

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: P556327

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-93-87-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: P556327
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-LD4-1HI-40-UNV-93-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

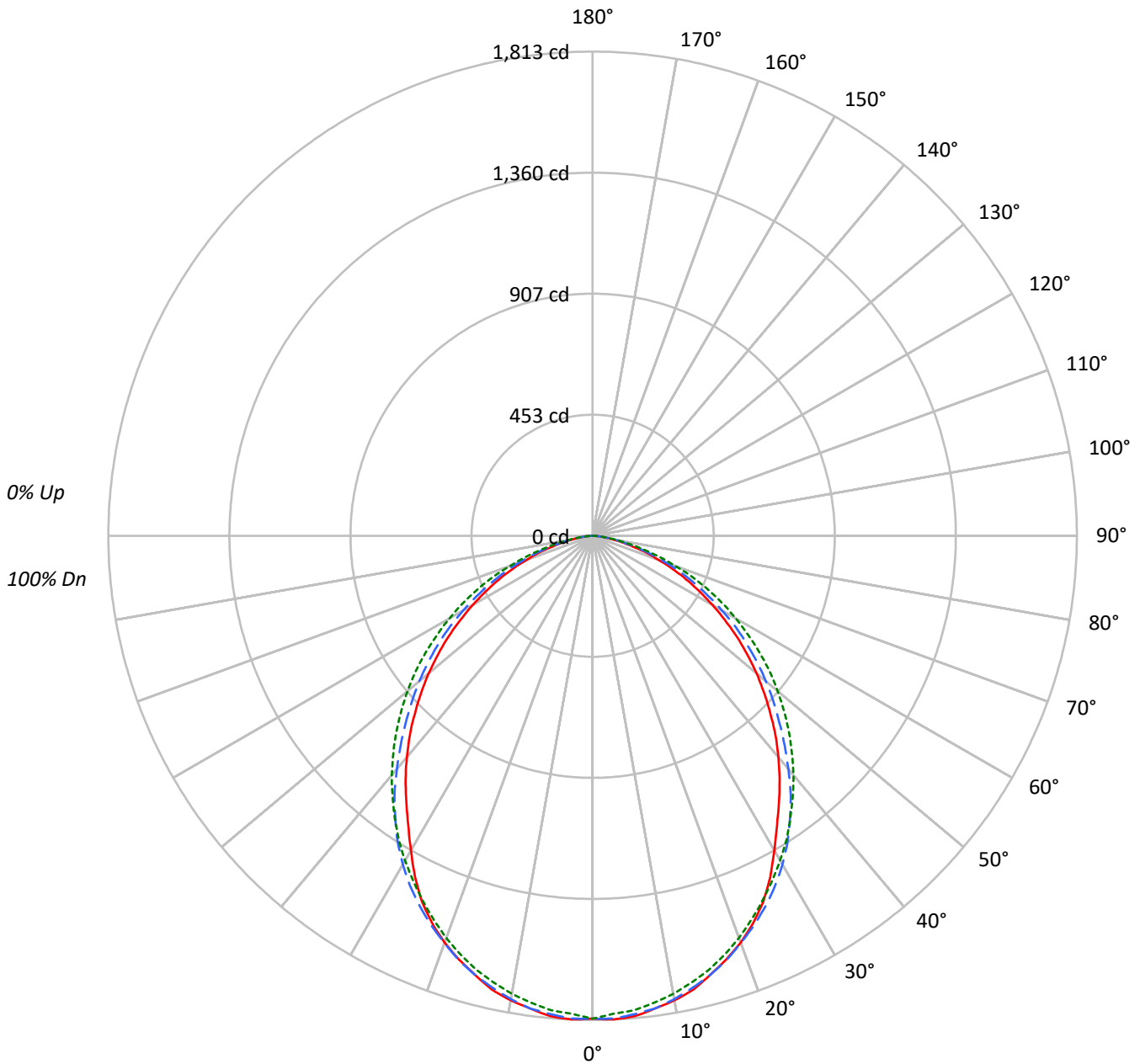
Lumens per Lamp: N/A
Luminaire Lumens: 4181.0 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (Ain): 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°	4866	4866	4866
5°	4879	4858	4817
10°	4827	4814	4759
15°	4741	4741	4687
20°	4641	4647	4587
25°	4488	4544	4472
30°	4226	4416	4362
35°	3993	4233	4240
40°	3799	4004	4109
45°	3582	3762	3955
50°	3353	3545	3786
55°	3093	3298	3582
60°	2785	3010	3331
65°	2459	2676	3030
70°	2050	2279	2574
75°	1611	1821	2015
80°	1151	1282	1421
85°	750	750	707



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.2	4.1
10°-20°	478.3	11.4
20°-30°	698.9	16.7
30°-40°	793.3	19.0
40°-50°	765.8	18.3
50°-60°	631.8	15.1
60°-70°	420.7	10.1
70°-80°	188.3	4.5
80°-90°	33.7	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°	1347.4	32.2
0°-40°	2140.8	51.2
0°-60°	3538.4	84.6
0°-90°	4181.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4181.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1808	1808	1808	1808	1808	
5°	1806	1805	1798	1789	1783	171
15°	1702	1706	1702	1694	1682	480
25°	1512	1523	1530	1519	1506	692
35°	1216	1232	1289	1296	1291	762
45°	941	957	988	1034	1039	726
55°	659	670	703	742	763	588
65°	386	397	420	450	476	383
75°	155	163	175	183	194	169
85°	24	24	24	23	23	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1808.2	1808.2	1808.2	1808.2	1808.2
2.5°	1813.0	1813.7	1809.6	1798.4	1791.5
5°	1806.1	1805.4	1798.4	1788.7	1783.2
7.5°	1785.9	1787.3	1785.3	1771.4	1763.7
10°	1766.5	1767.2	1761.6	1750.5	1741.5
12.5°	1741.5	1740.8	1733.2	1727.6	1713.0
15°	1701.9	1706.1	1701.9	1694.3	1682.4
17.5°	1663.7	1663.7	1666.5	1653.3	1644.2
20°	1620.6	1622.7	1622.7	1612.3	1601.9
22.5°	1570.6	1576.9	1578.9	1567.8	1555.3
25°	1511.6	1523.4	1530.3	1519.2	1506.0
27.5°	1440.0	1458.1	1478.9	1470.6	1456.0
30°	1360.1	1386.5	1421.3	1414.3	1403.9
32.5°	1284.4	1310.8	1358.7	1356.0	1350.4
35°	1215.6	1232.3	1288.6	1295.5	1290.7
37.5°	1150.3	1165.6	1218.4	1234.4	1230.2
40°	1081.6	1098.2	1139.9	1168.4	1169.8
42.5°	1013.5	1029.5	1063.5	1104.5	1104.5
45°	941.3	957.2	988.5	1033.6	1039.2
47.5°	870.4	887.1	917.6	962.8	971.8
50°	800.9	816.2	846.8	890.5	904.4
52.5°	728.7	745.4	775.2	815.5	835.7
55°	659.2	670.3	703.0	741.9	763.4
57.5°	587.0	597.4	634.2	667.6	689.8
60°	517.5	530.7	559.2	593.2	618.9
62.5°	450.8	464.7	489.0	518.9	548.1
65°	386.2	396.6	420.3	450.1	475.8
67.5°	323.7	332.7	356.4	377.2	404.3
70°	260.5	272.3	289.7	309.8	327.2
72.5°	209.8	214.6	229.2	243.8	261.9
75°	154.9	163.2	175.1	183.4	193.8
77.5°	111.1	116.0	123.0	129.9	139.6
80°	74.3	76.4	82.7	84.1	91.7
82.5°	45.2	46.5	47.9	48.6	51.4
85°	24.3	24.3	24.3	22.9	22.9
87.5°	13.9	13.9	11.8	9.7	6.9
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)