

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: INVUE

Report Number: P141289

Luminaire Tested: **EMM-E04-LED-E1-SL4-7030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141289
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33692)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: EMM-E04-LED-E1-SL4-7030
Description: EPIC MODERN MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (84) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10315.3 lumens
Efficiency: N/A
Efficacy: 106.1 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

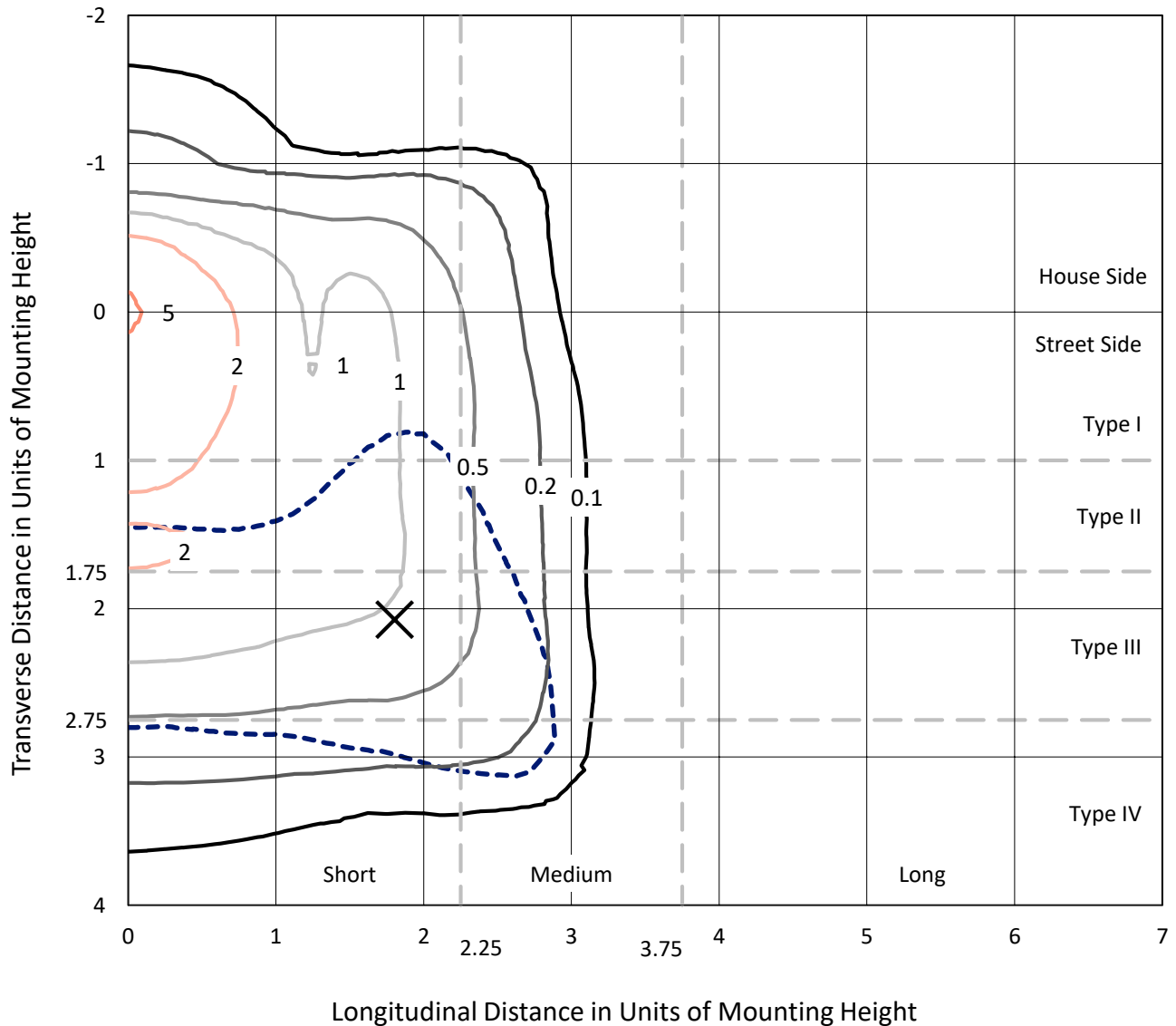
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

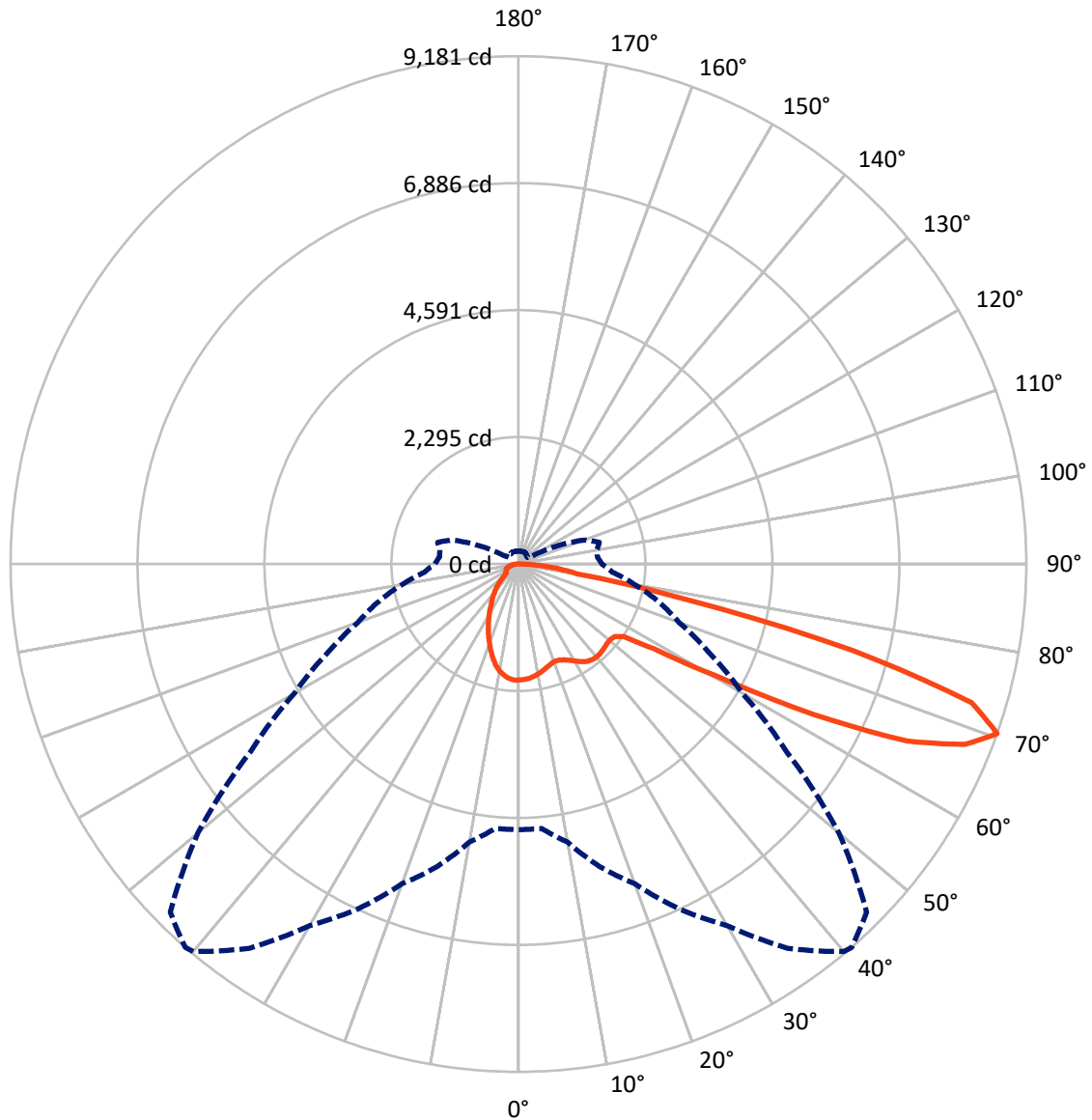
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 41-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2213.2	0.0	2213.2
	% Fixture	21.5	0.0	21.5
Street Side	Lumens	8102.1	0.0	8102.1
	% Fixture	78.5	0.0	78.5
Total	Lumens	10315.3	0.0	10315.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.0	1.9
10°-20°	522.7	5.1
20°-30°	755.8	7.3
30°-40°	961.9	9.3
40°-50°	1133.5	11.0
50°-60°	1734.4	16.8
60°-70°	3223.6	31.3
70°-80°	1555.9	15.1
80°-90°	232.4	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°	10315.3	100.0
0°-180°	10315.3	100.0



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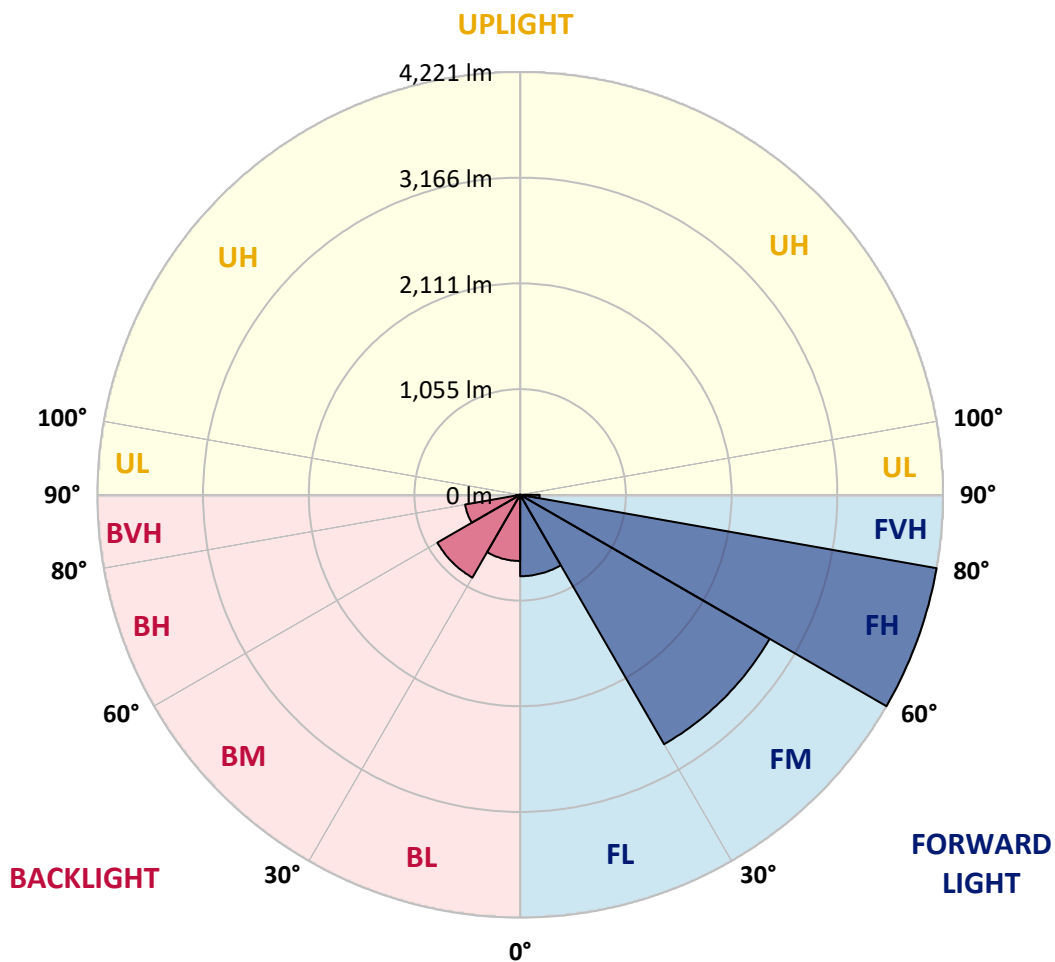
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	812.4	7.9			
FM (30°-60°)	2875.1	27.9			
FH (60°-80°)	4221.5	40.9			G2/5000
FVH (80°-90°)	193.2	1.9			G2/225
BL (0°-30°)	661.1	6.4	B2/1000		
BM (30°-60°)	954.8	9.3	B1/1000		
BH (60°-80°)	558.1	5.4	B2/1000		G2/1000
BVH (80°-90°)	39.2	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	41°	45°
0°	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8
2.5°	2095.8	2098.3	2097.1	2094.6	2092.2	2093.4	2092.2	2091.0	2091.0	2089.7	2088.5
5°	2086.1	2091.0	2087.3	2084.9	2081.2	2081.2	2080.0	2077.6	2075.1	2073.9	2071.5
7.5°	2065.4	2070.3	2067.8	2065.4	2061.7	2059.3	2054.4	2052.0	2049.6	2048.3	2044.7
10°	2037.4	2039.8	2037.4	2032.5	2030.1	2028.9	2026.4	2021.5	2016.7	2014.2	2010.6
12.5°	2000.8	2002.1	1999.6	1997.2	1993.5	1993.5	1989.9	1986.2	1978.9	1976.5	1968.0
15°	1969.2	1965.5	1963.1	1961.9	1960.7	1954.6	1955.8	1949.7	1937.5	1933.9	1924.1
17.5°	1960.7	1957.0	1955.8	1952.1	1949.7	1942.4	1935.1	1922.9	1902.2	1898.6	1883.9
20°	1985.0	1985.0	1981.4	1978.9	1975.3	1961.9	1946.0	1922.9	1885.2	1876.6	1858.4
22.5°	2043.5	2037.4	2034.9	2034.9	2033.7	2014.2	1985.0	1948.5	1898.6	1887.6	1855.9
25°	2134.8	2123.8	2127.5	2126.3	2123.8	2095.8	2053.2	2000.8	1932.6	1918.0	1876.6
27.5°	2243.2	2245.6	2244.4	2239.5	2232.2	2201.8	2140.9	2070.3	1985.0	1970.4	1916.8
30°	2356.4	2358.9	2366.2	2362.5	2357.7	2311.4	2235.9	2159.2	2055.6	2036.2	1970.4
32.5°	2488.0	2496.5	2502.6	2503.8	2484.3	2421.0	2332.1	2234.7	2125.1	2105.6	2024.0
35°	2640.2	2635.3	2646.3	2641.4	2607.3	2520.8	2411.2	2295.6	2183.5	2157.9	2070.3
37.5°	2793.6	2799.7	2788.8	2768.1	2714.5	2601.2	2466.0	2335.7	2211.5	2187.2	2095.8
40°	2942.2	2938.6	2913.0	2877.7	2797.3	2652.4	2496.5	2354.0	2221.3	2195.7	2101.9
42.5°	3053.0	3043.3	3004.3	2947.1	2843.6	2676.7	2505.0	2354.0	2215.2	2188.4	2093.4
45°	3101.7	3092.0	3054.2	2981.2	2858.2	2671.9	2490.4	2333.3	2194.5	2171.3	2076.3
47.5°	3101.7	3098.1	3056.7	2986.0	2854.5	2658.5	2468.5	2307.7	2173.8	2150.6	2061.7
50°	3077.4	3074.9	3038.4	2969.0	2842.3	2651.2	2462.4	2302.9	2172.6	2149.4	2067.8
52.5°	3159.0	3143.1	3105.4	3025.0	2887.4	2681.6	2492.8	2327.2	2201.8	2178.6	2094.6
55°	4151.5	4138.1	3946.9	3610.8	3258.8	2937.3	2662.1	2472.1	2345.5	2310.2	2249.3
57.5°	5756.5	5737.1	5541.0	5235.3	4630.1	3942.0	3402.5	3085.9	2908.1	2882.5	2846.0
60°	6408.1	6400.8	6317.9	6193.7	5964.8	5609.2	5107.5	4581.4	4172.2	4106.4	4111.3
62.5°	6781.9	6763.7	6723.5	6693.0	6615.1	6470.2	6376.4	6229.0	6030.5	5985.5	5700.5
65°	6991.4	6989.0	7010.9	7036.5	7031.6	7075.4	7122.9	7404.2	7734.3	7719.6	7418.8
67.5°	6679.6	6700.3	6814.8	6990.2	7174.1	7368.9	7731.8	8295.7	8703.6	8703.6	8439.4
70°	4801.8	4798.1	5102.6	5657.9	6152.3	6880.6	7549.1	8478.3	9145.7	9181.0	8900.9
72.5°	2877.7	2944.6	3132.2	3384.3	3804.4	4686.1	5929.5	7599.1	8530.7	8568.4	8233.5
75°	2021.5	1971.6	1964.3	1978.9	2050.8	2267.5	2951.9	4664.2	6184.0	6242.4	5918.5
77.5°	1293.3	1282.3	1287.2	1303.0	1306.7	1327.4	1360.3	1599.0	2866.7	3146.8	3132.2
80°	1115.5	1111.9	1113.1	1094.8	1059.5	1046.1	1087.5	1054.6	1024.2	1066.8	1008.3
82.5°	747.7	761.1	783.0	812.3	882.9	907.3	893.9	887.8	791.6	769.6	683.2
85°	554.1	546.8	555.3	555.3	537.0	518.8	532.2	518.8	459.1	429.9	380.0
87.5°	299.6	300.8	325.2	334.9	333.7	285.0	235.0	203.4	183.9	170.5	143.7
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8
2.5°	2089.7	2086.1	2087.3	2087.3	2086.1	2088.5	2084.9	2083.7	2084.9	2084.9	2084.9
5°	2069.0	2064.2	2064.2	2063.0	2060.5	2060.5	2055.6	2054.4	2052.0	2055.6	2053.2
7.5°	2039.8	2032.5	2026.4	2021.5	2019.1	2015.5	2009.4	2006.9	2004.5	2003.3	2000.8
10°	2004.5	1996.0	1983.8	1974.1	1969.2	1959.4	1952.1	1942.4	1942.4	1937.5	1932.6
12.5°	1961.9	1949.7	1937.5	1924.1	1915.6	1902.2	1890.0	1879.1	1870.5	1859.6	1852.3
15°	1919.3	1901.0	1887.6	1874.2	1858.4	1840.1	1825.5	1808.4	1792.6	1775.6	1770.7
17.5°	1873.0	1858.4	1846.2	1830.4	1813.3	1791.4	1771.9	1743.9	1724.4	1703.7	1687.9
20°	1842.5	1825.5	1812.1	1797.5	1779.2	1753.6	1728.1	1696.4	1667.2	1636.7	1613.6
22.5°	1826.7	1798.7	1786.5	1773.1	1754.9	1726.8	1697.6	1658.6	1622.1	1581.9	1545.4
25°	1832.8	1795.0	1770.7	1756.1	1740.2	1712.2	1674.5	1630.6	1589.2	1538.1	1496.7
27.5°	1859.6	1808.4	1770.7	1746.3	1729.3	1700.0	1661.1	1611.2	1561.2	1507.6	1457.7
30°	1894.9	1830.4	1781.6	1746.3	1720.8	1689.1	1646.5	1592.9	1538.1	1478.4	1421.2
32.5°	1935.1	1855.9	1797.5	1748.8	1707.4	1667.2	1623.3	1567.3	1510.1	1446.7	1390.7
35°	1966.7	1875.4	1808.4	1743.9	1689.1	1639.2	1588.0	1535.6	1478.4	1418.7	1359.1
37.5°	1985.0	1887.6	1808.4	1726.8	1659.9	1607.5	1553.9	1502.8	1448.0	1389.5	1337.1
40°	1992.3	1892.5	1801.1	1707.4	1629.4	1569.7	1519.8	1467.4	1418.7	1367.6	1321.3
42.5°	1988.7	1888.8	1791.4	1689.1	1605.1	1540.5	1485.7	1437.0	1396.8	1354.2	1315.2
45°	1974.1	1876.6	1781.6	1680.6	1596.5	1530.8	1474.8	1428.5	1390.7	1351.8	1321.3
47.5°	1961.9	1871.8	1787.7	1701.3	1620.9	1553.9	1493.0	1441.9	1410.2	1379.8	1360.3
50°	1971.6	1885.2	1801.1	1719.5	1641.6	1573.4	1511.3	1463.8	1445.5	1440.7	1434.6
52.5°	1998.4	1913.2	1842.5	1785.3	1750.0	1724.4	1661.1	1650.1	1634.3	1625.8	1605.1
55°	2172.6	2137.2	2200.6	2270.0	2282.2	2358.9	2389.3	2391.8	2365.0	2270.0	2048.3
57.5°	2881.3	2969.0	2995.8	3156.5	3200.4	3166.3	3120.0	3117.6	3034.8	2909.3	2586.6
60°	4147.8	4101.6	4044.3	3939.6	3840.9	3735.0	3588.9	3476.8	3370.9	3178.5	2838.7
62.5°	5472.8	5069.7	4776.2	4475.4	4231.9	4018.7	3806.8	3626.6	3454.9	3188.2	2824.1
65°	6622.4	5801.6	5206.1	4754.3	4376.8	4065.0	3783.7	3537.7	3320.9	2987.3	2618.3
67.5°	7370.1	6190.1	5299.9	4625.2	4091.8	3694.8	3280.8	2892.3	2679.2	2410.0	2222.5
70°	7561.3	5916.1	4673.9	3809.3	3090.8	2617.1	2128.7	1704.9	1508.9	1433.4	1439.4
72.5°	6820.9	4676.4	3313.6	2423.4	1897.3	1504.0	1222.7	940.1	734.3	616.2	601.6
75°	4455.9	2602.4	1573.4	1096.0	871.9	694.1	546.8	460.3	397.0	320.3	267.9
77.5°	1684.2	991.3	706.3	576.0	426.2	297.1	231.4	194.8	179.0	174.1	157.1
80°	863.4	688.1	492.0	323.9	226.5	181.5	152.2	129.1	119.3	114.5	116.9
82.5°	582.1	433.5	271.6	194.8	157.1	135.2	107.2	90.1	80.4	79.2	85.2
85°	323.9	216.8	158.3	131.5	115.7	101.1	81.6	67.0	62.1	65.8	76.7
87.5°	101.1	99.9	71.9	58.5	60.9	52.4	39.0	29.2	29.2	37.8	53.6
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°	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8
2.5°	2084.9	2087.3	2092.2	2088.5	2089.7	2091.0	2094.6	2099.5	2095.8	2093.4	2100.7
5°	2055.6	2055.6	2061.7	2059.3	2064.2	2069.0	2071.5	2080.0	2077.6	2075.1	2084.9
7.5°	2002.1	2003.3	2011.8	2009.4	2019.1	2020.3	2030.1	2037.4	2037.4	2042.3	2050.8
10°	1933.9	1933.9	1941.2	1942.4	1948.5	1953.4	1964.3	1977.7	1980.1	1988.7	2000.8
12.5°	1857.1	1854.7	1860.8	1860.8	1865.7	1871.8	1883.9	1899.8	1902.2	1915.6	1931.4
15°	1762.2	1758.5	1756.1	1758.5	1760.9	1762.2	1780.4	1796.3	1806.0	1820.6	1836.4
17.5°	1670.8	1657.4	1651.3	1651.3	1652.6	1652.6	1659.9	1678.1	1691.5	1714.7	1737.8
20°	1589.2	1566.1	1557.6	1538.1	1534.4	1525.9	1532.0	1552.7	1577.1	1595.3	1613.6
22.5°	1512.5	1488.2	1463.8	1440.7	1422.4	1411.4	1422.4	1435.8	1444.3	1458.9	1463.8
25°	1454.1	1413.9	1379.8	1343.2	1323.7	1314.0	1312.8	1311.6	1304.3	1301.8	1301.8
27.5°	1407.8	1360.3	1309.1	1268.9	1242.2	1223.9	1203.2	1188.6	1170.3	1146.0	1133.8
30°	1368.8	1317.7	1261.6	1214.1	1180.0	1144.7	1102.1	1069.2	1036.3	1007.1	981.5
32.5°	1333.5	1281.1	1226.3	1176.4	1117.9	1057.1	1003.5	964.5	907.3	868.3	835.4
35°	1306.7	1254.3	1203.2	1137.4	1057.1	979.1	909.7	852.5	794.0	742.9	699.0
37.5°	1287.2	1243.4	1188.6	1099.7	998.6	904.8	831.8	763.6	694.1	624.7	569.9
40°	1281.1	1243.4	1174.0	1058.3	942.6	841.5	757.5	673.4	596.7	522.4	466.4
42.5°	1284.8	1244.6	1150.8	1021.7	896.3	786.7	691.7	594.3	503.0	423.8	367.8
45°	1298.2	1244.6	1126.5	981.5	853.7	736.8	623.5	507.8	401.9	338.5	314.2
47.5°	1338.4	1253.1	1107.0	952.3	815.9	682.0	546.8	415.3	325.2	298.4	298.4
50°	1400.5	1278.7	1104.5	930.4	773.3	618.6	451.8	327.6	287.4	286.2	293.5
52.5°	1506.4	1323.7	1116.7	915.8	728.2	533.4	351.9	282.5	274.0	281.3	292.3
55°	1712.2	1402.9	1133.8	889.0	652.7	417.7	288.6	267.9	271.6	280.1	289.8
57.5°	2088.5	1562.4	1152.0	831.8	528.5	316.6	261.8	263.0	269.1	277.7	286.2
60°	2347.9	1759.7	1188.6	735.6	393.3	261.8	250.9	260.6	267.9	274.0	281.3
62.5°	2369.8	1831.6	1215.4	627.2	292.3	238.7	241.1	255.7	265.5	267.9	271.6
65°	2238.3	1739.0	1138.6	517.6	242.3	226.5	235.0	248.4	258.2	259.4	263.0
67.5°	1950.9	1545.4	971.8	393.3	221.6	218.0	227.7	236.3	243.6	249.6	254.5
70°	1511.3	1261.6	781.8	305.7	205.8	204.6	213.1	222.9	230.2	236.3	243.6
72.5°	796.4	896.3	582.1	244.8	188.8	190.0	198.5	207.0	211.9	218.0	225.3
75°	247.2	380.0	359.3	196.1	168.1	172.9	177.8	185.1	193.6	197.3	200.9
77.5°	146.1	154.7	187.5	153.4	146.1	149.8	155.9	162.0	168.1	172.9	176.6
80°	118.1	120.6	121.8	121.8	121.8	126.7	131.5	140.0	144.9	147.4	148.6
82.5°	92.6	98.6	99.9	97.4	101.1	105.9	108.4	113.3	114.5	116.9	119.3
85°	76.7	75.5	77.9	79.2	74.3	74.3	71.9	71.9	76.7	85.2	86.5
87.5°	59.7	52.4	42.6	40.2	37.8	35.3	32.9	32.9	34.1	39.0	42.6
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°	2095.8	2095.8	2095.8	2095.8	2095.8
2.5°	2100.7	2099.5	2101.9	2105.6	2103.1
5°	2086.1	2086.1	2091.0	2094.6	2092.2
7.5°	2056.9	2058.1	2065.4	2070.3	2067.8
10°	2010.6	2013.0	2021.5	2028.9	2032.5
12.5°	1941.2	1949.7	1960.7	1968.0	1968.0
15°	1853.5	1866.9	1879.1	1890.0	1883.9
17.5°	1753.6	1769.5	1785.3	1791.4	1785.3
20°	1633.1	1634.3	1644.0	1650.1	1647.7
22.5°	1468.7	1463.8	1468.7	1471.1	1474.8
25°	1300.6	1292.1	1287.2	1294.5	1298.2
27.5°	1128.9	1116.7	1120.4	1111.9	1102.1
30°	962.1	951.1	937.7	934.1	940.1
32.5°	814.7	786.7	775.7	755.0	763.6
35°	658.8	630.8	604.0	596.7	591.9
37.5°	531.0	496.9	464.0	453.0	450.6
40°	415.3	387.3	365.3	359.3	356.8
42.5°	337.3	325.2	321.5	321.5	322.7
45°	308.1	309.3	313.0	315.4	316.6
47.5°	302.0	306.9	311.8	316.6	317.8
50°	302.0	305.7	309.3	314.2	315.4
52.5°	299.6	303.2	304.5	306.9	309.3
55°	297.1	298.4	298.4	299.6	302.0
57.5°	291.1	292.3	289.8	291.1	295.9
60°	285.0	286.2	283.7	286.2	287.4
62.5°	276.4	276.4	275.2	276.4	277.7
65°	266.7	263.0	265.5	264.3	265.5
67.5°	254.5	249.6	248.4	248.4	249.6
70°	237.5	233.8	232.6	235.0	237.5
72.5°	216.8	219.2	222.9	226.5	232.6
75°	202.2	205.8	210.7	222.9	231.4
77.5°	181.5	180.2	185.1	198.5	210.7
80°	151.0	152.2	151.0	154.7	157.1
82.5°	115.7	114.5	110.8	110.8	108.4
85°	81.6	77.9	73.1	71.9	70.6
87.5°	41.4	43.8	40.2	36.5	36.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)