

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: P556690

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-82-85-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: P556690
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-82-85-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

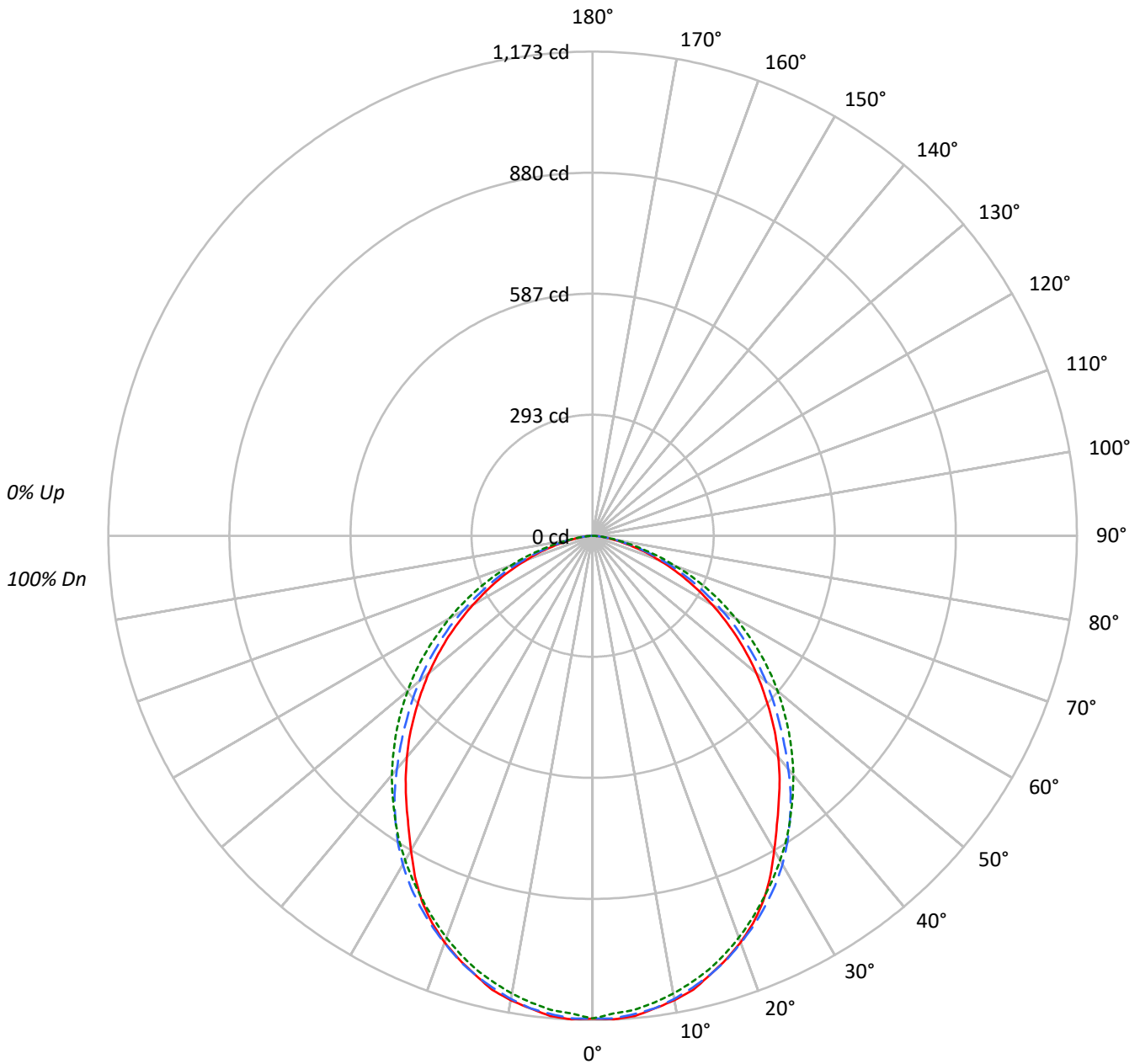
Lumens per Lamp: N/A
Luminaire Lumens: 2704.0 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): 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°	3147	3147	3147
5°	3155	3142	3115
10°	3122	3113	3078
15°	3066	3066	3031
20°	3001	3005	2967
25°	2903	2939	2892
30°	2733	2856	2821
35°	2583	2738	2742
40°	2457	2590	2657
45°	2316	2433	2558
50°	2169	2292	2449
55°	2000	2133	2316
60°	1801	1947	2154
65°	1591	1731	1959
70°	1326	1474	1665
75°	1042	1177	1303
80°	745	829	919
85°	485	485	457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.1	4.1
10°-20°	309.3	11.4
20°-30°	452.0	16.7
30°-40°	513.1	19.0
40°-50°	495.3	18.3
50°-60°	408.6	15.1
60°-70°	272.1	10.1
70°-80°	121.8	4.5
80°-90°	21.8	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°	871.4	32.2
0°-40°	1384.5	51.2
0°-60°	2288.4	84.6
0°-90°	2704.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2704.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1169	1169	1169	1169	1169	
5°	1168	1168	1163	1157	1153	111
15°	1101	1103	1101	1096	1088	310
25°	978	985	990	982	974	448
35°	786	797	833	838	835	493
45°	609	619	639	668	672	470
55°	426	434	455	480	494	381
65°	250	256	272	291	308	248
75°	100	106	113	119	125	110
85°	16	16	16	15	15	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1169.4	1169.4	1169.4	1169.4	1169.4
2.5°	1172.6	1173.0	1170.3	1163.1	1158.6
5°	1168.1	1167.6	1163.1	1156.8	1153.2
7.5°	1155.0	1155.9	1154.6	1145.6	1140.7
10°	1142.5	1142.9	1139.3	1132.1	1126.3
12.5°	1126.3	1125.8	1120.9	1117.3	1107.9
15°	1100.7	1103.4	1100.7	1095.7	1088.1
17.5°	1076.0	1076.0	1077.8	1069.2	1063.4
20°	1048.1	1049.5	1049.5	1042.7	1036.0
22.5°	1015.8	1019.8	1021.2	1014.0	1005.9
25°	977.6	985.2	989.7	982.5	974.0
27.5°	931.3	943.0	956.5	951.1	941.6
30°	879.6	896.7	919.2	914.7	907.9
32.5°	830.7	847.7	878.7	876.9	873.4
35°	786.2	797.0	833.4	837.9	834.7
37.5°	744.0	753.8	788.0	798.3	795.6
40°	699.5	710.3	737.2	755.6	756.5
42.5°	655.5	665.8	687.8	714.3	714.3
45°	608.7	619.1	639.3	668.5	672.1
47.5°	562.9	573.7	593.5	622.7	628.5
50°	518.0	527.9	547.6	575.9	584.9
52.5°	471.3	482.1	501.4	527.4	540.5
55°	426.3	433.5	454.6	479.8	493.7
57.5°	379.6	386.4	410.2	431.7	446.1
60°	334.7	343.2	361.7	383.7	400.3
62.5°	291.6	300.6	316.3	335.6	354.5
65°	249.8	256.5	271.8	291.1	307.7
67.5°	209.4	215.2	230.5	243.9	261.5
70°	168.5	176.1	187.3	200.4	211.6
72.5°	135.7	138.8	148.3	157.7	169.4
75°	100.2	105.6	113.2	118.6	125.3
77.5°	71.9	75.0	79.5	84.0	90.3
80°	48.1	49.4	53.5	54.4	59.3
82.5°	29.2	30.1	31.0	31.4	33.2
85°	15.7	15.7	15.7	14.8	14.8
87.5°	9.0	9.0	7.6	6.3	4.5
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)