

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: P557417

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-93-88-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: P557417
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-LD4-2LO-50-UNV-93-88-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

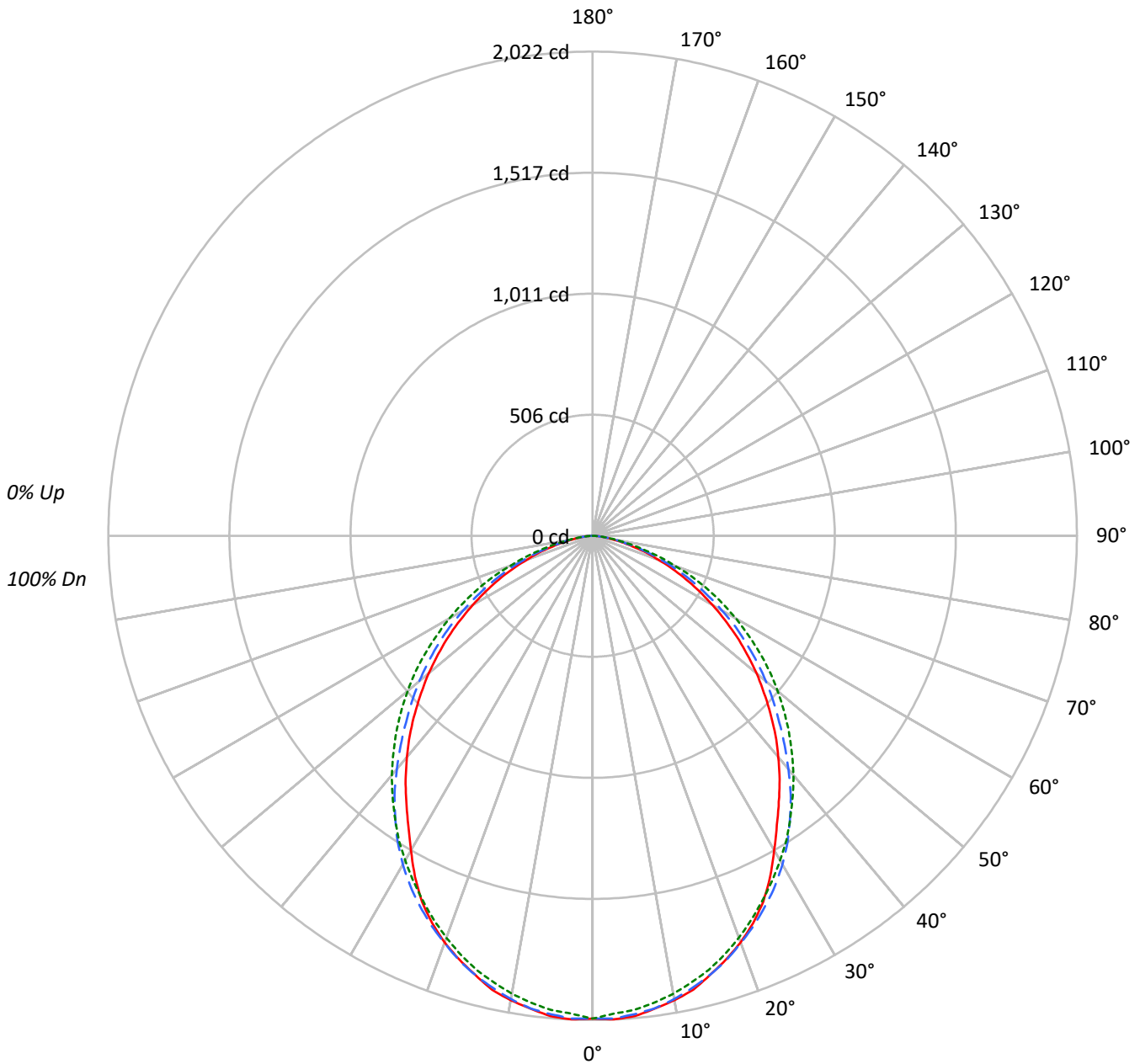
Lumens per Lamp: N/A
Luminaire Lumens: 4662.0 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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

TEST NUMBER: P557417

CATALOG NUMBER: FUSL-12-4-LD4-2LO-50-UNV-93-88-EDD

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°	5426	5426	5426
5°	5440	5417	5371
10°	5382	5367	5306
15°	5287	5287	5226
20°	5175	5182	5115
25°	5005	5067	4986
30°	4712	4924	4864
35°	4453	4720	4728
40°	4236	4465	4582
45°	3994	4195	4410
50°	3739	3953	4222
55°	3449	3678	3993
60°	3106	3356	3714
65°	2742	2984	3379
70°	2286	2541	2870
75°	1796	2030	2247
80°	1285	1429	1584
85°	837	837	790



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.8	4.1
10°-20°	533.3	11.4
20°-30°	779.3	16.7
30°-40°	884.6	19.0
40°-50°	854.0	18.3
50°-60°	704.4	15.1
60°-70°	469.1	10.1
70°-80°	209.9	4.5
80°-90°	37.5	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°	1502.4	32.2
0°-40°	2387.0	51.2
0°-60°	3945.4	84.6
0°-90°	4662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4662.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2016	2016	2016	2016	2016	
5°	2014	2013	2005	1994	1988	191
15°	1898	1902	1898	1889	1876	535
25°	1686	1699	1706	1694	1679	772
35°	1356	1374	1437	1445	1439	849
45°	1050	1067	1102	1153	1159	810
55°	735	748	784	827	851	656
65°	431	442	469	502	531	427
75°	173	182	195	204	216	189
85°	27	27	27	26	26	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2016.2	2016.2	2016.2	2016.2	2016.2
2.5°	2021.6	2022.4	2017.7	2005.4	1997.6
5°	2013.9	2013.1	2005.4	1994.5	1988.3
7.5°	1991.4	1993.0	1990.6	1975.1	1966.6
10°	1969.7	1970.5	1964.3	1951.9	1941.8
12.5°	1941.8	1941.1	1932.5	1926.3	1910.1
15°	1897.7	1902.3	1897.7	1889.2	1876.0
17.5°	1855.1	1855.1	1858.2	1843.5	1833.4
20°	1807.1	1809.4	1809.4	1797.8	1786.1
22.5°	1751.3	1758.3	1760.6	1748.2	1734.3
25°	1685.5	1698.6	1706.4	1694.0	1679.3
27.5°	1605.7	1625.8	1649.1	1639.8	1623.5
30°	1516.6	1546.0	1584.8	1577.0	1565.4
32.5°	1432.2	1461.6	1515.1	1512.0	1505.8
35°	1355.5	1374.1	1436.8	1444.6	1439.1
37.5°	1282.7	1299.7	1358.6	1376.4	1371.8
40°	1206.0	1224.6	1271.1	1302.8	1304.4
42.5°	1130.1	1147.9	1185.9	1231.6	1231.6
45°	1049.5	1067.4	1102.2	1152.6	1158.8
47.5°	970.5	989.1	1023.2	1073.5	1083.6
50°	893.1	910.1	944.2	993.0	1008.5
52.5°	812.5	831.1	864.4	909.3	931.8
55°	735.1	747.5	783.9	827.2	851.2
57.5°	654.5	666.1	707.2	744.4	769.1
60°	577.1	591.8	623.5	661.5	690.1
62.5°	502.7	518.2	545.3	578.6	611.1
65°	430.7	442.3	468.6	501.9	530.6
67.5°	360.9	371.0	397.4	420.6	450.8
70°	290.5	303.6	323.0	345.5	364.8
72.5°	233.9	239.3	255.6	271.9	292.0
75°	172.7	182.0	195.2	204.5	216.1
77.5°	123.9	129.4	137.1	144.8	155.7
80°	82.9	85.2	92.2	93.7	102.2
82.5°	50.3	51.9	53.4	54.2	57.3
85°	27.1	27.1	27.1	25.6	25.6
87.5°	15.5	15.5	13.2	10.8	7.7
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)