

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: P556193

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-93-84-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: P556193
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-30-UNV-93-84-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

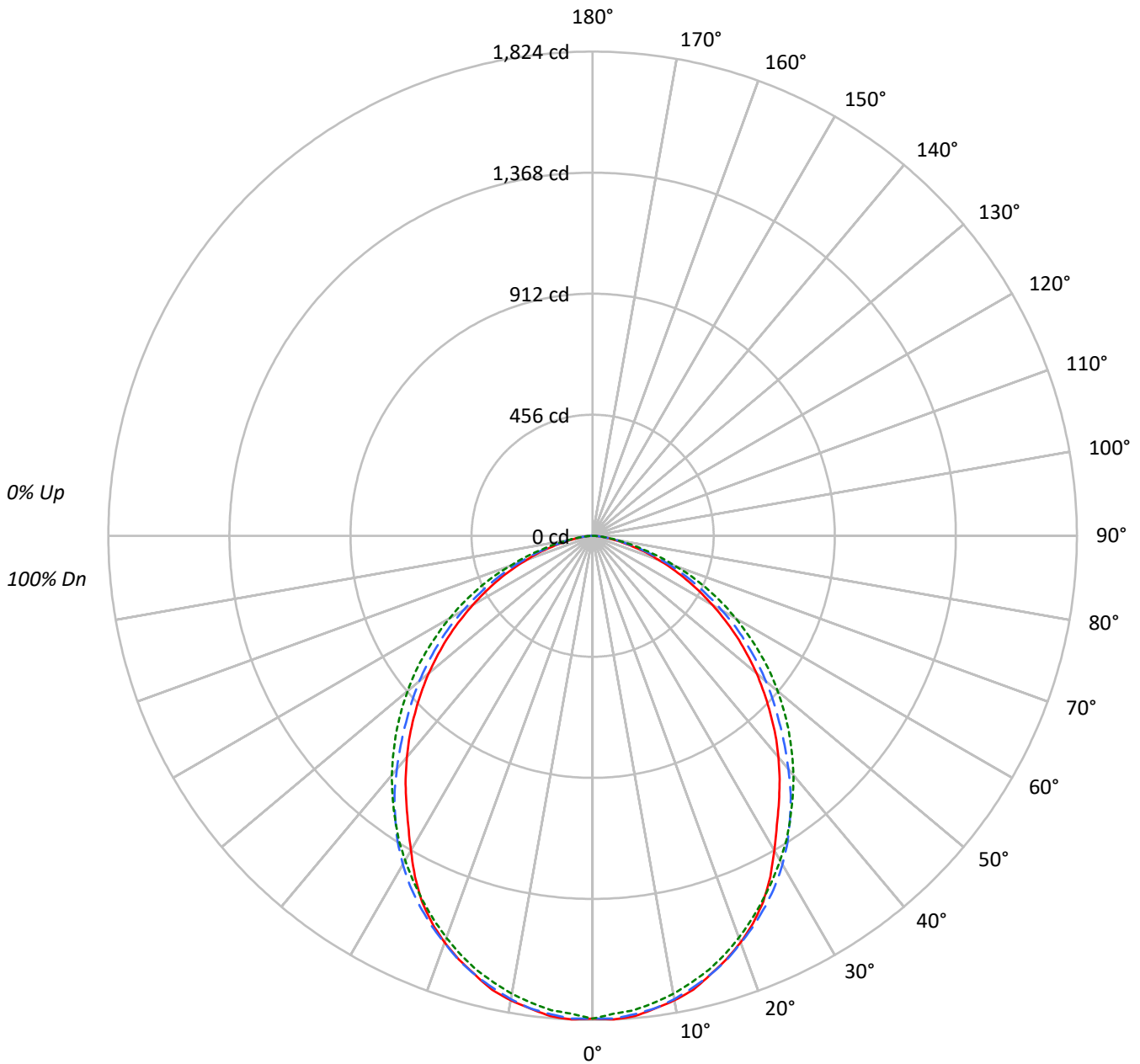
Lumens per Lamp: N/A
Luminaire Lumens: 4206.0 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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°	4895	4895	4895
5°	4908	4887	4846
10°	4856	4843	4787
15°	4770	4770	4715
20°	4669	4675	4615
25°	4515	4571	4498
30°	4252	4443	4388
35°	4017	4258	4265
40°	3822	4028	4134
45°	3604	3784	3978
50°	3373	3566	3809
55°	3111	3318	3603
60°	2802	3027	3351
65°	2474	2692	3048
70°	2062	2293	2589
75°	1620	1831	2027
80°	1159	1289	1429
85°	756	756	713



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.3	4.1
10°-20°	481.1	11.4
20°-30°	703.1	16.7
30°-40°	798.1	19.0
40°-50°	770.4	18.3
50°-60°	635.5	15.1
60°-70°	423.2	10.1
70°-80°	189.4	4.5
80°-90°	33.9	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°	1355.5	32.2
0°-40°	2153.6	51.2
0°-60°	3559.5	84.6
0°-90°	4206.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4206.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1819	1819	1819	1819	1819	
5°	1817	1816	1809	1799	1794	172
15°	1712	1716	1712	1704	1692	483
25°	1521	1532	1540	1528	1515	696
35°	1223	1240	1296	1303	1298	766
45°	947	963	994	1040	1045	731
55°	663	674	707	746	768	592
65°	388	399	423	453	479	385
75°	156	164	176	184	195	170
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°	1819.0	1819.0	1819.0	1819.0	1819.0
2.5°	1823.9	1824.6	1820.4	1809.2	1802.2
5°	1816.9	1816.2	1809.2	1799.4	1793.8
7.5°	1796.6	1798.0	1795.9	1781.9	1774.3
10°	1777.1	1777.8	1772.2	1761.0	1751.9
12.5°	1751.9	1751.2	1743.5	1737.9	1723.3
15°	1712.1	1716.3	1712.1	1704.4	1692.5
17.5°	1673.6	1673.6	1676.4	1663.2	1654.1
20°	1630.3	1632.4	1632.4	1621.9	1611.4
22.5°	1580.0	1586.3	1588.4	1577.2	1564.6
25°	1520.6	1532.5	1539.5	1528.3	1515.0
27.5°	1448.6	1466.8	1487.8	1479.4	1464.7
30°	1368.3	1394.8	1429.8	1422.8	1412.3
32.5°	1292.1	1318.6	1366.9	1364.1	1358.5
35°	1222.9	1239.7	1296.3	1303.3	1298.4
37.5°	1157.2	1172.6	1225.7	1241.8	1237.6
40°	1088.0	1104.8	1146.7	1175.4	1176.8
42.5°	1019.6	1035.6	1069.9	1111.1	1111.1
45°	946.9	963.0	994.4	1039.8	1045.4
47.5°	875.6	892.4	923.1	968.5	977.6
50°	805.7	821.1	851.8	895.9	909.8
52.5°	733.0	749.8	779.9	820.4	840.7
55°	663.2	674.3	707.2	746.3	768.0
57.5°	590.5	601.0	638.0	671.6	693.9
60°	520.6	533.9	562.5	596.8	622.6
62.5°	453.5	467.5	492.0	522.0	551.4
65°	388.5	399.0	422.8	452.8	478.7
67.5°	325.6	334.7	358.5	379.5	406.7
70°	262.1	273.9	291.4	311.7	329.1
72.5°	211.0	215.9	230.6	245.3	263.4
75°	155.8	164.2	176.1	184.5	195.0
77.5°	111.8	116.7	123.7	130.7	140.5
80°	74.8	76.9	83.2	84.6	92.2
82.5°	45.4	46.8	48.2	48.9	51.7
85°	24.5	24.5	24.5	23.1	23.1
87.5°	14.0	14.0	11.9	9.8	7.0
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)