

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: P556716

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-93-96-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: P556716
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-93-96-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

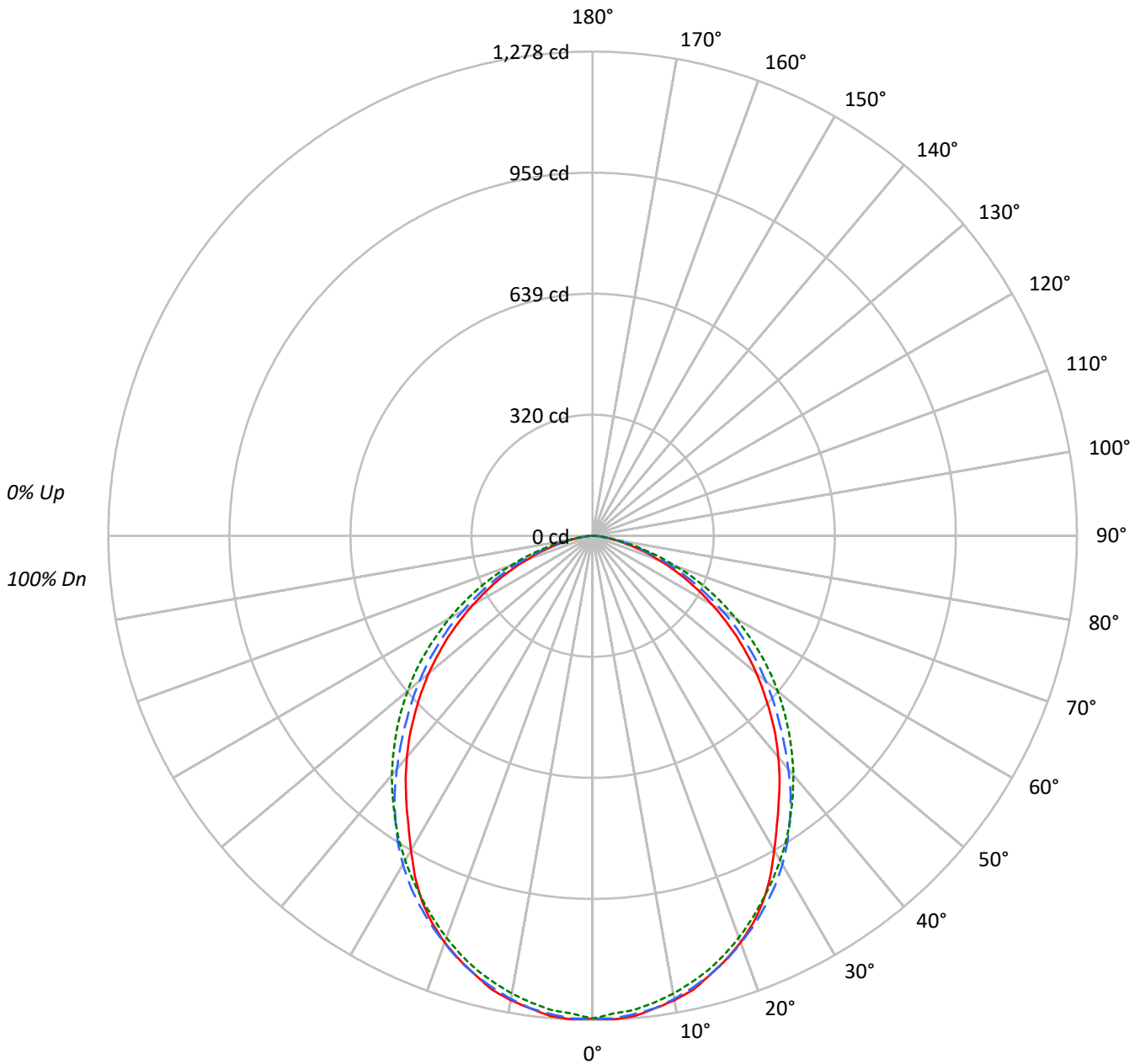
Lumens per Lamp: N/A
Luminaire Lumens: 2946.0 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3429	3429	3429
5°	3438	3423	3394
10°	3401	3392	3353
15°	3341	3341	3303
20°	3270	3274	3232
25°	3162	3202	3151
30°	2978	3112	3074
35°	2814	2983	2987
40°	2677	2821	2896
45°	2524	2651	2786
50°	2362	2498	2668
55°	2179	2324	2524
60°	1962	2120	2347
65°	1733	1885	2135
70°	1444	1606	1814
75°	1134	1282	1420
80°	812	902	1001
85°	528	528	500



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.0	4.1
10°-20°	337.0	11.4
20°-30°	492.5	16.7
30°-40°	559.0	19.0
40°-50°	539.6	18.3
50°-60°	445.1	15.1
60°-70°	296.4	10.1
70°-80°	132.6	4.5
80°-90°	23.7	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°	949.4	32.2
0°-40°	1508.4	51.2
0°-60°	2493.2	84.6
0°-90°	2946.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2946.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1274	1274	1274	1274	1274	
5°	1273	1272	1267	1260	1256	120
15°	1199	1202	1199	1194	1186	338
25°	1065	1073	1078	1070	1061	488
35°	857	868	908	913	909	537
45°	663	674	696	728	732	512
55°	464	472	495	523	538	415
65°	272	280	296	317	335	270
75°	109	115	123	129	137	119
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°	1274.1	1274.1	1274.1	1274.1	1274.1
2.5°	1277.5	1278.0	1275.0	1267.2	1262.3
5°	1272.6	1272.1	1267.2	1260.4	1256.4
7.5°	1258.4	1259.4	1257.9	1248.1	1242.7
10°	1244.7	1245.2	1241.3	1233.4	1227.1
12.5°	1227.1	1226.6	1221.2	1217.3	1207.0
15°	1199.2	1202.1	1199.2	1193.8	1185.5
17.5°	1172.3	1172.3	1174.2	1164.9	1158.6
20°	1141.9	1143.4	1143.4	1136.0	1128.7
22.5°	1106.7	1111.1	1112.5	1104.7	1095.9
25°	1065.1	1073.4	1078.3	1070.5	1061.2
27.5°	1014.7	1027.4	1042.1	1036.2	1025.9
30°	958.4	977.0	1001.4	996.5	989.2
32.5°	905.0	923.6	957.4	955.4	951.5
35°	856.6	868.3	908.0	912.8	909.4
37.5°	810.5	821.3	858.5	869.8	866.8
40°	762.1	773.8	803.2	823.3	824.3
42.5°	714.1	725.4	749.4	778.2	778.2
45°	663.2	674.5	696.5	728.3	732.2
47.5°	613.3	625.0	646.6	678.4	684.8
50°	564.3	575.1	596.7	627.5	637.3
52.5°	513.4	525.2	546.2	574.6	588.8
55°	464.5	472.3	495.3	522.7	537.9
57.5°	413.6	420.9	446.9	470.4	486.0
60°	364.6	373.9	394.0	418.0	436.1
62.5°	317.7	327.4	344.6	365.6	386.2
65°	272.1	279.5	296.1	317.2	335.3
67.5°	228.1	234.5	251.1	265.8	284.9
70°	183.5	191.9	204.1	218.3	230.5
72.5°	147.8	151.2	161.5	171.8	184.5
75°	109.1	115.0	123.3	129.2	136.6
77.5°	78.3	81.7	86.6	91.5	98.4
80°	52.4	53.8	58.2	59.2	64.6
82.5°	31.8	32.8	33.8	34.3	36.2
85°	17.1	17.1	17.1	16.2	16.2
87.5°	9.8	9.8	8.3	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)