

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: P557928

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-UNV-93-88-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: P557928
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-LD4-3HI-50-UNV-93-88-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

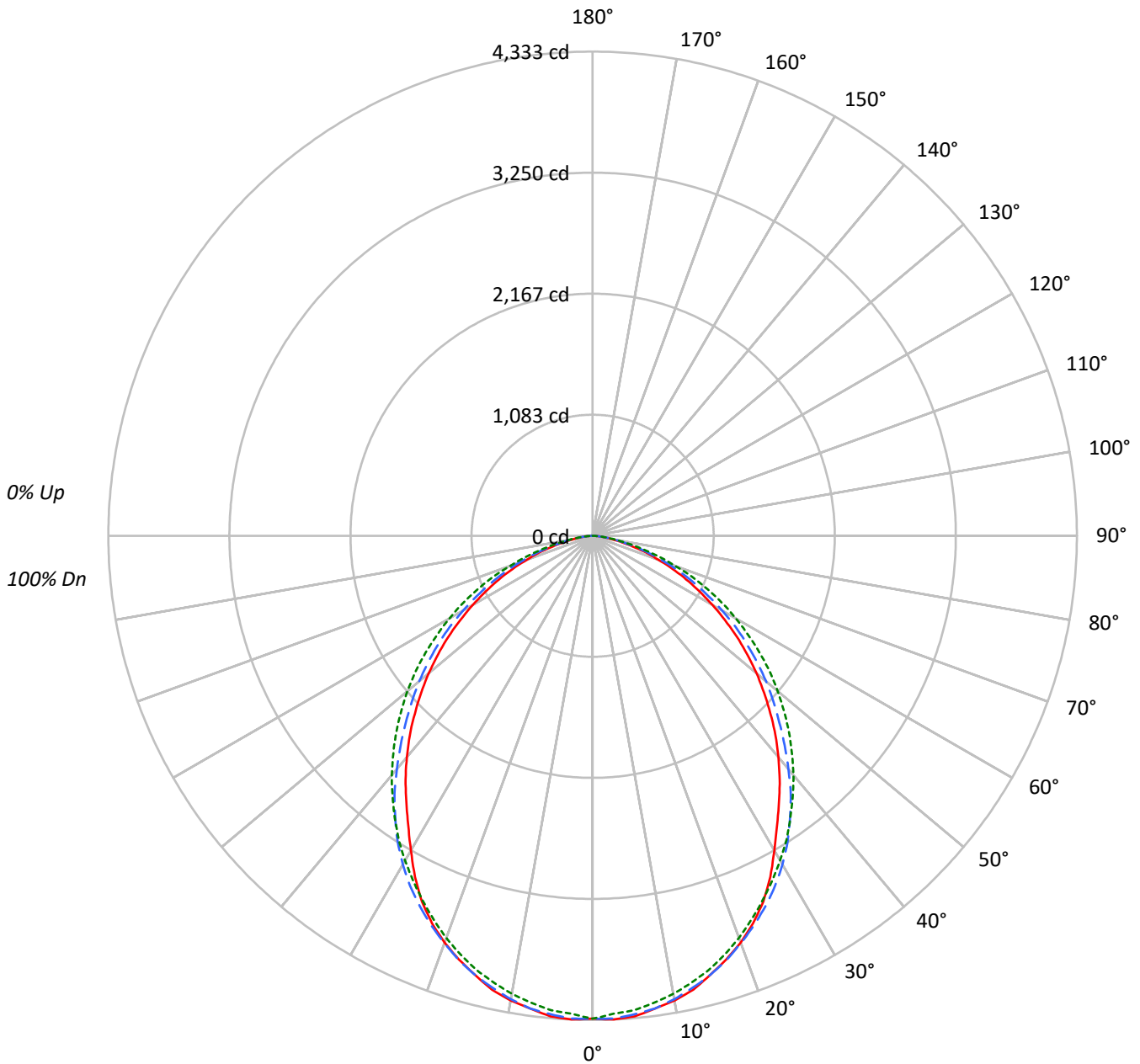
Lumens per Lamp: N/A
Luminaire Lumens: 9993.0 lumens
Efficiency: N/A
Efficacy: 77.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	11630	11630	11630
5°	11661	11611	11512
10°	11537	11505	11373
15°	11332	11332	11203
20°	11092	11106	10964
25°	10727	10860	10688
30°	10101	10555	10426
35°	9545	10117	10134
40°	9081	9571	9822
45°	8562	8991	9452
50°	8014	8473	9050
55°	7392	7883	8561
60°	6657	7193	7962
65°	5878	6396	7242
70°	4899	5447	6153
75°	3849	4350	4816
80°	2754	3062	3397
85°	1794	1794	1692



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.9	4.1
10°-20°	1143.1	11.4
20°-30°	1670.4	16.7
30°-40°	1896.1	19.0
40°-50°	1830.4	18.3
50°-60°	1510.0	15.1
60°-70°	1005.5	10.1
70°-80°	450.0	4.5
80°-90°	80.5	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°	3220.5	32.2
0°-40°	5116.6	51.2
0°-60°	8457.0	84.6
0°-90°	9993.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9993.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4322	4322	4322	4322	4322	
5°	4317	4315	4298	4275	4262	409
15°	4068	4078	4068	4049	4021	1147
25°	3613	3641	3658	3631	3600	1654
35°	2906	2945	3080	3096	3085	1820
45°	2250	2288	2363	2470	2484	1736
55°	1576	1602	1680	1773	1825	1406
65°	923	948	1004	1076	1137	915
75°	370	390	418	438	463	405
85°	58	58	58	55	55	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4321.7	4321.7	4321.7	4321.7	4321.7
2.5°	4333.3	4335.0	4325.0	4298.5	4281.9
5°	4316.7	4315.1	4298.5	4275.2	4261.9
7.5°	4268.6	4271.9	4266.9	4233.7	4215.5
10°	4222.1	4223.8	4210.5	4183.9	4162.3
12.5°	4162.3	4160.7	4142.4	4129.1	4094.3
15°	4067.7	4077.7	4067.7	4049.4	4021.2
17.5°	3976.4	3976.4	3983.0	3951.5	3929.9
20°	3873.4	3878.4	3878.4	3853.5	3828.6
22.5°	3753.9	3768.8	3773.8	3747.3	3717.4
25°	3612.8	3641.0	3657.6	3631.0	3599.5
27.5°	3441.8	3484.9	3534.7	3514.8	3480.0
30°	3250.8	3313.9	3396.9	3380.3	3355.4
32.5°	3069.9	3133.0	3247.5	3240.9	3227.6
35°	2905.5	2945.3	3079.8	3096.4	3084.8
37.5°	2749.4	2786.0	2912.1	2950.3	2940.4
40°	2585.1	2624.9	2724.5	2792.6	2795.9
42.5°	2422.4	2460.5	2541.9	2639.8	2639.8
45°	2249.7	2287.9	2362.6	2470.5	2483.8
47.5°	2080.3	2120.2	2193.2	2301.2	2322.7
50°	1914.3	1950.8	2023.9	2128.5	2161.7
52.5°	1741.6	1781.5	1852.9	1949.2	1997.3
55°	1575.6	1602.2	1680.2	1773.2	1824.7
57.5°	1402.9	1427.8	1515.8	1595.5	1648.7
60°	1236.9	1268.5	1336.5	1417.9	1479.3
62.5°	1077.5	1110.7	1168.8	1240.2	1310.0
65°	923.1	948.0	1004.5	1075.9	1137.3
67.5°	773.7	795.3	851.7	901.5	966.3
70°	622.6	650.8	692.3	740.5	782.0
72.5°	501.4	513.0	547.9	582.8	625.9
75°	370.2	390.2	418.4	438.3	463.2
77.5°	265.6	277.3	293.9	310.5	333.7
80°	177.7	182.6	197.6	200.9	219.2
82.5°	107.9	111.2	114.6	116.2	122.9
85°	58.1	58.1	58.1	54.8	54.8
87.5°	33.2	33.2	28.2	23.2	16.6
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)