

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: P144534

Luminaire Tested: **LDRL-RW-F02-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144534
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-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (14) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4529.5 lumens
Efficiency: N/A
Efficacy: 82.4 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

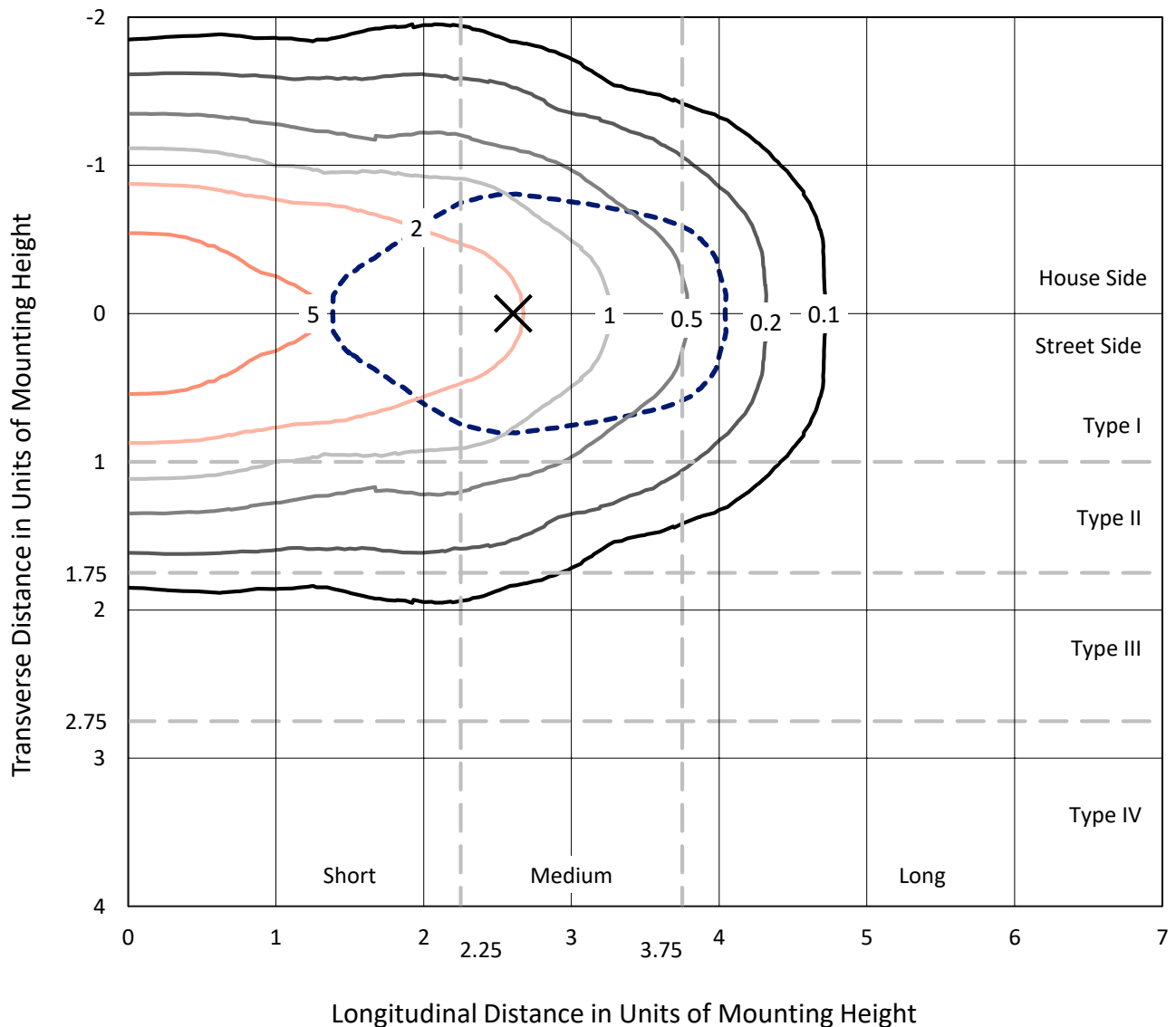
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

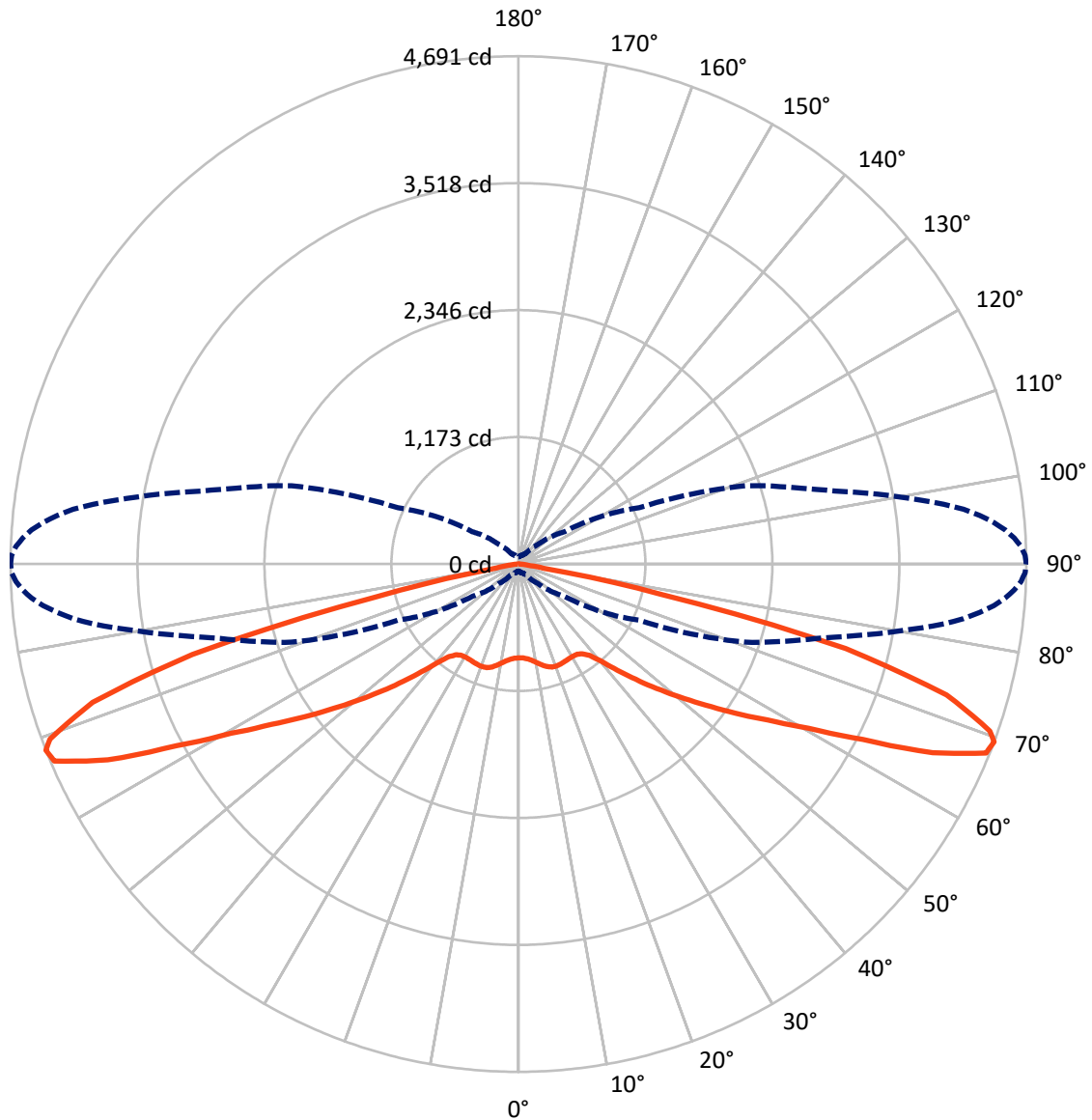
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.9 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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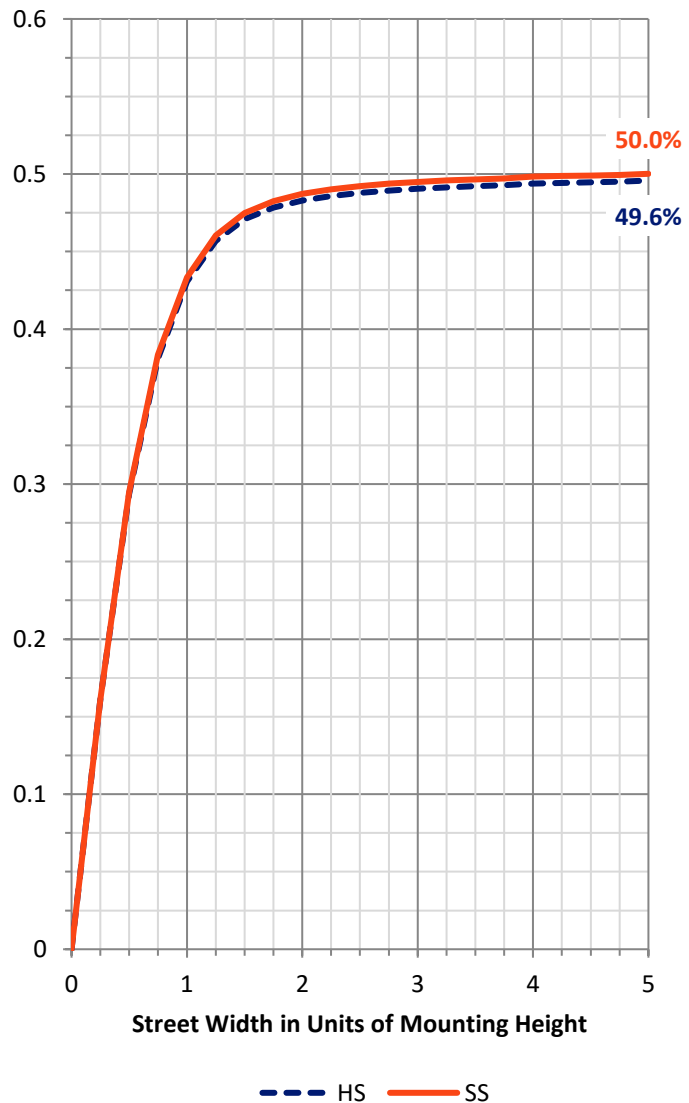
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2264.7	0.0	2264.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2264.7	0.0	2264.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	4529.5	0.0	4529.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.9	1.9
10°-20°	267.3	5.9
20°-30°	432.9	9.6
30°-40°	539.2	11.9
40°-50°	671.3	14.8
50°-60°	823.7	18.2
60°-70°	1015.9	22.4
70°-80°	631.5	13.9
80°-90°	62.7	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°	4529.5	100.0
0°-180°	4529.5	100.0



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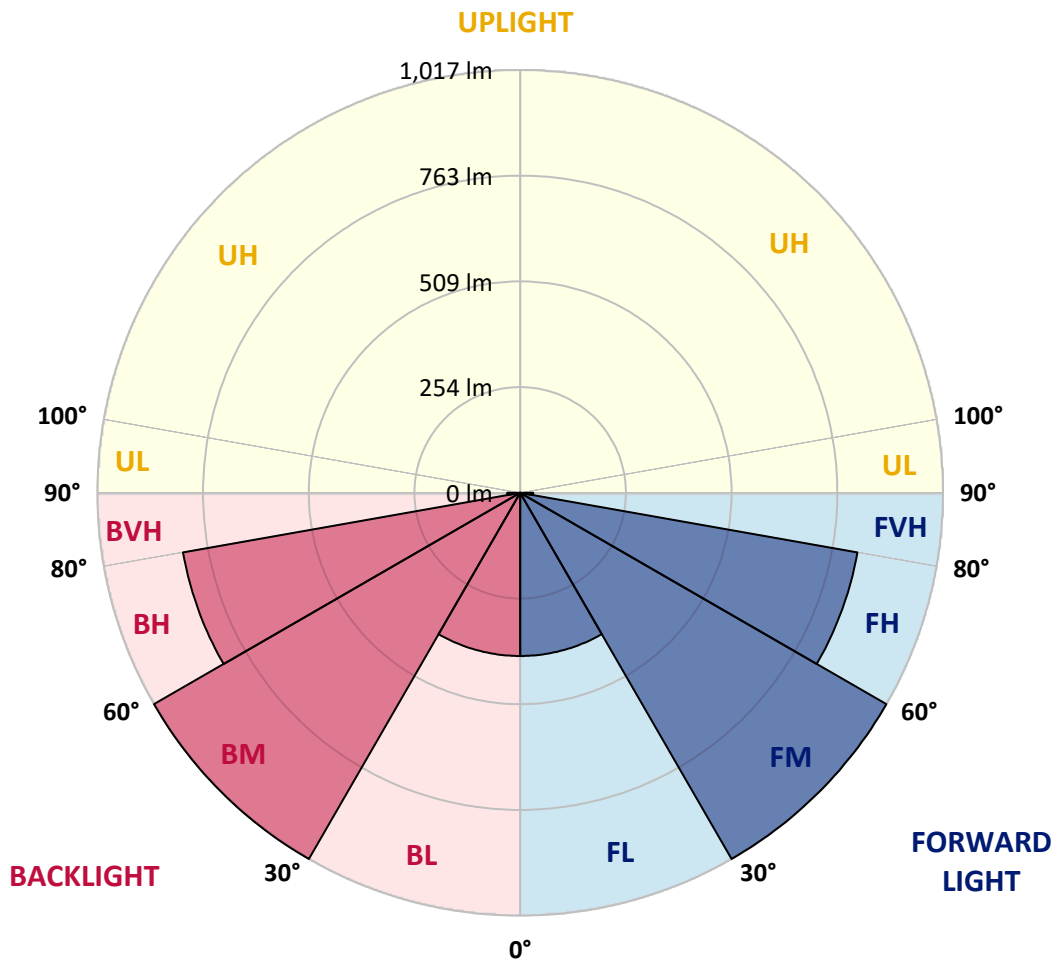
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	392.5	8.7			
FM (30°-60°)	1017.1	22.5			
FH (60°-80°)	823.7	18.2			G1/1800
FVH (80°-90°)	31.4	0.7			G1/100
BL (0°-30°)	392.5	8.7	B1/500		
BM (30°-60°)	1017.1	22.5	B2/2500		
BH (60°-80°)	823.7	18.2	B2/1000		G2/1000
BVH (80°-90°)	31.4	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°	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4
2.5°	869.6	868.8	870.4	872.0	871.5	871.8	871.2	870.4	870.5	870.5	870.6
5°	876.4	875.5	877.0	878.4	878.8	879.9	880.2	879.8	880.0	880.2	880.4
7.5°	884.6	883.8	885.8	887.6	891.0	892.8	894.7	896.5	896.6	896.8	897.0
10°	892.2	891.8	895.0	899.0	904.5	908.7	913.8	918.8	919.2	919.6	920.0
12.5°	897.2	897.2	902.1	909.2	918.8	927.4	936.2	944.6	945.4	946.2	947.0
15°	897.0	897.6	905.0	918.0	934.5	949.7	960.4	969.6	970.4	971.2	971.9
17.5°	890.8	891.0	901.4	922.1	948.0	970.7	984.6	989.6	989.8	990.1	990.4
20°	873.4	874.6	889.6	919.6	958.6	989.8	1003.0	1000.8	1000.4	999.9	999.5
22.5°	843.7	845.2	865.1	905.4	960.6	1002.2	1015.8	1006.2	1004.8	1003.4	1001.9
25°	802.4	805.0	826.6	878.1	947.3	1005.8	1024.1	1008.8	1006.6	1004.3	1002.1
27.5°	754.6	755.8	781.3	835.4	916.4	993.8	1027.8	1014.1	1011.3	1008.4	1005.6
30°	699.2	702.4	729.0	785.5	872.8	965.8	1026.3	1024.4	1021.2	1018.1	1014.9
32.5°	644.2	647.0	673.0	733.9	822.6	926.6	1018.8	1039.9	1037.2	1034.6	1031.9
35°	588.7	592.0	618.8	684.4	772.7	882.4	1006.8	1062.0	1060.9	1059.8	1058.6
37.5°	540.0	542.1	568.5	636.5	728.9	841.8	991.4	1091.8	1094.4	1097.0	1099.6
40°	490.4	492.5	520.1	589.8	688.7	807.0	977.0	1129.2	1136.3	1143.4	1150.5
42.5°	442.8	444.6	471.2	540.8	643.9	777.1	968.4	1174.4	1188.0	1201.6	1215.2
45°	393.9	395.1	420.1	487.8	592.8	742.1	966.2	1225.2	1244.9	1264.5	1284.1
47.5°	345.8	348.6	374.5	438.7	534.4	692.0	962.8	1281.4	1307.5	1333.5	1359.6
50°	299.8	303.0	329.5	390.4	478.0	632.6	946.0	1345.2	1377.0	1408.7	1440.4
52.5°	252.8	256.1	282.6	340.8	425.7	565.6	899.0	1412.2	1449.9	1487.7	1525.4
55°	202.9	204.0	231.3	289.7	373.4	509.6	824.0	1473.6	1519.3	1565.0	1610.7
57.5°	147.5	151.6	178.5	232.8	320.0	460.0	728.7	1504.9	1562.0	1619.0	1676.1
60°	106.4	109.2	132.9	175.5	259.5	411.2	644.1	1482.0	1558.2	1634.3	1710.4
62.5°	84.2	87.2	105.4	132.3	200.7	357.7	588.8	1419.2	1526.0	1632.8	1739.6
65°	74.5	77.2	94.1	107.4	153.5	302.7	554.2	1356.8	1501.0	1645.1	1789.3
67.5°	68.1	70.9	85.6	94.7	126.8	267.2	537.8	1309.8	1476.3	1642.8	1809.2
69°	65.0	67.6	81.1	89.6	119.6	255.2	520.1	1230.2	1395.2	1560.3	1725.3
70°	63.3	65.6	77.9	86.4	116.7	245.2	494.0	1135.6	1294.8	1454.0	1613.3
72.5°	58.6	60.2	70.6	78.4	106.8	195.8	372.6	801.2	936.1	1071.2	1206.2
75°	52.0	53.8	63.0	70.3	81.4	117.6	233.3	465.0	557.6	650.0	742.6
77.5°	44.6	46.7	54.3	65.7	65.6	76.6	141.6	267.0	312.0	356.9	401.9
80°	38.3	40.1	46.9	65.0	54.9	60.6	105.6	199.2	217.3	235.4	253.5
82.5°	30.0	31.6	39.4	53.7	43.8	46.2	80.4	181.4	193.7	205.9	218.2
85°	18.8	19.5	28.7	37.1	31.2	27.9	51.7	139.6	148.5	157.5	166.4
87.5°	7.5	9.2	13.9	13.3	13.4	11.2	16.8	50.4	54.9	59.5	64.1
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°	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4
2.5°	870.6	870.7	870.4	870.0	870.4	870.0	870.1	870.6	870.4	870.4	870.1
5°	880.6	880.8	880.8	879.9	880.4	880.5	880.6	880.4	880.5	880.8	880.2
7.5°	897.1	897.2	897.7	898.2	897.8	898.0	898.3	898.0	897.6	898.6	897.8
10°	920.4	920.8	920.8	922.1	921.5	922.0	923.3	923.3	922.6	923.6	923.4
12.5°	947.8	948.6	948.4	948.2	948.8	949.3	950.8	951.1	951.4	953.0	952.4
15°	972.6	973.4	974.0	974.3	975.4	975.6	976.6	977.2	977.6	978.2	978.6
17.5°	990.6	990.9	991.8	991.4	992.8	992.6	993.6	994.0	994.6	995.3	995.8
20°	999.0	998.6	998.8	998.3	998.3	998.6	998.8	999.4	999.0	999.8	1000.4
22.5°	1000.5	999.0	998.1	997.0	996.6	995.7	995.8	996.0	995.0	995.8	996.6
25°	999.8	997.6	995.9	994.0	992.4	990.9	990.0	989.7	989.0	988.9	989.6
27.5°	1002.8	1000.0	997.5	994.5	992.4	990.2	988.3	986.8	985.4	985.0	985.0
30°	1011.7	1008.6	1005.8	1002.0	998.8	996.0	993.3	991.2	988.3	987.1	985.8
32.5°	1029.3	1026.6	1022.8	1019.6	1015.6	1012.3	1008.6	1005.4	1002.0	999.0	997.8
35°	1057.5	1056.4	1054.2	1052.0	1048.2	1044.0	1041.0	1037.0	1033.2	1028.9	1027.6
37.5°	1102.2	1104.8	1103.6	1101.8	1100.8	1099.5	1095.4	1092.8	1090.2	1086.6	1085.9
40°	1157.6	1164.6	1171.7	1176.4	1174.7	1180.3	1181.2	1181.6	1179.4	1182.4	1183.0
42.5°	1228.9	1242.4	1255.2	1264.6	1275.4	1283.6	1294.2	1298.7	1307.3	1316.2	1321.3
45°	1303.8	1323.4	1341.8	1361.0	1379.8	1400.4	1420.6	1434.7	1455.4	1470.7	1480.4
47.5°	1385.6	1411.6	1433.6	1462.2	1489.6	1514.0	1549.2	1577.4	1602.5	1626.5	1651.7
50°	1472.2	1503.9	1531.1	1566.0	1599.2	1637.6	1678.7	1714.6	1754.1	1792.2	1826.2
52.5°	1563.1	1600.8	1637.5	1673.4	1713.7	1755.3	1800.0	1851.8	1899.2	1956.6	1997.8
55°	1656.4	1702.0	1741.1	1778.6	1821.4	1867.5	1920.6	1982.0	2042.1	2105.0	2167.4
57.5°	1733.1	1790.2	1832.8	1876.7	1922.7	1968.4	2034.2	2097.2	2173.5	2250.6	2328.8
60°	1786.5	1862.6	1914.4	1969.8	2023.1	2078.6	2149.6	2229.1	2324.6	2418.0	2524.2
62.5°	1846.4	1953.2	2025.7	2099.7	2164.4	2231.1	2326.1	2417.6	2540.2	2647.9	2781.5
65°	1933.4	2077.6	2184.3	2284.1	2371.0	2461.8	2574.4	2688.8	2829.1	2978.0	3145.5
67.5°	1975.6	2142.1	2281.9	2405.1	2516.0	2631.7	2748.0	2883.4	3041.4	3220.6	3404.6
69°	1890.3	2055.4	2216.2	2340.7	2457.6	2581.0	2705.5	2842.1	2997.8	3183.6	3378.6
70°	1772.5	1931.8	2102.6	2227.4	2345.4	2473.6	2600.2	2738.2	2887.0	3078.5	3275.8
72.5°	1341.2	1476.2	1642.0	1774.0	1898.0	2027.5	2158.0	2277.6	2428.6	2612.9	2794.6
75°	835.0	927.6	1076.7	1209.2	1308.9	1419.9	1542.4	1655.8	1807.4	1938.0	2112.7
77.5°	446.8	491.8	578.8	673.8	729.3	783.4	863.2	924.7	988.5	1064.0	1136.2
80°	271.6	289.7	319.4	339.9	332.2	310.0	303.0	280.8	288.8	275.2	265.4
82.5°	230.5	242.8	260.8	273.2	264.2	228.8	188.6	158.8	137.7	117.5	99.8
85°	175.3	184.2	193.6	199.2	198.8	181.1	143.8	111.4	86.8	67.2	56.0
87.5°	68.7	73.3	80.1	79.0	82.4	83.1	65.0	50.2	35.8	24.1	21.1
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°	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4	867.4
2.5°	869.5	869.4	869.5	870.0	870.0	870.2	870.0	870.1	869.6	869.2	869.5
5°	880.2	879.9	880.2	880.6	880.6	880.2	881.0	881.0	880.7	880.2	880.4
7.5°	898.6	898.8	898.3	899.8	898.4	898.6	899.6	899.4	899.1	899.2	899.4
10°	924.2	924.1	924.4	925.3	924.0	924.8	925.9	926.2	925.4	925.4	925.6
12.5°	952.6	953.8	954.0	954.6	954.6	955.3	955.5	955.6	956.2	956.4	955.5
15°	979.8	980.6	981.2	981.8	981.1	982.2	983.4	983.4	983.2	983.8	982.9
17.5°	996.5	997.2	998.3	998.2	998.3	999.2	1000.0	1000.2	1000.6	1000.6	1000.7
20°	1001.8	1002.2	1002.8	1003.4	1003.7	1004.6	1005.2	1005.6	1006.0	1005.6	1005.8
22.5°	997.6	998.2	999.4	999.8	1000.0	1001.3	1001.9	1002.4	1002.6	1003.0	1002.5
25°	990.3	990.9	992.1	992.6	992.8	994.0	994.8	995.8	996.2	996.4	996.5
27.5°	985.3	985.6	986.6	987.2	987.3	988.6	989.7	990.4	990.6	990.8	990.7
30°	985.5	985.4	986.5	986.6	986.6	987.8	988.4	988.8	989.1	989.0	989.2
32.5°	995.9	995.2	996.2	994.8	995.0	994.8	994.7	995.2	994.8	995.0	994.4
35°	1025.3	1023.6	1022.2	1022.8	1020.8	1017.8	1019.4	1018.6	1017.0	1017.2	1017.6
37.5°	1081.7	1080.0	1081.6	1080.2	1080.6	1076.4	1077.4	1073.6	1072.6	1074.0	1070.1
40°	1181.8	1181.1	1184.0	1182.8	1183.4	1184.6	1185.8	1182.1	1176.1	1181.5	1181.7
42.5°	1320.5	1327.4	1330.0	1333.8	1337.9	1336.1	1339.7	1340.8	1334.2	1339.1	1340.3
45°	1494.6	1501.8	1510.2	1512.8	1519.4	1520.4	1523.1	1523.8	1517.8	1518.4	1519.7
47.5°	1676.8	1690.2	1700.1	1707.0	1714.0	1715.4	1716.8	1714.0	1714.4	1715.8	1715.8
50°	1856.0	1884.4	1902.0	1915.8	1927.7	1921.5	1926.8	1927.2	1929.0	1925.2	1927.5
52.5°	2044.4	2082.0	2111.5	2134.6	2141.8	2163.8	2154.8	2161.7	2166.4	2159.4	2164.0
55°	2228.4	2281.9	2329.4	2362.9	2386.4	2408.7	2412.2	2430.1	2428.0	2434.8	2431.8
57.5°	2403.3	2478.1	2546.0	2595.6	2629.4	2663.4	2686.5	2706.1	2708.0	2727.5	2716.5
60°	2614.9	2719.0	2806.4	2880.2	2930.1	2980.8	3020.8	3053.0	3060.3	3093.6	3082.6
62.5°	2900.3	3027.5	3139.0	3225.8	3336.8	3390.4	3468.2	3516.8	3547.0	3555.4	3570.9
65°	3301.6	3467.2	3614.4	3753.1	3878.1	3964.8	4054.8	4127.2	4185.2	4180.5	4204.3
67.5°	3599.8	3788.5	3965.7	4132.0	4266.6	4378.2	4481.6	4559.8	4611.7	4644.8	4658.8
69°	3568.6	3771.4	3966.8	4144.4	4283.2	4407.8	4508.6	4585.6	4645.0	4681.0	4691.3
70°	3465.4	3673.6	3877.4	4051.6	4193.1	4330.0	4432.5	4518.4	4574.9	4614.2	4620.2
72.5°	2997.5	3223.0	3403.2	3593.4	3729.6	3868.1	3932.6	4039.0	4112.8	4136.5	4136.1
75°	2260.8	2449.0	2607.3	2747.9	2869.7	2963.6	2994.1	3069.8	3131.0	3130.3	3124.5
77.5°	1217.4	1261.7	1321.0	1340.9	1378.4	1377.8	1340.2	1352.0	1386.8	1319.5	1341.2
80°	261.2	257.2	254.0	252.0	251.0	251.4	252.7	244.2	252.6	248.8	232.8
82.5°	90.9	88.8	86.7	88.2	87.2	88.1	87.8	88.8	88.7	88.4	86.3
85°	51.2	49.3	48.2	49.0	47.3	45.8	44.8	44.3	44.2	43.1	42.5
87.5°	19.4	19.3	19.2	18.4	16.6	15.2	14.4	12.6	11.8	10.8	10.0
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)