

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: LUMARK

Report Number: P146629

Luminaire Tested: **LDRL-T3-E06-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146629
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33695)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T3-E06-E-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (126) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16362.5 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

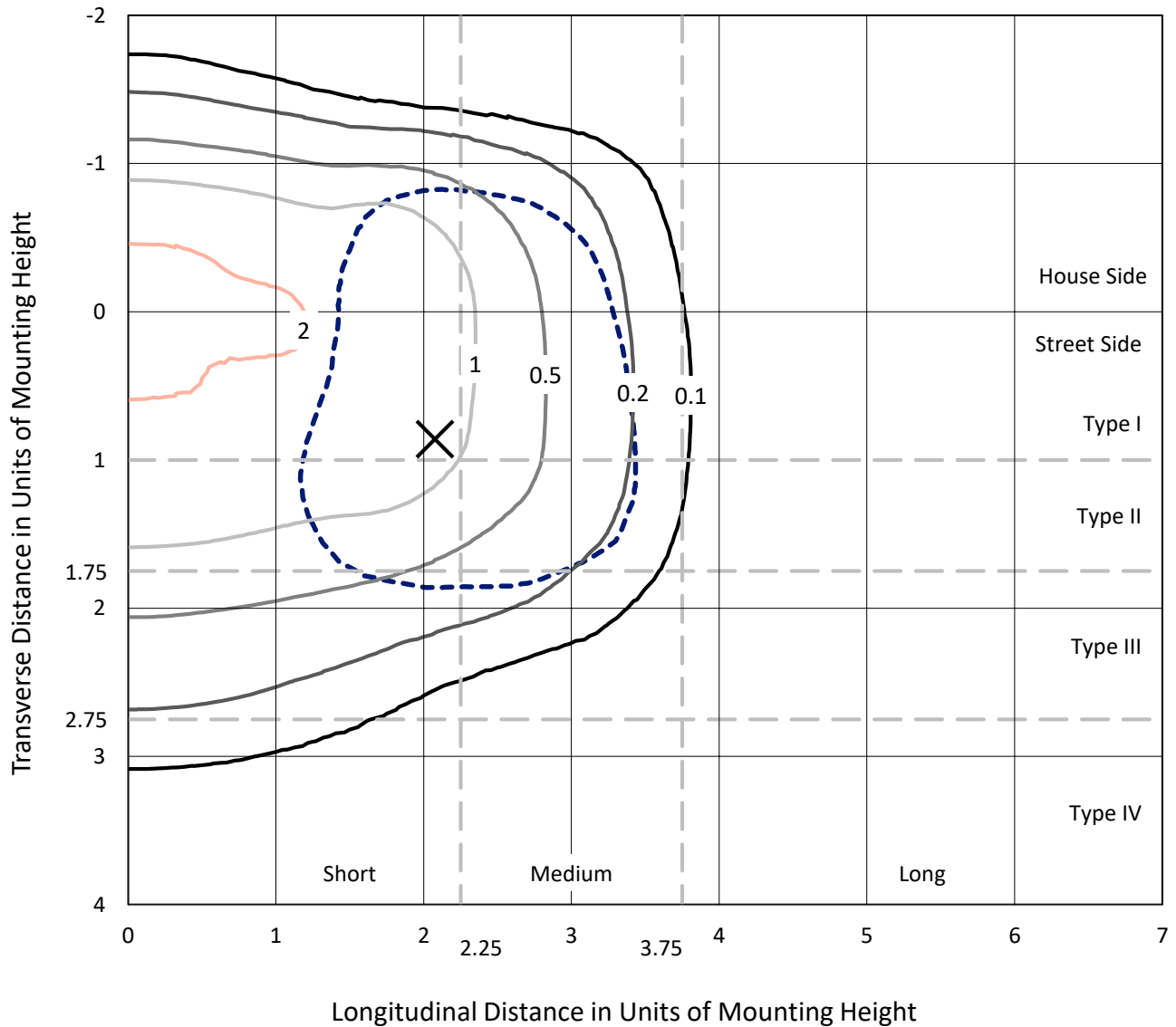
Input Watts (W): 150.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

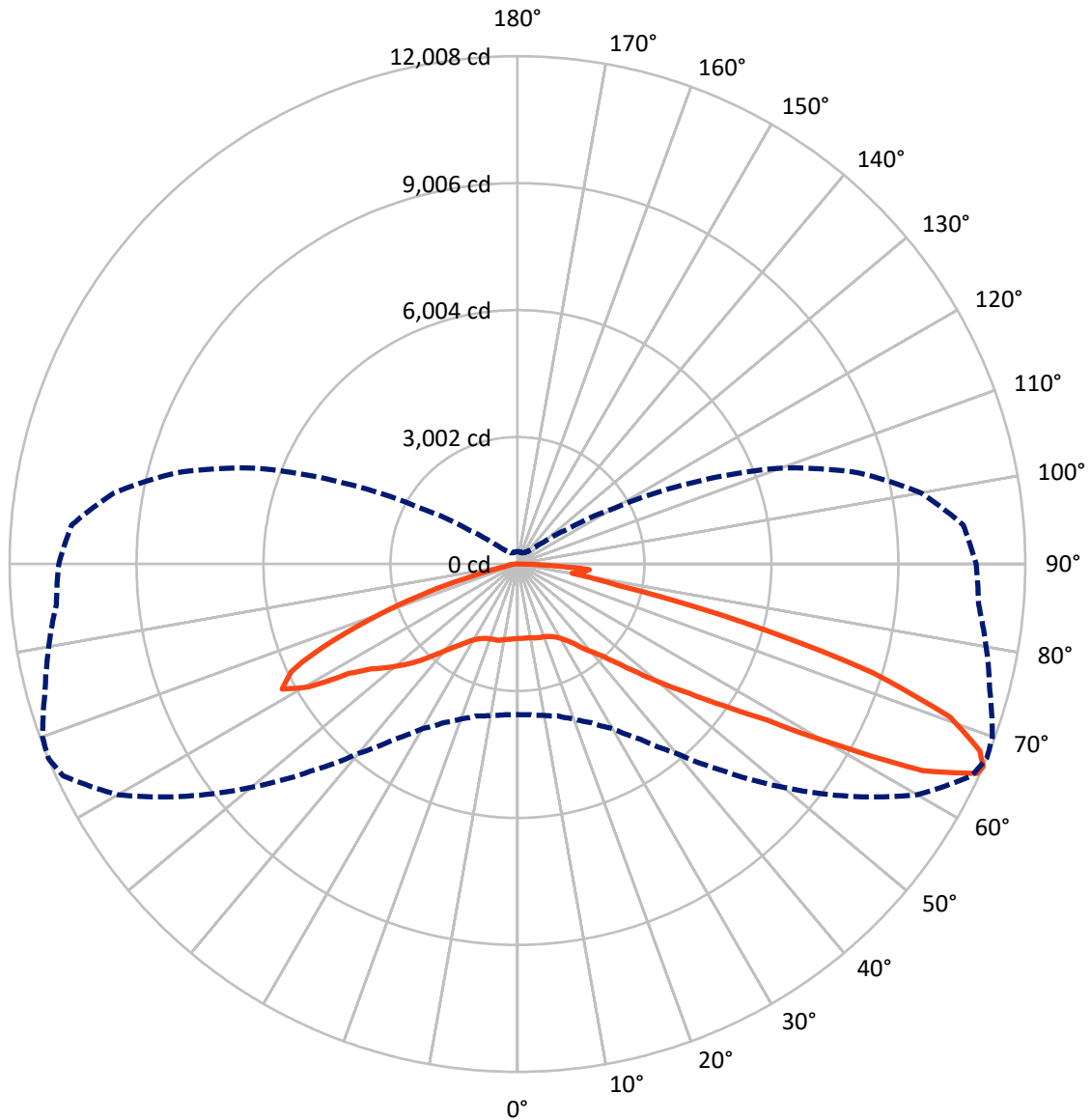
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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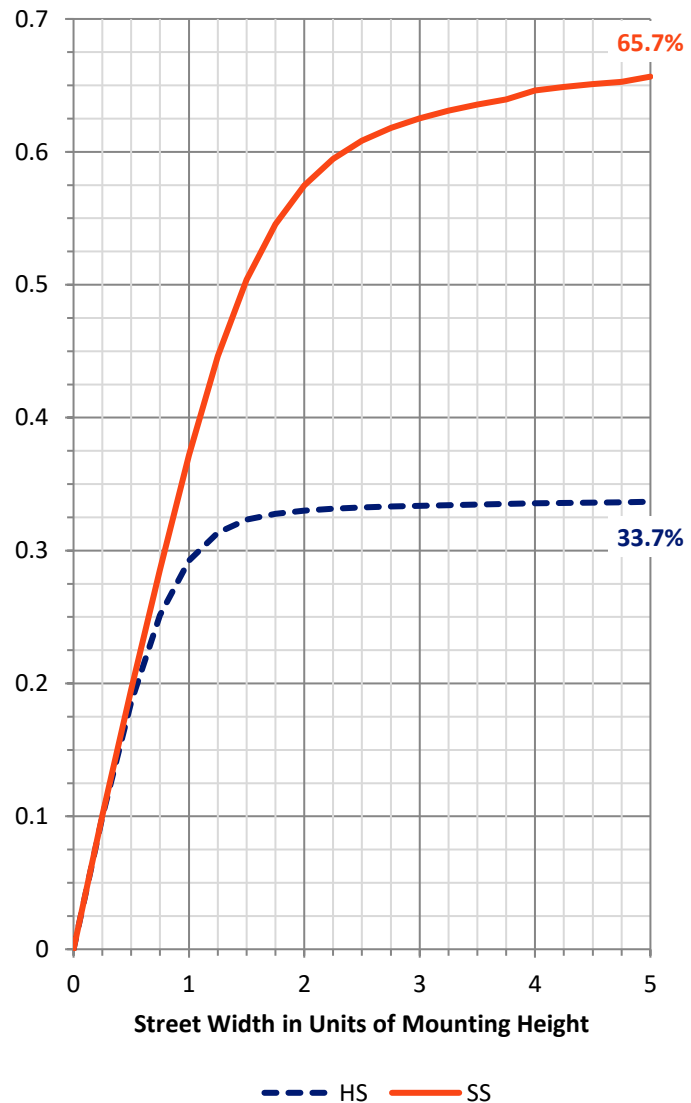
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5558.9	0.0	5558.9
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	10803.6	0.0	10803.6
	% Fixture	66.0	0.0	66.0
Total	Lumens	16362.5	0.0	16362.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.2	1.0
10°-20°	501.3	3.1
20°-30°	861.8	5.3
30°-40°	1386.2	8.5
40°-50°	2284.8	14.0
50°-60°	3581.4	21.9
60°-70°	4956.4	30.3
70°-80°	2243.0	13.7
80°-90°	378.4	2.3
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°	16362.5	100.0
0°-180°	16362.5	100.0



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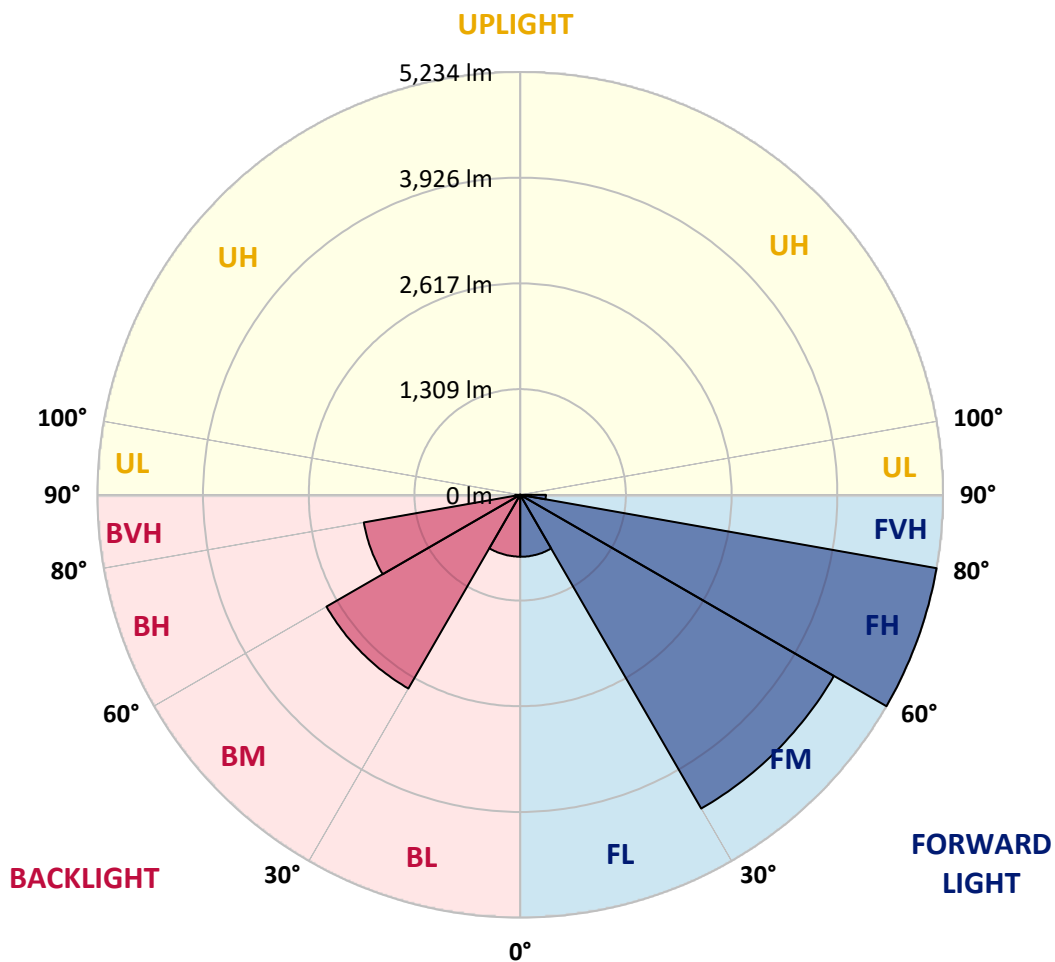
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	767.4	4.7			
FM	(30°-60°)	4484.0	27.4			
FH	(60°-80°)	5234.2	32.0			G3/7500
FVH	(80°-90°)	318.0	1.9			G3/500
BL	(0°-30°)	764.9	4.7	B2/1000		
BM	(30°-60°)	2768.4	16.9	B3/5000		
BH	(60°-80°)	1965.2	12.0	B3/2500		G3/2500
BVH	(80°-90°)	60.4	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3
2.5°	1759.1	1758.0	1756.9	1756.9	1755.8	1756.9	1758.0	1759.1	1758.0	1759.1	1758.0
5°	1755.8	1755.8	1754.7	1754.7	1754.7	1754.7	1755.8	1756.9	1755.8	1758.0	1755.8
7.5°	1741.6	1748.2	1746.0	1748.2	1750.3	1752.5	1753.6	1755.8	1759.1	1761.3	1759.1
10°	1722.9	1726.2	1727.3	1729.5	1733.9	1739.4	1743.8	1749.2	1756.9	1759.1	1761.3
12.5°	1689.0	1693.4	1696.6	1701.0	1707.6	1716.4	1724.0	1732.8	1746.0	1754.7	1762.4
15°	1663.8	1669.2	1670.3	1675.8	1682.4	1692.3	1702.1	1715.3	1732.8	1748.2	1763.5
17.5°	1680.2	1682.4	1680.2	1680.2	1682.4	1686.8	1694.4	1705.4	1724.0	1742.7	1761.3
20°	1729.5	1729.5	1727.3	1726.2	1724.0	1719.7	1718.6	1717.5	1729.5	1743.8	1760.2
22.5°	1776.6	1776.6	1775.6	1779.9	1778.8	1778.8	1775.6	1770.1	1764.6	1762.4	1773.4
25°	1806.2	1810.6	1812.8	1819.4	1823.8	1830.4	1832.5	1831.5	1823.8	1810.6	1807.3
27.5°	1854.5	1857.8	1859.9	1867.6	1876.4	1884.1	1891.7	1901.6	1901.6	1889.5	1873.1
30°	1947.6	1943.2	1945.4	1947.6	1955.3	1966.3	1976.1	1989.3	1995.9	1991.5	1969.5
32.5°	2034.2	2038.6	2040.8	2047.4	2055.0	2071.5	2083.5	2098.9	2113.1	2115.3	2104.4
35°	2161.4	2159.2	2155.9	2178.9	2187.7	2206.3	2220.5	2242.5	2253.4	2263.3	2256.7
37.5°	2361.9	2355.3	2351.0	2357.5	2369.6	2381.7	2402.5	2418.9	2437.5	2460.6	2452.9
40°	2645.8	2658.9	2640.3	2649.1	2658.9	2631.5	2650.2	2665.5	2697.3	2698.4	2697.3
42.5°	3015.2	3025.0	3020.6	3026.1	3008.6	2999.8	2992.1	2999.8	3039.3	3033.8	3007.5
45°	3384.5	3398.8	3395.5	3397.7	3431.6	3417.4	3429.4	3431.6	3472.2	3461.2	3441.5
47.5°	3700.2	3724.3	3729.8	3749.5	3795.5	3832.8	3884.3	3922.7	3942.4	3955.5	3970.9
50°	3950.1	3967.6	3998.3	4047.6	4114.5	4179.1	4295.3	4370.9	4440.0	4488.2	4537.5
52.5°	4115.6	4135.3	4182.4	4256.9	4353.4	4471.8	4607.7	4765.5	4911.3	4996.8	5070.2
55°	4183.5	4203.2	4261.3	4358.9	4487.1	4638.4	4833.4	5055.9	5249.9	5446.1	5559.0
57.5°	4144.1	4166.0	4232.8	4342.4	4497.0	4695.4	4937.6	5210.5	5494.4	5791.4	6018.2
60°	4027.9	4047.6	4123.2	4237.2	4413.7	4637.3	4927.7	5269.7	5668.6	6109.2	6540.0
62.5°	3867.9	3897.4	3964.3	4080.5	4255.8	4500.3	4831.3	5276.2	5848.4	6558.6	7397.0
65°	3664.0	3685.9	3745.1	3837.2	4030.1	4285.4	4635.1	5179.8	5927.3	6934.5	8131.4
66°	3558.8	3579.6	3634.4	3721.0	3897.4	4143.0	4492.6	5050.5	5839.6	6932.3	8209.2
67.5°	3373.6	3383.4	3422.9	3508.4	3623.4	3843.7	4168.2	4691.0	5468.0	6639.7	7992.2
70°	2829.9	2844.2	2882.5	2926.4	2969.1	3048.0	3274.9	3620.2	4241.6	5365.0	6655.0
72.5°	1957.5	1979.4	2021.1	2102.2	2169.0	2268.8	2357.5	2472.6	2678.7	3459.0	4761.1
75°	1415.0	1422.6	1484.0	1626.5	1761.3	1960.8	2137.2	2193.1	2123.0	2110.9	2797.0
77.5°	843.9	854.9	943.7	1087.3	1227.5	1498.3	1859.9	2139.4	2294.0	2239.2	2117.5
80°	355.1	370.5	423.1	460.3	576.5	803.4	1160.7	1599.1	2006.8	2257.8	2200.8
82.5°	114.0	132.6	156.7	189.6	223.6	299.2	463.6	693.8	1096.0	1634.2	2009.0
85°	41.6	42.7	59.2	82.2	91.0	105.2	134.8	208.2	370.5	612.7	1139.9
87.5°	16.4	19.7	23.0	31.8	32.9	34.0	38.4	49.3	48.2	41.6	215.9
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3
2.5°	1759.1	1761.3	1760.2	1761.3	1761.3	1759.1	1759.1	1763.5	1760.2	1762.4	1762.4
5°	1758.0	1760.2	1759.1	1761.3	1761.3	1760.2	1760.2	1766.8	1765.7	1769.0	1771.2
7.5°	1762.4	1763.5	1762.4	1762.4	1765.7	1764.6	1765.7	1767.9	1773.4	1778.8	1783.2
10°	1767.9	1770.1	1773.4	1774.5	1778.8	1777.7	1781.0	1784.3	1789.8	1795.3	1800.8
12.5°	1775.6	1782.1	1792.0	1794.2	1798.6	1801.9	1807.3	1810.6	1815.0	1823.8	1830.4
15°	1782.1	1794.2	1806.2	1810.6	1815.0	1819.4	1824.9	1828.2	1835.8	1843.5	1851.2
17.5°	1784.3	1798.6	1813.9	1819.4	1823.8	1831.5	1838.0	1844.6	1853.4	1863.2	1872.0
20°	1785.4	1805.1	1824.9	1831.5	1841.3	1852.3	1863.2	1868.7	1880.8	1892.8	1900.5
22.5°	1795.3	1819.4	1846.8	1858.9	1868.7	1888.4	1902.7	1911.5	1925.7	1935.6	1938.9
25°	1822.7	1847.9	1880.8	1899.4	1915.8	1944.3	1961.9	1978.3	1986.0	1999.1	1995.9
27.5°	1872.0	1891.7	1934.5	1959.7	1980.5	2017.8	2051.8	2067.1	2079.2	2085.7	2078.1
30°	1956.4	1964.1	2011.2	2041.9	2077.0	2135.0	2172.3	2192.0	2207.4	2208.5	2188.8
32.5°	2082.4	2070.4	2112.0	2155.9	2201.9	2272.1	2322.5	2343.3	2355.3	2356.4	2312.6
35°	2253.4	2232.6	2267.7	2310.4	2367.4	2459.5	2523.0	2547.2	2565.8	2557.0	2492.4
37.5°	2469.3	2468.2	2484.7	2539.5	2604.1	2722.5	2789.4	2802.5	2801.4	2775.1	2677.6
40°	2709.4	2689.6	2691.8	2731.3	2805.8	2961.4	3054.6	3076.5	3068.9	3030.5	2903.4
42.5°	3011.9	3003.1	2973.5	2994.3	3063.4	3253.0	3365.9	3387.8	3394.4	3330.8	3180.7
45°	3436.0	3428.4	3362.6	3367.0	3417.4	3616.9	3734.1	3770.3	3771.4	3711.1	3516.0
47.5°	3950.1	3943.5	3866.8	3844.8	3870.0	4047.6	4193.4	4201.0	4203.2	4119.9	3917.2
50°	4533.1	4514.5	4456.4	4433.4	4403.8	4600.0	4717.3	4716.2	4704.1	4612.1	4384.1
52.5°	5096.5	5138.1	5116.2	5071.3	5072.4	5213.8	5324.5	5263.1	5270.8	5183.1	4921.1
55°	5698.2	5804.5	5884.5	5901.0	5893.3	5965.6	6027.0	5917.4	5876.9	5862.6	5584.2
57.5°	6337.2	6609.0	6855.6	6958.6	6919.2	7051.8	7106.6	6992.6	6994.8	7106.6	6866.6
60°	7191.0	7877.1	8498.5	8691.4	8781.3	9000.5	8903.0	8896.4	9068.5	9213.1	8768.2
62.5°	8486.5	9623.1	10615.0	10758.5	10830.9	10880.2	10836.4	10716.9	10894.4	10912.0	10225.9
65°	9468.5	10802.4	11761.4	11941.1	11928.0	11677.0	11433.7	11194.8	11192.6	11017.2	10133.8
66°	9574.8	10914.2	11849.1	12008.0	11949.9	11563.0	11253.9	10943.8	10844.0	10581.0	9684.4
67.5°	9342.5	10719.1	11647.4	11789.9	11666.0	11077.5	10656.6	10236.8	10086.7	9720.6	8806.5
70°	7986.7	9405.0	10646.7	10852.8	10705.9	9924.5	9300.8	8839.4	8430.6	8070.0	7315.9
72.5°	6192.5	7253.5	8567.6	8782.4	8794.5	8182.9	7480.3	7037.5	6561.9	6200.2	5634.6
75°	4061.9	4864.1	5586.4	5514.1	5534.9	5053.8	4635.1	4266.8	3836.1	3551.1	3281.5
77.5°	2374.0	2661.1	2595.4	2415.6	2264.4	1779.9	1273.6	874.6	762.8	795.7	897.6
80°	2063.8	1902.7	1489.5	1309.7	1191.4	808.9	435.1	306.9	269.6	272.9	289.3
82.5°	2221.6	2304.9	1891.7	1557.4	1358.0	952.4	511.8	255.4	184.1	214.8	236.7
85°	1724.0	2194.2	2023.3	1709.8	1438.0	1012.7	522.8	162.2	109.6	146.9	185.2
87.5°	491.0	777.1	621.4	549.1	442.8	302.5	124.9	64.7	59.2	76.7	106.3
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3	1761.3
2.5°	1763.5	1763.5	1766.8	1767.9	1769.0	1769.0	1771.2	1771.2	1772.3	1776.6	1775.6
5°	1774.5	1777.7	1782.1	1784.3	1787.6	1788.7	1792.0	1792.0	1795.3	1798.6	1797.5
7.5°	1787.6	1790.9	1794.2	1797.5	1800.8	1805.1	1804.0	1803.0	1801.9	1799.7	1797.5
10°	1806.2	1809.5	1812.8	1811.7	1809.5	1807.3	1798.6	1788.7	1784.3	1775.6	1769.0
12.5°	1836.9	1840.2	1836.9	1828.2	1816.1	1801.9	1783.2	1766.8	1756.9	1743.8	1736.1
15°	1859.9	1863.2	1856.7	1841.3	1821.6	1803.0	1777.7	1756.9	1739.4	1725.1	1714.2
17.5°	1877.5	1875.3	1861.0	1843.5	1822.7	1807.3	1784.3	1761.3	1740.5	1720.8	1705.4
20°	1902.7	1890.6	1869.8	1847.9	1827.1	1813.9	1795.3	1774.5	1752.5	1724.0	1704.3
22.5°	1935.6	1913.7	1886.3	1864.3	1844.6	1831.5	1812.8	1793.1	1772.3	1739.4	1712.0
25°	1982.7	1947.6	1915.8	1892.8	1875.3	1862.1	1839.1	1818.3	1795.3	1762.4	1727.3
27.5°	2048.5	1998.0	1965.2	1942.1	1924.6	1909.3	1879.7	1854.5	1824.9	1792.0	1750.3
30°	2134.0	2072.6	2036.4	2016.7	1998.0	1976.1	1944.3	1907.1	1868.7	1824.9	1779.9
32.5°	2240.3	2171.2	2137.2	2117.5	2093.4	2063.8	2022.2	1972.8	1915.8	1857.8	1801.9
35°	2391.5	2312.6	2275.3	2241.4	2206.3	2162.4	2100.0	2028.7	1953.1	1877.5	1808.4
37.5°	2541.7	2468.2	2422.2	2387.1	2332.3	2261.1	2174.5	2075.9	1975.0	1878.6	1795.3
40°	2754.3	2668.8	2615.1	2552.6	2463.9	2353.2	2227.1	2094.5	1969.5	1853.4	1754.7
42.5°	3015.2	2917.6	2837.6	2724.7	2586.6	2426.6	2252.3	2083.5	1931.2	1797.5	1689.0
45°	3345.1	3217.9	3084.2	2906.6	2695.1	2471.5	2251.2	2045.2	1865.4	1714.2	1606.8
47.5°	3729.8	3551.1	3326.4	3055.7	2766.4	2482.5	2216.2	1976.1	1766.8	1600.2	1476.3
50°	4125.4	3866.8	3547.8	3170.8	2802.5	2455.1	2138.3	1863.2	1637.5	1447.8	1314.1
52.5°	4613.1	4212.0	3748.4	3248.6	2787.2	2374.0	2009.0	1704.3	1463.2	1278.0	1124.5
55°	5194.0	4608.8	3939.1	3291.3	2719.2	2228.2	1812.8	1496.1	1242.9	1074.1	936.0
57.5°	6155.3	5230.2	4264.6	3354.9	2585.5	2011.2	1573.9	1246.2	1008.3	864.8	754.1
60°	7812.4	6504.9	4952.9	3511.6	2400.3	1702.1	1270.3	976.6	780.4	665.3	587.5
62.5°	8968.7	7277.6	5323.4	3457.9	2085.7	1340.4	939.3	698.2	568.8	493.2	440.6
65°	8744.1	6972.9	4877.3	2937.3	1634.2	948.1	624.7	472.4	399.0	351.8	325.5
66°	8340.7	6636.4	4537.5	2637.0	1417.2	790.2	515.1	391.3	343.1	309.1	291.5
67.5°	7605.3	5939.3	3927.0	2116.4	1060.9	583.1	391.3	304.7	278.4	260.9	248.8
70°	6296.6	4696.4	2703.9	1250.6	561.2	326.6	248.8	224.7	212.6	205.0	203.9
72.5°	4828.0	3369.2	1564.0	605.0	300.3	217.0	190.7	181.9	177.6	175.4	175.4
75°	2982.3	1900.5	699.3	303.6	207.1	177.6	165.5	161.1	160.0	160.0	160.0
77.5°	1048.9	662.0	313.5	222.5	181.9	160.0	150.2	148.0	150.2	150.2	150.2
80°	289.3	255.4	226.9	197.3	164.4	148.0	139.2	138.1	142.5	143.6	139.2
82.5°	225.8	212.6	194.0	176.5	150.2	134.8	130.4	132.6	134.8	131.5	124.9
85°	192.9	184.1	135.9	135.9	121.7	117.3	116.2	118.4	117.3	108.5	99.7
87.5°	109.6	96.4	73.4	80.0	85.5	87.7	73.4	78.9	77.8	69.0	64.7
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):

	160°	165°	170°	175°	180°
0°	1761.3	1761.3	1761.3	1761.3	1761.3
2.5°	1777.7	1777.7	1779.9	1779.9	1778.8
5°	1799.7	1799.7	1803.0	1800.8	1801.9
7.5°	1795.3	1790.9	1790.9	1788.7	1787.6
10°	1764.6	1756.9	1752.5	1754.7	1751.4
12.5°	1729.5	1722.9	1718.6	1717.5	1716.4
15°	1707.6	1699.9	1696.6	1694.4	1694.4
17.5°	1695.5	1686.8	1682.4	1679.1	1678.0
20°	1690.1	1679.1	1672.5	1669.2	1667.0
22.5°	1692.3	1679.1	1670.3	1666.0	1663.8
25°	1701.0	1684.6	1673.6	1668.1	1664.9
27.5°	1716.4	1694.4	1682.4	1674.7	1670.3
30°	1735.0	1704.3	1686.8	1675.8	1671.4
32.5°	1747.1	1705.4	1683.5	1667.0	1662.7
35°	1744.9	1693.4	1664.9	1644.0	1640.7
37.5°	1722.9	1661.6	1626.5	1599.1	1595.8
40°	1675.8	1613.3	1572.8	1545.4	1538.8
42.5°	1610.1	1545.4	1501.5	1476.3	1467.6
45°	1513.6	1434.7	1394.1	1373.3	1361.3
47.5°	1377.7	1303.2	1258.2	1240.7	1225.4
50°	1223.2	1141.0	1108.1	1088.3	1070.8
52.5°	1041.2	971.1	945.9	927.2	913.0
55°	864.8	815.4	785.8	766.1	767.2
57.5°	694.9	665.3	648.8	628.0	630.2
60°	546.9	521.7	521.7	508.6	504.2
62.5°	417.6	407.7	404.4	400.0	392.4
65°	316.7	316.7	317.8	317.8	313.5
66°	285.0	288.3	292.6	292.6	287.2
67.5°	246.6	251.0	255.4	257.6	257.6
70°	203.9	209.3	211.5	213.7	212.6
72.5°	178.7	183.0	183.0	184.1	181.9
75°	162.2	164.4	165.5	163.3	162.2
77.5°	150.2	151.3	150.2	149.1	148.0
80°	135.9	134.8	131.5	127.1	126.0
82.5°	117.3	112.9	110.7	104.1	103.0
85°	94.3	88.8	84.4	75.6	71.2
87.5°	62.5	60.3	57.0	41.6	34.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)