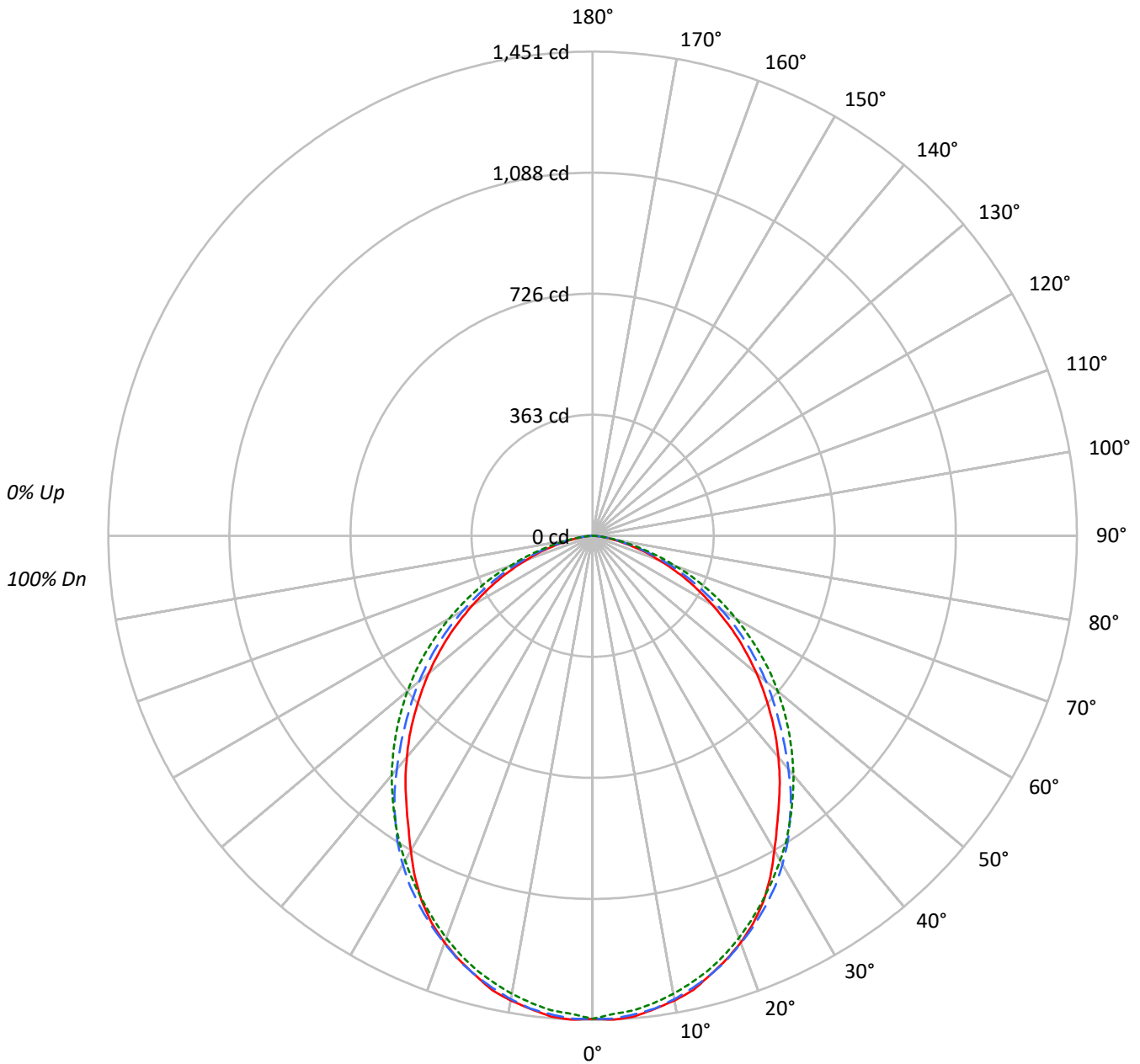
Lumens per Lamp: N/A
Luminaire Lumens: 3347.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3895	3895	3895
5°	3905	3889	3856
10°	3864	3853	3809
15°	3796	3796	3752
20°	3715	3720	3672
25°	3593	3638	3580
30°	3383	3535	3492
35°	3197	3389	3394
40°	3041	3205	3289
45°	2868	3011	3166
50°	2684	2838	3031
55°	2476	2640	2867
60°	2230	2409	2667
65°	1969	2142	2425
70°	1640	1825	2061
75°	1289	1457	1613
80°	922	1026	1137
85°	602	602	568



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.3	4.1
10°-20°	382.9	11.4
20°-30°	559.5	16.7
30°-40°	635.1	19.0
40°-50°	613.1	18.3
50°-60°	505.7	15.1
60°-70°	336.8	10.1
70°-80°	150.7	4.5
80°-90°	27.0	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°	1078.6	32.2
0°-40°	1713.7	51.2
0°-60°	2832.5	84.6
0°-90°	3347.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3347.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1446	1445	1440	1432	1428	137
15°	1362	1366	1362	1356	1347	384
25°	1210	1220	1225	1216	1206	554
35°	973	986	1032	1037	1033	610
45°	754	766	791	828	832	581
55°	528	537	563	594	611	471
65°	309	318	336	360	381	307
75°	124	131	140	147	155	136
85°	20	20	20	18	18	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1447.5	1447.5	1447.5	1447.5	1447.5
2.5°	1451.4	1451.9	1448.6	1439.7	1434.1
5°	1445.8	1445.3	1439.7	1431.9	1427.5
7.5°	1429.7	1430.8	1429.1	1418.0	1411.9
10°	1414.1	1414.7	1410.2	1401.3	1394.1
12.5°	1394.1	1393.6	1387.4	1383.0	1371.3
15°	1362.4	1365.7	1362.4	1356.3	1346.8
17.5°	1331.8	1331.8	1334.0	1323.5	1316.3
20°	1297.3	1299.0	1299.0	1290.7	1282.3
22.5°	1257.3	1262.3	1264.0	1255.1	1245.1
25°	1210.0	1219.5	1225.1	1216.2	1205.6
27.5°	1152.8	1167.2	1183.9	1177.2	1165.6
30°	1088.8	1109.9	1137.8	1132.2	1123.8
32.5°	1028.2	1049.3	1087.7	1085.5	1081.0
35°	973.1	986.5	1031.5	1037.1	1033.2
37.5°	920.9	933.1	975.4	988.2	984.8
40°	865.8	879.2	912.5	935.3	936.4
42.5°	811.3	824.1	851.4	884.2	884.2
45°	753.5	766.3	791.3	827.5	831.9
47.5°	696.8	710.1	734.6	770.7	778.0
50°	641.2	653.4	677.9	712.9	724.0
52.5°	583.3	596.7	620.6	652.8	669.0
55°	527.7	536.6	562.8	593.9	611.1
57.5°	469.9	478.2	507.7	534.4	552.2
60°	414.3	424.8	447.6	474.9	495.5
62.5°	360.9	372.0	391.5	415.4	438.8
65°	309.2	317.5	336.4	360.3	380.9
67.5°	259.1	266.4	285.3	302.0	323.6
70°	208.5	218.0	231.9	248.0	261.9
72.5°	167.9	171.8	183.5	195.2	209.6
75°	124.0	130.7	140.1	146.8	155.1
77.5°	89.0	92.9	98.4	104.0	111.8
80°	59.5	61.2	66.2	67.3	73.4
82.5°	36.1	37.3	38.4	38.9	41.2
85°	19.5	19.5	19.5	18.4	18.4
87.5°	11.1	11.1	9.5	7.8	5.6
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)