

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: P556164

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-81-86-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: P556164
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-81-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

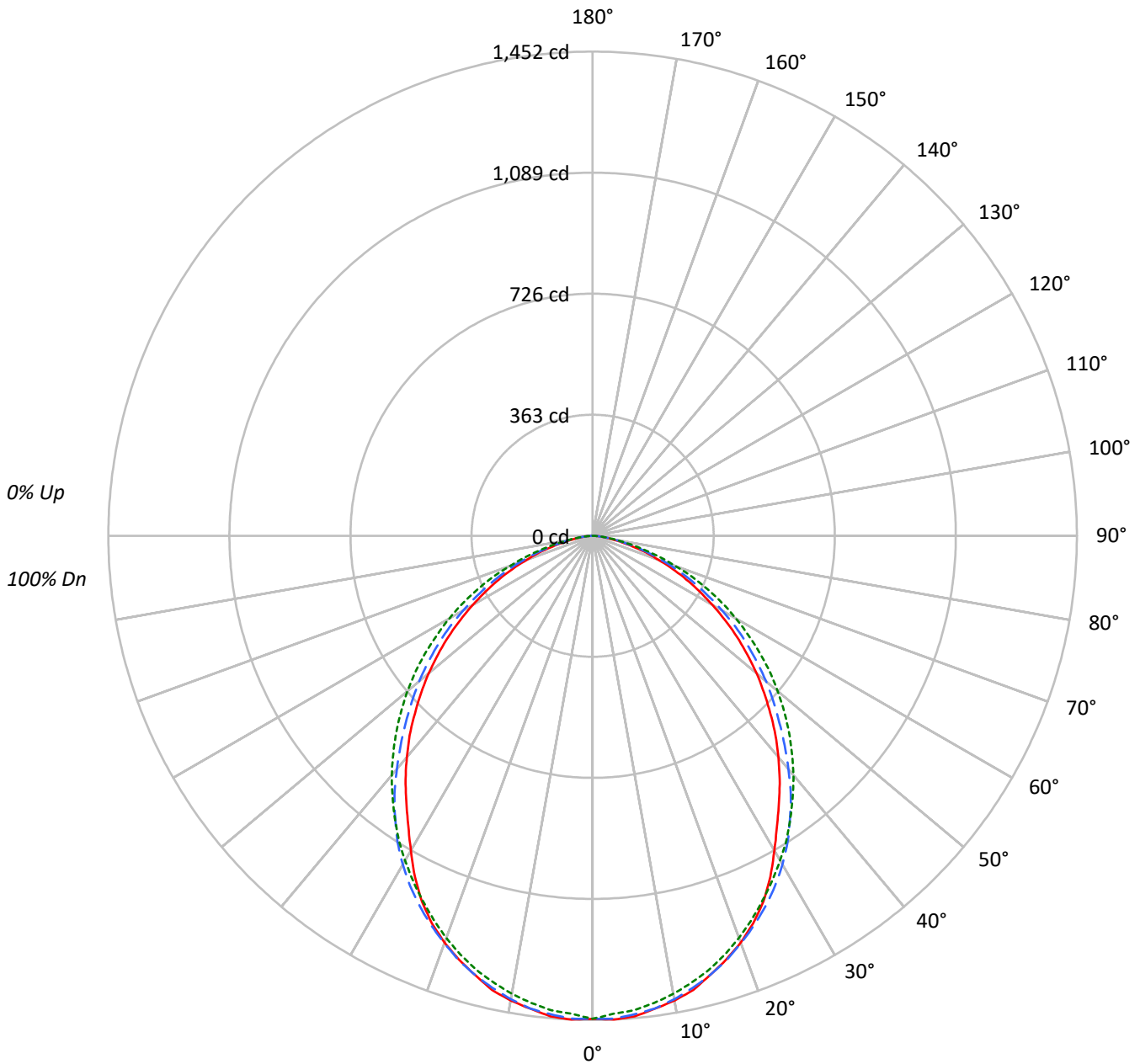
Lumens per Lamp: N/A
Luminaire Lumens: 3349.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3898	3898	3898
5°	3908	3891	3858
10°	3866	3856	3812
15°	3798	3798	3754
20°	3717	3722	3674
25°	3595	3640	3582
30°	3385	3537	3494
35°	3199	3391	3396
40°	3043	3208	3292
45°	2869	3013	3168
50°	2686	2840	3033
55°	2477	2642	2869
60°	2231	2411	2668
65°	1970	2143	2427
70°	1642	1825	2062
75°	1290	1458	1614
80°	922	1026	1137
85°	602	602	568



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.4	4.1
10°-20°	383.1	11.4
20°-30°	559.8	16.7
30°-40°	635.5	19.0
40°-50°	613.4	18.3
50°-60°	506.0	15.1
60°-70°	337.0	10.1
70°-80°	150.8	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°	1079.3	32.2
0°-40°	1714.8	51.2
0°-60°	2834.2	84.6
0°-90°	3349.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3349.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1447	1446	1441	1433	1428	137
15°	1363	1367	1363	1357	1348	384
25°	1211	1220	1226	1217	1206	554
35°	974	987	1032	1038	1034	610
45°	754	767	792	828	832	582
55°	528	537	563	594	612	471
65°	309	318	337	361	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°	1448.4	1448.4	1448.4	1448.4	1448.4
2.5°	1452.3	1452.8	1449.5	1440.6	1435.0
5°	1446.7	1446.1	1440.6	1432.8	1428.3
7.5°	1430.6	1431.7	1430.0	1418.9	1412.7
10°	1415.0	1415.5	1411.1	1402.2	1394.9
12.5°	1394.9	1394.4	1388.3	1383.8	1372.1
15°	1363.2	1366.6	1363.2	1357.1	1347.6
17.5°	1332.6	1332.6	1334.8	1324.3	1317.0
20°	1298.1	1299.8	1299.8	1291.4	1283.1
22.5°	1258.1	1263.1	1264.7	1255.8	1245.8
25°	1210.8	1220.2	1225.8	1216.9	1206.3
27.5°	1153.5	1167.9	1184.6	1177.9	1166.3
30°	1089.5	1110.6	1138.4	1132.9	1124.5
32.5°	1028.8	1050.0	1088.4	1086.1	1081.7
35°	973.7	987.1	1032.2	1037.7	1033.8
37.5°	921.4	933.7	976.0	988.8	985.4
40°	866.3	879.7	913.1	935.9	937.0
42.5°	811.8	824.6	851.9	884.7	884.7
45°	753.9	766.7	791.8	827.9	832.4
47.5°	697.2	710.5	735.0	771.2	778.4
50°	641.5	653.8	678.3	713.3	724.5
52.5°	583.7	597.0	621.0	653.2	669.4
55°	528.0	536.9	563.1	594.3	611.5
57.5°	470.2	478.5	508.0	534.7	552.5
60°	414.5	425.1	447.9	475.2	495.8
62.5°	361.1	372.2	391.7	415.6	439.0
65°	309.4	317.7	336.6	360.6	381.1
67.5°	259.3	266.5	285.4	302.1	323.8
70°	208.7	218.1	232.0	248.2	262.1
72.5°	168.0	171.9	183.6	195.3	209.8
75°	124.1	130.8	140.2	146.9	155.2
77.5°	89.0	92.9	98.5	104.1	111.8
80°	59.5	61.2	66.2	67.3	73.4
82.5°	36.2	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)