

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: P557319

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-81-87-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: P557319
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-40-UNV-81-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC 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

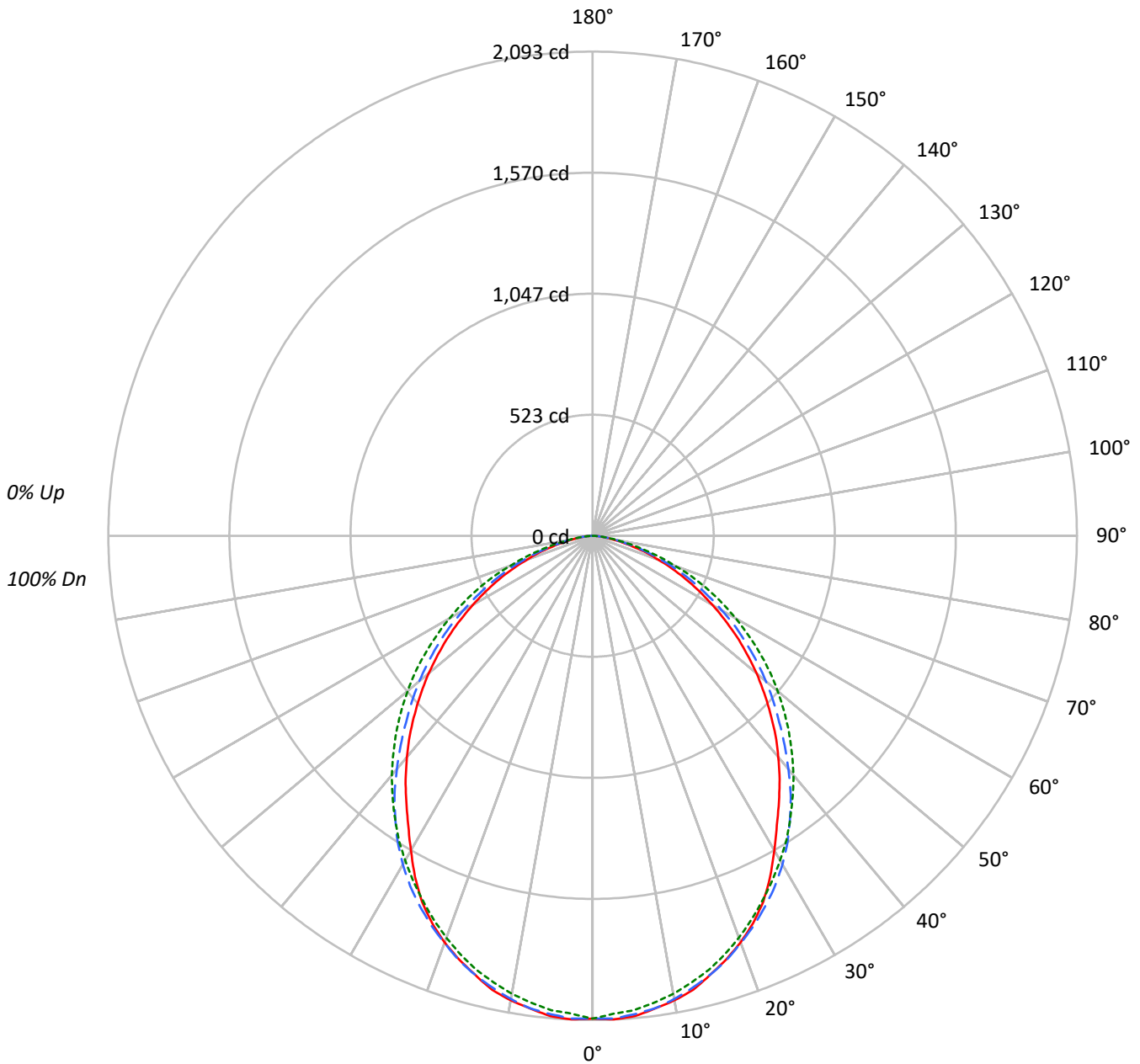
Lumens per Lamp: N/A
Luminaire Lumens: 4826.0 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (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°	5616	5616	5616
5°	5631	5608	5560
10°	5572	5556	5493
15°	5473	5473	5410
20°	5357	5364	5295
25°	5180	5245	5161
30°	4878	5097	5035
35°	4610	4886	4894
40°	4385	4622	4743
45°	4135	4342	4565
50°	3870	4092	4371
55°	3570	3807	4134
60°	3215	3474	3845
65°	2839	3089	3497
70°	2366	2631	2972
75°	1859	2101	2326
80°	1330	1478	1640
85°	868	868	818



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.5	4.1
10°-20°	552.0	11.4
20°-30°	806.7	16.7
30°-40°	915.7	19.0
40°-50°	884.0	18.3
50°-60°	729.2	15.1
60°-70°	485.6	10.1
70°-80°	217.3	4.5
80°-90°	38.9	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°	1555.3	32.2
0°-40°	2471.0	51.2
0°-60°	4084.2	84.6
0°-90°	4826.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4826.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2087	2087	2087	2087	2087	
5°	2085	2084	2076	2065	2058	197
15°	1964	1969	1964	1956	1942	554
25°	1745	1758	1766	1754	1738	799
35°	1403	1422	1487	1495	1490	879
45°	1086	1105	1141	1193	1200	838
55°	761	774	811	856	881	679
65°	446	458	485	520	549	442
75°	179	188	202	212	224	196
85°	28	28	28	26	26	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2087.1	2087.1	2087.1	2087.1	2087.1
2.5°	2092.7	2093.5	2088.7	2075.9	2067.9
5°	2084.7	2083.9	2075.9	2064.7	2058.3
7.5°	2061.5	2063.1	2060.7	2044.6	2035.8
10°	2039.0	2039.8	2033.4	2020.6	2010.1
12.5°	2010.1	2009.3	2000.5	1994.1	1977.3
15°	1964.4	1969.3	1964.4	1955.6	1942.0
17.5°	1920.3	1920.3	1923.6	1908.3	1897.9
20°	1870.6	1873.0	1873.0	1861.0	1849.0
22.5°	1812.9	1820.1	1822.5	1809.7	1795.3
25°	1744.7	1758.4	1766.4	1753.6	1738.3
27.5°	1662.2	1683.0	1707.1	1697.4	1680.6
30°	1570.0	1600.4	1640.5	1632.5	1620.5
32.5°	1482.6	1513.0	1568.3	1565.1	1558.7
35°	1403.2	1422.4	1487.4	1495.4	1489.8
37.5°	1327.8	1345.4	1406.4	1424.8	1420.0
40°	1248.4	1267.7	1315.8	1348.7	1350.3
42.5°	1169.8	1188.3	1227.6	1274.9	1274.9
45°	1086.5	1104.9	1141.0	1193.1	1199.5
47.5°	1004.7	1023.9	1059.2	1111.3	1121.7
50°	924.5	942.1	977.4	1027.9	1044.0
52.5°	841.1	860.3	894.8	941.3	964.6
55°	760.9	773.7	811.4	856.3	881.2
57.5°	677.5	689.6	732.1	770.5	796.2
60°	597.4	612.6	645.5	684.7	714.4
62.5°	520.4	536.4	564.5	599.0	632.6
65°	445.8	457.8	485.1	519.6	549.2
67.5°	373.6	384.1	411.3	435.4	466.7
70°	300.7	314.3	334.4	357.6	377.7
72.5°	242.1	247.8	264.6	281.4	302.3
75°	178.8	188.4	202.1	211.7	223.7
77.5°	128.3	133.9	141.9	149.9	161.2
80°	85.8	88.2	95.4	97.0	105.8
82.5°	52.1	53.7	55.3	56.1	59.3
85°	28.1	28.1	28.1	26.5	26.5
87.5°	16.0	16.0	13.6	11.2	8.0
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)