

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: P144533

Luminaire Tested: **LDRL-RW-F02-E-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144533
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-8030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (14) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4185.5 lumens
Efficiency: N/A
Efficacy: 76.1 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

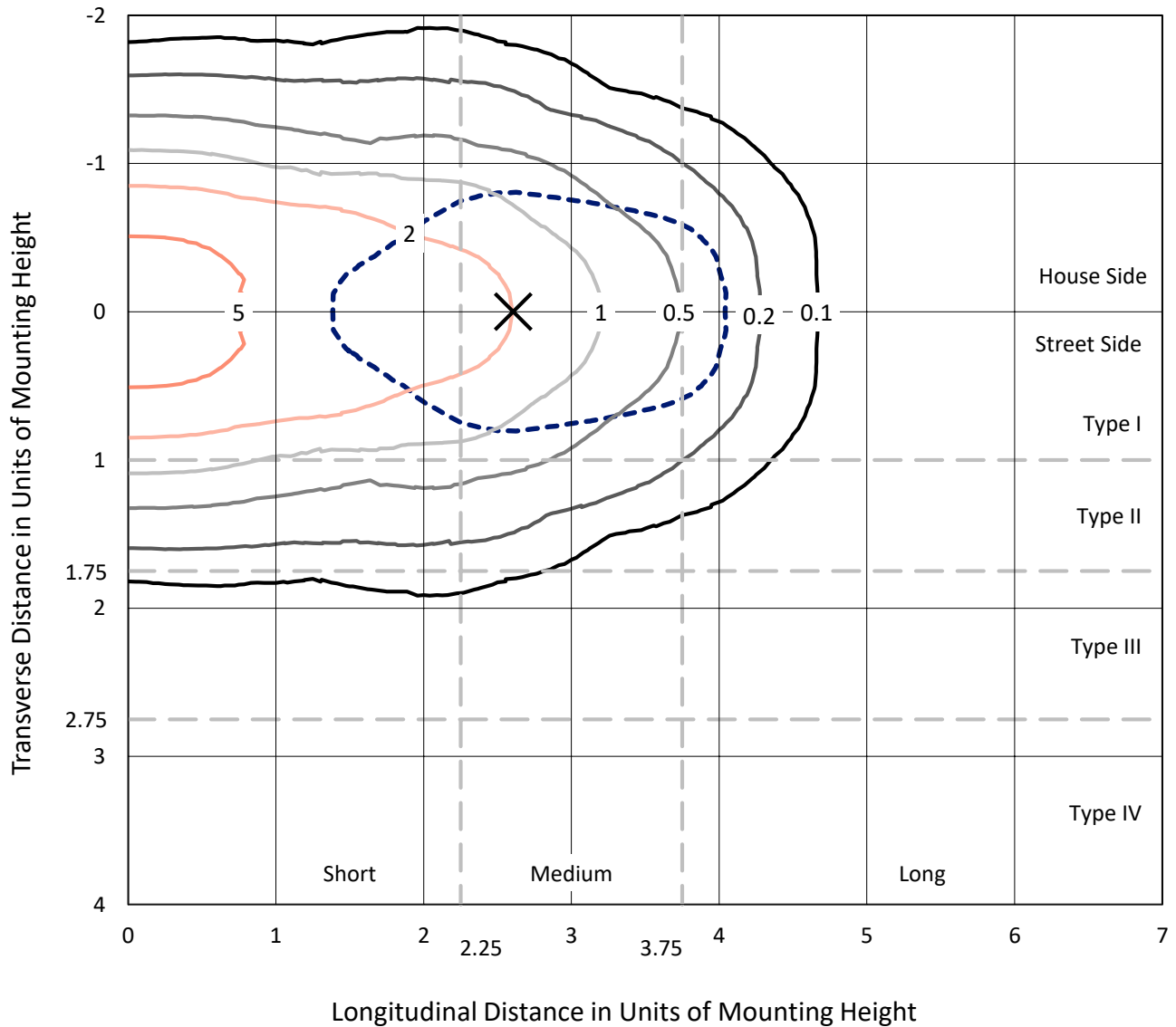
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

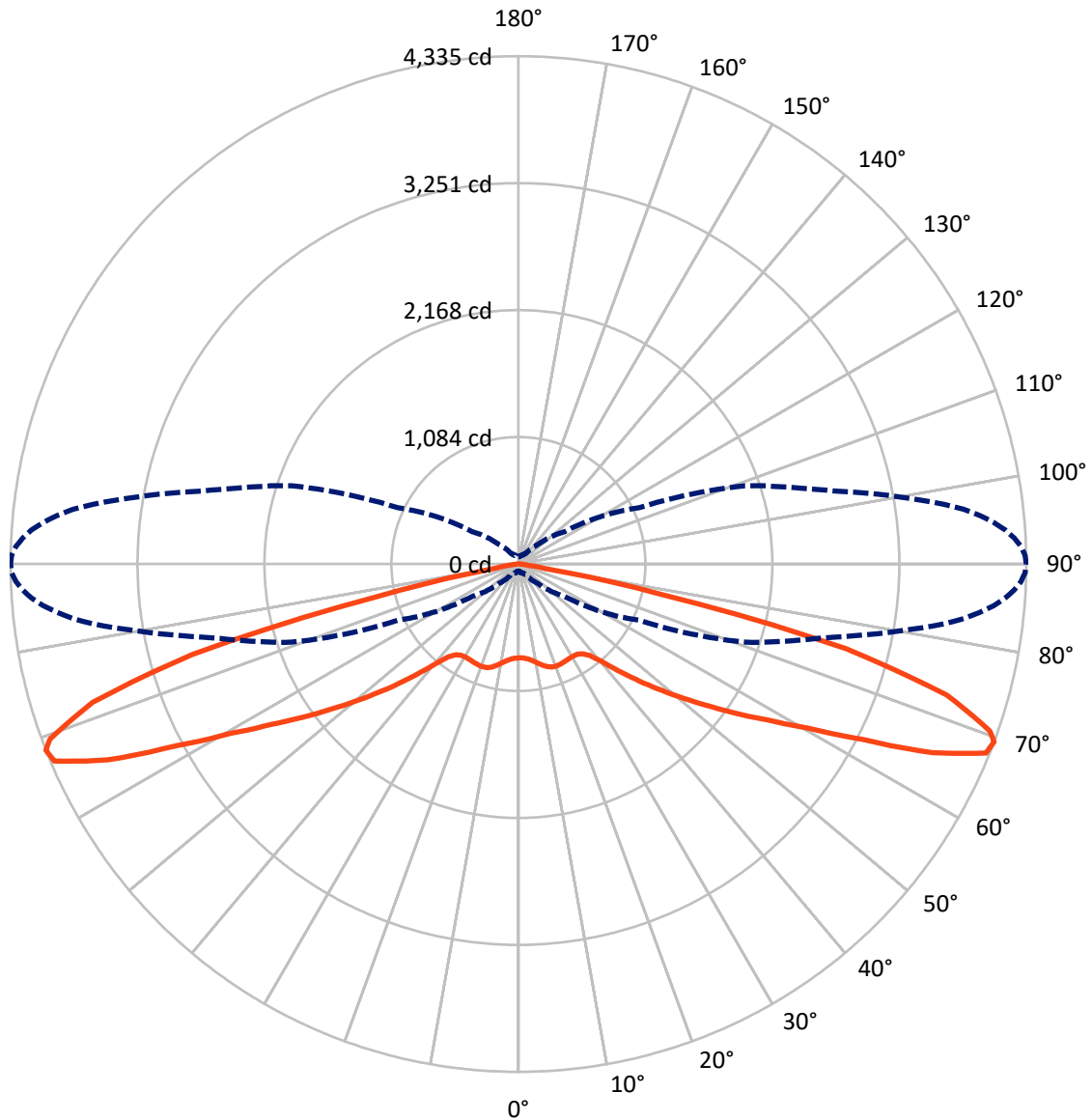
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.2 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	2092.8	0.0	2092.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2092.8	0.0	2092.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	4185.5	0.0	4185.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.4	1.9
10°-20°	247.0	5.9
20°-30°	400.0	9.6
30°-40°	498.3	11.9
40°-50°	620.3	14.8
50°-60°	761.2	18.2
60°-70°	938.8	22.4
70°-80°	583.6	13.9
80°-90°	58.0	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°	4185.5	100.0
0°-180°	4185.5	100.0



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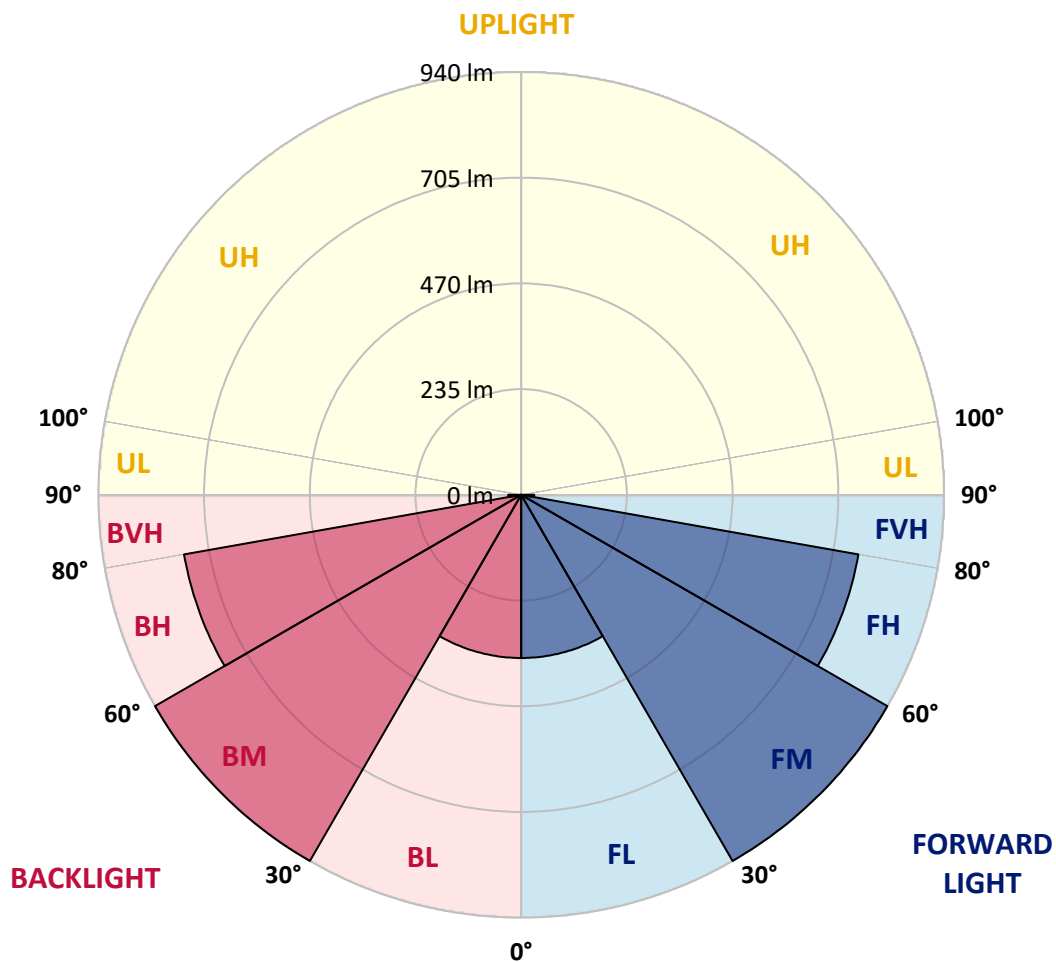
CATALOG NUMBER: LDRL-RW-F02-E-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	362.7	8.7			
FM	(30°-60°)	939.9	22.5			
FH	(60°-80°)	761.2	18.2			G1/1800
FVH	(80°-90°)	29.0	0.7			G1/100
BL	(0°-30°)	362.7	8.7	B1/500		
BM	(30°-60°)	939.9	22.5	B1/1000		
BH	(60°-80°)	761.2	18.2	B2/1000		G2/1000
BVH	(80°-90°)	29.0	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°	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5
2.5°	803.6	802.8	804.3	805.7	805.2	805.6	805.0	804.3	804.4	804.4	804.5
5°	809.9	809.0	810.4	811.7	812.1	813.1	813.4	813.0	813.2	813.3	813.6
7.5°	817.4	816.7	818.5	820.2	823.4	825.0	826.8	828.4	828.5	828.7	828.8
10°	824.6	824.1	827.0	830.6	835.8	839.7	844.4	849.0	849.4	849.8	850.1
12.5°	829.2	829.1	833.6	840.2	849.0	857.0	865.0	872.8	873.6	874.3	875.0
15°	828.8	829.4	836.2	848.2	863.6	877.6	887.5	896.0	896.7	897.4	898.1
17.5°	823.1	823.2	833.0	852.1	876.0	897.0	909.8	914.4	914.6	914.9	915.2
20°	807.1	808.2	822.0	849.7	885.8	914.7	926.8	924.8	924.4	924.0	923.6
22.5°	779.6	781.1	799.4	836.6	887.6	926.1	938.6	929.8	928.5	927.2	925.8
25°	741.4	743.8	763.8	811.4	875.4	929.4	946.3	932.2	930.1	928.0	926.0
27.5°	697.2	698.4	722.0	772.0	846.8	918.3	949.8	937.1	934.5	931.9	929.2
30°	646.2	649.1	673.6	725.8	806.6	892.4	948.4	946.6	943.6	940.7	937.8
32.5°	595.3	597.8	621.9	678.2	760.1	856.2	941.4	961.0	958.5	956.0	953.6
35°	544.0	547.1	571.9	632.4	714.0	815.3	930.4	981.4	980.4	979.3	978.3
37.5°	499.0	501.0	525.4	588.2	673.6	777.8	916.0	1008.8	1011.2	1013.6	1016.0
40°	453.2	455.2	480.6	545.0	636.4	745.8	902.8	1043.4	1050.0	1056.6	1063.1
42.5°	409.1	410.8	435.4	499.7	595.0	718.0	894.8	1085.2	1097.8	1110.4	1122.9
45°	364.0	365.1	388.2	450.8	547.8	685.8	892.8	1132.2	1150.3	1168.5	1186.6
47.5°	319.5	322.2	346.0	405.4	493.8	639.5	889.8	1184.2	1208.2	1232.3	1256.3
50°	277.0	280.0	304.5	360.8	441.7	584.6	874.1	1243.1	1272.4	1301.7	1331.1
52.5°	233.7	236.6	261.2	314.9	393.4	522.7	830.6	1305.0	1339.9	1374.7	1409.6
55°	187.4	188.6	213.8	267.6	345.0	470.8	761.4	1361.7	1403.9	1446.1	1488.4
57.5°	136.2	140.0	165.0	215.2	295.7	425.0	673.3	1390.6	1443.4	1496.1	1548.8
60°	98.4	100.9	122.8	162.2	239.8	380.0	595.2	1369.5	1439.8	1510.2	1580.6
62.5°	77.8	80.6	97.4	122.2	185.5	330.6	544.2	1311.4	1410.1	1508.8	1607.5
65°	68.8	71.4	87.0	99.2	141.9	279.6	512.1	1253.8	1387.0	1520.2	1653.4
67.5°	62.8	65.5	79.2	87.6	117.2	247.0	496.9	1210.4	1364.2	1518.0	1671.8
69°	60.0	62.4	75.0	82.8	110.5	235.8	480.6	1136.8	1289.3	1441.8	1594.3
70°	58.5	60.6	72.0	79.8	107.8	226.6	456.5	1049.2	1196.4	1343.6	1490.7
72.5°	54.2	55.6	65.2	72.5	98.6	180.9	344.3	740.4	865.1	989.8	1114.6
75°	48.0	49.8	58.2	64.9	75.2	108.7	215.6	429.8	515.2	600.7	686.2
77.5°	41.2	43.2	50.2	60.8	60.6	70.8	130.8	246.8	288.3	329.8	371.4
80°	35.4	37.1	43.4	60.0	50.7	56.0	97.6	184.1	200.8	217.5	234.3
82.5°	27.7	29.2	36.4	49.6	40.6	42.6	74.3	167.6	179.0	190.3	201.6
85°	17.5	18.0	26.5	34.3	28.8	25.8	47.8	129.0	137.3	145.6	153.8
87.5°	7.0	8.5	12.8	12.2	12.4	10.3	15.5	46.6	50.8	55.0	59.2
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5
2.5°	804.5	804.6	804.3	803.9	804.3	803.9	804.0	804.4	804.3	804.3	804.1
5°	813.8	814.0	813.9	813.1	813.5	813.6	813.8	813.5	813.7	813.9	813.4
7.5°	829.0	829.1	829.6	830.0	829.6	829.8	830.1	829.8	829.4	830.4	829.7
10°	850.5	850.8	850.9	852.2	851.6	852.0	853.2	853.2	852.5	853.5	853.2
12.5°	875.8	876.5	876.4	876.2	876.8	877.2	878.6	878.8	879.2	880.6	880.1
15°	898.8	899.5	900.0	900.3	901.3	901.6	902.4	903.0	903.4	904.0	904.2
17.5°	915.4	915.6	916.4	916.0	917.5	917.2	918.2	918.6	919.0	919.7	920.2
20°	923.2	922.8	922.8	922.4	922.4	922.8	922.8	923.4	923.2	923.9	924.4
22.5°	924.5	923.2	922.4	921.4	921.0	920.2	920.1	920.4	919.4	920.2	921.0
25°	923.9	921.8	920.2	918.6	917.0	915.6	914.8	914.6	913.8	913.8	914.6
27.5°	926.6	924.0	921.8	919.0	917.0	915.0	913.3	911.9	910.5	910.2	910.2
30°	934.9	932.0	929.4	926.0	922.9	920.4	917.9	915.9	913.3	912.2	910.9
32.5°	951.1	948.6	945.2	942.1	938.5	935.4	932.0	929.0	926.0	923.2	922.0
35°	977.2	976.2	974.2	972.1	968.6	964.7	962.0	958.3	954.8	950.8	949.6
37.5°	1018.4	1020.8	1019.8	1018.2	1017.2	1016.0	1012.2	1009.8	1007.5	1004.1	1003.4
40°	1069.6	1076.2	1082.7	1087.0	1085.5	1090.7	1091.6	1091.9	1089.8	1092.6	1093.2
42.5°	1135.5	1148.1	1159.9	1168.6	1178.6	1186.2	1195.8	1200.0	1208.0	1216.2	1220.9
45°	1204.8	1222.9	1239.9	1257.6	1275.1	1294.2	1312.6	1325.8	1344.8	1359.1	1368.0
47.5°	1280.4	1304.4	1324.8	1351.2	1376.4	1399.1	1431.5	1457.6	1480.8	1503.0	1526.2
50°	1360.4	1389.7	1414.8	1447.1	1477.8	1513.1	1551.2	1584.4	1620.9	1656.2	1687.4
52.5°	1444.4	1479.3	1513.2	1546.4	1583.5	1622.0	1663.2	1711.2	1755.0	1808.0	1846.0
55°	1530.6	1572.8	1608.9	1643.6	1683.0	1725.7	1774.8	1831.4	1887.0	1945.2	2002.8
57.5°	1601.5	1654.2	1693.6	1734.2	1776.7	1818.9	1879.8	1937.9	2008.4	2079.8	2151.9
60°	1650.9	1721.2	1769.0	1820.3	1869.5	1920.8	1986.4	2059.8	2148.0	2234.4	2332.6
62.5°	1706.2	1804.8	1871.8	1940.2	2000.0	2061.6	2149.4	2234.0	2347.3	2446.8	2570.2
65°	1786.6	1919.8	2018.4	2110.7	2191.0	2274.9	2378.9	2484.7	2614.3	2751.8	2906.6
67.5°	1825.6	1979.4	2108.6	2222.4	2325.0	2431.9	2539.3	2664.4	2810.5	2976.0	3146.0
69°	1746.8	1899.3	2047.8	2163.0	2270.9	2385.0	2500.0	2626.3	2770.1	2941.9	3122.1
70°	1637.9	1785.0	1943.0	2058.3	2167.2	2285.8	2402.8	2530.2	2667.8	2844.8	3027.0
72.5°	1239.3	1364.1	1517.4	1639.3	1753.8	1873.6	1994.0	2104.7	2244.2	2414.5	2582.4
75°	771.7	857.2	994.9	1117.4	1209.6	1312.1	1425.2	1530.0	1670.1	1790.8	1952.2
77.5°	412.9	454.4	534.8	622.6	673.9	723.9	797.7	854.5	913.4	983.2	1050.0
80°	251.0	267.7	295.1	314.1	307.0	286.5	280.0	259.4	266.8	254.3	245.2
82.5°	213.0	224.4	241.0	252.5	244.2	211.4	174.3	146.7	127.2	108.6	92.2
85°	162.0	170.3	179.0	184.0	183.7	167.4	133.0	103.0	80.3	62.2	51.7
87.5°	63.5	67.7	74.0	73.0	76.2	76.8	60.1	46.4	33.0	22.3	19.6
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°	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5
2.5°	803.5	803.3	803.4	803.8	803.9	804.2	803.9	804.0	803.6	803.2	803.5
5°	813.4	813.1	813.3	813.6	813.6	813.4	814.1	814.1	813.8	813.4	813.5
7.5°	830.4	830.5	830.1	831.5	830.2	830.4	831.2	831.1	830.8	830.9	831.1
10°	854.0	854.0	854.2	855.0	853.8	854.6	855.6	855.8	855.2	855.2	855.3
12.5°	880.2	881.4	881.6	882.0	882.0	882.8	882.9	883.0	883.6	883.8	882.9
15°	905.4	906.2	906.7	907.3	906.6	907.6	908.7	908.7	908.6	909.1	908.3
17.5°	920.8	921.5	922.4	922.4	922.5	923.4	924.0	924.3	924.6	924.6	924.7
20°	925.6	926.1	926.6	927.2	927.5	928.4	928.8	929.3	929.6	929.3	929.4
22.5°	921.8	922.4	923.5	923.8	924.0	925.2	925.8	926.2	926.6	926.8	926.4
25°	915.1	915.6	916.8	917.2	917.5	918.6	919.3	920.2	920.6	920.6	920.8
27.5°	910.5	910.8	911.6	912.2	912.3	913.6	914.6	915.2	915.4	915.6	915.5
30°	910.6	910.6	911.6	911.8	911.6	912.7	913.2	913.7	914.0	914.0	914.1
32.5°	920.2	919.7	920.5	919.2	919.4	919.3	919.1	919.6	919.2	919.4	918.9
35°	947.4	945.8	944.6	945.2	943.2	940.4	942.0	941.2	939.8	939.9	940.3
37.5°	999.5	998.0	999.4	998.2	998.6	994.6	995.6	992.2	991.2	992.4	988.8
40°	1092.0	1091.4	1094.0	1092.9	1093.6	1094.7	1095.6	1092.4	1086.8	1091.8	1091.9
42.5°	1220.2	1226.5	1229.0	1232.5	1236.3	1234.6	1238.0	1238.9	1232.8	1237.4	1238.5
45°	1381.1	1387.8	1395.6	1398.0	1404.1	1404.9	1407.4	1408.1	1402.5	1403.1	1404.3
47.5°	1549.5	1561.8	1571.0	1577.4	1583.8	1585.1	1586.4	1583.8	1584.2	1585.4	1585.5
50°	1715.1	1741.3	1757.6	1770.3	1781.2	1775.6	1780.4	1780.8	1782.5	1779.0	1781.1
52.5°	1889.2	1923.8	1951.2	1972.4	1979.2	1999.4	1991.2	1997.6	2001.8	1995.4	1999.6
55°	2059.2	2108.6	2152.5	2183.4	2205.2	2225.8	2229.0	2245.6	2243.6	2249.9	2247.1
57.5°	2220.8	2289.9	2352.6	2398.4	2429.6	2461.1	2482.5	2500.6	2502.4	2520.4	2510.2
60°	2416.3	2512.6	2593.2	2661.6	2707.6	2754.5	2791.4	2821.1	2827.9	2858.7	2848.5
62.5°	2680.0	2797.5	2900.6	2980.8	3083.5	3133.0	3204.9	3249.7	3277.8	3285.4	3299.7
65°	3050.8	3203.8	3339.9	3468.0	3583.6	3663.7	3746.9	3813.8	3867.4	3863.0	3885.0
67.5°	3326.4	3500.8	3664.6	3818.2	3942.5	4045.7	4141.2	4213.6	4261.5	4292.0	4305.0
69°	3297.6	3485.0	3665.6	3829.7	3957.9	4073.1	4166.2	4237.4	4292.3	4325.5	4335.1
70°	3202.2	3394.6	3582.9	3744.0	3874.7	4001.2	4096.0	4175.2	4227.5	4263.8	4269.3
72.5°	2769.8	2978.2	3144.8	3320.5	3446.3	3574.4	3634.0	3732.2	3800.4	3822.4	3822.0
75°	2089.1	2263.0	2409.4	2539.2	2651.8	2738.6	2766.8	2836.6	2893.2	2892.6	2887.3
77.5°	1125.0	1165.9	1220.6	1239.0	1273.8	1273.2	1238.4	1249.4	1281.4	1219.3	1239.4
80°	241.4	237.8	234.7	232.8	231.9	232.3	233.6	225.6	233.4	229.9	215.2
82.5°	84.1	82.1	80.2	81.6	80.6	81.4	81.1	82.1	82.0	81.6	79.7
85°	47.2	45.6	44.6	45.3	43.8	42.4	41.4	41.0	40.8	39.8	39.3
87.5°	18.0	17.8	17.7	17.0	15.3	14.0	13.2	11.6	10.9	9.9	9.2
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)