

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: P146614

Luminaire Tested: **LDRL-T3-F04-E-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P146614  
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-F04-E-7030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3  
Light Source: (28) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9005.1 lumens  
Efficiency: N/A  
Efficacy: 88.1 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

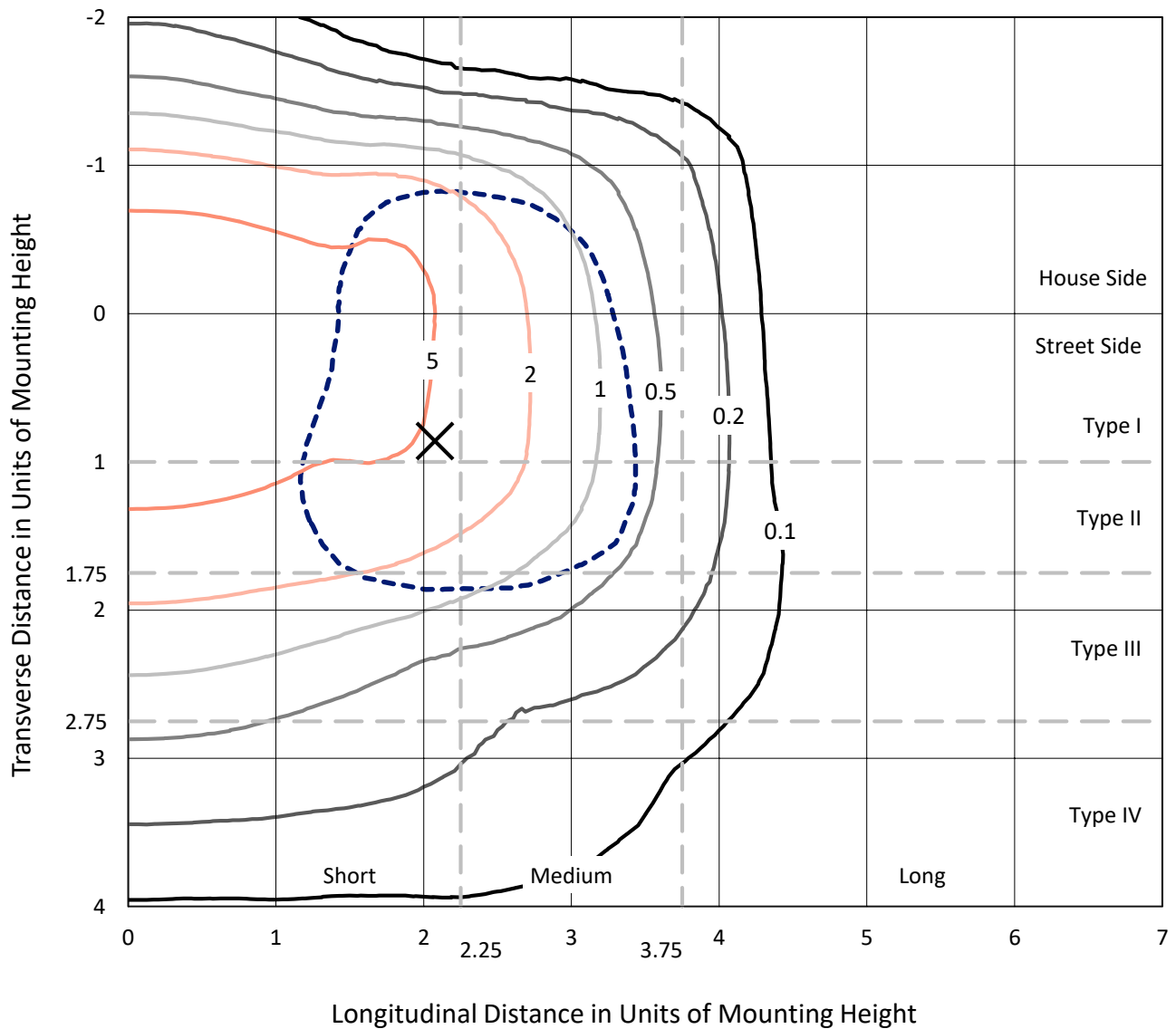
Input Watts (W): 102.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

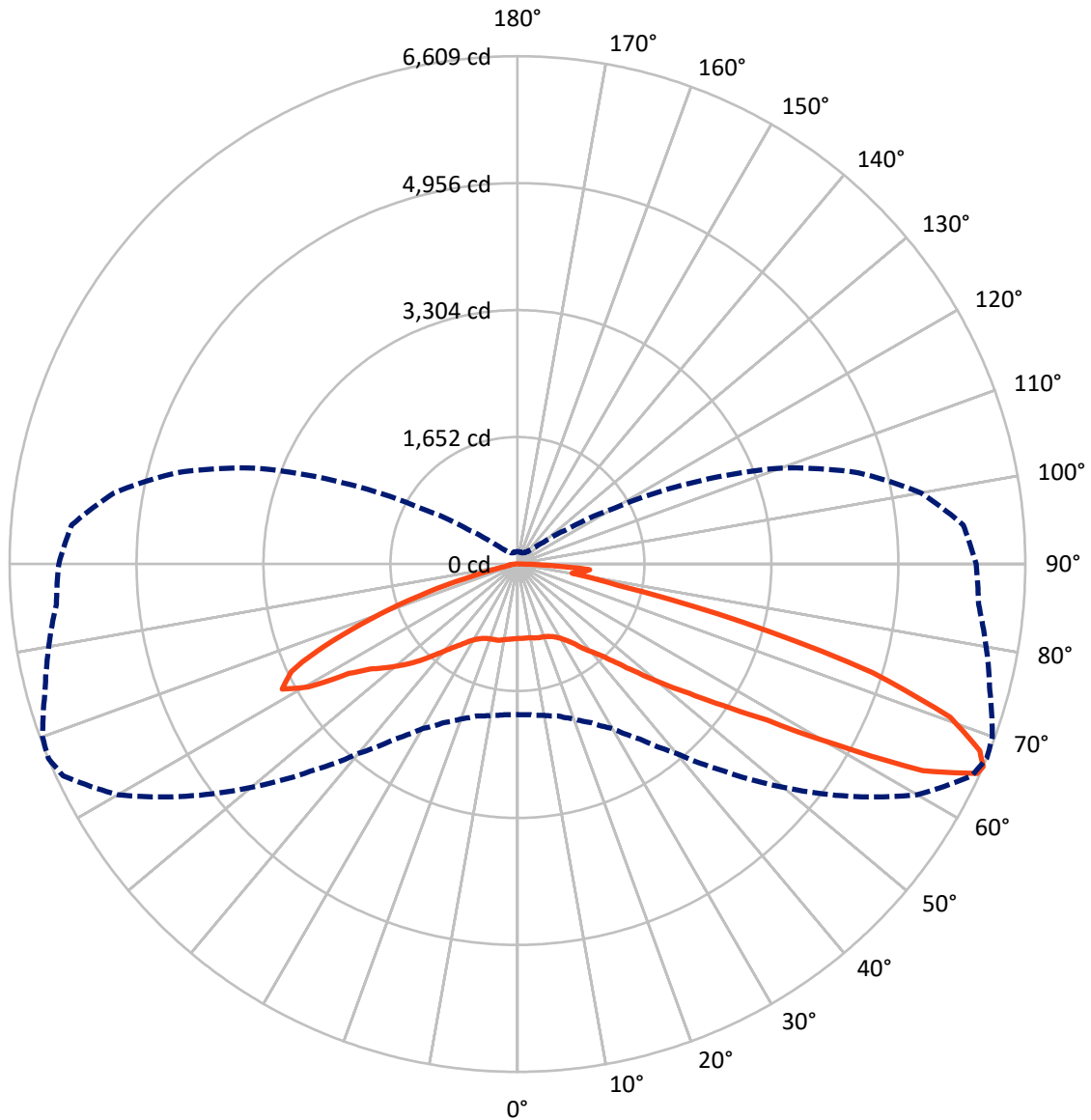
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.7 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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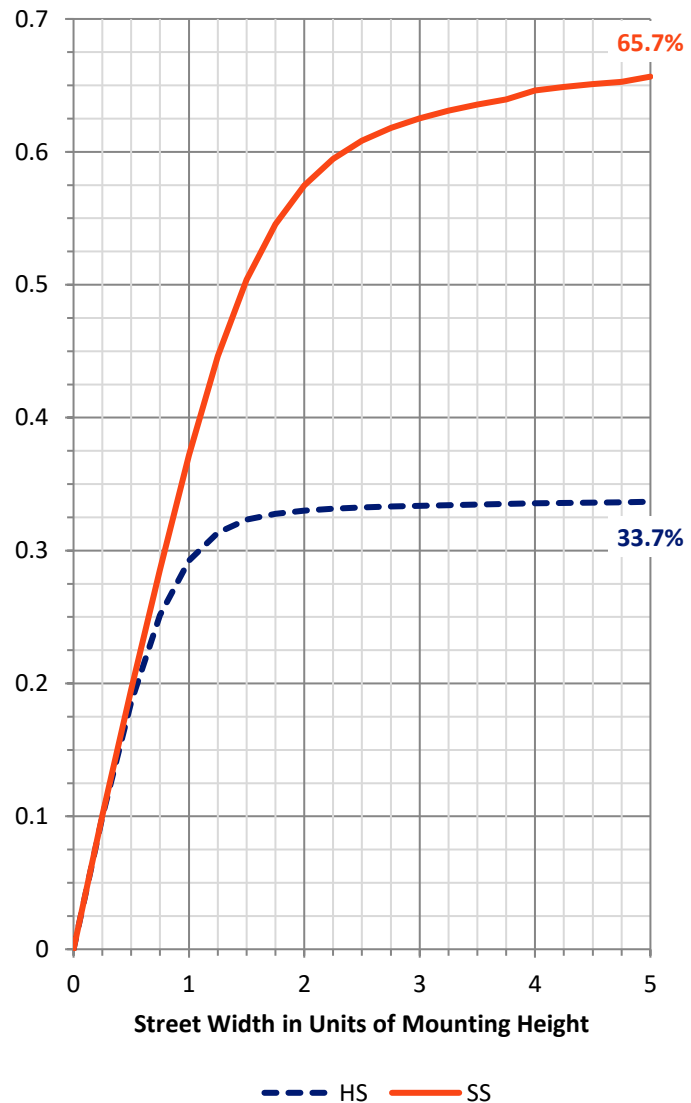
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3059.3	0.0	3059.3
	% Fixture	34.0	0.0	34.0
<b>Street Side</b>	Lumens	5945.8	0.0	5945.8
	% Fixture	66.0	0.0	66.0
<b>Total</b>	Lumens	9005.1	0.0	9005.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.1	1.0
10°-20°	275.9	3.1
20°-30°	474.3	5.3
30°-40°	762.9	8.5
40°-50°	1257.4	14.0
50°-60°	1971.0	21.9
60°-70°	2727.7	30.3
70°-80°	1234.4	13.7
80°-90°	208.3	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°	9005.1	100.0
0°-180°	9005.1	100.0



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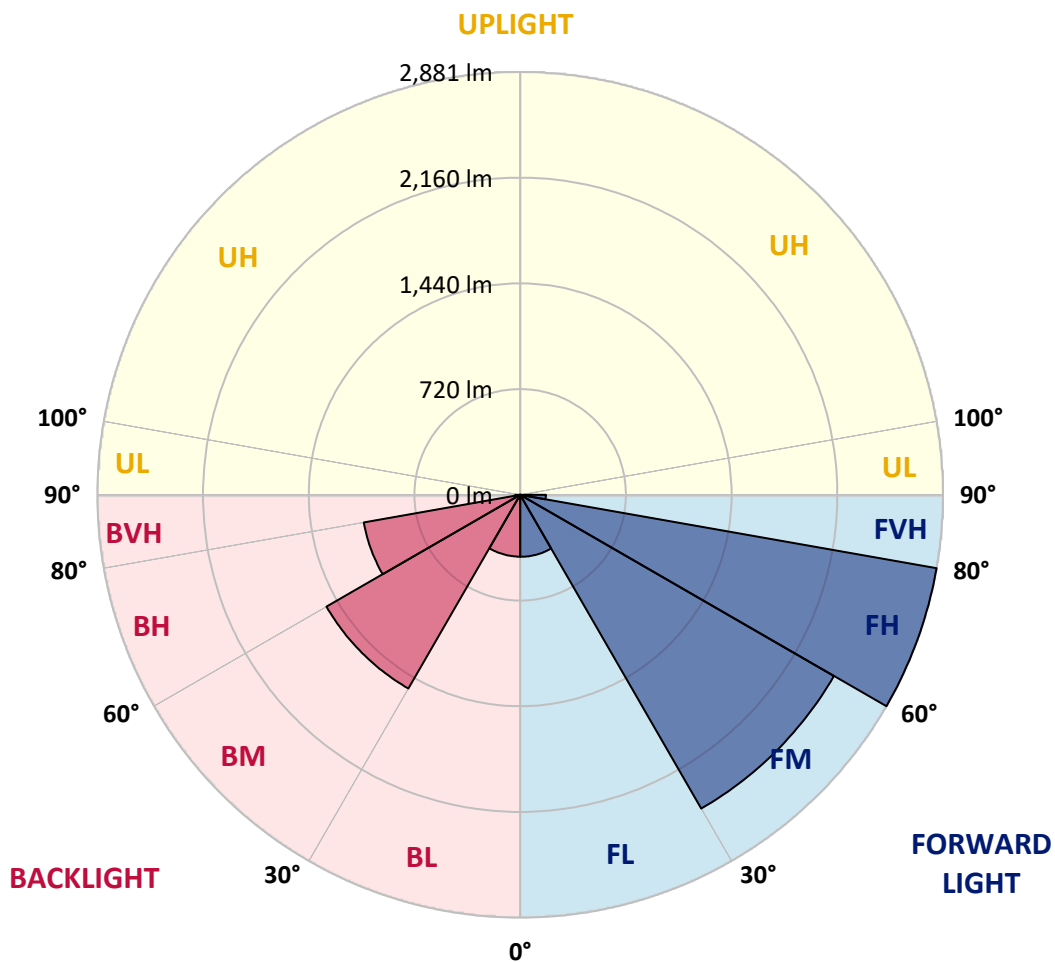
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	422.3	4.7			
FM	(30°-60°)	2467.8	27.4			
FH	(60°-80°)	2880.7	32.0			G2/5000
FVH	(80°-90°)	175.0	1.9			G2/225
BL	(0°-30°)	421.0	4.7	B1/500		
BM	(30°-60°)	1523.6	16.9	B2/2500		
BH	(60°-80°)	1081.5	12.0	B3/2500		G3/2500
BVH	(80°-90°)	33.2	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: 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°	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3
2.5°	968.1	967.5	966.9	966.9	966.3	966.9	967.5	968.1	967.5	968.1	967.5
5°	966.3	966.3	965.7	965.7	965.7	965.7	966.3	966.9	966.3	967.5	966.3
7.5°	958.5	962.1	960.9	962.1	963.3	964.5	965.1	966.3	968.1	969.3	968.1
10°	948.2	950.0	950.6	951.8	954.3	957.3	959.7	962.7	966.9	968.1	969.3
12.5°	929.5	931.9	933.7	936.2	939.8	944.6	948.8	953.7	960.9	965.7	969.9
15°	915.6	918.7	919.3	922.3	925.9	931.3	936.8	944.0	953.7	962.1	970.5
17.5°	924.7	925.9	924.7	924.7	925.9	928.3	932.5	938.6	948.8	959.1	969.3
20°	951.8	951.8	950.6	950.0	948.8	946.4	945.8	945.2	951.8	959.7	968.7
22.5°	977.8	977.8	977.2	979.6	979.0	979.0	977.2	974.2	971.1	969.9	976.0
25°	994.1	996.5	997.7	1001.3	1003.7	1007.3	1008.5	1007.9	1003.7	996.5	994.7
27.5°	1020.6	1022.4	1023.6	1027.8	1032.7	1036.9	1041.1	1046.5	1046.5	1039.9	1030.9
30°	1071.9	1069.5	1070.7	1071.9	1076.1	1082.1	1087.6	1094.8	1098.4	1096.0	1083.9
32.5°	1119.5	1121.9	1123.1	1126.8	1131.0	1140.0	1146.7	1155.1	1163.0	1164.2	1158.1
35°	1189.5	1188.3	1186.5	1199.2	1204.0	1214.2	1222.1	1234.1	1240.2	1245.6	1242.0
37.5°	1299.9	1296.3	1293.9	1297.5	1304.1	1310.7	1322.2	1331.3	1341.5	1354.2	1349.9
40°	1456.1	1463.4	1453.1	1457.9	1463.4	1448.3	1458.5	1467.0	1484.5	1485.1	1484.5
42.5°	1659.4	1664.8	1662.4	1665.4	1655.8	1650.9	1646.7	1650.9	1672.7	1669.6	1655.2
45°	1862.7	1870.5	1868.7	1869.9	1888.6	1880.8	1887.4	1888.6	1910.9	1904.9	1894.0
47.5°	2036.4	2049.7	2052.7	2063.5	2088.9	2109.4	2137.7	2158.8	2169.7	2176.9	2185.4
50°	2173.9	2183.6	2200.5	2227.6	2264.4	2300.0	2363.9	2405.5	2443.5	2470.1	2497.2
52.5°	2265.0	2275.9	2301.8	2342.8	2395.9	2461.0	2535.8	2622.7	2702.9	2750.0	2790.4
55°	2302.4	2313.3	2345.2	2398.9	2469.5	2552.7	2660.1	2782.5	2889.3	2997.3	3059.4
57.5°	2280.7	2292.7	2329.5	2389.9	2474.9	2584.1	2717.4	2867.6	3023.8	3187.3	3312.1
60°	2216.7	2227.6	2269.2	2332.0	2429.1	2552.1	2712.0	2900.2	3119.7	3362.2	3599.3
62.5°	2128.7	2145.0	2181.8	2245.7	2342.2	2476.7	2658.9	2903.8	3218.6	3609.5	4071.0
65°	2016.5	2028.5	2061.1	2111.8	2217.9	2358.5	2550.9	2850.7	3262.1	3816.4	4475.1
66°	1958.6	1970.0	2000.2	2047.8	2145.0	2280.1	2472.5	2779.5	3213.8	3815.2	4517.9
67.5°	1856.6	1862.1	1883.8	1930.8	1994.2	2115.4	2293.9	2581.7	3009.3	3654.2	4398.5
70°	1557.4	1565.3	1586.4	1610.5	1634.1	1677.5	1802.3	1992.4	2334.4	2952.6	3662.6
72.5°	1077.3	1089.4	1112.3	1156.9	1193.7	1248.6	1297.5	1360.8	1474.2	1903.7	2620.3
75°	778.7	782.9	816.7	895.1	969.3	1079.1	1176.2	1207.0	1168.4	1161.8	1539.4
77.5°	464.5	470.5	519.4	598.4	675.6	824.6	1023.6	1177.4	1262.5	1232.3	1165.4
80°	195.4	203.9	232.8	253.3	317.3	442.1	638.8	880.1	1104.4	1242.6	1211.2
82.5°	62.7	73.0	86.3	104.4	123.1	164.7	255.2	381.8	603.2	899.4	1105.7
85°	22.9	23.5	32.6	45.2	50.1	57.9	74.2	114.6	203.9	337.2	627.3
87.5°	9.0	10.9	12.7	17.5	18.1	18.7	21.1	27.1	26.5	22.9	118.8
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°	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3
2.5°	968.1	969.3	968.7	969.3	969.3	968.1	968.1	970.5	968.7	969.9	969.9
5°	967.5	968.7	968.1	969.3	969.3	968.7	968.7	972.3	971.7	973.6	974.8
7.5°	969.9	970.5	969.9	969.9	971.7	971.1	971.7	973.0	976.0	979.0	981.4
10°	973.0	974.2	976.0	976.6	979.0	978.4	980.2	982.0	985.0	988.0	991.0
12.5°	977.2	980.8	986.2	987.4	989.8	991.7	994.7	996.5	998.9	1003.7	1007.3
15°	980.8	987.4	994.1	996.5	998.9	1001.3	1004.3	1006.1	1010.4	1014.6	1018.8
17.5°	982.0	989.8	998.3	1001.3	1003.7	1007.9	1011.6	1015.2	1020.0	1025.4	1030.3
20°	982.6	993.5	1004.3	1007.9	1013.4	1019.4	1025.4	1028.4	1035.1	1041.7	1045.9
22.5°	988.0	1001.3	1016.4	1023.0	1028.4	1039.3	1047.1	1052.0	1059.8	1065.2	1067.1
25°	1003.1	1017.0	1035.1	1045.3	1054.4	1070.1	1079.7	1088.8	1093.0	1100.2	1098.4
27.5°	1030.3	1041.1	1064.6	1078.5	1090.0	1110.5	1129.2	1137.6	1144.3	1147.9	1143.7
30°	1076.7	1080.9	1106.9	1123.8	1143.1	1175.0	1195.5	1206.4	1214.8	1215.4	1204.6
32.5°	1146.1	1139.4	1162.4	1186.5	1211.8	1250.4	1278.2	1289.6	1296.3	1296.9	1272.7
35°	1240.2	1228.7	1248.0	1271.5	1302.9	1353.6	1388.6	1401.8	1412.1	1407.3	1371.7
37.5°	1359.0	1358.4	1367.4	1397.6	1433.2	1498.3	1535.1	1542.4	1541.8	1527.3	1473.6
40°	1491.1	1480.2	1481.4	1503.2	1544.2	1629.8	1681.1	1693.2	1688.9	1667.8	1597.9
42.5°	1657.6	1652.8	1636.5	1647.9	1685.9	1790.3	1852.4	1864.5	1868.1	1833.1	1750.5
45°	1891.0	1886.8	1850.6	1853.0	1880.8	1990.5	2055.1	2075.0	2075.6	2042.4	1935.0
47.5°	2173.9	2170.3	2128.1	2116.0	2129.9	2227.6	2307.8	2312.0	2313.3	2267.4	2155.8
50°	2494.8	2484.6	2452.6	2439.9	2423.6	2531.6	2596.2	2595.5	2588.9	2538.2	2412.8
52.5°	2804.9	2827.8	2815.7	2791.0	2791.6	2869.4	2930.3	2896.5	2900.8	2852.5	2708.3
55°	3136.0	3194.5	3238.6	3247.6	3243.4	3283.2	3317.0	3256.6	3234.3	3226.5	3073.3
57.5°	3487.7	3637.3	3773.0	3829.7	3808.0	3881.0	3911.1	3848.4	3849.6	3911.1	3779.0
60°	3957.6	4335.2	4677.2	4783.3	4832.8	4953.4	4899.8	4896.1	4990.8	5070.5	4825.6
62.5°	4670.5	5296.1	5841.9	5921.0	5960.8	5987.9	5963.8	5898.0	5995.8	6005.4	5627.8
65°	5211.0	5945.1	6472.9	6571.8	6564.6	6426.4	6292.5	6161.0	6159.8	6063.3	5577.1
66°	5269.5	6006.6	6521.1	6608.6	6576.6	6363.7	6193.6	6022.9	5968.0	5823.2	5329.8
67.5°	5141.6	5899.2	6410.2	6488.6	6420.4	6096.5	5864.9	5633.8	5551.2	5349.7	4846.7
70°	4395.5	5176.0	5859.4	5972.8	5892.0	5461.9	5118.7	4864.8	4639.8	4441.3	4026.3
72.5°	3408.1	3991.9	4715.2	4833.4	4840.0	4503.5	4116.8	3873.1	3611.3	3412.3	3101.0
75°	2235.4	2677.0	3074.5	3034.7	3046.1	2781.3	2550.9	2348.2	2111.2	1954.4	1806.0
77.5°	1306.5	1464.6	1428.4	1329.4	1246.2	979.6	700.9	481.3	419.8	437.9	494.0
80°	1135.8	1047.1	819.7	720.8	655.7	445.2	239.5	168.9	148.4	150.2	159.2
82.5°	1222.7	1268.5	1041.1	857.1	747.4	524.2	281.7	140.5	101.3	118.2	130.3
85°	948.8	1207.6	1113.5	941.0	791.4	557.4	287.7	89.3	60.3	80.8	101.9
87.5°	270.2	427.7	342.0	302.2	243.7	166.5	68.8	35.6	32.6	42.2	58.5
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°	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3
2.5°	970.5	970.5	972.3	973.0	973.6	973.6	974.8	974.8	975.4	977.8	977.2
5°	976.6	978.4	980.8	982.0	983.8	984.4	986.2	986.2	988.0	989.8	989.2
7.5°	983.8	985.6	987.4	989.2	991.0	993.5	992.9	992.3	991.7	990.4	989.2
10°	994.1	995.9	997.7	997.1	995.9	994.7	989.8	984.4	982.0	977.2	973.6
12.5°	1011.0	1012.8	1011.0	1006.1	999.5	991.7	981.4	972.3	966.9	959.7	955.5
15°	1023.6	1025.4	1021.8	1013.4	1002.5	992.3	978.4	966.9	957.3	949.4	943.4
17.5°	1033.3	1032.1	1024.2	1014.6	1003.1	994.7	982.0	969.3	957.9	947.0	938.6
20°	1047.1	1040.5	1029.1	1017.0	1005.5	998.3	988.0	976.6	964.5	948.8	938.0
22.5°	1065.2	1053.2	1038.1	1026.0	1015.2	1007.9	997.7	986.8	975.4	957.3	942.2
25°	1091.2	1071.9	1054.4	1041.7	1032.1	1024.8	1012.2	1000.7	988.0	969.9	950.6
27.5°	1127.4	1099.6	1081.5	1068.9	1059.2	1050.8	1034.5	1020.6	1004.3	986.2	963.3
30°	1174.4	1140.6	1120.7	1109.9	1099.6	1087.6	1070.1	1049.6	1028.4	1004.3	979.6
32.5°	1232.9	1194.9	1176.2	1165.4	1152.1	1135.8	1112.9	1085.8	1054.4	1022.4	991.7
35°	1316.2	1272.7	1252.2	1233.5	1214.2	1190.1	1155.7	1116.5	1074.9	1033.3	995.3
37.5°	1398.8	1358.4	1333.1	1313.8	1283.6	1244.4	1196.7	1142.5	1087.0	1033.9	988.0
40°	1515.8	1468.8	1439.2	1404.8	1356.0	1295.1	1225.7	1152.7	1083.9	1020.0	965.7
42.5°	1659.4	1605.7	1561.7	1499.5	1423.5	1335.5	1239.6	1146.7	1062.8	989.2	929.5
45°	1841.0	1771.0	1697.4	1599.7	1483.3	1360.2	1239.0	1125.6	1026.6	943.4	884.3
47.5°	2052.7	1954.4	1830.7	1681.7	1522.5	1366.2	1219.7	1087.6	972.3	880.7	812.5
50°	2270.4	2128.1	1952.5	1745.0	1542.4	1351.2	1176.8	1025.4	901.2	796.8	723.2
52.5°	2538.8	2318.1	2062.9	1787.9	1533.9	1306.5	1105.7	938.0	805.3	703.3	618.9
55°	2858.5	2536.4	2167.9	1811.4	1496.5	1226.3	997.7	823.4	684.0	591.1	515.1
57.5°	3387.5	2878.4	2347.0	1846.4	1422.9	1106.9	866.2	685.8	554.9	475.9	415.0
60°	4299.6	3580.0	2725.8	1932.6	1321.0	936.8	699.1	537.4	429.5	366.1	323.3
62.5°	4935.9	4005.2	2929.7	1903.1	1147.9	737.7	516.9	384.2	313.1	271.4	242.5
65°	4812.3	3837.5	2684.2	1616.6	899.4	521.8	343.8	260.0	219.6	193.6	179.1
66°	4590.3	3652.3	2497.2	1451.3	779.9	434.9	283.5	215.3	188.8	170.1	160.4
67.5°	4185.6	3268.7	2161.2	1164.8	583.9	320.9	215.3	167.7	153.2	143.6	136.9
70°	3465.4	2584.7	1488.1	688.2	308.8	179.8	136.9	123.7	117.0	112.8	112.2
72.5°	2657.1	1854.2	860.8	333.0	165.3	119.4	105.0	100.1	97.7	96.5	96.5
75°	1641.3	1045.9	384.8	167.1	114.0	97.7	91.1	88.7	88.1	88.1	88.1
77.5°	577.3	364.3	172.5	122.4	100.1	88.1	82.6	81.4	82.6	82.6	82.6
80°	159.2	140.5	124.9	108.6	90.5	81.4	76.6	76.0	78.4	79.0	76.6
82.5°	124.3	117.0	106.8	97.1	82.6	74.2	71.8	73.0	74.2	72.4	68.8
85°	106.2	101.3	74.8	74.8	67.0	64.5	63.9	65.1	64.5	59.7	54.9
87.5°	60.3	53.1	40.4	44.0	47.0	48.3	40.4	43.4	42.8	38.0	35.6
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°	969.3	969.3	969.3	969.3	969.3
2.5°	978.4	978.4	979.6	979.6	979.0
5°	990.4	990.4	992.3	991.0	991.7
7.5°	988.0	985.6	985.6	984.4	983.8
10°	971.1	966.9	964.5	965.7	963.9
12.5°	951.8	948.2	945.8	945.2	944.6
15°	939.8	935.6	933.7	932.5	932.5
17.5°	933.1	928.3	925.9	924.1	923.5
20°	930.1	924.1	920.5	918.7	917.5
22.5°	931.3	924.1	919.3	916.9	915.6
25°	936.2	927.1	921.1	918.1	916.3
27.5°	944.6	932.5	925.9	921.7	919.3
30°	954.9	938.0	928.3	922.3	919.9
32.5°	961.5	938.6	926.5	917.5	915.0
35°	960.3	931.9	916.3	904.8	903.0
37.5°	948.2	914.4	895.1	880.1	878.3
40°	922.3	887.9	865.6	850.5	846.9
42.5°	886.1	850.5	826.4	812.5	807.7
45°	833.0	789.6	767.3	755.8	749.2
47.5°	758.2	717.2	692.5	682.8	674.4
50°	673.2	627.9	609.8	599.0	589.3
52.5°	573.0	534.4	520.6	510.3	502.5
55°	475.9	448.8	432.5	421.6	422.2
57.5°	382.4	366.1	357.1	345.6	346.8
60°	301.0	287.1	287.1	279.9	277.5
62.5°	229.8	224.4	222.6	220.2	215.9
65°	174.3	174.3	174.9	174.9	172.5
66°	156.8	158.6	161.1	161.1	158.0
67.5°	135.7	138.1	140.5	141.8	141.8
70°	112.2	115.2	116.4	117.6	117.0
72.5°	98.3	100.7	100.7	101.3	100.1
75°	89.3	90.5	91.1	89.9	89.3
77.5°	82.6	83.2	82.6	82.0	81.4
80°	74.8	74.2	72.4	70.0	69.4
82.5°	64.5	62.1	60.9	57.3	56.7
85°	51.9	48.9	46.4	41.6	39.2
87.5°	34.4	33.2	31.4	22.9	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)