

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: P146633

Luminaire Tested: **LDRL-T3-F06-E-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146633
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33695)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T3-F06-E-8030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (42) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12481.9 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

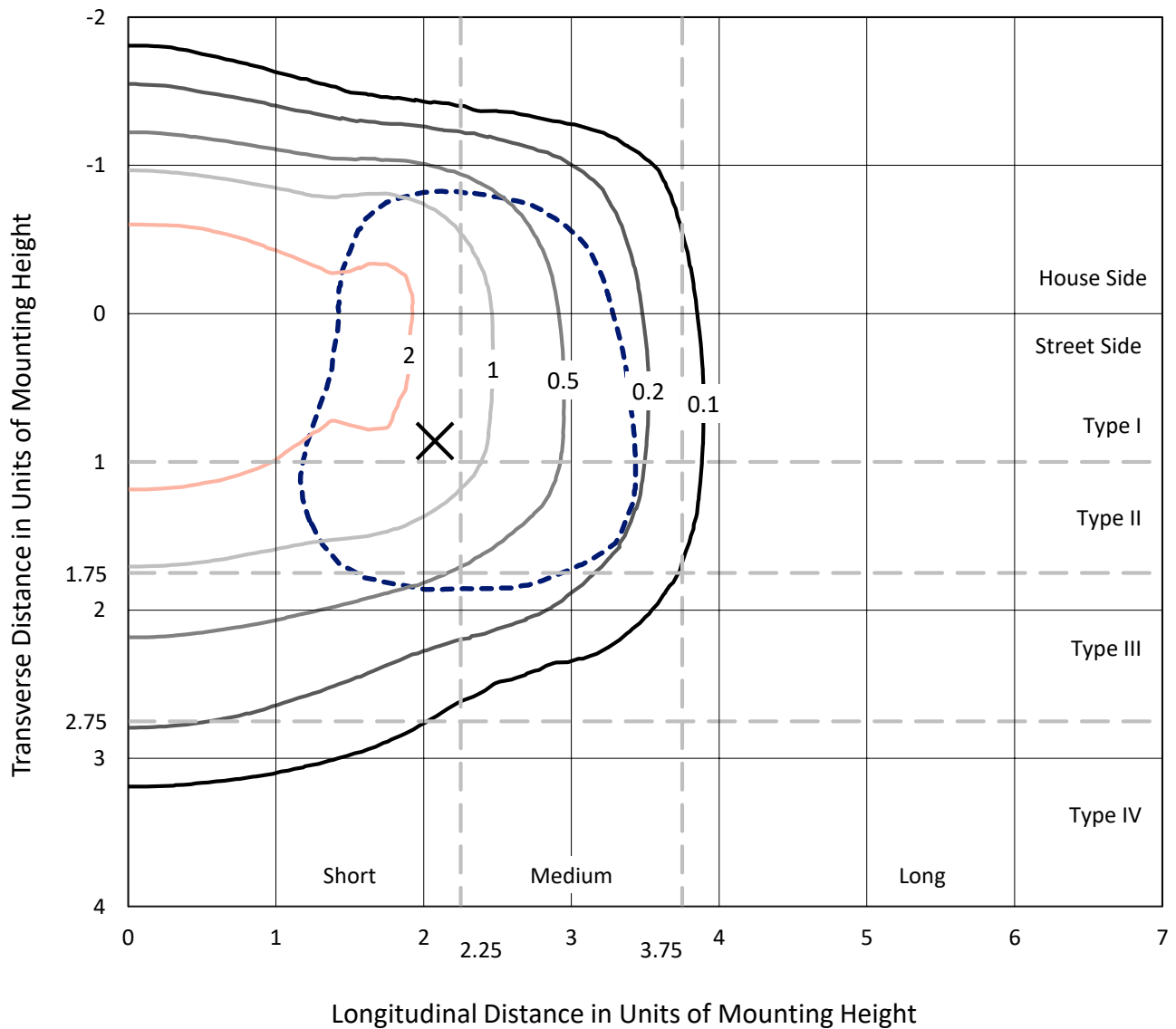
Input Watts (W): 156.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

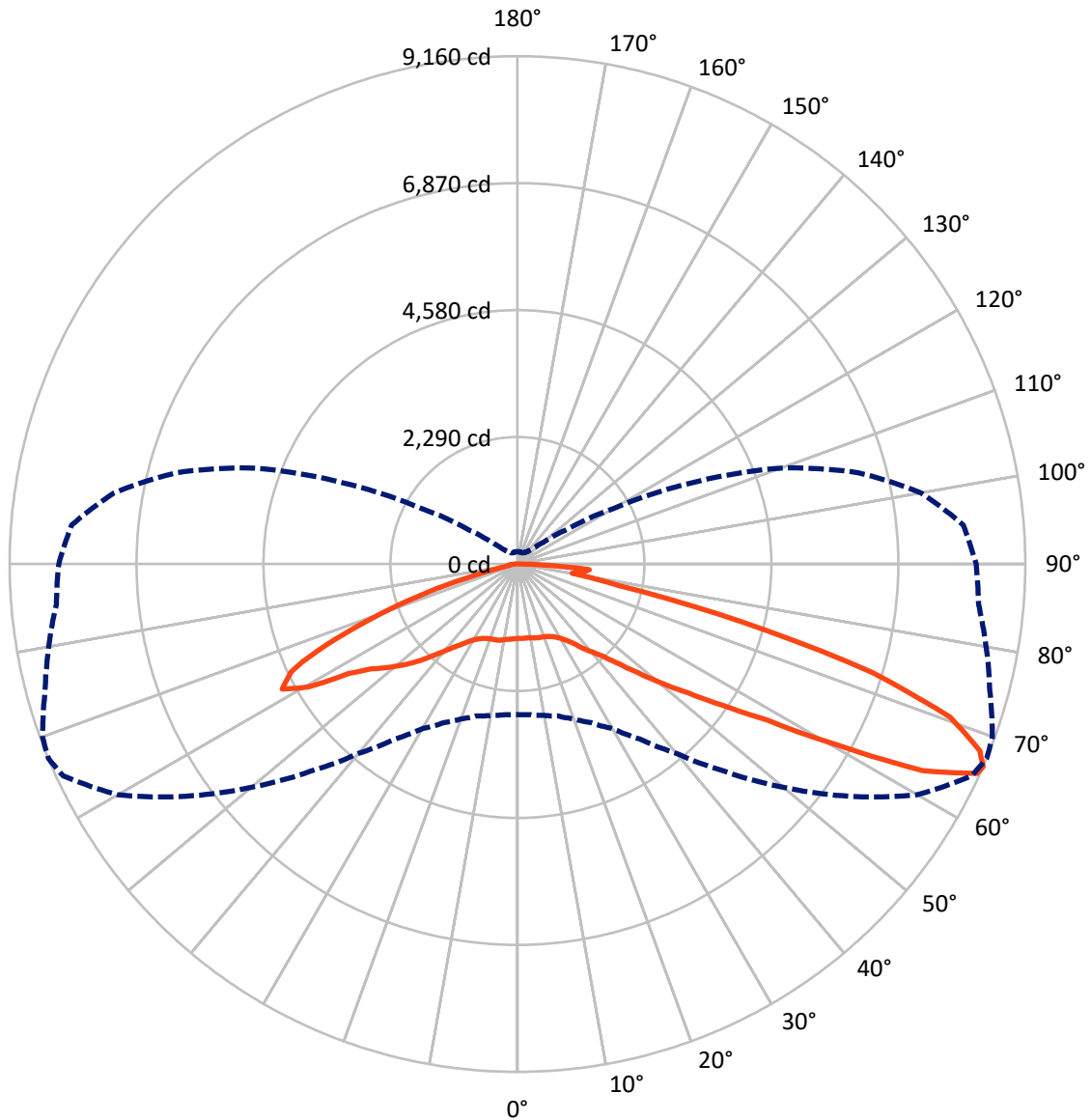
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.4 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4240.5	0.0	4240.5
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	8241.4	0.0	8241.4
	% Fixture	66.0	0.0	66.0
Total	Lumens	12481.9	0.0	12481.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.1	1.0
10°-20°	382.4	3.1
20°-30°	657.4	5.3
30°-40°	1057.4	8.5
40°-50°	1742.9	14.0
50°-60°	2732.0	21.9
60°-70°	3780.9	30.3
70°-80°	1711.0	13.7
80°-90°	288.7	2.3
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°	12481.9	100.0
0°-180°	12481.9	100.0



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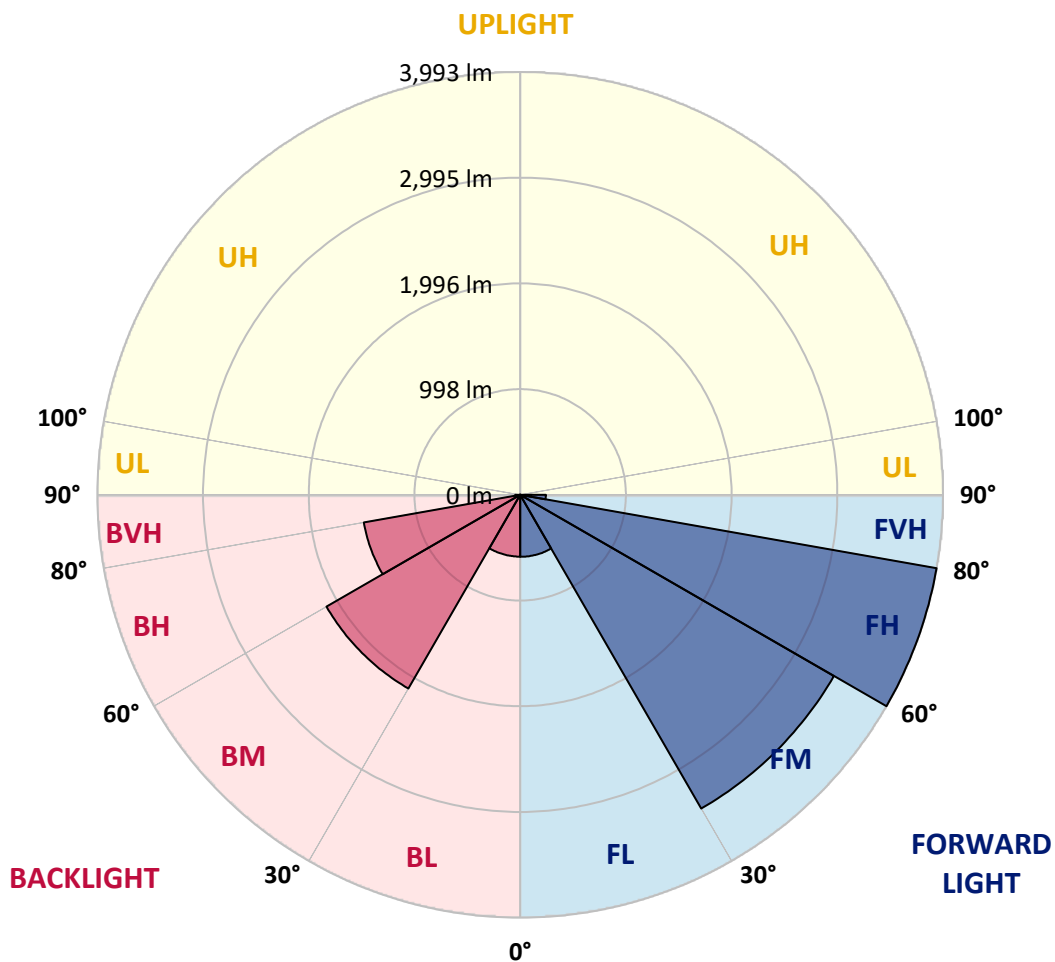
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	585.4	4.7			
FM	(30°-60°)	3420.5	27.4			
FH	(60°-80°)	3992.8	32.0			G2/5000
FVH	(80°-90°)	242.6	1.9			G3/500
BL	(0°-30°)	583.5	4.7	B2/1000		
BM	(30°-60°)	2111.8	16.9	B2/2500		
BH	(60°-80°)	1499.1	12.0	B3/2500		G3/2500
BVH	(80°-90°)	46.1	0.4			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6
2.5°	1341.9	1341.1	1340.2	1340.2	1339.4	1340.2	1341.1	1341.9	1341.1	1341.9	1341.1
5°	1339.4	1339.4	1338.6	1338.6	1338.6	1338.6	1339.4	1340.2	1339.4	1341.1	1339.4
7.5°	1328.5	1333.6	1331.9	1333.6	1335.2	1336.9	1337.7	1339.4	1341.9	1343.6	1341.9
10°	1314.3	1316.8	1317.7	1319.3	1322.7	1326.9	1330.2	1334.4	1340.2	1341.9	1343.6
12.5°	1288.4	1291.7	1294.3	1297.6	1302.6	1309.3	1315.2	1321.8	1331.9	1338.6	1344.4
15°	1269.2	1273.4	1274.2	1278.4	1283.4	1290.9	1298.4	1308.5	1321.8	1333.6	1345.3
17.5°	1281.7	1283.4	1281.7	1281.7	1283.4	1286.7	1292.6	1300.9	1315.2	1329.4	1343.6
20°	1319.3	1319.3	1317.7	1316.8	1315.2	1311.8	1311.0	1310.1	1319.3	1330.2	1342.7
22.5°	1355.3	1355.3	1354.5	1357.8	1357.0	1357.0	1354.5	1350.3	1346.1	1344.4	1352.8
25°	1377.9	1381.2	1382.9	1387.9	1391.2	1396.3	1397.9	1397.1	1391.2	1381.2	1378.7
27.5°	1414.7	1417.2	1418.8	1424.7	1431.4	1437.2	1443.1	1450.6	1450.6	1441.4	1428.9
30°	1485.7	1482.4	1484.0	1485.7	1491.6	1499.9	1507.5	1517.5	1522.5	1519.2	1502.4
32.5°	1551.8	1555.1	1556.8	1561.8	1567.7	1580.2	1589.4	1601.1	1612.0	1613.6	1605.3
35°	1648.8	1647.1	1644.6	1662.1	1668.8	1683.0	1693.9	1710.6	1719.0	1726.5	1721.5
37.5°	1801.8	1796.7	1793.4	1798.4	1807.6	1816.8	1832.7	1845.2	1859.4	1877.0	1871.2
40°	2018.3	2028.3	2014.1	2020.8	2028.3	2007.4	2021.6	2033.4	2057.6	2058.4	2057.6
42.5°	2300.1	2307.6	2304.2	2308.4	2295.0	2288.4	2282.5	2288.4	2318.5	2314.3	2294.2
45°	2581.8	2592.7	2590.2	2591.9	2617.8	2606.9	2616.1	2617.8	2648.7	2640.3	2625.3
47.5°	2822.6	2841.0	2845.2	2860.2	2895.4	2923.8	2963.1	2992.3	3007.4	3017.4	3029.1
50°	3013.2	3026.6	3050.0	3087.7	3138.7	3188.0	3276.6	3334.3	3387.0	3423.8	3461.4
52.5°	3139.5	3154.5	3190.5	3247.3	3320.9	3411.2	3514.9	3635.3	3746.5	3811.7	3867.7
55°	3191.3	3206.4	3250.7	3325.1	3422.9	3538.3	3687.1	3856.8	4004.8	4154.5	4240.6
57.5°	3161.2	3178.0	3229.0	3312.6	3430.4	3581.8	3766.6	3974.7	4191.3	4417.9	4590.9
60°	3072.6	3087.7	3145.3	3232.3	3366.9	3537.5	3759.0	4019.9	4324.2	4660.3	4988.9
62.5°	2950.5	2973.1	3024.1	3112.7	3246.5	3433.0	3685.5	4024.9	4461.3	5003.1	5642.7
65°	2795.0	2811.7	2856.9	2927.1	3074.3	3269.1	3535.8	3951.3	4521.5	5289.9	6202.9
66°	2714.8	2730.6	2772.5	2838.5	2973.1	3160.4	3427.1	3852.7	4454.6	5288.2	6262.3
67.5°	2573.5	2581.0	2611.1	2676.3	2764.1	2932.1	3179.6	3578.4	4171.2	5065.0	6096.7
70°	2158.8	2169.6	2198.9	2232.3	2264.9	2325.1	2498.2	2761.6	3235.6	4092.6	5076.7
72.5°	1493.2	1510.0	1541.7	1603.6	1654.6	1730.7	1798.4	1886.2	2043.4	2638.7	3631.9
75°	1079.4	1085.2	1132.1	1240.7	1343.6	1495.8	1630.4	1673.0	1619.5	1610.3	2133.7
77.5°	643.8	652.1	719.9	829.4	936.4	1142.9	1418.8	1632.0	1749.9	1708.1	1615.3
80°	270.9	282.6	322.7	351.2	439.8	612.8	885.4	1219.8	1530.9	1722.3	1678.9
82.5°	87.0	101.2	119.6	144.6	170.6	228.3	353.7	529.2	836.1	1246.6	1532.5
85°	31.8	32.6	45.1	62.7	69.4	80.3	102.8	158.9	282.6	467.4	869.5
87.5°	12.5	15.0	17.6	24.2	25.1	25.9	29.3	37.6	36.8	31.8	164.7
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6
2.5°	1341.9	1343.6	1342.7	1343.6	1343.6	1341.9	1341.9	1345.3	1342.7	1344.4	1344.4
5°	1341.1	1342.7	1341.9	1343.6	1342.7	1342.7	1342.7	1347.8	1346.9	1349.4	1351.1
7.5°	1344.4	1345.3	1344.4	1344.4	1346.9	1346.1	1346.9	1348.6	1352.8	1357.0	1360.3
10°	1348.6	1350.3	1352.8	1353.6	1357.0	1356.1	1358.6	1361.1	1365.3	1369.5	1373.7
12.5°	1354.5	1359.5	1367.0	1368.7	1372.0	1374.5	1378.7	1381.2	1384.6	1391.2	1396.3
15°	1359.5	1368.7	1377.9	1381.2	1384.6	1387.9	1392.1	1394.6	1400.4	1406.3	1412.1
17.5°	1361.1	1372.0	1383.7	1387.9	1391.2	1397.1	1402.1	1407.1	1413.8	1421.3	1428.0
20°	1362.0	1377.0	1392.1	1397.1	1404.6	1413.0	1421.3	1425.5	1434.7	1443.9	1449.8
22.5°	1369.5	1387.9	1408.8	1418.0	1425.5	1440.6	1451.4	1458.1	1469.0	1476.5	1479.0
25°	1390.4	1409.6	1434.7	1448.9	1461.5	1483.2	1496.6	1509.1	1515.0	1525.0	1522.5
27.5°	1428.0	1443.1	1475.7	1494.9	1510.8	1539.2	1565.1	1576.9	1586.0	1591.1	1585.2
30°	1492.4	1498.3	1534.2	1557.6	1584.4	1628.7	1657.1	1672.2	1683.9	1684.7	1669.7
32.5°	1588.6	1579.4	1611.1	1644.6	1679.7	1733.2	1771.7	1787.5	1796.7	1797.6	1764.1
35°	1719.0	1703.1	1729.9	1762.5	1805.9	1876.2	1924.7	1943.1	1957.3	1950.6	1901.3
37.5°	1883.7	1882.9	1895.4	1937.2	1986.5	2076.8	2127.8	2137.9	2137.0	2117.0	2042.5
40°	2066.8	2051.7	2053.4	2083.5	2140.4	2259.1	2330.2	2346.9	2341.0	2311.8	2214.8
42.5°	2297.6	2290.9	2268.3	2284.2	2336.9	2481.5	2567.6	2584.3	2589.3	2540.9	2426.3
45°	2621.1	2615.3	2565.1	2568.4	2606.9	2759.1	2848.5	2876.1	2877.0	2831.0	2682.2
47.5°	3013.2	3008.2	2949.7	2933.0	2952.2	3087.7	3198.9	3204.7	3206.4	3142.8	2988.2
50°	3458.0	3443.8	3399.5	3382.0	3359.4	3509.0	3598.5	3597.7	3588.5	3518.2	3344.3
52.5°	3887.8	3919.6	3902.8	3868.6	3869.4	3977.2	4061.7	4014.9	4020.7	3953.8	3754.0
55°	4346.8	4427.9	4488.9	4501.5	4495.6	4550.8	4597.6	4514.0	4483.1	4472.2	4259.8
57.5°	4834.2	5041.6	5229.7	5308.3	5278.2	5379.4	5421.2	5334.2	5335.9	5421.2	5238.1
60°	5485.5	6008.9	6483.0	6630.1	6698.7	6865.9	6791.5	6786.5	6917.7	7028.1	6688.7
62.5°	6473.8	7340.8	8097.5	8207.0	8262.2	8299.8	8266.3	8175.2	8310.7	8324.0	7800.7
65°	7222.9	8240.4	8972.0	9109.1	9099.1	8907.6	8722.0	8539.7	8538.1	8404.3	7730.4
66°	7304.0	8325.7	9038.9	9160.1	9115.8	8820.7	8584.9	8348.3	8272.2	8071.5	7387.6
67.5°	7126.8	8176.9	8885.1	8993.7	8899.3	8450.3	8129.2	7809.0	7694.5	7415.2	6717.9
70°	6092.5	7174.4	8121.7	8278.9	8166.9	7570.7	7095.0	6743.0	6431.1	6156.1	5580.9
72.5°	4723.9	5533.2	6535.7	6699.5	6708.7	6242.2	5706.3	5368.5	5005.6	4729.7	4298.3
75°	3098.5	3710.5	4261.5	4206.3	4222.2	3855.2	3535.8	3254.9	2926.3	2708.9	2503.2
77.5°	1811.0	2030.0	1979.8	1842.7	1727.3	1357.8	971.5	667.2	581.9	607.0	684.8
80°	1574.3	1451.4	1136.2	999.1	908.8	617.0	331.9	234.1	205.7	208.2	220.7
82.5°	1694.7	1758.3	1443.1	1188.1	1035.9	726.6	390.5	194.8	140.5	163.9	180.6
85°	1315.2	1673.8	1543.4	1304.3	1096.9	772.5	398.8	123.7	83.6	112.0	141.3
87.5°	374.6	592.8	474.1	418.9	337.8	230.8	95.3	49.3	45.1	58.5	81.1
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6	1343.6
2.5°	1345.3	1345.3	1347.8	1348.6	1349.4	1349.4	1351.1	1351.1	1351.9	1355.3	1354.5
5°	1353.6	1356.1	1359.5	1361.1	1363.7	1364.5	1367.0	1367.0	1369.5	1372.0	1371.2
7.5°	1363.7	1366.2	1368.7	1371.2	1373.7	1377.0	1376.2	1375.4	1374.5	1372.8	1371.2
10°	1377.9	1380.4	1382.9	1382.0	1380.4	1378.7	1372.0	1364.5	1361.1	1354.5	1349.4
12.5°	1401.3	1403.8	1401.3	1394.6	1385.4	1374.5	1360.3	1347.8	1340.2	1330.2	1324.4
15°	1418.8	1421.3	1416.3	1404.6	1389.6	1375.4	1356.1	1340.2	1326.9	1316.0	1307.6
17.5°	1432.2	1430.5	1419.7	1406.3	1390.4	1378.7	1361.1	1343.6	1327.7	1312.6	1300.9
20°	1451.4	1442.2	1426.4	1409.6	1393.7	1383.7	1369.5	1353.6	1336.9	1315.2	1300.1
22.5°	1476.5	1459.8	1438.9	1422.2	1407.1	1397.1	1382.9	1367.8	1351.9	1326.9	1306.0
25°	1512.5	1485.7	1461.5	1443.9	1430.5	1420.5	1402.9	1387.1	1369.5	1344.4	1317.7
27.5°	1562.6	1524.2	1499.1	1481.5	1468.2	1456.5	1433.9	1414.7	1392.1	1367.0	1335.2
30°	1627.9	1581.0	1553.4	1538.4	1524.2	1507.5	1483.2	1454.8	1425.5	1392.1	1357.8
32.5°	1709.0	1656.3	1630.4	1615.3	1596.9	1574.3	1542.6	1504.9	1461.5	1417.2	1374.5
35°	1824.3	1764.1	1735.7	1709.8	1683.0	1649.6	1601.9	1547.6	1489.9	1432.2	1379.5
37.5°	1938.9	1882.9	1847.7	1821.0	1779.2	1724.8	1658.8	1583.5	1506.6	1433.0	1369.5
40°	2101.1	2035.9	1994.9	1947.2	1879.5	1795.1	1698.9	1597.8	1502.4	1413.8	1338.6
42.5°	2300.1	2225.7	2164.6	2078.5	1973.2	1851.1	1718.1	1589.4	1473.2	1371.2	1288.4
45°	2551.7	2454.7	2352.7	2217.3	2055.9	1885.4	1717.3	1560.1	1423.0	1307.6	1225.7
47.5°	2845.2	2708.9	2537.5	2331.0	2110.3	1893.7	1690.6	1507.5	1347.8	1220.7	1126.2
50°	3147.0	2949.7	2706.4	2418.8	2137.9	1872.8	1631.2	1421.3	1249.1	1104.5	1002.5
52.5°	3519.1	3213.1	2859.4	2478.1	2126.2	1811.0	1532.5	1300.1	1116.2	974.9	857.8
55°	3962.2	3515.7	3004.9	2510.8	2074.3	1699.8	1382.9	1141.3	948.1	819.4	714.0
57.5°	4695.4	3989.8	3253.2	2559.2	1972.3	1534.2	1200.6	950.6	769.2	659.7	575.2
60°	5959.6	4962.2	3778.3	2678.8	1831.0	1298.4	969.0	744.9	595.3	507.5	448.1
62.5°	6841.7	5551.6	4060.9	2637.8	1591.1	1022.5	716.5	532.6	433.9	376.2	336.1
65°	6670.3	5319.2	3720.6	2240.7	1246.6	723.2	476.6	360.4	304.3	268.4	248.3
66°	6362.6	5062.5	3461.4	2011.6	1081.1	602.8	393.0	298.5	261.7	235.8	222.4
67.5°	5801.6	4530.7	2995.7	1614.5	809.3	444.8	298.5	232.4	212.4	199.0	189.8
70°	4803.3	3582.6	2062.6	954.0	428.1	249.2	189.8	171.4	162.2	156.3	155.5
72.5°	3682.9	2570.1	1193.1	461.5	229.1	165.5	145.5	138.8	135.4	133.8	133.8
75°	2275.0	1449.8	533.4	231.6	158.0	135.4	126.2	122.9	122.1	122.1	122.1
77.5°	800.1	505.0	239.1	169.7	138.8	122.1	114.5	112.9	114.5	114.5	114.5
80°	220.7	194.8	173.1	150.5	125.4	112.9	106.2	105.3	108.7	109.5	106.2
82.5°	172.2	162.2	148.0	134.6	114.5	102.8	99.5	101.2	102.8	100.3	95.3
85°	147.2	140.5	103.7	103.7	92.8	89.5	88.6	90.3	89.5	82.8	76.1
87.5°	83.6	73.6	56.0	61.0	65.2	66.9	56.0	60.2	59.4	52.7	49.3
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):

	160°	165°	170°	175°	180°
0°	1343.6	1343.6	1343.6	1343.6	1343.6
2.5°	1356.1	1356.1	1357.8	1357.8	1357.0
5°	1372.8	1372.8	1375.4	1373.7	1374.5
7.5°	1369.5	1366.2	1366.2	1364.5	1363.7
10°	1346.1	1340.2	1336.9	1338.6	1336.1
12.5°	1319.3	1314.3	1311.0	1310.1	1309.3
15°	1302.6	1296.8	1294.3	1292.6	1292.6
17.5°	1293.4	1286.7	1283.4	1280.9	1280.0
20°	1289.2	1280.9	1275.9	1273.4	1271.7
22.5°	1290.9	1280.9	1274.2	1270.8	1269.2
25°	1297.6	1285.1	1276.7	1272.5	1270.0
27.5°	1309.3	1292.6	1283.4	1277.5	1274.2
30°	1323.5	1300.1	1286.7	1278.4	1275.0
32.5°	1332.7	1300.9	1284.2	1271.7	1268.3
35°	1331.0	1291.7	1270.0	1254.1	1251.6
37.5°	1314.3	1267.5	1240.7	1219.8	1217.3
40°	1278.4	1230.7	1199.8	1178.9	1173.9
42.5°	1228.2	1178.9	1145.4	1126.2	1119.5
45°	1154.6	1094.4	1063.5	1047.6	1038.4
47.5°	1051.0	994.1	959.8	946.4	934.7
50°	933.1	870.4	845.3	830.2	816.9
52.5°	794.3	740.8	721.5	707.3	696.5
55°	659.7	622.0	599.5	584.4	585.3
57.5°	530.1	507.5	495.0	479.1	480.7
60°	417.2	398.0	398.0	387.9	384.6
62.5°	318.5	311.0	308.5	305.2	299.3
65°	241.6	241.6	242.5	242.5	239.1
66°	217.4	219.9	223.2	223.2	219.1
67.5°	188.1	191.5	194.8	196.5	196.5
70°	155.5	159.7	161.4	163.0	162.2
72.5°	136.3	139.6	139.6	140.5	138.8
75°	123.7	125.4	126.2	124.6	123.7
77.5°	114.5	115.4	114.5	113.7	112.9
80°	103.7	102.8	100.3	97.0	96.1
82.5°	89.5	86.1	84.4	79.4	78.6
85°	71.9	67.7	64.4	57.7	54.3
87.5°	47.7	46.0	43.5	31.8	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)