

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: P163563

Luminaire Tested: **LDRL-SL3-F06-E-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P163563  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: LDRL-SL3-F06-E-7050-HSS  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (42) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

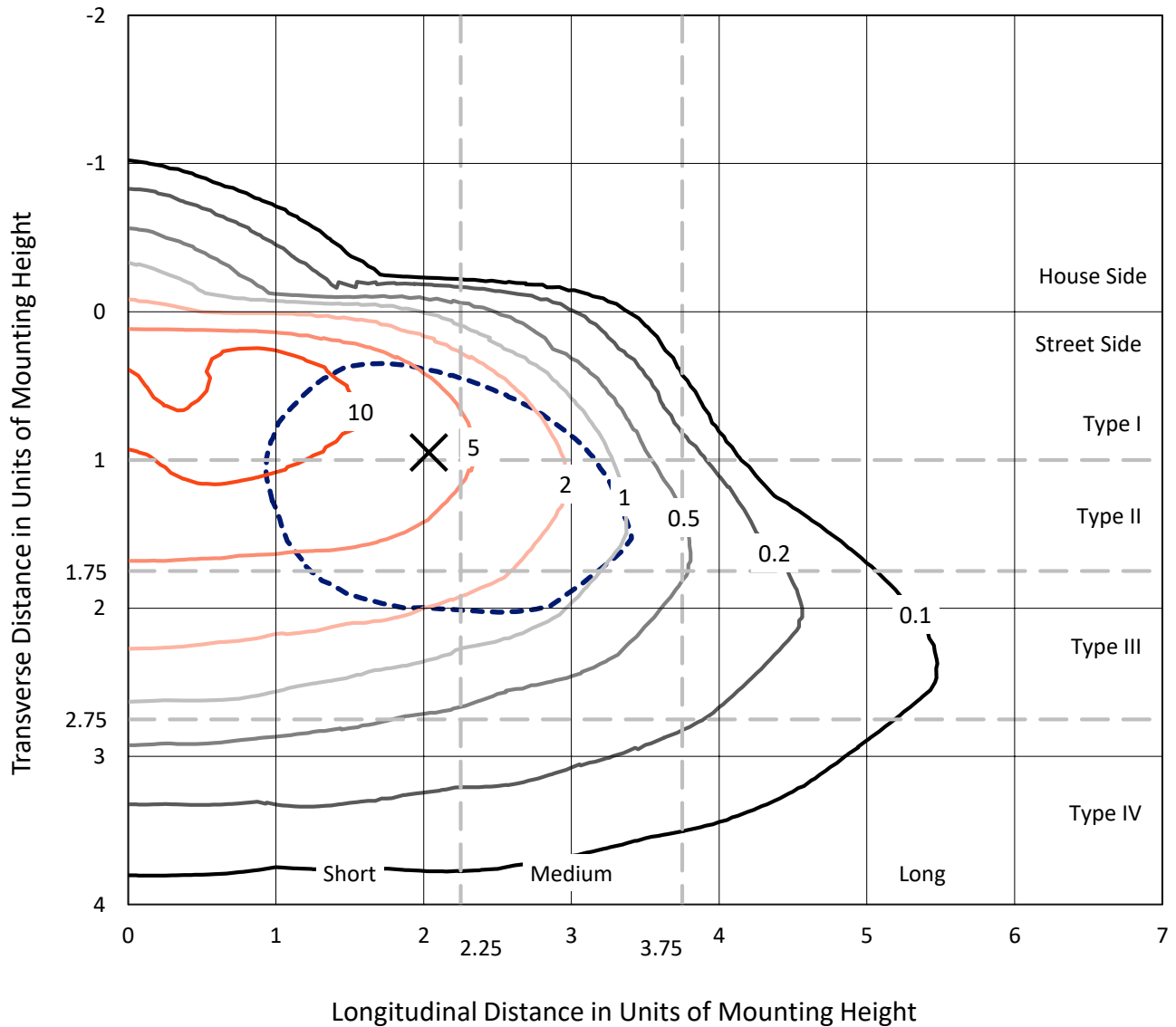
Lumens per Lamp: N/A  
Luminaire Lumens: 8547.6 lumens  
Efficiency: N/A  
Efficacy: 54.6 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 1' x H: 0.1')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B0 - U0 - G2  
  
Input Watts (W): 156.5  
Input Voltage (V): NR  
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

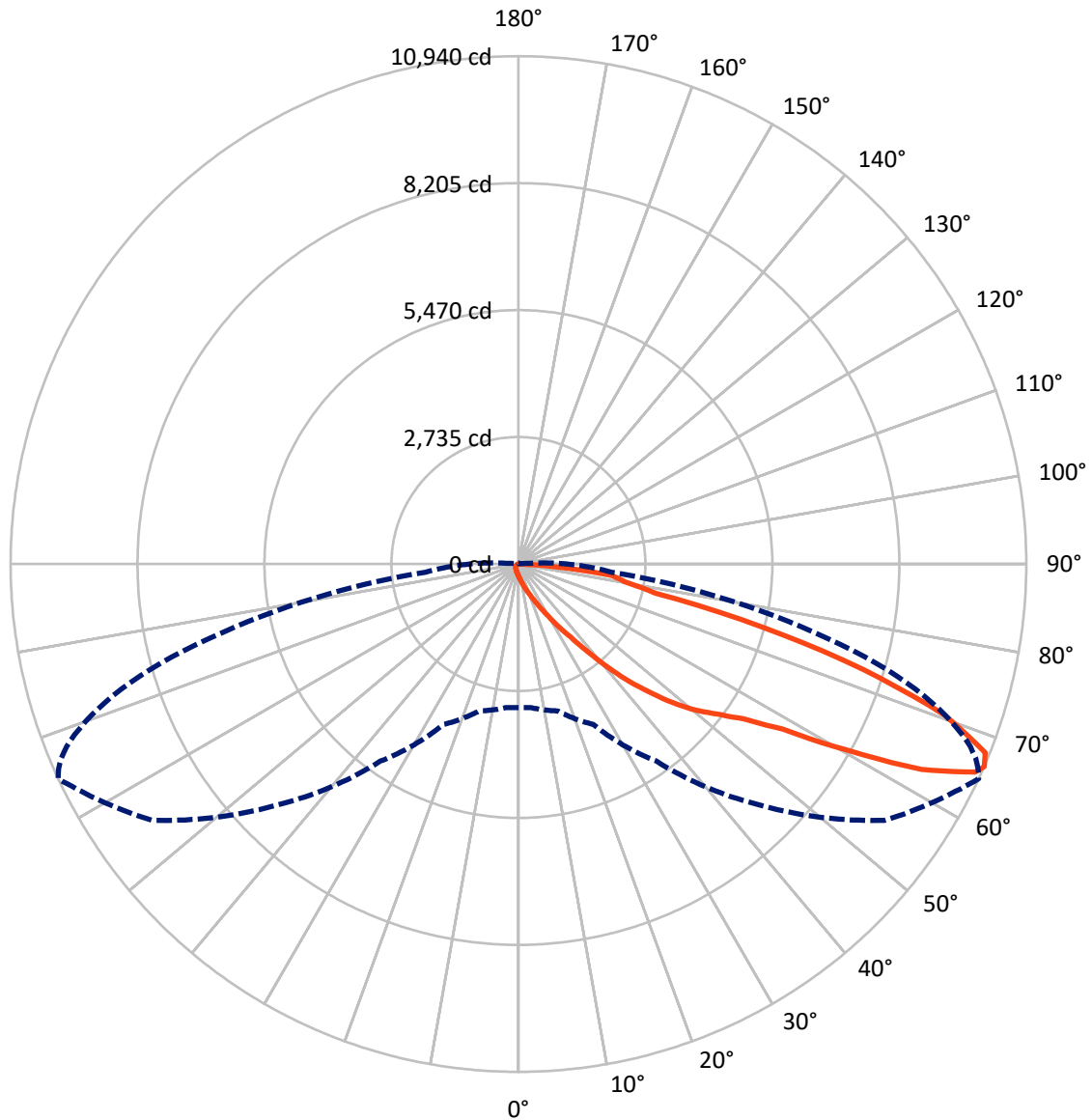
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.1 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

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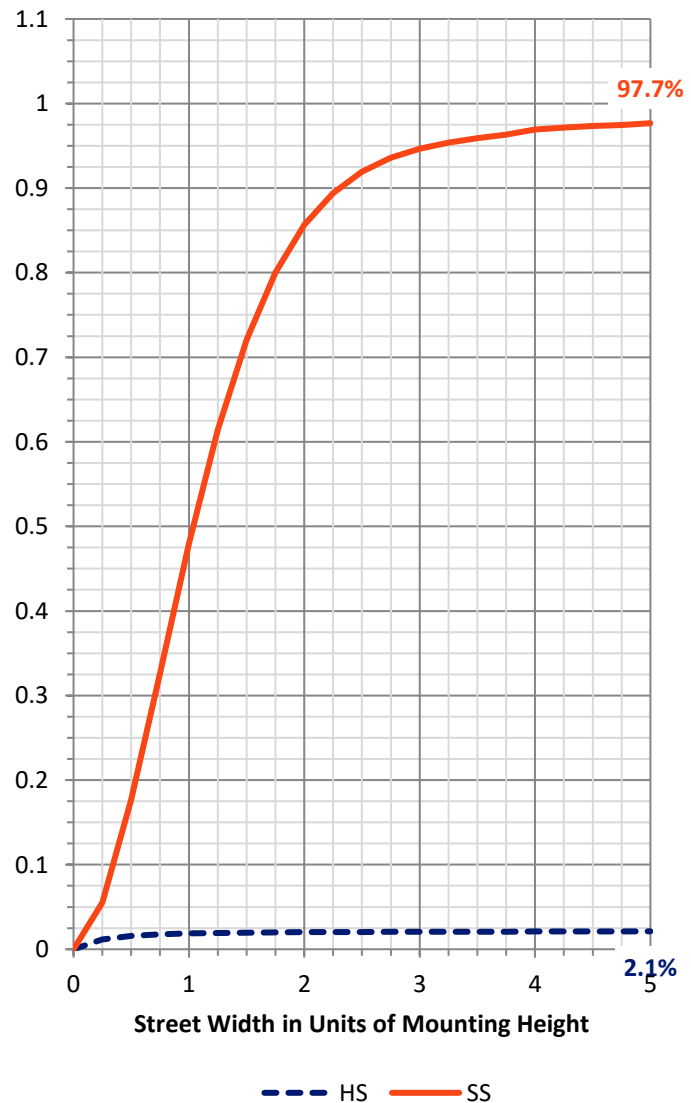
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	185.2	0.0	185.2
	% Fixture	2.2	0.0	2.2
<b>Street Side</b>	Lumens	8362.4	0.0	8362.4
	% Fixture	97.8	0.0	97.8
<b>Total</b>	Lumens	8547.6	0.0	8547.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.9	0.3
10°-20°	122.5	1.4
20°-30°	264.1	3.1
30°-40°	564.1	6.6
40°-50°	1247.4	14.6
50°-60°	2114.0	24.7
60°-70°	2820.9	33.0
70°-80°	1242.6	14.5
80°-90°	143.1	1.7
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°	8547.6	100.0
0°-180°	8547.6	100.0



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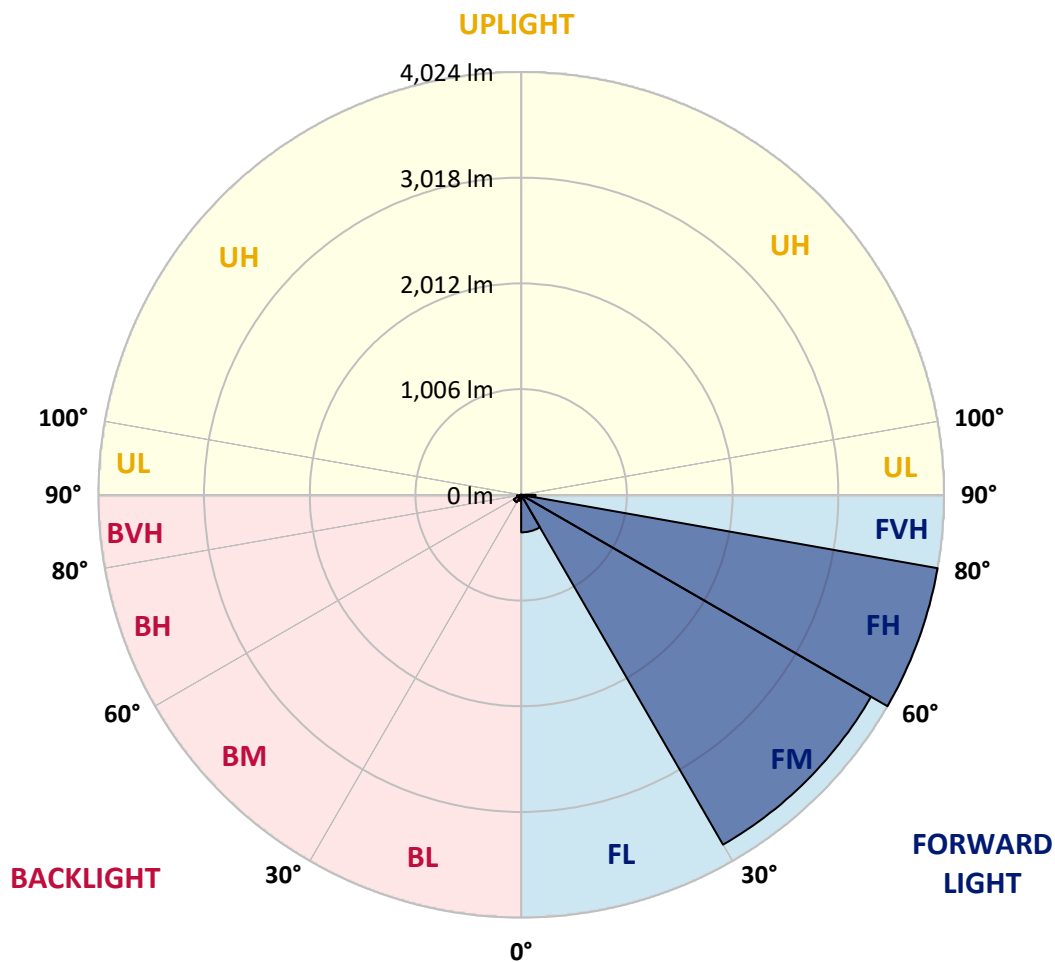
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	357.0	4.2			
FM	(30°-60°)	3844.1	45.0			
FH	(60°-80°)	4023.8	47.1			G2/5000
FVH	(80°-90°)	137.4	1.6			G2/225
BL	(0°-30°)	58.4	0.7	B0/110		
BM	(30°-60°)	81.3	1.0	B0/220		
BH	(60°-80°)	39.7	0.5	B0/110		G0/110
BVH	(80°-90°)	5.7	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0
2.5°	325.4	323.8	317.1	317.1	307.3	300.7	292.5	284.3	284.3	282.7	281.0
5°	430.6	420.7	419.0	401.0	386.2	364.8	345.1	318.8	315.5	312.3	310.5
7.5°	547.2	545.6	530.8	509.5	479.9	440.4	401.0	358.2	351.7	348.4	341.8
10°	698.4	690.2	670.5	634.3	590.0	537.3	473.3	405.9	397.7	391.1	387.8
12.5°	843.0	828.2	816.8	770.7	714.8	637.6	560.4	463.4	456.8	448.6	435.5
15°	977.8	964.6	944.9	905.5	843.0	746.1	655.6	537.3	521.0	509.5	499.6
17.5°	1083.0	1074.7	1051.8	1007.3	939.9	854.6	746.1	612.9	599.8	585.0	566.9
20°	1183.2	1171.7	1135.5	1074.7	1002.5	936.7	852.8	711.5	693.4	675.4	655.6
22.5°	1278.5	1267.0	1207.8	1107.6	1030.3	1002.5	972.9	823.3	795.4	780.6	760.8
25°	1411.6	1387.0	1294.9	1135.5	1032.0	1053.4	1104.3	967.9	941.6	920.2	889.0
27.5°	1590.7	1557.9	1413.2	1176.6	1038.5	1109.2	1255.5	1143.8	1115.8	1091.2	1056.6
30°	1792.9	1771.4	1598.9	1275.2	1086.2	1191.4	1424.7	1367.3	1334.3	1304.8	1263.7
32.5°	1996.6	1967.0	1796.1	1462.5	1214.4	1350.8	1636.8	1626.9	1584.2	1556.2	1511.8
35°	2175.7	2161.0	2034.4	1769.8	1506.9	1630.1	1919.3	1930.9	1893.1	1863.5	1814.2
37.5°	2297.4	2297.4	2272.7	2100.2	1972.0	2064.0	2335.2	2336.8	2299.0	2231.6	2207.0
40°	2359.8	2377.9	2466.6	2499.4	2492.9	2611.3	2880.7	2851.2	2819.9	2785.4	2703.3
42.5°	2488.0	2504.4	2693.4	2920.2	3068.1	3224.2	3409.8	3400.0	3362.2	3299.7	3224.2
45°	2704.9	2726.2	2951.4	3311.2	3615.3	3837.2	3955.5	3909.4	3871.6	3812.5	3773.0
47.5°	2981.0	3022.0	3276.8	3722.1	4088.5	4455.0	4578.3	4456.7	4423.8	4377.8	4313.7
50°	3275.1	3314.6	3585.7	4095.1	4509.3	4946.3	5151.8	4946.3	4898.7	4883.9	4811.7
52.5°	3529.9	3562.7	3823.9	4382.7	4831.4	5344.0	5643.2	5372.0	5337.5	5288.2	5235.5
55°	3681.0	3707.3	3952.1	4520.7	5049.9	5702.3	6118.1	5879.8	5828.9	5809.1	5733.5
57.5°	3731.9	3758.3	3978.4	4538.8	5168.2	6029.3	6694.8	6703.0	6642.3	6571.6	6548.6
60°	3731.9	3761.5	3947.2	4494.4	5283.2	6377.7	7463.9	8149.2	8017.7	8004.6	7920.8
62.5°	3577.4	3605.4	3792.7	4358.1	5437.7	6847.7	8535.4	9744.8	9707.1	9621.6	9483.6
65°	3242.3	3258.7	3442.8	4009.6	5378.6	7279.9	9463.8	10806.4	10745.6	10578.0	10400.5
66°	3091.0	3104.3	3276.8	3810.8	5184.6	7339.1	9628.2	10939.5	10839.2	10698.0	10497.5
67.5°	2872.5	2895.5	3017.1	3441.1	4719.6	7133.6	9524.6	10845.9	10758.7	10587.9	10387.3
70°	1917.7	1901.3	2330.2	2640.8	3595.5	5812.4	8545.2	9738.3	9739.9	9659.4	9578.9
72.5°	910.4	920.2	1045.2	1625.3	2353.2	3883.1	6801.6	7772.9	7884.6	7740.0	7639.7
75°	654.0	668.9	744.4	994.2	1403.4	2330.2	4409.0	5436.1	5439.3	5183.0	4954.6
77.5°	190.6	198.8	279.3	612.9	1051.8	1572.6	2532.4	3022.0	2951.4	2767.3	2594.8
80°	78.9	78.9	82.1	195.6	422.4	1068.1	1771.4	2327.0	2318.7	2248.1	2146.1
82.5°	29.6	31.2	39.4	80.5	100.2	263.0	1181.6	2019.7	2014.7	1914.5	1842.2
85°	3.3	3.3	9.9	34.5	37.8	49.3	236.6	890.6	885.8	890.6	780.6
87.5°	0.0	0.0	1.6	3.3	4.9	6.6	9.9	34.5	37.8	36.2	32.8
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):**

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0
2.5°	281.0	277.7	277.7	276.1	276.1	276.1	274.5	272.8	272.8	271.1	269.5
5°	307.3	304.0	302.4	299.1	297.4	295.8	292.5	290.8	287.6	285.9	284.3
7.5°	338.5	332.0	330.3	325.4	320.4	317.1	313.9	308.9	305.7	299.1	297.4
10°	377.9	369.7	363.2	356.6	351.7	343.5	338.5	332.0	325.4	320.4	315.5
12.5°	428.9	417.4	407.5	401.0	389.4	379.6	369.7	364.8	351.7	345.1	336.9
15°	484.8	471.7	460.2	447.0	438.7	422.4	409.1	394.4	387.8	376.3	363.2
17.5°	557.0	535.7	517.6	504.5	488.0	471.7	456.8	442.1	422.4	409.1	392.8
20°	634.3	616.2	591.6	568.6	548.9	529.2	507.7	488.0	470.0	448.6	428.9
22.5°	732.9	706.7	677.1	654.0	627.8	606.3	576.8	550.5	521.0	493.0	470.0
25°	857.8	823.3	795.4	762.5	731.3	698.4	662.2	629.4	591.6	565.3	525.8
27.5°	1012.3	979.4	941.6	898.9	867.7	818.4	770.7	729.6	685.2	644.2	599.8
30°	1209.5	1161.8	1122.4	1081.3	1018.8	971.2	915.3	859.4	798.7	757.6	690.2
32.5°	1446.2	1395.1	1336.0	1276.8	1219.4	1152.0	1083.0	1013.9	946.6	870.9	801.9
35°	1735.4	1674.6	1607.2	1543.0	1454.3	1382.0	1294.9	1199.7	1124.0	1036.9	949.8
37.5°	2118.3	2017.9	1958.8	1891.5	1771.4	1672.8	1576.0	1480.6	1347.6	1255.5	1132.3
40°	2598.0	2538.9	2441.9	2333.5	2225.0	2095.2	1963.8	1837.2	1682.7	1554.6	1411.6
42.5°	3161.7	3074.7	2976.1	2819.9	2709.9	2557.0	2407.5	2239.8	2050.9	1886.5	1718.9
45°	3690.9	3587.3	3511.8	3355.6	3240.6	3059.8	2879.1	2701.6	2483.1	2271.0	2077.1
47.5°	4262.8	4177.3	4052.4	3925.9	3809.2	3605.4	3409.8	3194.6	2964.5	2713.1	2461.6
50°	4765.6	4698.2	4612.7	4460.0	4330.1	4159.2	3929.1	3694.1	3403.3	3153.6	2867.6
52.5°	5192.8	5140.3	5020.3	4911.9	4795.2	4634.2	4428.7	4203.6	3889.7	3615.3	3289.9
55°	5697.3	5659.5	5554.4	5487.0	5383.4	5229.0	5036.7	4828.0	4496.1	4197.0	3828.9
57.5°	6523.9	6494.4	6402.4	6374.4	6272.6	6137.8	5901.1	5677.6	5289.8	4918.4	4497.8
60°	7892.8	7833.7	7698.9	7629.9	7414.6	7233.9	6926.6	6619.3	6150.9	5677.6	5171.5
62.5°	9358.6	9192.6	8936.3	8716.1	8410.4	8096.6	7685.8	7215.8	6666.9	6104.9	5523.2
65°	10149.1	9866.5	9542.7	9192.6	8796.6	8334.8	7817.2	7253.6	6663.6	6070.4	5455.8
66°	10239.4	9920.6	9577.2	9187.8	8747.3	8255.9	7730.1	7138.5	6525.6	5947.2	5332.5
67.5°	10126.1	9792.5	9429.3	8997.2	8520.5	8011.2	7459.0	6844.3	6254.5	5667.7	5069.6
70°	9332.4	9000.4	8676.7	8221.5	7713.7	7201.0	6678.4	5991.5	5432.7	4893.8	4361.4
72.5°	7452.4	7227.2	6906.9	6517.3	6022.7	5421.3	4985.8	4371.2	3886.5	3363.9	2951.4
75°	4657.2	4340.0	3944.0	3447.6	3069.7	2581.7	2327.0	1860.2	1584.2	1342.6	1109.2
77.5°	2381.1	2142.9	1865.2	1585.8	1318.0	1051.8	813.4	575.1	387.8	269.5	200.5
80°	1967.0	1756.7	1526.7	1271.9	1035.3	803.5	578.5	394.4	251.4	164.4	128.2
82.5°	1625.3	1447.8	1242.4	1005.7	800.3	631.0	438.7	285.9	177.5	115.1	90.4
85°	691.8	627.8	484.8	384.5	289.2	213.7	149.5	100.2	70.6	57.5	52.6
87.5°	29.6	32.8	31.2	24.6	18.1	18.1	16.5	13.1	13.1	13.1	13.1
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):**

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0	258.0
2.5°	269.5	267.8	266.2	266.2	264.6	263.0	253.1	244.9	235.0	228.4	221.8
5°	281.0	279.3	276.1	274.5	271.1	269.5	248.1	230.0	215.3	203.8	195.6
7.5°	292.5	290.8	285.9	281.0	279.3	276.1	241.5	218.5	198.8	185.7	177.5
10°	307.3	302.4	297.4	290.8	285.9	281.0	235.0	205.4	184.1	172.5	164.4
12.5°	328.6	320.4	312.3	304.0	297.4	289.2	231.7	193.9	172.5	159.4	151.2
15°	353.3	341.8	332.0	322.1	310.5	302.4	225.2	184.1	162.6	149.5	139.7
17.5°	376.3	363.2	348.4	333.6	322.1	310.5	218.5	174.2	152.8	139.7	129.8
20°	409.1	389.4	371.4	353.3	336.9	322.1	208.7	164.4	144.6	129.8	119.9
22.5°	445.3	422.4	399.3	374.7	353.3	333.6	200.5	156.1	136.4	121.6	110.1
25°	491.4	463.4	432.2	401.0	376.3	350.0	192.2	147.9	128.2	113.3	101.9
27.5°	555.4	516.0	481.5	442.1	404.3	374.7	185.7	141.3	119.9	105.2	93.6
30°	642.5	585.0	530.8	488.0	443.7	401.0	179.1	133.1	113.3	97.0	83.8
32.5°	739.5	672.1	609.7	545.6	489.7	440.4	172.5	126.6	105.2	88.7	77.3
35°	859.4	774.0	690.2	616.2	548.9	483.1	166.0	119.9	98.6	80.5	69.0
37.5°	1032.0	925.2	815.1	719.8	632.7	545.6	161.0	113.3	90.4	72.3	60.8
40°	1268.7	1130.6	995.9	866.1	752.6	644.2	154.5	106.8	83.8	65.8	54.2
42.5°	1525.0	1357.4	1179.9	1033.7	877.5	741.1	147.9	100.2	77.3	59.2	47.7
45°	1843.8	1635.1	1419.8	1221.0	1030.3	854.6	141.3	93.6	69.0	52.6	41.1
47.5°	2192.2	1925.9	1682.7	1432.9	1206.2	995.9	133.1	88.7	62.4	46.0	36.2
50°	2550.4	2269.4	1962.1	1677.8	1408.3	1137.1	124.9	80.5	55.9	41.1	29.6
52.5°	2936.6	2604.7	2290.8	1937.4	1623.6	1322.9	116.7	73.9	50.9	36.2	24.6
55°	3427.9	3056.6	2688.4	2292.4	1914.5	1538.2	108.5	65.8	44.3	31.2	19.7
57.5°	4045.8	3605.4	3153.6	2706.5	2248.1	1820.7	101.9	57.5	37.8	26.3	16.5
60°	4629.2	4114.9	3567.6	3053.2	2535.6	2037.7	92.0	50.9	32.8	21.3	16.5
62.5°	4931.6	4344.9	3754.9	3188.0	2635.9	2114.9	82.1	42.7	28.0	18.1	14.7
65°	4857.6	4259.5	3687.6	3115.7	2575.1	2065.6	72.3	37.8	24.6	16.5	14.7
66°	4750.8	4159.2	3584.0	3040.1	2524.1	2013.1	67.4	36.2	23.0	16.5	13.1
67.5°	4517.5	3945.6	3396.7	2890.6	2384.5	1912.8	60.8	32.8	21.3	14.7	13.1
70°	3858.5	3339.2	2900.5	2450.1	2037.7	1612.1	49.3	28.0	18.1	13.1	13.1
72.5°	2553.7	2200.4	1907.9	1641.6	1372.2	1064.9	41.1	23.0	14.7	13.1	11.5
75°	963.0	870.9	747.7	672.1	586.6	514.3	32.8	14.7	11.5	11.5	11.5
77.5°	170.9	157.8	139.7	128.2	118.3	108.5	26.3	9.9	9.9	11.5	11.5
80°	115.1	106.8	97.0	88.7	82.1	73.9	18.1	8.2	9.9	9.9	11.5
82.5°	82.1	77.3	72.3	65.8	60.8	54.2	11.5	8.2	9.9	9.9	9.9
85°	49.3	46.0	42.7	39.4	34.5	32.8	8.2	8.2	8.2	9.9	9.9
87.5°	13.1	11.5	13.1	13.1	9.9	11.5	6.6	6.6	6.6	8.2	8.2
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):**

	145°	155°	165°	175°	180°
0°	258.0	258.0	258.0	258.0	258.0
2.5°	218.5	218.5	215.3	220.2	220.2
5°	189.0	189.0	187.3	189.0	189.0
7.5°	172.5	170.9	170.9	170.9	172.5
10°	157.8	156.1	156.1	156.1	156.1
12.5°	144.6	142.9	141.3	142.9	142.9
15°	133.1	129.8	129.8	129.8	129.8
17.5°	123.2	119.9	118.3	118.3	118.3
20°	113.3	108.5	108.5	108.5	108.5
22.5°	103.5	98.6	98.6	98.6	98.6
25°	93.6	88.7	88.7	88.7	88.7
27.5°	85.5	80.5	80.5	80.5	80.5
30°	75.6	72.3	72.3	73.9	72.3
32.5°	69.0	64.0	64.0	65.8	65.8
35°	60.8	57.5	57.5	57.5	57.5
37.5°	52.6	49.3	49.3	49.3	49.3
40°	46.0	42.7	41.1	42.7	42.7
42.5°	39.4	36.2	34.5	34.5	34.5
45°	34.5	29.6	28.0	29.6	29.6
47.5°	28.0	24.6	24.6	26.3	26.3
50°	21.3	21.3	23.0	26.3	26.3
52.5°	19.7	19.7	23.0	26.3	26.3
55°	18.1	19.7	23.0	24.6	26.3
57.5°	16.5	19.7	23.0	24.6	24.6
60°	16.5	18.1	21.3	24.6	24.6
62.5°	14.7	16.5	19.7	23.0	23.0
65°	14.7	16.5	19.7	23.0	23.0
66°	14.7	16.5	19.7	23.0	23.0
67.5°	14.7	16.5	19.7	23.0	23.0
70°	14.7	16.5	19.7	21.3	21.3
72.5°	13.1	14.7	18.1	21.3	21.3
75°	13.1	14.7	18.1	21.3	21.3
77.5°	13.1	14.7	18.1	21.3	21.3
80°	13.1	14.7	18.1	19.7	21.3
82.5°	11.5	14.7	16.5	19.7	19.7
85°	11.5	13.1	16.5	18.1	19.7
87.5°	9.9	11.5	13.1	16.5	16.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)