

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: P556559

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-81-97-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: P556559
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-LD4-1LO-40-UNV-81-97-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

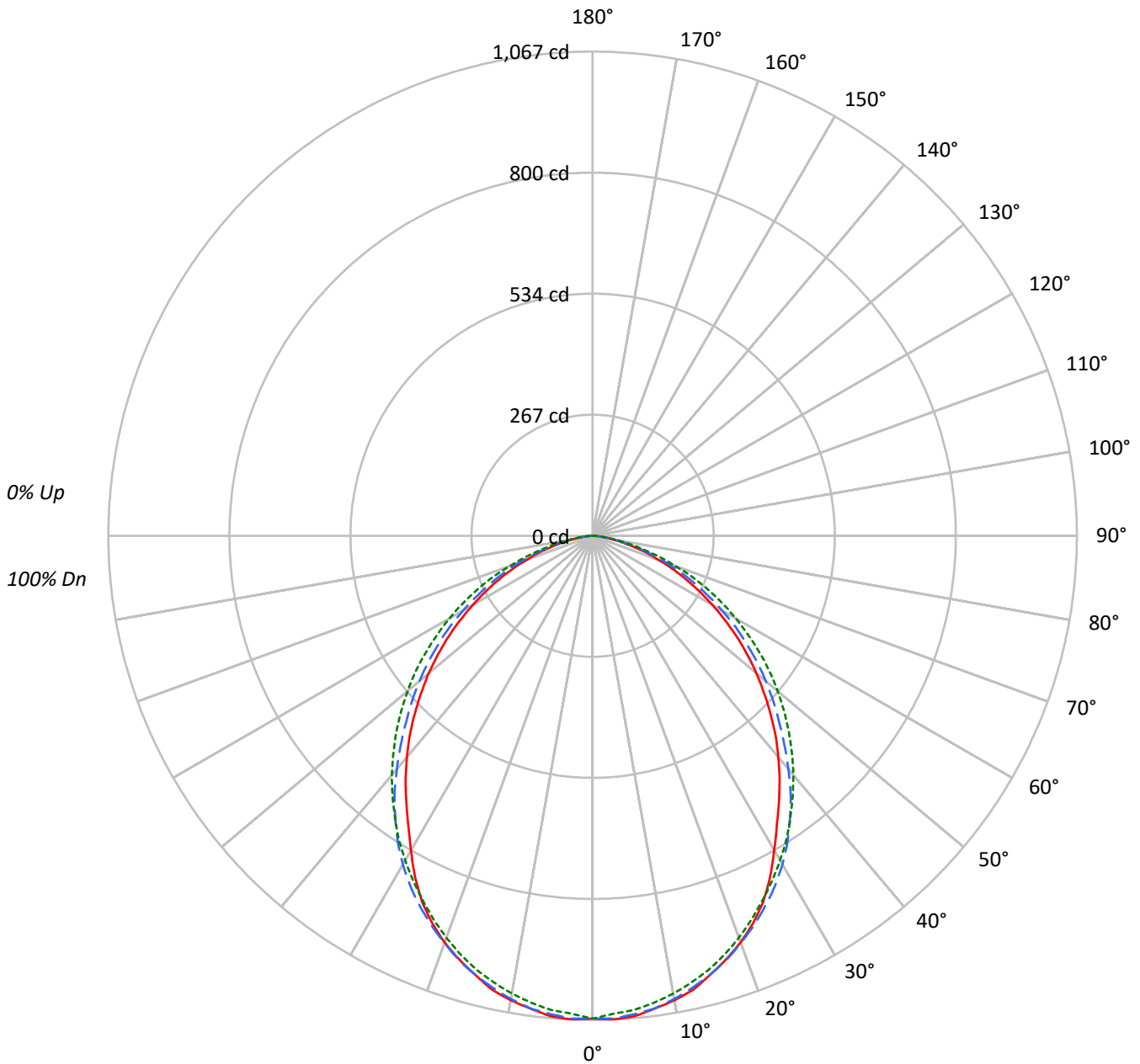
Lumens per Lamp: N/A
Luminaire Lumens: 2460.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	2863	2863	2863
5°	2871	2858	2834
10°	2840	2832	2800
15°	2790	2790	2758
20°	2731	2734	2699
25°	2641	2673	2631
30°	2487	2598	2567
35°	2350	2491	2495
40°	2236	2356	2418
45°	2108	2213	2327
50°	1973	2086	2228
55°	1820	1940	2107
60°	1639	1771	1960
65°	1447	1575	1783
70°	1206	1341	1515
75°	947	1071	1185
80°	677	753	837
85°	442	442	417



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.2	4.1
10°-20°	281.4	11.4
20°-30°	411.2	16.7
30°-40°	466.8	19.0
40°-50°	450.6	18.3
50°-60°	371.7	15.1
60°-70°	247.5	10.1
70°-80°	110.8	4.5
80°-90°	19.8	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°	792.8	32.2
0°-40°	1259.6	51.2
0°-60°	2081.9	84.6
0°-90°	2460.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2460.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1064	1064	1064	1064	1064	
5°	1063	1062	1058	1052	1049	101
15°	1001	1004	1001	997	990	282
25°	889	896	900	894	886	407
35°	715	725	758	762	759	448
45°	554	563	582	608	611	427
55°	388	394	414	436	449	346
65°	227	233	247	265	280	225
75°	91	96	103	108	114	100
85°	14	14	14	14	14	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1063.9	1063.9	1063.9	1063.9	1063.9
2.5°	1066.7	1067.2	1064.7	1058.2	1054.1
5°	1062.7	1062.3	1058.2	1052.4	1049.2
7.5°	1050.8	1051.6	1050.4	1042.2	1037.7
10°	1039.4	1039.8	1036.5	1030.0	1024.6
12.5°	1024.6	1024.2	1019.7	1016.5	1007.9
15°	1001.4	1003.8	1001.4	996.9	989.9
17.5°	978.9	978.9	980.5	972.7	967.4
20°	953.5	954.8	954.8	948.6	942.5
22.5°	924.1	927.8	929.0	922.5	915.1
25°	889.4	896.3	900.4	893.9	886.1
27.5°	847.3	857.9	870.2	865.3	856.7
30°	800.3	815.8	836.2	832.1	826.0
32.5°	755.7	771.2	799.4	797.8	794.5
35°	715.3	725.1	758.2	762.3	759.4
37.5°	676.8	685.8	716.9	726.3	723.8
40°	636.4	646.2	670.7	687.5	688.3
42.5°	596.3	605.7	625.7	649.9	649.9
45°	553.8	563.2	581.6	608.2	611.4
47.5°	512.1	521.9	539.9	566.5	571.8
50°	471.2	480.2	498.2	524.0	532.1
52.5°	428.7	438.6	456.1	479.8	491.7
55°	387.9	394.4	413.6	436.5	449.2
57.5°	345.4	351.5	373.2	392.8	405.9
60°	304.5	312.3	329.0	349.0	364.2
62.5°	265.3	273.4	287.7	305.3	322.5
65°	227.2	233.4	247.3	264.8	280.0
67.5°	190.5	195.8	209.7	221.9	237.9
70°	153.3	160.2	170.4	182.3	192.5
72.5°	123.4	126.3	134.9	143.5	154.1
75°	91.1	96.0	103.0	107.9	114.0
77.5°	65.4	68.3	72.3	76.4	82.2
80°	43.7	45.0	48.6	49.5	54.0
82.5°	26.6	27.4	28.2	28.6	30.2
85°	14.3	14.3	14.3	13.5	13.5
87.5°	8.2	8.2	6.9	5.7	4.1
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)