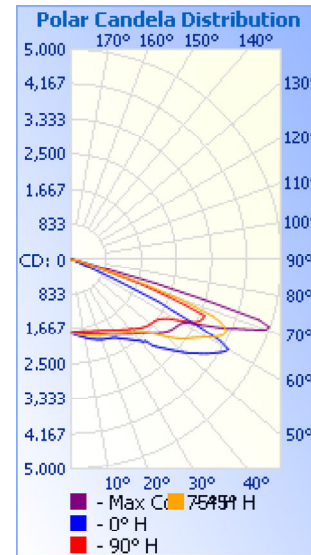


Photometrics Pro

Luminaire Photometric Report

Filename: Street Light STZM 100W
Manufacturer: SARIN Energy Inc.
Luminaire: SES-STZM-5700-100
Lamp Output: 1 lamp, rated Lumens/lamp: 9500
Max Candela: 4,996.1 at Horizontal: 75°, Vertical: 71°
Input Wattage: 100
Luminous Opening: Point
Test Date: 2014.8.13
Photometry : Type C
Nema Type: 7 X 5



Roadway Summary

Cutoff Classification:	CUTOFF
Distribution:	TYPE III, MEDIUM
Max Cd, 90 Deg Vert:	26.5
Max Cd, 80 to <90 Deg:	712.6
	Lumens % Lamp
Downward Street Side:	6,292.9 66.2%
Downward House Side:	3,166.6 33.3%
Downward Total:	9,459.5 99.6%
Total Lumens:	9,459.5 99.6%

Flood Summary

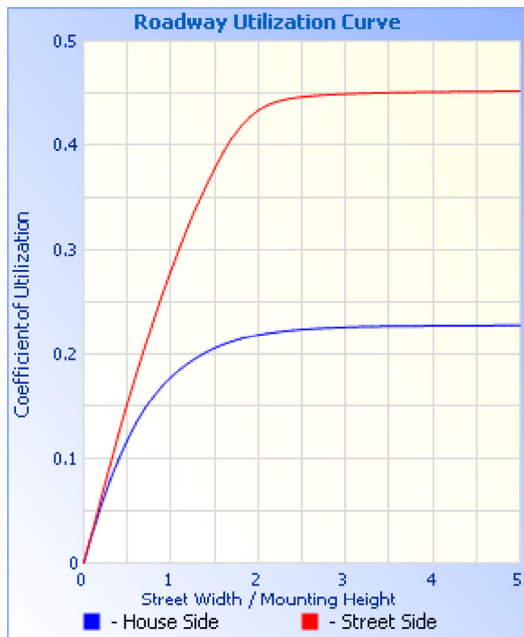
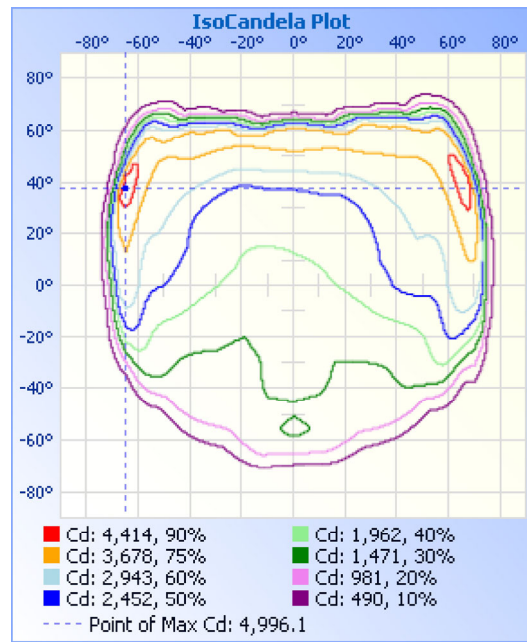
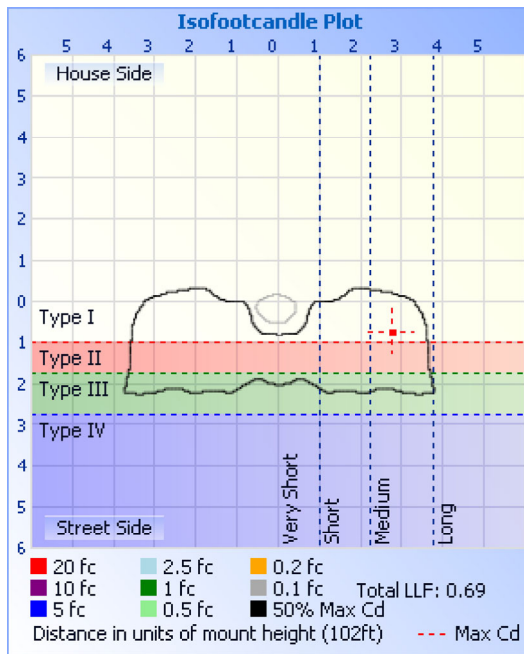
	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	97%	9,215.1	147.1	96.5
Beam (50%):	46.9%	4,458.6	43.6	65.5
Total:	99.5%	9,456.0		

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	1,545.3	16.3%	16.3%
0-40	2,782.0	29.3%	29.4%
0-60	6,611.9	69.6%	69.9%
60-90	2,847.0	30%	30.1%
0-90	9,458.9	99.6%	100%

Lumens Per Zone

Zone	Lumens	% Total
0-10	169.0	1.8%
10-20	511.7	5.4%
20-30	864.6	9.1%
30-40	1,236.7	13.1%
40-50	1,657.8	17.5%
50-60	2,172.2	23.0%
60-70	2,045.2	21.6%
70-80	737.2	7.8%
80-90	64.7	0.7%



Illuminance at a Distance

	Center Beam fc	Beam Width
16.7ft	6.34 fc	21.5 ft 13.4 ft
33.3ft	1.59 fc	42.8 ft 26.6 ft
50.0ft	0.71 fc	64.3 ft 40.0 ft
66.7ft	0.40 fc	85.8 ft 53.3 ft
83.3ft	0.25 fc	107.2 ft 66.6 ft
100.0ft	0.18 fc	128.7 ft 80.0 ft

■ Vert. Spread: 65.5°
■ Horiz. Spread: 43.6°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50				30				10				0
RW %:	70	50	30	0	70	50	30	0	50	30	20	0	50	30	20	0	50	30	20	0	
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.11	1.06	1.06	1.06	1.06	1.02	1.02	1.02	1.00	
1	1.07	1.02	.97	.93	1.04	1.00	.95	.82	.95	.92	.89	.86	.92	.89	.86	.83	.88	.86	.83	.81	
2	.96	.87	.79	.73	.93	.85	.78	.66	.81	.75	.70	.68	.78	.73	.68	.67	.75	.70	.67	.64	
3	.86	.74	.65	.57	.83	.72	.64	.53	.69	.62	.56	.55	.66	.60	.55	.54	.64	.58	.54	.51	
4	.77	.64	.54	.47	.75	.62	.53	.44	.60	.52	.45	.45	.57	.50	.45	.44	.55	.49	.44	.42	
5	.70	.56	.46	.38	.68	.55	.45	.37	.52	.44	.38	.37	.50	.43	.37	.37	.48	.42	.37	.34	
6	.64	.49	.39	.32	.62	.48	.39	.31	.46	.38	.32	.32	.45	.37	.31	.31	.43	.36	.31	.29	
7	.59	.44	.34	.28	.57	.43	.34	.27	.41	.33	.27	.27	.40	.33	.27	.27	.39	.32	.27	.25	
8	.54	.40	.30	.24	.53	.39	.30	.23	.37	.29	.24	.24	.36	.29	.23	.23	.35	.28	.23	.21	
9	.50	.36	.27	.21	.49	.35	.27	.20	.34	.26	.21	.21	.33	.26	.21	.21	.32	.25	.20	.19	

10 | .47 .33 .24 .19 | .46 .32 .24 .18 | .31 .24 .18 | .30 .23 .18 | .29 .23 .18 | .16

Candela Table - Type C

	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360
0	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768	1768
1	1787	1782	1779	1776	1772	1767	1760	1756	1755	1751	1750	1751	1748	1753	1754	1759	1765	1770	1774	1779	1779	1783	1781	1785	1787
2	1802	1795	1789	1783	1775	1768	1755	1747	1738	1736	1725	1733	1729	1738	1738	1751	1761	1772	1781	1790	1789	1798	1795	1800	1802
3	1817	1809	1797	1792	1778	1769	1750	1737	1724	1721	1703	1713	1705	1721	1722	1743	1759	1774	1787	1803	1803	1815	1809	1817	1817
4	1830	1822	1807	1800	1784	1771	1748	1729	1717	1704	1691	1694	1682	1703	1707	1734	1756	1778	1795	1815	1821	1831	1829	1833	1830
5	1843	1833	1822	1808	1791	1774	1747	1722	1709	1690	1675	1674	1669	1686	1697	1724	1754	1782	1806	1828	1838	1846	1850	1848	1843
6	1855	1847	1835	1818	1798	1778	1746	1717	1700	1676	1659	1653	1655	1668	1687	1716	1750	1786	1819	1842	1855	1864	1869	1866	1855
7	1871	1859	1846	1826	1802	1783	1747	1711	1691	1660	1642	1636	1641	1653	1674	1706	1747	1790	1829	1856	1869	1879	1884	1881	1871
8	1888	1873	1854	1836	1807	1790	1749	1708	1682	1648	1626	1620	1626	1639	1659	1698	1743	1794	1838	1870	1881	1896	1897	1898	1888
9	1902	1887	1862	1845	1815	1796	1752	1705	1675	1635	1614	1606	1613	1627	1650	1689	1737	1798	1846	1884	1892	1911	1911	1915	1902
10	1918	1900	1877	1854	1825	1805	1756	1704	1670	1623	1605	1595	1608	1617	1644	1681	1731	1802	1860	1899	1911	1926	1932	1931	1918
11	1933	1913	1891	1864	1835	1813	1759	1704	1665	1614	1599	1585	1602	1608	1636	1673	1729	1806	1877	1915	1929	1943	1951	1945	1933
12	1948	1925	1902	1874	1845	1822	1765	1705	1660	1606	1593	1577	1596	1599	1629	1664	1723	1810	1889	1931	1947	1957	1969	1961	1948
13	1965	1937	1912	1884	1853	1832	1772	1706	1655	1599	1586	1570	1588	1593	1623	1656	1718	1814	1900	1948	1962	1972	1982	1975	1965
14	1978	1949	1919	1895	1861	1841	1778	1707	1647	1593	1579	1564	1581	1588	1616	1647	1714	1819	1912	1968	1973	1988	1994	1990	1978
15	1993	1961	1930	1904	1869	1850	1787	1708	1639	1586	1573	1558	1578	1582	1608	1638	1708	1825	1929	1986	1987	2001	2005	2004	1993
16	2004	1972	1944	1914	1882	1861	1794	1708	1634	1579	1569	1553	1576	1577	1602	1631	1706	1831	1948	2004	2009	2015	2024	2015	2004
17	2018	1982	1956	1924	1894	1871	1799	1708	1628	1572	1564	1548	1574	1573	1599	1623	1703	1838	1971	2026	2030	2030	2041	2026	2018
18	2032	1993	1967	1933	1906	1882	1806	1708	1620	1564	1559	1544	1574	1571	1595	1615	1701	1846	1989	2046	2047	2045	2055	2039	2032
19	2046	2004	1975	1942	1914	1893	1815	1707	1609	1557	1553	1542	1575	1570	1588	1608	1700	1854	2004	2067	2063	2059	2066	2050	2046
20	2058	2015	1983	1952	1921	1905	1827	1707	1598	1548	1547	1540	1579	1569	1583	1601	1700	1863	2020	2091	2076	2075	2075	2062	2058
21	2069	2025	1992	1961	1931	1919	1838	1707	1592	1537	1543	1539	1583	1571	1579	1595	1701	1872	2038	2112	2097	2088	2087	2071	2069
22	2078	2034	2004	1969	1944	1932	1846	1709	1587	1526	1538	1539	1586	1572	1576	1589	1702	1881	2062	2134	2122	2102	2101	2081	2078
23	2085	2045	2013	1977	1958	1946	1856	1710	1580	1514	1532	1541	1592	1575	1572	1584	1704	1892	2088	2158	2145	2118	2114	2091	2085
24	2095	2055	2020	1985	1973	1962	1871	1713	1575	1501	1526	1543	1596	1579	1567	1580	1707	1902	2112	2182	2167	2132	2124	2101	2095
25	2105	2065	2027	1994	1983	1978	1887	1717	1572	1491	1520	1546	1599	1582	1561	1577	1710	1912	2130	2201	2184	2148	2133	2111	2105
26	2115	2077	2032	2004	1992	1996	1905	1721	1569	1480	1512	1549	1600	1584	1552	1575	1713	1924	2149	2245	2201	2163	2141	2125	2115
27	2127	2091	2038	2013	2004	2015	1920	1727	1567	1468	1504	1551	1602	1585	1544	1572	1715	1935	2166	2258	2220	2180	2151	2140	2127
28	2142	2110	2049	2026	2021	2034	1934	1732	1566	1459	1495	1551	1602	1585	1535	1568	1716	1945	2191	2275	2247	2202	2164	2161	2142
29	2162	2135	2061	2039	2039	2053	1949	1738	1566	1450	1483	1550	1603	1584	1523	1564	1714	1955	2220	2304	2273	2224	2181	2191	2162
30	2190	2163	2075	2053	2058	2075	1968	1745	1566	1442	1470	1549	1603	1581	1510	1559	1712	1965	2245	2326	2299	2247	2201	2221	2190
31	2221	2190	2089	2070	2073	2096	1986	1752	1565	1436	1455	1547	1603	1579	1497	1553	1707	1975	2264	2355	2318	2269	2219	2250	2221
32	2253	2217	2101	2088	2087	2116	2006	1759	1564	1430	1440	1547	1604	1576	1481	1544	1700	1983	2282	2380	2336	2291	2235	2280	2253
33	2286	2275	2115	2105	2106	2140	2031	1766	1563	1423	1425	1545	1604	1573	1467	1533	1691	1990	2304	2408	2358	2307	2254	2310	2286
34	2319	2283	2139	2124	2129	2163	2051	1773	1560	1417	1412	1544	1604	1569	1457	1523	1681	1994	2334	2436	2386	2333	2284	2342	2319
35	2354	2315	2165	2143	2154	2188	2067	1780	1556	1410	1398	1545	1600	1565	1444	1511	1668	1998	2367	2468	2416	2355	2315	2377	2354
36	2395	2351	2193	2162	2180	2217	2085	1787	1551	1403	1384	1544	1595	1560	1431	1497	1657	1997	2394	2497	2447	2382	2348	2416	2395
37	2434	2391	2212	2185	2199	2246	2110	1794	1545	1396	1372	1543	1588	1554	1416	1486	1645	1996	2418	2531	2469	2408	2372	2450	2434
38	2476	2432	2232	2208	2217	2275	2142	1800	1536	1388	1360	1538	1579	1544	1403	1473	1631	1994	2439	2571	2491	2440	2396	2495	2476
39	2523	2476	2256	2232	2239	2304	2164	1806	1526	1380	1345	1532	1567	1533	1389	1461	1616	1990	2466	2605	2519	2468	2425	2545	2523
40	2574	2532	2296	2291	2269	2333	2182	1811	1517	1369	1330	1524	1552	1520	1372	1448	1606	1987	2501	2649	2557	2499	2471	2601	2574
41	2641	2594	2338	2299	2304	2362	2200	1816	1505	1357	1314	1514	1530	1505	1355	1433	1592	1981	2531	2691	2597	2539	2521	2667	2641
42	2648	2666	2386	2328	2330	2398	2256	1820	1492	1345	1295	1503	1506	1488	1339	1421	1579	1974	2554	2730	2615	2573	2577	2730	2648
43	2839	2735	2424	2370	2351	2427	2271	1822	1480	1332	1273	1488	1486	1469	1322	1409	1567	1969	2573	2768	2685	2628	2620	2800	2839
44	2922	2817	2463	2411	2376	2466	2307	1821	1464	1316	1255	1470	1473	1446	1304	1395	1557	1964	2583	2814	2713	2669	2627	2887	2922
45	3010	2895	2529	2464	2413	2512	2335	1820	1447	1301	1233	1448	1466	1424	1287	1384	1552	1960	2594	2845	2753	2723	2749	2957	3010
46	3089	2984	2618	2533	2461	2555	2358	1818	1433	1286	1212	1427	1464	1404	1273	1372	1549	1955	2602	2879	2806	2790	2847	3035	3089
47	3179	3072	2655	2600	2518	2601	2383	1814	1418	1268	1192	1411	1462	1391	1260	1360	1550	1952	2600	2905	2861	2843	2937	3120	3179
48	3273	3158	2834	2677	2565	2649	2406	1809	1403	1251	1177	1401	1459	1384	1250	1350	1553	1950	2592	2924	2900	2910	3014	3202	3273
49	3370	3239	2908	2774	2609	2699	2425	1803	1387	1234	1164	1395	1461	1382	1245	1339	1559	1950	2583	2938	2940	2982	3075	3273	3370
50	3474	3328	2978	2864	2656	2749	2436	1795	1375	1216	1155	1389	1466	1380	12										

52	3665	3488	3200	3064	2832	2838	2467	1782	1357	1185	1144	1385	1489	1390	1258	1305	1574	1970	2560	2939	3067	3189	3300	3513	3665
53	3755	3565	3292	3164	2910	2879	2475	1780	1352	1174	1140	1389	1505	1401	1260	1297	1570	1984	2572	2938	3101	3245	3394	3581	3755
54	3856	3640	3380	3256	2992	2911	2495	1783	1351	1167	1135	1399	1521	1413	1256	1294	1561	2002	2595	2943	3127	3292	3494	3649	3856
55	3951	3721	3447	3331	3060	2938	2523	1790	1348	1160	1126	1408	1529	1422	1241	1289	1550	2030	2606	2955	3145	3335	3580	3724	3951
56	4038	3785	3507	3399	3122	2964	2565	1805	1343	1151	1109	1414	1523	1423	1216	1279	1532	2063	2670	2975	3163	3372	3656	3797	4038
57	4125	3843	3596	3465	3192	2978	2620	1828	1327	1138	1077	1413	1500	1415	1175	1262	1502	2103	2729	2986	3184	3417	3768	3865	4125
58	4214	3906	3711	3549	3261	3002	2681	1859	1293	1114	1042	1405	1474	1395	1119	1229	1459	2150	2809	3007	3205	3490	3907	3936	4214
59	4291	3931	3823	3640	3313	3028	2788	1894	1243	1081	993	1387	1438	1363	1057	1185	1390	2194	2914	3030	3232	3577	4013	3975	4291
60	4321	3803	3918	3740	3327	3065	2925	1919	1166	1037	922	1358	1387	1322	981	1125	1295	2231	3001	3071	3259	3677	4100	3931	4321
61	4091	3120	3994	3850	3325	3139	3056	1929	1049	971	846	1316	1323	1265	887	1043	1158	2247	3086	3146	3281	3781	4178	3647	4091
62	3518	2436	4042	3948	3326	3291	3200	1911	927	895	776	1267	1263	1199	801	954	1027	2232	3177	3271	3306	3876	4229	2594	3518
63	2748	1731	4065	4035	3345	3472	3325	1857	790	805	687	1208	1173	1118	699	852	879	2169	3286	3423	3360	3971	4286	2325	2748
64	2316	1185	3905	4074	3415	3662	3394	1761	641	701	616	1137	1060	1024	613	740	738	2065	3374	3549	3455	4040	4242	1620	2316
65	1293	718	3397	4074	3551	3881	3435	1605	513	606	544	1065	929	936	527	636	596	1910	3442	3699	3590	4081	4078	1003	1293
66	726	451	2771	4004	3668	4086	3455	1408	389	504	460	976	785	833	436	536	471	1687	3476	3845	3731	4092	3756	575	726
67	438	305	2323	3868	3786	4255	3455	1146	281	418	381	884	634	735	361	434	347	1436	3504	3990	3844	4076	3378	365	438
68	307	243	1748	3647	3888	4484	2943	855	231	337	330	771	552	623	304	347	272	1139	3508	4191	3945	4015	2830	273	307
69	256	214	1046	3142	3967	4728	2431	574	202	276	290	653	488	512	267	282	228	869	3487	4443	4071	3889	1896	237	256
70	228	187	542	2637	3962	4940	1918	362	182	239	263	545	436	419	242	239	201	624	3387	4673	4121	3683	962	210	228
71	195	163	344	1883	3887	4996	1406	258	165	213	236	475	333	360	219	213	183	435	3170	4873	4132	3113	527	185	195
72	168	140	283	1224	3814	4714	893	219	149	191	209	422	213	320	198	195	168	312	2928	4918	4122	2543	402	161	168
73	143	121	250	746	3725	3400	460	192	136	172	176	340	149	276	176	179	155	257	2585	4711	4115	1644	332	139	143
74	123	106	214	494	3512	2087	315	171	123	153	128	223	124	195	147	163	143	221	1785	4108	4033	949	275	120	123
75	110	93	178	361	3042	928	261	155	113	137	98	151	108	136	113	149	132	197	984	2515	3715	579	226	104	110
76	96	82	150	293	2334	569	227	139	100	122	82	122	94	111	90	134	120	178	479	1406	3170	399	193	92	96
77	81	71	124	258	1456	398	197	125	89	108	71	101	81	93	77	120	110	163	340	750	2538	325	167	81	81
78	70	64	107	228	879	314	167	107	78	92	60	86	70	80	67	107	98	149	289	491	1895	288	148	69	70
79	63	58	91	200	595	265	142	93	65	71	51	73	59	69	58	94	87	135	261	373	1252	260	130	61	63
80	60	54	74	172	399	220	115	79	53	59	44	62	51	60	50	74	76	121	226	314	713	238	105	57	60
81	54	49	61	141	312	187	91	65	39	49	37	53	42	52	43	62	65	105	200	271	508	216	81	52	54
82	49	46	53	102	253	161	65	52	30	41	31	46	34	45	38	52	54	90	177	233	408	194	67	48	49
83	47	42	47	70	211	134	42	43	25	33	25	39	18	38	32	44	41	77	151	202	344	167	60	44	47
84	41	36	42	47	160	104	28	37	20	26	21	33	14	32	26	36	31	63	122	175	278	130	53	40	41
85	37	33	38	36	116	71	22	31	14	17	16	27	10	27	21	29	24	50	99	150	229	84	45	35	37
86	32	30	34	25	74	38	15	19	10	11	11	22	7	22	18	21	20	42	75	126	180	48	39	32	32
87	28	29	31	20	44	20	7	11	3	6	3	14	4	16	10	14	15	35	48	102	132	33	34	31	28
88	26	26	25	15	23	7	0	5	1	3	0	4	1	9	3	9	10	27	30	70	90	24	32	29	26
89	22	22	18	8	13	1	1	1	0	0	0	0	0	2	0	5	4	14	19	36	57	18	26	26	22
90	14	19	10	2	1	1	1	1	1	0	0	1	1	0	0	1	2	7	10	21	27	16	19	23	14

Luminaire Report Summary

IESNA:LM-63-2002
[TEST]
[TESTDATE] 2014.8.13
[TESTLAB]
[ISSUE DATE] 2014-08-14 08:56:09
[MANUFAC] SARIN Energy Inc.
[LUMINAIRE] SES-STZM-5700-100
[_TOTALLUMINAIRELUMENS] 9458.9
[_LAMPPOSITION] 0,0
[OTHER] EVERFINE GO-2000B SYSTEM
FILE: CANDELA MULTIPLIER: 1
FILE: VERTICAL ANGLES: 91, HORIZONTAL ANGLES: 25
FILE: COORDINATE SYSTEM: TYPE C
FILE: UNIT OF MEASURE: METRIC
FILE: BALLAST FACTOR: 1

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Reported data calculated from manufacturer's data file, based on IES recommended methods.