



LM-79 Distribution Test Report (Luminaire)

Total Luminous Flux, Luminous Intensity Distribution and
Electrical Characteristics of Customer Submitted Luminaire

CURTIS-STRAUS

Report No.: PHM-RPT-180223-03
Date: February 23, 2018

LM-79 Distribution Testing: Total Luminous Flux, Luminous Intensity Distribution, Electrical Characteristics and Efficacy.

Report Prepared for:

**Vantage Lighting
181 Narragansett Park Drive
East Providence, RI 02916
USA
Telephone: (860) 564-4512**

**Description : 4" SQ ENC
Model Tested: SQ44VEFLEDU-3035K
WO/CS#: S0461**

**Report Issue Date: February 23, 2018
Date of Test(s): February 19-22, 2018
Total Number of Pages : 9 (including this page)**

Report Reviewed by:

**Mark Razvi
Photometric Lab Supervisor
Curtis-Straus**



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CURTIS-STRAUS

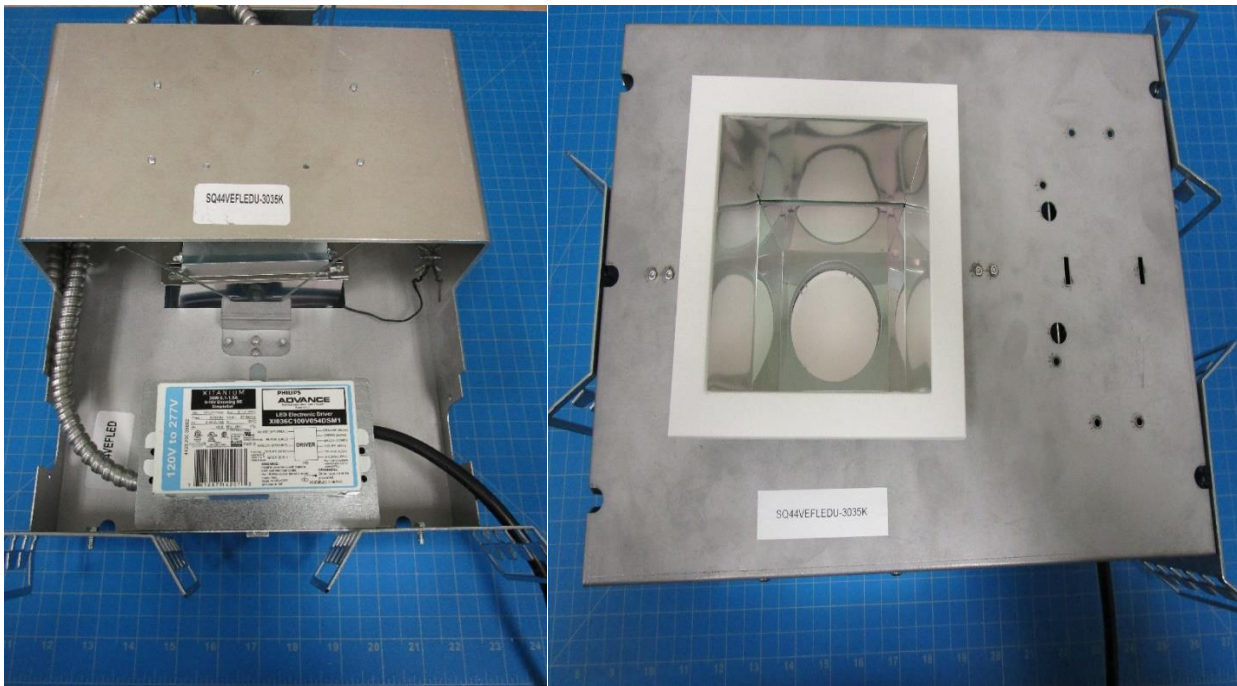
Report No.: PHM-RPT-180223-03

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DETAILED PRODUCT DESCRIPTION

Model #	SQ44VEFLEDU-3035K
CS/WO#	S0461
Description	4" SQ ENC
Supply Voltage	120VAC

Pictures:





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Curtis-Straus Photometric Testing Information

Photometric Testing is performed in accordance with the procedures outlined in LM-79-2008 . The test sample is evaluated for photometric and electrical characteristics using the equipment listed below.

Curtis-Straus Environmental Testing Info

Curtis-Straus testing laboratory temperature during testing: 25.4 °C .

LIST OF EQUIPMENT USED:

Description	Model No.	Serial No.	Asset No	Cal. Date	Cal. Due
Yokogawa Power Meter	WT-310E	C2SK10001V	2360	04-21-17	04-21-18
Chroma AC Power Supply	61603	616030001283	2355	04-21-17	04-21-18
LabSphere Type-C GoniometerSystem	PM-150-140	022172153	AA-30058-195	02-09-18	03-09-18
Digital Thermometer	4627	160739886	2392	09-07-16	09-07-18

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LM-79-2008 Distribution Test Data

Model # SQ44VEFLEDU-3035K
CS/WO# S0461
Description 4" SQ ENC
Supply Voltage 120VAC

Result of Tests

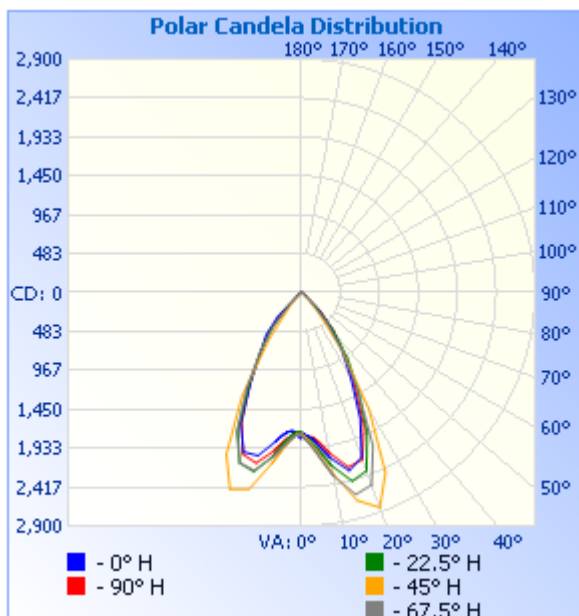
Photometric and Electrical Test Data

Input Voltage: 120 VAC

Base Orientation: Base Up

Lumens (lm)	Watts (W)	Volts (VAC)	Amps (A)	Efficacy	PF	Ithd (%)
2605.35	36.42	120.25	0.30	71.53	0.9959	0.13

Luminous Intensity Summary: Cd



Illumination Cone of Light
Mounting Ht: 10 ft.

Distance (ft)	Illuminance at a Distance	
	Center Beam fc	Beam Width
1.7ft	610 fc	1.8 ft
3.3ft	162 fc	3.5 ft
5.0ft	70.5 fc	5.3 ft
6.7ft	39.3 fc	7.0 ft
8.3ft	25.6 fc	8.7 ft
10.0ft	17.6 fc	10.5 ft

■ Vert. Spread: 55.5°
■ Horiz. Spread: 55.2°



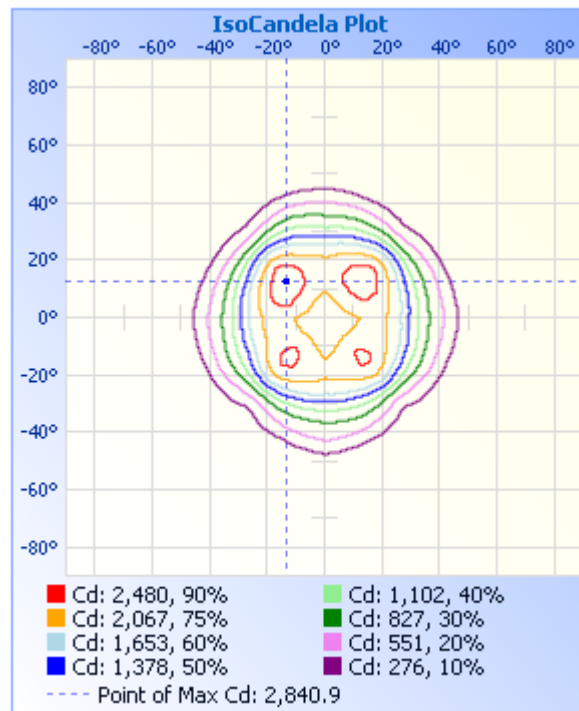
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IsoCandela Plot



Zonal Lumens Summary

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,738.1	66.7%
0-40	2,294.9	88.1%
0-60	2,523.4	96.9%
60-90	35.9	1.4%
70-100	27.5	1.1%
90-120	19.7	0.8%
0-90	2,559.3	98.2%
90-180	46.1	1.8%
0-180	2,605.3	100%

Lumens per Zone

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	187.8	7.2%	90-100	6.8	0.3%
10-20	666.8	25.6%	100-110	6.6	0.3%
20-30	883.5	33.9%	110-120	6.3	0.2%
30-40	556.8	21.4%	120-130	6.3	0.2%
40-50	190.3	7.3%	130-140	6.2	0.2%
50-60	38.2	1.5%	140-150	5.7	0.2%
60-70	15.1	0.6%	150-160	4.4	0.2%
70-80	11.5	0.4%	160-170	2.7	0.1%
80-90	9.2	0.4%	170-180	1.0	0%



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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	1763	1763	1763	1763	1763	1763	1763	1763	1763	1763	1763	1763	1763	1763	1763	1763	1763
0.1	1742	1770	1763	1788	1796	1764	1743	1729	1813	1735	1747	1760	1766	1784	1786	1783	1714
0.2	1744	1772	1766	1790	1796	1764	1743	1728	1810	1734	1748	1760	1765	1785	1789	1785	1715
0.3	1746	1775	1769	1792	1796	1764	1744	1729	1807	1734	1748	1761	1764	1785	1791	1786	1717
0.4	1748	1777	1771	1794	1796	1765	1745	1729	1804	1734	1749	1761	1763	1786	1793	1788	1718
0.5	1749	1779	1774	1797	1796	1765	1746	1729	1801	1734	1749	1761	1763	1786	1795	1789	1720
0.6	1751	1781	1776	1799	1796	1765	1746	1730	1798	1734	1750	1761	1762	1787	1797	1791	1722
0.7	1753	1783	1779	1801	1797	1765	1747	1730	1795	1734	1751	1761	1762	1787	1799	1792	1724
0.8	1755	1785	1781	1803	1797	1766	1748	1730	1792	1733	1751	1761	1761	1788	1802	1794	1726
0.9	1757	1787	1784	1806	1797	1766	1748	1731	1789	1733	1752	1762	1761	1789	1804	1796	1727
1	1759	1789	1786	1809	1797	1767	1749	1731	1787	1733	1752	1763	1761	1792	1806	1797	1729
1.1	1761	1791	1789	1812	1797	1768	1750	1731	1784	1733	1753	1764	1761	1795	1808	1799	1731
1.2	1763	1793	1792	1815	1797	1769	1750	1732	1781	1733	1754	1765	1761	1797	1810	1800	1733
1.3	1764	1795	1795	1818	1797	1770	1751	1732	1778	1733	1756	1766	1761	1800	1813	1802	1735
1.4	1766	1797	1798	1821	1797	1771	1753	1734	1775	1734	1757	1768	1761	1803	1815	1803	1737
1.5	1768	1800	1801	1824	1798	1772	1755	1735	1772	1735	1759	1769	1761	1806	1817	1805	1739
1.6	1770	1802	1805	1827	1798	1773	1757	1736	1769	1736	1761	1770	1761	1809	1819	1807	1742
1.7	1772	1804	1808	1830	1798	1774	1759	1738	1766	1736	1762	1771	1761	1811	1821	1811	1744
1.8	1774	1806	1811	1833	1798	1775	1761	1739	1763	1737	1764	1772	1761	1814	1823	1815	1747
1.9	1776	1808	1814	1836	1798	1776	1763	1741	1760	1738	1766	1773	1761	1817	1826	1819	1750
2	1778	1810	1817	1839	1798	1777	1765	1742	1758	1739	1767	1775	1761	1820	1828	1822	1752
2.1	1779	1812	1820	1843	1798	1779	1767	1744	1755	1740	1769	1776	1762	1824	1830	1826	1755
2.2	1781	1814	1824	1847	1798	1781	1769	1745	1752	1741	1771	1778	1762	1827	1832	1830	1758
2.3	1783	1816	1827	1851	1799	1783	1770	1746	1749	1741	1773	1780	1763	1831	1834	1834	1760
2.4	1785	1818	1831	1855	1799	1785	1773	1748	1746	1742	1775	1782	1764	1835	1837	1837	1763
2.5	1787	1820	1836	1859	1799	1787	1775	1750	1743	1744	1778	1784	1764	1838	1839	1841	1765
2.6	1789	1822	1840	1863	1799	1789	1778	1752	1740	1746	1780	1786	1765	1842	1841	1845	1768
2.7	1791	1824	1844	1867	1799	1791	1781	1755	1737	1748	1783	1787	1766	1846	1843	1849	1772
2.8	1793	1827	1848	1870	1799	1793	1783	1757	1734	1750	1785	1789	1767	1849	1845	1853	1775
2.9	1795	1829	1853	1874	1799	1795	1786	1760	1731	1752	1788	1791	1767	1853	1847	1858	1778
3	1796	1831	1857	1878	1800	1797	1788	1762	1728	1754	1790	1793	1768	1857	1850	1863	1782



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3.1	1798	1833	1861	1882	1800	1798	1791	1764	1726	1756	1793	1795	1769	1860	1854	1868	1785
3.2	1800	1836	1865	1887	1800	1801	1794	1767	1724	1758	1796	1798	1770	1865	1858	1873	1788
3.3	1802	1840	1870	1892	1800	1803	1796	1769	1724	1760	1798	1801	1772	1869	1863	1877	1792
3.4	1804	1844	1874	1897	1800	1806	1799	1772	1724	1762	1801	1804	1773	1873	1868	1882	1795
3.5	1806	1848	1879	1902	1800	1809	1802	1774	1724	1764	1804	1807	1775	1878	1872	1887	1798
3.6	1808	1853	1884	1907	1800	1812	1805	1777	1724	1767	1808	1810	1776	1882	1877	1892	1802
3.7	1810	1857	1888	1912	1800	1814	1809	1780	1724	1770	1811	1813	1778	1886	1881	1896	1805
3.8	1811	1861	1893	1916	1801	1817	1812	1784	1724	1773	1815	1816	1780	1891	1886	1901	1809
3.9	1813	1865	1898	1921	1801	1820	1816	1787	1724	1776	1818	1819	1781	1895	1890	1906	1813
4	1815	1870	1902	1926	1801	1823	1819	1791	1724	1778	1822	1822	1783	1899	1895	1911	1817
4.1	1818	1874	1907	1931	1801	1825	1823	1794	1724	1781	1826	1824	1785	1904	1900	1917	1821
4.2	1822	1878	1912	1936	1801	1828	1826	1798	1724	1784	1829	1827	1786	1908	1905	1922	1824
4.3	1826	1882	1916	1942	1804	1831	1830	1801	1724	1787	1833	1831	1788	1913	1910	1927	1828
4.4	1830	1887	1921	1947	1806	1834	1833	1805	1725	1790	1836	1835	1791	1918	1916	1932	1832
4.5	1834	1892	1926	1953	1809	1838	1837	1808	1726	1793	1840	1838	1793	1923	1922	1937	1836
4.6	1837	1897	1931	1958	1811	1842	1840	1812	1727	1795	1844	1842	1796	1929	1927	1942	1840
4.7	1841	1902	1937	1964	1814	1845	1844	1816	1728	1799	1849	1846	1799	1934	1933	1947	1844
4.8	1845	1907	1942	1969	1816	1849	1849	1820	1729	1803	1853	1849	1801	1939	1939	1952	1848
4.9	1849	1911	1948	1975	1819	1853	1854	1824	1730	1807	1858	1853	1804	1945	1944	1958	1852
5	1853	1916	1953	1980	1821	1856	1858	1829	1731	1811	1863	1856	1806	1950	1950	1963	1856
5.1	1857	1921	1959	1986	1824	1860	1863	1833	1732	1814	1867	1860	1809	1955	1956	1968	1861
5.2	1861	1926	1964	1991	1826	1864	1868	1838	1733	1818	1872	1864	1811	1960	1961	1974	1865
5.3	1865	1931	1970	1997	1829	1867	1873	1842	1734	1822	1876	1867	1814	1966	1967	1979	1870
5.4	1870	1936	1975	2003	1832	1871	1877	1847	1735	1826	1881	1871	1816	1971	1973	1984	1874
5.5	1874	1941	1981	2010	1835	1875	1882	1851	1737	1830	1885	1875	1819	1977	1979	1990	1879
5.6	1879	1946	1986	2016	1838	1879	1887	1856	1739	1834	1890	1879	1823	1983	1985	1995	1883
5.7	1883	1951	1992	2022	1842	1883	1891	1860	1741	1838	1895	1883	1826	1989	1992	2000	1888
5.8	1888	1956	1998	2028	1845	1888	1896	1865	1743	1842	1900	1887	1829	1994	1998	2006	1892
5.9	1892	1961	2004	2035	1848	1892	1902	1869	1745	1846	1905	1891	1832	2000	2004	2011	1897
6	1897	1966	2011	2041	1851	1896	1907	1874	1747	1850	1910	1895	1835	2006	2010	2017	1901
6.1	1901	1971	2017	2047	1854	1900	1913	1879	1748	1854	1916	1898	1838	2012	2016	2022	1906
6.2	1906	1976	2023	2053	1858	1904	1918	1884	1750	1859	1921	1902	1842	2018	2022	2028	1911
6.3	1910	1981	2029	2060	1861	1908	1924	1888	1752	1863	1926	1906	1845	2024	2029	2034	1915
6.4	1915	1986	2035	2066	1864	1912	1929	1893	1754	1867	1931	1910	1848	2029	2035	2040	1920
6.5	1920	1991	2042	2073	1868	1917	1935	1898	1756	1872	1936	1914	1851	2035	2042	2046	1925
6.6	1925	1997	2048	2079	1872	1921	1940	1903	1759	1876	1942	1918	1855	2041	2049	2052	1929
6.7	1929	2002	2054	2086	1876	1925	1946	1908	1762	1880	1947	1923	1859	2048	2056	2058	1934
6.8	1934	2007	2060	2093	1880	1930	1951	1912	1765	1884	1952	1927	1863	2054	2062	2064	1939
6.9	1939	2012	2067	2100	1884	1935	1957	1917	1767	1889	1958	1931	1866	2060	2069	2070	1943
7	1943	2017	2074	2106	1888	1939	1963	1922	1770	1894	1964	1936	1870	2066	2076	2076	1948



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7.1	1948	2022	2081	2113	1892	1944	1970	1928	1773	1899	1970	1940	1874	2072	2083	2082	1953
7.2	1953	2028	2088	2120	1896	1948	1976	1934	1776	1904	1976	1944	1878	2078	2090	2088	1957
7.3	1958	2033	2094	2127	1901	1953	1983	1939	1779	1910	1983	1949	1882	2084	2097	2094	1962
7.4	1962	2038	2101	2133	1905	1957	1989	1945	1782	1915	1989	1953	1886	2090	2104	2100	1967
7.5	1967	2043	2108	2140	1909	1962	1996	1951	1785	1920	1995	1957	1890	2096	2111	2106	1971
7.6	1972	2048	2115	2147	1913	1967	2002	1956	1787	1925	2001	1962	1893	2102	2118	2112	1976
7.7	1976	2054	2122	2154	1918	1971	2009	1962	1791	1931	2007	1966	1897	2109	2125	2119	1980
7.8	1981	2059	2129	2161	1923	1976	2015	1968	1794	1936	2013	1971	1902	2115	2133	2125	1985
7.9	1986	2065	2135	2167	1927	1982	2021	1973	1798	1941	2019	1976	1906	2121	2140	2131	1990
8	1991	2071	2143	2174	1932	1987	2028	1979	1801	1946	2026	1981	1910	2128	2147	2137	1994
8.1	1995	2077	2150	2181	1937	1992	2035	1985	1805	1952	2032	1986	1914	2134	2154	2143	1999
8.2	2000	2083	2158	2188	1942	1997	2042	1991	1809	1958	2039	1990	1918	2141	2162	2149	2003
8.3	2005	2089	2165	2194	1947	2002	2049	1997	1812	1964	2046	1995	1922	2147	2169	2155	2008
8.4	2010	2094	2172	2201	1951	2007	2056	2004	1816	1970	2052	2000	1926	2153	2176	2161	2013
8.5	2014	2100	2180	2208	1956	2012	2063	2010	1820	1976	2059	2005	1931	2160	2183	2168	2018
8.6	2019	2106	2187	2215	1961	2017	2069	2016	1823	1982	2065	2009	1935	2166	2191	2174	2023
8.7	2024	2112	2195	2222	1966	2022	2076	2022	1827	1988	2072	2014	1939	2172	2198	2180	2028
8.8	2029	2118	2202	2229	1970	2027	2083	2028	1831	1994	2078	2019	1943	2179	2205	2187	2033
8.9	2034	2123	2210	2237	1975	2033	2090	2035	1835	2000	2085	2024	1948	2185	2213	2193	2038
9	2039	2129	2217	2244	1980	2038	2097	2041	1839	2006	2092	2029	1952	2192	2220	2199	2043
9.1	2044	2135	2225	2252	1985	2043	2104	2047	1843	2012	2098	2034	1957	2198	2227	2205	2048
9.2	2050	2141	2232	2259	1989	2049	2111	2054	1847	2018	2105	2039	1961	2205	2235	2212	2053
9.3	2055	2147	2240	2267	1994	2054	2118	2060	1852	2024	2112	2044	1966	2212	2242	2218	2058
9.4	2060	2153	2247	2274	1999	2060	2126	2066	1856	2030	2118	2049	1970	2218	2250	2224	2063
9.5	2065	2158	2255	2282	2003	2065	2133	2073	1860	2036	2125	2054	1975	2225	2257	2230	2068
9.6	2070	2164	2262	2289	2008	2070	2140	2079	1864	2042	2132	2059	1979	2231	2264	2236	2073
9.7	2075	2170	2270	2297	2013	2076	2148	2086	1868	2048	2138	2064	1984	2238	2272	2242	2078
9.8	2080	2176	2277	2304	2017	2081	2155	2092	1873	2054	2145	2069	1989	2244	2279	2248	2083
9.9	2084	2182	2285	2311	2022	2087	2162	2099	1877	2060	2152	2074	1993	2251	2287	2254	2088
10	2089	2188	2292	2319	2027	2092	2169	2105	1881	2066	2159	2079	1998	2257	2295	2260	2093
15	2289	2424	2675	2596	2244	2286	2553	2355	2097	2300	2528	2284	2191	2489	2673	2509	2292
20	2177	2356	2841	2543	2205	2208	2643	2333	2106	2252	2602	2250	2137	2402	2820	2433	2170
25	1720	1927	2465	2099	1827	1806	2252	1960	1790	1879	2215	1912	1767	1953	2429	1976	1715
30	1228	1407	1672	1397	1302	1300	1489	1318	1252	1295	1479	1363	1275	1376	1657	1369	1221
35	876	995	866	870	889	906	715	838	876	887	713	903	883	898	868	896	871
40	590	598	332	490	612	559	261	550	686	585	267	539	620	564	334	528	584
45	301	247	125	173	341	198	120	210	421	240	126	194	346	195	126	180	290
50	67	61	57	57	79	63	53	56	94	62	54	57	80	64	55	53	66
55	53	47	31	40	58	44	30	42	58	45	30	41	58	41	30	39	53
60	28	21	19	19	36	21	19	21	38	22	18	20	31	19	17	17	28



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65	14	12	11	12	20	13	11	13	21	13	11	13	19	12	11	11	13
70	11	12	10	11	11	11	11	12	12	12	10	12	11	11	11	11	11
75	11	11	11	10	12	10	11	11	13	10	11	11	12	10	11	11	11
80	10	10	10	9	10	10	10	11	11	10	10	10	10	9	10	9	10
85	9	9	9	8	9	9	9	9	10	9	9	9	9	9	8	8	9
90	6	6	6	6	7	6	6	6	8	6	6	6	6	6	6	6	6
95	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
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105	6	6	6	7	6	6	6	6	6	6	6	6	6	6	6	6	6
110	6	6	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6
115	6	6	7	7	6	6	6	6	6	6	6	6	7	6	7	7	6
120	6	6	7	7	7	6	6	6	6	6	6	6	6	7	7	7	6
125	7	7	8	8	7	6	6	7	6	6	6	6	7	7	9	8	6
130	7	7	9	8	7	7	7	8	7	7	7	7	7	8	10	9	7
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140	7	8	10	9	9	8	8	8	8	8	8	9	9	10	11	8	8
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175	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
180	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10