

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: P556845

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-93-96-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: P556845
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-LD4-1STD-40-UNV-93-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

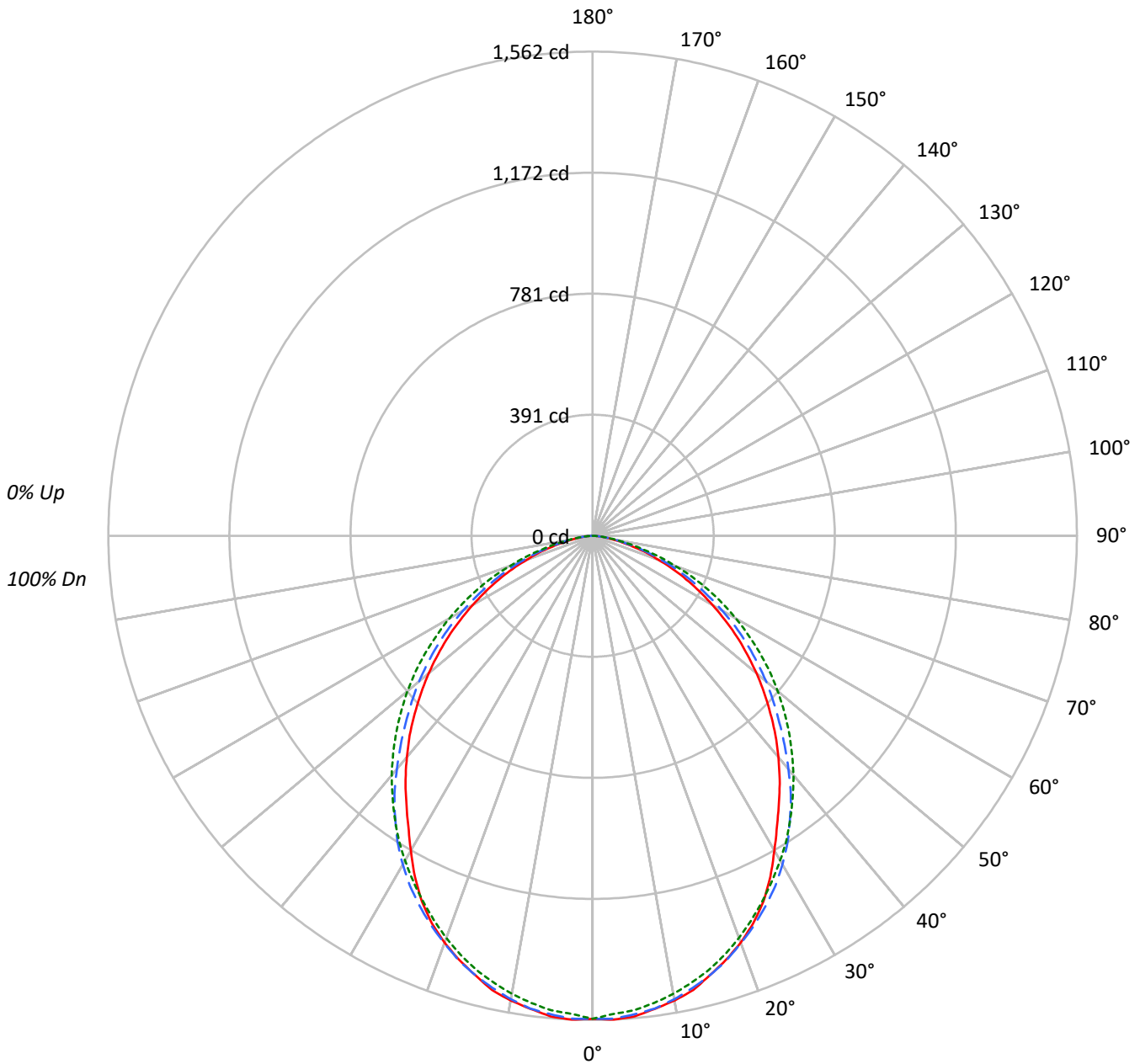
Lumens per Lamp: N/A
Luminaire Lumens: 3603.0 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	4193	4193	4193
5°	4204	4186	4151
10°	4160	4148	4101
15°	4086	4086	4039
20°	3999	4005	3953
25°	3868	3916	3853
30°	3642	3806	3759
35°	3441	3648	3654
40°	3274	3451	3541
45°	3087	3242	3408
50°	2889	3055	3263
55°	2665	2842	3087
60°	2400	2594	2871
65°	2119	2306	2611
70°	1766	1964	2218
75°	1388	1569	1736
80°	993	1103	1224
85°	648	648	611



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.7	4.1
10°-20°	412.1	11.4
20°-30°	602.3	16.7
30°-40°	683.7	19.0
40°-50°	660.0	18.3
50°-60°	544.4	15.1
60°-70°	362.5	10.1
70°-80°	162.2	4.5
80°-90°	29.0	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°	1161.2	32.2
0°-40°	1844.8	51.2
0°-60°	3049.2	84.6
0°-90°	3603.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3603.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1558	1558	1558	1558	1558	
5°	1556	1556	1550	1541	1537	147
15°	1467	1470	1467	1460	1450	413
25°	1303	1313	1319	1309	1298	597
35°	1048	1062	1110	1116	1112	656
45°	811	825	852	891	896	626
55°	568	578	606	639	658	507
65°	333	342	362	388	410	330
75°	134	141	151	158	167	146
85°	21	21	21	20	20	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1558.2	1558.2	1558.2	1558.2	1558.2
2.5°	1562.4	1563.0	1559.4	1549.8	1543.8
5°	1556.4	1555.8	1549.8	1541.4	1536.7
7.5°	1539.0	1540.2	1538.5	1526.5	1519.9
10°	1522.3	1522.9	1518.1	1508.5	1500.7
12.5°	1500.7	1500.1	1493.6	1488.8	1476.2
15°	1466.6	1470.2	1466.6	1460.0	1449.9
17.5°	1433.7	1433.7	1436.1	1424.7	1416.9
20°	1396.6	1398.4	1398.4	1389.4	1380.4
22.5°	1353.5	1358.9	1360.7	1351.1	1340.3
25°	1302.6	1312.8	1318.8	1309.2	1297.8
27.5°	1240.9	1256.5	1274.5	1267.3	1254.7
30°	1172.1	1194.8	1224.8	1218.8	1209.8
32.5°	1106.8	1129.6	1170.9	1168.5	1163.7
35°	1047.6	1061.9	1110.4	1116.4	1112.2
37.5°	991.3	1004.5	1050.0	1063.7	1060.2
40°	932.0	946.4	982.3	1006.9	1008.1
42.5°	873.4	887.2	916.5	951.8	951.8
45°	811.1	824.9	851.8	890.7	895.5
47.5°	750.1	764.4	790.8	829.7	837.5
50°	690.2	703.4	729.7	767.4	779.4
52.5°	628.0	642.3	668.1	702.8	720.1
55°	568.1	577.7	605.8	639.3	657.9
57.5°	505.8	514.8	546.5	575.3	594.4
60°	446.0	457.3	481.9	511.2	533.4
62.5°	388.5	400.5	421.4	447.2	472.3
65°	332.8	341.8	362.2	387.9	410.1
67.5°	279.0	286.7	307.1	325.0	348.4
70°	224.5	234.7	249.6	267.0	281.9
72.5°	180.8	185.0	197.5	210.1	225.7
75°	133.5	140.7	150.9	158.0	167.0
77.5°	95.8	100.0	106.0	111.9	120.3
80°	64.1	65.8	71.2	72.4	79.0
82.5°	38.9	40.1	41.3	41.9	44.3
85°	21.0	21.0	21.0	19.8	19.8
87.5°	12.0	12.0	10.2	8.4	6.0
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)