

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: P558436

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-93-86-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: P558436
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-50-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

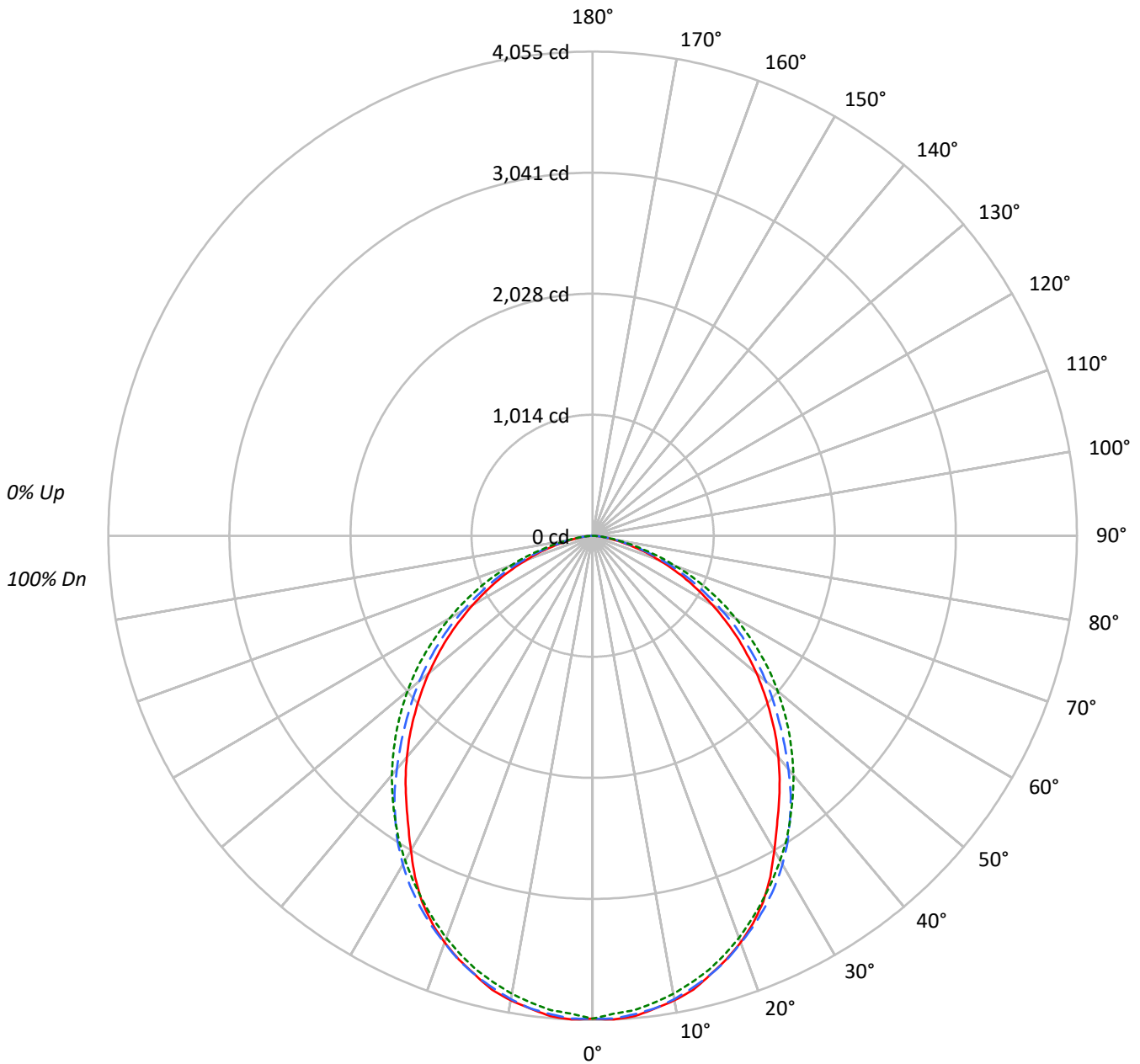
Lumens per Lamp: N/A
Luminaire Lumens: 9351.0 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (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°	10883	10883	10883
5°	10911	10865	10773
10°	10796	10766	10643
15°	10604	10604	10483
20°	10380	10393	10259
25°	10038	10162	10001
30°	9452	9877	9757
35°	8931	9468	9483
40°	8498	8956	9191
45°	8012	8413	8845
50°	7499	7929	8468
55°	6917	7377	8010
60°	6229	6731	7450
65°	5500	5985	6776
70°	4584	5098	5758
75°	3603	4070	4507
80°	2576	2865	3178
85°	1680	1680	1584



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	380.8	4.1
10°-20°	1069.7	11.4
20°-30°	1563.1	16.7
30°-40°	1774.3	19.0
40°-50°	1712.8	18.3
50°-60°	1413.0	15.1
60°-70°	940.9	10.1
70°-80°	421.1	4.5
80°-90°	75.3	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°	3013.6	32.2
0°-40°	4787.9	51.2
0°-60°	7913.7	84.6
0°-90°	9351.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9351.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4044	4044	4044	4044	4044	
5°	4039	4038	4022	4001	3988	382
15°	3806	3816	3806	3789	3763	1073
25°	3381	3407	3423	3398	3368	1548
35°	2719	2756	2882	2898	2887	1703
45°	2105	2141	2211	2312	2324	1624
55°	1474	1499	1572	1659	1707	1316
65°	864	887	940	1007	1064	857
75°	346	365	392	410	434	379
85°	54	54	54	51	51	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4044.1	4044.1	4044.1	4044.1	4044.1
2.5°	4054.9	4056.5	4047.2	4022.3	4006.8
5°	4039.4	4037.9	4022.3	4000.6	3988.1
7.5°	3994.4	3997.5	3992.8	3961.7	3944.6
10°	3950.8	3952.4	3940.0	3915.1	3894.9
12.5°	3894.9	3893.4	3876.3	3863.8	3831.2
15°	3806.4	3815.7	3806.4	3789.3	3762.9
17.5°	3720.9	3720.9	3727.1	3697.6	3677.4
20°	3624.6	3629.3	3629.3	3605.9	3582.6
22.5°	3512.7	3526.7	3531.4	3506.5	3478.5
25°	3380.7	3407.1	3422.6	3397.8	3368.2
27.5°	3220.6	3261.0	3307.7	3289.0	3256.4
30°	3042.0	3101.0	3178.7	3163.2	3139.9
32.5°	2872.6	2931.7	3038.9	3032.7	3020.2
35°	2718.8	2756.1	2882.0	2897.5	2886.6
37.5°	2572.8	2607.0	2725.0	2760.8	2751.5
40°	2419.0	2456.3	2549.5	2613.2	2616.3
42.5°	2266.7	2302.5	2378.6	2470.3	2470.3
45°	2105.2	2140.9	2210.8	2311.8	2324.2
47.5°	1946.7	1984.0	2052.3	2153.3	2173.5
50°	1791.3	1825.5	1893.9	1991.7	2022.8
52.5°	1629.7	1667.0	1733.8	1823.9	1869.0
55°	1474.4	1499.2	1572.3	1659.3	1707.4
57.5°	1312.8	1336.1	1418.5	1493.0	1542.7
60°	1157.4	1187.0	1250.7	1326.8	1384.3
62.5°	1008.3	1039.4	1093.7	1160.6	1225.8
65°	863.8	887.1	939.9	1006.7	1064.2
67.5°	724.0	744.2	797.0	843.6	904.2
70°	582.6	609.0	647.9	692.9	731.8
72.5°	469.2	480.1	512.7	545.3	585.7
75°	346.5	365.1	391.5	410.2	433.5
77.5°	248.6	259.5	275.0	290.5	312.3
80°	166.2	170.9	184.9	188.0	205.1
82.5°	101.0	104.1	107.2	108.8	115.0
85°	54.4	54.4	54.4	51.3	51.3
87.5°	31.1	31.1	26.4	21.8	15.5
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)