

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: P146600

Luminaire Tested: **LDRL-T3-E03-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146600
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-E03-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (63) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8957.4 lumens
Efficiency: N/A
Efficacy: 119.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

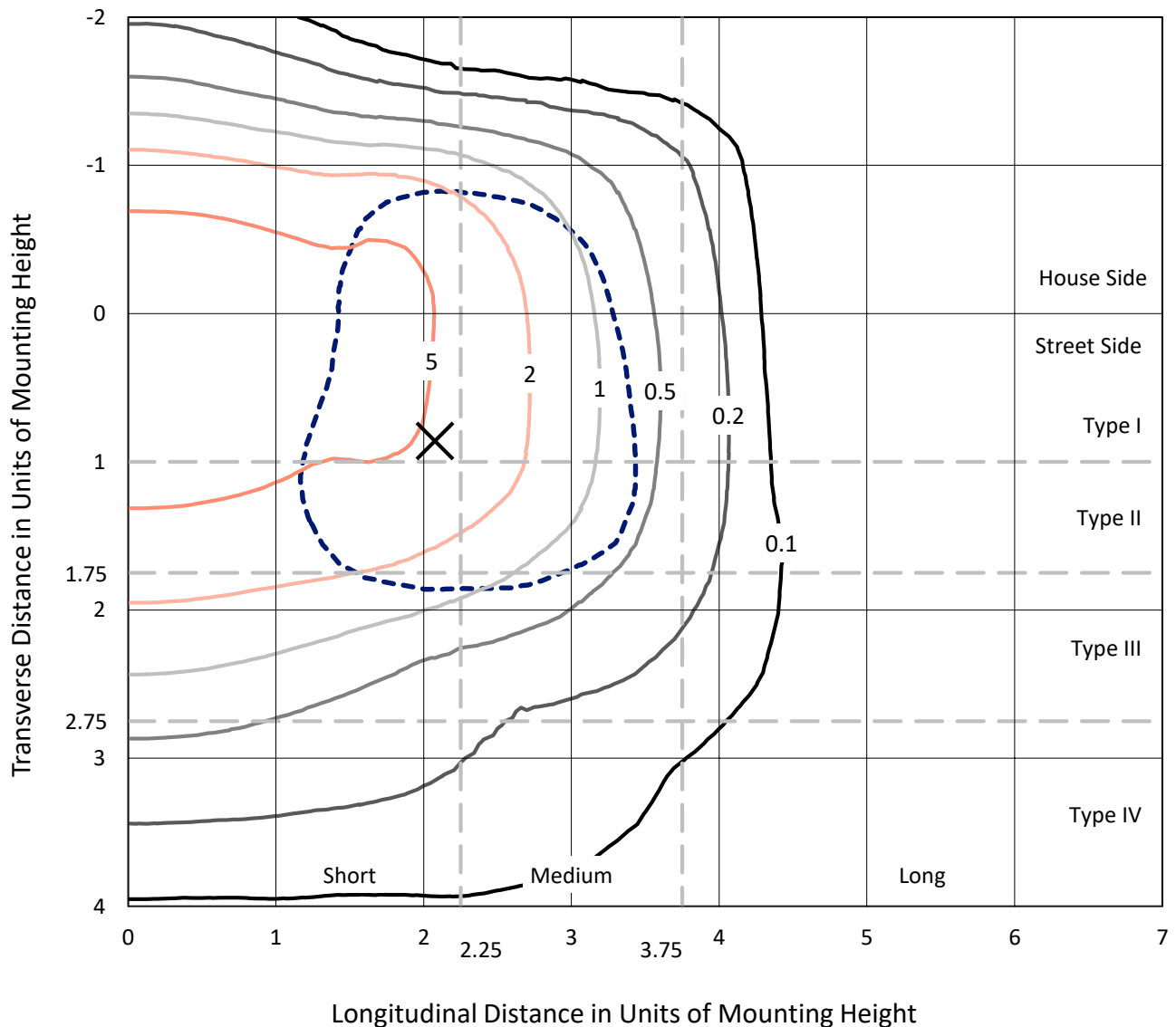
Input Watts (W): 75.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

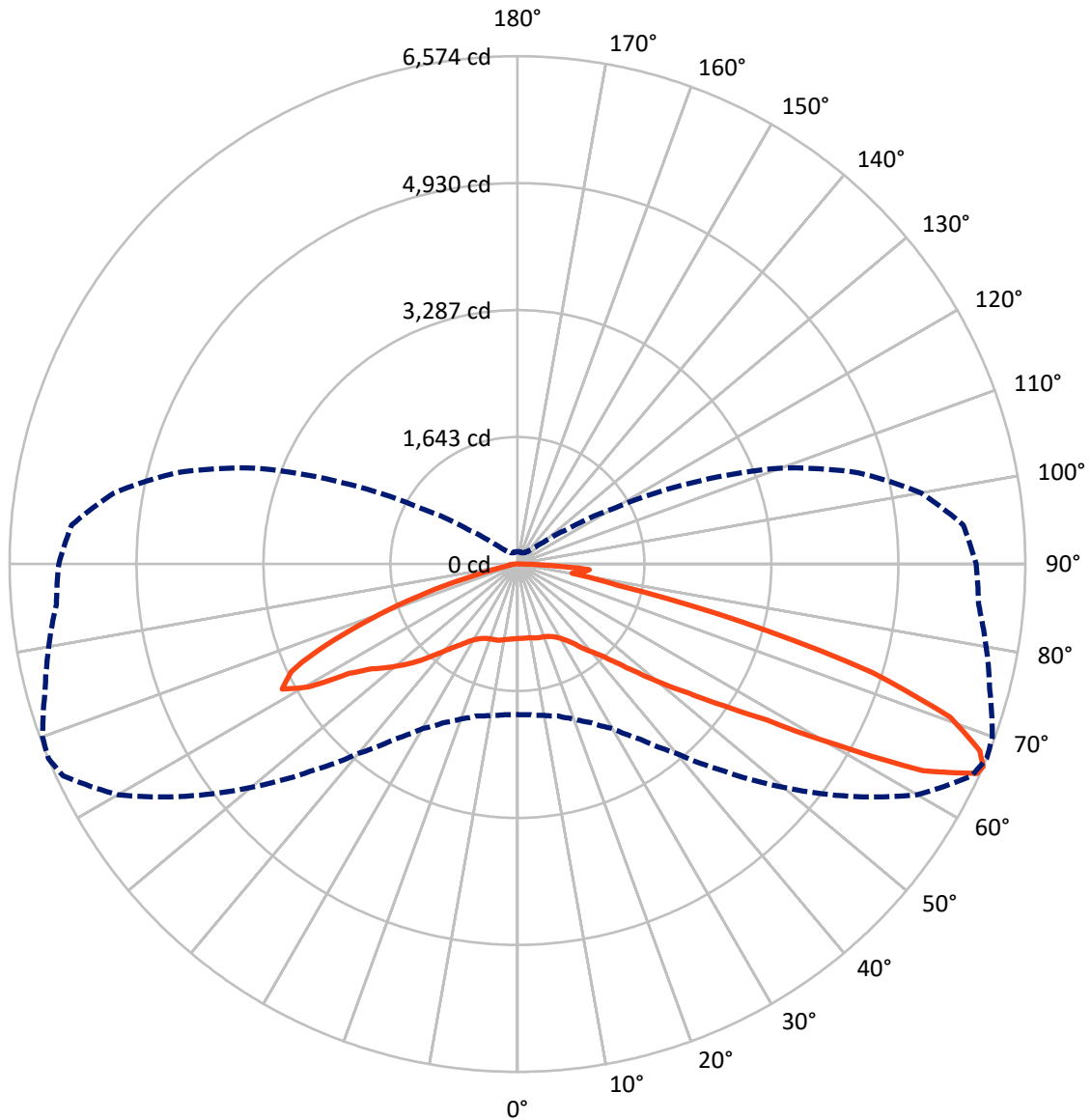
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.6 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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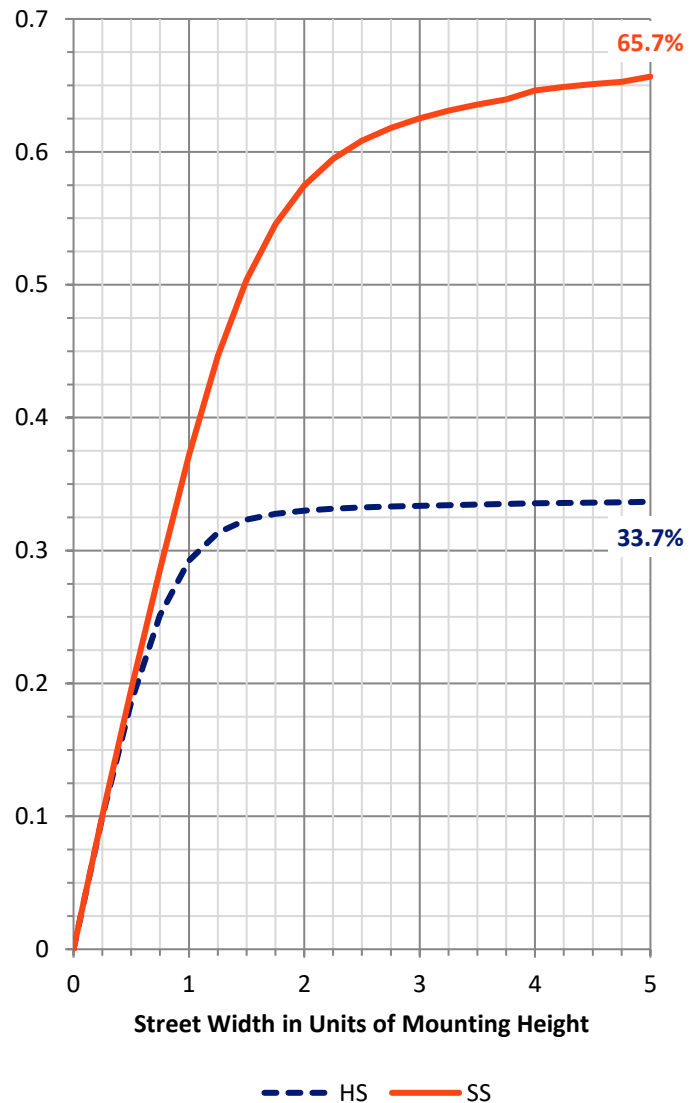
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3043.1	0.0	3043.1
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	5914.3	0.0	5914.3
	% Fixture	66.0	0.0	66.0
Total	Lumens	8957.4	0.0	8957.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.6	1.0
10°-20°	274.4	3.1
20°-30°	471.8	5.3
30°-40°	758.9	8.5
40°-50°	1250.8	14.0
50°-60°	1960.6	21.9
60°-70°	2713.3	30.3
70°-80°	1227.9	13.7
80°-90°	207.2	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°	8957.4	100.0
0°-180°	8957.4	100.0



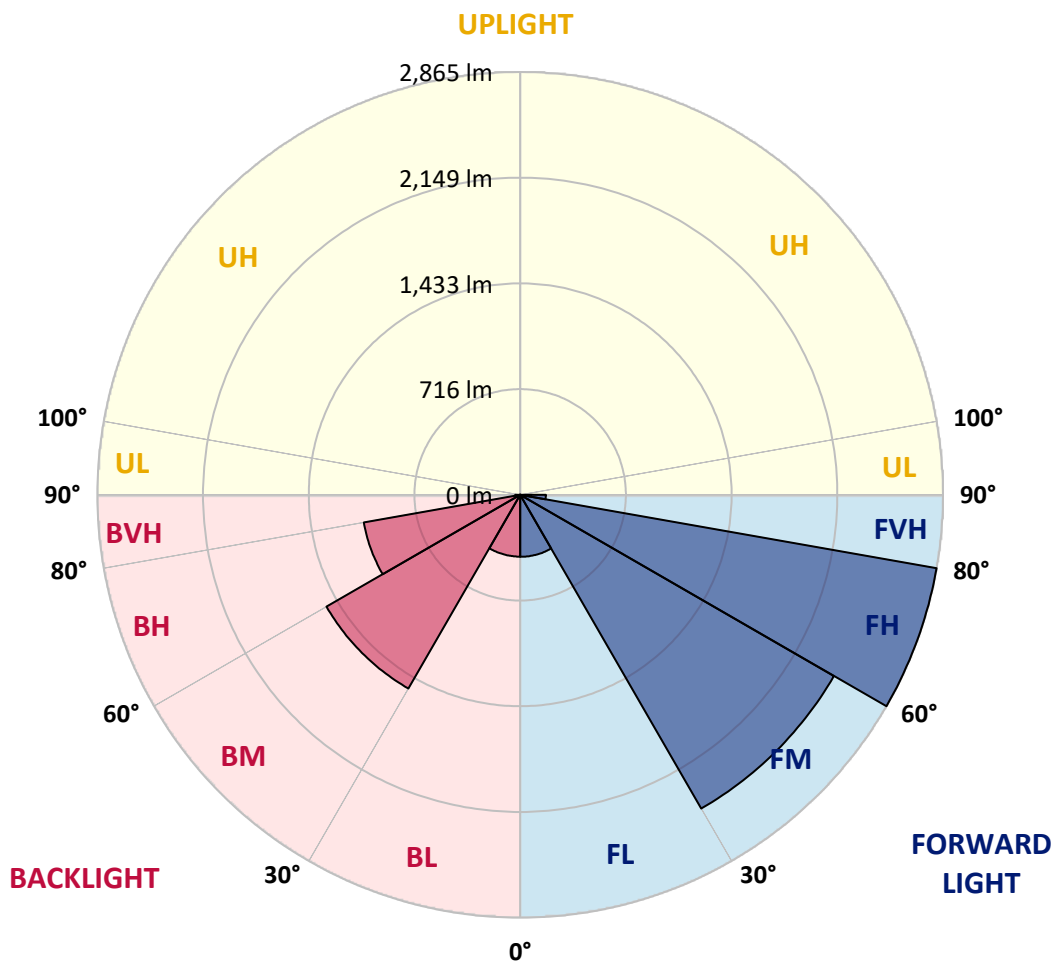
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	420.1	4.7			
FM	(30°-60°)	2454.7	27.4			
FH	(60°-80°)	2865.4	32.0			G2/5000
FVH	(80°-90°)	174.1	1.9			G2/225
BL	(0°-30°)	418.8	4.7	B1/500		
BM	(30°-60°)	1515.5	16.9	B2/2500		
BH	(60°-80°)	1075.8	12.0	B3/2500		G3/2500
BVH	(80°-90°)	33.1	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°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2
2.5°	963.0	962.4	961.8	961.8	961.2	961.8	962.4	963.0	962.4	963.0	962.4
5°	961.2	961.2	960.6	960.6	960.6	960.6	961.2	961.8	961.2	962.4	961.2
7.5°	953.4	957.0	955.8	957.0	958.2	959.4	960.0	961.2	963.0	964.2	963.0
10°	943.2	945.0	945.6	946.8	949.2	952.2	954.6	957.6	961.8	963.0	964.2
12.5°	924.6	927.0	928.8	931.2	934.8	939.6	943.8	948.6	955.8	960.6	964.8
15°	910.8	913.8	914.4	917.4	921.0	926.4	931.8	939.0	948.6	957.0	965.4
17.5°	919.8	921.0	919.8	919.8	921.0	923.4	927.6	933.6	943.8	954.0	964.2
20°	946.8	946.8	945.6	945.0	943.8	941.4	940.8	940.2	946.8	954.6	963.6
22.5°	972.6	972.6	972.0	974.4	973.8	973.8	972.0	969.0	966.0	964.8	970.8
25°	988.8	991.2	992.4	996.0	998.4	1002.0	1003.2	1002.6	998.4	991.2	989.4
27.5°	1015.2	1017.0	1018.2	1022.4	1027.2	1031.4	1035.6	1041.0	1041.0	1034.4	1025.4
30°	1066.2	1063.8	1065.0	1066.2	1070.4	1076.4	1081.8	1089.0	1092.6	1090.2	1078.2
32.5°	1113.6	1116.0	1117.2	1120.8	1125.0	1134.0	1140.6	1149.0	1156.8	1158.0	1152.0
35°	1183.2	1182.0	1180.2	1192.8	1197.6	1207.8	1215.6	1227.6	1233.6	1239.0	1235.4
37.5°	1293.0	1289.4	1287.0	1290.6	1297.2	1303.8	1315.2	1324.2	1334.4	1347.0	1342.8
40°	1448.4	1455.6	1445.4	1450.2	1455.6	1440.6	1450.8	1459.2	1476.6	1477.2	1476.6
42.5°	1650.6	1656.0	1653.6	1656.6	1647.0	1642.2	1638.0	1642.2	1663.8	1660.8	1646.4
45°	1852.8	1860.6	1858.8	1860.0	1878.6	1870.8	1877.4	1878.6	1900.8	1894.8	1884.0
47.5°	2025.6	2038.8	2041.8	2052.6	2077.8	2098.2	2126.4	2147.4	2158.2	2165.4	2173.8
50°	2162.4	2172.0	2188.8	2215.8	2252.4	2287.8	2351.4	2392.8	2430.6	2457.0	2484.0
52.5°	2253.0	2263.8	2289.6	2330.4	2383.2	2448.0	2522.4	2608.8	2688.6	2735.4	2775.6
55°	2290.2	2301.0	2332.8	2386.2	2456.4	2539.2	2646.0	2767.8	2874.0	2981.4	3043.2
57.5°	2268.6	2280.6	2317.2	2377.2	2461.8	2570.4	2703.0	2852.4	3007.8	3170.4	3294.6
60°	2205.0	2215.8	2257.2	2319.6	2416.2	2538.6	2697.6	2884.8	3103.2	3344.4	3580.2
62.5°	2117.4	2133.6	2170.2	2233.8	2329.8	2463.6	2644.8	2888.4	3201.6	3590.4	4049.4
65°	2005.8	2017.8	2050.2	2100.6	2206.2	2346.0	2537.4	2835.6	3244.8	3796.2	4451.4
66°	1948.2	1959.6	1989.6	2037.0	2133.6	2268.0	2459.4	2764.8	3196.8	3795.0	4494.0
67.5°	1846.8	1852.2	1873.8	1920.6	1983.6	2104.2	2281.8	2568.0	2993.4	3634.8	4375.2
70°	1549.2	1557.0	1578.0	1602.0	1625.4	1668.6	1792.8	1981.8	2322.0	2937.0	3643.2
72.5°	1071.6	1083.6	1106.4	1150.8	1187.4	1242.0	1290.6	1353.6	1466.4	1893.6	2606.4
75°	774.6	778.8	812.4	890.4	964.2	1073.4	1170.0	1200.6	1162.2	1155.6	1531.2
77.5°	462.0	468.0	516.6	595.2	672.0	820.2	1018.2	1171.2	1255.8	1225.8	1159.2
80°	194.4	202.8	231.6	252.0	315.6	439.8	635.4	875.4	1098.6	1236.0	1204.8
82.5°	62.4	72.6	85.8	103.8	122.4	163.8	253.8	379.8	600.0	894.6	1099.8
85°	22.8	23.4	32.4	45.0	49.8	57.6	73.8	114.0	202.8	335.4	624.0
87.5°	9.0	10.8	12.6	17.4	18.0	18.6	21.0	27.0	26.4	22.8	118.2
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°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2
2.5°	963.0	964.2	963.6	964.2	964.2	963.0	963.0	965.4	963.6	964.8	964.8
5°	962.4	963.6	963.0	964.2	964.2	963.6	963.6	967.2	966.6	968.4	969.6
7.5°	964.8	965.4	964.8	964.8	966.6	966.0	966.6	967.8	970.8	973.8	976.2
10°	967.8	969.0	970.8	971.4	973.8	973.2	975.0	976.8	979.8	982.8	985.8
12.5°	972.0	975.6	981.0	982.2	984.6	986.4	989.4	991.2	993.6	998.4	1002.0
15°	975.6	982.2	988.8	991.2	993.6	996.0	999.0	1000.8	1005.0	1009.2	1013.4
17.5°	976.8	984.6	993.0	996.0	998.4	1002.6	1006.2	1009.8	1014.6	1020.0	1024.8
20°	977.4	988.2	999.0	1002.6	1008.0	1014.0	1020.0	1023.0	1029.6	1036.2	1040.4
22.5°	982.8	996.0	1011.0	1017.6	1023.0	1033.8	1041.6	1046.4	1054.2	1059.6	1061.4
25°	997.8	1011.6	1029.6	1039.8	1048.8	1064.4	1074.0	1083.0	1087.2	1094.4	1092.6
27.5°	1024.8	1035.6	1059.0	1072.8	1084.2	1104.6	1123.2	1131.6	1138.2	1141.8	1137.6
30°	1071.0	1075.2	1101.0	1117.8	1137.0	1168.8	1189.2	1200.0	1208.4	1209.0	1198.2
32.5°	1140.0	1133.4	1156.2	1180.2	1205.4	1243.8	1271.4	1282.8	1289.4	1290.0	1266.0
35°	1233.6	1222.2	1241.4	1264.8	1296.0	1346.4	1381.2	1394.4	1404.6	1399.8	1364.4
37.5°	1351.8	1351.2	1360.2	1390.2	1425.6	1490.4	1527.0	1534.2	1533.6	1519.2	1465.8
40°	1483.2	1472.4	1473.6	1495.2	1536.0	1621.2	1672.2	1684.2	1680.0	1659.0	1589.4
42.5°	1648.8	1644.0	1627.8	1639.2	1677.0	1780.8	1842.6	1854.6	1858.2	1823.4	1741.2
45°	1881.0	1876.8	1840.8	1843.2	1870.8	1980.0	2044.2	2064.0	2064.6	2031.6	1924.8
47.5°	2162.4	2158.8	2116.8	2104.8	2118.6	2215.8	2295.6	2299.8	2301.0	2255.4	2144.4
50°	2481.6	2471.4	2439.6	2427.0	2410.8	2518.2	2582.4	2581.8	2575.2	2524.8	2400.0
52.5°	2790.0	2812.8	2800.8	2776.2	2776.8	2854.2	2914.8	2881.2	2885.4	2837.4	2694.0
55°	3119.4	3177.6	3221.4	3230.4	3226.2	3265.8	3299.4	3239.4	3217.2	3209.4	3057.0
57.5°	3469.2	3618.0	3753.0	3809.4	3787.8	3860.4	3890.4	3828.0	3829.2	3890.4	3759.0
60°	3936.6	4312.2	4652.4	4758.0	4807.2	4927.2	4873.8	4870.2	4964.4	5043.6	4800.0
62.5°	4645.8	5268.0	5811.0	5889.6	5929.2	5956.2	5932.2	5866.8	5964.0	5973.6	5598.0
65°	5183.4	5913.6	6438.6	6537.0	6529.8	6392.4	6259.2	6128.4	6127.2	6031.2	5547.6
66°	5241.6	5974.8	6486.6	6573.6	6541.8	6330.0	6160.8	5991.0	5936.4	5792.4	5301.6
67.5°	5114.4	5868.0	6376.2	6454.2	6386.4	6064.2	5833.8	5604.0	5521.8	5321.4	4821.0
70°	4372.2	5148.6	5828.4	5941.2	5860.8	5433.0	5091.6	4839.0	4615.2	4417.8	4005.0
72.5°	3390.0	3970.8	4690.2	4807.8	4814.4	4479.6	4095.0	3852.6	3592.2	3394.2	3084.6
75°	2223.6	2662.8	3058.2	3018.6	3030.0	2766.6	2537.4	2335.8	2100.0	1944.0	1796.4
77.5°	1299.6	1456.8	1420.8	1322.4	1239.6	974.4	697.2	478.8	417.6	435.6	491.4
80°	1129.8	1041.6	815.4	717.0	652.2	442.8	238.2	168.0	147.6	149.4	158.4
82.5°	1216.2	1261.8	1035.6	852.6	743.4	521.4	280.2	139.8	100.8	117.6	129.6
85°	943.8	1201.2	1107.6	936.0	787.2	554.4	286.2	88.8	60.0	80.4	101.4
87.5°	268.8	425.4	340.2	300.6	242.4	165.6	68.4	35.4	32.4	42.0	58.2
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°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2
2.5°	965.4	965.4	967.2	967.8	968.4	968.4	969.6	969.6	970.2	972.6	972.0
5°	971.4	973.2	975.6	976.8	978.6	979.2	981.0	981.0	982.8	984.6	984.0
7.5°	978.6	980.4	982.2	984.0	985.8	988.2	987.6	987.0	986.4	985.2	984.0
10°	988.8	990.6	992.4	991.8	990.6	989.4	984.6	979.2	976.8	972.0	968.4
12.5°	1005.6	1007.4	1005.6	1000.8	994.2	986.4	976.2	967.2	961.8	954.6	950.4
15°	1018.2	1020.0	1016.4	1008.0	997.2	987.0	973.2	961.8	952.2	944.4	938.4
17.5°	1027.8	1026.6	1018.8	1009.2	997.8	989.4	976.8	964.2	952.8	942.0	933.6
20°	1041.6	1035.0	1023.6	1011.6	1000.2	993.0	982.8	971.4	959.4	943.8	933.0
22.5°	1059.6	1047.6	1032.6	1020.6	1009.8	1002.6	992.4	981.6	970.2	952.2	937.2
25°	1085.4	1066.2	1048.8	1036.2	1026.6	1019.4	1006.8	995.4	982.8	964.8	945.6
27.5°	1121.4	1093.8	1075.8	1063.2	1053.6	1045.2	1029.0	1015.2	999.0	981.0	958.2
30°	1168.2	1134.6	1114.8	1104.0	1093.8	1081.8	1064.4	1044.0	1023.0	999.0	974.4
32.5°	1226.4	1188.6	1170.0	1159.2	1146.0	1129.8	1107.0	1080.0	1048.8	1017.0	986.4
35°	1309.2	1266.0	1245.6	1227.0	1207.8	1183.8	1149.6	1110.6	1069.2	1027.8	990.0
37.5°	1391.4	1351.2	1326.0	1306.8	1276.8	1237.8	1190.4	1136.4	1081.2	1028.4	982.8
40°	1507.8	1461.0	1431.6	1397.4	1348.8	1288.2	1219.2	1146.6	1078.2	1014.6	960.6
42.5°	1650.6	1597.2	1553.4	1491.6	1416.0	1328.4	1233.0	1140.6	1057.2	984.0	924.6
45°	1831.2	1761.6	1688.4	1591.2	1475.4	1353.0	1232.4	1119.6	1021.2	938.4	879.6
47.5°	2041.8	1944.0	1821.0	1672.8	1514.4	1359.0	1213.2	1081.8	967.2	876.0	808.2
50°	2258.4	2116.8	1942.2	1735.8	1534.2	1344.0	1170.6	1020.0	896.4	792.6	719.4
52.5°	2525.4	2305.8	2052.0	1778.4	1525.8	1299.6	1099.8	933.0	801.0	699.6	615.6
55°	2843.4	2523.0	2156.4	1801.8	1488.6	1219.8	992.4	819.0	680.4	588.0	512.4
57.5°	3369.6	2863.2	2334.6	1836.6	1415.4	1101.0	861.6	682.2	552.0	473.4	412.8
60°	4276.8	3561.0	2711.4	1922.4	1314.0	931.8	695.4	534.6	427.2	364.2	321.6
62.5°	4909.8	3984.0	2914.2	1893.0	1141.8	733.8	514.2	382.2	311.4	270.0	241.2
65°	4786.8	3817.2	2670.0	1608.0	894.6	519.0	342.0	258.6	218.4	192.6	178.2
66°	4566.0	3633.0	2484.0	1443.6	775.8	432.6	282.0	214.2	187.8	169.2	159.6
67.5°	4163.4	3251.4	2149.8	1158.6	580.8	319.2	214.2	166.8	152.4	142.8	136.2
70°	3447.0	2571.0	1480.2	684.6	307.2	178.8	136.2	123.0	116.4	112.2	111.6
72.5°	2643.0	1844.4	856.2	331.2	164.4	118.8	104.4	99.6	97.2	96.0	96.0
75°	1632.6	1040.4	382.8	166.2	113.4	97.2	90.6	88.2	87.6	87.6	87.6
77.5°	574.2	362.4	171.6	121.8	99.6	87.6	82.2	81.0	82.2	82.2	82.2
80°	158.4	139.8	124.2	108.0	90.0	81.0	76.2	75.6	78.0	78.6	76.2
82.5°	123.6	116.4	106.2	96.6	82.2	73.8	71.4	72.6	73.8	72.0	68.4
85°	105.6	100.8	74.4	74.4	66.6	64.2	63.6	64.8	64.2	59.4	54.6
87.5°	60.0	52.8	40.2	43.8	46.8	48.0	40.2	43.2	42.6	37.8	35.4
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°	964.2	964.2	964.2	964.2	964.2
2.5°	973.2	973.2	974.4	974.4	973.8
5°	985.2	985.2	987.0	985.8	986.4
7.5°	982.8	980.4	980.4	979.2	978.6
10°	966.0	961.8	959.4	960.6	958.8
12.5°	946.8	943.2	940.8	940.2	939.6
15°	934.8	930.6	928.8	927.6	927.6
17.5°	928.2	923.4	921.0	919.2	918.6
20°	925.2	919.2	915.6	913.8	912.6
22.5°	926.4	919.2	914.4	912.0	910.8
25°	931.2	922.2	916.2	913.2	911.4
27.5°	939.6	927.6	921.0	916.8	914.4
30°	949.8	933.0	923.4	917.4	915.0
32.5°	956.4	933.6	921.6	912.6	910.2
35°	955.2	927.0	911.4	900.0	898.2
37.5°	943.2	909.6	890.4	875.4	873.6
40°	917.4	883.2	861.0	846.0	842.4
42.5°	881.4	846.0	822.0	808.2	803.4
45°	828.6	785.4	763.2	751.8	745.2
47.5°	754.2	713.4	688.8	679.2	670.8
50°	669.6	624.6	606.6	595.8	586.2
52.5°	570.0	531.6	517.8	507.6	499.8
55°	473.4	446.4	430.2	419.4	420.0
57.5°	380.4	364.2	355.2	343.8	345.0
60°	299.4	285.6	285.6	278.4	276.0
62.5°	228.6	223.2	221.4	219.0	214.8
65°	173.4	173.4	174.0	174.0	171.6
66°	156.0	157.8	160.2	160.2	157.2
67.5°	135.0	137.4	139.8	141.0	141.0
70°	111.6	114.6	115.8	117.0	116.4
72.5°	97.8	100.2	100.2	100.8	99.6
75°	88.8	90.0	90.6	89.4	88.8
77.5°	82.2	82.8	82.2	81.6	81.0
80°	74.4	73.8	72.0	69.6	69.0
82.5°	64.2	61.8	60.6	57.0	56.4
85°	51.6	48.6	46.2	41.4	39.0
87.5°	34.2	33.0	31.2	22.8	18.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)