

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: P557412

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-93-86-EDD-90**

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: P557412
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-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

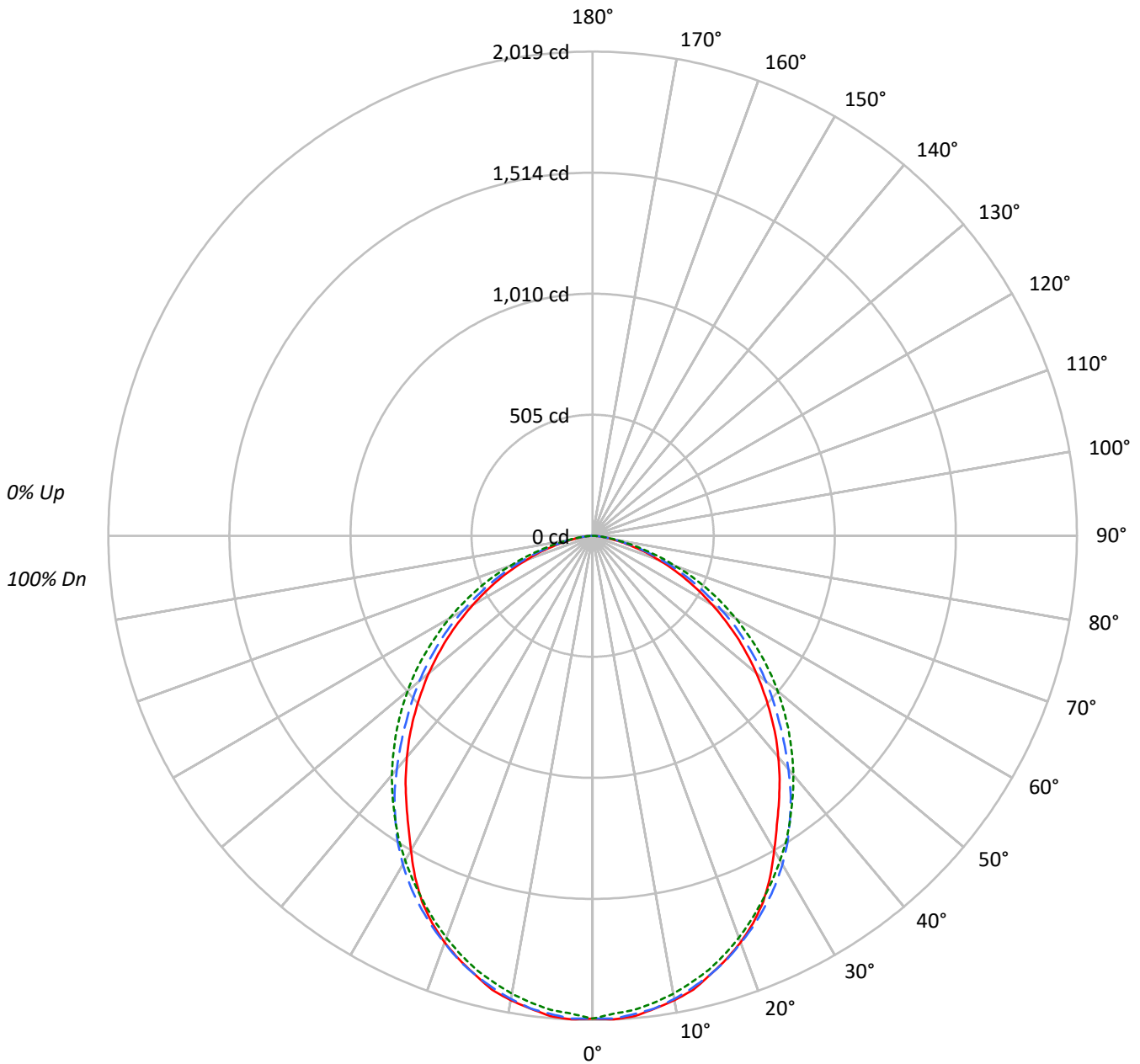
Lumens per Lamp: N/A
Luminaire Lumens: 4655.0 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	5417	5417	5417
5°	5432	5409	5363
10°	5374	5359	5298
15°	5279	5279	5219
20°	5167	5174	5107
25°	4997	5059	4978
30°	4705	4917	4857
35°	4446	4713	4721
40°	4230	4458	4575
45°	3988	4188	4403
50°	3733	3947	4216
55°	3444	3672	3988
60°	3101	3351	3709
65°	2738	2979	3373
70°	2282	2537	2866
75°	1794	2026	2244
80°	1283	1426	1582
85°	837	837	787



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.5	4.1
10°-20°	532.5	11.4
20°-30°	778.1	16.7
30°-40°	883.3	19.0
40°-50°	852.7	18.3
50°-60°	703.4	15.1
60°-70°	468.4	10.1
70°-80°	209.6	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°	1500.2	32.2
0°-40°	2383.4	51.2
0°-60°	3939.5	84.6
0°-90°	4655.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4655.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2013	2013	2013	2013	2013	
5°	2011	2010	2002	1992	1985	190
15°	1895	1900	1895	1886	1873	534
25°	1683	1696	1704	1691	1677	771
35°	1354	1372	1435	1442	1437	848
45°	1048	1066	1101	1151	1157	809
55°	734	746	783	826	850	655
65°	430	442	468	501	530	426
75°	172	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°	2013.2	2013.2	2013.2	2013.2	2013.2
2.5°	2018.6	2019.4	2014.7	2002.3	1994.6
5°	2010.8	2010.1	2002.3	1991.5	1985.3
7.5°	1988.4	1990.0	1987.6	1972.2	1963.7
10°	1966.8	1967.5	1961.3	1949.0	1938.9
12.5°	1938.9	1938.1	1929.6	1923.5	1907.2
15°	1894.8	1899.5	1894.8	1886.3	1873.2
17.5°	1852.3	1852.3	1855.4	1840.7	1830.6
20°	1804.3	1806.7	1806.7	1795.1	1783.5
22.5°	1748.7	1755.6	1757.9	1745.6	1731.6
25°	1682.9	1696.1	1703.8	1691.4	1676.7
27.5°	1603.3	1623.4	1646.6	1637.3	1621.1
30°	1514.3	1543.7	1582.4	1574.6	1563.0
32.5°	1430.0	1459.4	1512.8	1509.7	1503.5
35°	1353.5	1372.0	1434.7	1442.4	1437.0
37.5°	1280.8	1297.8	1356.5	1374.3	1369.7
40°	1204.2	1222.7	1269.2	1300.9	1302.4
42.5°	1128.4	1146.2	1184.1	1229.7	1229.7
45°	1048.0	1065.7	1100.6	1150.8	1157.0
47.5°	969.1	987.6	1021.7	1071.9	1082.0
50°	891.7	908.7	942.8	991.5	1007.0
52.5°	811.3	829.9	863.1	908.0	930.4
55°	734.0	746.3	782.7	826.0	850.0
57.5°	653.5	665.1	706.1	743.2	768.0
60°	576.2	590.9	622.6	660.5	689.1
62.5°	501.9	517.4	544.5	577.7	610.2
65°	430.0	441.6	467.9	501.2	529.8
67.5°	360.4	370.5	396.8	420.0	450.1
70°	290.0	303.2	322.5	344.9	364.3
72.5°	233.6	239.0	255.2	271.5	291.6
75°	172.5	181.7	194.9	204.2	215.8
77.5°	123.7	129.2	136.9	144.6	155.5
80°	82.8	85.1	92.0	93.6	102.1
82.5°	50.3	51.8	53.4	54.1	57.2
85°	27.1	27.1	27.1	25.5	25.5
87.5°	15.5	15.5	13.1	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)