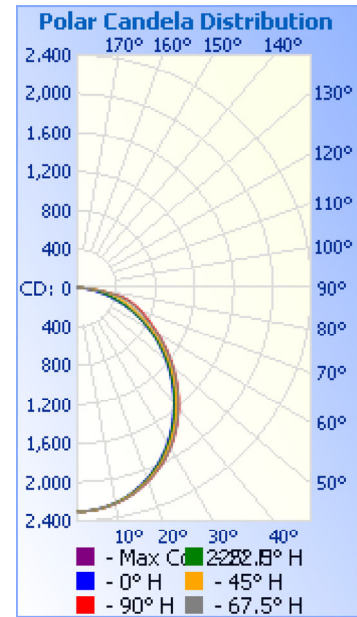


Photometrics Pro

Luminaire Photometric Report

Filename: Troffer 2x4 50W TR24DN - 120V
Manufacturer: SARIN Energy Inc.
Luminaire: SES-TR24DN40-4000- 50 120V
Lamp Output: Total luminaire Lumens: 6274.4
Max Candela: 2,311.4 at Horizontal: 225°, Vertical: 1°
Input Wattage: 50
Luminous Opening: Point
Test Date: 2017-11-17
Test Lab: Standard-Tech Co. Ltd
Photometry : Type C
Nema Type: 7 X 7

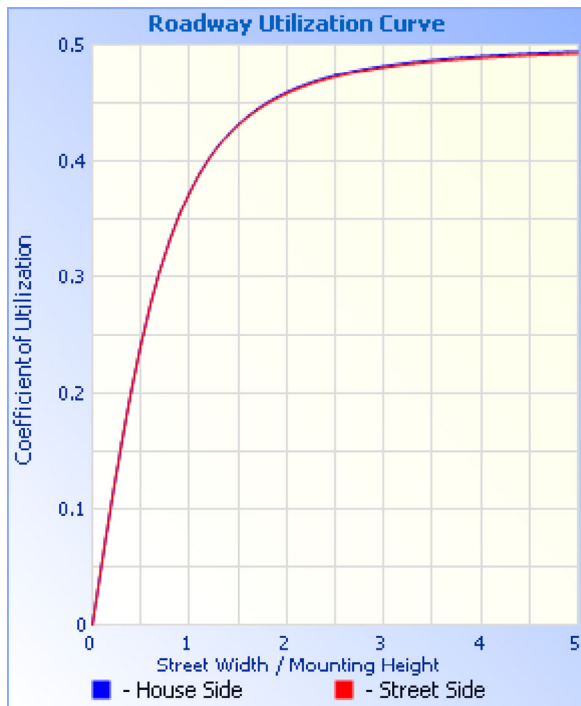
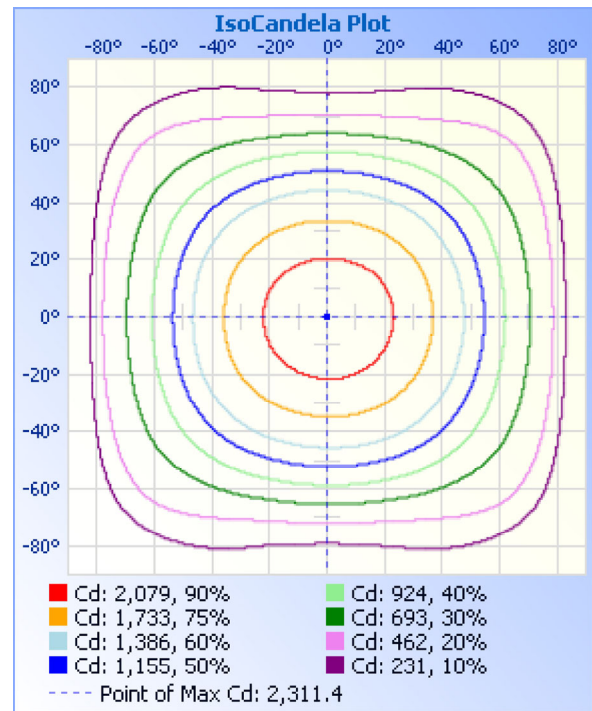
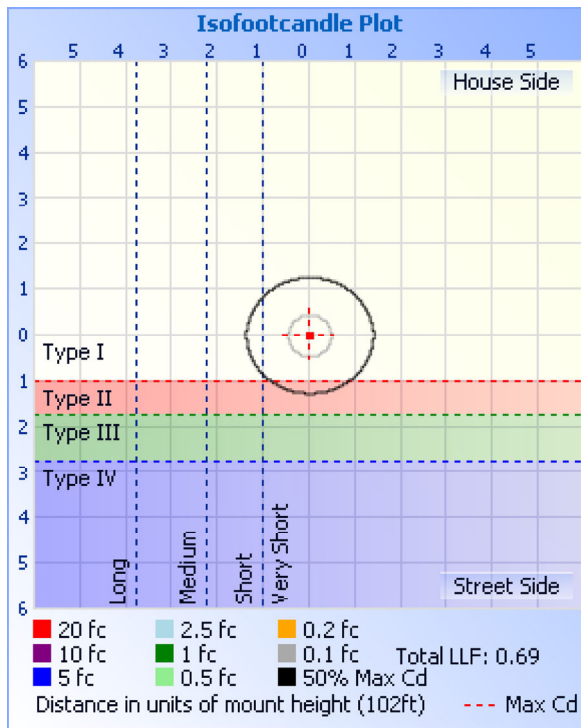


Roadway Summary		
Cutoff Classification:	CUTOFF	
Distribution:	Type VS	
Max Cd, 90 Deg Vert:	1.4	
Max Cd, 80 to <90 Deg:	384.3	
	Lumens	% Lamp
Downward Street Side:	3,126.2	49.8%
Downward House Side:	3,146.4	50.1%
Downward Total:	6,272.6	100%
Upward Street Side:	1.3	0%
Upward House Side:	1.1	0%
Upward Total:	2.5	0%
Total Lumens:	6,275.0	100%

Flood Summary				
	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	98.7%	6,191.5	165.2	156.9
Beam (50%):	67.5%	4,236.8	108.4	103.1
Total:	100%	6,272.0		

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,763.1	28.1%
0-40	2,851.8	45.5%
0-60	4,912.6	78.3%
60-90	1,359.4	21.7%
70-100	618.7	9.9%
90-120	1.5	0%
0-90	6,272.0	100%
90-180	2.5	0%
0-180	6,274.4	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	218.1	3.5%	90-100	0.6	0%
10-20	620.0	9.9%	100-110	0.5	0%
20-30	924.9	14.7%	110-120	0.4	0%
30-40	1,088.8	17.4%	120-130	0.2	0%
40-50	1,096.2	17.5%	130-140	0.2	0%
50-60	964.6	15.4%	140-150	0.2	0%
60-70	741.3	11.8%	150-160	0.2	0%
70-80	484.1	7.7%	160-170	0.1	0%
80-90	134.0	2.1%	170-180	0.1	0%



Illuminance at a Distance

	Center Beam fc	Beam Width	
16.7ft	8.28 fc	42.1 ft	46.3 ft
33.3ft	2.08 fc	83.9 ft	92.4 ft
50.0ft	0.92 fc	126.0 ft	138.7 ft
66.7ft	0.52 fc	168.0 ft	185.1 ft
83.3ft	0.33 fc	209.9 ft	231.1 ft
100.0ft	0.23 fc	251.9 ft	277.5 ft

Vert. Spread: 103.1°
 Horiz. Spread: 108.4°

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	50	30	20	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	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.09	1.04	.99	.95	1.06	1.01	.97	.84	.97	.94	.91	.93	.91	.88	.90	.87	.85	.83
2	.99	.90	.83	.78	.96	.88	.82	.71	.85	.79	.75	.82	.77	.73	.78	.75	.71	.69
3	.90	.79	.71	.65	.87	.78	.70	.60	.75	.68	.63	.72	.66	.62	.69	.65	.61	.58

4	.82	.70	.62	.55	.80	.69	.61	.52	.66	.59	.54	.64	.58	.53	.62	.57	.52	.50
5	.76	.63	.54	.47	.74	.62	.53	.45	.60	.52	.46	.58	.51	.46	.56	.50	.45	.43
6	.70	.57	.48	.41	.68	.56	.47	.40	.54	.46	.41	.52	.46	.40	.51	.45	.40	.38
7	.65	.51	.43	.37	.63	.51	.42	.35	.49	.42	.36	.48	.41	.36	.46	.40	.36	.34
8	.61	.47	.39	.33	.59	.46	.38	.32	.45	.38	.32	.44	.37	.32	.43	.36	.32	.30
9	.57	.43	.35	.29	.55	.43	.35	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27
10	.53	.40	.32	.27	.52	.39	.32	.26	.38	.31	.27	.37	.31	.26	.37	.31	.26	.25

Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	2310	2310	2310	2310	2310	2310	2310	2310	2310	2310	2310	2310	2310	2310	2310	2310	2310
1	2309	2310	2311	2310	2310	2310	2308	2310	2310	2310	2311	2310	2310	2310	2309	2309	2309
2	2308	2308	2308	2309	2309	2309	2305	2308	2309	2309	2309	2309	2310	2310	2308	2308	2308
3	2304	2305	2307	2307	2306	2307	2303	2305	2306	2307	2307	2306	2307	2308	2306	2304	2304
4	2299	2302	2303	2302	2302	2302	2300	2302	2303	2303	2304	2303	2304	2304	2303	2300	2299
5	2294	2297	2298	2299	2298	2298	2295	2297	2297	2300	2298	2299	2300	2300	2299	2296	2294
6	2288	2290	2292	2293	2294	2293	2288	2291	2294	2294	2294	2293	2295	2296	2293	2290	2288
7	2281	2283	2285	2286	2287	2286	2282	2284	2285	2286	2288	2287	2290	2290	2288	2284	2281
8	2273	2273	2277	2280	2280	2280	2275	2275	2279	2278	2281	2280	2284	2283	2280	2276	2273
9	2263	2265	2269	2272	2272	2271	2266	2266	2269	2270	2271	2272	2277	2275	2273	2266	2263
10	2254	2256	2259	2263	2263	2262	2257	2256	2260	2259	2263	2264	2267	2265	2263	2256	2254
11	2242	2243	2248	2253	2254	2253	2247	2245	2249	2249	2253	2254	2258	2256	2252	2245	2242
12	2230	2233	2236	2243	2243	2241	2235	2233	2237	2237	2241	2242	2247	2246	2242	2233	2230
13	2216	2219	2225	2233	2231	2230	2223	2221	2223	2224	2229	2232	2236	2234	2229	2220	2216
14	2201	2204	2213	2220	2220	2216	2210	2206	2208	2211	2215	2219	2225	2221	2217	2204	2201
15	2185	2189	2196	2206	2207	2204	2196	2191	2194	2197	2202	2205	2212	2208	2203	2189	2185
16	2169	2174	2181	2192	2193	2190	2181	2176	2177	2179	2187	2192	2197	2194	2187	2173	2169
17	2151	2156	2165	2177	2177	2175	2165	2159	2161	2164	2172	2177	2184	2179	2172	2156	2151
18	2132	2139	2148	2159	2161	2157	2149	2142	2142	2146	2156	2160	2167	2163	2155	2137	2132
19	2113	2119	2130	2143	2145	2141	2131	2123	2123	2128	2138	2142	2151	2147	2137	2119	2113
20	2094	2100	2112	2125	2128	2123	2114	2103	2104	2109	2118	2125	2134	2128	2117	2098	2094
21	2072	2079	2092	2107	2109	2105	2094	2083	2084	2088	2099	2107	2117	2111	2099	2077	2072
22	2050	2058	2072	2088	2090	2086	2074	2061	2063	2067	2080	2088	2097	2090	2078	2058	2050
23	2028	2035	2050	2067	2070	2065	2052	2037	2040	2047	2058	2067	2078	2070	2056	2035	2028
24	2005	2013	2028	2048	2049	2045	2032	2016	2015	2023	2037	2045	2058	2049	2034	2012	2005
25	1979	1989	2006	2025	2028	2022	2009	1992	1991	1999	2014	2025	2036	2027	2010	1987	1979
26	1955	1964	1981	2002	2005	2001	1985	1968	1966	1974	1991	2001	2014	2004	1987	1962	1955
27	1928	1939	1957	1979	1982	1977	1962	1942	1941	1949	1967	1979	1991	1981	1963	1937	1928
28	1903	1913	1931	1956	1958	1954	1937	1917	1915	1925	1942	1954	1967	1956	1937	1912	1903
29	1875	1886	1905	1931	1933	1929	1912	1890	1888	1898	1916	1928	1942	1930	1912	1884	1875
30	1848	1859	1879	1905	1908	1904	1886	1862	1861	1870	1890	1902	1918	1904	1884	1858	1848
31	1819	1831	1853	1878	1882	1877	1859	1834	1831	1843	1863	1877	1892	1879	1858	1829	1819
32	1790	1803	1824	1851	1856	1851	1831	1806	1803	1814	1835	1849	1866	1851	1829	1800	1790
33	1761	1772	1795	1824	1827	1823	1804	1777	1773	1785	1807	1822	1838	1823	1800	1771	1761
34	1730	1743	1766	1795	1799	1796	1774	1748	1742	1756	1779	1794	1810	1795	1772	1742	1730
35	1700	1713	1736	1767	1771	1767	1745	1718	1714	1727	1749	1765	1781	1766	1742	1710	1700
36	1669	1682	1708	1738	1741	1738	1715	1687	1682	1696	1719	1735	1753	1736	1711	1681	1669
37	1636	1652	1677	1707	1712	1707	1684	1655	1650	1665	1689	1706	1722	1705	1682	1650	1636
38	1606	1619	1646	1677	1681	1678	1653	1624	1618	1633	1658	1675	1692	1675	1651	1617	1606
39	1573	1587	1614	1645	1651	1647	1622	1592	1587	1601	1627	1645	1661	1643	1619	1585	1573
40	1541	1554	1583	1614	1619	1616	1590	1560	1555	1568	1594	1612	1630	1612	1586	1553	1541
41	1507	1521	1550	1583	1588	1584	1557	1527	1522	1536	1563	1582	1599	1580	1554	1520	1507
42	1475	1488	1517	1550	1555	1552	1525	1494	1488	1504	1530	1549	1566	1547	1520	1486	1475
43	1442	1455	1484	1517	1523	1520	1491	1459	1455	1469	1497	1516	1534	1514	1488	1453	1442
44	1408	1421	1451	1485	1490	1486	1459	1426	1421	1436	1463	1483	1501	1481	1454	1420	1408
45	1374	1387	1417	1451	1457	1454	1424	1393	1389	1402	1430	1449	1468	1446	1420	1384	1374
46	1339	1353	1384	1417	1424	1419	1390	1358	1354	1368	1395	1416	1435	1413	1386	1351	1339

47	1305	1318	1350	1384	1389	1386	1356	1324	1320	1334	1361	1383	1402	1380	1351	1316	1305
48	1271	1284	1315	1351	1357	1352	1322	1290	1286	1299	1326	1349	1368	1345	1317	1281	1271
49	1236	1249	1281	1316	1323	1319	1288	1253	1251	1264	1293	1314	1334	1311	1281	1248	1236
50	1202	1214	1247	1282	1290	1284	1252	1218	1217	1229	1258	1281	1301	1277	1246	1212	1202
51	1168	1179	1212	1249	1256	1251	1217	1183	1181	1194	1223	1247	1268	1243	1211	1177	1168
52	1133	1144	1177	1215	1223	1217	1182	1150	1147	1158	1188	1212	1234	1208	1176	1142	1133
53	1097	1109	1143	1180	1190	1183	1147	1114	1111	1124	1153	1179	1201	1176	1142	1108	1097
54	1062	1073	1109	1147	1157	1149	1112	1078	1076	1088	1118	1145	1168	1142	1106	1071	1062
55	1027	1039	1074	1114	1124	1115	1078	1044	1041	1052	1083	1113	1135	1108	1071	1036	1027
56	993	1003	1040	1080	1091	1082	1043	1008	1006	1017	1049	1079	1102	1075	1037	1001	993
57	958	968	1005	1048	1059	1049	1009	972	970	982	1014	1047	1070	1043	1002	966	958
58	922	933	972	1015	1027	1016	976	938	935	946	980	1015	1037	1010	968	930	922
59	886	898	938	983	995	983	941	903	899	911	946	982	1006	977	934	895	886
60	851	863	904	951	964	952	909	867	864	876	913	951	974	945	899	860	851
61	815	827	871	919	932	919	875	833	828	841	878	918	943	914	866	824	815
62	781	792	838	887	903	888	842	798	793	806	846	887	913	883	832	789	781
63	745	757	806	857	875	857	810	763	758	771	813	857	884	851	799	755	745
64	709	723	774	827	847	827	778	729	722	736	780	827	857	822	767	721	709
65	675	689	743	799	821	799	746	695	688	701	748	799	830	794	735	686	675
66	640	655	711	771	796	771	715	661	652	668	716	772	804	766	704	652	640
67	604	621	680	746	771	745	684	627	618	633	686	745	779	740	671	617	604
68	569	588	650	720	746	719	653	594	583	600	655	720	753	714	641	584	569
69	535	555	621	695	722	694	624	561	548	567	625	695	729	689	611	551	535
70	501	523	593	670	698	669	595	528	514	534	596	671	705	665	581	518	501
71	466	491	566	645	673	644	568	496	479	502	569	646	681	641	555	486	466
72	432	459	540	620	650	620	541	465	445	470	542	622	657	616	529	454	432
73	398	428	515	596	626	596	515	434	411	439	517	598	633	593	504	423	398
74	365	398	490	571	601	572	491	404	378	409	493	574	608	570	480	392	365
75	332	369	466	546	577	547	466	374	345	379	469	549	581	546	456	362	332
76	299	340	442	520	549	523	442	345	313	350	445	523	552	521	432	333	299
77	268	311	418	492	519	495	419	317	282	322	422	497	519	493	409	304	268
78	237	284	394	460	482	465	396	289	251	294	399	465	480	461	386	277	237
79	207	259	369	422	439	429	372	262	221	267	374	429	435	423	361	251	207
80	178	235	342	376	381	384	345	238	191	243	348	384	377	376	332	227	178
81	150	212	310	320	323	330	315	215	163	220	316	329	319	321	300	205	150
82	124	191	270	265	267	273	277	193	136	198	278	273	262	265	259	184	124
83	100	168	220	211	212	219	230	172	111	177	232	219	208	210	211	162	100
84	78	145	170	159	159	166	179	149	88	153	181	167	155	158	162	138	78
85	59	117	122	109	107	116	131	123	68	127	133	116	104	107	115	110	59
86	42	84	77	62	60	69	86	92	50	96	87	70	57	60	71	77	42
87	28	48	36	21	18	26	43	57	34	60	45	26	16	19	31	43	28
88	16	19	7	3	3	5	12	26	21	29	12	3	3	4	6	16	16
89	5	3	2	2	2	2	3	6	10	8	2	2	2	2	2	4	5
90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
91	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1
92	1	1	1	1	1	1	0	0	1	1	0	0	1	1	1	1	1
93	1	1	1	1	1	0	0	0	1	1	0	0	1	1	1	1	1
94	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1
95	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1

96	0	1	1	0	0	0	0	0	1	1	0	0	0	0	1	0	
97	0	1	1	0	0	0	0	0	2	1	0	0	0	0	1	0	
98	1	1	1	0	0	0	0	0	2	1	0	0	0	0	1	1	
99	1	1	1	0	0	0	0	0	2	1	0	0	0	0	1	1	
100	1	1	1	0	0	0	0	0	2	1	0	0	0	0	1	1	
101	1	1	1	0	0	0	0	0	2	1	0	0	0	0	1	1	
102	1	1	1	0	0	0	0	0	2	1	0	0	0	0	1	1	
103	1	1	1	0	0	0	0	0	2	1	0	0	0	0	1	1	
104	1	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	
105	1	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	
106	1	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	
107	1	1	1	0	0	0	0	0	1	0	0	0	0	0	1	1	
108	1	1	1	1	0	0	0	0	1	0	0	0	0	0	1	1	
109	1	1	1	0	0	0	0	0	1	0	0	0	0	0	1	1	
110	1	1	1	1	0	0	0	0	1	0	0	0	0	1	1	1	
111	1	1	1	1	0	0	0	0	1	0	0	0	0	1	1	1	
112	1	1	1	1	0	0	0	0	1	0	0	0	0	1	1	1	
113	1	1	1	1	0	0	0	0	1	0	0	0	0	1	1	1	
114	1	0	1	1	0	0	0	0	1	0	0	0	0	1	1	1	
115	1	0	1	1	0	0	0	0	1	0	0	0	0	1	1	1	
116	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	
117	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	
118	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	
119	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	
120	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	
121	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	
122	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0
123	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0
124	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0
125	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0
126	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0
127	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0
128	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0
129	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0
130	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0
131	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0
132	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0
133	0	0	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0
134	0	0	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0
135	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0
136	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
137	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
138	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
139	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
141	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
142	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

145	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
146	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
147	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
148	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
149	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
150	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
151	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
152	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
153	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
154	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0
155	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0
156	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0
157	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0
158	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0
159	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0
160	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0
161	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1
162	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0
163	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0
164	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1
165	1	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1
166	1	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1
167	1	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1
168	1	1	0	0	0	0	0	1	1	1	1	1	0	0	0	1
169	1	1	0	0	0	0	0	1	1	1	1	1	0	0	0	1
170	1	1	0	0	0	0	0	1	1	1	1	1	0	0	0	1
171	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1
172	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1
173	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1
174	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1
175	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	1
176	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	1
177	1	1	0	0	0	0	0	1	1	1	1	0	1	0	0	1
178	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	1
179	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	1
180	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Luminaire Report Summary

IESNA:LM-63-2002

[TEST]

[TESTDATE] 2017-11-17

[TESTLAB] Standard-Tech Co. Ltd

[ISSUEDATE] 2017-11-17 19:56:30

[MANUFAC] SARIN Energy Inc.

[LUMINAIRE] SES-TR24DN40-4000- 50 120V

[_TOTALLUMINAIRELUMENS] 6274.4

[_LAMPPOSITION] 0,0

[OTHER] EVERFINE GO-R5000_V2 SYSTEMGamma(deg) Fz(lm) Ft(lm) %Lum %Lamp0- 10 218.15

218.15 3.48 3.4810- 20 620.01 838.16 13.36 13.3620- 30 924.96 1763.12 28.10

28.1030- 40 1088.96 2852.08 45.45 45.4540- 50 1096.44 3948.52 62.92 62.9250- 60

964.80 4913.33 78.30 78.3060- 70 741.29 5654.62 90.11 90.1170- 80 484.00 6138.62

97.83 97.8380- 90 133.98 6272.60 99.96 99.9690-100 0.61 6273.22 99.97 99.97100-110

0.53 6273.75 99.98 99.98110-120 0.39 6274.14 99.99 99.99120-130 0.24 6274.38 99.99

99.99130-140 0.19 6274.57 99.99 99.99140-150 0.16 6274.73 99.99 99.99150-160 0.16

6274.89 100.00 100.00160-170 0.12 6275.01 100.00 100.00170-180 0.05 6275.07 100.00

100.00

FILE: CREATED USING ABSOLUTE PHOTOMETRY

FILE: CANDELA MULTIPLIER: 1

FILE: VERTICAL ANGLES: 181, HORIZONTAL ANGLES: 17

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.