

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: P558249

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-93-88-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: P558249
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-30-UNV-93-88-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE
AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

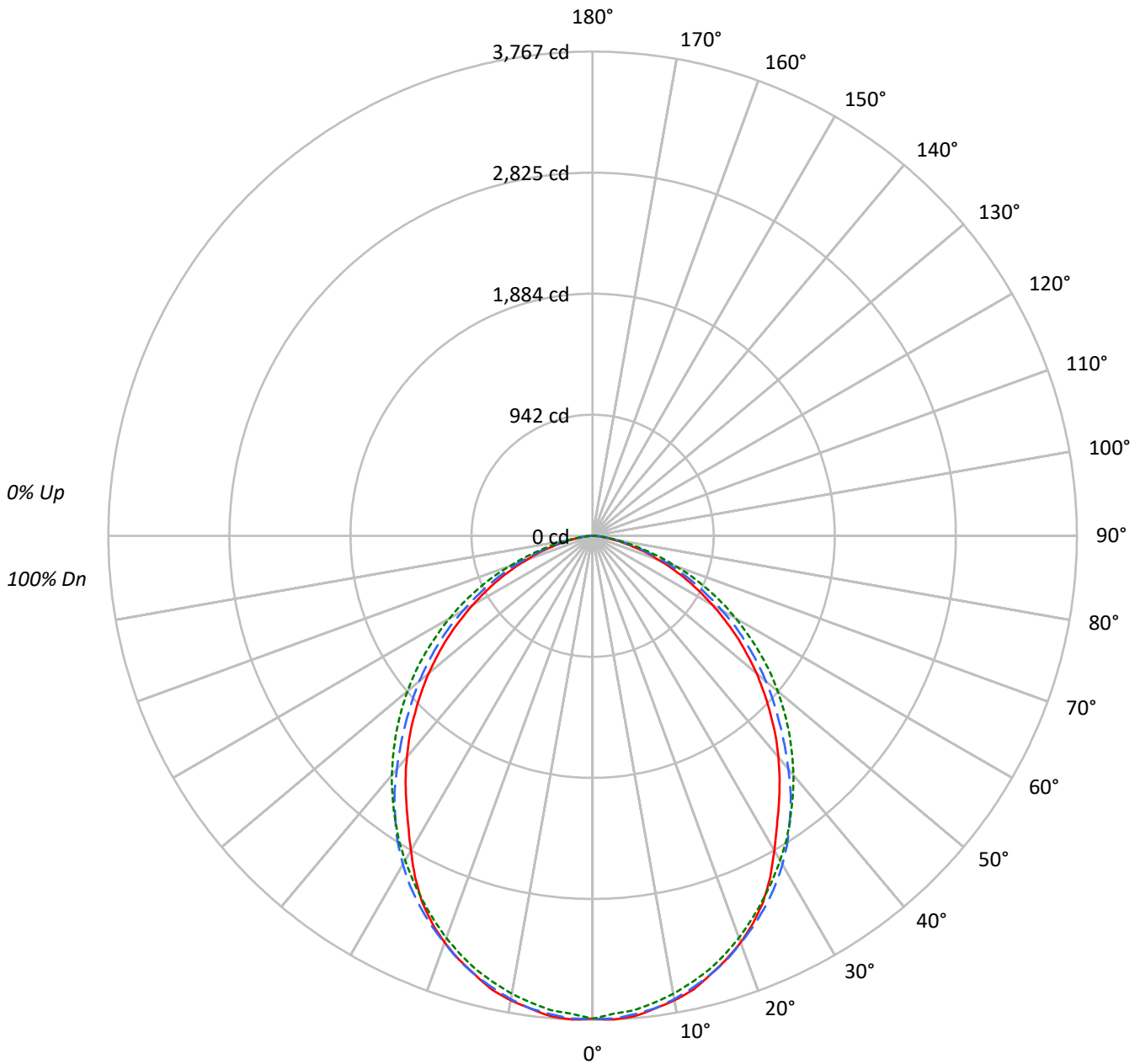
Lumens per Lamp: N/A
Luminaire Lumens: 8687.0 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	10110	10110	10110
5°	10137	10094	10008
10°	10029	10001	9887
15°	9851	9851	9739
20°	9643	9655	9531
25°	9325	9441	9291
30°	8781	9176	9064
35°	8297	8795	8809
40°	7894	8320	8538
45°	7443	7816	8217
50°	6967	7366	7867
55°	6426	6853	7442
60°	5787	6253	6921
65°	5110	5560	6295
70°	4258	4736	5349
75°	3347	3781	4187
80°	2393	2662	2952
85°	1559	1559	1470



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	353.7	4.1
10°-20°	993.7	11.4
20°-30°	1452.1	16.7
30°-40°	1648.3	19.0
40°-50°	1591.2	18.3
50°-60°	1312.6	15.1
60°-70°	874.1	10.1
70°-80°	391.2	4.5
80°-90°	70.0	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°	2799.6	32.2
0°-40°	4447.9	51.2
0°-60°	7351.8	84.6
0°-90°	8687.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8687.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3757	3757	3757	3757	3757	
5°	3753	3751	3737	3716	3705	355
15°	3536	3545	3536	3520	3496	997
25°	3141	3165	3180	3156	3129	1438
35°	2526	2560	2677	2692	2682	1583
45°	1956	1989	2054	2148	2159	1509
55°	1370	1393	1461	1541	1586	1222
65°	802	824	873	935	989	796
75°	322	339	364	381	403	352
85°	50	50	50	48	48	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3756.9	3756.9	3756.9	3756.9	3756.9
2.5°	3767.0	3768.4	3759.8	3736.7	3722.3
5°	3752.6	3751.1	3736.7	3716.5	3704.9
7.5°	3710.7	3713.6	3709.3	3680.4	3664.5
10°	3670.3	3671.7	3660.2	3637.1	3618.3
12.5°	3618.3	3616.9	3601.0	3589.5	3559.2
15°	3536.1	3544.7	3536.1	3520.2	3495.7
17.5°	3456.7	3456.7	3462.5	3435.0	3416.3
20°	3367.2	3371.5	3371.5	3349.9	3328.2
22.5°	3263.3	3276.3	3280.6	3257.5	3231.5
25°	3140.6	3165.2	3179.6	3156.5	3129.1
27.5°	2992.0	3029.5	3072.8	3055.5	3025.2
30°	2826.0	2880.8	2953.0	2938.6	2916.9
32.5°	2668.7	2723.5	2823.1	2817.3	2805.8
35°	2525.8	2560.4	2677.3	2691.7	2681.6
37.5°	2390.1	2421.9	2531.5	2564.7	2556.1
40°	2247.2	2281.9	2368.5	2427.6	2430.5
42.5°	2105.8	2139.0	2209.7	2294.8	2294.8
45°	1955.7	1988.9	2053.8	2147.6	2159.2
47.5°	1808.5	1843.1	1906.6	2000.4	2019.2
50°	1664.1	1695.9	1759.4	1850.3	1879.2
52.5°	1514.0	1548.7	1610.7	1694.4	1736.3
55°	1369.7	1392.8	1460.6	1541.4	1586.2
57.5°	1219.6	1241.2	1317.7	1387.0	1433.2
60°	1075.3	1102.7	1161.9	1232.6	1286.0
62.5°	936.7	965.6	1016.1	1078.1	1138.8
65°	802.5	824.1	873.2	935.3	988.7
67.5°	672.6	691.3	740.4	783.7	840.0
70°	541.2	565.8	601.9	643.7	679.8
72.5°	435.9	446.0	476.3	506.6	544.1
75°	321.9	339.2	363.7	381.0	402.7
77.5°	230.9	241.0	255.5	269.9	290.1
80°	154.4	158.8	171.8	174.6	190.5
82.5°	93.8	96.7	99.6	101.0	106.8
85°	50.5	50.5	50.5	47.6	47.6
87.5°	28.9	28.9	24.5	20.2	14.4
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)