

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: P146605

Luminaire Tested: **LDRL-T3-F03-E**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P146605  
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-F03-E  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 3  
Light Source: (21) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7394.6 lumens  
Efficiency: N/A  
Efficacy: 94.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

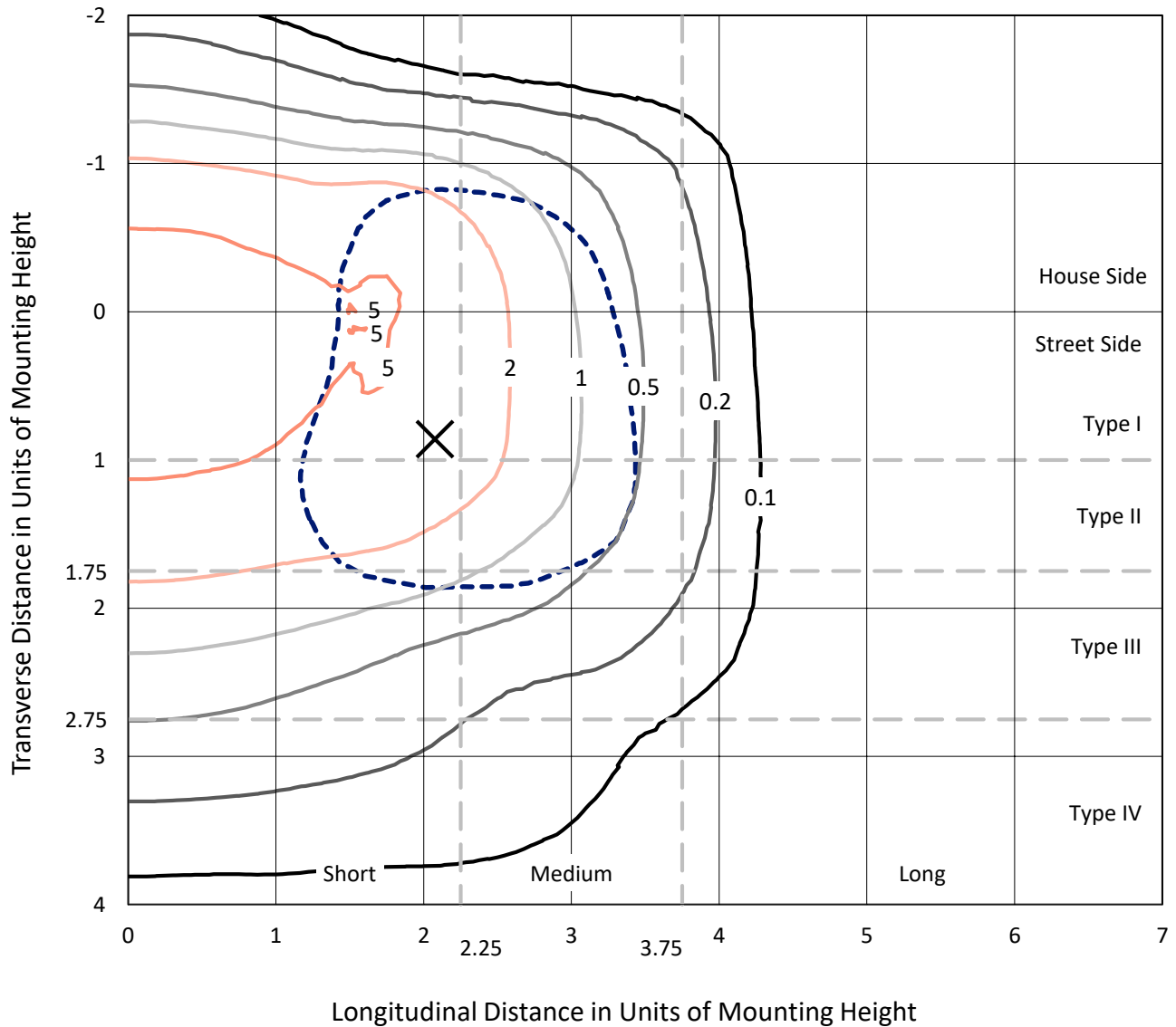
Input Watts (W): 78.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

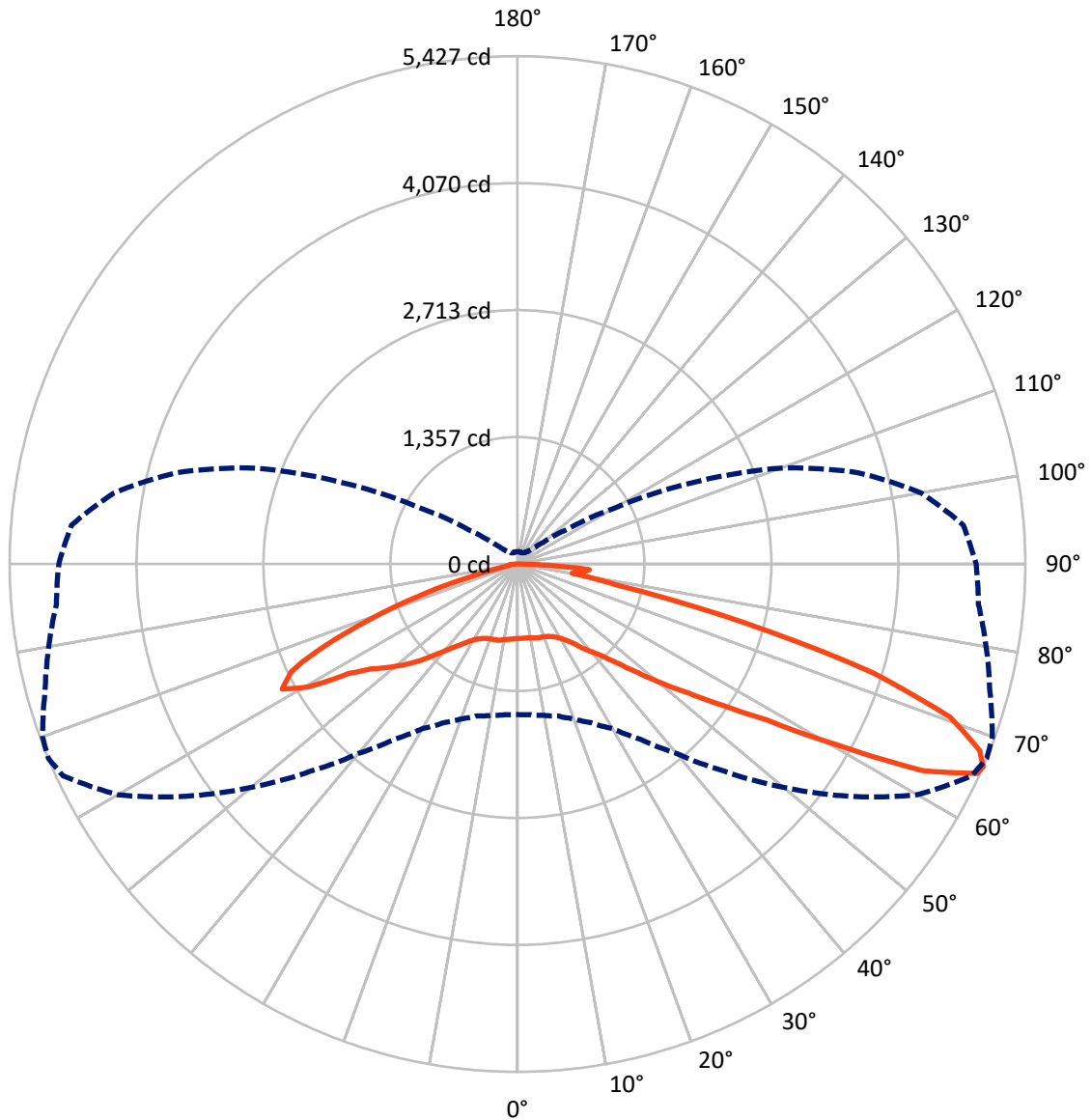
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8 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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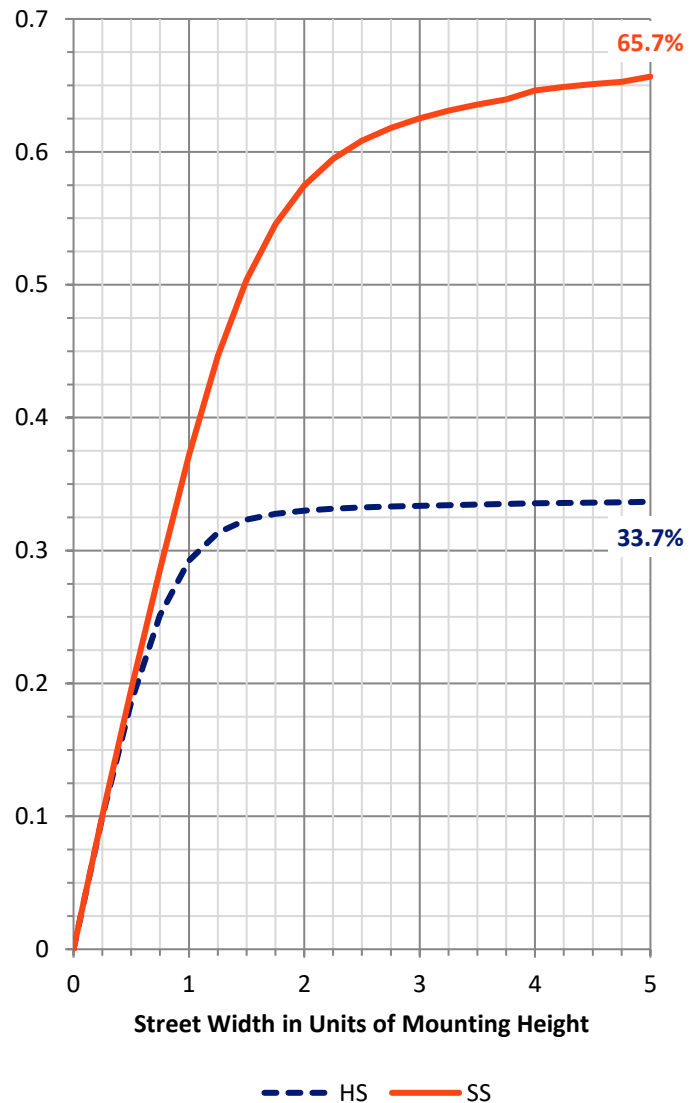
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2512.2	0.0	2512.2
	% Fixture	34.0	0.0	34.0
<b>Street Side</b>	Lumens	4882.4	0.0	4882.4
	% Fixture	66.0	0.0	66.0
<b>Total</b>	Lumens	7394.6	0.0	7394.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.5	1.0
10°-20°	226.6	3.1
20°-30°	389.5	5.3
30°-40°	626.5	8.5
40°-50°	1032.5	14.0
50°-60°	1618.5	21.9
60°-70°	2239.9	30.3
70°-80°	1013.7	13.7
80°-90°	171.0	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°	7394.6	100.0
0°-180°	7394.6	100.0



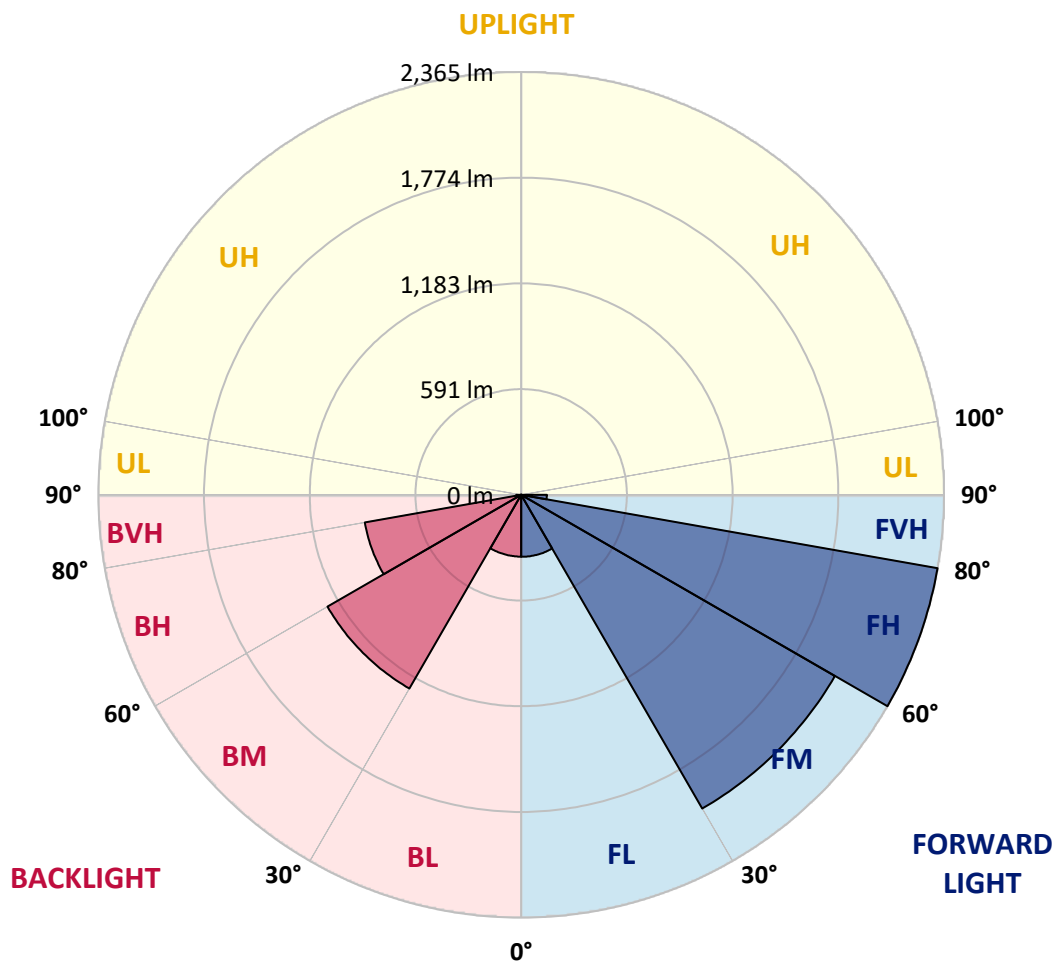
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	346.8	4.7			
FM	(30°-60°)	2026.4	27.4			
FH	(60°-80°)	2365.5	32.0			G2/5000
FVH	(80°-90°)	143.7	1.9			G2/225
BL	(0°-30°)	345.7	4.7	B1/500		
BM	(30°-60°)	1251.1	16.9	B2/2500		
BH	(60°-80°)	888.1	12.0	B2/1000		G2/1000
BVH	(80°-90°)	27.3	0.4			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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0
2.5°	795.0	794.5	794.0	794.0	793.5	794.0	794.5	795.0	794.5	795.0	794.5
5°	793.5	793.5	793.0	793.0	793.0	793.0	793.5	794.0	793.5	794.5	793.5
7.5°	787.1	790.0	789.0	790.0	791.0	792.0	792.5	793.5	795.0	796.0	795.0
10°	778.6	780.1	780.6	781.6	783.6	786.1	788.0	790.5	794.0	795.0	796.0
12.5°	763.3	765.3	766.7	768.7	771.7	775.7	779.1	783.1	789.0	793.0	796.5
15°	751.9	754.4	754.9	757.3	760.3	764.8	769.2	775.2	783.1	790.0	797.0
17.5°	759.3	760.3	759.3	759.3	760.3	762.3	765.8	770.7	779.1	787.6	796.0
20°	781.6	781.6	780.6	780.1	779.1	777.1	776.7	776.2	781.6	788.0	795.5
22.5°	802.9	802.9	802.4	804.4	803.9	803.9	802.4	799.9	797.5	796.5	801.4
25°	816.3	818.3	819.3	822.2	824.2	827.2	828.2	827.7	824.2	818.3	816.8
27.5°	838.1	839.6	840.5	844.0	848.0	851.4	854.9	859.4	859.4	853.9	846.5
30°	880.2	878.2	879.2	880.2	883.6	888.6	893.1	899.0	902.0	900.0	890.1
32.5°	919.3	921.3	922.3	925.2	928.7	936.1	941.6	948.5	955.0	956.0	951.0
35°	976.8	975.8	974.3	984.7	988.6	997.1	1003.5	1013.4	1018.4	1022.8	1019.9
37.5°	1067.4	1064.4	1062.5	1065.4	1070.9	1076.3	1085.7	1093.2	1101.6	1112.0	1108.5
40°	1195.7	1201.6	1193.2	1197.2	1201.6	1189.3	1197.7	1204.6	1219.0	1219.5	1219.0
42.5°	1362.6	1367.1	1365.1	1367.6	1359.6	1355.7	1352.2	1355.7	1373.5	1371.0	1359.1
45°	1529.5	1536.0	1534.5	1535.5	1550.8	1544.4	1549.8	1550.8	1569.2	1564.2	1555.3
47.5°	1672.2	1683.1	1685.6	1694.5	1715.3	1732.1	1755.4	1772.7	1781.6	1787.6	1794.5
50°	1785.1	1793.0	1806.9	1829.2	1859.4	1888.6	1941.1	1975.3	2006.5	2028.3	2050.6
52.5°	1859.9	1868.8	1890.1	1923.8	1967.4	2020.9	2082.3	2153.6	2219.5	2258.1	2291.3
55°	1890.6	1899.5	1925.8	1969.9	2027.8	2096.2	2184.3	2284.9	2372.6	2461.2	2512.2
57.5°	1872.8	1882.7	1912.9	1962.4	2032.3	2121.9	2231.4	2354.7	2483.0	2617.2	2719.8
60°	1820.3	1829.2	1863.4	1914.9	1994.6	2095.7	2226.9	2381.5	2561.8	2760.9	2955.5
62.5°	1748.0	1761.3	1791.6	1844.1	1923.3	2033.8	2183.3	2384.4	2643.0	2964.0	3342.9
65°	1655.8	1665.7	1692.5	1734.1	1821.3	1936.7	2094.7	2340.9	2678.7	3133.9	3674.7
66°	1608.3	1617.7	1642.5	1681.6	1761.3	1872.3	2030.3	2282.4	2639.0	3132.9	3709.9
67.5°	1524.6	1529.0	1546.9	1585.5	1637.5	1737.1	1883.7	2119.9	2471.1	3000.6	3611.8
70°	1278.9	1285.3	1302.7	1322.5	1341.8	1377.5	1480.0	1636.0	1916.9	2424.6	3007.6
72.5°	884.6	894.5	913.4	950.0	980.2	1025.3	1065.4	1117.4	1210.5	1563.2	2151.6
75°	639.5	642.9	670.7	735.0	796.0	886.1	965.9	991.1	959.4	954.0	1264.0
77.5°	381.4	386.3	426.5	491.4	554.8	677.1	840.5	966.9	1036.7	1011.9	956.9
80°	160.5	167.4	191.2	208.0	260.5	363.1	524.5	722.7	906.9	1020.3	994.6
82.5°	51.5	59.9	70.8	85.7	101.0	135.2	209.5	313.5	495.3	738.5	907.9
85°	18.8	19.3	26.7	37.1	41.1	47.6	60.9	94.1	167.4	276.9	515.1
87.5°	7.4	8.9	10.4	14.4	14.9	15.4	17.3	22.3	21.8	18.8	97.6
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°	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0
2.5°	795.0	796.0	795.5	796.0	796.0	795.0	795.0	797.0	795.5	796.5	796.5
5°	794.5	795.5	795.0	796.0	796.0	795.5	795.5	798.4	798.0	799.4	800.4
7.5°	796.5	797.0	796.5	796.5	798.0	797.5	798.0	798.9	801.4	803.9	805.9
10°	798.9	799.9	801.4	801.9	803.9	803.4	804.9	806.4	808.8	811.3	813.8
12.5°	802.4	805.4	809.8	810.8	812.8	814.3	816.8	818.3	820.2	824.2	827.2
15°	805.4	810.8	816.3	818.3	820.2	822.2	824.7	826.2	829.7	833.1	836.6
17.5°	806.4	812.8	819.7	822.2	824.2	827.7	830.6	833.6	837.6	842.0	846.0
20°	806.9	815.8	824.7	827.7	832.1	837.1	842.0	844.5	850.0	855.4	858.9
22.5°	811.3	822.2	834.6	840.1	844.5	853.4	859.9	863.8	870.3	874.7	876.2
25°	823.7	835.1	850.0	858.4	865.8	878.7	886.6	894.0	897.5	903.5	902.0
27.5°	846.0	854.9	874.2	885.6	895.0	911.9	927.2	934.2	939.6	942.6	939.1
30°	884.1	887.6	908.9	922.8	938.6	964.9	981.7	990.6	997.6	998.1	989.1
32.5°	941.1	935.6	954.5	974.3	995.1	1026.8	1049.6	1059.0	1064.4	1064.9	1045.1
35°	1018.4	1009.0	1024.8	1044.1	1069.9	1111.5	1140.2	1151.1	1159.5	1155.6	1126.3
37.5°	1115.9	1115.4	1122.9	1147.6	1176.9	1230.4	1260.6	1266.5	1266.0	1254.1	1210.1
40°	1224.4	1215.5	1216.5	1234.3	1268.0	1338.3	1380.4	1390.3	1386.9	1369.5	1312.1
42.5°	1361.1	1357.2	1343.8	1353.2	1384.4	1470.1	1521.1	1531.0	1534.0	1505.3	1437.4
45°	1552.8	1549.3	1519.6	1521.6	1544.4	1634.5	1687.5	1703.9	1704.4	1677.1	1589.0
47.5°	1785.1	1782.1	1747.5	1737.6	1749.0	1829.2	1895.1	1898.5	1899.5	1861.9	1770.3
50°	2048.6	2040.2	2014.0	2003.5	1990.2	2078.8	2131.8	2131.3	2125.9	2084.3	1981.3
52.5°	2303.2	2322.0	2312.1	2291.8	2292.3	2356.2	2406.2	2378.5	2382.0	2342.3	2224.0
55°	2575.1	2623.2	2659.3	2666.8	2663.3	2696.0	2723.7	2674.2	2655.9	2649.4	2523.6
57.5°	2863.9	2986.7	3098.2	3144.8	3126.9	3186.9	3211.6	3160.1	3161.1	3211.6	3103.1
60°	3249.8	3559.8	3840.7	3927.8	3968.5	4067.5	4023.4	4020.5	4098.2	4163.6	3962.5
62.5°	3835.2	4348.9	4797.1	4862.0	4894.7	4917.0	4897.2	4843.2	4923.4	4931.4	4621.3
65°	4279.0	4881.8	5315.2	5396.5	5390.5	5277.1	5167.1	5059.1	5058.2	4978.9	4579.7
66°	4327.1	4932.3	5354.8	5426.7	5400.4	5225.6	5085.9	4945.7	4900.6	4781.8	4376.6
67.5°	4222.1	4844.2	5263.7	5328.1	5272.1	5006.1	4815.9	4626.2	4558.4	4392.9	3979.9
70°	3609.4	4250.3	4811.5	4904.6	4838.2	4485.1	4203.2	3994.7	3810.0	3647.0	3306.2
72.5°	2798.5	3278.0	3871.9	3969.0	3974.4	3698.0	3380.5	3180.4	2965.5	2802.0	2546.4
75°	1835.6	2198.2	2524.6	2491.9	2501.3	2283.9	2094.7	1928.3	1733.6	1604.8	1483.0
77.5°	1072.9	1202.6	1172.9	1091.7	1023.3	804.4	575.6	395.3	344.7	359.6	405.7
80°	932.7	859.9	673.1	591.9	538.4	365.5	196.6	138.7	121.8	123.3	130.8
82.5°	1004.0	1041.6	854.9	703.8	613.7	430.4	231.3	115.4	83.2	97.1	107.0
85°	779.1	991.6	914.4	772.7	649.9	457.7	236.3	73.3	49.5	66.4	83.7
87.5°	221.9	351.2	280.8	248.2	200.1	136.7	56.5	29.2	26.7	34.7	48.0
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):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0	796.0
2.5°	797.0	797.0	798.4	798.9	799.4	799.4	800.4	800.4	800.9	802.9	802.4
5°	801.9	803.4	805.4	806.4	807.9	808.4	809.8	809.8	811.3	812.8	812.3
7.5°	807.9	809.3	810.8	812.3	813.8	815.8	815.3	814.8	814.3	813.3	812.3
10°	816.3	817.8	819.3	818.8	817.8	816.8	812.8	808.4	806.4	802.4	799.4
12.5°	830.1	831.6	830.1	826.2	820.7	814.3	805.9	798.4	794.0	788.0	784.6
15°	840.5	842.0	839.1	832.1	823.2	814.8	803.4	794.0	786.1	779.6	774.7
17.5°	848.5	847.5	841.0	833.1	823.7	816.8	806.4	796.0	786.6	777.6	770.7
20°	859.9	854.4	845.0	835.1	825.7	819.7	811.3	801.9	792.0	779.1	770.2
22.5°	874.7	864.8	852.4	842.5	833.6	827.7	819.3	810.3	800.9	786.1	773.7
25°	896.0	880.2	865.8	855.4	847.5	841.5	831.1	821.7	811.3	796.5	780.6
27.5°	925.7	903.0	888.1	877.7	869.8	862.8	849.5	838.1	824.7	809.8	791.0
30°	964.4	936.6	920.3	911.4	903.0	893.1	878.7	861.8	844.5	824.7	804.4
32.5°	1012.4	981.2	965.9	956.9	946.1	932.7	913.9	891.6	865.8	839.6	814.3
35°	1080.8	1045.1	1028.3	1012.9	997.1	977.3	949.0	916.8	882.7	848.5	817.3
37.5°	1148.6	1115.4	1094.6	1078.8	1054.0	1021.8	982.7	938.1	892.6	849.0	811.3
40°	1244.7	1206.1	1181.8	1153.6	1113.5	1063.4	1006.5	946.5	890.1	837.6	793.0
42.5°	1362.6	1318.5	1282.4	1231.4	1168.9	1096.6	1017.9	941.6	872.7	812.3	763.3
45°	1511.7	1454.2	1393.8	1313.6	1218.0	1116.9	1017.4	924.3	843.0	774.7	726.1
47.5°	1685.6	1604.8	1503.3	1380.9	1250.2	1121.9	1001.5	893.1	798.4	723.2	667.2
50°	1864.4	1747.5	1603.3	1432.9	1266.5	1109.5	966.4	842.0	740.0	654.3	593.9
52.5°	2084.8	1903.5	1694.0	1468.1	1259.6	1072.9	907.9	770.2	661.2	577.5	508.2
55°	2347.3	2082.8	1780.2	1487.4	1228.9	1007.0	819.3	676.1	561.7	485.4	423.0
57.5°	2781.7	2363.6	1927.3	1516.2	1168.4	908.9	711.3	563.2	455.7	390.8	340.8
60°	3530.6	2939.7	2238.3	1587.0	1084.7	769.2	574.1	441.3	352.7	300.7	265.5
62.5°	4053.2	3288.9	2405.7	1562.7	942.6	605.8	424.5	315.5	257.1	222.9	199.1
65°	3951.6	3151.2	2204.2	1327.4	738.5	428.4	282.3	213.5	180.3	159.0	147.1
66°	3769.3	2999.1	2050.6	1191.7	640.4	357.1	232.8	176.8	155.0	139.7	131.8
67.5°	3437.0	2684.1	1774.7	956.5	479.5	263.5	176.8	137.7	125.8	117.9	112.4
70°	2845.6	2122.4	1221.9	565.2	253.6	147.6	112.4	101.5	96.1	92.6	92.1
72.5°	2181.9	1522.6	706.8	273.4	135.7	98.1	86.2	82.2	80.2	79.3	79.3
75°	1347.8	858.9	316.0	137.2	93.6	80.2	74.8	72.8	72.3	72.3	72.3
77.5°	474.0	299.2	141.7	100.5	82.2	72.3	67.9	66.9	67.9	67.9	67.9
80°	130.8	115.4	102.5	89.2	74.3	66.9	62.9	62.4	64.4	64.9	62.9
82.5°	102.0	96.1	87.7	79.7	67.9	60.9	58.9	59.9	60.9	59.4	56.5
85°	87.2	83.2	61.4	61.4	55.0	53.0	52.5	53.5	53.0	49.0	45.1
87.5°	49.5	43.6	33.2	36.2	38.6	39.6	33.2	35.7	35.2	31.2	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):**

	160°	165°	170°	175°	180°
0°	796.0	796.0	796.0	796.0	796.0
2.5°	803.4	803.4	804.4	804.4	803.9
5°	813.3	813.3	814.8	813.8	814.3
7.5°	811.3	809.3	809.3	808.4	807.9
10°	797.5	794.0	792.0	793.0	791.5
12.5°	781.6	778.6	776.7	776.2	775.7
15°	771.7	768.2	766.7	765.8	765.8
17.5°	766.3	762.3	760.3	758.8	758.3
20°	763.8	758.8	755.9	754.4	753.4
22.5°	764.8	758.8	754.9	752.9	751.9
25°	768.7	761.3	756.3	753.9	752.4
27.5°	775.7	765.8	760.3	756.8	754.9
30°	784.1	770.2	762.3	757.3	755.4
32.5°	789.5	770.7	760.8	753.4	751.4
35°	788.5	765.3	752.4	743.0	741.5
37.5°	778.6	750.9	735.0	722.7	721.2
40°	757.3	729.1	710.8	698.4	695.4
42.5°	727.6	698.4	678.6	667.2	663.2
45°	684.0	648.4	630.0	620.6	615.2
47.5°	622.6	588.9	568.6	560.7	553.8
50°	552.8	515.6	500.8	491.8	483.9
52.5°	470.5	438.8	427.5	419.0	412.6
55°	390.8	368.5	355.1	346.2	346.7
57.5°	314.0	300.7	293.2	283.8	284.8
60°	247.2	235.8	235.8	229.8	227.8
62.5°	188.7	184.3	182.8	180.8	177.3
65°	143.1	143.1	143.6	143.6	141.7
66°	128.8	130.3	132.2	132.2	129.8
67.5°	111.4	113.4	115.4	116.4	116.4
70°	92.1	94.6	95.6	96.6	96.1
72.5°	80.7	82.7	82.7	83.2	82.2
75°	73.3	74.3	74.8	73.8	73.3
77.5°	67.9	68.4	67.9	67.4	66.9
80°	61.4	60.9	59.4	57.5	57.0
82.5°	53.0	51.0	50.0	47.1	46.6
85°	42.6	40.1	38.1	34.2	32.2
87.5°	28.2	27.2	25.8	18.8	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)