

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: P558351

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-UNV-81-97-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: P558351
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-LD4-3STD-40-UNV-81-97-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

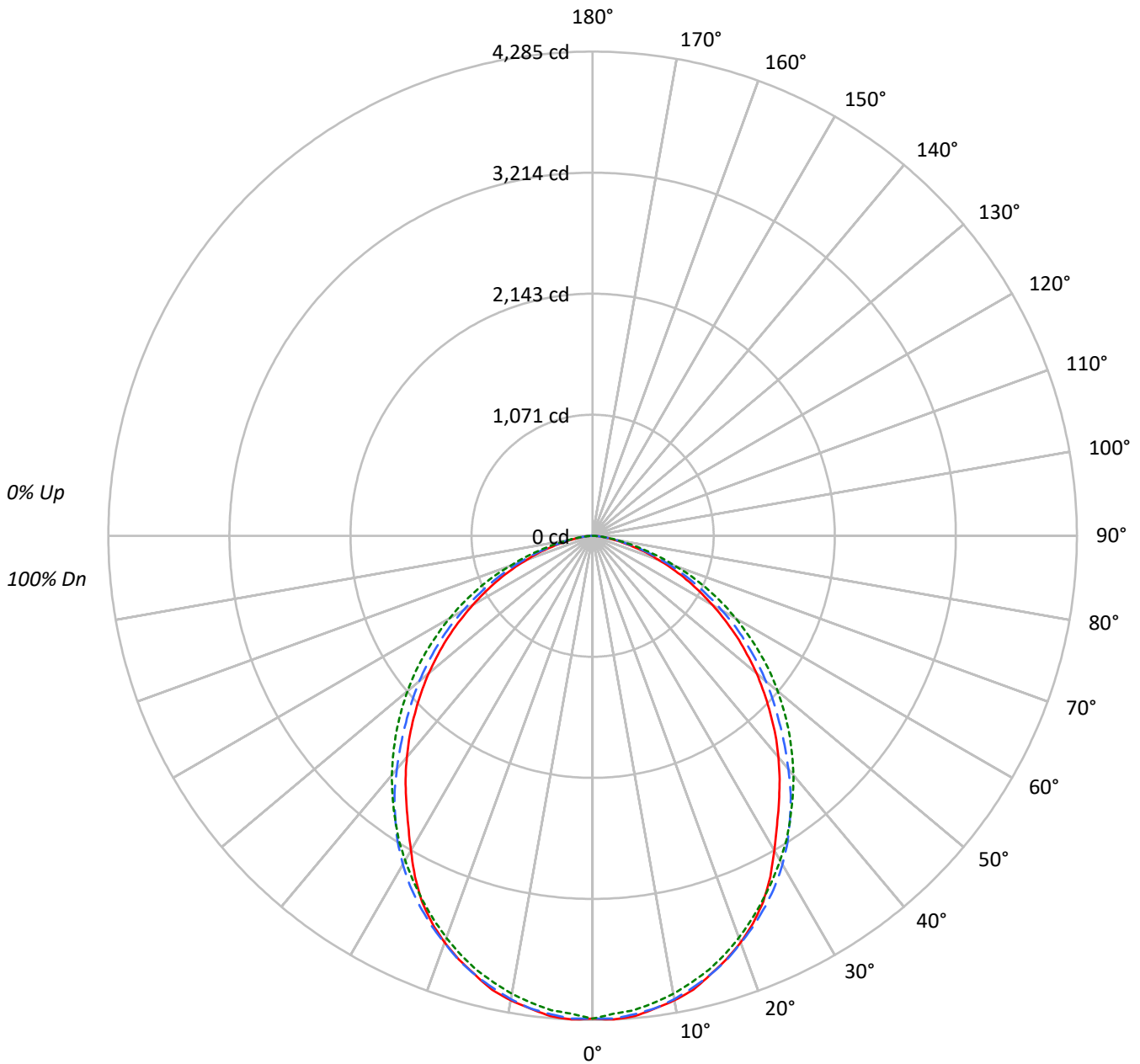
Lumens per Lamp: N/A
Luminaire Lumens: 9881.0 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	11499	11499	11499
5°	11530	11481	11384
10°	11408	11376	11246
15°	11205	11205	11077
20°	10968	10982	10841
25°	10607	10738	10568
30°	9988	10437	10309
35°	9438	10004	10020
40°	8979	9464	9712
45°	8466	8890	9346
50°	7924	8378	8948
55°	7309	7795	8465
60°	6582	7112	7872
65°	5812	6324	7160
70°	4843	5386	6083
75°	3806	4301	4762
80°	2723	3028	3358
85°	1775	1775	1673



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	402.3	4.1
10°-20°	1130.3	11.4
20°-30°	1651.7	16.7
30°-40°	1874.9	19.0
40°-50°	1809.9	18.3
50°-60°	1493.0	15.1
60°-70°	994.2	10.1
70°-80°	444.9	4.5
80°-90°	79.6	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°	3184.4	32.2
0°-40°	5059.2	51.2
0°-60°	8362.2	84.6
0°-90°	9881.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9881.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4273	4273	4273	4273	4273	
5°	4268	4267	4250	4227	4214	404
15°	4022	4032	4022	4004	3976	1134
25°	3572	3600	3617	3590	3559	1636
35°	2873	2912	3045	3062	3050	1800
45°	2224	2262	2336	2443	2456	1716
55°	1558	1584	1661	1753	1804	1390
65°	913	937	993	1064	1124	905
75°	366	386	414	433	458	400
85°	58	58	58	54	54	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4273.3	4273.3	4273.3	4273.3	4273.3
2.5°	4284.8	4286.4	4276.6	4250.3	4233.9
5°	4268.4	4266.7	4250.3	4227.3	4214.2
7.5°	4220.7	4224.0	4219.1	4186.3	4168.2
10°	4174.8	4176.4	4163.3	4137.0	4115.7
12.5°	4115.7	4114.0	4096.0	4082.8	4048.4
15°	4022.1	4032.0	4022.1	4004.0	3976.1
17.5°	3931.8	3931.8	3938.4	3907.2	3885.8
20°	3830.0	3835.0	3835.0	3810.3	3785.7
22.5°	3711.8	3726.6	3731.5	3705.3	3675.7
25°	3572.3	3600.2	3616.6	3590.3	3559.1
27.5°	3403.2	3445.9	3495.1	3475.4	3440.9
30°	3214.4	3276.8	3358.9	3342.4	3317.8
32.5°	3035.5	3097.8	3211.1	3204.5	3191.4
35°	2872.9	2912.3	3045.3	3061.7	3050.2
37.5°	2718.6	2754.7	2879.5	2917.3	2907.4
40°	2556.1	2595.5	2694.0	2761.3	2764.6
42.5°	2395.2	2433.0	2513.4	2610.3	2610.3
45°	2224.5	2262.2	2336.1	2442.8	2455.9
47.5°	2057.0	2096.4	2168.7	2275.4	2296.7
50°	1892.9	1929.0	2001.2	2104.6	2137.5
52.5°	1722.1	1761.5	1832.1	1927.3	1974.9
55°	1557.9	1584.2	1661.4	1753.3	1804.2
57.5°	1387.2	1411.8	1498.8	1577.6	1630.2
60°	1223.0	1254.2	1321.5	1402.0	1462.7
62.5°	1065.4	1098.3	1155.7	1226.3	1295.3
65°	912.8	937.4	993.2	1063.8	1124.5
67.5°	765.0	786.4	842.2	891.4	955.5
70°	615.6	643.5	684.6	732.2	773.2
72.5°	495.8	507.3	541.8	576.2	618.9
75°	366.1	385.8	413.7	433.4	458.0
77.5°	262.7	274.2	290.6	307.0	330.0
80°	175.7	180.6	195.4	198.6	216.7
82.5°	106.7	110.0	113.3	114.9	121.5
85°	57.5	57.5	57.5	54.2	54.2
87.5°	32.8	32.8	27.9	23.0	16.4
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)