

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: P144528

Luminaire Tested: **LDRL-RW-E02-E-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144528
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33700)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-RW-E02-E-8030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (42) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5070.1 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

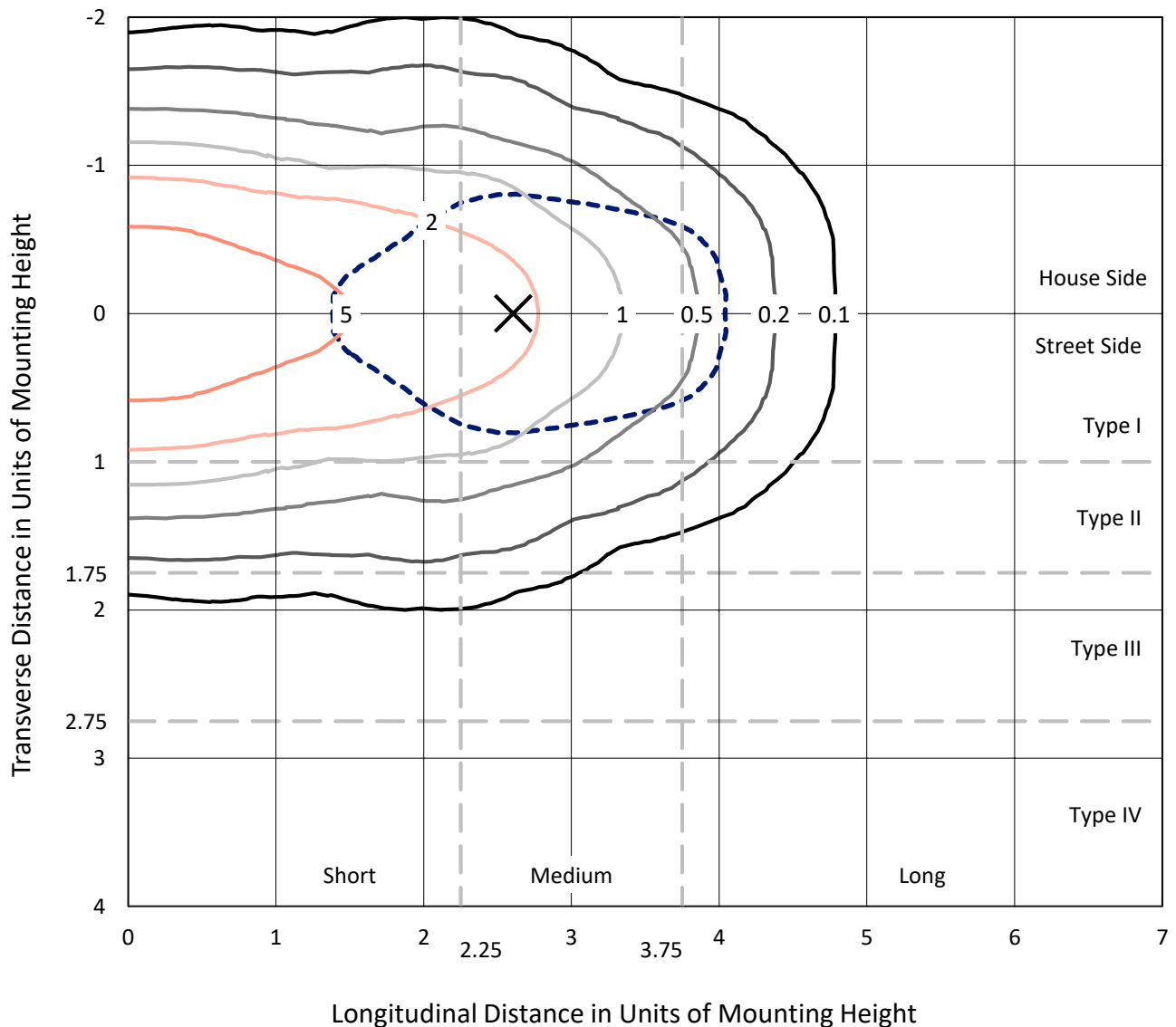
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

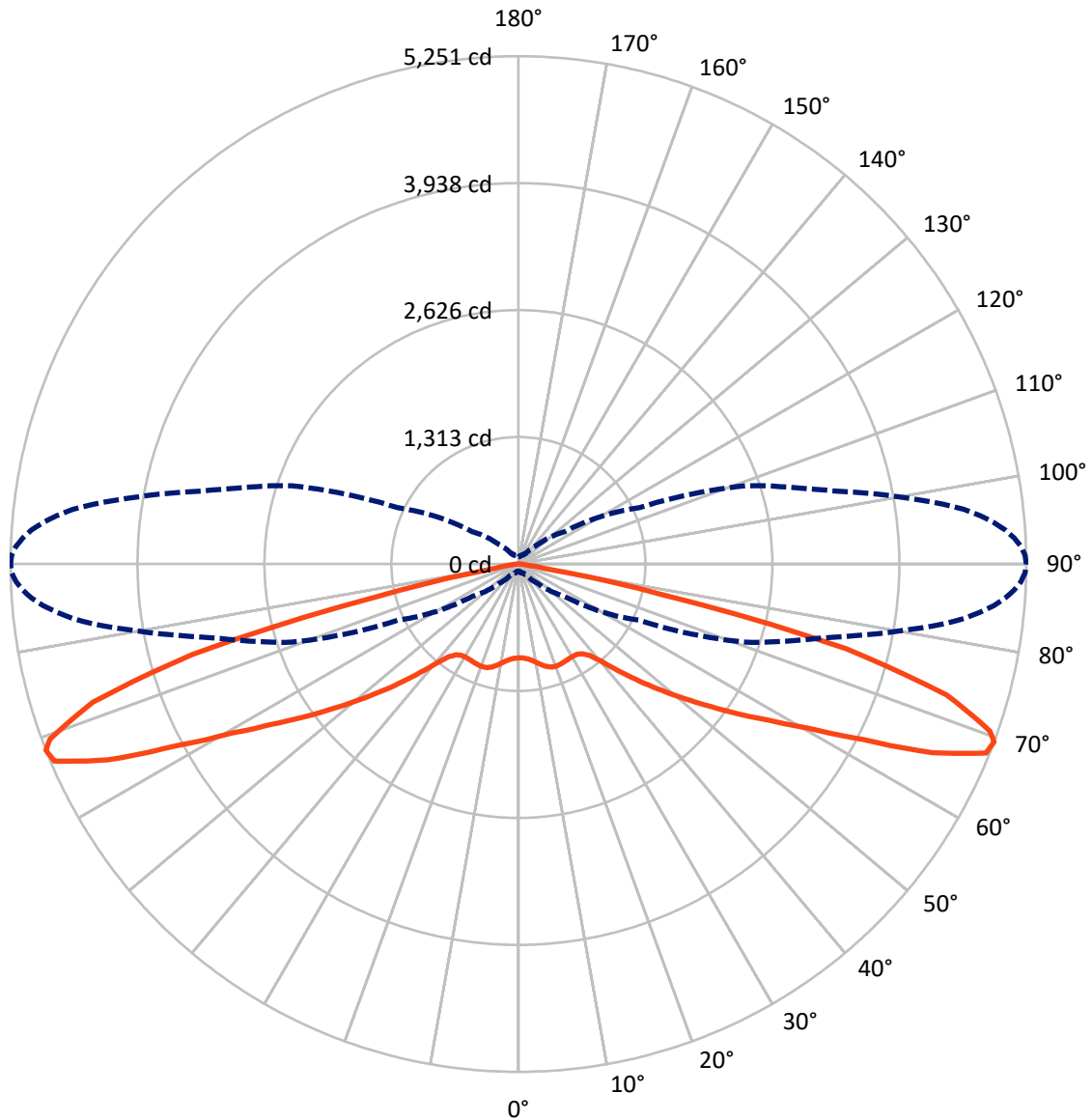
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.9 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2535.1	0.0	2535.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2535.1	0.0	2535.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	5070.1	0.0	5070.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.0	1.9
10°-20°	299.2	5.9
20°-30°	484.5	9.6
30°-40°	603.6	11.9
40°-50°	751.4	14.8
50°-60°	922.1	18.2
60°-70°	1137.2	22.4
70°-80°	706.9	13.9
80°-90°	70.2	1.4
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°	5070.1	100.0
0°-180°	5070.1	100.0



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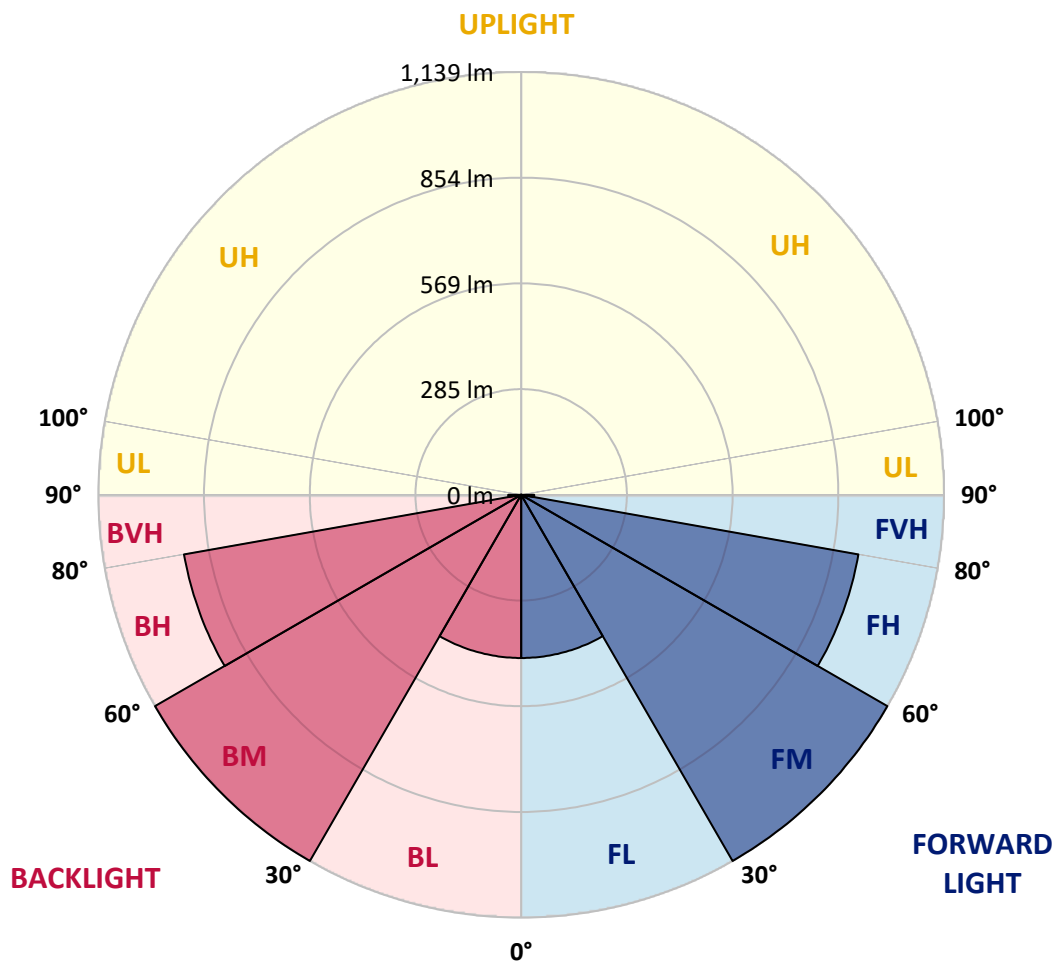
CATALOG NUMBER: LDRL-RW-E02-E-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	439.4	8.7			
FM	(30°-60°)	1138.6	22.5			
FH	(60°-80°)	922.1	18.2			G1/1800
FVH	(80°-90°)	35.1	0.7			G1/100
BL	(0°-30°)	439.4	8.7	B1/500		
BM	(30°-60°)	1138.6	22.5	B2/2500		
BH	(60°-80°)	922.1	18.2	B2/1000		G2/1000
BVH	(80°-90°)	35.1	0.7			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 I Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9
2.5°	973.4	972.4	974.3	976.0	975.4	975.8	975.2	974.4	974.4	974.5	974.5
5°	981.0	980.0	981.8	983.2	983.8	984.9	985.3	984.8	985.0	985.2	985.5
7.5°	990.2	989.4	991.5	993.6	997.4	999.4	1001.4	1003.5	1003.7	1003.8	1004.0
10°	998.8	998.2	1001.8	1006.2	1012.4	1017.2	1022.9	1028.4	1028.9	1029.3	1029.8
12.5°	1004.4	1004.4	1009.8	1017.7	1028.4	1038.1	1047.9	1057.4	1058.2	1059.1	1060.0
15°	1004.0	1004.6	1013.0	1027.4	1046.0	1063.1	1075.1	1085.4	1086.2	1087.0	1087.9
17.5°	997.1	997.2	1009.1	1032.2	1061.2	1086.6	1102.0	1107.6	1108.0	1108.3	1108.6
20°	977.6	979.0	995.7	1029.3	1073.0	1108.0	1122.7	1120.3	1119.8	1119.3	1118.8
22.5°	944.4	946.1	968.4	1013.5	1075.2	1121.8	1137.0	1126.4	1124.8	1123.2	1121.5
25°	898.2	901.0	925.2	982.9	1060.4	1125.9	1146.3	1129.2	1126.7	1124.2	1121.7
27.5°	844.6	846.0	874.6	935.2	1025.8	1112.4	1150.6	1135.2	1132.0	1128.8	1125.6
30°	782.7	786.2	816.0	879.3	977.0	1081.0	1148.8	1146.6	1143.1	1139.6	1136.0
32.5°	721.1	724.1	753.4	821.6	920.8	1037.3	1140.4	1164.0	1161.0	1158.1	1155.1
35°	659.0	662.7	692.8	766.0	864.9	987.6	1127.1	1188.8	1187.6	1186.3	1185.0
37.5°	604.4	606.8	636.4	712.5	816.0	942.2	1109.7	1222.1	1225.0	1227.9	1230.8
40°	549.0	551.3	582.2	660.2	770.9	903.4	1093.6	1264.0	1271.9	1279.8	1287.7
42.5°	495.6	497.6	527.5	605.4	720.8	869.8	1084.1	1314.6	1329.8	1345.0	1360.3
45°	440.9	442.2	470.2	546.0	663.6	830.6	1081.4	1371.4	1393.4	1415.4	1437.4
47.5°	387.1	390.3	419.1	491.0	598.2	774.6	1077.8	1434.4	1463.6	1492.7	1521.8
50°	335.6	339.1	368.8	437.0	535.1	708.1	1058.8	1505.9	1541.4	1576.9	1612.4
52.5°	283.0	286.6	316.3	381.5	476.6	633.2	1006.2	1580.8	1623.0	1665.3	1707.5
55°	227.0	228.4	258.9	324.2	418.0	570.4	922.4	1649.4	1700.6	1751.8	1802.9
57.5°	165.1	169.6	199.8	260.6	358.2	514.8	815.7	1684.6	1748.4	1812.3	1876.1
60°	119.2	122.2	148.7	196.5	290.5	460.3	721.0	1659.0	1744.2	1829.4	1914.6
62.5°	94.2	97.6	118.0	148.0	224.7	400.4	659.2	1588.6	1708.1	1827.6	1947.2
65°	83.4	86.4	105.3	120.2	171.8	338.8	620.4	1518.8	1680.2	1841.5	2002.9
67.5°	76.1	79.4	95.9	106.0	142.0	299.2	602.0	1466.2	1652.5	1838.8	2025.2
69°	72.8	75.6	90.8	100.3	133.9	285.6	582.2	1377.0	1561.8	1746.5	1931.3
70°	70.8	73.4	87.2	96.8	130.6	274.5	553.0	1271.0	1449.3	1627.5	1805.8
72.5°	65.6	67.4	79.0	87.8	119.5	219.1	417.1	896.8	1047.9	1199.0	1350.1
75°	58.2	60.2	70.6	78.6	91.2	131.6	261.2	520.6	624.1	727.6	831.2
77.5°	50.0	52.4	60.8	73.6	73.4	85.8	158.5	299.0	349.2	399.6	449.8
80°	42.9	44.9	52.5	72.8	61.4	67.8	118.2	223.0	243.2	263.5	283.8
82.5°	33.6	35.2	44.0	60.1	49.2	51.6	90.0	203.1	216.8	230.6	244.3
85°	21.1	21.8	32.0	41.6	34.9	31.2	57.9	156.3	166.3	176.3	186.3
87.5°	8.4	10.3	15.6	14.8	15.0	12.5	18.8	56.4	61.5	66.7	71.8
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9
2.5°	974.6	974.6	974.3	973.8	974.3	973.8	974.0	974.4	974.3	974.4	974.0
5°	985.7	986.0	986.0	984.9	985.4	985.6	985.8	985.4	985.6	986.0	985.2
7.5°	1004.2	1004.4	1004.8	1005.4	1005.0	1005.2	1005.6	1005.2	1004.7	1005.9	1005.0
10°	1030.2	1030.6	1030.6	1032.2	1031.5	1032.0	1033.6	1033.6	1032.7	1033.8	1033.6
12.5°	1060.9	1061.8	1061.6	1061.4	1062.1	1062.6	1064.2	1064.6	1065.0	1066.8	1066.1
15°	1088.7	1089.6	1090.2	1090.6	1091.8	1092.2	1093.2	1093.8	1094.3	1095.0	1095.3
17.5°	1108.9	1109.2	1110.2	1109.7	1111.4	1111.0	1112.2	1112.7	1113.2	1114.0	1114.6
20°	1118.3	1117.8	1118.0	1117.4	1117.4	1117.8	1118.0	1118.6	1118.3	1119.1	1119.8
22.5°	1119.9	1118.3	1117.3	1116.1	1115.6	1114.6	1114.6	1114.9	1113.8	1114.6	1115.6
25°	1119.1	1116.6	1114.8	1112.7	1110.8	1109.2	1108.2	1107.8	1107.0	1107.0	1107.8
27.5°	1122.5	1119.3	1116.6	1113.2	1110.8	1108.5	1106.3	1104.6	1102.9	1102.6	1102.6
30°	1132.4	1128.9	1125.9	1121.6	1118.0	1114.9	1111.9	1109.5	1106.3	1105.0	1103.4
32.5°	1152.2	1149.2	1145.0	1141.2	1136.8	1133.2	1129.1	1125.4	1121.7	1118.3	1117.0
35°	1183.7	1182.4	1180.0	1177.6	1173.4	1168.6	1165.2	1160.8	1156.6	1151.8	1150.4
37.5°	1233.7	1236.6	1235.2	1233.4	1232.2	1230.7	1226.2	1223.3	1220.4	1216.4	1215.5
40°	1295.7	1303.6	1311.6	1316.8	1314.9	1321.2	1322.2	1322.7	1320.2	1323.5	1324.2
42.5°	1375.5	1390.7	1405.0	1415.6	1427.7	1436.8	1448.6	1453.7	1463.3	1473.3	1479.0
45°	1459.4	1481.4	1502.0	1523.4	1544.5	1567.6	1590.1	1605.9	1629.1	1646.3	1657.1
47.5°	1551.0	1580.1	1604.8	1636.8	1667.4	1694.8	1734.1	1765.6	1793.8	1820.7	1848.8
50°	1647.9	1683.4	1713.8	1753.0	1790.1	1833.0	1879.0	1919.2	1963.4	2006.2	2044.2
52.5°	1749.7	1792.0	1833.0	1873.2	1918.2	1964.8	2014.8	2072.8	2125.9	2190.2	2236.2
55°	1854.0	1905.2	1948.9	1991.0	2038.8	2090.4	2149.8	2218.5	2285.8	2356.2	2426.2
57.5°	1940.0	2003.8	2051.6	2100.7	2152.2	2203.3	2277.1	2347.5	2432.9	2519.3	2606.8
60°	1999.8	2085.0	2142.9	2205.0	2264.6	2326.7	2406.2	2495.2	2602.0	2706.7	2825.5
62.5°	2066.7	2186.2	2267.4	2350.4	2422.8	2497.4	2603.7	2706.2	2843.4	2963.9	3113.5
65°	2164.2	2325.6	2445.0	2556.8	2654.0	2755.6	2881.8	3009.8	3166.8	3333.4	3521.0
67.5°	2211.5	2397.8	2554.2	2692.1	2816.4	2945.9	3076.0	3227.6	3404.5	3605.0	3811.0
69°	2116.0	2300.8	2480.6	2620.1	2751.0	2889.2	3028.4	3181.4	3355.6	3563.7	3781.9
70°	1984.0	2162.3	2353.6	2493.3	2625.3	2768.8	2910.6	3065.0	3231.6	3446.0	3666.8
72.5°	1501.2	1652.4	1838.0	1985.8	2124.5	2269.5	2415.5	2549.6	2718.5	2924.8	3128.2
75°	934.7	1038.2	1205.2	1353.6	1465.1	1589.4	1726.4	1853.4	2023.0	2169.2	2364.8
77.5°	500.2	550.4	647.8	754.2	816.3	876.9	966.2	1035.0	1106.4	1191.1	1271.9
80°	304.0	324.2	357.6	380.4	371.8	347.0	339.1	314.3	323.2	308.0	297.1
82.5°	258.0	271.8	292.0	305.8	295.8	256.1	211.2	177.8	154.2	131.5	111.8
85°	196.3	206.2	216.7	223.0	222.5	202.7	161.0	124.8	97.2	75.3	62.6
87.5°	76.9	82.0	89.6	88.4	92.3	93.0	72.8	56.2	40.0	27.0	23.6
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):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9	970.9
2.5°	973.3	973.2	973.3	973.8	973.8	974.2	973.8	974.0	973.4	973.0	973.3
5°	985.3	985.0	985.2	985.6	985.6	985.2	986.1	986.1	985.8	985.2	985.4
7.5°	1005.9	1006.0	1005.6	1007.2	1005.7	1005.8	1006.8	1006.8	1006.4	1006.6	1006.7
10°	1034.6	1034.4	1034.7	1035.8	1034.2	1035.2	1036.4	1036.8	1035.9	1035.9	1036.1
12.5°	1066.3	1067.6	1067.8	1068.4	1068.5	1069.4	1069.5	1069.7	1070.4	1070.6	1069.5
15°	1096.7	1097.6	1098.4	1099.1	1098.2	1099.4	1100.8	1100.7	1100.6	1101.2	1100.2
17.5°	1115.4	1116.2	1117.4	1117.3	1117.4	1118.4	1119.3	1119.6	1120.0	1120.0	1120.1
20°	1121.3	1121.8	1122.5	1123.2	1123.5	1124.6	1125.2	1125.8	1126.0	1125.8	1125.9
22.5°	1116.6	1117.2	1118.6	1119.2	1119.3	1120.8	1121.5	1122.0	1122.4	1122.7	1122.2
25°	1108.5	1109.2	1110.5	1111.0	1111.4	1112.8	1113.6	1114.8	1115.1	1115.2	1115.4
27.5°	1102.9	1103.2	1104.3	1105.0	1105.2	1106.6	1107.8	1108.6	1108.8	1109.0	1109.0
30°	1103.1	1103.1	1104.3	1104.4	1104.2	1105.6	1106.3	1106.8	1107.2	1107.2	1107.3
32.5°	1114.8	1114.0	1115.1	1113.6	1113.8	1113.6	1113.4	1113.9	1113.6	1113.7	1113.1
35°	1147.6	1145.8	1144.3	1145.0	1142.6	1139.2	1141.0	1140.2	1138.4	1138.6	1139.1
37.5°	1210.8	1208.9	1210.6	1209.1	1209.6	1204.9	1206.1	1201.8	1200.6	1202.2	1197.8
40°	1322.8	1322.0	1325.2	1323.9	1324.8	1326.1	1327.2	1323.2	1316.4	1322.6	1322.7
42.5°	1478.2	1485.8	1488.8	1493.0	1497.6	1495.6	1499.6	1500.8	1493.4	1498.9	1500.3
45°	1673.0	1681.0	1690.5	1693.4	1700.8	1701.8	1704.9	1705.7	1699.0	1699.6	1701.1
47.5°	1877.0	1891.8	1903.0	1910.8	1918.6	1920.0	1921.8	1918.6	1919.0	1920.6	1920.6
50°	2077.6	2109.3	2129.0	2144.4	2157.8	2150.8	2156.8	2157.2	2159.2	2155.0	2157.6
52.5°	2288.4	2330.4	2363.5	2389.4	2397.4	2422.1	2412.0	2419.7	2425.0	2417.2	2422.3
55°	2494.4	2554.2	2607.4	2644.9	2671.2	2696.2	2700.1	2720.2	2717.8	2725.4	2722.0
57.5°	2690.1	2773.9	2849.8	2905.4	2943.2	2981.3	3007.1	3029.1	3031.2	3053.0	3040.7
60°	2927.0	3043.6	3141.4	3224.0	3279.9	3336.6	3381.4	3417.4	3425.6	3462.9	3450.6
62.5°	3246.5	3388.8	3513.7	3610.8	3735.2	3795.1	3882.2	3936.6	3970.5	3979.8	3997.1
65°	3695.6	3881.0	4045.8	4201.0	4341.0	4438.0	4538.8	4619.8	4684.8	4679.4	4706.1
67.5°	4029.4	4240.7	4439.0	4625.2	4775.8	4900.7	5016.5	5104.2	5162.2	5199.2	5214.9
69°	3994.6	4221.4	4440.2	4639.1	4794.4	4934.0	5046.8	5133.0	5199.5	5239.6	5251.3
70°	3879.0	4112.0	4340.2	4535.3	4693.6	4846.8	4961.6	5057.7	5121.0	5164.9	5171.6
72.5°	3355.2	3607.7	3809.4	4022.3	4174.8	4329.8	4402.0	4521.1	4603.6	4630.3	4629.8
75°	2530.6	2741.3	2918.5	3075.8	3212.2	3317.4	3351.4	3436.2	3504.8	3503.9	3497.5
77.5°	1362.8	1412.4	1478.6	1501.0	1543.0	1542.3	1500.1	1513.4	1552.2	1477.0	1501.3
80°	292.4	288.0	284.2	282.1	280.8	281.4	282.9	273.3	282.7	278.5	260.6
82.5°	101.8	99.4	97.0	98.8	97.6	98.6	98.2	99.4	99.2	98.9	96.6
85°	57.2	55.2	54.0	54.8	53.0	51.4	50.1	49.6	49.4	48.2	47.6
87.5°	21.8	21.6	21.5	20.6	18.5	17.0	16.0	14.0	13.2	12.0	11.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)