

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: P407865

Luminaire Tested: **ALP7A40-DL**

Issue Date: 08/27/2020

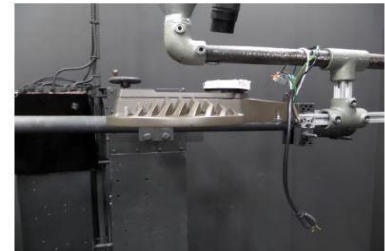
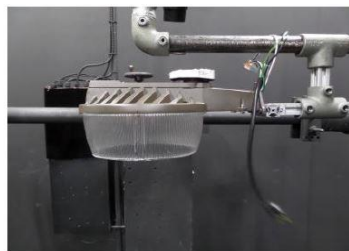
Test Information

Test Method: LM-79-08
Report Number: P407865
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2006-852-18)
Test Lab: INNOVATIONS CENTER(G1)
Issue Date: 08/27/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ALP7A40-DL
Description: HALO OUTDOOR BARN LIGHT PREMIUM 7000LM W/ DROP LENS
Light Source: (78) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7419.3 lumens
Efficiency: N/A
Efficacy: 139.5 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 0.67' x H: 0.25')
IES Classification: Type V - Short - Cutoff
BUG Rating: B2 - U3 - G1

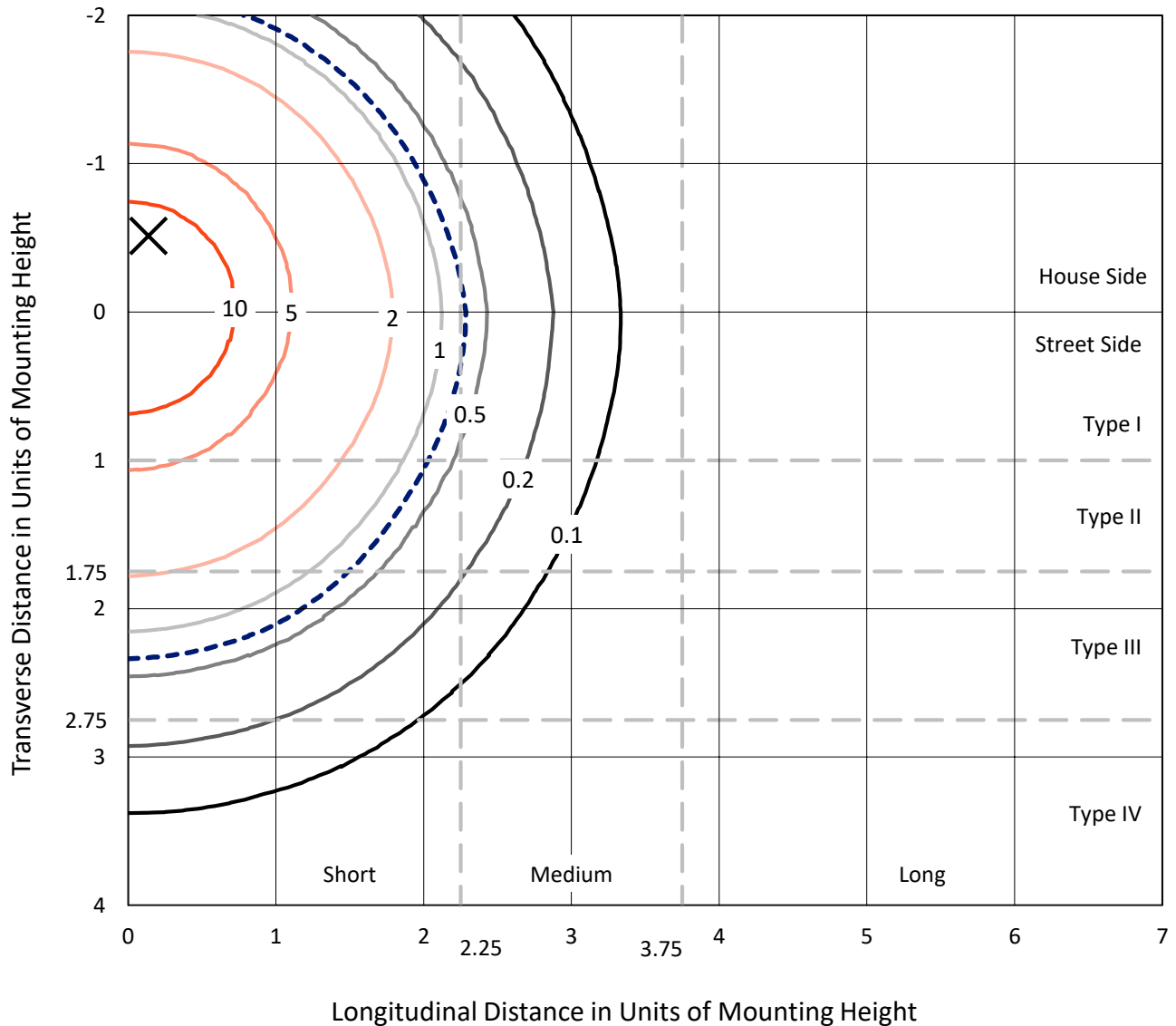
Input Watts (W): 53.2
Input Voltage (V): 120.0
Input Current (Ain): 0.452
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

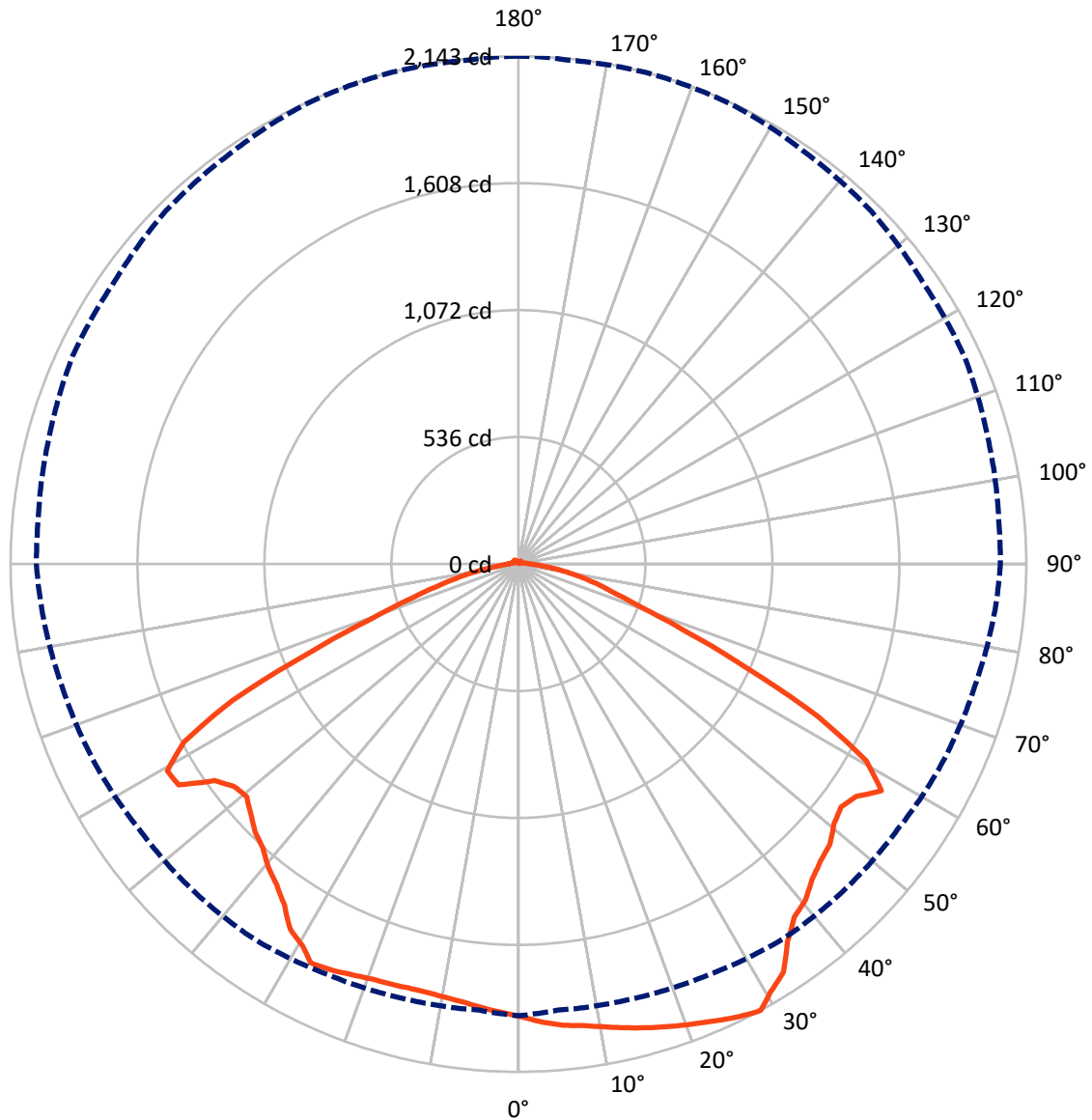
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 19.2 fc
 Type V - Short - Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 165-Deg Lateral - - - Horizontal Cone Through 28-Deg Vertical

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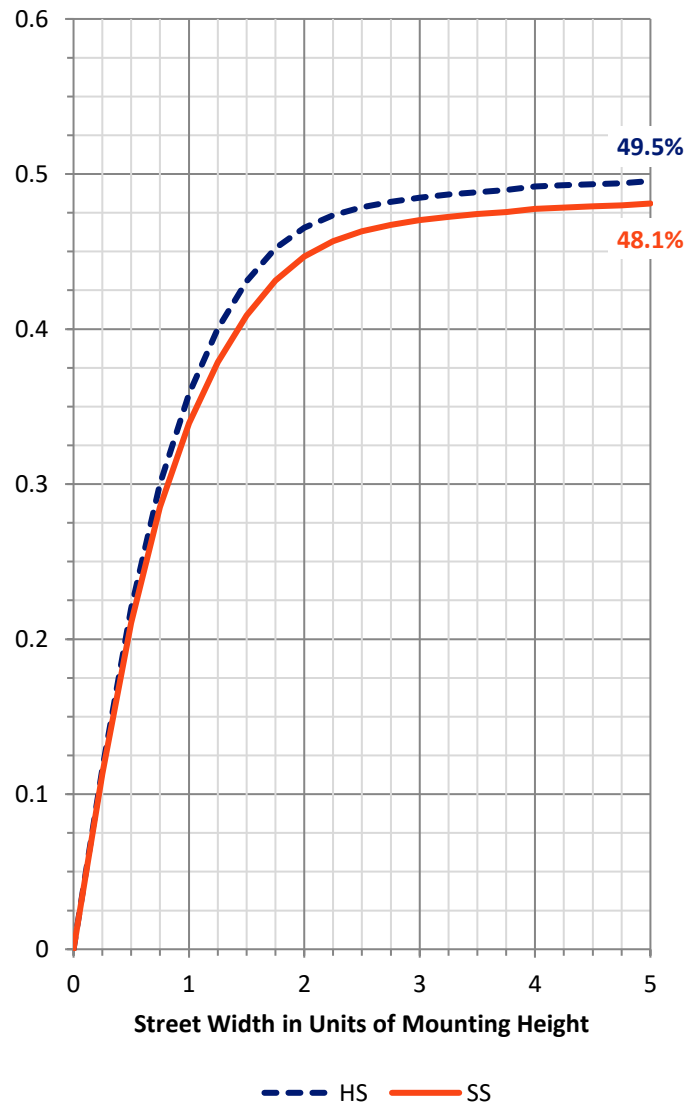
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3712.0	56.8	3768.8
	% Fixture	50.0	0.8	50.8
Street Side	Lumens	3585.8	64.7	3650.5
	% Fixture	48.3	0.9	49.2
Total	Lumens	7297.8	121.5	7419.3
	% Fixture	98.4	1.6	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.7	2.5
10°-20°	550.2	7.4
20°-30°	924.8	12.5
30°-40°	1174.1	15.8
40°-50°	1298.7	17.5
50°-60°	1506.0	20.3
60°-70°	1163.1	15.7
70°-80°	386.8	5.2
80°-90°	111.5	1.5
90°-100°	38.6	0.5
100°-110°	23.1	0.3
110°-120°	14.3	0.2
120°-130°	14.0	0.2
130°-140°	14.6	0.2
140°-150°	11.5	0.2
150°-160°	4.8	0.1
160°-170°	0.6	0.0
170°-180°	0.1	0.0
0°-90°	7297.8	98.4
0°-180°	7419.3	100.0



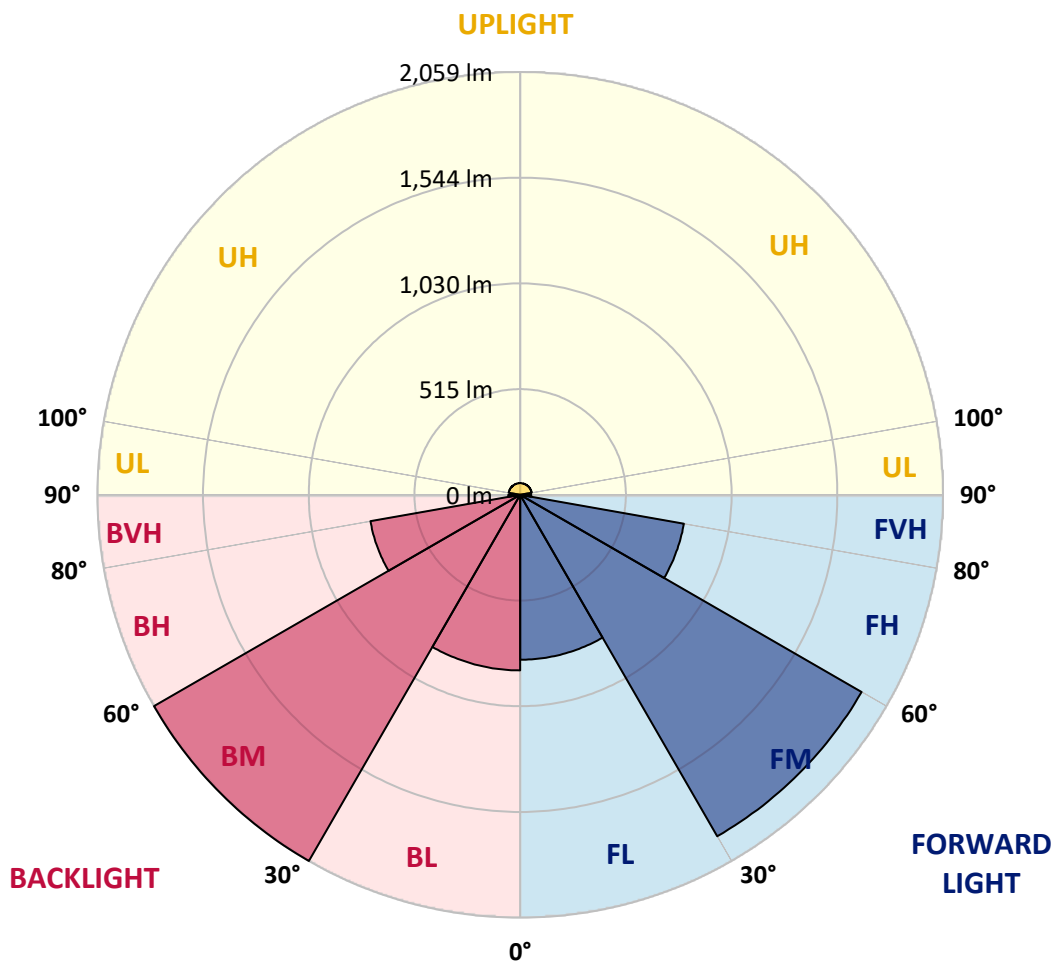
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	802.8	10.8			
FM	(30°-60°)	1919.8	25.9			
FH	(60°-80°)	809.6	10.9			G1/1800
FVH	(80°-90°)	53.6	0.7			G1/100
BL	(0°-30°)	854.9	11.5	B2/1000		
BM	(30°-60°)	2059.0	27.8	B2/2500		
BH	(60°-80°)	740.3	10.0	B2/1000		G1/1800
BVH	(80°-90°)	57.9	0.8			G1/100
UL	(90°-100°)	38.6	0.5		U2/50	
UH	(100°-180°)	56.8	0.8		U3/500	

BUG Rating: B2-U3-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7
2.5°	1906.6	1885.1	1894.3	1902.5	1910.7	1900.5	1900.5	1898.4	1901.5	1910.7	1906.6
5°	1891.3	1868.8	1880.0	1887.2	1898.4	1890.2	1891.3	1894.3	1899.4	1909.6	1908.6
7.5°	1873.9	1852.5	1863.7	1869.8	1885.1	1875.9	1880.0	1884.1	1891.3	1907.6	1905.6
10°	1858.6	1842.2	1854.5	1863.7	1878.0	1872.9	1874.9	1885.1	1894.3	1911.7	1912.7
12.5°	1853.5	1836.1	1848.4	1860.6	1873.9	1873.9	1877.0	1888.2	1898.4	1916.8	1920.9
15°	1853.5	1835.1	1848.4	1859.6	1878.0	1879.0	1882.1	1895.3	1908.6	1928.0	1933.1
17.5°	1856.5	1840.2	1853.5	1864.7	1885.1	1886.2	1891.3	1906.6	1920.9	1942.3	1948.4
20°	1862.7	1847.4	1857.6	1872.9	1892.3	1898.4	1902.5	1920.9	1935.2	1957.6	1966.8
22.5°	1873.9	1859.6	1869.8	1884.1	1902.5	1912.7	1916.8	1938.2	1954.6	1975.0	1986.2
25°	1893.3	1878.0	1885.1	1894.3	1921.9	1928.0	1933.1	1955.6	1973.0	1999.5	2007.7
27.5°	1904.5	1889.2	1896.4	1909.6	1932.1	1943.3	1950.5	1973.0	1990.3	2017.9	2028.1
28°	1906.6	1890.2	1897.4	1910.7	1936.2	1945.4	1953.6	1976.0	1994.4	2022.0	2034.2
30°	1873.9	1855.5	1850.4	1869.8	1886.2	1918.8	1933.1	1964.8	1968.9	1980.1	1984.2
32.5°	1813.7	1799.4	1817.7	1829.0	1845.3	1867.8	1855.5	1875.9	1910.7	1956.6	1976.0
35°	1774.8	1748.3	1744.2	1766.7	1787.1	1777.9	1805.5	1833.1	1862.7	1901.5	1916.8
37.5°	1713.6	1706.4	1695.2	1701.3	1722.8	1726.9	1756.5	1782.0	1799.4	1802.4	1829.0
40°	1650.3	1642.1	1658.4	1662.5	1668.6	1696.2	1692.1	1720.7	1745.2	1744.2	1749.3
42.5°	1624.7	1614.5	1612.5	1600.2	1618.6	1648.2	1625.8	1654.3	1689.1	1708.5	1727.9
45°	1598.2	1590.0	1584.9	1581.8	1597.2	1624.7	1604.3	1616.6	1661.5	1677.8	1680.9
47.5°	1522.6	1521.6	1544.1	1549.2	1548.1	1574.7	1555.3	1579.8	1613.5	1639.0	1658.4
50°	1505.3	1499.1	1509.3	1524.7	1545.1	1535.9	1518.5	1555.3	1589.0	1611.5	1638.0
52.5°	1532.8	1522.6	1523.6	1520.6	1535.9	1524.7	1523.6	1565.5	1615.5	1653.3	1681.9
55°	1582.9	1574.7	1574.7	1584.9	1581.8	1570.6	1569.6	1603.3	1660.5	1704.4	1720.7
57.5°	1717.7	1709.5	1710.5	1714.6	1706.4	1695.2	1685.0	1712.6	1775.9	1815.7	1832.0
60°	1727.9	1718.7	1719.7	1713.6	1703.4	1681.9	1664.6	1693.2	1738.1	1773.8	1778.9
62.5°	1620.6	1605.3	1598.2	1590.0	1567.5	1541.0	1518.5	1531.8	1581.8	1584.9	1577.8
65°	1355.1	1344.9	1335.7	1318.4	1297.9	1258.1	1235.7	1232.6	1244.8	1263.2	1261.2
67.5°	966.1	962.0	958.9	970.1	939.5	918.1	875.2	881.3	888.4	905.8	908.9
70°	668.9	666.8	667.9	669.9	658.7	639.3	611.7	614.8	612.7	606.6	624.0
72.5°	492.2	489.2	486.1	488.1	484.1	473.8	456.5	449.3	447.3	453.4	451.4
75°	357.4	364.6	363.6	370.7	364.6	365.6	354.4	346.2	348.2	355.4	354.4
77.5°	266.5	265.5	269.6	267.6	269.6	272.7	263.5	264.5	266.5	275.7	273.7
80°	191.0	191.0	191.0	193.0	192.0	193.0	188.9	192.0	192.0	198.1	198.1
82.5°	124.6	122.5	124.6	125.6	128.7	129.7	127.7	127.7	128.7	128.7	130.7
85°	83.7	82.7	82.7	82.7	83.7	85.8	84.8	84.8	88.8	87.8	87.8
87.5°	61.3	61.3	61.3	62.3	61.3	62.3	62.3	63.3	62.3	64.3	65.4
90°	44.9	46.0	46.0	46.0	46.0	47.0	46.0	47.0	47.0	48.0	49.0
92.5°	38.8	38.8	38.8	38.8	38.8	39.8	39.8	39.8	39.8	39.8	40.9
95°	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	34.7
97.5°	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6
100°	27.6	27.6	27.6	27.6	27.6	28.6	27.6	28.6	28.6	27.6	28.6
102.5°	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
105°	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
107.5°	19.4	19.4	19.4	20.4	20.4	20.4	19.4	20.4	20.4	19.4	20.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	17.4	17.4	17.4	18.4	18.4	18.4	17.4	17.4	17.4	17.4	17.4
112.5°	15.3	15.3	15.3	16.3	17.4	17.4	16.3	16.3	15.3	14.3	15.3
115°	15.3	15.3	15.3	16.3	16.3	17.4	16.3	15.3	14.3	14.3	14.3
117.5°	15.3	15.3	15.3	15.3	16.3	16.3	16.3	15.3	14.3	13.3	13.3
120°	18.4	17.4	17.4	16.3	16.3	17.4	16.3	16.3	15.3	14.3	13.3
122.5°	20.4	19.4	19.4	18.4	17.4	17.4	17.4	17.4	16.3	14.3	14.3
125°	21.5	22.5	21.5	20.4	19.4	18.4	18.4	18.4	17.4	14.3	14.3
127.5°	22.5	22.5	22.5	21.5	20.4	19.4	19.4	18.4	18.4	16.3	15.3
130°	23.5	24.5	23.5	22.5	22.5	21.5	20.4	19.4	19.4	17.4	17.4
132.5°	23.5	24.5	23.5	22.5	22.5	22.5	21.5	19.4	20.4	18.4	17.4
135°	23.5	23.5	22.5	21.5	22.5	22.5	21.5	20.4	19.4	19.4	18.4
137.5°	22.5	23.5	22.5	22.5	22.5	22.5	21.5	20.4	21.5	20.4	20.4
140°	22.5	22.5	21.5	22.5	21.5	22.5	21.5	20.4	20.4	20.4	19.4
142.5°	21.5	20.4	20.4	20.4	20.4	21.5	21.5	20.4	20.4	20.4	19.4
145°	19.4	19.4	18.4	19.4	19.4	19.4	18.4	18.4	19.4	19.4	19.4
147.5°	16.3	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
150°	14.3	14.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	16.3
152.5°	12.3	12.3	12.3	12.3	12.3	12.3	13.3	13.3	13.3	13.3	14.3
155°	9.2	9.2	9.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	11.2
157.5°	6.1	6.1	6.1	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
160°	4.1	4.1	4.1	4.1	5.1	5.1	5.1	5.1	4.1	5.1	5.1
162.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
165°	1.0	2.0	1.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	176°	180°
0°	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7	1911.7
2.5°	1909.6	1914.8	1929.0	1914.8	1922.9	1930.1	1938.2	1936.2	1927.0	1931.1	1933.1
5°	1910.7	1921.9	1938.2	1923.9	1935.2	1943.3	1954.6	1955.6	1944.4	1949.5	1950.5
7.5°	1911.7	1922.9	1940.3	1934.2	1945.4	1954.6	1965.8	1966.8	1959.7	1963.8	1964.8
10°	1918.8	1932.1	1952.5	1945.4	1959.7	1970.9	1985.2	1986.2	1979.1	1981.1	1984.2
12.5°	1926.0	1942.3	1965.8	1962.7	1979.1	1987.3	2007.7	2008.7	2001.6	2005.6	2005.6
15°	1937.2	1955.6	1981.1	1978.1	1997.5	2009.7	2027.1	2031.2	2024.0	2028.1	2029.1
17.5°	1955.6	1970.9	1995.4	1994.4	2014.8	2029.1	2047.5	2052.6	2048.5	2051.6	2054.7
20°	1970.9	1987.3	2011.8	2011.8	2035.3	2048.5	2067.9	2074.1	2067.9	2072.0	2073.0
22.5°	1991.3	2006.7	2029.1	2032.2	2054.7	2066.9	2092.4	2096.5	2090.4	2094.5	2097.5
25°	2012.8	2025.0	2050.6	2053.6	2077.1	2091.4	2111.8	2121.0	2116.9	2120.0	2121.0
27.5°	2030.1	2048.5	2071.0	2074.1	2101.6	2113.9	2134.3	2141.5	2134.3	2139.4	2137.4
28°	2035.3	2051.6	2076.1	2080.2	2105.7	2116.9	2138.4	2143.5	2137.4	2141.5	2143.5
30°	1985.2	2029.1	2065.9	2066.9	2075.1	2077.1	2093.5	2096.5	2094.5	2098.6	2103.7
32.5°	1978.1	1971.9	1973.0	1986.2	2019.9	2033.2	2052.6	2053.6	2024.0	2025.0	2025.0
35°	1919.9	1919.9	1942.3	1921.9	1922.9	1948.4	1970.9	1956.6	1980.1	1987.3	1987.3
37.5°	1832.0	1852.5	1881.1	1870.8	1890.2	1878.0	1891.3	1891.3	1910.7	1910.7	1907.6
40°	1769.7	1821.8	1810.6	1818.8	1818.8	1815.7	1846.3	1864.7	1837.1	1840.2	1832.0
42.5°	1720.7	1755.4	1751.4	1750.3	1785.1	1774.8	1786.1	1817.7	1799.4	1801.4	1802.4
45°	1694.2	1723.8	1725.8	1724.8	1765.7	1760.5	1765.7	1788.1	1785.1	1786.1	1800.4
47.5°	1669.7	1697.2	1686.0	1690.1	1710.5	1715.6	1740.1	1768.7	1729.9	1735.0	1743.2
50°	1633.9	1664.6	1665.6	1658.4	1679.9	1697.2	1715.6	1725.8	1699.3	1699.3	1707.4
52.5°	1670.7	1666.6	1664.6	1659.5	1695.2	1698.3	1722.8	1704.4	1710.5	1711.5	1709.5
55°	1726.9	1726.9	1704.4	1680.9	1705.4	1720.7	1735.0	1730.9	1724.8	1725.8	1723.8
57.5°	1823.9	1807.5	1793.2	1778.9	1804.5	1808.5	1819.8	1806.5	1797.3	1797.3	1796.3
60°	1773.8	1728.9	1695.2	1669.7	1699.3	1699.3	1706.4	1687.0	1684.0	1678.9	1682.9
62.5°	1558.4	1503.2	1450.1	1448.1	1429.7	1428.7	1421.5	1419.5	1406.2	1412.3	1383.7
65°	1237.7	1172.3	1123.3	1108.0	1093.7	1082.5	1078.4	1061.0	1056.9	1047.8	1051.8
67.5°	874.2	827.2	790.4	774.1	776.1	777.1	769.0	767.9	746.5	749.6	770.0
70°	592.3	566.8	549.4	549.4	544.3	548.4	553.5	551.5	538.2	536.1	537.2
72.5°	443.2	424.8	419.7	423.8	429.9	428.9	431.0	431.0	426.9	421.8	423.8
75°	350.3	336.0	332.9	344.1	351.3	350.3	349.3	350.3	343.1	343.1	342.1
77.5°	271.6	260.4	261.4	268.6	275.7	274.7	274.7	275.7	270.6	269.6	270.6
80°	198.1	192.0	192.0	198.1	203.2	205.3	209.4	207.3	207.3	206.3	209.4
82.5°	128.7	131.7	132.8	136.8	142.0	145.0	146.0	146.0	146.0	144.0	146.0
85°	88.8	89.9	88.8	91.9	91.9	95.0	97.0	97.0	99.1	98.0	99.1
87.5°	64.3	64.3	65.4	65.4	67.4	67.4	69.4	69.4	69.4	68.4	68.4
90°	48.0	48.0	49.0	49.0	50.0	50.0	50.0	50.0	49.0	49.0	51.1
92.5°	40.9	39.8	40.9	40.9	40.9	39.8	39.8	38.8	39.8	39.8	39.8
95°	34.7	34.7	34.7	34.7	34.7	33.7	33.7	33.7	32.7	32.7	32.7
97.5°	30.6	30.6	30.6	30.6	30.6	30.6	28.6	27.6	27.6	27.6	27.6
100°	27.6	27.6	28.6	28.6	27.6	26.6	25.5	23.5	23.5	23.5	23.5
102.5°	25.5	25.5	25.5	25.5	25.5	23.5	21.5	19.4	19.4	19.4	19.4
105°	22.5	22.5	22.5	22.5	22.5	21.5	18.4	16.3	17.4	17.4	17.4
107.5°	19.4	20.4	19.4	20.4	19.4	18.4	16.3	14.3	15.3	15.3	15.3



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	176°	180°
110°	17.4	17.4	17.4	17.4	16.3	15.3	13.3	12.3	12.3	12.3	12.3
112.5°	14.3	14.3	14.3	15.3	14.3	14.3	11.2	10.2	9.2	9.2	9.2
115°	13.3	13.3	14.3	14.3	14.3	13.3	11.2	9.2	8.2	8.2	8.2
117.5°	13.3	13.3	13.3	13.3	13.3	12.3	11.2	9.2	7.2	7.2	7.2
120°	13.3	13.3	13.3	13.3	13.3	12.3	11.2	8.2	7.2	7.2	7.2
122.5°	13.3	13.3	13.3	14.3	14.3	13.3	11.2	8.2	6.1	6.1	7.2
125°	14.3	13.3	14.3	14.3	14.3	13.3	11.2	9.2	7.2	7.2	7.2
127.5°	14.3	14.3	15.3	14.3	14.3	13.3	11.2	9.2	6.1	6.1	6.1
130°	16.3	16.3	16.3	16.3	16.3	15.3	14.3	10.2	6.1	6.1	6.1
132.5°	17.4	17.4	17.4	18.4	17.4	17.4	15.3	10.2	7.2	6.1	6.1
135°	17.4	18.4	18.4	18.4	18.4	18.4	16.3	13.3	7.2	6.1	5.1
137.5°	19.4	19.4	18.4	19.4	20.4	20.4	18.4	14.3	8.2	7.2	6.1
140°	20.4	18.4	20.4	20.4	21.5	21.5	19.4	14.3	9.2	8.2	7.2
142.5°	19.4	20.4	20.4	21.5	21.5	20.4	18.4	14.3	9.2	8.2	8.2
145°	19.4	20.4	20.4	21.5	21.5	19.4	18.4	13.3	9.2	8.2	8.2
147.5°	17.4	18.4	19.4	20.4	19.4	19.4	15.3	11.2	8.2	7.2	7.2
150°	16.3	17.4	17.4	19.4	18.4	17.4	14.3	10.2	8.2	7.2	6.1
152.5°	14.3	14.3	15.3	16.3	15.3	14.3	11.2	9.2	7.2	6.1	6.1
155°	11.2	12.3	12.3	13.3	12.3	11.2	9.2	6.1	5.1	4.1	4.1
157.5°	8.2	8.2	9.2	9.2	8.2	8.2	6.1	4.1	3.1	2.0	2.0
160°	5.1	5.1	6.1	6.1	5.1	4.1	3.1	2.0	1.0	1.0	1.0
162.5°	3.1	3.1	3.1	3.1	3.1	2.0	2.0	1.0	1.0	1.0	1.0
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

(END OF REPORT)