

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: HALO

Report Number: P407855

Luminaire Tested: **ALP7A40**

Issue Date: 08/27/2020

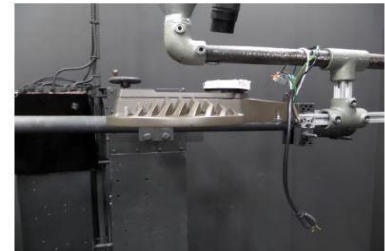
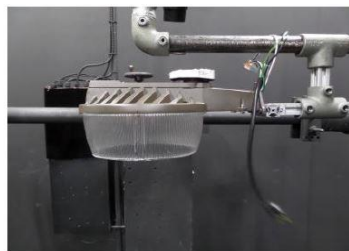
Test Information

Test Method: LM-79-08
Report Number: P407855
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2006-852-6)
Test Lab: INNOVATIONS CENTER(G1)
Issue Date: 08/27/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ALP7A40
Description: HALO OUTDOOR BARN LIGHT PREMIUM 7000LM
Light Source: (78) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7544.6 lumens
Efficiency: N/A
Efficacy: 141.8 lumens/watt
Luminous Opening: Circular (Dia: 0.67' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B2 - U0 - G0

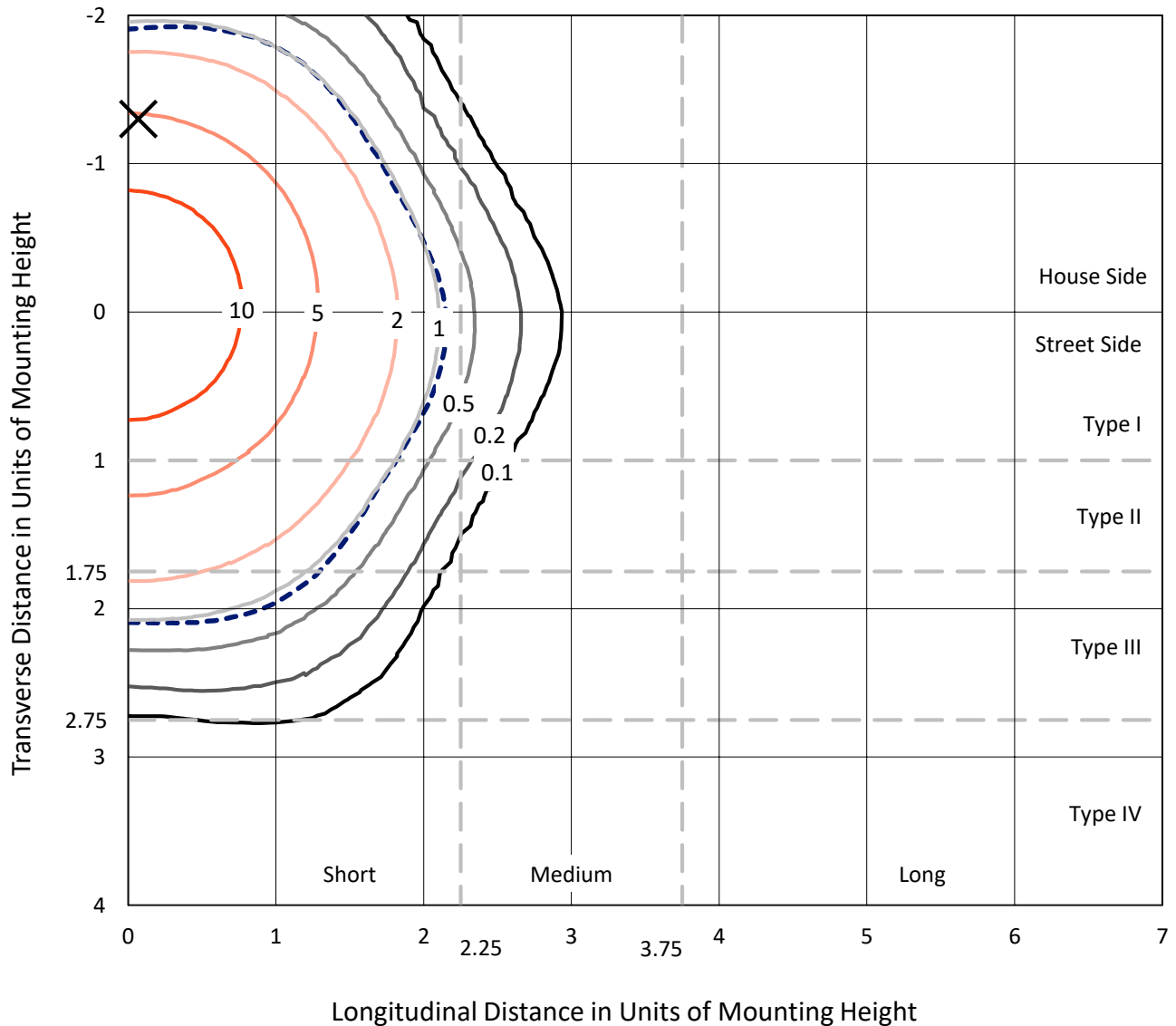
Input Watts (W): 53.2
Input Voltage (V): 120.0
Input Current (Ain): 0.452
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

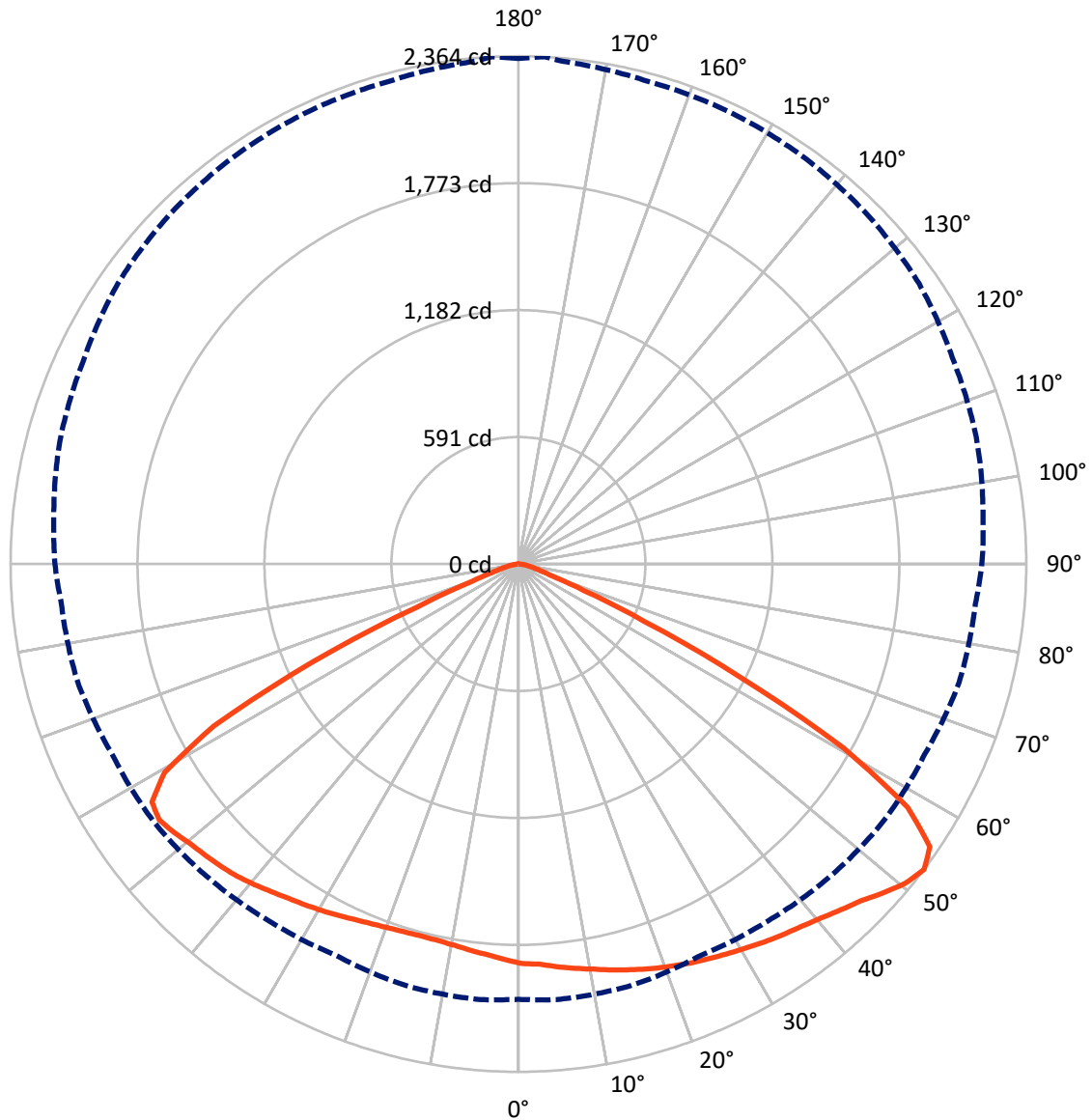
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.7 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 177-Deg Lateral - - - Horizontal Cone Through 52.5-Deg Vertical

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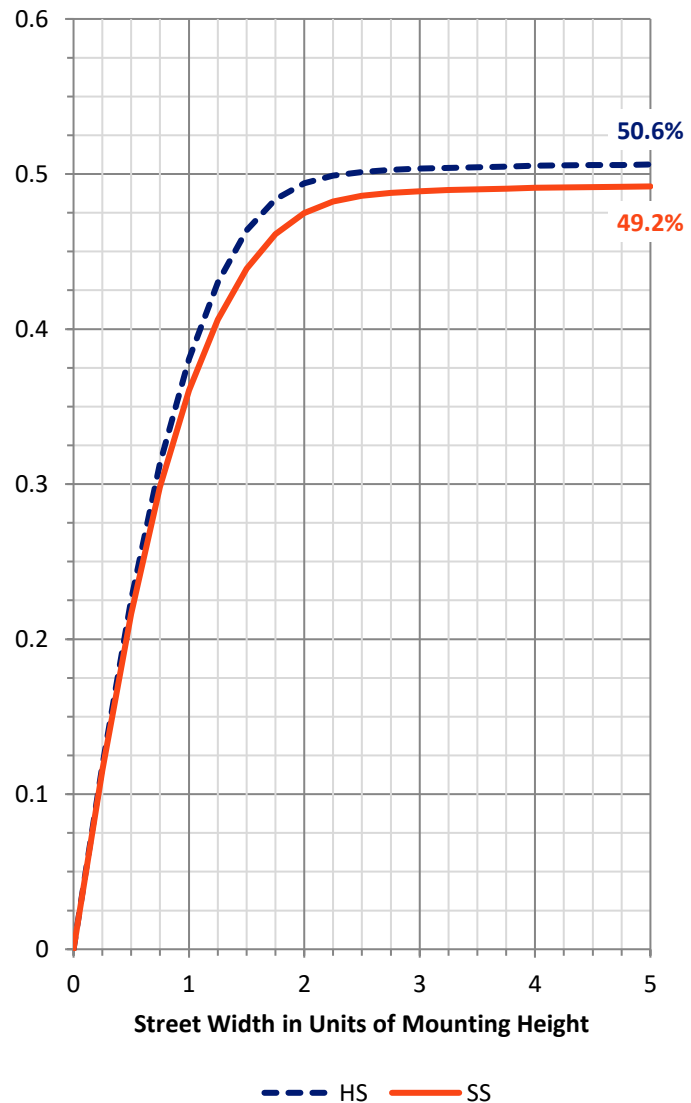
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 3835.4 | 0.0 | 3835.4 |
| | % Fixture | 50.8 | 0.0 | 50.8 |
| Street Side | Lumens | 3709.2 | 0.0 | 3709.2 |
| | % Fixture | 49.2 | 0.0 | 49.2 |
| Total | Lumens | 7544.6 | 0.0 | 7544.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 177.8 | 2.4 |
| 10°-20° | 534.6 | 7.1 |
| 20°-30° | 896.2 | 11.9 |
| 30°-40° | 1256.6 | 16.7 |
| 40°-50° | 1617.1 | 21.4 |
| 50°-60° | 1894.7 | 25.1 |
| 60°-70° | 1020.9 | 13.5 |
| 70°-80° | 128.8 | 1.7 |
| 80°-90° | 17.8 | 0.2 |
| 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°-90° | 7544.6 | 100.0 |
| 0°-180° | 7544.6 | 100.0 |

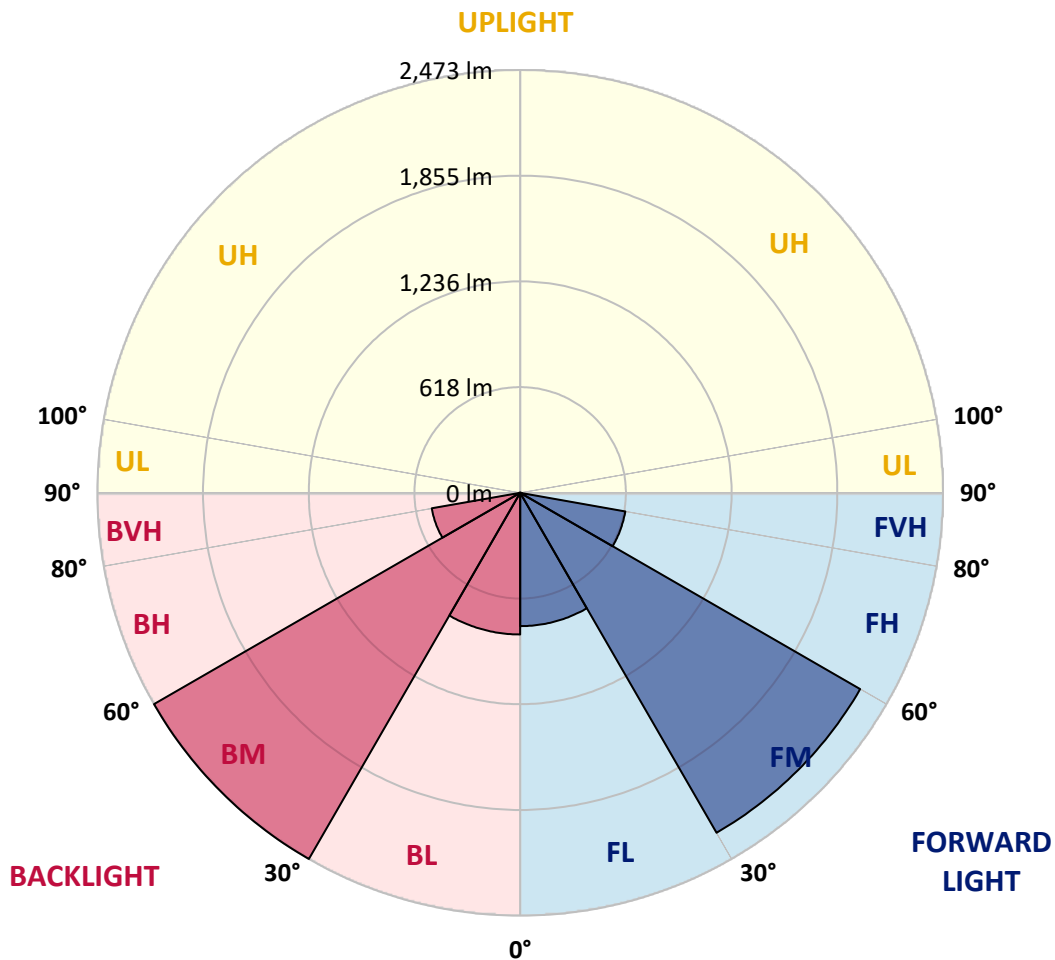


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 780.0 | 10.3 | | | |
| FM | (30°-60°) | 2295.7 | 30.4 | | | |
| FH | (60°-80°) | 624.6 | 8.3 | | | G0/660 |
| FVH | (80°-90°) | 9.0 | 0.1 | | | G0/10 |
| BL | (0°-30°) | 828.7 | 11.0 | B2/1000 | | |
| BM | (30°-60°) | 2472.7 | 32.8 | B2/2500 | | |
| BH | (60°-80°) | 525.1 | 7.0 | B2/1000 | | G0/660 |
| BVH | (80°-90°) | 8.8 | 0.1 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G0
 Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 |
| 2.5° | 1833.1 | 1847.4 | 1846.4 | 1842.3 | 1836.2 | 1856.6 | 1857.7 | 1849.5 | 1863.8 | 1854.6 | 1862.8 |
| 5° | 1816.8 | 1830.1 | 1832.1 | 1828.0 | 1822.9 | 1847.4 | 1847.4 | 1843.4 | 1858.7 | 1852.6 | 1862.8 |
| 7.5° | 1803.5 | 1817.8 | 1819.9 | 1814.8 | 1813.7 | 1837.2 | 1840.3 | 1836.2 | 1856.6 | 1853.6 | 1863.8 |
| 10° | 1791.3 | 1805.6 | 1810.7 | 1805.6 | 1806.6 | 1831.1 | 1834.2 | 1836.2 | 1856.6 | 1856.6 | 1867.9 |
| 12.5° | 1781.1 | 1799.4 | 1803.5 | 1801.5 | 1802.5 | 1830.1 | 1836.2 | 1838.3 | 1861.7 | 1862.8 | 1876.0 |
| 15° | 1781.1 | 1795.4 | 1801.5 | 1801.5 | 1803.5 | 1834.2 | 1841.3 | 1845.4 | 1869.9 | 1868.9 | 1885.2 |
| 17.5° | 1783.1 | 1798.4 | 1804.6 | 1802.5 | 1808.6 | 1838.3 | 1848.5 | 1852.6 | 1880.1 | 1882.2 | 1895.4 |
| 20° | 1788.2 | 1804.6 | 1810.7 | 1806.6 | 1817.8 | 1847.4 | 1856.6 | 1863.8 | 1892.4 | 1896.5 | 1909.7 |
| 22.5° | 1797.4 | 1814.8 | 1817.8 | 1815.8 | 1824.0 | 1859.7 | 1868.9 | 1877.1 | 1907.7 | 1909.7 | 1926.1 |
| 25° | 1810.7 | 1827.0 | 1828.0 | 1825.0 | 1834.2 | 1869.9 | 1881.1 | 1891.4 | 1922.0 | 1924.0 | 1942.4 |
| 27.5° | 1828.0 | 1843.4 | 1843.4 | 1834.2 | 1847.4 | 1881.1 | 1892.4 | 1903.6 | 1936.3 | 1942.4 | 1956.7 |
| 30° | 1845.4 | 1859.7 | 1857.7 | 1847.4 | 1860.7 | 1892.4 | 1905.7 | 1918.9 | 1949.6 | 1955.7 | 1973.1 |
| 32.5° | 1862.8 | 1877.1 | 1873.0 | 1861.7 | 1874.0 | 1905.7 | 1920.0 | 1930.2 | 1960.8 | 1966.9 | 1985.3 |
| 35° | 1880.1 | 1894.4 | 1888.3 | 1877.1 | 1890.3 | 1921.0 | 1935.3 | 1944.5 | 1973.1 | 1975.1 | 1995.5 |
| 37.5° | 1902.6 | 1914.9 | 1908.7 | 1894.4 | 1906.7 | 1937.3 | 1951.6 | 1958.8 | 1982.3 | 1985.3 | 2005.7 |
| 40° | 1925.1 | 1939.4 | 1932.2 | 1915.9 | 1926.1 | 1953.7 | 1966.9 | 1973.1 | 1995.5 | 1995.5 | 2019.0 |
| 42.5° | 1947.5 | 1961.8 | 1955.7 | 1936.3 | 1946.5 | 1973.1 | 1984.3 | 1990.4 | 2013.9 | 2011.9 | 2037.4 |
| 45° | 1964.9 | 1980.2 | 1975.1 | 1955.7 | 1964.9 | 1990.4 | 2005.7 | 2013.9 | 2037.4 | 2039.4 | 2061.9 |
| 47.5° | 1981.2 | 1995.5 | 1992.5 | 1971.0 | 1983.3 | 2010.8 | 2028.2 | 2038.4 | 2065.0 | 2069.1 | 2092.5 |
| 50° | 1999.6 | 2011.9 | 2008.8 | 1989.4 | 2002.7 | 2032.3 | 2055.8 | 2065.0 | 2096.6 | 2102.8 | 2128.3 |
| 52.5° | 2026.2 | 2035.4 | 2031.3 | 2009.8 | 2027.2 | 2054.8 | 2079.3 | 2088.5 | 2124.2 | 2135.4 | 2157.9 |
| 55° | 2047.6 | 2055.8 | 2048.6 | 2028.2 | 2044.5 | 2070.1 | 2090.5 | 2102.8 | 2139.5 | 2149.7 | 2172.2 |
| 57.5° | 2031.3 | 2036.4 | 2027.2 | 2017.0 | 2032.3 | 2046.6 | 2059.9 | 2067.0 | 2100.7 | 2105.8 | 2119.1 |
| 60° | 1904.6 | 1916.9 | 1921.0 | 1932.2 | 1946.5 | 1920.0 | 1900.6 | 1904.6 | 1947.5 | 1943.4 | 1946.5 |
| 62.5° | 1593.2 | 1612.6 | 1651.4 | 1684.0 | 1684.0 | 1599.3 | 1519.6 | 1580.9 | 1615.6 | 1616.6 | 1632.0 |
| 65° | 1055.0 | 1074.4 | 1205.1 | 1281.7 | 1253.1 | 1122.4 | 976.3 | 1016.1 | 1159.1 | 1197.9 | 1181.6 |
| 67.5° | 494.3 | 525.9 | 697.5 | 808.8 | 764.9 | 604.6 | 483.1 | 479.0 | 645.4 | 729.2 | 701.6 |
| 70° | 222.6 | 228.8 | 327.8 | 455.5 | 425.9 | 295.1 | 209.4 | 208.3 | 293.1 | 371.7 | 372.8 |
| 72.5° | 126.6 | 130.7 | 164.4 | 250.2 | 239.0 | 149.1 | 119.5 | 118.5 | 151.2 | 206.3 | 211.4 |
| 75° | 84.8 | 85.8 | 102.1 | 148.1 | 144.0 | 96.0 | 82.7 | 82.7 | 98.0 | 129.7 | 133.8 |
| 77.5° | 61.3 | 60.3 | 69.5 | 95.0 | 92.9 | 66.4 | 59.2 | 59.2 | 68.4 | 87.8 | 88.9 |
| 80° | 40.9 | 40.9 | 47.0 | 61.3 | 62.3 | 47.0 | 40.9 | 40.9 | 48.0 | 58.2 | 59.2 |
| 82.5° | 25.5 | 25.5 | 29.6 | 35.7 | 35.7 | 29.6 | 25.5 | 26.6 | 29.6 | 32.7 | 32.7 |
| 85° | 10.2 | 10.2 | 11.2 | 13.3 | 14.3 | 11.2 | 8.2 | 10.2 | 10.2 | 12.3 | 13.3 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 177° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 | 1859.7 |
| 2.5° | 1861.7 | 1865.8 | 1859.7 | 1873.0 | 1875.0 | 1875.0 | 1879.1 | 1875.0 | 1872.0 | 1864.8 | 1884.2 |
| 5° | 1861.7 | 1868.9 | 1867.9 | 1881.1 | 1886.3 | 1890.3 | 1895.4 | 1892.4 | 1889.3 | 1883.2 | 1900.6 |
| 7.5° | 1864.8 | 1875.0 | 1874.0 | 1894.4 | 1898.5 | 1906.7 | 1910.8 | 1908.7 | 1906.7 | 1900.6 | 1917.9 |
| 10° | 1870.9 | 1882.2 | 1885.2 | 1906.7 | 1913.8 | 1922.0 | 1928.1 | 1926.1 | 1924.0 | 1917.9 | 1937.3 |
| 12.5° | 1877.1 | 1891.4 | 1896.5 | 1922.0 | 1928.1 | 1938.3 | 1946.5 | 1944.5 | 1942.4 | 1939.4 | 1954.7 |
| 15° | 1886.3 | 1901.6 | 1909.7 | 1933.2 | 1944.5 | 1956.7 | 1965.9 | 1962.8 | 1963.9 | 1959.8 | 1975.1 |
| 17.5° | 1899.5 | 1914.9 | 1921.0 | 1948.6 | 1959.8 | 1975.1 | 1982.3 | 1980.2 | 1984.3 | 1981.2 | 1993.5 |
| 20° | 1915.9 | 1929.1 | 1934.3 | 1962.8 | 1977.1 | 1994.5 | 1998.6 | 1997.6 | 2001.7 | 2000.6 | 2013.9 |
| 22.5° | 1930.2 | 1944.5 | 1949.6 | 1978.2 | 1993.5 | 2007.8 | 2018.0 | 2013.9 | 2020.0 | 2020.0 | 2031.3 |
| 25° | 1944.5 | 1959.8 | 1964.9 | 1994.5 | 2009.8 | 2025.1 | 2035.4 | 2030.3 | 2035.4 | 2038.4 | 2046.6 |
| 27.5° | 1962.8 | 1976.1 | 1982.3 | 2011.9 | 2028.2 | 2046.6 | 2050.7 | 2048.6 | 2054.8 | 2056.8 | 2065.0 |
| 30° | 1978.2 | 1994.5 | 2002.7 | 2031.3 | 2048.6 | 2068.0 | 2071.1 | 2068.0 | 2071.1 | 2076.2 | 2082.3 |
| 32.5° | 1991.4 | 2014.9 | 2021.1 | 2051.7 | 2067.0 | 2083.4 | 2092.5 | 2086.4 | 2092.5 | 2098.7 | 2100.7 |
| 35° | 2005.7 | 2031.3 | 2039.4 | 2072.1 | 2086.4 | 2105.8 | 2109.9 | 2106.8 | 2113.0 | 2119.1 | 2120.1 |
| 37.5° | 2018.0 | 2046.6 | 2056.8 | 2090.5 | 2106.8 | 2125.2 | 2132.4 | 2129.3 | 2134.4 | 2140.5 | 2140.5 |
| 40° | 2033.3 | 2066.0 | 2079.3 | 2110.9 | 2127.3 | 2143.6 | 2155.9 | 2149.7 | 2158.9 | 2167.1 | 2168.1 |
| 42.5° | 2051.7 | 2089.5 | 2101.7 | 2137.5 | 2152.8 | 2172.2 | 2182.4 | 2180.4 | 2189.6 | 2200.8 | 2197.7 |
| 45° | 2075.2 | 2116.0 | 2136.5 | 2169.1 | 2187.5 | 2204.9 | 2215.1 | 2217.1 | 2229.4 | 2236.5 | 2235.5 |
| 47.5° | 2108.9 | 2148.7 | 2173.2 | 2206.9 | 2227.4 | 2244.7 | 2252.9 | 2259.0 | 2275.4 | 2286.6 | 2279.4 |
| 50° | 2140.5 | 2185.5 | 2212.0 | 2250.8 | 2272.3 | 2288.6 | 2295.8 | 2297.8 | 2322.3 | 2335.6 | 2328.5 |
| 52.5° | 2171.2 | 2210.0 | 2235.5 | 2276.4 | 2298.8 | 2313.1 | 2322.3 | 2326.4 | 2348.9 | 2364.2 | 2354.0 |
| 55° | 2181.4 | 2206.9 | 2224.3 | 2258.0 | 2276.4 | 2287.6 | 2293.7 | 2288.6 | 2309.1 | 2324.4 | 2315.2 |
| 57.5° | 2120.1 | 2124.2 | 2115.0 | 2141.6 | 2151.8 | 2156.9 | 2154.8 | 2134.4 | 2125.2 | 2137.5 | 2110.9 |
| 60° | 1934.3 | 1890.3 | 1819.9 | 1834.2 | 1876.0 | 1888.3 | 1886.3 | 1818.9 | 1743.3 | 1739.2 | 1712.6 |
| 62.5° | 1595.2 | 1456.3 | 1339.9 | 1339.9 | 1399.1 | 1458.4 | 1442.0 | 1323.5 | 1168.3 | 1152.0 | 1116.2 |
| 65° | 1133.6 | 952.8 | 800.7 | 792.5 | 897.7 | 988.6 | 949.8 | 811.9 | 667.9 | 643.4 | 626.0 |
| 67.5° | 665.9 | 481.0 | 379.9 | 367.7 | 489.2 | 587.2 | 544.3 | 419.7 | 337.0 | 327.8 | 327.8 |
| 70° | 332.9 | 229.8 | 179.7 | 178.7 | 238.0 | 302.3 | 292.1 | 209.4 | 167.5 | 163.4 | 157.3 |
| 72.5° | 188.9 | 131.7 | 110.3 | 111.3 | 135.8 | 180.8 | 173.6 | 125.6 | 106.2 | 107.2 | 105.2 |
| 75° | 119.5 | 88.9 | 79.7 | 80.7 | 91.9 | 121.5 | 114.4 | 85.8 | 75.6 | 76.6 | 76.6 |
| 77.5° | 81.7 | 63.3 | 57.2 | 58.2 | 66.4 | 85.8 | 83.7 | 62.3 | 55.2 | 56.2 | 56.2 |
| 80° | 55.2 | 44.9 | 40.9 | 41.9 | 46.0 | 59.2 | 57.2 | 44.9 | 39.8 | 40.9 | 38.8 |
| 82.5° | 32.7 | 28.6 | 26.6 | 26.6 | 29.6 | 33.7 | 32.7 | 28.6 | 26.6 | 25.5 | 25.5 |
| 85° | 12.3 | 10.2 | 10.2 | 10.2 | 12.3 | 13.3 | 14.3 | 12.3 | 10.2 | 9.2 | 9.2 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)