

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: P144520

Luminaire Tested: **LDRL-RW-E01-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144520
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-E01-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (21) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3003.7 lumens
Efficiency: N/A
Efficacy: 121.6 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

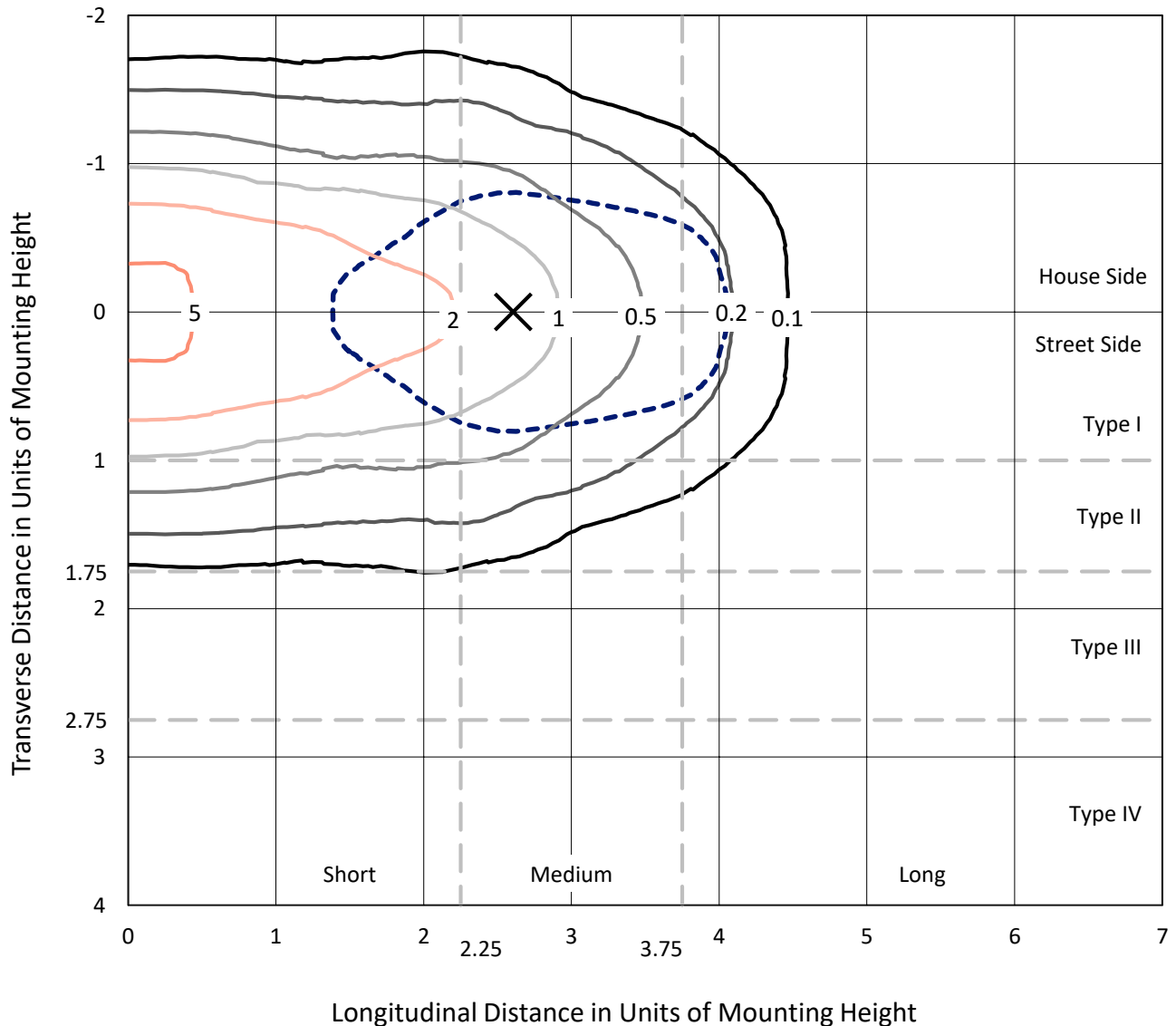
Input Watts (W): 24.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

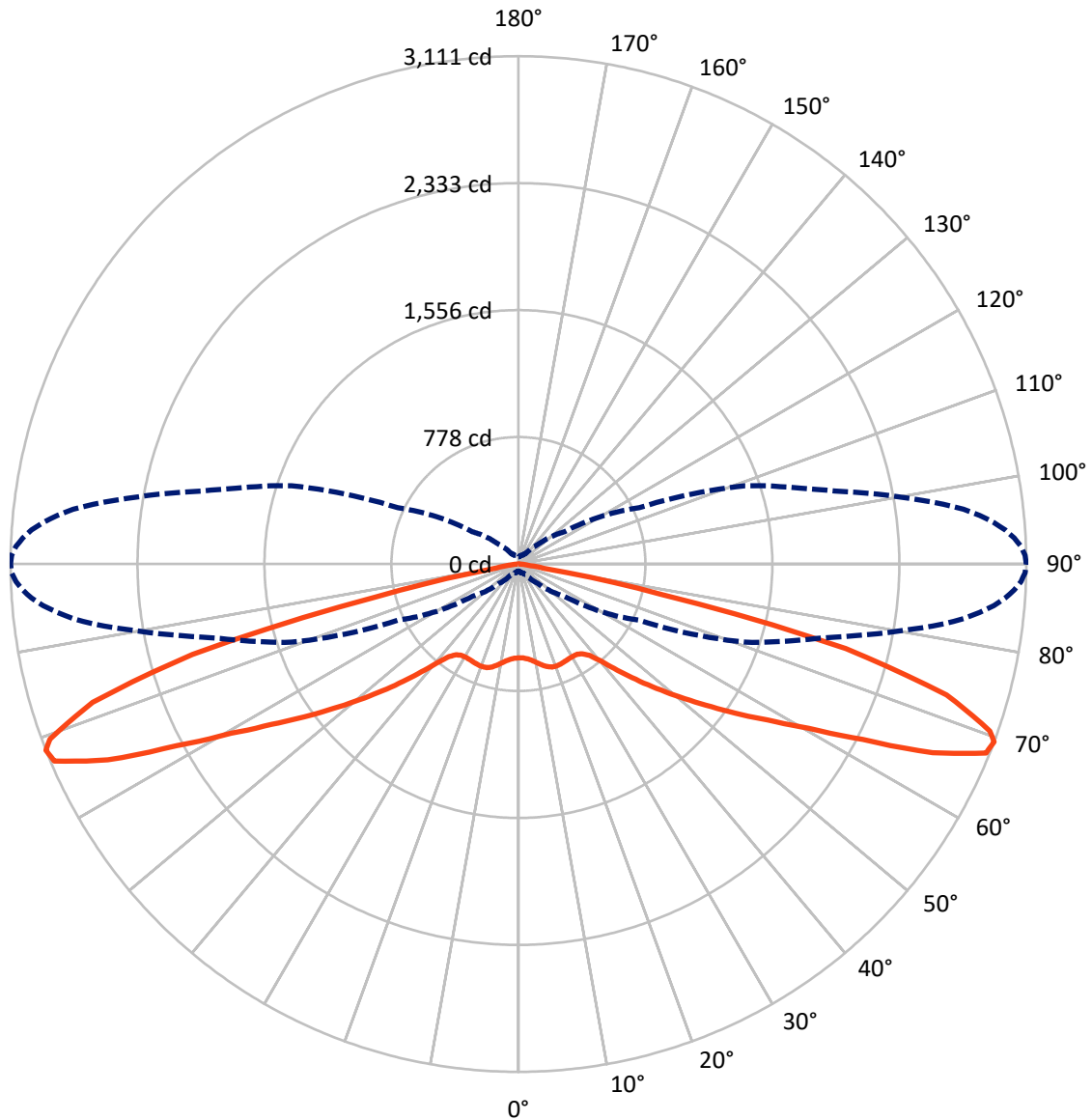
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 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	1501.8	0.0	1501.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	1501.8	0.0	1501.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	3003.7	0.0	3003.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.3	1.9
10°-20°	177.2	5.9
20°-30°	287.0	9.6
30°-40°	357.6	11.9
40°-50°	445.2	14.8
50°-60°	546.2	18.2
60°-70°	673.7	22.4
70°-80°	418.8	13.9
80°-90°	41.6	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°	3003.7	100.0
0°-180°	3003.7	100.0



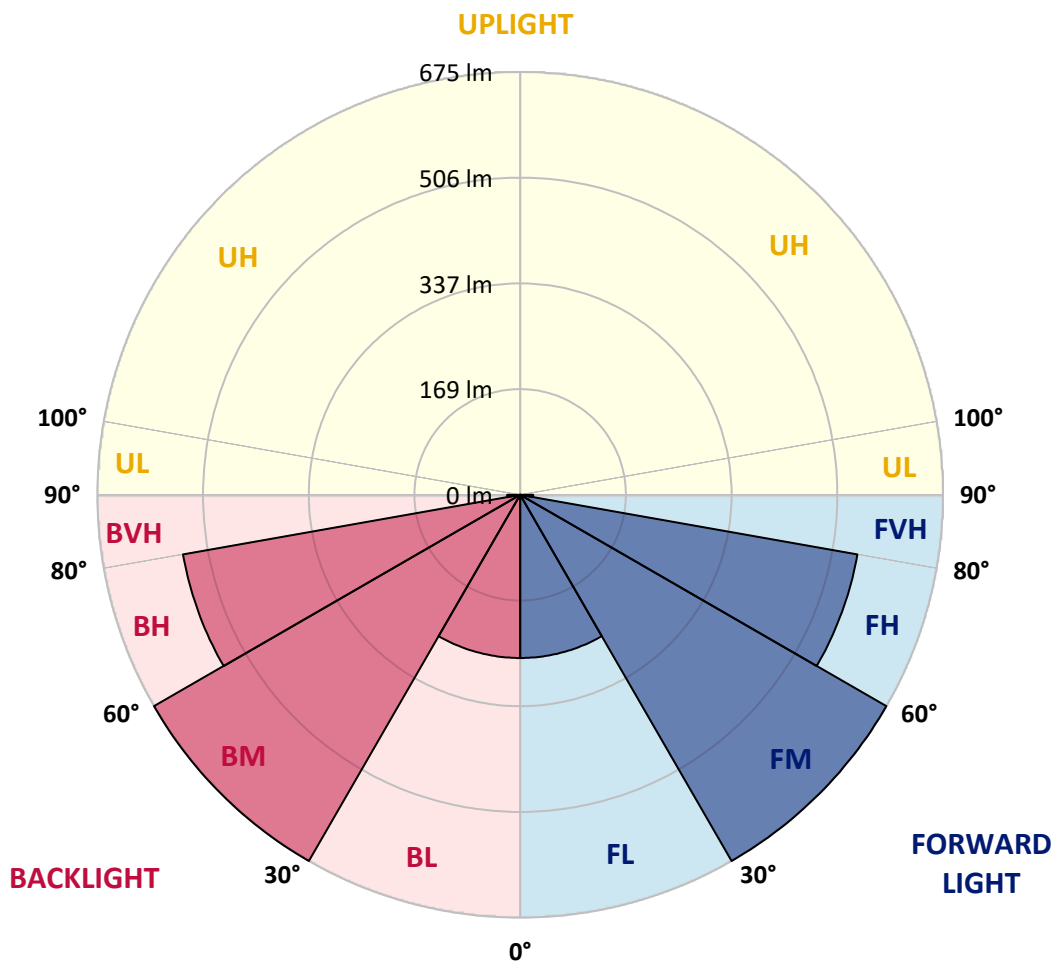
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	260.3	8.7			
FM (30°-60°)	674.5	22.5			
FH (60°-80°)	546.2	18.2			G0/660
FVH (80°-90°)	20.8	0.7			G1/100
BL (0°-30°)	260.3	8.7	B1/500		
BM (30°-60°)	674.5	22.5	B1/1000		
BH (60°-80°)	546.2	18.2	B2/1000		G2/1000
BVH (80°-90°)	20.8	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°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2
2.5°	576.7	576.1	577.2	578.2	577.9	578.1	577.7	577.2	577.2	577.3	577.3
5°	581.2	580.6	581.6	582.5	582.8	583.5	583.7	583.4	583.5	583.7	583.8
7.5°	586.6	586.1	587.4	588.6	590.9	592.1	593.3	594.5	594.6	594.7	594.8
10°	591.7	591.4	593.5	596.1	599.8	602.6	606.0	609.3	609.6	609.8	610.1
12.5°	595.0	595.0	598.2	602.9	609.3	615.0	620.8	626.4	626.9	627.4	628.0
15°	594.8	595.2	600.1	608.7	619.7	629.8	636.9	643.0	643.5	644.0	644.5
17.5°	590.7	590.8	597.8	611.5	628.7	643.7	652.9	656.2	656.4	656.6	656.7
20°	579.2	580.0	589.9	609.8	635.7	656.4	665.1	663.7	663.4	663.1	662.8
22.5°	559.5	560.5	573.7	600.4	637.0	664.6	673.6	667.3	666.3	665.4	664.4
25°	532.1	533.8	548.1	582.3	628.2	667.0	679.1	669.0	667.5	666.0	664.5
27.5°	500.4	501.2	518.1	554.0	607.7	659.0	681.6	672.5	670.6	668.7	666.9
30°	463.7	465.8	483.4	520.9	578.8	640.4	680.6	679.3	677.2	675.1	673.0
32.5°	427.2	429.0	446.3	486.7	545.5	614.5	675.6	689.6	687.8	686.1	684.3
35°	390.4	392.6	410.4	453.8	512.4	585.1	667.7	704.3	703.5	702.8	702.0
37.5°	358.1	359.5	377.0	422.1	483.4	558.2	657.4	724.0	725.7	727.4	729.2
40°	325.2	326.6	344.9	391.1	456.7	535.2	647.9	748.8	753.5	758.2	762.9
42.5°	293.6	294.8	312.5	358.6	427.0	515.3	642.2	778.8	787.8	796.8	805.9
45°	261.2	262.0	278.6	323.5	393.1	492.1	640.7	812.5	825.5	838.5	851.6
47.5°	229.3	231.2	248.3	290.9	354.4	458.9	638.5	849.8	867.1	884.3	901.6
50°	198.8	200.9	218.5	258.9	317.0	419.5	627.3	892.1	913.1	934.2	955.2
52.5°	167.7	169.8	187.4	226.0	282.3	375.1	596.1	936.5	961.5	986.5	1011.6
55°	134.5	135.3	153.4	192.1	247.6	337.9	546.4	977.2	1007.5	1037.8	1068.1
57.5°	97.8	100.5	118.4	154.4	212.2	305.0	483.2	998.0	1035.8	1073.6	1111.5
60°	70.6	72.4	88.1	116.4	172.1	272.7	427.1	982.8	1033.3	1083.8	1134.2
62.5°	55.8	57.8	69.9	87.7	133.1	237.2	390.5	941.1	1011.9	1082.7	1153.6
65°	49.4	51.2	62.4	71.2	101.8	200.7	367.5	899.8	995.4	1091.0	1186.5
67.5°	45.1	47.0	56.8	62.8	84.1	177.2	356.6	868.6	979.0	1089.4	1199.7
69°	43.1	44.8	53.8	59.4	79.3	169.2	344.9	815.8	925.2	1034.7	1144.1
70°	42.0	43.5	51.7	57.3	77.4	162.6	327.6	753.0	858.6	964.2	1069.8
72.5°	38.9	39.9	46.8	52.0	70.8	129.8	247.1	531.3	620.8	710.3	799.9
75°	34.5	35.7	41.8	46.6	54.0	78.0	154.7	308.4	369.7	431.1	492.4
77.5°	29.6	31.0	36.0	43.6	43.5	50.8	93.9	177.1	206.9	236.7	266.5
80°	25.4	26.6	31.1	43.1	36.4	40.2	70.0	132.1	144.1	156.1	168.1
82.5°	19.9	20.9	26.1	35.6	29.1	30.6	53.3	120.3	128.4	136.6	144.7
85°	12.5	12.9	19.0	24.6	20.7	18.5	34.3	92.6	98.5	104.4	110.4
87.5°	5.0	6.1	9.2	8.8	8.9	7.4	11.1	33.4	36.4	39.5	42.5
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°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2
2.5°	577.4	577.4	577.2	576.9	577.2	576.9	577.0	577.3	577.2	577.2	577.0
5°	584.0	584.1	584.1	583.5	583.8	583.9	584.0	583.8	583.9	584.1	583.7
7.5°	594.9	595.0	595.3	595.6	595.4	595.5	595.7	595.5	595.2	595.9	595.4
10°	610.3	610.6	610.6	611.5	611.1	611.4	612.3	612.3	611.8	612.5	612.3
12.5°	628.5	629.0	628.9	628.8	629.2	629.5	630.5	630.7	630.9	632.0	631.6
15°	645.0	645.5	645.9	646.1	646.8	647.0	647.6	648.0	648.3	648.7	648.9
17.5°	656.9	657.1	657.7	657.4	658.4	658.2	658.9	659.2	659.5	660.0	660.3
20°	662.5	662.2	662.3	662.0	662.0	662.2	662.3	662.7	662.5	663.0	663.4
22.5°	663.5	662.5	661.9	661.2	660.9	660.3	660.3	660.5	659.8	660.3	660.9
25°	663.0	661.5	660.4	659.2	658.1	657.1	656.5	656.3	655.8	655.8	656.3
27.5°	665.0	663.1	661.5	659.5	658.1	656.7	655.4	654.4	653.4	653.2	653.2
30°	670.9	668.8	667.0	664.5	662.3	660.5	658.7	657.3	655.4	654.6	653.7
32.5°	682.6	680.8	678.3	676.1	673.5	671.3	668.9	666.7	664.5	662.5	661.7
35°	701.3	700.5	699.1	697.6	695.1	692.3	690.3	687.7	685.2	682.3	681.5
37.5°	730.9	732.6	731.8	730.7	730.0	729.1	726.4	724.7	723.0	720.6	720.1
40°	767.6	772.3	777.0	780.1	779.0	782.7	783.3	783.6	782.1	784.1	784.5
42.5°	814.9	823.9	832.4	838.6	845.8	851.2	858.2	861.2	866.9	872.8	876.2
45°	864.6	877.6	889.8	902.5	915.0	928.7	942.0	951.4	965.1	975.3	981.7
47.5°	918.8	936.1	950.7	969.7	987.8	1004.0	1027.3	1046.0	1062.7	1078.6	1095.3
50°	976.3	997.3	1015.3	1038.5	1060.5	1085.9	1113.2	1137.0	1163.2	1188.5	1211.0
52.5°	1036.6	1061.6	1085.9	1109.7	1136.4	1164.0	1193.6	1228.0	1259.4	1297.5	1324.8
55°	1098.4	1128.7	1154.6	1179.5	1207.8	1238.4	1273.6	1314.3	1354.2	1395.9	1437.3
57.5°	1149.3	1187.1	1215.4	1244.5	1275.0	1305.3	1349.0	1390.7	1441.3	1492.5	1544.3
60°	1184.7	1235.2	1269.5	1306.3	1341.6	1378.4	1425.5	1478.2	1541.5	1603.5	1673.9
62.5°	1224.4	1295.2	1343.3	1392.4	1435.3	1479.5	1542.5	1603.2	1684.5	1755.9	1844.5
65°	1282.1	1377.7	1448.5	1514.7	1572.3	1632.5	1707.2	1783.1	1876.1	1974.8	2085.9
67.5°	1310.1	1420.5	1513.2	1594.9	1668.5	1745.2	1822.3	1912.1	2016.9	2135.7	2257.7
69°	1253.6	1363.0	1469.6	1552.2	1629.7	1711.6	1794.1	1884.7	1987.9	2111.2	2240.5
70°	1175.4	1281.0	1394.3	1477.1	1555.3	1640.3	1724.3	1815.8	1914.5	2041.5	2172.3
72.5°	889.4	978.9	1088.9	1176.4	1258.6	1344.5	1431.0	1510.4	1610.5	1732.7	1853.2
75°	553.8	615.1	714.0	801.9	868.0	941.6	1022.8	1098.0	1198.5	1285.1	1401.0
77.5°	296.3	326.1	383.8	446.8	483.6	519.5	572.4	613.2	655.5	705.6	753.5
80°	180.1	192.1	211.8	225.4	220.3	205.6	200.9	186.2	191.5	182.5	176.0
82.5°	152.9	161.0	173.0	181.2	175.2	151.7	125.1	105.3	91.3	77.9	66.2
85°	116.3	122.2	128.4	132.1	131.8	120.1	95.4	73.9	57.6	44.6	37.1
87.5°	45.6	48.6	53.1	52.4	54.7	55.1	43.1	33.3	23.7	16.0	14.0
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):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2
2.5°	576.6	576.5	576.6	576.9	576.9	577.1	576.9	577.0	576.7	576.4	576.6
5°	583.7	583.5	583.7	583.9	583.9	583.7	584.2	584.2	584.0	583.7	583.8
7.5°	595.9	596.0	595.7	596.7	595.8	595.9	596.5	596.4	596.2	596.3	596.4
10°	612.9	612.8	613.0	613.6	612.7	613.3	614.0	614.2	613.7	613.7	613.8
12.5°	631.7	632.5	632.6	633.0	633.0	633.5	633.6	633.7	634.1	634.2	633.6
15°	649.7	650.3	650.7	651.1	650.6	651.3	652.1	652.1	652.0	652.4	651.8
17.5°	660.8	661.3	662.0	661.9	662.0	662.6	663.1	663.3	663.5	663.5	663.6
20°	664.3	664.6	665.0	665.4	665.6	666.2	666.6	666.9	667.1	666.9	667.0
22.5°	661.5	661.9	662.7	663.0	663.1	664.0	664.4	664.7	664.9	665.1	664.8
25°	656.7	657.1	657.9	658.2	658.4	659.2	659.7	660.4	660.6	660.7	660.8
27.5°	653.4	653.6	654.2	654.6	654.7	655.6	656.3	656.8	656.9	657.0	657.0
30°	653.5	653.5	654.2	654.3	654.2	655.0	655.4	655.7	655.9	655.9	656.0
32.5°	660.4	660.0	660.6	659.7	659.8	659.7	659.6	659.9	659.7	659.8	659.4
35°	679.9	678.8	677.9	678.3	676.9	674.9	676.0	675.5	674.4	674.5	674.8
37.5°	717.3	716.2	717.2	716.3	716.6	713.8	714.5	712.0	711.3	712.2	709.6
40°	783.7	783.2	785.1	784.3	784.8	785.6	786.3	783.9	779.9	783.5	783.6
42.5°	875.7	880.2	882.0	884.5	887.2	886.0	888.4	889.1	884.7	888.0	888.8
45°	991.1	995.9	1001.5	1003.2	1007.6	1008.2	1010.0	1010.5	1006.5	1006.9	1007.8
47.5°	1112.0	1120.8	1127.4	1132.0	1136.6	1137.5	1138.5	1136.6	1136.9	1137.8	1137.8
50°	1230.8	1249.6	1261.3	1270.4	1278.3	1274.2	1277.7	1278.0	1279.2	1276.7	1278.2
52.5°	1355.7	1380.6	1400.2	1415.5	1420.3	1434.9	1428.9	1433.5	1436.6	1432.0	1435.0
55°	1477.7	1513.2	1544.7	1566.9	1582.5	1597.3	1599.6	1611.5	1610.1	1614.6	1612.6
57.5°	1593.7	1643.3	1688.3	1721.2	1743.6	1766.2	1781.5	1794.5	1795.8	1808.7	1801.4
60°	1734.0	1803.1	1861.0	1910.0	1943.1	1976.7	2003.2	2024.5	2029.4	2051.5	2044.2
62.5°	1923.3	2007.6	2081.6	2139.1	2212.8	2248.3	2299.9	2332.1	2352.2	2357.7	2368.0
65°	2189.4	2299.2	2396.8	2488.8	2571.7	2629.2	2688.9	2736.9	2775.4	2772.2	2788.0
67.5°	2387.1	2512.3	2629.8	2740.1	2829.3	2903.3	2971.9	3023.8	3058.2	3080.1	3089.4
69°	2366.5	2500.9	2630.5	2748.3	2840.3	2923.0	2989.8	3040.9	3080.3	3104.1	3111.0
70°	2298.0	2436.1	2571.2	2686.8	2780.6	2871.4	2939.4	2996.3	3033.8	3059.8	3063.8
72.5°	1987.7	2137.3	2256.8	2382.9	2473.2	2565.1	2607.9	2678.4	2727.3	2743.1	2742.8
75°	1499.2	1624.0	1729.0	1822.2	1903.0	1965.3	1985.5	2035.7	2076.3	2075.8	2072.0
77.5°	807.3	836.7	876.0	889.2	914.1	913.7	888.7	896.6	919.6	875.0	889.4
80°	173.2	170.6	168.4	167.1	166.4	166.7	167.6	161.9	167.5	165.0	154.4
82.5°	60.3	58.9	57.5	58.5	57.8	58.4	58.2	58.9	58.8	58.6	57.2
85°	33.9	32.7	32.0	32.5	31.4	30.4	29.7	29.4	29.3	28.6	28.2
87.5°	12.9	12.8	12.7	12.2	11.0	10.1	9.5	8.3	7.8	7.1	6.6
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)