

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: P146626

Luminaire Tested: **LDRL-T3-F05-E-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P146626  
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-F05-E-7050  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 3  
Light Source: (35) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12646 lumens  
Efficiency: N/A  
Efficacy: 94.9 lumens/watt  
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

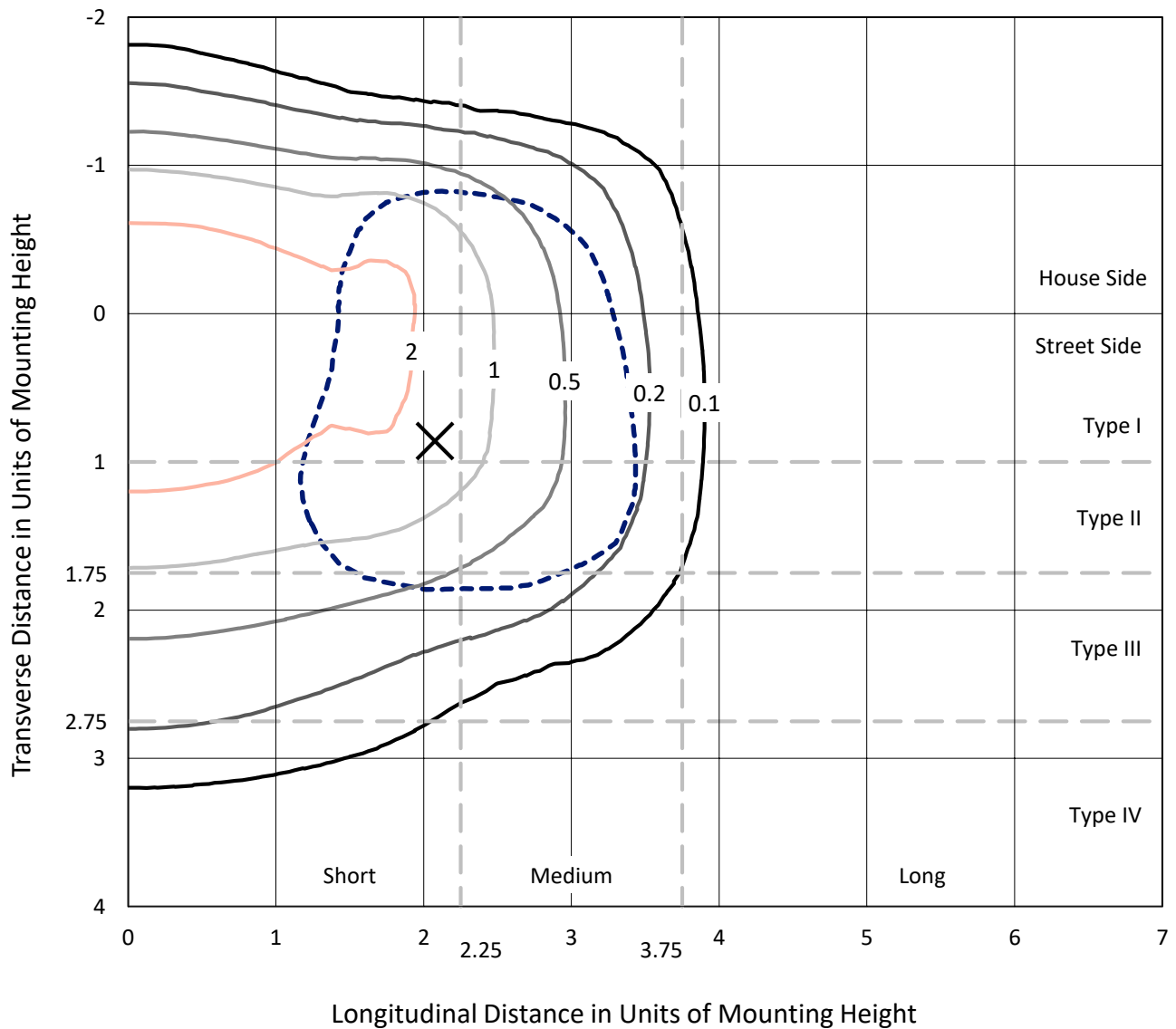
Input Watts (W): 133.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

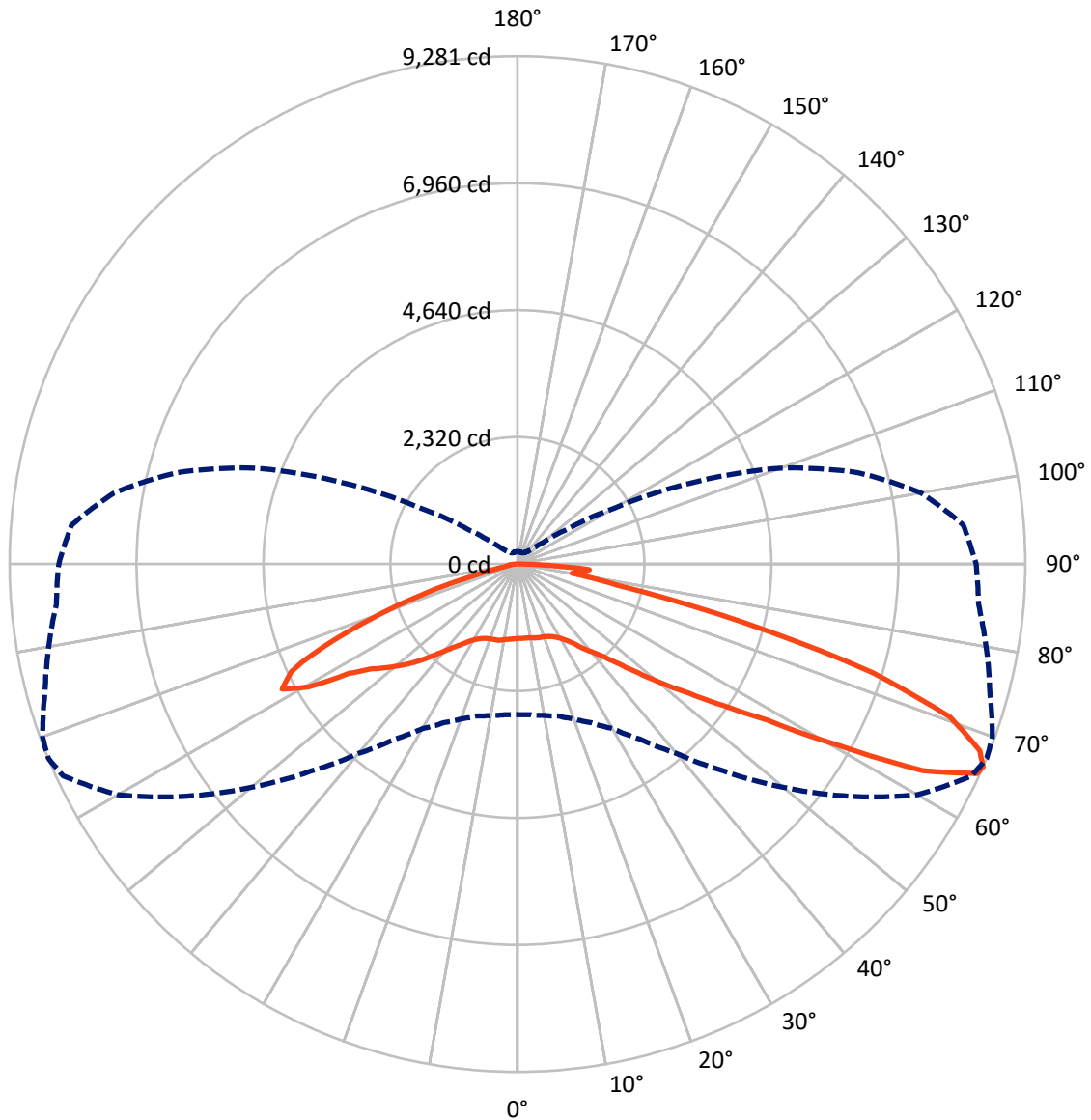
× Max cd  
 - - - 1/2 Max cd



Based on 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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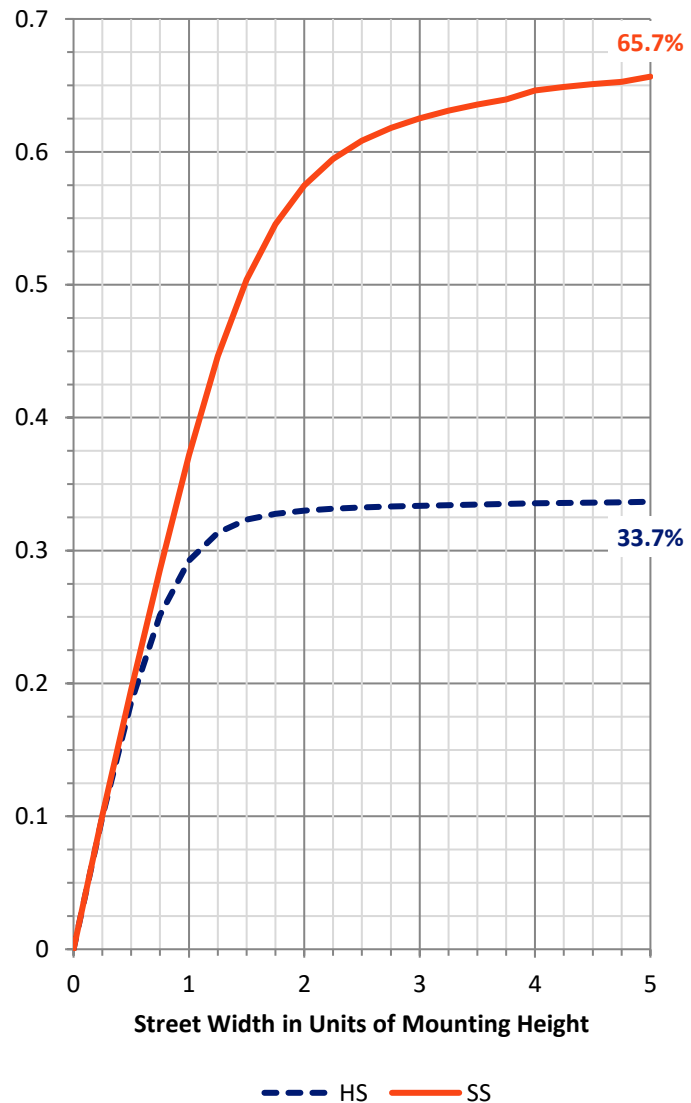
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4296.3	0.0	4296.3
	% Fixture	34.0	0.0	34.0
<b>Street Side</b>	Lumens	8349.8	0.0	8349.8
	% Fixture	66.0	0.0	66.0
<b>Total</b>	Lumens	12646.0	0.0	12646.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.8	1.0
10°-20°	387.5	3.1
20°-30°	666.1	5.3
30°-40°	1071.3	8.5
40°-50°	1765.8	14.0
50°-60°	2767.9	21.9
60°-70°	3830.6	30.3
70°-80°	1733.6	13.7
80°-90°	292.5	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°	12646.0	100.0
0°-180°	12646.0	100.0



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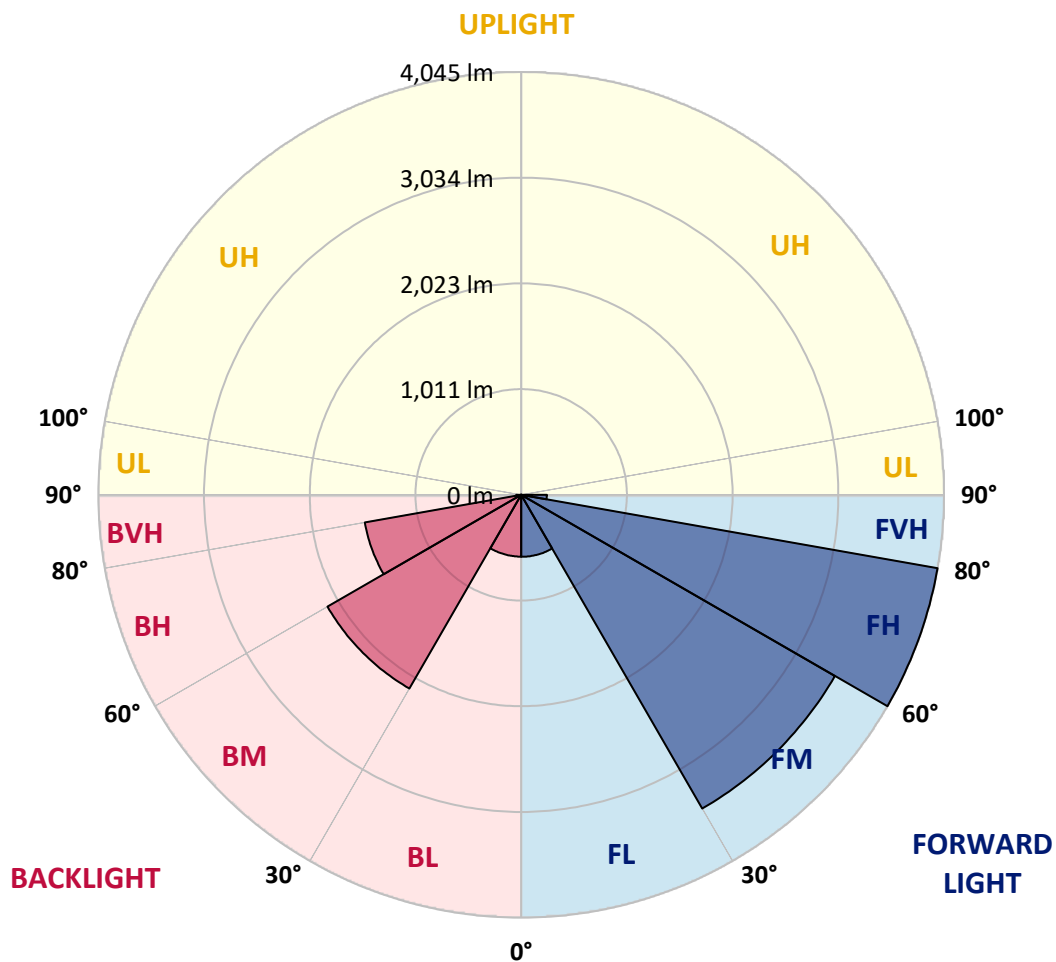
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	593.1	4.7			
FM	(30°-60°)	3465.5	27.4			
FH	(60°-80°)	4045.4	32.0			G2/5000
FVH	(80°-90°)	245.8	1.9			G3/500
BL	(0°-30°)	591.2	4.7	B2/1000		
BM	(30°-60°)	2139.6	16.9	B2/2500		
BH	(60°-80°)	1518.8	12.0	B3/2500		G3/2500
BVH	(80°-90°)	46.7	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°	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3
2.5°	1359.6	1358.7	1357.9	1357.9	1357.0	1357.9	1358.7	1359.6	1358.7	1359.6	1358.7
5°	1357.0	1357.0	1356.2	1356.2	1356.2	1356.2	1357.0	1357.9	1357.0	1358.7	1357.0
7.5°	1346.0	1351.1	1349.4	1351.1	1352.8	1354.5	1355.3	1357.0	1359.6	1361.3	1359.6
10°	1331.6	1334.1	1335.0	1336.7	1340.1	1344.3	1347.7	1351.9	1357.9	1359.6	1361.3
12.5°	1305.3	1308.7	1311.3	1314.7	1319.7	1326.5	1332.4	1339.2	1349.4	1356.2	1362.1
15°	1285.9	1290.1	1290.9	1295.2	1300.3	1307.9	1315.5	1325.7	1339.2	1351.1	1362.9
17.5°	1298.6	1300.3	1298.6	1298.6	1300.3	1303.6	1309.6	1318.0	1332.4	1346.9	1361.3
20°	1336.7	1336.7	1335.0	1334.1	1332.4	1329.1	1328.2	1327.4	1336.7	1347.7	1360.4
22.5°	1373.1	1373.1	1372.3	1375.7	1374.8	1374.8	1372.3	1368.0	1363.8	1362.1	1370.6
25°	1396.0	1399.4	1401.1	1406.1	1409.5	1414.6	1416.3	1415.5	1409.5	1399.4	1396.8
27.5°	1433.3	1435.8	1437.5	1443.4	1450.2	1456.1	1462.1	1469.7	1469.7	1460.4	1447.7
30°	1505.3	1501.9	1503.6	1505.3	1511.2	1519.7	1527.3	1537.4	1542.5	1539.1	1522.2
32.5°	1572.2	1575.6	1577.3	1582.3	1588.3	1601.0	1610.3	1622.1	1633.2	1634.9	1626.4
35°	1670.4	1668.7	1666.2	1684.0	1690.8	1705.2	1716.2	1733.1	1741.6	1749.2	1744.1
37.5°	1825.4	1820.4	1817.0	1822.1	1831.4	1840.7	1856.8	1869.5	1883.9	1901.7	1895.8
40°	2044.8	2055.0	2040.6	2047.4	2055.0	2033.8	2048.2	2060.1	2084.7	2085.5	2084.7
42.5°	2330.3	2337.9	2334.5	2338.8	2325.2	2318.4	2312.5	2318.4	2348.9	2344.7	2324.4
45°	2615.8	2626.8	2624.2	2625.9	2652.2	2641.2	2650.5	2652.2	2683.5	2675.1	2659.8
47.5°	2859.7	2878.4	2882.6	2897.8	2933.4	2962.2	3002.0	3031.7	3046.9	3057.1	3069.0
50°	3052.9	3066.4	3090.1	3128.3	3179.9	3229.9	3319.7	3378.1	3431.5	3468.8	3506.9
52.5°	3180.8	3196.0	3232.4	3290.0	3364.6	3456.1	3561.1	3683.1	3795.7	3861.8	3918.6
55°	3233.3	3248.5	3293.4	3368.8	3467.9	3584.8	3735.6	3907.6	4057.5	4209.1	4296.4
57.5°	3202.8	3219.7	3271.4	3356.1	3475.6	3628.9	3816.1	4027.0	4246.4	4475.9	4651.3
60°	3113.0	3128.3	3186.7	3274.8	3411.2	3584.0	3808.5	4072.7	4381.1	4721.6	5054.5
62.5°	2989.3	3012.2	3063.9	3153.7	3289.2	3478.1	3733.9	4077.8	4520.0	5068.9	5716.9
65°	2831.8	2848.7	2894.5	2965.6	3114.7	3312.1	3582.3	4003.3	4581.0	5359.4	6284.5
66°	2750.5	2766.5	2808.9	2875.8	3012.2	3201.9	3472.2	3903.3	4513.2	5357.8	6344.6
67.5°	2607.3	2614.9	2645.4	2711.5	2800.4	2970.7	3221.4	3625.5	4226.1	5131.6	6176.9
70°	2187.1	2198.2	2227.8	2261.7	2294.7	2355.7	2531.1	2797.9	3278.2	4146.4	5143.4
72.5°	1512.9	1529.8	1562.0	1624.7	1676.4	1753.4	1822.1	1911.0	2070.3	2673.4	3679.7
75°	1093.6	1099.5	1146.9	1257.1	1361.3	1515.4	1651.8	1695.0	1640.8	1631.5	2161.7
77.5°	652.2	660.7	729.3	840.3	948.7	1158.0	1437.5	1653.5	1772.9	1730.6	1636.6
80°	274.5	286.3	327.0	355.8	445.6	620.9	897.1	1235.9	1551.0	1745.0	1700.9
82.5°	88.1	102.5	121.1	146.5	172.8	231.3	358.3	536.2	847.1	1263.0	1552.7
85°	32.2	33.0	45.7	63.5	70.3	81.3	104.2	160.9	286.3	473.5	881.0
87.5°	12.7	15.2	17.8	24.6	25.4	26.3	29.6	38.1	37.3	32.2	166.9
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):**

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3
2.5°	1359.6	1361.3	1360.4	1361.3	1361.3	1359.6	1359.6	1362.9	1360.4	1362.1	1362.1
5°	1358.7	1360.4	1359.6	1361.3	1361.3	1360.4	1360.4	1365.5	1364.6	1367.2	1368.9
7.5°	1362.1	1362.9	1362.1	1362.1	1364.6	1363.8	1364.6	1366.3	1370.6	1374.8	1378.2
10°	1366.3	1368.0	1370.6	1371.4	1374.8	1374.0	1376.5	1379.0	1383.3	1387.5	1391.7
12.5°	1372.3	1377.3	1385.0	1386.7	1390.1	1392.6	1396.8	1399.4	1402.8	1409.5	1414.6
15°	1377.3	1386.7	1396.0	1399.4	1402.8	1406.1	1410.4	1412.9	1418.9	1424.8	1430.7
17.5°	1379.0	1390.1	1401.9	1406.1	1409.5	1415.5	1420.5	1425.6	1432.4	1440.0	1446.8
20°	1379.9	1395.1	1410.4	1415.5	1423.1	1431.6	1440.0	1444.3	1453.6	1462.9	1468.8
22.5°	1387.5	1406.1	1427.3	1436.6	1444.3	1459.5	1470.5	1477.3	1488.3	1495.9	1498.5
25°	1408.7	1428.2	1453.6	1468.0	1480.7	1502.7	1516.3	1529.0	1534.9	1545.1	1542.5
27.5°	1446.8	1462.1	1495.1	1514.6	1530.7	1559.5	1585.7	1597.6	1606.9	1612.0	1606.1
30°	1512.0	1518.0	1554.4	1578.1	1605.2	1650.1	1678.9	1694.2	1706.0	1706.9	1691.6
32.5°	1609.4	1600.1	1632.3	1666.2	1701.8	1756.0	1795.0	1811.0	1820.4	1821.2	1787.3
35°	1741.6	1725.5	1752.6	1785.6	1829.7	1900.8	1950.0	1968.6	1983.0	1976.2	1926.2
37.5°	1908.5	1907.6	1920.3	1962.7	2012.7	2104.1	2155.8	2166.0	2165.1	2144.8	2069.4
40°	2094.0	2078.7	2080.4	2110.9	2168.5	2288.8	2360.8	2377.7	2371.8	2342.2	2243.9
42.5°	2327.8	2321.0	2298.1	2314.2	2367.6	2514.1	2601.4	2618.3	2623.4	2574.3	2458.2
45°	2655.6	2649.7	2598.8	2602.2	2641.2	2795.3	2886.0	2913.9	2914.8	2868.2	2717.4
47.5°	3052.9	3047.8	2988.5	2971.5	2991.0	3128.3	3240.9	3246.8	3248.5	3184.2	3027.4
50°	3503.5	3489.1	3444.2	3426.4	3403.5	3555.2	3645.8	3645.0	3635.6	3564.5	3388.3
52.5°	3938.9	3971.1	3954.1	3919.4	3920.3	4029.5	4115.1	4067.7	4073.6	4005.8	3803.4
55°	4403.9	4486.1	4547.9	4560.7	4554.7	4610.6	4658.1	4573.4	4542.0	4531.0	4315.9
57.5°	4897.8	5107.9	5298.5	5378.1	5347.6	5450.1	5492.4	5404.3	5406.0	5492.4	5306.9
60°	5557.7	6087.9	6568.2	6717.3	6786.8	6956.2	6880.8	6875.7	7008.7	7120.5	6776.6
62.5°	6558.9	7437.3	8203.9	8314.9	8370.8	8408.9	8375.0	8282.7	8419.9	8433.5	7903.2
65°	7317.9	8348.8	9090.0	9228.9	9218.7	9024.7	8836.7	8652.0	8650.3	8514.8	7832.1
66°	7400.1	8435.2	9157.7	9280.6	9235.7	8936.6	8697.8	8458.1	8381.0	8177.7	7484.8
67.5°	7220.5	8284.4	9001.9	9112.0	9016.3	8561.4	8236.1	7911.7	7795.6	7512.7	6806.3
70°	6172.6	7268.8	8228.5	8387.7	8274.2	7670.3	7188.3	6831.7	6515.7	6237.0	5654.2
72.5°	4786.0	5605.9	6621.6	6787.6	6796.9	6324.3	5781.3	5439.1	5071.4	4791.9	4354.8
75°	3139.3	3759.3	4317.5	4261.6	4277.7	3905.9	3582.3	3297.7	2964.8	2744.5	2536.1
77.5°	1834.8	2056.7	2005.9	1867.0	1750.1	1375.7	984.3	676.0	589.6	615.0	693.8
80°	1595.0	1470.5	1151.2	1012.3	920.8	625.1	336.3	237.2	208.4	210.9	223.6
82.5°	1717.0	1781.4	1462.1	1203.7	1049.5	736.1	395.6	197.4	142.3	166.0	183.0
85°	1332.4	1695.8	1563.7	1321.4	1111.4	782.7	404.1	125.4	84.7	113.5	143.2
87.5°	379.5	600.6	480.3	424.4	342.2	233.8	96.6	50.0	45.7	59.3	82.2
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):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3	1361.3
2.5°	1362.9	1362.9	1365.5	1366.3	1367.2	1367.2	1368.9	1368.9	1369.7	1373.1	1372.3
5°	1371.4	1374.0	1377.3	1379.0	1381.6	1382.4	1385.0	1385.0	1387.5	1390.1	1389.2
7.5°	1381.6	1384.1	1386.7	1389.2	1391.7	1395.1	1394.3	1393.4	1392.6	1390.9	1389.2
10°	1396.0	1398.5	1401.1	1400.2	1398.5	1396.8	1390.1	1382.4	1379.0	1372.3	1367.2
12.5°	1419.7	1422.2	1419.7	1412.9	1403.6	1392.6	1378.2	1365.5	1357.9	1347.7	1341.8
15°	1437.5	1440.0	1434.9	1423.1	1407.8	1393.4	1374.0	1357.9	1344.3	1333.3	1324.8
17.5°	1451.0	1449.3	1438.3	1424.8	1408.7	1396.8	1379.0	1361.3	1345.2	1329.9	1318.0
20°	1470.5	1461.2	1445.1	1428.2	1412.1	1401.9	1387.5	1371.4	1354.5	1332.4	1317.2
22.5°	1495.9	1479.0	1457.8	1440.9	1425.6	1415.5	1401.1	1385.8	1369.7	1344.3	1323.1
25°	1532.4	1505.3	1480.7	1462.9	1449.3	1439.2	1421.4	1405.3	1387.5	1362.1	1335.0
27.5°	1583.2	1544.2	1518.8	1501.0	1487.5	1475.6	1452.7	1433.3	1410.4	1385.0	1352.8
30°	1649.3	1601.8	1573.9	1558.6	1544.2	1527.3	1502.7	1473.9	1444.3	1410.4	1375.7
32.5°	1731.4	1678.1	1651.8	1636.6	1617.9	1595.0	1562.9	1524.7	1480.7	1435.8	1392.6
35°	1848.3	1787.3	1758.5	1732.3	1705.2	1671.3	1623.0	1567.9	1509.5	1451.0	1397.7
37.5°	1964.4	1907.6	1872.0	1844.9	1802.6	1747.5	1680.6	1604.4	1526.4	1451.9	1387.5
40°	2128.7	2062.6	2021.1	1972.8	1904.2	1818.7	1721.3	1618.8	1522.2	1432.4	1356.2
42.5°	2330.3	2254.9	2193.1	2105.8	1999.1	1875.4	1740.7	1610.3	1492.5	1389.2	1305.3
45°	2585.3	2487.0	2383.7	2246.4	2083.0	1910.2	1739.9	1580.6	1441.7	1324.8	1241.8
47.5°	2882.6	2744.5	2570.9	2361.6	2138.0	1918.6	1712.8	1527.3	1365.5	1236.7	1141.0
50°	3188.4	2988.5	2742.0	2450.6	2166.0	1897.4	1652.6	1440.0	1265.5	1119.0	1015.6
52.5°	3565.3	3255.3	2897.0	2510.7	2154.1	1834.8	1552.7	1317.2	1130.8	987.7	869.1
55°	4014.3	3562.0	3044.4	2543.8	2101.6	1722.1	1401.1	1156.3	960.6	830.1	723.4
57.5°	4757.2	4042.2	3296.0	2592.9	1998.3	1554.4	1216.4	963.1	779.3	668.3	582.8
60°	6038.0	5027.4	3827.9	2714.0	1855.1	1315.5	981.8	754.7	603.1	514.2	454.0
62.5°	6931.6	5624.6	4114.2	2672.5	1612.0	1036.0	725.9	539.6	439.6	381.2	340.5
65°	6758.0	5389.1	3769.5	2270.2	1263.0	732.7	482.8	365.1	308.3	271.9	251.6
66°	6446.2	5129.0	3506.9	2038.1	1095.3	610.7	398.1	302.4	265.1	238.9	225.3
67.5°	5877.9	4590.3	3035.1	1635.7	820.0	450.6	302.4	235.5	215.2	201.6	192.3
70°	4866.4	3629.7	2089.7	966.5	433.7	252.4	192.3	173.7	164.3	158.4	157.6
72.5°	3731.4	2603.9	1208.8	467.6	232.1	167.7	147.4	140.6	137.2	135.5	135.5
75°	2304.9	1468.8	540.4	234.6	160.1	137.2	127.9	124.5	123.7	123.7	123.7
77.5°	810.7	511.6	242.3	172.0	140.6	123.7	116.0	114.4	116.0	116.0	116.0
80°	223.6	197.4	175.3	152.5	127.1	114.4	107.6	106.7	110.1	111.0	107.6
82.5°	174.5	164.3	149.9	136.4	116.0	104.2	100.8	102.5	104.2	101.6	96.6
85°	149.1	142.3	105.0	105.0	94.0	90.6	89.8	91.5	90.6	83.9	77.1
87.5°	84.7	74.5	56.8	61.8	66.1	67.8	56.8	61.0	60.1	53.4	50.0
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):**

	160°	165°	170°	175°	180°
0°	1361.3	1361.3	1361.3	1361.3	1361.3
2.5°	1374.0	1374.0	1375.7	1375.7	1374.8
5°	1390.9	1390.9	1393.4	1391.7	1392.6
7.5°	1387.5	1384.1	1384.1	1382.4	1381.6
10°	1363.8	1357.9	1354.5	1356.2	1353.6
12.5°	1336.7	1331.6	1328.2	1327.4	1326.5
15°	1319.7	1313.8	1311.3	1309.6	1309.6
17.5°	1310.4	1303.6	1300.3	1297.7	1296.9
20°	1306.2	1297.7	1292.6	1290.1	1288.4
22.5°	1307.9	1297.7	1290.9	1287.6	1285.9
25°	1314.7	1302.0	1293.5	1289.2	1286.7
27.5°	1326.5	1309.6	1300.3	1294.3	1290.9
30°	1340.9	1317.2	1303.6	1295.2	1291.8
32.5°	1350.2	1318.0	1301.1	1288.4	1285.0
35°	1348.5	1308.7	1286.7	1270.6	1268.1
37.5°	1331.6	1284.2	1257.1	1235.9	1233.3
40°	1295.2	1246.9	1215.6	1194.4	1189.3
42.5°	1244.4	1194.4	1160.5	1141.0	1134.2
45°	1169.8	1108.8	1077.5	1061.4	1052.1
47.5°	1064.8	1007.2	972.4	958.9	947.0
50°	945.3	881.8	856.4	841.1	827.6
52.5°	804.7	750.5	731.0	716.6	705.6
55°	668.3	630.2	607.4	592.1	593.0
57.5°	537.0	514.2	501.5	485.4	487.1
60°	422.7	403.2	403.2	393.0	389.7
62.5°	322.7	315.1	312.6	309.2	303.3
65°	244.8	244.8	245.7	245.7	242.3
66°	220.2	222.8	226.2	226.2	221.9
67.5°	190.6	194.0	197.4	199.1	199.1
70°	157.6	161.8	163.5	165.2	164.3
72.5°	138.1	141.5	141.5	142.3	140.6
75°	125.4	127.1	127.9	126.2	125.4
77.5°	116.0	116.9	116.0	115.2	114.4
80°	105.0	104.2	101.6	98.3	97.4
82.5°	90.6	87.2	85.6	80.5	79.6
85°	72.8	68.6	65.2	58.4	55.1
87.5°	48.3	46.6	44.0	32.2	26.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)