

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: P144537

Luminaire Tested: **LDRL-RW-F02-E-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144537
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-F02-E-7060
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (14) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5088.7 lumens
Efficiency: N/A
Efficacy: 92.5 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): 55
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

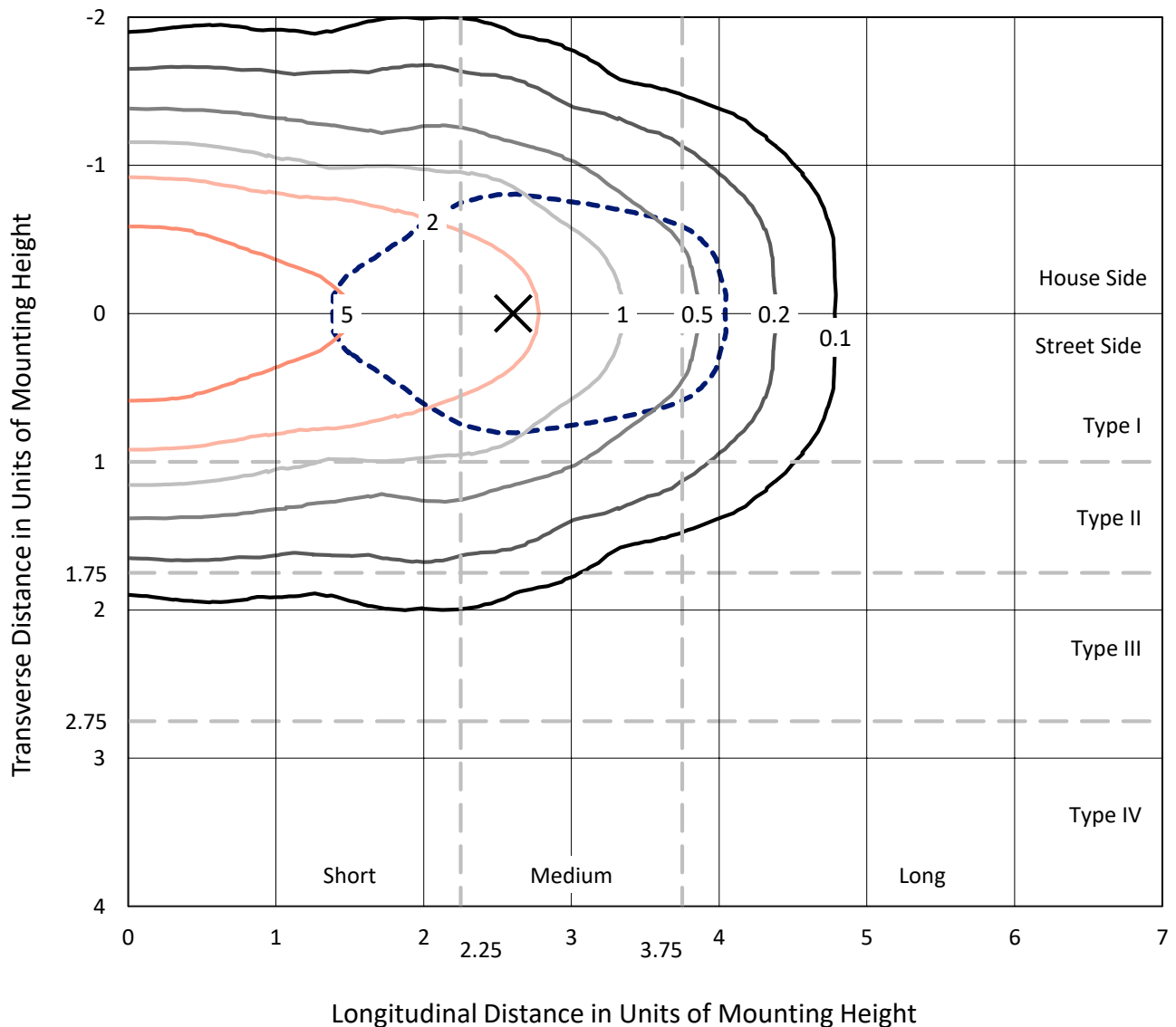


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Iso-Footcandle Lines of Horizontal Illumination

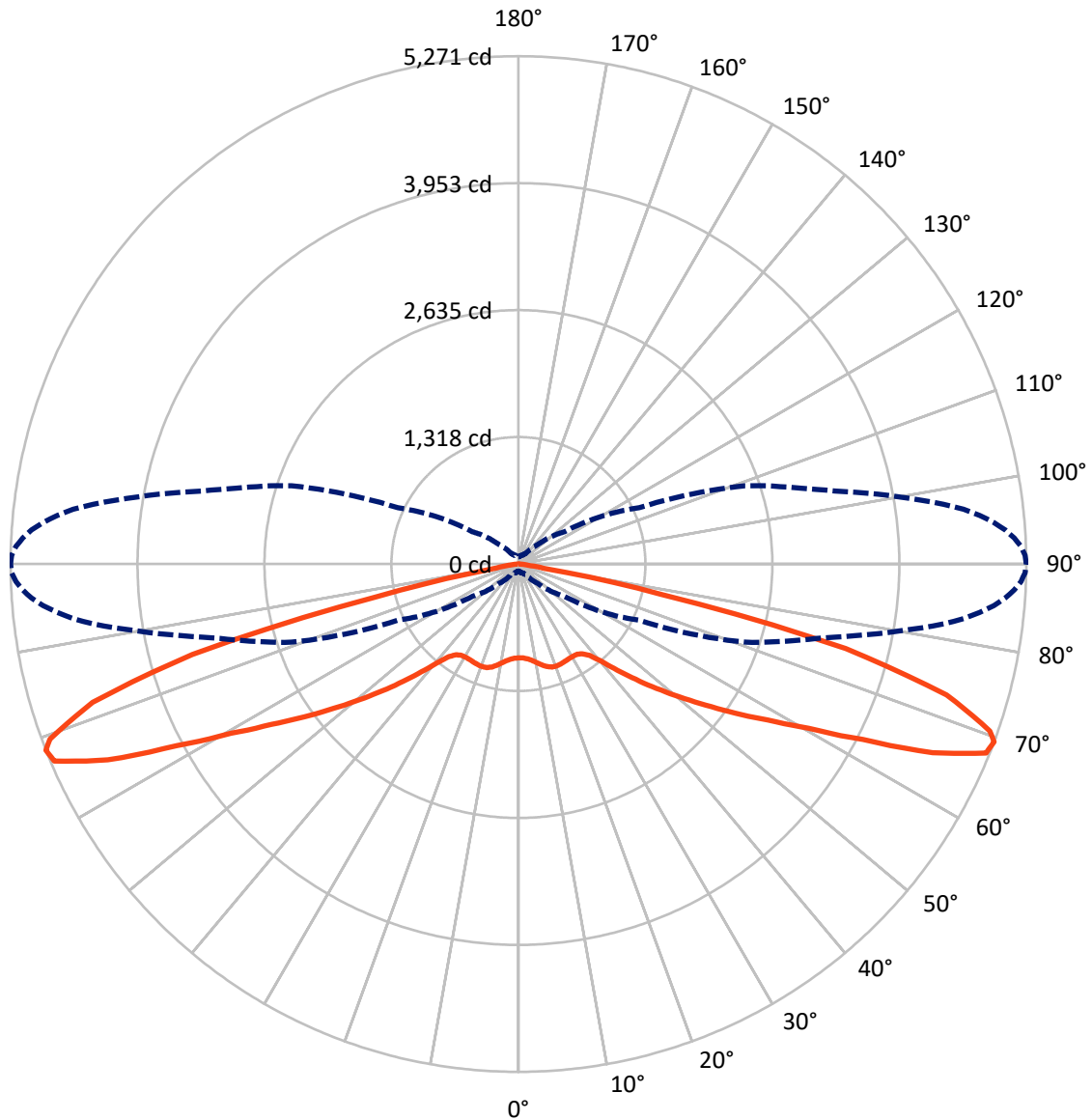
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10 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	2544.3	0.0	2544.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2544.3	0.0	2544.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	5088.7	0.0	5088.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.3	1.9
10°-20°	300.3	5.9
20°-30°	486.3	9.6
30°-40°	605.8	11.9
40°-50°	754.2	14.8
50°-60°	925.4	18.2
60°-70°	1141.3	22.4
70°-80°	709.5	13.9
80°-90°	70.5	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°	5088.7	100.0
0°-180°	5088.7	100.0



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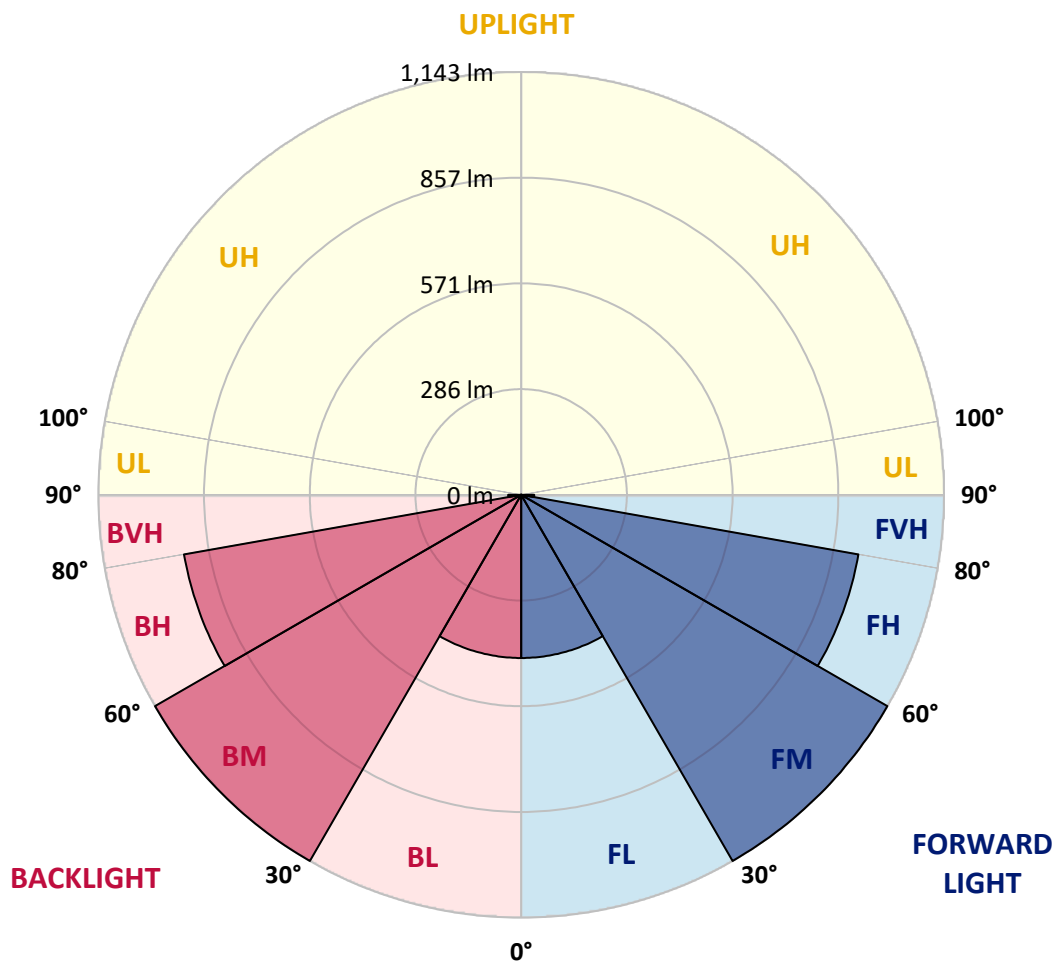
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	441.0	8.7			
FM (30°-60°)	1142.7	22.5			
FH (60°-80°)	925.4	18.2			G1/1800
FVH (80°-90°)	35.2	0.7			G1/100
BL (0°-30°)	441.0	8.7	B1/500		
BM (30°-60°)	1142.7	22.5	B2/2500		
BH (60°-80°)	925.4	18.2	B2/1000		G2/1000
BVH (80°-90°)	35.2	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°	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5
2.5°	977.0	976.0	977.9	979.6	979.0	979.4	978.7	977.8	977.9	978.0	978.1
5°	984.6	983.6	985.3	986.8	987.4	988.6	988.8	988.4	988.6	988.8	989.1
7.5°	993.8	993.0	995.2	997.2	1001.1	1003.2	1005.1	1007.2	1007.3	1007.5	1007.7
10°	1002.4	1001.9	1005.5	1009.9	1016.2	1020.9	1026.6	1032.2	1032.7	1033.1	1033.6
12.5°	1008.0	1008.0	1013.4	1021.4	1032.2	1041.9	1051.8	1061.2	1062.1	1063.0	1063.9
15°	1007.7	1008.4	1016.7	1031.2	1049.8	1066.9	1079.0	1089.4	1090.2	1091.0	1091.9
17.5°	1000.8	1000.9	1012.8	1036.0	1065.1	1090.6	1106.1	1111.7	1112.0	1112.3	1112.6
20°	981.2	982.6	999.4	1033.1	1077.0	1112.0	1126.8	1124.4	1123.9	1123.4	1122.9
22.5°	947.9	949.6	971.9	1017.2	1079.2	1125.9	1141.2	1130.6	1128.9	1127.3	1125.6
25°	901.4	904.4	928.6	986.5	1064.3	1130.0	1150.5	1133.4	1130.8	1128.3	1125.8
27.5°	847.8	849.1	877.7	938.6	1029.6	1116.4	1154.8	1139.3	1136.1	1132.9	1129.8
30°	785.6	789.2	818.9	882.5	980.6	1085.0	1153.1	1150.8	1147.3	1143.7	1140.2
32.5°	723.8	726.8	756.1	824.6	924.2	1041.1	1144.6	1168.3	1165.3	1162.3	1159.3
35°	661.4	665.2	695.2	768.8	868.1	991.2	1131.2	1193.2	1191.9	1190.6	1189.3
37.5°	606.7	609.0	638.7	715.1	819.0	945.7	1113.7	1226.6	1229.5	1232.4	1235.3
40°	551.0	553.3	584.3	662.6	773.8	906.8	1097.6	1268.6	1276.6	1284.5	1292.5
42.5°	497.4	499.4	529.4	607.6	723.4	873.0	1088.0	1319.4	1334.7	1350.0	1365.2
45°	442.5	443.8	472.0	548.0	666.0	833.7	1085.4	1376.5	1398.6	1420.6	1442.6
47.5°	388.4	391.7	420.6	492.8	600.4	777.4	1081.7	1439.7	1468.9	1498.2	1527.4
50°	336.8	340.4	370.2	438.6	537.0	710.7	1062.7	1511.4	1547.0	1582.6	1618.3
52.5°	284.1	287.7	317.5	382.9	478.2	635.5	1009.9	1586.6	1629.0	1671.4	1713.8
55°	227.8	229.2	259.9	325.4	419.5	572.4	925.7	1655.6	1706.9	1758.2	1809.5
57.5°	165.6	170.2	200.6	261.6	359.5	516.7	818.7	1690.8	1754.9	1818.9	1883.0
60°	119.6	122.6	149.2	197.2	291.5	462.0	723.6	1665.0	1750.5	1836.0	1921.6
62.5°	94.6	97.9	118.4	148.6	225.5	401.8	661.6	1594.4	1714.3	1834.3	1954.3
65°	83.7	86.8	105.7	120.6	172.4	340.0	622.6	1524.4	1686.3	1848.2	2010.2
67.5°	76.4	79.6	96.2	106.4	142.5	300.2	604.2	1471.6	1658.5	1845.5	2032.5
69°	73.0	75.9	91.2	100.6	134.4	286.6	584.3	1382.1	1567.5	1752.9	1938.3
70°	71.2	73.7	87.6	97.1	131.2	275.4	555.0	1275.7	1454.6	1633.5	1812.4
72.5°	65.9	67.6	79.3	88.1	120.0	219.9	418.6	900.1	1051.8	1203.4	1355.1
75°	58.4	60.4	70.8	79.0	91.5	132.1	262.0	522.4	626.4	730.3	834.2
77.5°	50.1	52.6	61.0	73.9	73.6	86.0	159.1	300.0	350.5	401.0	451.5
80°	43.0	45.1	52.7	73.0	61.6	68.1	118.6	223.8	244.1	264.5	284.8
82.5°	33.7	35.4	44.2	60.4	49.3	51.8	90.3	203.8	217.6	231.4	245.2
85°	21.2	21.8	32.2	41.6	35.1	31.4	58.1	156.9	166.9	177.0	187.0
87.5°	8.4	10.4	15.6	14.9	15.1	12.5	18.8	56.6	61.7	66.9	72.0
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°	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5
2.5°	978.1	978.2	977.8	977.4	977.8	977.4	977.6	978.0	977.9	977.8	977.6
5°	989.3	989.6	989.6	988.6	989.0	989.2	989.4	989.0	989.2	989.6	988.9
7.5°	1007.9	1008.0	1008.6	1009.0	1008.7	1008.8	1009.2	1008.8	1008.4	1009.6	1008.7
10°	1034.0	1034.4	1034.4	1036.0	1035.3	1035.8	1037.3	1037.4	1036.5	1037.6	1037.4
12.5°	1064.7	1065.6	1065.4	1065.3	1065.9	1066.4	1068.2	1068.5	1068.8	1070.7	1070.0
15°	1092.8	1093.6	1094.2	1094.6	1095.8	1096.2	1097.2	1097.8	1098.3	1099.0	1099.3
17.5°	1112.9	1113.2	1114.2	1113.8	1115.4	1115.1	1116.3	1116.8	1117.3	1118.2	1118.6
20°	1122.4	1121.9	1122.0	1121.5	1121.6	1121.8	1122.0	1122.7	1122.4	1123.2	1123.9
22.5°	1124.0	1122.4	1121.4	1120.2	1119.7	1118.6	1118.6	1119.0	1117.8	1118.6	1119.6
25°	1123.2	1120.6	1118.8	1116.8	1114.9	1113.2	1112.2	1111.8	1111.0	1111.0	1111.8
27.5°	1126.6	1123.4	1120.6	1117.3	1114.9	1112.6	1110.4	1108.6	1106.9	1106.6	1106.6
30°	1136.6	1133.0	1130.0	1125.8	1122.0	1119.0	1115.9	1113.6	1110.4	1109.0	1107.4
32.5°	1156.3	1153.4	1149.2	1145.4	1141.0	1137.2	1133.2	1129.4	1125.8	1122.4	1121.0
35°	1188.0	1186.8	1184.4	1181.8	1177.6	1172.9	1169.5	1165.1	1160.8	1155.9	1154.6
37.5°	1238.2	1241.2	1239.8	1238.0	1236.8	1235.2	1230.6	1227.8	1224.8	1220.8	1220.0
40°	1300.4	1308.4	1316.4	1321.6	1319.8	1326.0	1327.0	1327.6	1325.0	1328.4	1329.1
42.5°	1380.5	1395.8	1410.2	1420.8	1432.9	1442.0	1453.9	1459.0	1468.7	1478.6	1484.4
45°	1464.7	1486.8	1507.4	1529.0	1550.2	1573.4	1595.9	1611.8	1635.0	1652.3	1663.2
47.5°	1556.7	1585.9	1610.6	1642.8	1673.5	1701.0	1740.4	1772.1	1800.4	1827.3	1855.6
50°	1654.0	1689.6	1720.0	1759.4	1796.6	1839.7	1886.0	1926.2	1970.6	2013.5	2051.6
52.5°	1756.2	1798.6	1839.6	1880.0	1925.2	1972.0	2022.1	2080.4	2133.6	2198.2	2244.4
55°	1860.9	1912.2	1956.0	1998.2	2046.2	2098.0	2157.7	2226.6	2294.2	2364.9	2435.0
57.5°	1947.0	2011.1	2059.1	2108.4	2160.0	2211.4	2285.4	2356.0	2441.8	2528.6	2616.3
60°	2007.1	2092.6	2150.7	2213.0	2272.8	2335.2	2415.0	2504.3	2611.6	2716.6	2835.8
62.5°	2074.3	2194.2	2275.8	2359.0	2431.6	2506.5	2613.2	2716.0	2853.8	2974.8	3124.8
65°	2172.1	2334.0	2454.0	2566.1	2663.7	2765.7	2892.2	3020.9	3178.4	3345.6	3533.8
67.5°	2219.5	2406.5	2563.6	2702.0	2826.7	2956.6	3087.2	3239.4	3417.0	3618.2	3824.9
69°	2123.7	2309.1	2489.8	2629.6	2761.0	2899.8	3039.4	3193.0	3367.8	3576.7	3795.8
70°	1991.3	2170.2	2362.2	2502.4	2635.0	2778.9	2921.2	3076.2	3243.4	3458.6	3680.2
72.5°	1506.7	1658.4	1844.8	1993.0	2132.2	2277.8	2424.4	2558.8	2728.4	2935.4	3139.6
75°	938.1	1042.0	1209.6	1358.6	1470.5	1595.2	1732.8	1860.2	2030.4	2177.2	2373.6
77.5°	502.0	552.4	650.2	757.0	819.3	880.1	969.7	1038.8	1110.5	1195.4	1276.6
80°	305.1	325.4	358.8	381.8	373.2	348.3	340.4	315.5	324.4	309.2	298.2
82.5°	259.0	272.8	293.1	307.0	296.8	257.0	212.0	178.4	154.7	132.0	112.2
85°	197.0	207.0	217.5	223.8	223.3	203.4	161.6	125.2	97.6	75.6	62.8
87.5°	77.2	82.3	90.0	88.8	92.6	93.4	73.1	56.4	40.2	27.1	23.7
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):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5	974.5
2.5°	976.8	976.7	976.8	977.4	977.4	977.7	977.4	977.6	977.0	976.5	976.8
5°	988.9	988.5	988.8	989.2	989.2	988.8	989.7	989.7	989.4	988.8	989.0
7.5°	1009.6	1009.7	1009.2	1010.9	1009.4	1009.6	1010.6	1010.4	1010.1	1010.2	1010.4
10°	1038.4	1038.2	1038.5	1039.5	1038.0	1039.0	1040.2	1040.6	1039.7	1039.7	1039.9
12.5°	1070.2	1071.6	1071.8	1072.4	1072.4	1073.2	1073.4	1073.6	1074.2	1074.4	1073.4
15°	1100.7	1101.7	1102.4	1103.1	1102.2	1103.4	1104.8	1104.8	1104.6	1105.3	1104.2
17.5°	1119.5	1120.4	1121.6	1121.4	1121.5	1122.6	1123.4	1123.8	1124.1	1124.1	1124.2
20°	1125.4	1126.0	1126.6	1127.3	1127.6	1128.6	1129.3	1129.8	1130.2	1129.8	1130.0
22.5°	1120.7	1121.4	1122.7	1123.2	1123.4	1124.9	1125.6	1126.1	1126.4	1126.8	1126.3
25°	1112.6	1113.2	1114.6	1115.1	1115.4	1116.8	1117.6	1118.8	1119.2	1119.4	1119.5
27.5°	1106.9	1107.2	1108.3	1109.0	1109.2	1110.7	1111.8	1112.7	1112.9	1113.1	1113.1
30°	1107.1	1107.2	1108.3	1108.4	1108.4	1109.6	1110.4	1110.8	1111.2	1111.2	1111.4
32.5°	1118.8	1118.2	1119.2	1117.6	1117.8	1117.6	1117.4	1118.0	1117.6	1117.8	1117.1
35°	1151.9	1150.0	1148.5	1149.2	1146.8	1143.4	1145.2	1144.4	1142.6	1142.7	1143.2
37.5°	1215.2	1213.4	1215.0	1213.6	1214.0	1209.2	1210.5	1206.2	1205.1	1206.6	1202.2
40°	1327.8	1326.8	1330.1	1328.7	1329.6	1331.0	1332.1	1328.0	1321.2	1327.4	1327.5
42.5°	1483.6	1491.2	1494.2	1498.4	1503.1	1501.0	1505.1	1506.2	1498.8	1504.4	1505.8
45°	1679.1	1687.2	1696.7	1699.6	1707.0	1708.0	1711.1	1712.0	1705.2	1705.8	1707.4
47.5°	1883.9	1898.8	1910.0	1917.8	1925.6	1927.1	1928.8	1925.6	1926.1	1927.6	1927.6
50°	2085.2	2117.0	2136.9	2152.2	2165.6	2158.7	2164.6	2165.1	2167.1	2162.9	2165.5
52.5°	2296.8	2339.0	2372.2	2398.0	2406.2	2431.0	2420.8	2428.6	2433.8	2426.0	2431.1
55°	2503.4	2563.6	2617.0	2654.6	2681.0	2706.0	2710.0	2730.1	2727.8	2735.4	2732.0
57.5°	2700.0	2784.0	2860.2	2916.0	2953.9	2992.2	3018.1	3040.2	3042.4	3064.2	3051.8
60°	2937.7	3054.7	3152.8	3235.9	3292.0	3348.8	3393.8	3429.8	3438.2	3475.6	3463.2
62.5°	3258.4	3401.2	3526.6	3624.0	3748.8	3809.0	3896.4	3951.0	3985.0	3994.3	4011.8
65°	3709.2	3895.2	4060.6	4216.4	4356.8	4454.3	4555.4	4636.7	4702.0	4696.5	4723.3
67.5°	4044.1	4256.2	4455.3	4642.2	4793.2	4918.6	5034.8	5122.8	5181.0	5218.2	5233.9
69°	4009.2	4236.9	4456.5	4656.0	4811.9	4952.0	5065.2	5151.8	5218.5	5258.8	5270.5
70°	3893.2	4127.2	4356.0	4551.8	4710.8	4864.6	4979.8	5076.2	5139.7	5183.8	5190.5
72.5°	3367.4	3620.9	3823.4	4037.0	4190.0	4345.7	4418.2	4537.6	4620.4	4647.2	4646.7
75°	2539.9	2751.3	2929.2	3087.1	3224.0	3329.5	3363.8	3448.8	3517.6	3516.7	3510.3
77.5°	1367.7	1417.5	1484.0	1506.4	1548.6	1548.0	1505.6	1519.0	1558.0	1482.4	1506.8
80°	293.4	289.0	285.3	283.1	281.9	282.4	284.0	274.3	283.8	279.5	261.6
82.5°	102.2	99.8	97.4	99.1	97.9	98.9	98.6	99.8	99.6	99.3	96.9
85°	57.4	55.4	54.2	55.0	53.2	51.5	50.3	49.8	49.6	48.4	47.8
87.5°	21.8	21.7	21.6	20.7	18.6	17.1	16.1	14.0	13.2	12.0	11.2
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)