

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: P146595

Luminaire Tested: **LDRL-T3-F02-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146595
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-F02-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4929.7 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

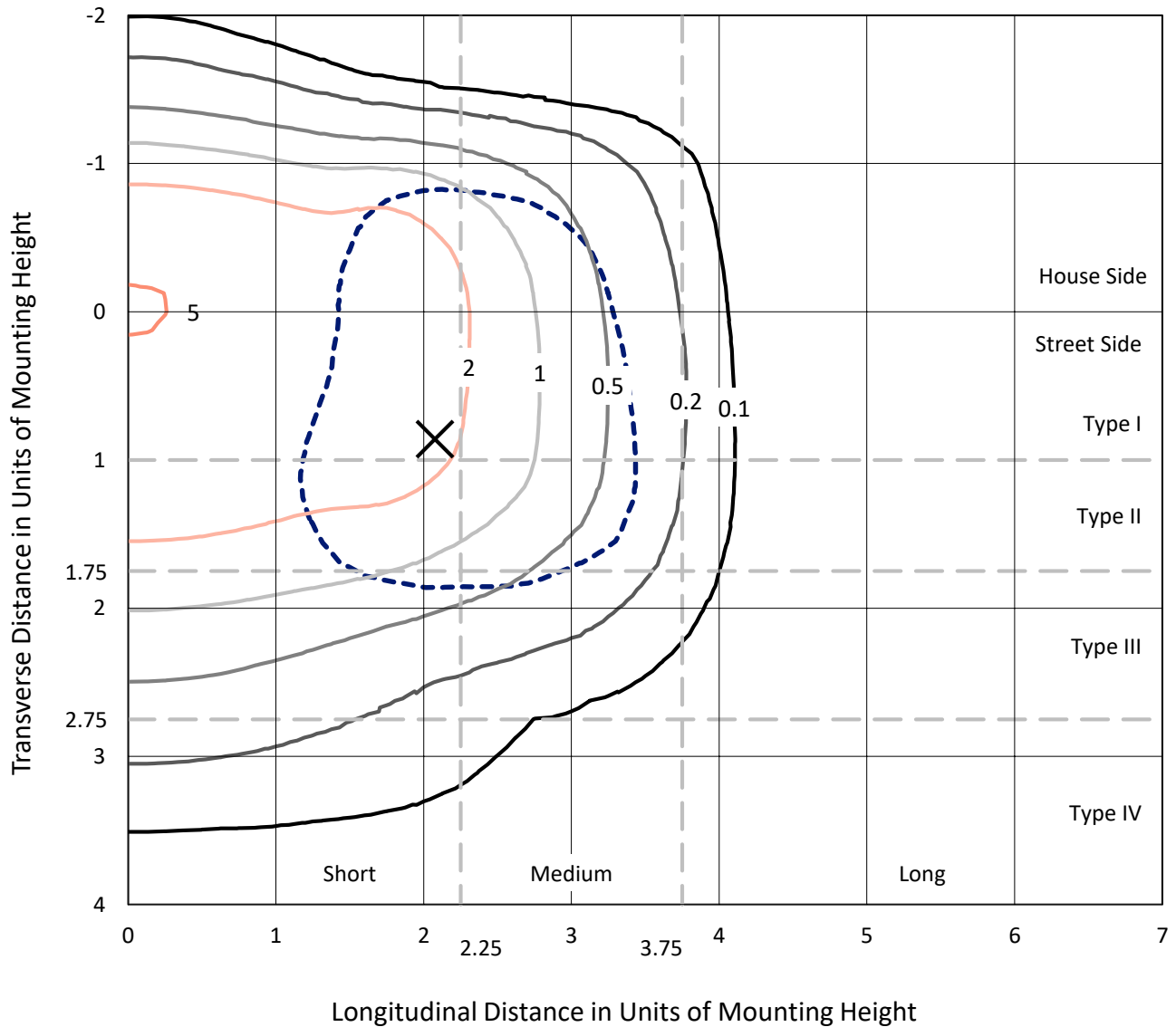
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

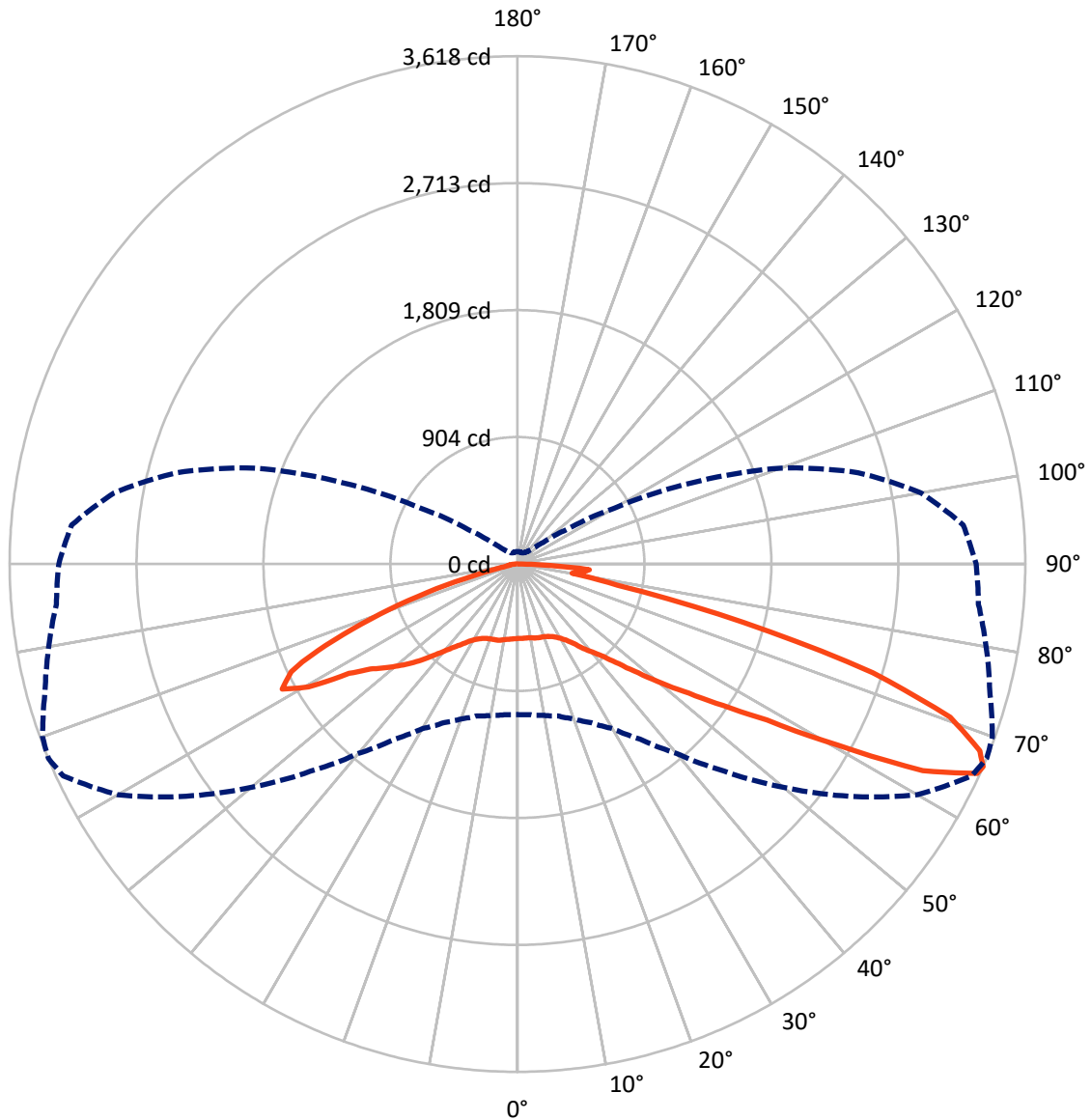
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.3 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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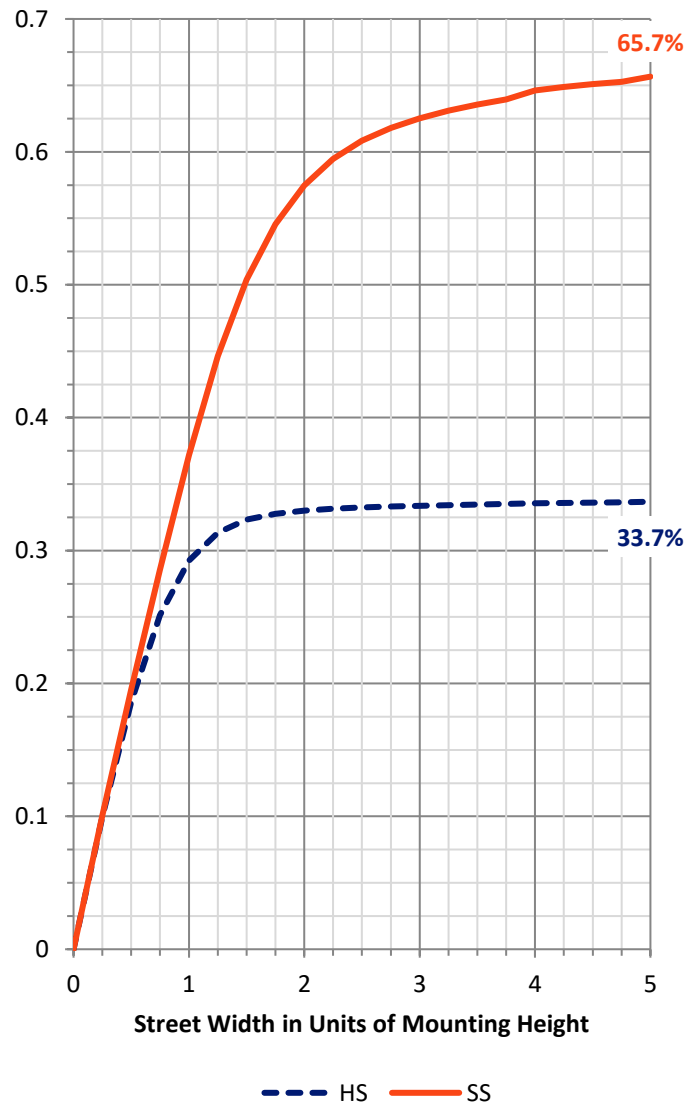
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1674.8	0.0	1674.8
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	3254.9	0.0	3254.9
	% Fixture	66.0	0.0	66.0
Total	Lumens	4929.7	0.0	4929.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.0	1.0
10°-20°	151.0	3.1
20°-30°	259.7	5.3
30°-40°	417.6	8.5
40°-50°	688.4	14.0
50°-60°	1079.0	21.9
60°-70°	1493.3	30.3
70°-80°	675.8	13.7
80°-90°	114.0	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°	4929.7	100.0
0°-180°	4929.7	100.0



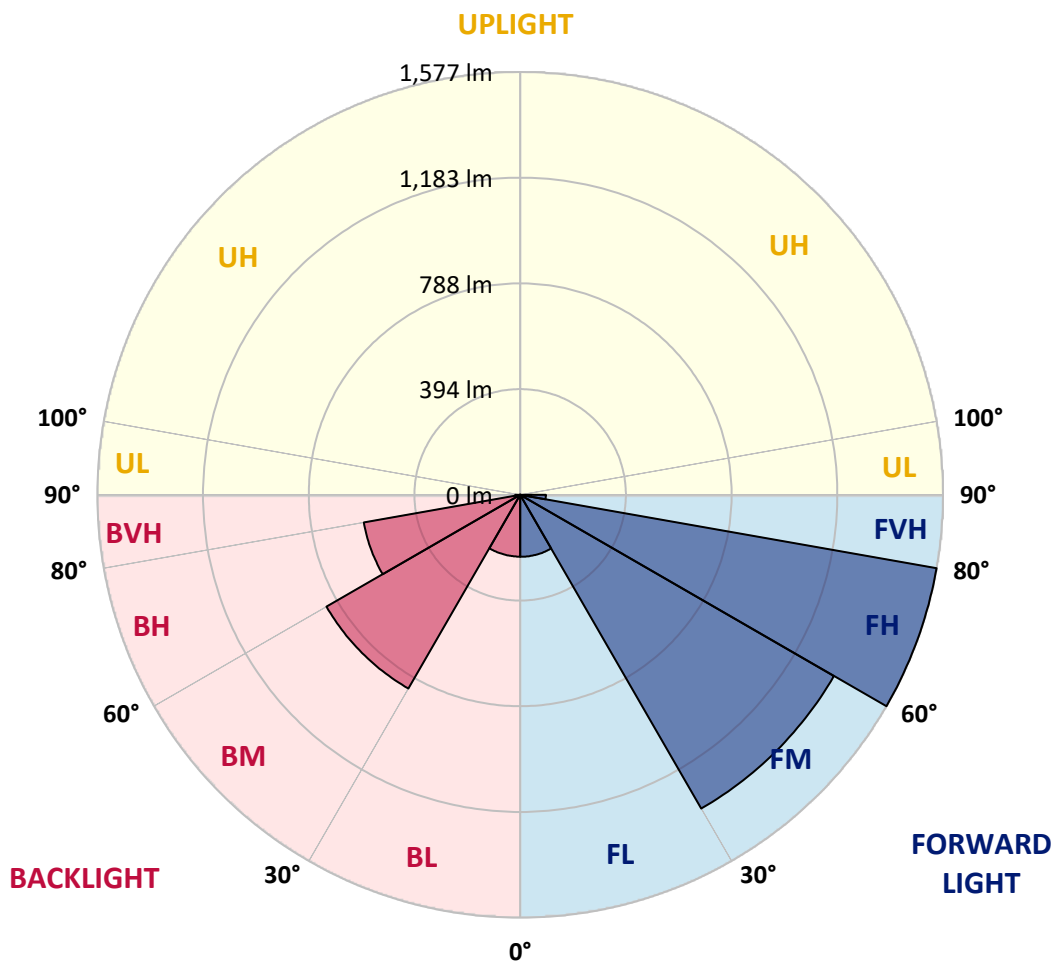
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	231.2	4.7			
FM	(30°-60°)	1350.9	27.4			
FH	(60°-80°)	1577.0	32.0			G1/1800
FVH	(80°-90°)	95.8	1.9			G1/100
BL	(0°-30°)	230.5	4.7	B1/500		
BM	(30°-60°)	834.1	16.9	B1/1000		
BH	(60°-80°)	592.1	12.0	B2/1000		G2/1000
BVH	(80°-90°)	18.2	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°	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6
2.5°	530.0	529.7	529.3	529.3	529.0	529.3	529.7	530.0	529.7	530.0	529.7
5°	529.0	529.0	528.7	528.7	528.7	528.7	529.0	529.3	529.0	529.7	529.0
7.5°	524.7	526.7	526.0	526.7	527.3	528.0	528.3	529.0	530.0	530.6	530.0
10°	519.1	520.1	520.4	521.1	522.4	524.0	525.4	527.0	529.3	530.0	530.6
12.5°	508.9	510.2	511.2	512.5	514.5	517.1	519.4	522.1	526.0	528.7	531.0
15°	501.3	502.9	503.2	504.9	506.9	509.8	512.8	516.8	522.1	526.7	531.3
17.5°	506.2	506.9	506.2	506.2	506.9	508.2	510.5	513.8	519.4	525.0	530.6
20°	521.1	521.1	520.4	520.1	519.4	518.1	517.8	517.4	521.1	525.4	530.3
22.5°	535.3	535.3	534.9	536.3	535.9	535.9	534.9	533.3	531.6	531.0	534.3
25°	544.2	545.5	546.2	548.1	549.5	551.5	552.1	551.8	549.5	545.5	544.5
27.5°	558.7	559.7	560.4	562.7	565.3	567.6	569.9	572.9	572.9	569.3	564.3
30°	586.8	585.5	586.1	586.8	589.1	592.4	595.4	599.3	601.3	600.0	593.4
32.5°	612.9	614.2	614.9	616.8	619.1	624.1	627.7	632.4	636.6	637.3	634.0
35°	651.2	650.5	649.5	656.5	659.1	664.7	669.0	675.6	678.9	681.9	679.9
37.5°	711.6	709.6	708.3	710.3	713.9	717.5	723.8	728.8	734.4	741.3	739.0
40°	797.1	801.1	795.5	798.1	801.1	792.8	798.4	803.1	812.6	813.0	812.6
42.5°	908.4	911.4	910.1	911.7	906.4	903.8	901.5	903.8	915.7	914.0	906.1
45°	1019.7	1024.0	1023.0	1023.7	1033.9	1029.6	1033.2	1033.9	1046.1	1042.8	1036.9
47.5°	1114.8	1122.1	1123.7	1129.6	1143.5	1154.7	1170.3	1181.8	1187.8	1191.7	1196.4
50°	1190.1	1195.4	1204.6	1219.5	1239.6	1259.1	1294.1	1316.9	1337.7	1352.2	1367.1
52.5°	1239.9	1245.9	1260.1	1282.5	1311.6	1347.3	1388.2	1435.8	1479.7	1505.4	1527.6
55°	1260.4	1266.4	1283.9	1313.2	1351.9	1397.4	1456.2	1523.3	1581.7	1640.8	1674.8
57.5°	1248.5	1255.1	1275.3	1308.3	1354.9	1414.6	1487.6	1569.8	1655.3	1744.8	1813.2
60°	1213.5	1219.5	1242.2	1276.6	1329.8	1397.1	1484.6	1587.6	1707.8	1840.6	1970.4
62.5°	1165.3	1174.2	1194.4	1229.4	1282.2	1355.8	1455.6	1589.6	1762.0	1976.0	2228.6
65°	1103.9	1110.5	1128.3	1156.1	1214.2	1291.1	1396.5	1560.6	1785.8	2089.2	2449.8
66°	1072.2	1078.5	1095.0	1121.1	1174.2	1248.2	1353.5	1521.6	1759.4	2088.6	2473.3
67.5°	1016.4	1019.4	1031.2	1057.0	1091.7	1158.0	1255.8	1413.3	1647.4	2000.4	2407.9
70°	852.6	856.9	868.5	881.7	894.5	918.3	986.7	1090.7	1277.9	1616.4	2005.0
72.5°	589.8	596.4	608.9	633.3	653.5	683.5	710.3	745.0	807.0	1042.1	1434.4
75°	426.3	428.6	447.1	490.0	530.6	590.7	643.9	660.8	639.6	636.0	842.7
77.5°	254.3	257.6	284.3	327.6	369.8	451.4	560.4	644.6	691.1	674.6	638.0
80°	107.0	111.6	127.5	138.7	173.7	242.0	349.7	481.8	604.6	680.2	663.1
82.5°	34.3	40.0	47.2	57.1	67.4	90.1	139.7	209.0	330.2	492.3	605.3
85°	12.5	12.9	17.8	24.8	27.4	31.7	40.6	62.7	111.6	184.6	343.4
87.5°	5.0	5.9	6.9	9.6	9.9	10.2	11.6	14.9	14.5	12.5	65.1
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6
2.5°	530.0	530.6	530.3	530.6	530.6	530.0	530.0	531.3	530.3	531.0	531.0
5°	529.7	530.3	530.0	530.6	530.6	530.3	530.3	532.3	532.0	533.0	533.6
7.5°	531.0	531.3	531.0	531.0	532.0	531.6	532.0	532.6	534.3	535.9	537.3
10°	532.6	533.3	534.3	534.6	535.9	535.6	536.6	537.6	539.2	540.9	542.5
12.5°	534.9	536.9	539.9	540.6	541.9	542.9	544.5	545.5	546.8	549.5	551.5
15°	536.9	540.6	544.2	545.5	546.8	548.1	549.8	550.8	553.1	555.4	557.7
17.5°	537.6	541.9	546.5	548.1	549.5	551.8	553.8	555.7	558.4	561.4	564.0
20°	537.9	543.9	549.8	551.8	554.8	558.1	561.4	563.0	566.6	570.3	572.6
22.5°	540.9	548.1	556.4	560.0	563.0	569.0	573.2	575.9	580.2	583.2	584.1
25°	549.1	556.7	566.6	572.3	577.2	585.8	591.1	596.0	598.3	602.3	601.3
27.5°	564.0	569.9	582.8	590.4	596.7	607.9	618.2	622.8	626.4	628.4	626.1
30°	589.4	591.7	605.9	615.2	625.7	643.2	654.5	660.4	665.0	665.4	659.4
32.5°	627.4	623.8	636.3	649.5	663.4	684.5	699.7	706.0	709.6	710.0	696.7
35°	678.9	672.6	683.2	696.1	713.3	741.0	760.1	767.4	773.0	770.4	750.9
37.5°	744.0	743.6	748.6	765.1	784.6	820.2	840.4	844.3	844.0	836.1	806.7
40°	816.3	810.3	811.0	822.9	845.3	892.2	920.3	926.9	924.6	913.0	874.7
42.5°	907.4	904.8	895.9	902.1	922.9	980.1	1014.1	1020.7	1022.7	1003.5	958.3
45°	1035.2	1032.9	1013.1	1014.4	1029.6	1089.7	1125.0	1135.9	1136.3	1118.1	1059.3
47.5°	1190.1	1188.1	1165.0	1158.4	1166.0	1219.5	1263.4	1265.7	1266.4	1241.3	1180.2
50°	1365.7	1360.1	1342.6	1335.7	1326.8	1385.9	1421.2	1420.9	1417.3	1389.5	1320.8
52.5°	1535.5	1548.0	1541.4	1527.9	1528.2	1570.8	1604.2	1585.7	1588.0	1561.6	1482.6
55°	1716.8	1748.8	1772.9	1777.9	1775.5	1797.3	1815.8	1782.8	1770.6	1766.3	1682.4
57.5°	1909.3	1991.2	2065.5	2096.5	2084.6	2124.6	2141.1	2106.7	2107.4	2141.1	2068.8
60°	2166.5	2373.2	2560.4	2618.6	2645.6	2711.7	2682.3	2680.3	2732.2	2775.7	2641.7
62.5°	2556.8	2899.2	3198.1	3241.3	3263.1	3278.0	3264.8	3228.8	3282.3	3287.6	3080.9
65°	2852.7	3254.5	3543.5	3597.6	3593.7	3518.1	3444.8	3372.8	3372.1	3319.3	3053.1
66°	2884.7	3288.2	3569.9	3617.8	3600.3	3483.7	3390.6	3297.1	3267.1	3187.8	2917.7
67.5°	2814.7	3229.5	3509.1	3552.1	3514.8	3337.4	3210.6	3084.2	3038.9	2928.6	2653.2
70°	2406.2	2833.5	3207.7	3269.7	3225.5	2990.1	2802.2	2663.1	2540.0	2431.3	2204.2
72.5°	1865.7	2185.3	2581.3	2646.0	2649.6	2465.3	2253.7	2120.3	1977.0	1868.0	1697.6
75°	1223.8	1465.5	1683.1	1661.3	1667.6	1522.6	1396.5	1285.5	1155.7	1069.9	988.6
77.5°	715.2	801.7	781.9	727.8	682.2	536.3	383.7	263.5	229.8	239.7	270.4
80°	621.8	573.2	448.8	394.6	358.9	243.7	131.1	92.5	81.2	82.2	87.2
82.5°	669.3	694.4	569.9	469.2	409.1	287.0	154.2	76.9	55.5	64.7	71.3
85°	519.4	661.1	609.6	515.1	433.2	305.1	157.5	48.9	33.0	44.2	55.8
87.5°	147.9	234.1	187.2	165.4	133.4	91.1	37.6	19.5	17.8	23.1	32.0
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°	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6
2.5°	531.3	531.3	532.3	532.6	533.0	533.0	533.6	533.6	533.9	535.3	534.9
5°	534.6	535.6	536.9	537.6	538.6	538.9	539.9	539.9	540.9	541.9	541.5
7.5°	538.6	539.6	540.6	541.5	542.5	543.9	543.5	543.2	542.9	542.2	541.5
10°	544.2	545.2	546.2	545.8	545.2	544.5	541.9	538.9	537.6	534.9	533.0
12.5°	553.4	554.4	553.4	550.8	547.2	542.9	537.3	532.3	529.3	525.4	523.1
15°	560.4	561.4	559.4	554.8	548.8	543.2	535.6	529.3	524.0	519.8	516.4
17.5°	565.6	565.0	560.7	555.4	549.1	544.5	537.6	530.6	524.4	518.4	513.8
20°	573.2	569.6	563.3	556.7	550.5	546.5	540.9	534.6	528.0	519.4	513.5
22.5°	583.2	576.5	568.3	561.7	555.7	551.8	546.2	540.2	533.9	524.0	515.8
25°	597.3	586.8	577.2	570.3	565.0	561.0	554.1	547.8	540.9	531.0	520.4
27.5°	617.2	602.0	592.1	585.1	579.8	575.2	566.3	558.7	549.8	539.9	527.3
30°	642.9	624.4	613.5	607.6	602.0	595.4	585.8	574.6	563.0	549.8	536.3
32.5°	674.9	654.1	643.9	638.0	630.7	621.8	609.2	594.4	577.2	559.7	542.9
35°	720.5	696.7	685.5	675.3	664.7	651.5	632.7	611.2	588.4	565.6	544.8
37.5°	765.8	743.6	729.8	719.2	702.7	681.2	655.1	625.4	595.0	566.0	540.9
40°	829.8	804.1	787.9	769.1	742.3	709.0	671.0	631.0	593.4	558.4	528.7
42.5°	908.4	879.0	854.9	820.9	779.3	731.1	678.6	627.7	581.8	541.5	508.9
45°	1007.8	969.5	929.2	875.7	812.0	744.6	678.3	616.2	562.0	516.4	484.1
47.5°	1123.7	1069.9	1002.2	920.6	833.4	747.9	667.7	595.4	532.3	482.1	444.8
50°	1242.9	1165.0	1068.9	955.3	844.3	739.7	644.2	561.4	493.3	436.2	395.9
52.5°	1389.9	1269.0	1129.3	978.7	839.7	715.2	605.3	513.5	440.8	385.0	338.8
55°	1564.9	1388.5	1186.8	991.6	819.3	671.3	546.2	450.7	374.5	323.6	282.0
57.5°	1854.5	1575.8	1284.8	1010.8	779.0	605.9	474.2	375.4	303.8	260.5	227.2
60°	2353.7	1959.8	1492.2	1058.0	723.2	512.8	382.7	294.2	235.1	200.4	177.0
62.5°	2702.1	2192.6	1603.8	1041.8	628.4	403.8	283.0	210.3	171.4	148.6	132.7
65°	2634.4	2100.8	1469.4	885.0	492.3	285.6	188.2	142.3	120.2	106.0	98.1
66°	2512.9	1999.4	1367.1	794.5	427.0	238.1	155.2	117.9	103.4	93.1	87.8
67.5°	2291.3	1789.4	1183.1	637.6	319.6	175.7	117.9	91.8	83.9	78.6	75.0
70°	1897.1	1414.9	814.6	376.8	169.1	98.4	75.0	67.7	64.1	61.7	61.4
72.5°	1454.6	1015.1	471.2	182.3	90.5	65.4	57.5	54.8	53.5	52.8	52.8
75°	898.5	572.6	210.7	91.5	62.4	53.5	49.9	48.5	48.2	48.2	48.2
77.5°	316.0	199.4	94.4	67.0	54.8	48.2	45.2	44.6	45.2	45.2	45.2
80°	87.2	76.9	68.4	59.4	49.5	44.6	41.9	41.6	42.9	43.3	41.9
82.5°	68.0	64.1	58.4	53.2	45.2	40.6	39.3	40.0	40.6	39.6	37.6
85°	58.1	55.5	40.9	40.9	36.7	35.3	35.0	35.7	35.3	32.7	30.0
87.5°	33.0	29.1	22.1	24.1	25.8	26.4	22.1	23.8	23.4	20.8	19.5
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°	530.6	530.6	530.6	530.6	530.6
2.5°	535.6	535.6	536.3	536.3	535.9
5°	542.2	542.2	543.2	542.5	542.9
7.5°	540.9	539.6	539.6	538.9	538.6
10°	531.6	529.3	528.0	528.7	527.7
12.5°	521.1	519.1	517.8	517.4	517.1
15°	514.5	512.2	511.2	510.5	510.5
17.5°	510.8	508.2	506.9	505.9	505.6
20°	509.2	505.9	503.9	502.9	502.2
22.5°	509.8	505.9	503.2	501.9	501.3
25°	512.5	507.5	504.2	502.6	501.6
27.5°	517.1	510.5	506.9	504.6	503.2
30°	522.7	513.5	508.2	504.9	503.6
32.5°	526.4	513.8	507.2	502.2	500.9
35°	525.7	510.2	501.6	495.3	494.3
37.5°	519.1	500.6	490.0	481.8	480.8
40°	504.9	486.1	473.9	465.6	463.6
42.5°	485.1	465.6	452.4	444.8	442.2
45°	456.0	432.2	420.0	413.8	410.1
47.5°	415.1	392.6	379.1	373.8	369.2
50°	368.5	343.7	333.8	327.9	322.6
52.5°	313.7	292.6	285.0	279.4	275.1
55°	260.5	245.7	236.8	230.8	231.1
57.5°	209.4	200.4	195.5	189.2	189.9
60°	164.8	157.2	157.2	153.2	151.9
62.5°	125.8	122.8	121.8	120.5	118.2
65°	95.4	95.4	95.8	95.8	94.4
66°	85.9	86.8	88.2	88.2	86.5
67.5°	74.3	75.6	76.9	77.6	77.6
70°	61.4	63.1	63.7	64.4	64.1
72.5°	53.8	55.1	55.1	55.5	54.8
75°	48.9	49.5	49.9	49.2	48.9
77.5°	45.2	45.6	45.2	44.9	44.6
80°	40.9	40.6	39.6	38.3	38.0
82.5°	35.3	34.0	33.4	31.4	31.0
85°	28.4	26.7	25.4	22.8	21.5
87.5°	18.8	18.2	17.2	12.5	10.2
90°	0.0	0.0	0.0	0.0	0.0

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