

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: 168P124

Luminaire Tested: **CFSLP12-332-120-IK12**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 168P124
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: CFSLP12-332-120-IK12
Description: 1 X 4 Fail-Safe Series with a Prismatic Acrylic Lens
Light Source: Three - FO32/35K - 2800 Lumens ea. - 32 Watts ea.
Ballast/Driver: Motorola M3-IN-T8-GP-D-120 Electronic - L.O.B.F. = 85.4

Summary

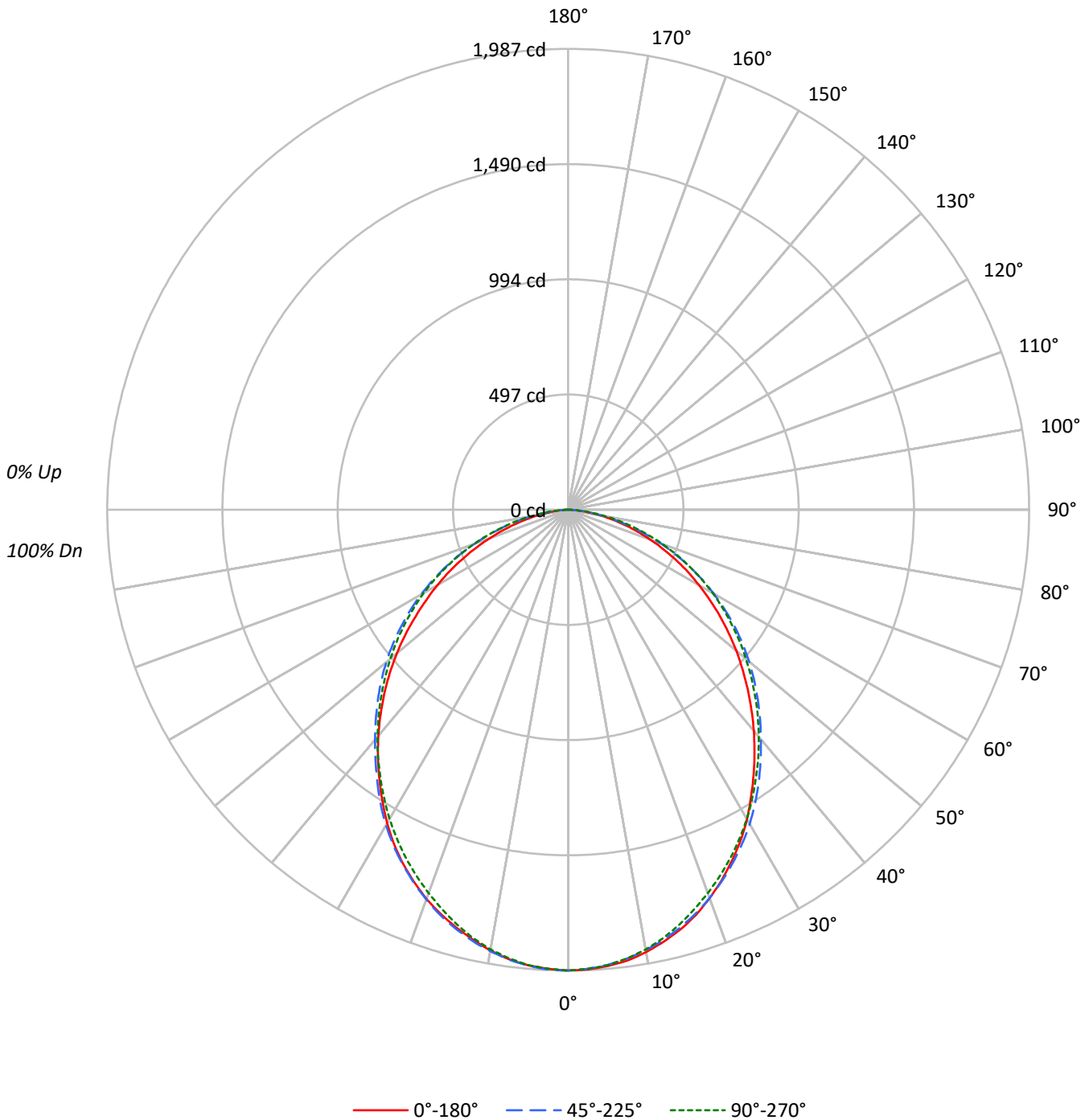
Lumens per Lamp: 2800 (3 lamps)
Luminaire Lumens: 4922.1 lumens
Efficiency: 58.6%
Efficacy: 62.3 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.71' x L: 0.71' x H: 0')
CIE Type: Direct

Input Watts (W): 79
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

TEST NUMBER: 168P124

CATALOG NUMBER: CFSLP12-332-120-IK12

Luminous Intensity Polar Plot





TEST NUMBER: 168P124

CATALOG NUMBER: CFSLP12-332-120-IK12

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	70	70	70	70	68	68	68	68	65	65	65	62	62	62	60	60	60	59
1	64	61	59	57	62	60	58	56	58	56	54	55	54	52	53	52	51	50
2	58	54	50	47	57	53	49	46	51	48	45	49	46	44	47	45	43	42
3	53	47	43	39	52	47	42	39	45	41	38	43	40	37	42	39	37	36
4	49	42	37	33	48	41	37	33	40	36	33	39	35	32	37	34	32	31
5	45	38	33	29	44	37	32	29	36	32	28	35	31	28	34	30	28	27
6	42	34	29	25	41	34	29	25	33	28	25	32	28	25	31	27	25	23
7	39	31	26	22	38	31	26	22	30	25	22	29	25	22	28	25	22	21
8	36	28	23	20	35	28	23	20	27	23	20	26	23	20	26	22	20	19
9	34	26	21	18	33	26	21	18	25	21	18	24	21	18	24	20	18	17
10	32	24	20	17	31	24	19	16	23	19	16	23	19	16	22	19	16	15

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8120	8120	8120
5°	8101	8085	8089
10°	8037	7988	8008
15°	7924	7835	7890
20°	7754	7649	7767
25°	7530	7467	7593
30°	7276	7267	7366
35°	6949	7039	7079
40°	6641	6817	6791
45°	6322	6588	6478
50°	6014	6357	6128
55°	5678	6127	5721
60°	5320	5876	5329
65°	4951	5560	4864
70°	4492	5149	4289
75°	3963	4610	3631
80°	3247	3859	2847
85°	2157	2813	1829



TEST NUMBER: 168P124

CATALOG NUMBER: CFSLP12-332-120-IK12

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	187.0	3.8	2.2	0°	1987	1987	1987	1987	1987	
10°-20°	525.5	10.7	6.3	5°	1975	1970	1971	1974	1972	187
20°-30°	771.4	15.7	9.2	15°	1873	1865	1852	1871	1865	527
30°-40°	888.1	18.0	10.6	25°	1670	1680	1656	1688	1684	769
40°-50°	879.2	17.9	10.5	35°	1393	1432	1411	1434	1419	872
50°-60°	761.0	15.5	9.1	45°	1094	1155	1140	1160	1121	844
60°-70°	552.8	11.2	6.6	55°	797	874	860	880	803	713
70°-80°	291.7	5.9	3.5	65°	512	574	575	581	503	507
80°-90°	65.6	1.3	0.8	75°	251	278	292	285	230	267
90°-100°	0.0	0.0	0.0	85°	46	50	60	53	39	58
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	2
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	1483.8	30.1	17.7	165°	0	0	0	0	0	0
0°-40°	2371.8	48.2	28.2	175°	0	0	0	0	0	0
0°-60°	4012.1	81.5	47.8	180°	0	0	0	0	0	0
0°-90°	4922.1	100.0	58.6							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	4922.1	100.0	58.6							



TEST NUMBER: 168P124

CATALOG NUMBER: CFSLP12-332-120-IK12

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1987	1987	1987	1987	1987	1987	1987	1987	1987
2.5°	1984	1986	1981	1979	1981	1983	1985	1988	1981
5°	1975	1976	1970	1966	1971	1973	1974	1978	1972
7.5°	1961	1959	1952	1946	1951	1956	1957	1960	1955
10°	1937	1935	1928	1921	1925	1931	1933	1937	1930
12.5°	1907	1906	1900	1889	1892	1901	1905	1909	1899
15°	1873	1873	1865	1852	1852	1864	1871	1875	1865
17.5°	1832	1835	1826	1808	1807	1823	1833	1836	1828
20°	1783	1791	1782	1762	1759	1778	1789	1790	1786
22.5°	1729	1739	1733	1713	1709	1729	1740	1740	1737
25°	1670	1683	1680	1662	1656	1677	1688	1684	1684
27.5°	1609	1623	1624	1607	1599	1621	1632	1625	1626
30°	1542	1558	1565	1547	1540	1561	1571	1560	1561
32.5°	1467	1485	1500	1483	1476	1497	1505	1488	1490
35°	1393	1412	1432	1416	1411	1428	1434	1415	1419
37.5°	1319	1340	1362	1349	1346	1360	1364	1344	1347
40°	1245	1268	1292	1281	1278	1293	1295	1274	1273
42.5°	1169	1196	1224	1214	1210	1225	1227	1202	1197
45°	1094	1123	1155	1146	1140	1157	1160	1129	1121
47.5°	1019	1050	1087	1075	1070	1087	1093	1055	1043
50°	946	976	1017	1005	1000	1017	1023	981	964
52.5°	871	902	947	934	931	946	953	905	885
55°	797	827	874	863	860	875	880	830	803
57.5°	723	751	799	791	790	804	807	755	726
60°	651	678	724	720	719	733	733	682	652
62.5°	582	605	650	648	647	662	657	608	577
65°	512	531	574	576	575	588	581	536	503
67.5°	443	460	498	503	503	514	506	463	431
70°	376	389	423	430	431	442	430	392	359
72.5°	312	320	349	358	360	369	357	323	293
75°	251	254	278	287	292	298	285	257	230
77.5°	192	193	210	221	226	229	217	195	173
80°	138	136	148	159	164	166	154	138	121
82.5°	90	87	94	103	108	109	99	89	77
85°	46	45	50	57	60	61	53	46	39
87.5°	15	14	16	21	23	24	18	15	12
90°	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0



TEST NUMBER: 168P124

CATALOG NUMBER: CFSLP12-332-120-IK12

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0

(END OF REPORT)