

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: P144531

Luminaire Tested: **LDRL-RW-E02-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144531
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-E02-E-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (42) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6164.2 lumens
Efficiency: N/A
Efficacy: 118.3 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

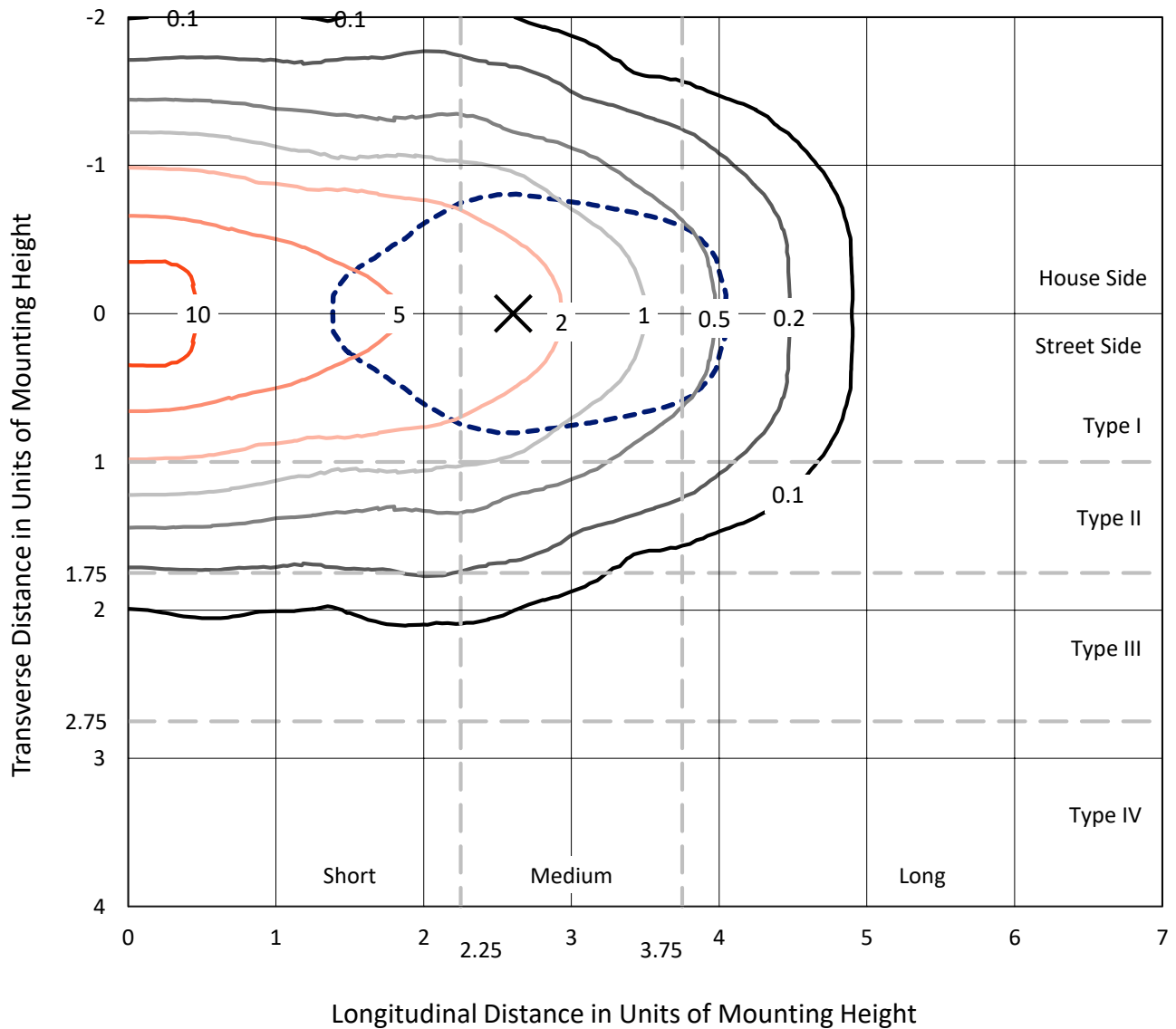
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

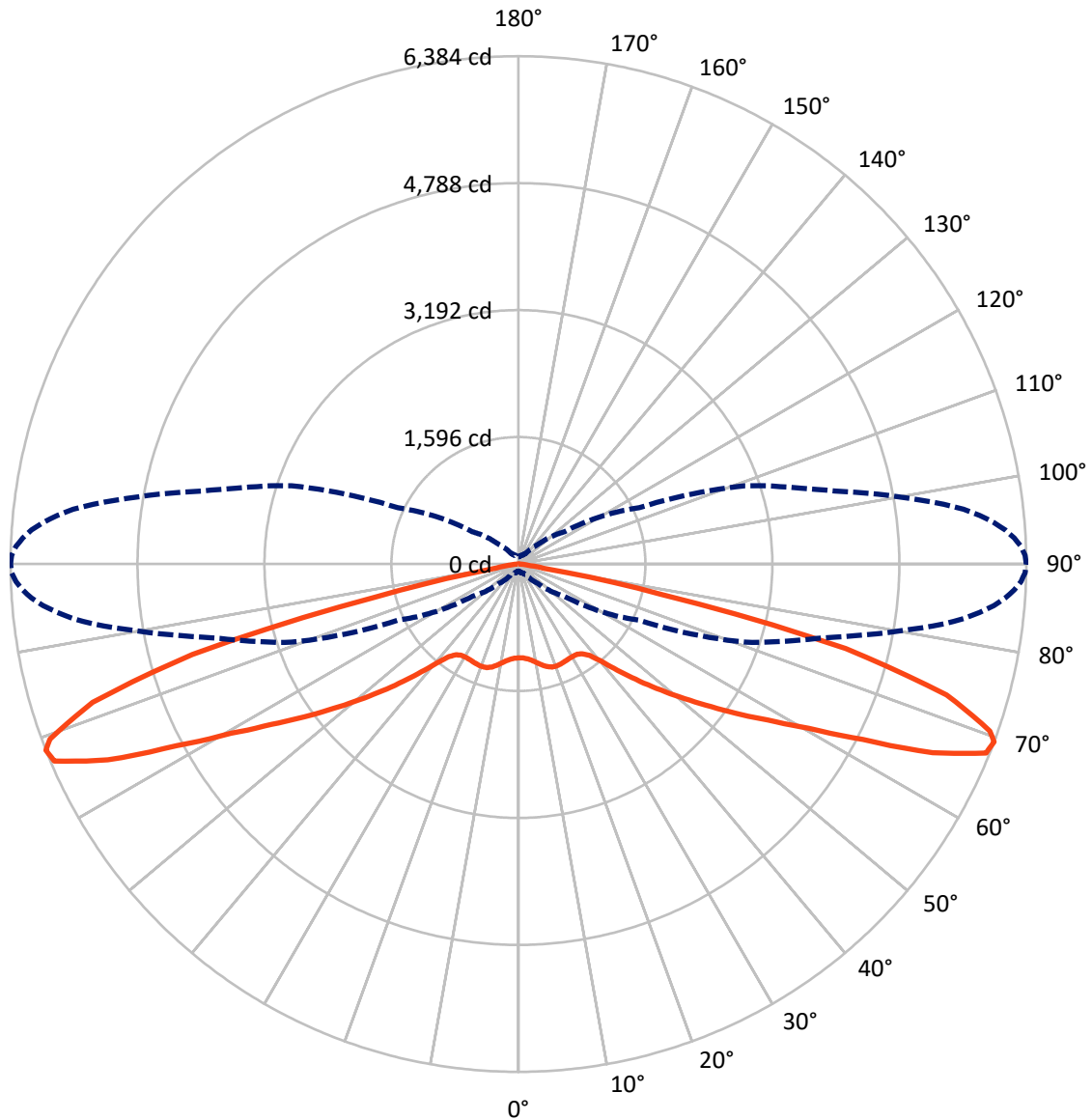
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.1 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	3082.1	0.0	3082.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3082.1	0.0	3082.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	6164.2	0.0	6164.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.5	1.9
10°-20°	363.7	5.9
20°-30°	589.1	9.6
30°-40°	733.9	11.9
40°-50°	913.6	14.8
50°-60°	1121.0	18.2
60°-70°	1382.6	22.4
70°-80°	859.5	13.9
80°-90°	85.4	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°	6164.2	100.0
0°-180°	6164.2	100.0



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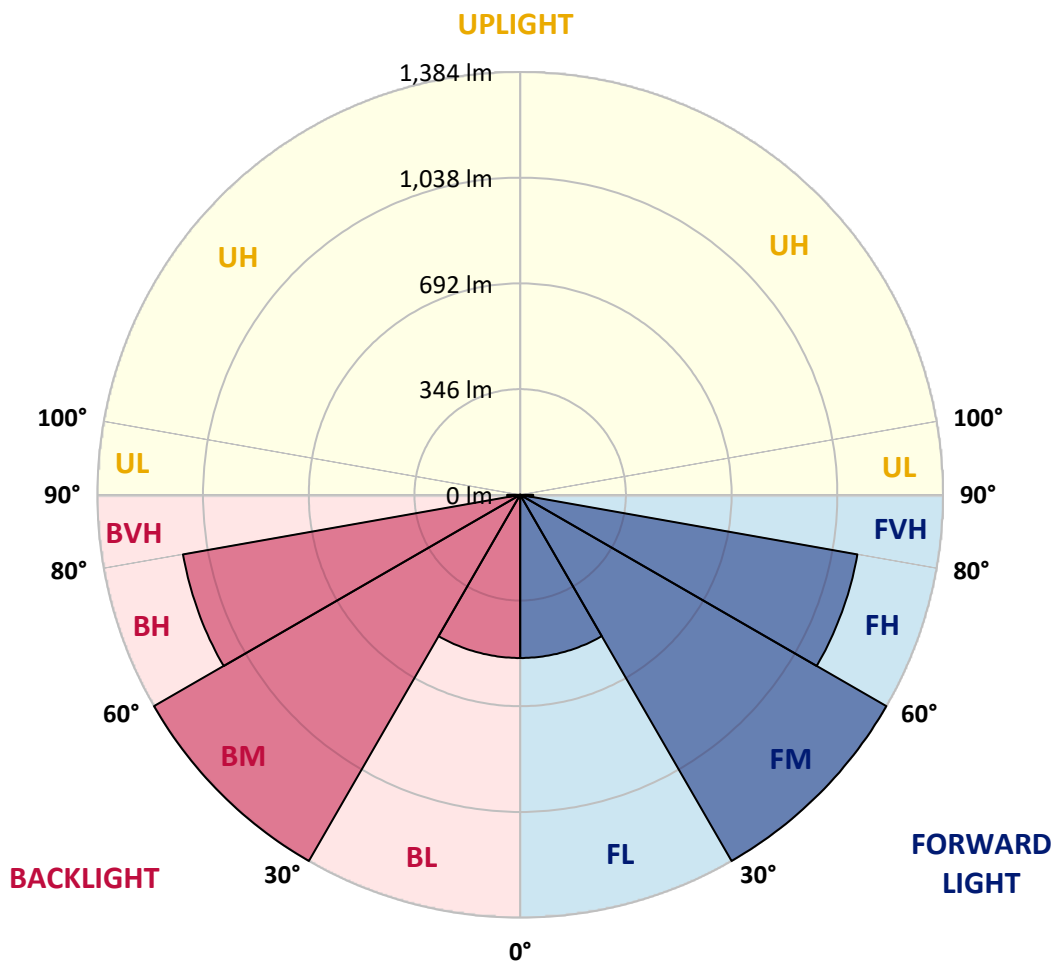
CATALOG NUMBER: LDRL-RW-E02-E-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	534.2	8.7			
FM (30°-60°)	1384.2	22.5			
FH (60°-80°)	1121.0	18.2			G1/1800
FVH (80°-90°)	42.7	0.7			G1/100
BL (0°-30°)	534.2	8.7	B2/1000		
BM (30°-60°)	1384.2	22.5	B2/2500		
BH (60°-80°)	1121.0	18.2	B3/2500		G3/2500
BVH (80°-90°)	42.7	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°	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4
2.5°	1183.6	1182.2	1184.6	1186.6	1186.0	1186.4	1185.6	1184.5	1184.6	1184.7	1184.7
5°	1192.8	1191.5	1193.6	1195.4	1196.0	1197.4	1197.8	1197.2	1197.5	1197.8	1198.1
7.5°	1203.8	1202.8	1205.5	1208.0	1212.6	1215.1	1217.6	1220.0	1220.2	1220.4	1220.6
10°	1214.3	1213.7	1218.0	1223.3	1231.0	1236.6	1243.6	1250.4	1250.9	1251.5	1252.0
12.5°	1221.1	1221.0	1227.6	1237.3	1250.4	1262.1	1274.0	1285.5	1286.6	1287.6	1288.7
15°	1220.6	1221.5	1231.6	1249.2	1271.8	1292.5	1307.1	1319.6	1320.6	1321.6	1322.6
17.5°	1212.2	1212.4	1226.8	1254.9	1290.2	1321.0	1339.8	1346.6	1347.0	1347.4	1347.8
20°	1188.6	1190.3	1210.6	1251.4	1304.6	1347.1	1364.9	1362.1	1361.4	1360.8	1360.2
22.5°	1148.2	1150.2	1177.4	1232.2	1307.2	1363.9	1382.4	1369.4	1367.5	1365.5	1363.5
25°	1092.0	1095.4	1124.8	1195.0	1289.2	1368.8	1393.7	1373.0	1369.9	1366.8	1363.7
27.5°	1027.0	1028.6	1063.2	1137.0	1247.2	1352.4	1398.8	1380.1	1376.2	1372.4	1368.5
30°	951.6	955.9	992.0	1069.0	1187.8	1314.2	1396.8	1394.1	1389.7	1385.4	1381.1
32.5°	876.7	880.4	915.9	998.8	1119.4	1261.1	1386.4	1415.2	1411.6	1408.0	1404.4
35°	801.2	805.7	842.2	931.3	1051.6	1200.8	1370.3	1445.4	1443.8	1442.3	1440.7
37.5°	734.9	737.8	773.6	866.2	992.0	1145.6	1349.1	1485.8	1489.3	1492.9	1496.4
40°	667.4	670.2	707.8	802.6	937.2	1098.4	1329.6	1536.7	1546.4	1556.0	1565.6
42.5°	602.6	605.0	641.3	735.9	876.3	1057.5	1317.9	1598.3	1616.8	1635.3	1653.8
45°	536.0	537.7	571.8	663.9	806.7	1009.9	1314.8	1667.4	1694.2	1720.9	1747.6
47.5°	470.6	474.4	509.6	597.0	727.3	941.8	1310.4	1744.0	1779.4	1814.8	1850.2
50°	408.0	412.3	448.4	531.3	650.6	860.9	1287.4	1830.8	1874.0	1917.2	1960.3
52.5°	344.2	348.4	384.6	463.8	579.4	769.8	1223.3	1921.9	1973.2	2024.6	2076.0
55°	276.0	277.6	314.8	394.2	508.2	693.4	1121.3	2005.4	2067.6	2129.8	2192.0
57.5°	200.7	206.2	243.0	316.8	435.4	626.0	991.6	2048.1	2125.7	2203.3	2281.0
60°	144.9	148.6	180.8	238.9	353.2	559.6	876.5	2017.0	2120.5	2224.1	2327.7
62.5°	114.6	118.6	143.4	180.0	273.2	486.8	801.4	1931.4	2076.7	2222.0	2367.3
65°	101.4	105.1	128.0	146.1	208.9	411.9	754.2	1846.6	2042.7	2238.9	2435.0
67.5°	92.6	96.4	116.6	128.9	172.6	363.7	731.8	1782.5	2009.1	2235.6	2462.1
69°	88.4	92.0	110.4	121.9	162.8	347.2	707.8	1674.2	1898.8	2123.4	2348.0
70°	86.2	89.2	106.1	117.6	158.9	333.7	672.3	1545.4	1762.1	1978.8	2195.5
72.5°	79.8	81.8	96.0	106.7	145.3	266.4	507.1	1090.4	1274.1	1457.8	1641.5
75°	70.8	73.2	85.8	95.6	110.8	160.0	317.5	632.9	758.8	884.7	1010.5
77.5°	60.7	63.6	73.9	89.5	89.2	104.2	192.7	363.4	424.6	485.8	546.9
80°	52.1	54.6	63.8	88.4	74.7	82.5	143.6	271.1	295.7	320.4	345.0
82.5°	40.8	42.9	53.6	73.1	59.7	62.8	109.4	246.9	263.6	280.3	297.0
85°	25.6	26.5	39.0	50.5	42.5	38.0	70.4	190.0	202.2	214.4	226.5
87.5°	10.2	12.6	18.9	18.0	18.2	15.2	22.8	68.6	74.8	81.0	87.3
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°	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4
2.5°	1184.8	1184.9	1184.6	1183.9	1184.6	1184.0	1184.2	1184.8	1184.6	1184.6	1184.2
5°	1198.4	1198.7	1198.7	1197.4	1198.1	1198.3	1198.5	1198.1	1198.3	1198.7	1197.8
7.5°	1220.8	1221.1	1221.7	1222.3	1221.9	1222.1	1222.5	1222.1	1221.4	1222.9	1221.9
10°	1252.6	1253.1	1253.0	1254.9	1254.1	1254.7	1256.6	1256.6	1255.6	1257.0	1256.6
12.5°	1289.7	1290.8	1290.6	1290.4	1291.2	1291.8	1294.0	1294.4	1294.8	1297.0	1296.2
15°	1323.7	1324.7	1325.5	1326.0	1327.4	1327.8	1329.0	1329.8	1330.4	1331.2	1331.6
17.5°	1348.1	1348.5	1349.8	1349.2	1351.2	1350.8	1352.2	1352.8	1353.4	1354.4	1355.1
20°	1359.6	1359.0	1359.2	1358.6	1358.6	1358.9	1359.2	1360.0	1359.6	1360.6	1361.4
22.5°	1361.6	1359.6	1358.4	1356.9	1356.4	1355.1	1355.1	1355.4	1354.0	1355.1	1356.3
25°	1360.6	1357.6	1355.3	1352.8	1350.6	1348.5	1347.3	1346.9	1345.8	1345.8	1346.8
27.5°	1364.7	1360.8	1357.6	1353.4	1350.6	1347.7	1345.0	1342.9	1341.0	1340.5	1340.5
30°	1376.8	1372.5	1368.8	1363.7	1359.2	1355.4	1351.8	1349.0	1345.0	1343.4	1341.6
32.5°	1400.8	1397.2	1392.1	1387.5	1382.2	1377.6	1372.7	1368.2	1363.7	1359.6	1358.0
35°	1439.1	1437.6	1434.7	1431.6	1426.5	1420.7	1416.6	1411.3	1406.2	1400.2	1398.6
37.5°	1499.9	1503.4	1501.8	1499.6	1498.1	1496.3	1490.8	1487.2	1483.8	1478.8	1477.8
40°	1575.3	1584.9	1594.6	1600.9	1598.6	1606.3	1607.5	1608.1	1605.1	1609.1	1610.0
42.5°	1672.3	1690.8	1708.3	1721.0	1735.8	1746.8	1761.2	1767.4	1779.1	1791.2	1798.2
45°	1774.3	1801.0	1826.0	1852.1	1877.8	1905.9	1933.2	1952.4	1980.6	2001.6	2014.6
47.5°	1885.7	1921.1	1951.0	1990.0	2027.2	2060.4	2108.2	2146.6	2180.9	2213.6	2247.8
50°	2003.5	2046.7	2083.6	2131.2	2176.4	2228.5	2284.6	2333.4	2387.2	2439.0	2485.2
52.5°	2127.3	2178.6	2228.5	2277.4	2332.2	2388.8	2449.6	2520.1	2584.6	2662.8	2718.8
55°	2254.2	2316.4	2369.5	2420.6	2478.6	2541.4	2613.7	2697.2	2779.1	2864.7	2949.6
57.5°	2358.6	2436.2	2494.2	2554.0	2616.6	2678.8	2768.4	2854.0	2957.8	3062.9	3169.2
60°	2431.3	2534.9	2605.2	2680.8	2753.2	2828.8	2925.4	3033.6	3163.5	3290.8	3435.2
62.5°	2512.7	2658.0	2756.7	2857.5	2945.6	3036.2	3165.5	3290.1	3457.0	3603.5	3785.3
65°	2631.2	2827.3	2972.6	3108.5	3226.7	3350.2	3503.5	3659.3	3850.2	4052.7	4280.7
67.5°	2688.7	2915.2	3105.4	3273.0	3424.1	3581.5	3739.8	3924.0	4139.1	4382.9	4633.3
69°	2572.6	2797.2	3016.0	3185.4	3344.5	3512.6	3681.8	3867.8	4079.6	4332.6	4598.0
70°	2412.2	2628.9	2861.4	3031.4	3191.8	3366.2	3538.6	3726.4	3929.0	4189.6	4458.0
72.5°	1825.2	2009.0	2234.6	2414.2	2583.0	2759.2	2936.7	3099.6	3305.1	3555.9	3803.2
75°	1136.4	1262.3	1465.2	1645.7	1781.4	1932.4	2099.0	2253.4	2459.6	2637.3	2875.2
77.5°	608.0	669.2	787.6	917.0	992.4	1066.1	1174.7	1258.4	1345.2	1448.1	1546.4
80°	369.6	394.2	434.6	462.6	452.1	422.0	412.3	382.2	393.0	374.5	361.2
82.5°	313.7	330.4	355.0	371.8	359.5	311.4	256.8	216.1	187.4	159.9	135.9
85°	238.6	250.8	263.5	271.1	270.4	246.4	195.8	151.6	118.2	91.6	76.2
87.5°	93.5	99.8	109.0	107.6	112.2	113.1	88.4	68.4	48.6	32.8	28.8
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°	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4	1180.4
2.5°	1183.3	1183.1	1183.3	1183.9	1183.9	1184.4	1183.9	1184.1	1183.5	1182.9	1183.3
5°	1197.8	1197.4	1197.9	1198.3	1198.3	1197.9	1198.9	1198.9	1198.5	1197.8	1198.1
7.5°	1222.9	1223.2	1222.5	1224.6	1222.7	1222.9	1224.2	1223.9	1223.5	1223.8	1223.9
10°	1257.8	1257.6	1258.0	1259.2	1257.4	1258.6	1260.0	1260.5	1259.4	1259.4	1259.6
12.5°	1296.4	1298.0	1298.2	1299.0	1299.1	1300.1	1300.2	1300.4	1301.3	1301.5	1300.3
15°	1333.4	1334.6	1335.4	1336.2	1335.2	1336.6	1338.2	1338.2	1338.0	1338.9	1337.6
17.5°	1356.1	1357.2	1358.6	1358.4	1358.6	1359.8	1360.8	1361.2	1361.6	1361.6	1361.8
20°	1363.2	1363.9	1364.7	1365.6	1366.0	1367.1	1368.0	1368.6	1369.0	1368.6	1368.8
22.5°	1357.6	1358.4	1360.0	1360.6	1360.8	1362.6	1363.4	1364.1	1364.5	1364.9	1364.3
25°	1347.7	1348.5	1350.2	1350.8	1351.2	1352.8	1353.8	1355.3	1355.7	1355.9	1356.1
27.5°	1340.9	1341.3	1342.6	1343.4	1343.6	1345.4	1346.8	1347.9	1348.1	1348.3	1348.3
30°	1341.2	1341.2	1342.6	1342.8	1342.6	1344.2	1345.0	1345.6	1346.1	1346.1	1346.3
32.5°	1355.2	1354.4	1355.7	1353.8	1354.0	1353.8	1353.6	1354.3	1353.8	1354.0	1353.2
35°	1395.3	1393.1	1391.2	1392.0	1389.2	1385.0	1387.3	1386.3	1384.0	1384.2	1384.8
37.5°	1472.1	1469.8	1471.8	1470.0	1470.6	1464.8	1466.3	1461.2	1459.7	1461.6	1456.2
40°	1608.3	1607.3	1611.2	1609.6	1610.6	1612.2	1613.6	1608.7	1600.5	1607.9	1608.1
42.5°	1797.1	1806.4	1810.0	1815.2	1820.8	1818.2	1823.2	1824.6	1815.6	1822.4	1824.0
45°	2034.0	2043.8	2055.3	2058.8	2067.8	2069.0	2072.8	2073.8	2065.6	2066.4	2068.2
47.5°	2282.1	2300.1	2313.6	2323.1	2332.6	2334.4	2336.4	2332.6	2333.2	2335.0	2335.0
50°	2525.9	2564.4	2588.4	2607.1	2623.4	2615.0	2622.1	2622.7	2625.2	2620.1	2623.1
52.5°	2782.2	2833.3	2873.5	2905.0	2914.8	2944.7	2932.4	2941.8	2948.2	2938.8	2944.9
55°	3032.6	3105.4	3170.0	3215.6	3247.6	3278.0	3282.7	3307.2	3304.2	3313.5	3309.4
57.5°	3270.6	3372.4	3464.8	3532.2	3578.2	3624.6	3656.0	3682.7	3685.4	3711.8	3696.9
60°	3558.6	3700.4	3819.2	3919.8	3987.7	4056.6	4111.0	4154.7	4164.8	4210.1	4195.1
62.5°	3947.0	4120.0	4271.9	4389.8	4541.1	4614.0	4719.8	4786.0	4827.2	4838.5	4859.6
65°	4493.1	4718.4	4918.8	5107.5	5277.6	5395.6	5518.2	5616.7	5695.7	5689.2	5721.6
67.5°	4898.8	5155.8	5396.9	5623.3	5806.4	5958.2	6099.0	6205.4	6276.1	6321.0	6340.1
69°	4856.6	5132.4	5398.4	5640.1	5828.9	5998.6	6135.7	6240.6	6321.4	6370.2	6384.4
70°	4716.0	4999.4	5276.6	5513.8	5706.4	5892.7	6032.3	6149.0	6226.0	6279.4	6287.6
72.5°	4079.2	4386.2	4631.4	4890.2	5075.6	5264.2	5352.0	5496.6	5597.0	5629.5	5628.8
75°	3076.6	3332.8	3548.3	3739.6	3905.4	4033.2	4074.7	4177.7	4261.0	4260.0	4252.2
77.5°	1656.8	1717.1	1797.7	1824.8	1876.0	1875.2	1823.8	1840.0	1887.2	1795.6	1825.2
80°	355.4	350.1	345.6	342.9	341.5	342.1	344.0	332.2	343.8	338.6	316.9
82.5°	123.8	120.8	118.0	120.0	118.6	119.8	119.4	120.8	120.7	120.2	117.4
85°	69.6	67.1	65.7	66.7	64.4	62.4	61.0	60.3	60.2	58.7	57.9
87.5°	26.5	26.2	26.0	25.0	22.5	20.7	19.5	17.0	16.0	14.6	13.5
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)