

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: P557199

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-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: P557199
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-30-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 3000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

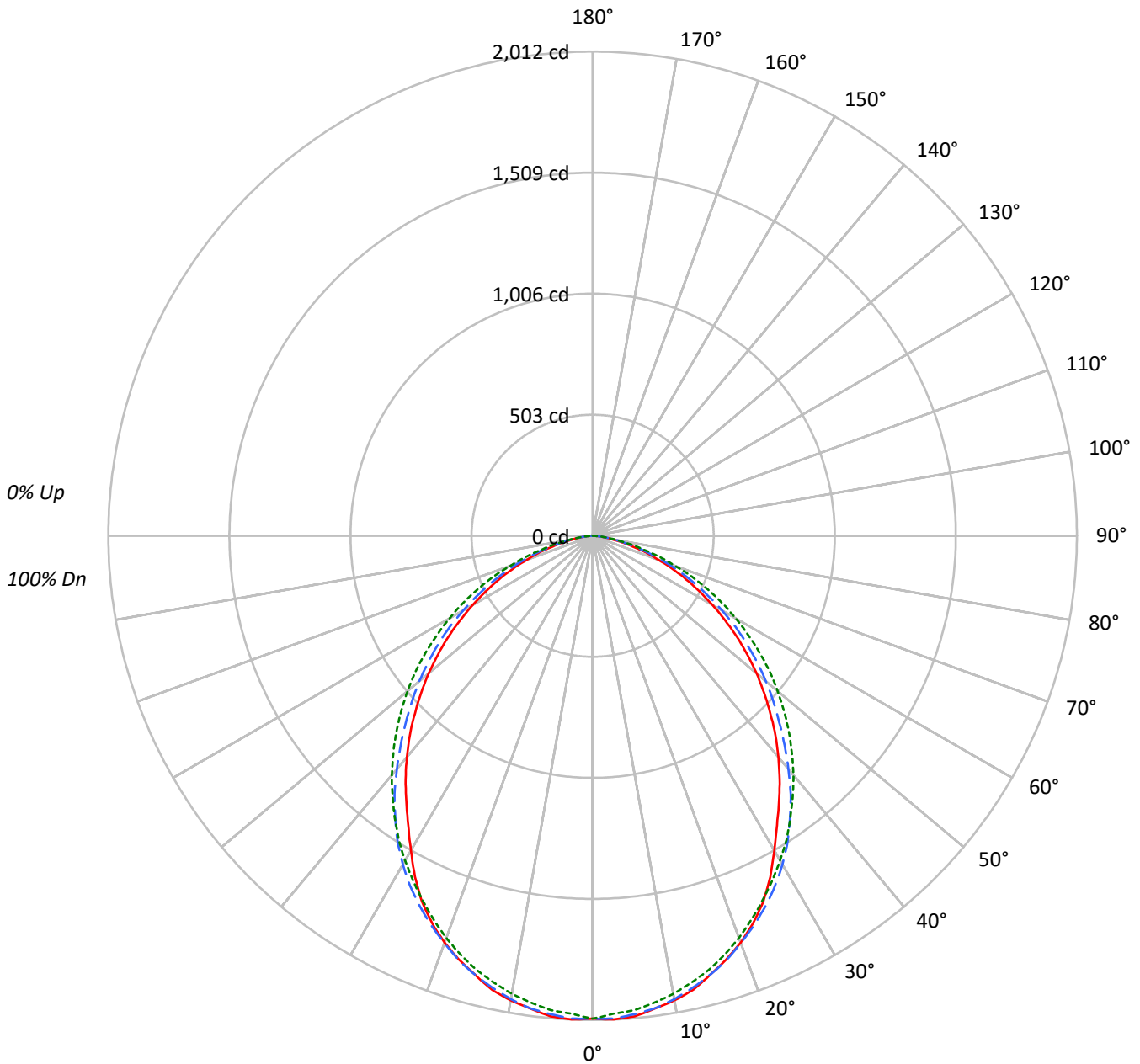
Lumens per Lamp: N/A
Luminaire Lumens: 4640.0 lumens
Efficiency: N/A
Efficacy: 99.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5400	5400	5400
5°	5414	5391	5346
10°	5357	5342	5281
15°	5262	5262	5202
20°	5150	5157	5091
25°	4981	5043	4962
30°	4690	4901	4841
35°	4432	4698	4706
40°	4216	4444	4560
45°	3975	4175	4389
50°	3721	3934	4202
55°	3432	3660	3975
60°	3091	3340	3697
65°	2729	2970	3363
70°	2275	2530	2857
75°	1787	2020	2236
80°	1278	1421	1578
85°	834	834	784



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.9	4.1
10°-20°	530.8	11.4
20°-30°	775.6	16.7
30°-40°	880.4	19.0
40°-50°	849.9	18.3
50°-60°	701.1	15.1
60°-70°	466.9	10.1
70°-80°	208.9	4.5
80°-90°	37.4	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°	1495.3	32.2
0°-40°	2375.8	51.2
0°-60°	3926.8	84.6
0°-90°	4640.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4640.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2007	2007	2007	2007	2007	
5°	2004	2004	1996	1985	1979	190
15°	1889	1893	1889	1880	1867	532
25°	1678	1691	1698	1686	1671	768
35°	1349	1368	1430	1438	1432	845
45°	1045	1062	1097	1147	1153	806
55°	732	744	780	823	847	653
65°	429	440	466	500	528	425
75°	172	181	194	204	215	188
85°	27	27	27	25	25	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2006.7	2006.7	2006.7	2006.7	2006.7
2.5°	2012.1	2012.8	2008.2	1995.9	1988.2
5°	2004.4	2003.6	1995.9	1985.1	1978.9
7.5°	1982.0	1983.6	1981.2	1965.8	1957.3
10°	1960.4	1961.2	1955.0	1942.7	1932.7
12.5°	1932.7	1931.9	1923.4	1917.3	1901.1
15°	1888.7	1893.4	1888.7	1880.3	1867.1
17.5°	1846.3	1846.3	1849.4	1834.8	1824.7
20°	1798.5	1800.8	1800.8	1789.3	1777.7
22.5°	1743.0	1750.0	1752.3	1739.9	1726.1
25°	1677.5	1690.6	1698.3	1686.0	1671.3
27.5°	1598.1	1618.1	1641.3	1632.0	1615.8
30°	1509.4	1538.7	1577.3	1569.6	1558.0
32.5°	1425.4	1454.7	1507.9	1504.8	1498.7
35°	1349.1	1367.6	1430.0	1437.7	1432.4
37.5°	1276.6	1293.6	1352.2	1369.9	1365.3
40°	1200.3	1218.8	1265.1	1296.7	1298.2
42.5°	1124.8	1142.5	1180.3	1225.7	1225.7
45°	1044.6	1062.3	1097.0	1147.1	1153.3
47.5°	966.0	984.5	1018.4	1068.5	1078.5
50°	888.9	905.8	939.7	988.3	1003.7
52.5°	808.7	827.2	860.3	905.0	927.4
55°	731.6	743.9	780.2	823.3	847.2
57.5°	651.4	663.0	703.8	740.8	765.5
60°	574.3	589.0	620.6	658.4	686.9
62.5°	500.3	515.7	542.7	575.9	608.2
65°	428.6	440.2	466.4	499.6	528.1
67.5°	359.2	369.3	395.5	418.6	448.7
70°	289.1	302.2	321.5	343.8	363.1
72.5°	232.8	238.2	254.4	270.6	290.6
75°	171.9	181.2	194.3	203.5	215.1
77.5°	123.3	128.7	136.5	144.2	155.0
80°	82.5	84.8	91.7	93.3	101.8
82.5°	50.1	51.7	53.2	54.0	57.0
85°	27.0	27.0	27.0	25.4	25.4
87.5°	15.4	15.4	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)