

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: P556581

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-93-86-EDD**

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: P556581
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-LD4-1LO-40-UNV-93-86-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

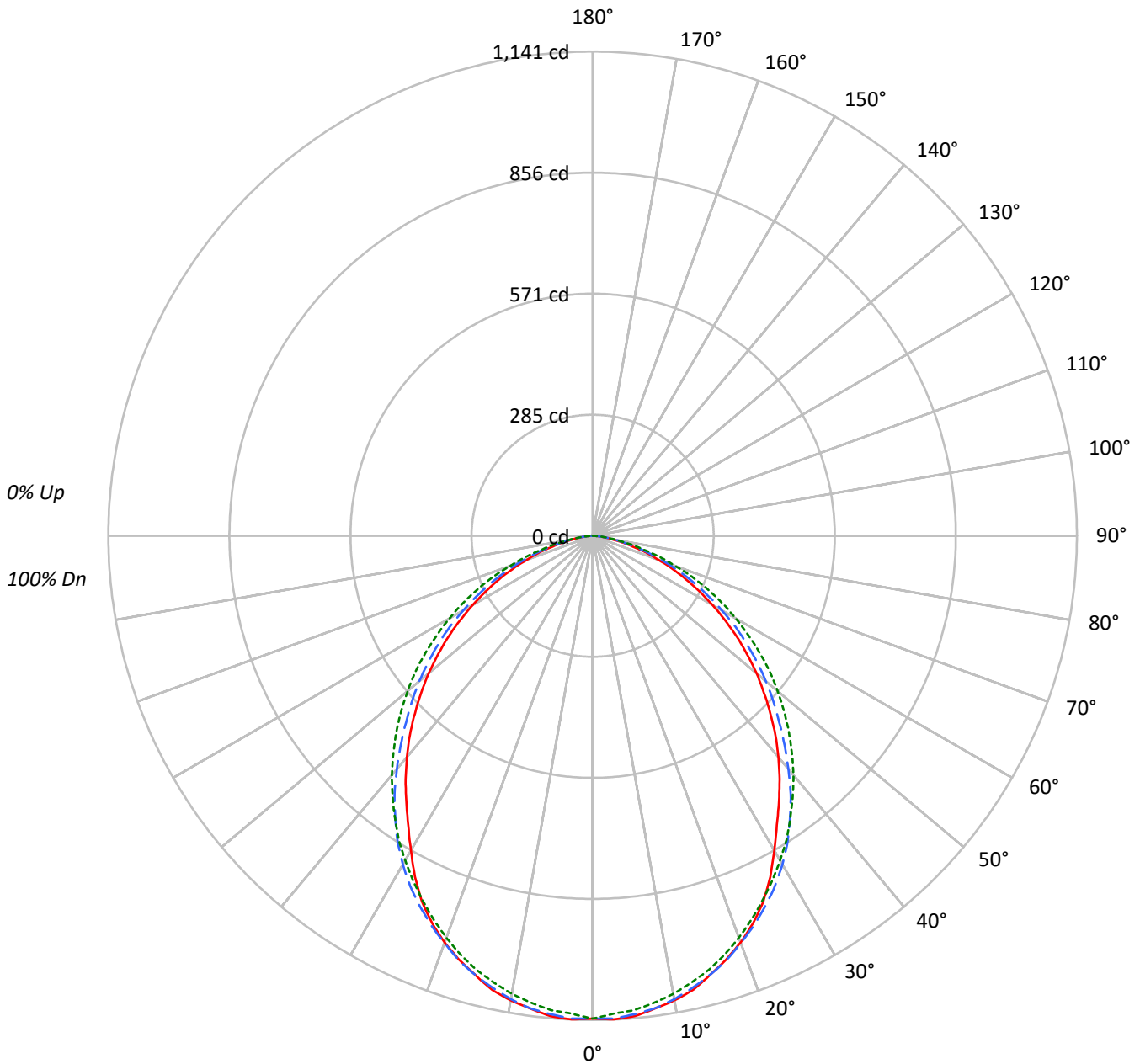
Lumens per Lamp: N/A
Luminaire Lumens: 2631.0 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	3062	3062	3062
5°	3070	3057	3031
10°	3037	3029	2995
15°	2984	2984	2949
20°	2920	2924	2887
25°	2824	2859	2814
30°	2660	2779	2745
35°	2513	2664	2668
40°	2391	2520	2586
45°	2254	2367	2488
50°	2110	2231	2382
55°	1946	2076	2254
60°	1753	1894	2096
65°	1547	1684	1906
70°	1290	1434	1620
75°	1014	1146	1268
80°	725	806	894
85°	472	472	445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.1	4.1
10°-20°	301.0	11.4
20°-30°	439.8	16.7
30°-40°	499.2	19.0
40°-50°	481.9	18.3
50°-60°	397.6	15.1
60°-70°	264.7	10.1
70°-80°	118.5	4.5
80°-90°	21.2	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°	847.9	32.2
0°-40°	1347.1	51.2
0°-60°	2226.6	84.6
0°-90°	2631.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2631.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1138	1138	1138	1138	1138	
5°	1136	1136	1132	1126	1122	108
15°	1071	1074	1071	1066	1059	302
25°	951	959	963	956	948	436
35°	765	776	811	815	812	479
45°	592	602	622	650	654	457
55°	415	422	442	467	480	370
65°	243	250	264	283	299	241
75°	98	103	110	115	122	107
85°	15	15	15	14	14	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1137.8	<i>1137.8</i>	1137.8	1137.8	1137.8
2.5°	<i>1140.9</i>	<i>1141.3</i>	<i>1138.7</i>	<i>1131.7</i>	<i>1127.3</i>
5°	1136.5	<i>1136.1</i>	1131.7	1125.6	1122.1
7.5°	1123.9	<i>1124.7</i>	1123.4	1114.7	1109.9
10°	1111.6	<i>1112.0</i>	1108.6	1101.6	1095.9
12.5°	1095.9	<i>1095.4</i>	1090.6	1087.1	1078.0
15°	1071.0	<i>1073.6</i>	1071.0	1066.2	1058.7
17.5°	1046.9	<i>1046.9</i>	1048.7	1040.4	1034.7
20°	1019.8	<i>1021.1</i>	1021.1	1014.6	1008.0
22.5°	988.3	<i>992.3</i>	993.6	986.6	978.7
25°	951.2	<i>958.6</i>	963.0	956.0	947.7
27.5°	906.2	<i>917.5</i>	930.6	925.4	916.2
30°	855.9	<i>872.5</i>	894.4	890.0	883.4
32.5°	808.2	<i>824.9</i>	855.0	853.3	849.8
35°	765.0	<i>775.5</i>	810.9	815.2	812.2
37.5°	723.9	<i>733.5</i>	766.7	776.8	774.2
40°	680.6	<i>691.1</i>	717.3	735.2	736.1
42.5°	637.8	<i>647.8</i>	669.2	695.0	695.0
45°	592.3	<i>602.4</i>	622.0	650.4	653.9
47.5°	547.7	<i>558.2</i>	577.4	605.9	611.5
50°	504.0	<i>513.6</i>	532.9	560.4	569.1
52.5°	458.5	<i>469.0</i>	487.8	513.2	525.9
55°	414.8	<i>421.8</i>	442.4	466.9	480.4
57.5°	369.4	<i>375.9</i>	399.1	420.1	434.1
60°	325.7	<i>334.0</i>	351.9	373.3	389.5
62.5°	283.7	<i>292.4</i>	307.7	326.5	344.9
65°	243.0	<i>249.6</i>	264.5	283.3	299.4
67.5°	203.7	<i>209.4</i>	224.2	237.4	254.4
70°	163.9	<i>171.4</i>	182.3	195.0	205.9
72.5°	132.0	<i>135.1</i>	144.3	153.4	164.8
75°	97.5	<i>102.7</i>	110.2	115.4	122.0
77.5°	69.9	<i>73.0</i>	77.4	81.7	87.9
80°	46.8	<i>48.1</i>	52.0	52.9	57.7
82.5°	28.4	<i>29.3</i>	30.2	30.6	32.3
85°	15.3	<i>15.3</i>	15.3	14.4	14.4
87.5°	8.7	<i>8.7</i>	7.4	6.1	4.4
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)