

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: P144543

Luminaire Tested: **LDRL-RW-F03-E-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144543
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-F03-E-8030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (21) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6278.3 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

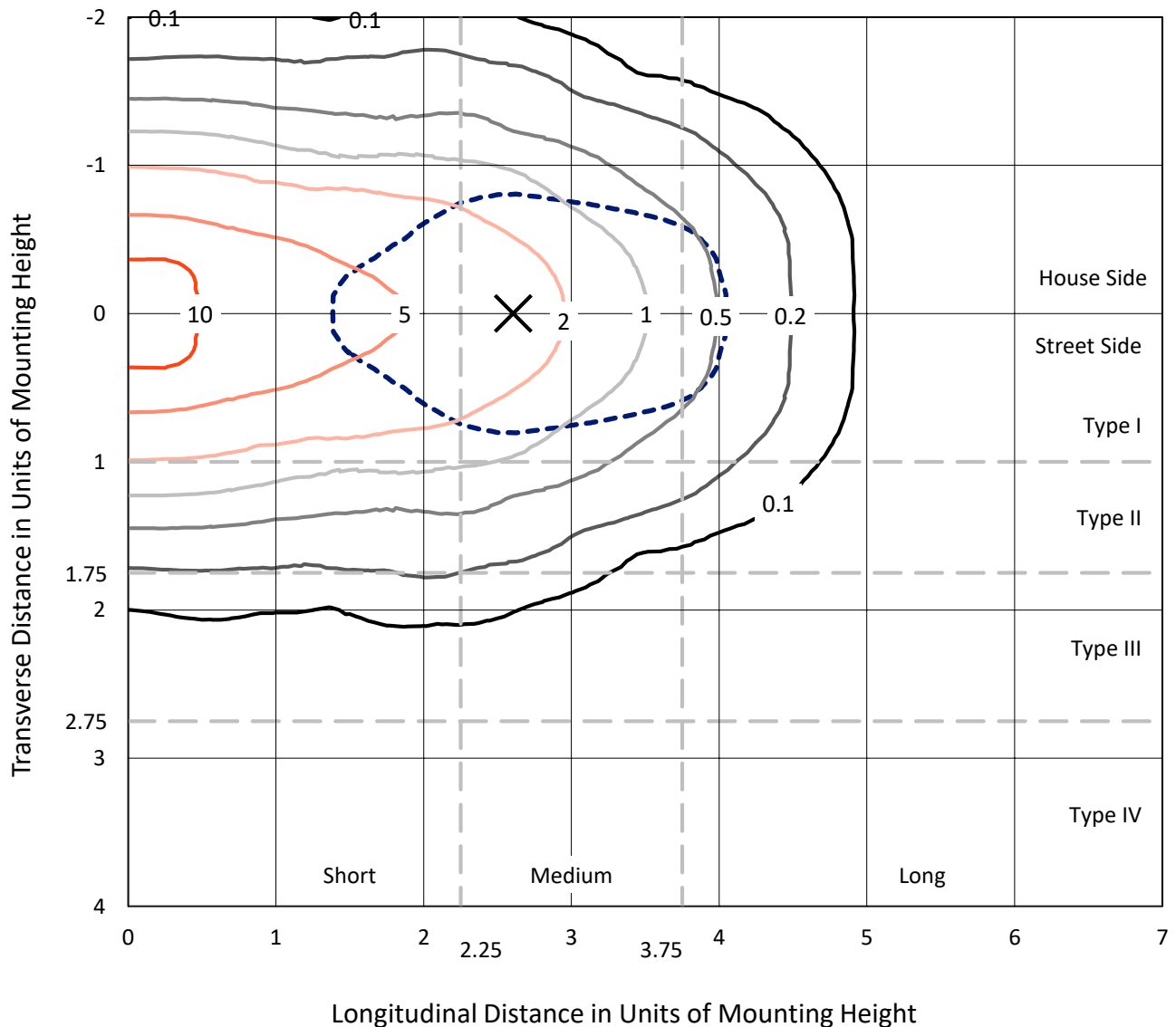
Input Watts (W): 78.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

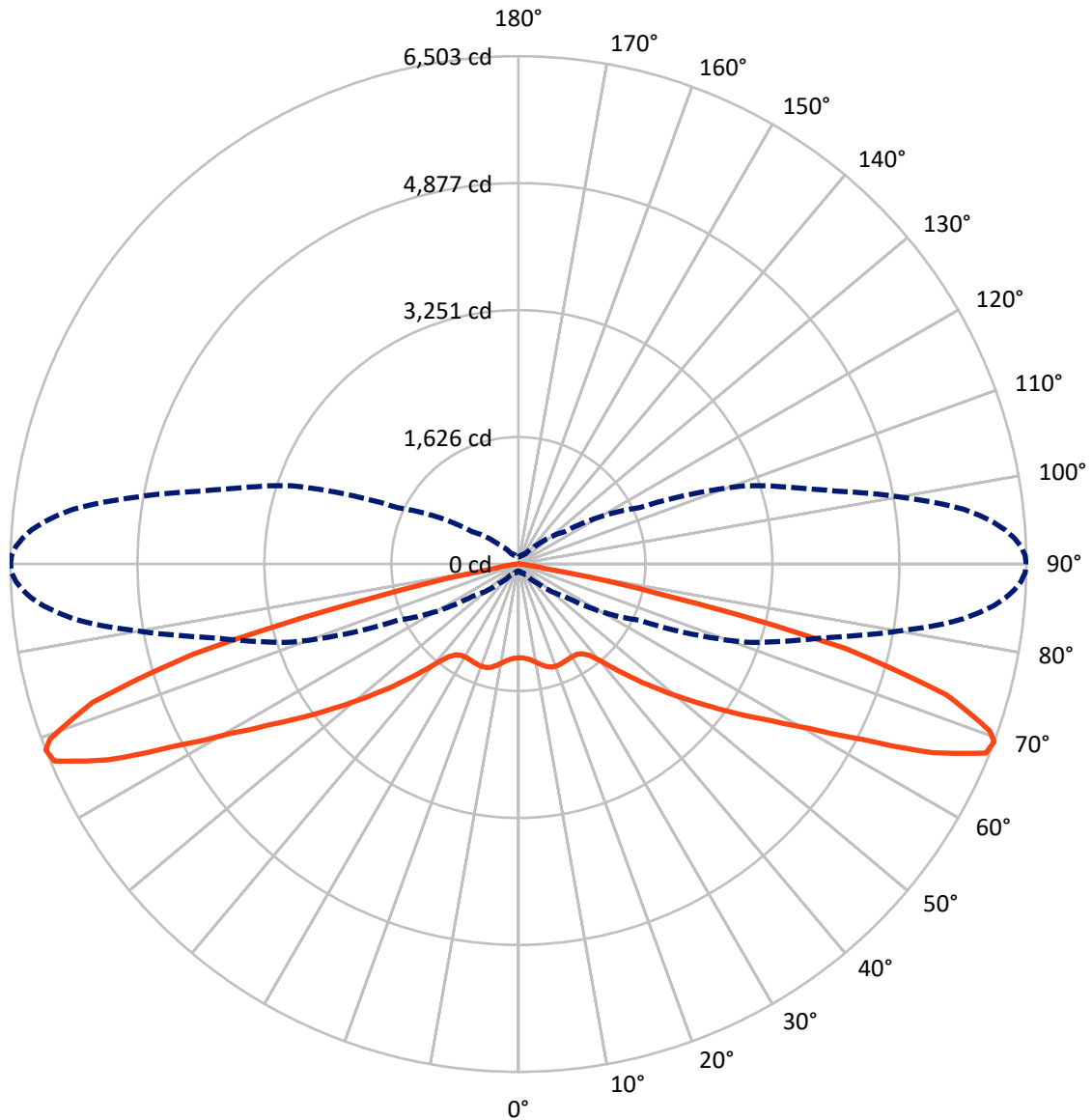
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.3 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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CATALOG NUMBER: LDRL-RW-F03-E-8030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3139.1	0.0	3139.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3139.1	0.0	3139.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	6278.3	0.0	6278.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.6	1.9
10°-20°	370.5	5.9
20°-30°	600.0	9.6
30°-40°	747.5	11.9
40°-50°	930.5	14.8
50°-60°	1141.8	18.2
60°-70°	1408.1	22.4
70°-80°	875.4	13.9
80°-90°	86.9	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°	6278.3	100.0
0°-180°	6278.3	100.0



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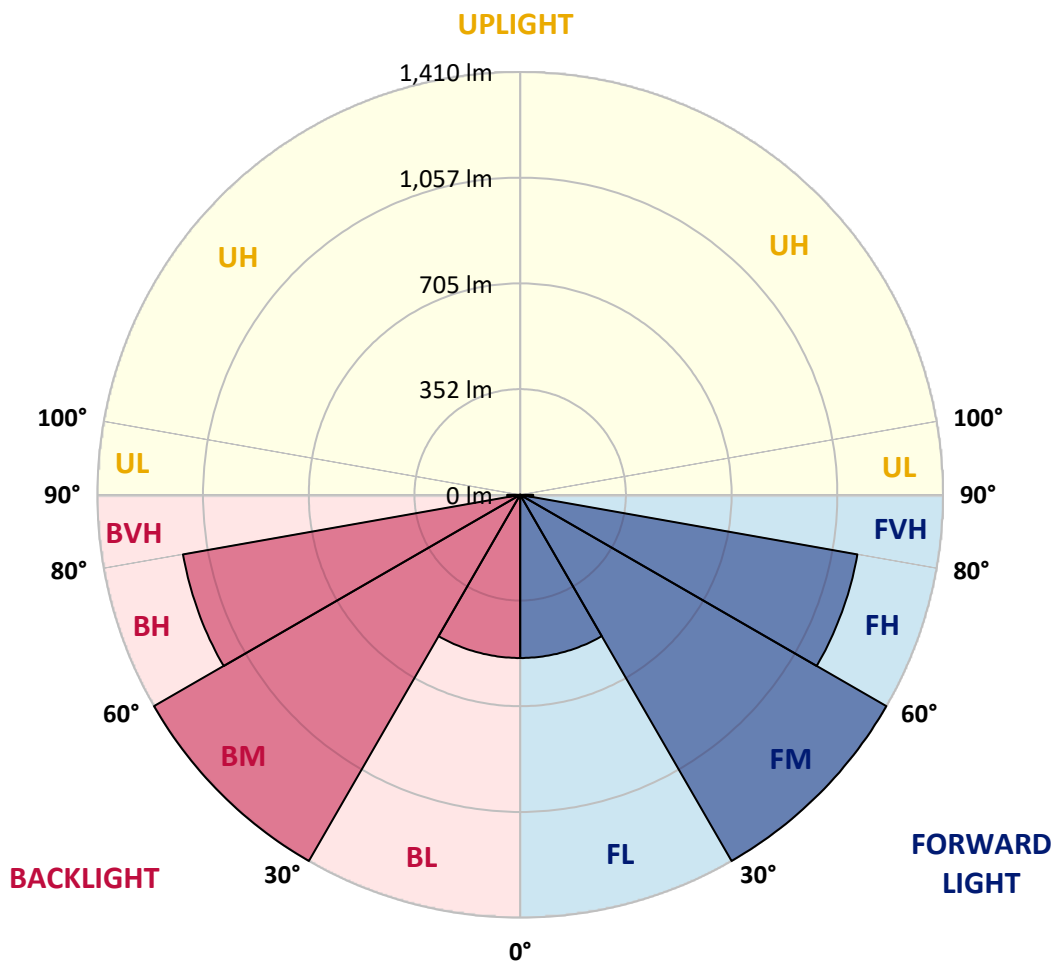
CATALOG NUMBER: LDRL-RW-F03-E-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	544.0	8.7			
FM (30°-60°)	1409.9	22.5			
FH (60°-80°)	1141.8	18.2			G1/1800
FVH (80°-90°)	43.5	0.7			G1/100
BL (0°-30°)	544.0	8.7	B2/1000		
BM (30°-60°)	1409.9	22.5	B2/2500		
BH (60°-80°)	1141.8	18.2	B3/2500		G3/2500
BVH (80°-90°)	43.5	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type I Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3
2.5°	1205.4	1204.2	1206.5	1208.6	1207.9	1208.4	1207.5	1206.4	1206.5	1206.6	1206.7
5°	1214.8	1213.6	1215.6	1217.6	1218.2	1219.6	1220.1	1219.4	1219.7	1220.0	1220.3
7.5°	1226.2	1225.0	1227.8	1230.3	1235.1	1237.6	1240.2	1242.6	1242.9	1243.1	1243.3
10°	1236.8	1236.2	1240.6	1246.0	1253.7	1259.6	1266.7	1273.6	1274.1	1274.6	1275.2
12.5°	1243.6	1243.7	1250.4	1260.2	1273.6	1285.4	1297.6	1309.3	1310.4	1311.5	1312.6
15°	1243.2	1244.1	1254.3	1272.4	1295.3	1316.4	1331.2	1344.0	1345.0	1346.1	1347.2
17.5°	1234.7	1234.8	1249.5	1278.2	1314.2	1345.4	1364.7	1371.6	1371.9	1372.3	1372.7
20°	1210.6	1212.3	1233.0	1274.6	1328.8	1372.0	1390.2	1387.3	1386.7	1386.0	1385.4
22.5°	1169.5	1171.6	1199.2	1255.0	1331.4	1389.1	1408.0	1394.8	1392.8	1390.8	1388.8
25°	1112.2	1115.8	1145.6	1217.2	1313.1	1394.2	1419.4	1398.4	1395.2	1392.1	1388.9
27.5°	1046.0	1047.6	1082.9	1158.0	1270.2	1377.4	1424.6	1405.6	1401.7	1397.8	1393.9
30°	969.2	973.6	1010.4	1088.8	1209.8	1338.6	1422.6	1419.9	1415.5	1411.1	1406.7
32.5°	893.0	896.7	932.8	1017.3	1140.2	1284.4	1412.2	1441.4	1437.7	1434.1	1430.4
35°	816.0	820.6	857.8	948.6	1071.1	1223.0	1395.6	1472.2	1470.6	1469.0	1467.4
37.5°	748.6	751.4	788.0	882.3	1010.4	1166.8	1374.1	1513.4	1516.9	1520.5	1524.1
40°	679.8	682.6	721.0	817.5	954.6	1118.7	1354.2	1565.2	1575.0	1584.8	1594.6
42.5°	613.7	616.2	653.2	749.6	892.5	1077.1	1342.3	1627.8	1646.7	1665.6	1684.4
45°	546.0	547.6	582.4	676.2	821.6	1028.6	1339.2	1698.3	1725.5	1752.7	1780.0
47.5°	479.3	483.2	519.0	608.0	740.8	959.2	1334.6	1776.2	1812.3	1848.4	1884.5
50°	415.6	419.9	456.8	541.2	662.6	876.8	1311.2	1864.6	1908.6	1952.6	1996.6
52.5°	350.5	354.9	391.7	472.4	590.0	784.0	1246.0	1957.5	2009.8	2062.1	2114.4
55°	281.2	282.8	320.6	401.6	517.6	706.3	1142.0	2042.5	2105.9	2169.2	2232.5
57.5°	204.4	210.1	247.4	322.7	443.5	637.5	1010.0	2086.0	2165.1	2244.2	2323.2
60°	147.6	151.4	184.2	243.3	359.7	570.0	892.8	2054.2	2159.8	2265.3	2370.8
62.5°	116.6	120.8	146.1	183.3	278.2	495.8	816.2	1967.1	2115.1	2263.1	2411.2
65°	103.2	107.0	130.4	148.8	212.8	419.5	768.2	1880.8	2080.6	2280.4	2480.1
67.5°	94.2	98.2	118.7	131.2	175.8	370.4	745.3	1815.6	2046.3	2277.0	2507.7
69°	90.1	93.6	112.4	124.2	165.8	353.6	720.9	1705.2	1933.9	2162.7	2391.4
70°	87.8	90.9	108.0	119.8	161.8	339.8	684.8	1573.9	1794.6	2015.4	2236.1
72.5°	81.4	83.4	97.8	108.7	148.0	271.3	516.5	1110.6	1297.7	1484.8	1671.9
75°	72.1	74.6	87.4	97.4	112.8	163.0	323.4	644.6	772.9	901.1	1029.3
77.5°	61.9	64.8	75.2	91.1	90.9	106.2	196.2	370.2	432.4	494.8	557.0
80°	53.1	55.6	65.0	90.1	76.1	84.0	146.3	276.2	301.2	326.3	351.4
82.5°	41.6	43.7	54.6	74.4	60.8	64.0	111.4	251.4	268.5	285.5	302.5
85°	26.1	27.0	39.7	51.4	43.2	38.7	71.6	193.5	205.9	218.3	230.7
87.5°	10.4	12.8	19.2	18.4	18.6	15.5	23.2	69.8	76.2	82.5	88.9
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°	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3
2.5°	1206.8	1206.8	1206.5	1205.8	1206.4	1205.8	1206.1	1206.6	1206.4	1206.5	1206.0
5°	1220.6	1220.9	1220.8	1219.6	1220.3	1220.5	1220.7	1220.2	1220.4	1220.9	1220.1
7.5°	1243.5	1243.7	1244.3	1244.9	1244.5	1244.7	1245.2	1244.7	1244.1	1245.6	1244.5
10°	1275.7	1276.2	1276.3	1278.2	1277.3	1277.9	1279.8	1279.8	1278.8	1280.2	1279.8
12.5°	1313.7	1314.8	1314.5	1314.3	1315.2	1315.8	1317.8	1318.3	1318.7	1321.0	1320.2
15°	1348.2	1349.2	1350.0	1350.4	1352.0	1352.4	1353.6	1354.4	1355.1	1355.9	1356.4
17.5°	1373.1	1373.4	1374.8	1374.1	1376.2	1375.8	1377.2	1377.9	1378.4	1379.5	1380.2
20°	1384.7	1384.1	1384.4	1383.7	1383.7	1384.2	1384.4	1385.2	1384.8	1385.8	1386.6
22.5°	1386.8	1384.8	1383.5	1382.0	1381.4	1380.2	1380.2	1380.6	1379.1	1380.2	1381.4
25°	1385.8	1382.6	1380.4	1377.8	1375.6	1373.4	1372.2	1371.8	1370.8	1370.8	1371.8
27.5°	1390.0	1386.0	1382.6	1378.5	1375.6	1372.6	1369.9	1367.8	1365.7	1365.3	1365.3
30°	1402.3	1398.0	1394.2	1388.9	1384.4	1380.6	1376.8	1373.9	1369.9	1368.2	1366.4
32.5°	1426.7	1423.0	1417.8	1413.2	1407.8	1403.2	1398.2	1393.6	1388.9	1384.8	1383.1
35°	1465.8	1464.2	1461.2	1458.1	1452.9	1447.0	1442.9	1437.4	1432.2	1426.1	1424.4
37.5°	1527.7	1531.3	1529.6	1527.3	1525.9	1523.9	1518.3	1514.8	1511.2	1506.2	1505.2
40°	1604.4	1614.2	1624.0	1630.6	1628.2	1636.0	1637.2	1637.9	1634.8	1639.0	1639.8
42.5°	1703.2	1722.1	1739.9	1752.8	1767.9	1779.2	1793.8	1800.1	1812.0	1824.4	1831.4
45°	1807.2	1834.4	1859.9	1886.4	1912.6	1941.2	1969.0	1988.6	2017.2	2038.6	2052.0
47.5°	1920.6	1956.6	1987.2	2026.8	2064.8	2098.6	2147.3	2186.4	2221.2	2254.5	2289.4
50°	2040.6	2084.6	2122.2	2170.7	2216.6	2269.8	2326.8	2376.6	2431.3	2484.2	2531.2
52.5°	2166.7	2219.0	2269.8	2319.5	2375.4	2433.0	2494.9	2566.8	2632.4	2712.0	2769.1
55°	2295.9	2359.2	2413.4	2465.4	2524.6	2588.5	2662.1	2747.2	2830.6	2917.7	3004.2
57.5°	2402.2	2481.3	2540.4	2601.2	2665.0	2728.4	2819.7	2906.8	3012.6	3119.6	3228.0
60°	2476.3	2581.8	2653.5	2730.4	2804.2	2881.1	2979.6	3089.8	3222.0	3351.6	3498.8
62.5°	2559.2	2707.2	2807.8	2910.4	3000.0	3092.5	3224.2	3351.0	3521.0	3670.2	3855.4
65°	2679.9	2879.7	3027.7	3166.0	3286.4	3412.2	3568.4	3727.0	3921.4	4127.8	4360.0
67.5°	2738.4	2969.1	3162.9	3333.6	3487.5	3647.8	3809.0	3996.7	4215.8	4464.0	4719.1
69°	2620.2	2849.0	3071.8	3244.4	3406.4	3577.6	3750.0	3939.4	4155.2	4412.8	4683.1
70°	2456.8	2677.5	2914.4	3087.4	3250.9	3428.6	3604.2	3795.4	4001.7	4267.2	4540.6
72.5°	1859.0	2046.1	2276.0	2459.0	2630.7	2810.2	2991.0	3157.0	3366.2	3621.7	3873.6
75°	1157.5	1285.7	1492.4	1676.2	1814.3	1968.2	2137.8	2295.0	2505.1	2686.1	2928.4
77.5°	619.3	681.6	802.2	933.9	1010.8	1085.9	1196.4	1281.7	1370.1	1474.8	1575.0
80°	376.5	401.5	442.8	471.2	460.5	429.8	419.9	389.2	400.3	381.5	367.8
82.5°	319.5	336.5	361.6	378.8	366.2	317.1	261.5	220.1	190.9	162.8	138.4
85°	243.0	255.4	268.4	276.1	275.4	251.0	199.4	154.4	120.4	93.2	77.6
87.5°	95.2	101.6	111.0	109.5	114.4	115.2	90.0	69.6	49.6	33.4	29.2
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):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3	1202.3
2.5°	1205.2	1205.0	1205.2	1205.8	1205.8	1206.2	1205.8	1206.0	1205.4	1204.8	1205.2
5°	1220.0	1219.6	1220.1	1220.5	1220.5	1220.1	1221.1	1221.1	1220.7	1220.0	1220.3
7.5°	1245.6	1245.8	1245.2	1247.2	1245.3	1245.6	1246.8	1246.6	1246.2	1246.4	1246.6
10°	1281.1	1280.9	1281.3	1282.6	1280.6	1282.0	1283.4	1283.8	1282.8	1282.8	1283.0
12.5°	1320.4	1322.1	1322.2	1323.1	1323.1	1324.2	1324.4	1324.6	1325.4	1325.6	1324.4
15°	1358.0	1359.3	1360.1	1361.0	1359.9	1361.4	1363.0	1363.1	1362.8	1363.7	1362.4
17.5°	1381.2	1382.2	1383.8	1383.5	1383.7	1385.0	1386.0	1386.4	1386.8	1386.8	1387.1
20°	1388.5	1389.2	1389.9	1390.8	1391.2	1392.5	1393.4	1394.0	1394.4	1393.9	1394.2
22.5°	1382.7	1383.6	1385.2	1385.8	1386.0	1387.9	1388.8	1389.4	1389.8	1390.2	1389.6
25°	1372.6	1373.5	1375.2	1375.8	1376.2	1377.8	1378.9	1380.4	1380.8	1381.0	1381.2
27.5°	1365.8	1366.2	1367.4	1368.2	1368.4	1370.4	1371.8	1372.8	1373.1	1373.2	1373.3
30°	1366.0	1366.0	1367.4	1367.6	1367.4	1369.0	1369.9	1370.6	1371.0	1371.0	1371.2
32.5°	1380.4	1379.6	1380.8	1378.9	1379.1	1378.9	1378.7	1379.4	1378.9	1379.1	1378.3
35°	1421.2	1418.8	1416.9	1417.8	1414.9	1410.7	1413.0	1411.9	1409.6	1409.8	1410.5
37.5°	1499.3	1497.0	1499.0	1497.2	1497.8	1491.9	1493.4	1488.2	1486.8	1488.6	1483.2
40°	1638.1	1637.0	1641.0	1639.4	1640.4	1642.0	1643.5	1638.5	1630.2	1637.7	1637.9
42.5°	1830.4	1839.8	1843.6	1848.8	1854.4	1851.9	1857.0	1858.4	1849.2	1856.1	1857.8
45°	2071.6	2081.6	2093.4	2096.9	2106.1	2107.4	2111.1	2112.1	2103.8	2104.6	2106.5
47.5°	2324.3	2342.7	2356.5	2366.1	2375.7	2377.6	2379.7	2375.8	2376.4	2378.2	2378.2
50°	2572.6	2612.0	2636.4	2655.4	2672.0	2663.4	2670.7	2671.3	2673.8	2668.6	2671.7
52.5°	2833.7	2885.8	2926.8	2958.7	2968.7	2999.2	2986.6	2996.3	3002.8	2993.2	2999.4
55°	3088.7	3162.9	3228.8	3275.1	3307.8	3338.7	3343.5	3368.4	3365.4	3374.8	3370.7
57.5°	3331.2	3434.8	3528.9	3597.6	3644.5	3691.7	3723.8	3750.9	3753.6	3780.6	3765.3
60°	3624.4	3768.8	3889.8	3992.3	4061.5	4131.7	4187.1	4231.6	4241.9	4288.0	4272.8
62.5°	4020.1	4196.3	4351.0	4471.2	4625.2	4699.4	4807.2	4874.6	4916.6	4928.1	4949.6
65°	4576.3	4805.8	5009.8	5202.1	5375.4	5495.5	5620.3	5720.7	5801.2	5794.5	5827.5
67.5°	4989.6	5251.2	5496.8	5727.4	5913.8	6068.5	6211.8	6320.4	6392.2	6438.0	6457.5
69°	4946.4	5227.4	5498.3	5744.5	5936.8	6109.7	6249.3	6356.1	6438.4	6488.2	6502.6
70°	4803.2	5092.0	5374.4	5616.0	5812.0	6001.8	6144.0	6262.9	6341.2	6395.6	6404.0
72.5°	4154.7	4467.4	4717.2	4980.8	5169.5	5361.6	5451.0	5598.4	5700.6	5733.6	5733.0
75°	3133.6	3394.5	3614.0	3808.8	3977.6	4107.8	4150.1	4255.0	4339.9	4338.8	4330.9
77.5°	1687.4	1748.8	1831.0	1858.6	1910.6	1909.8	1857.6	1874.1	1922.2	1828.9	1859.0
80°	362.0	356.6	352.0	349.2	347.8	348.4	350.4	338.4	350.1	344.9	322.7
82.5°	126.0	123.1	120.2	122.2	120.8	122.0	121.6	123.2	122.9	122.4	119.6
85°	70.9	68.4	66.9	68.0	65.6	63.6	62.1	61.5	61.2	59.8	58.9
87.5°	27.0	26.8	26.6	25.5	23.0	21.1	19.8	17.4	16.3	14.8	13.8
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)