

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: P556707

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-93-85-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: P556707
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-93-85-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

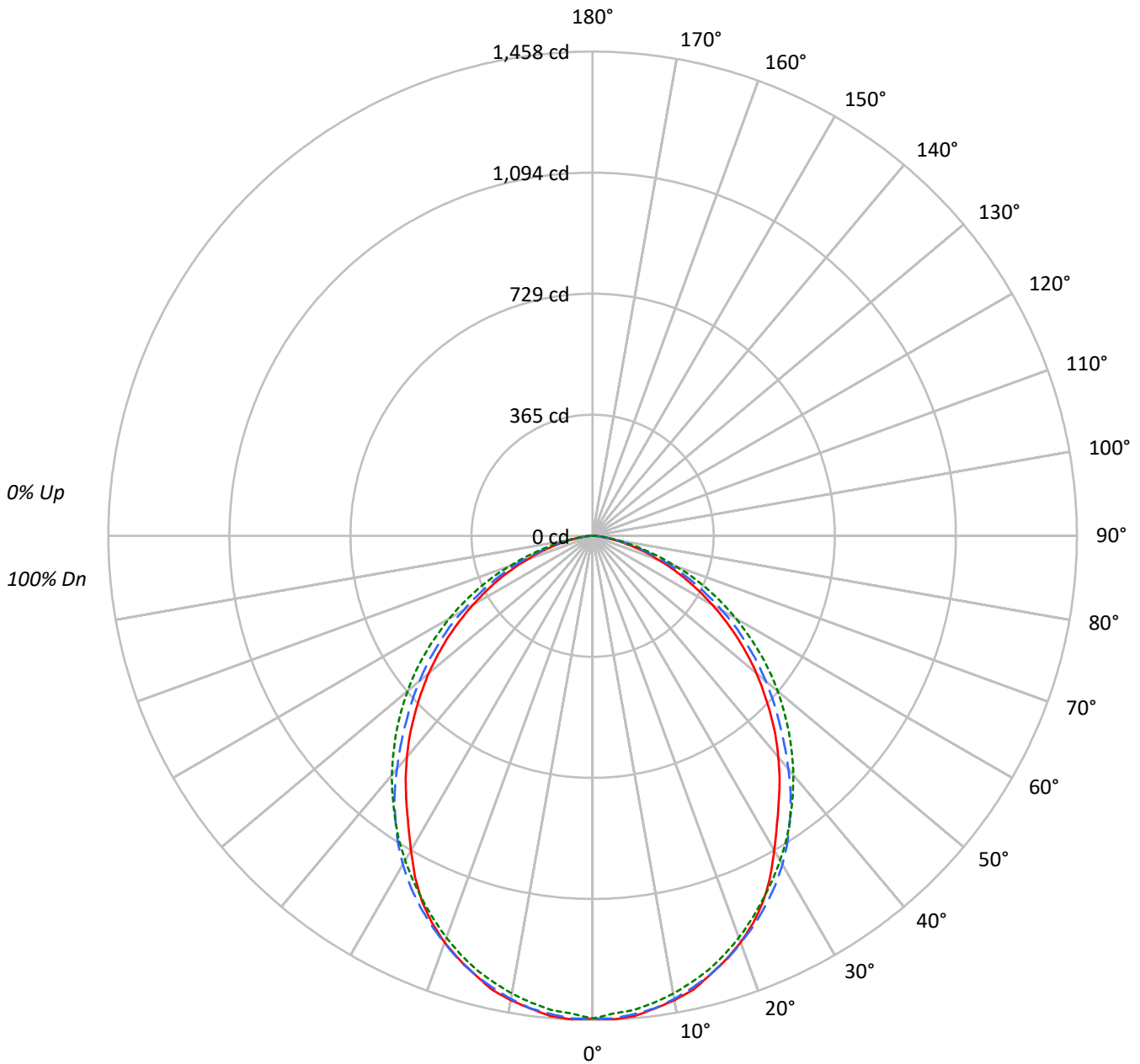
Lumens per Lamp: N/A
Luminaire Lumens: 3361.0 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3911	3911	3911
5°	3922	3905	3872
10°	3880	3869	3825
15°	3811	3811	3768
20°	3731	3735	3688
25°	3608	3653	3594
30°	3397	3550	3507
35°	3210	3403	3408
40°	3054	3219	3303
45°	2879	3024	3179
50°	2695	2850	3044
55°	2486	2651	2879
60°	2239	2419	2678
65°	1977	2151	2436
70°	1648	1832	2069
75°	1294	1463	1620
80°	927	1031	1142
85°	602	602	568



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.9	4.1
10°-20°	384.5	11.4
20°-30°	561.8	16.7
30°-40°	637.7	19.0
40°-50°	615.6	18.3
50°-60°	507.9	15.1
60°-70°	338.2	10.1
70°-80°	151.3	4.5
80°-90°	27.1	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°	1083.2	32.2
0°-40°	1720.9	51.2
0°-60°	2844.4	84.6
0°-90°	3361.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3361.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1454	1454	1454	1454	1454	
5°	1452	1451	1446	1438	1433	137
15°	1368	1372	1368	1362	1352	386
25°	1215	1225	1230	1221	1211	556
35°	977	991	1036	1041	1038	612
45°	757	770	795	831	835	584
55°	530	539	565	596	614	473
65°	310	319	338	362	382	308
75°	124	131	141	147	156	136
85°	20	20	20	18	18	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1453.5	1453.5	1453.5	1453.5	1453.5
2.5°	1457.5	1458.0	1454.7	1445.7	1440.1
5°	1451.9	1451.3	1445.7	1437.9	1433.4
7.5°	1435.7	1436.8	1435.1	1423.9	1417.8
10°	1420.0	1420.6	1416.1	1407.2	1399.9
12.5°	1399.9	1399.4	1393.2	1388.8	1377.0
15°	1368.1	1371.5	1368.1	1362.0	1352.5
17.5°	1337.4	1337.4	1339.6	1329.0	1321.8
20°	1302.8	1304.4	1304.4	1296.1	1287.7
22.5°	1262.6	1267.6	1269.3	1260.3	1250.3
25°	1215.1	1224.6	1230.2	1221.2	1210.6
27.5°	1157.6	1172.1	1188.9	1182.2	1170.4
30°	1093.4	1114.6	1142.5	1136.9	1128.6
32.5°	1032.5	1053.7	1092.3	1090.0	1085.6
35°	977.2	990.6	1035.9	1041.4	1037.5
37.5°	924.7	937.0	979.5	992.3	988.9
40°	869.4	882.8	916.4	939.2	940.4
42.5°	814.7	827.6	854.9	887.9	887.9
45°	756.6	769.5	794.6	830.9	835.4
47.5°	699.7	713.1	737.7	774.0	781.2
50°	643.8	656.1	680.7	715.9	727.1
52.5°	585.8	599.2	623.2	655.6	671.8
55°	529.9	538.9	565.1	596.4	613.7
57.5°	471.9	480.2	509.8	536.6	554.5
60°	416.0	426.6	449.5	476.9	497.5
62.5°	362.4	373.6	393.1	417.1	440.6
65°	310.5	318.9	337.8	361.9	382.5
67.5°	260.2	267.5	286.5	303.2	325.0
70°	209.4	218.9	232.9	249.1	263.0
72.5°	168.6	172.5	184.3	196.0	210.5
75°	124.5	131.2	140.7	147.4	155.8
77.5°	89.3	93.3	98.8	104.4	112.2
80°	59.8	61.4	66.5	67.6	73.7
82.5°	36.3	37.4	38.5	39.1	41.3
85°	19.5	19.5	19.5	18.4	18.4
87.5°	11.2	11.2	9.5	7.8	5.6
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)