

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: P556846

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-93-97-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: P556846
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-40-UNV-93-97-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE
AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND
4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

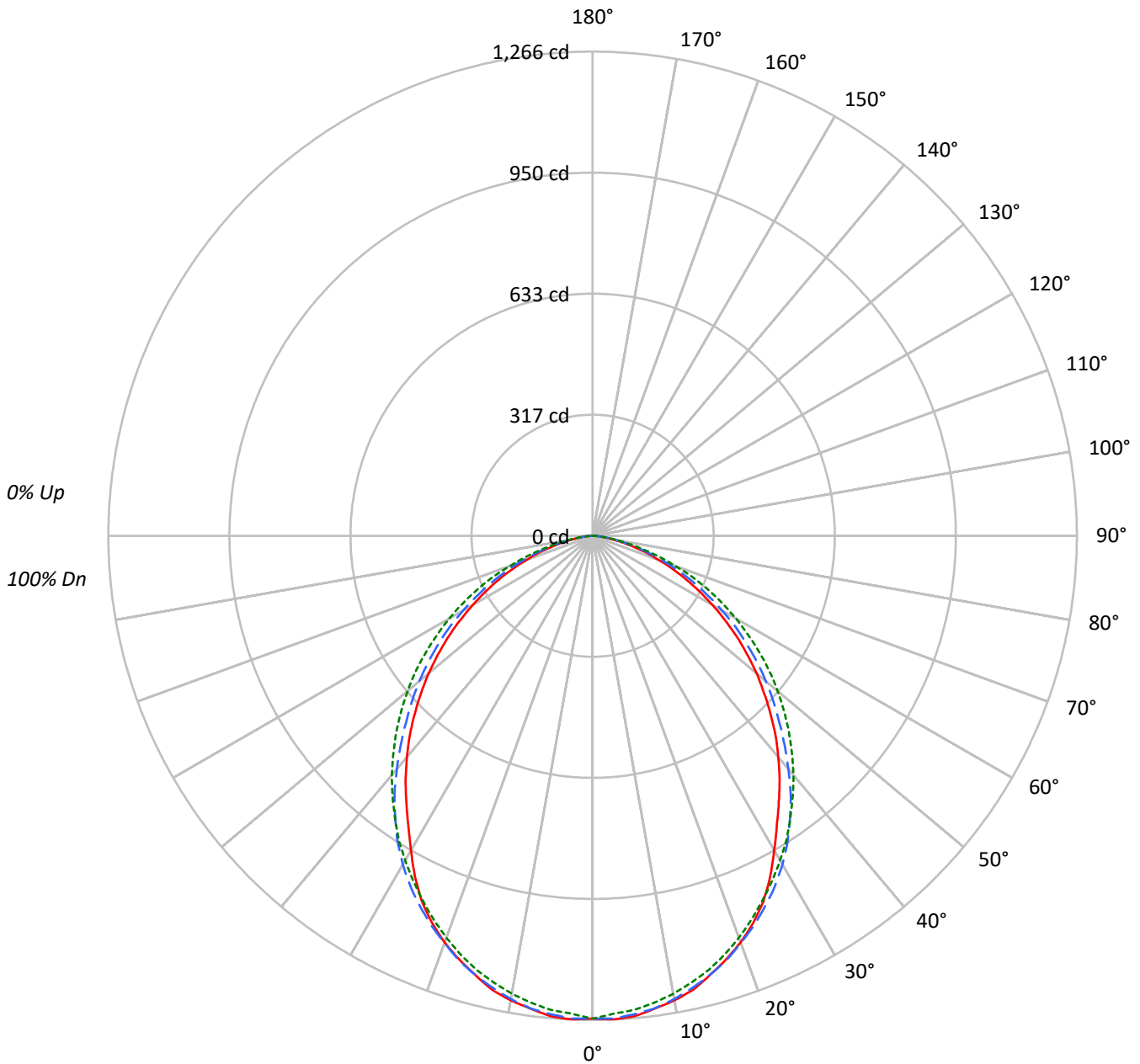
Lumens per Lamp: N/A
Luminaire Lumens: 2919.0 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3397	3397	3397
5°	3406	3392	3363
10°	3370	3361	3322
15°	3310	3310	3272
20°	3240	3244	3203
25°	3133	3172	3122
30°	2951	3083	3045
35°	2788	2955	2960
40°	2653	2796	2869
45°	2501	2626	2761
50°	2341	2475	2643
55°	2159	2303	2501
60°	1945	2101	2326
65°	1717	1868	2115
70°	1431	1591	1797
75°	1124	1271	1407
80°	804	894	992
85°	525	525	494



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.9	4.1
10°-20°	333.9	11.4
20°-30°	487.9	16.7
30°-40°	553.9	19.0
40°-50°	534.7	18.3
50°-60°	441.1	15.1
60°-70°	293.7	10.1
70°-80°	131.4	4.5
80°-90°	23.5	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°	940.7	32.2
0°-40°	1494.6	51.2
0°-60°	2470.3	84.6
0°-90°	2919.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1261	1260	1256	1249	1245	119
15°	1188	1191	1188	1183	1175	335
25°	1055	1064	1068	1061	1051	483
35°	849	860	900	904	901	532
45°	657	668	690	722	726	507
55°	460	468	491	518	533	411
65°	270	277	293	314	332	267
75°	108	114	122	128	135	118
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°	1262.4	1262.4	1262.4	1262.4	1262.4
2.5°	1265.8	1266.3	1263.4	1255.6	1250.8
5°	1260.9	1260.5	1255.6	1248.8	1244.9
7.5°	1246.9	1247.8	1246.4	1236.7	1231.4
10°	1233.3	1233.8	1229.9	1222.1	1215.8
12.5°	1215.8	1215.3	1210.0	1206.1	1196.0
15°	1188.2	1191.1	1188.2	1182.9	1174.6
17.5°	1161.5	1161.5	1163.5	1154.2	1147.9
20°	1131.4	1132.9	1132.9	1125.6	1118.4
22.5°	1096.5	1100.9	1102.4	1094.6	1085.9
25°	1055.3	1063.6	1068.4	1060.6	1051.4
27.5°	1005.4	1018.0	1032.5	1026.7	1016.5
30°	949.6	968.0	992.3	987.4	980.1
32.5°	896.7	915.1	948.6	946.7	942.8
35°	848.7	860.3	899.6	904.5	901.1
37.5°	803.1	813.8	850.6	861.8	858.9
40°	755.1	766.7	795.8	815.7	816.7
42.5°	707.6	718.7	742.5	771.1	771.1
45°	657.1	668.3	690.1	721.6	725.5
47.5°	607.7	619.3	640.7	672.2	678.5
50°	559.2	569.8	591.2	621.7	631.4
52.5°	508.7	520.4	541.2	569.4	583.4
55°	460.2	468.0	490.8	518.0	533.0
57.5°	409.8	417.1	442.8	466.1	481.6
60°	361.3	370.5	390.4	414.2	432.1
62.5°	314.7	324.4	341.4	362.3	382.6
65°	269.6	276.9	293.4	314.3	332.2
67.5°	226.0	232.3	248.8	263.3	282.3
70°	181.9	190.1	202.2	216.3	228.4
72.5°	146.5	149.9	160.0	170.2	182.8
75°	108.1	114.0	122.2	128.0	135.3
77.5°	77.6	81.0	85.8	90.7	97.5
80°	51.9	53.3	57.7	58.7	64.0
82.5°	31.5	32.5	33.5	33.9	35.9
85°	17.0	17.0	17.0	16.0	16.0
87.5°	9.7	9.7	8.2	6.8	4.8
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)