

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: P558350

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-UNV-81-97-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: P558350
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-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

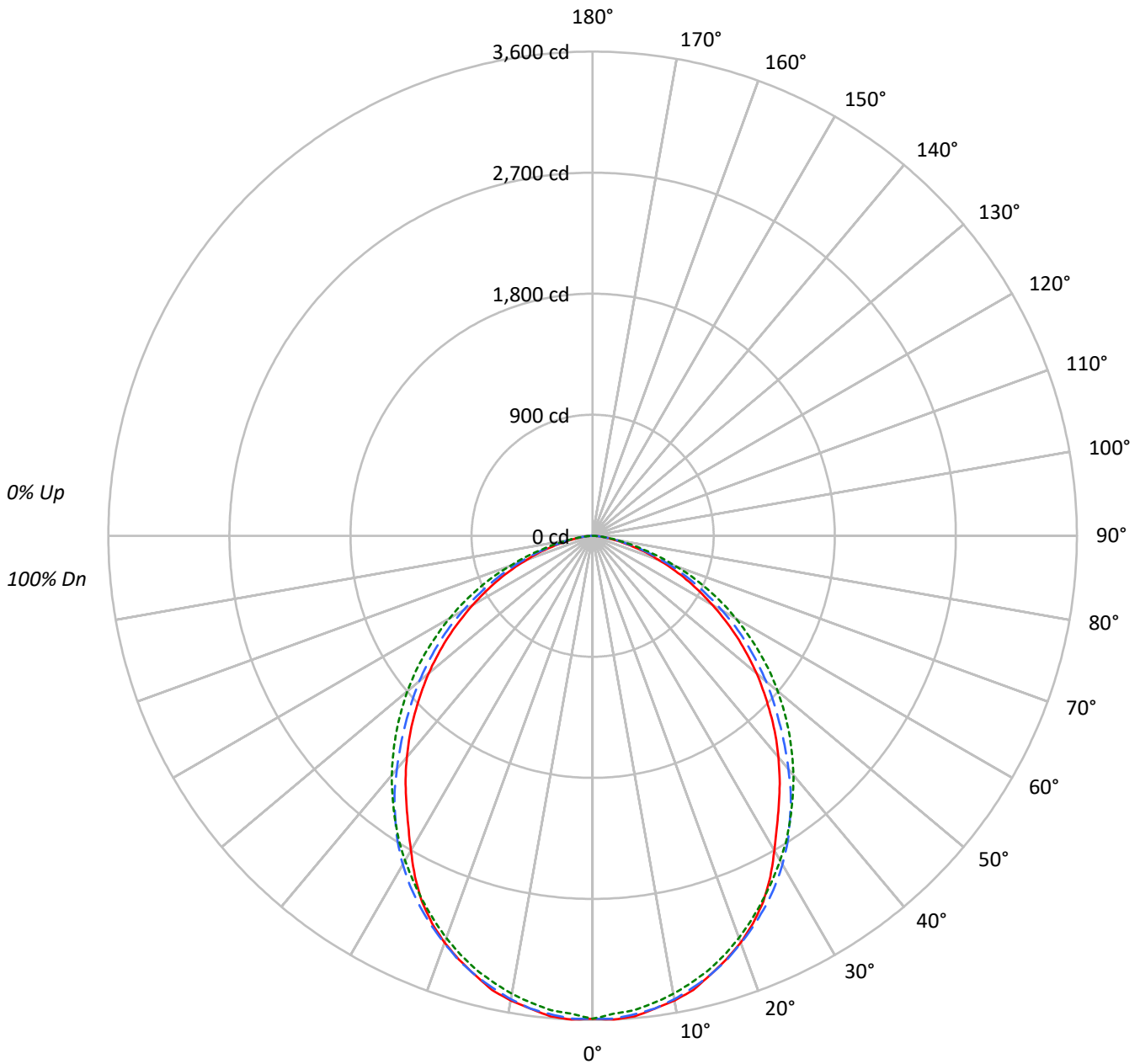
Lumens per Lamp: N/A
Luminaire Lumens: 8303.0 lumens
Efficiency: N/A
Efficacy: 83.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9663	9663	9663
5°	9689	9648	9566
10°	9586	9559	9450
15°	9416	9416	9308
20°	9216	9228	9110
25°	8913	9023	8880
30°	8393	8770	8663
35°	7931	8407	8420
40°	7545	7952	8161
45°	7113	7470	7854
50°	6659	7040	7519
55°	6142	6550	7113
60°	5531	5977	6615
65°	4884	5314	6017
70°	4070	4526	5112
75°	3198	3614	4002
80°	2287	2545	2822
85°	1491	1491	1405



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.1	4.1
10°-20°	949.8	11.4
20°-30°	1388.0	16.7
30°-40°	1575.5	19.0
40°-50°	1520.9	18.3
50°-60°	1254.6	15.1
60°-70°	835.5	10.1
70°-80°	373.9	4.5
80°-90°	66.9	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°	2675.8	32.2
0°-40°	4251.3	51.2
0°-60°	7026.8	84.6
0°-90°	8303.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8303.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3591	3591	3591	3591	3591	
5°	3587	3585	3572	3552	3541	339
15°	3380	3388	3380	3365	3341	953
25°	3002	3025	3039	3017	2991	1375
35°	2414	2447	2559	2573	2563	1513
45°	1869	1901	1963	2053	2064	1442
55°	1309	1331	1396	1473	1516	1168
65°	767	788	835	894	945	761
75°	308	324	348	364	385	336
85°	48	48	48	46	46	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3590.8	3590.8	3590.8	3590.8	3590.8
2.5°	3600.5	3601.9	3593.6	3571.5	3557.7
5°	3586.7	3585.3	3571.5	3552.2	3541.2
7.5°	3546.7	3549.4	3545.3	3517.7	3502.5
10°	3508.1	3509.4	3498.4	3476.3	3458.4
12.5°	3458.4	3457.0	3441.8	3430.8	3401.8
15°	3379.8	3388.0	3379.8	3364.6	3341.1
17.5°	3303.9	3303.9	3309.4	3283.2	3265.3
20°	3218.4	3222.5	3222.5	3201.8	3181.1
22.5°	3119.0	3131.5	3135.6	3113.5	3088.7
25°	3001.8	3025.2	3039.0	3017.0	2990.8
27.5°	2859.7	2895.6	2937.0	2920.4	2891.4
30°	2701.1	2753.5	2822.5	2808.7	2788.0
32.5°	2550.7	2603.1	2698.3	2692.8	2681.7
35°	2414.1	2447.2	2559.0	2572.8	2563.1
37.5°	2284.4	2314.8	2419.6	2451.4	2443.1
40°	2147.9	2181.0	2263.8	2320.3	2323.1
42.5°	2012.7	2044.4	2112.0	2193.4	2193.4
45°	1869.2	1900.9	1963.0	2052.7	2063.7
47.5°	1728.5	1761.6	1822.3	1912.0	1929.9
50°	1590.6	1620.9	1681.6	1768.5	1796.1
52.5°	1447.1	1480.2	1539.5	1619.5	1659.5
55°	1309.1	1331.2	1396.1	1473.3	1516.1
57.5°	1165.7	1186.4	1259.5	1325.7	1369.8
60°	1027.7	1053.9	1110.5	1178.1	1229.1
62.5°	895.3	922.9	971.2	1030.5	1088.4
65°	767.0	787.7	834.6	893.9	945.0
67.5°	642.8	660.8	707.7	749.1	802.9
70°	517.3	540.8	575.3	615.3	649.7
72.5°	416.6	426.3	455.2	484.2	520.1
75°	307.6	324.2	347.6	364.2	384.9
77.5°	220.7	230.4	244.2	258.0	277.3
80°	147.6	151.7	164.2	166.9	182.1
82.5°	89.7	92.4	95.2	96.6	102.1
85°	48.3	48.3	48.3	45.5	45.5
87.5°	27.6	27.6	23.5	19.3	13.8
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)