

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: P556704

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-93-84-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: P556704
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-30-UNV-93-84-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

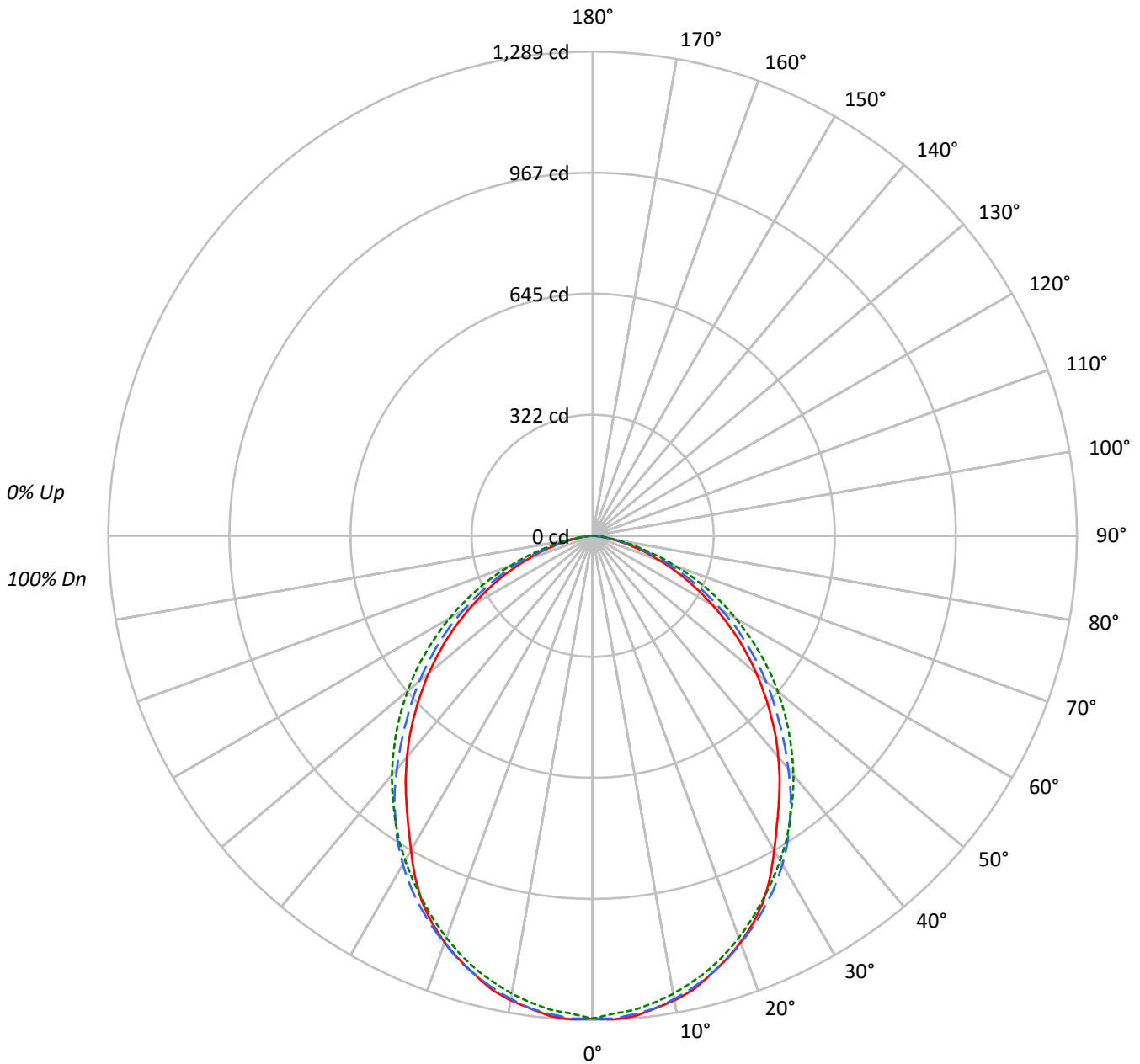
Lumens per Lamp: N/A
Luminaire Lumens: 2972.0 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3459	3459	3459
5°	3468	3453	3424
10°	3431	3422	3383
15°	3370	3370	3332
20°	3299	3303	3261
25°	3190	3230	3178
30°	3004	3139	3101
35°	2839	3009	3014
40°	2701	2846	2921
45°	2546	2674	2811
50°	2383	2520	2691
55°	2198	2344	2546
60°	1980	2139	2368
65°	1748	1902	2153
70°	1457	1620	1830
75°	1145	1293	1433
80°	818	911	1010
85°	534	534	503



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.0	4.1
10°-20°	340.0	11.4
20°-30°	496.8	16.7
30°-40°	563.9	19.0
40°-50°	544.4	18.3
50°-60°	449.1	15.1
60°-70°	299.0	10.1
70°-80°	133.8	4.5
80°-90°	23.9	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°	957.8	32.2
0°-40°	1521.7	51.2
0°-60°	2515.2	84.6
0°-90°	2972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2972.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1285	1285	1285	1285	1285	
5°	1284	1283	1278	1272	1268	122
15°	1210	1213	1210	1204	1196	341
25°	1074	1083	1088	1080	1070	492
35°	864	876	916	921	917	541
45°	669	680	703	735	739	516
55°	469	476	500	527	543	418
65°	274	282	299	320	338	272
75°	110	116	124	130	138	120
85°	17	17	17	16	16	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1285.3	1285.3	1285.3	1285.3	1285.3
2.5°	1288.8	1289.3	1286.3	1278.4	1273.5
5°	1283.8	1283.3	1278.4	1271.5	1267.5
7.5°	1269.5	1270.5	1269.0	1259.1	1253.7
10°	1255.7	1256.2	1252.2	1244.3	1237.9
12.5°	1237.9	1237.4	1232.0	1228.0	1217.7
15°	1209.8	1212.7	1209.8	1204.3	1195.9
17.5°	1182.6	1182.6	1184.6	1175.2	1168.8
20°	1152.0	1153.5	1153.5	1146.1	1138.7
22.5°	1116.4	1120.9	1122.4	1114.5	1105.6
25°	1074.5	1082.9	1087.8	1079.9	1070.5
27.5°	1023.6	1036.4	1051.3	1045.3	1035.0
30°	966.8	985.6	1010.3	1005.3	997.9
32.5°	913.0	931.8	965.8	963.9	959.9
35°	864.1	876.0	916.0	920.9	917.4
37.5°	817.7	828.6	866.1	877.4	874.5
40°	768.8	780.7	810.3	830.5	831.5
42.5°	720.4	731.8	756.0	785.1	785.1
45°	669.1	680.4	702.7	734.7	738.7
47.5°	618.7	630.6	652.3	684.4	690.8
50°	569.3	580.2	601.9	633.0	642.9
52.5°	518.0	529.8	551.1	579.7	594.0
55°	468.6	476.5	499.7	527.4	542.7
57.5°	417.2	424.7	450.8	474.5	490.3
60°	367.9	377.2	397.5	421.7	440.0
62.5°	320.5	330.3	347.6	368.9	389.6
65°	274.5	281.9	298.7	320.0	338.2
67.5°	230.1	236.5	253.3	268.1	287.4
70°	185.2	193.6	205.9	220.2	232.6
72.5°	149.1	152.6	162.9	173.3	186.2
75°	110.1	116.0	124.4	130.4	137.8
77.5°	79.0	82.5	87.4	92.3	99.3
80°	52.8	54.3	58.8	59.7	65.2
82.5°	32.1	33.1	34.1	34.6	36.5
85°	17.3	17.3	17.3	16.3	16.3
87.5°	9.9	9.9	8.4	6.9	4.9
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)