

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: P146594

Luminaire Tested: **LDRL-T3-F02-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146594
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-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (14) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4502.6 lumens
Efficiency: N/A
Efficacy: 81.9 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

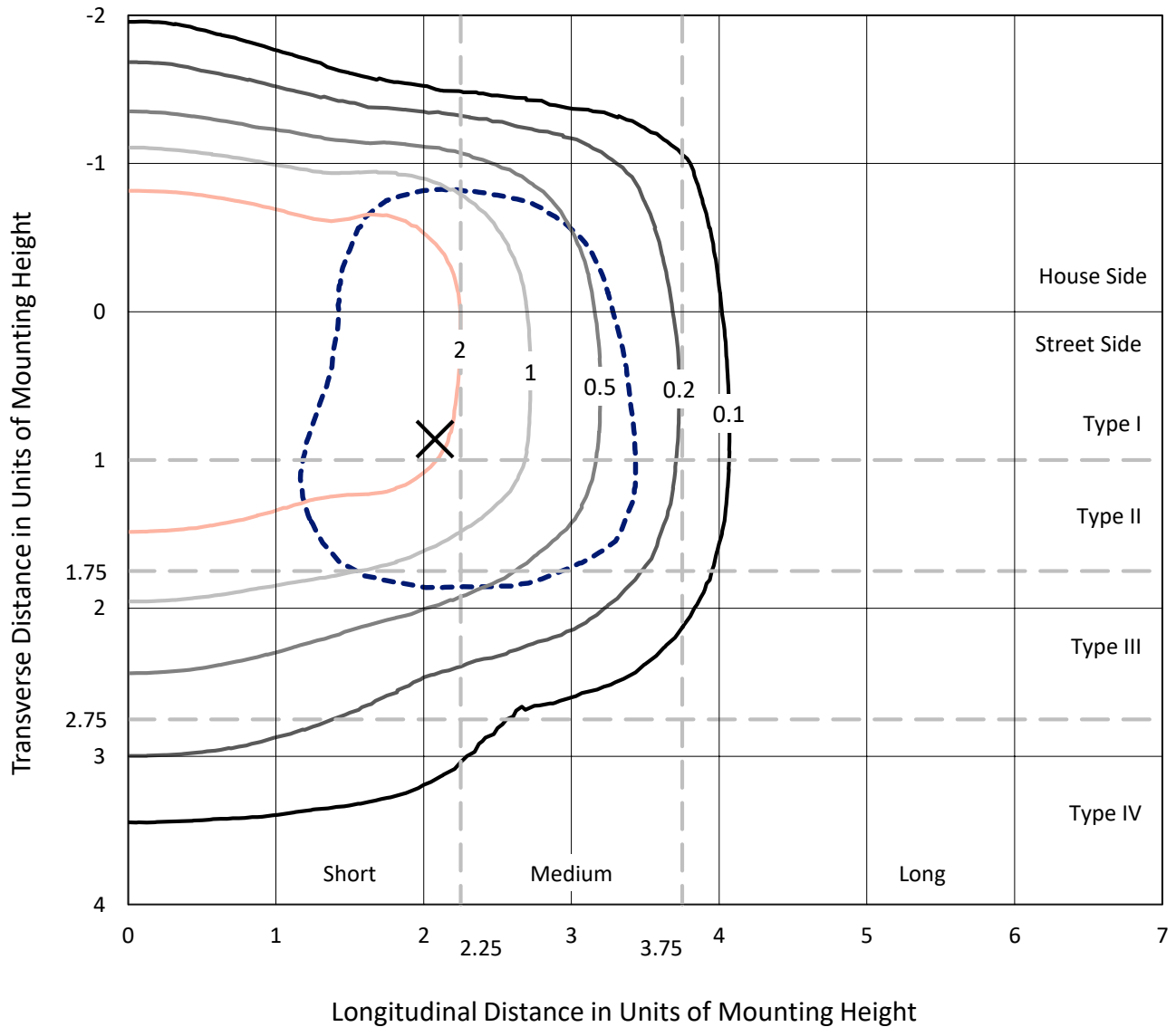
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

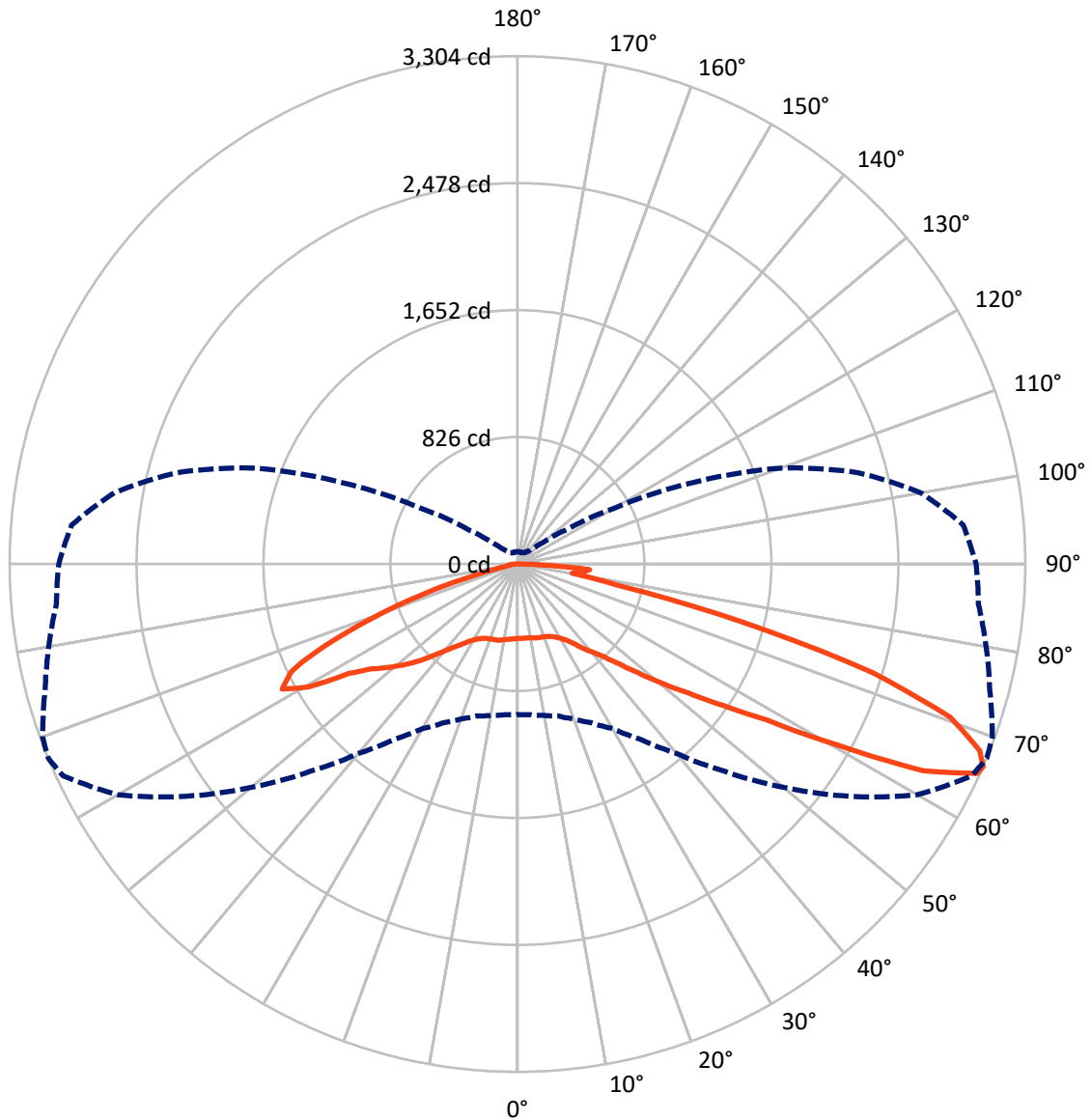
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.8 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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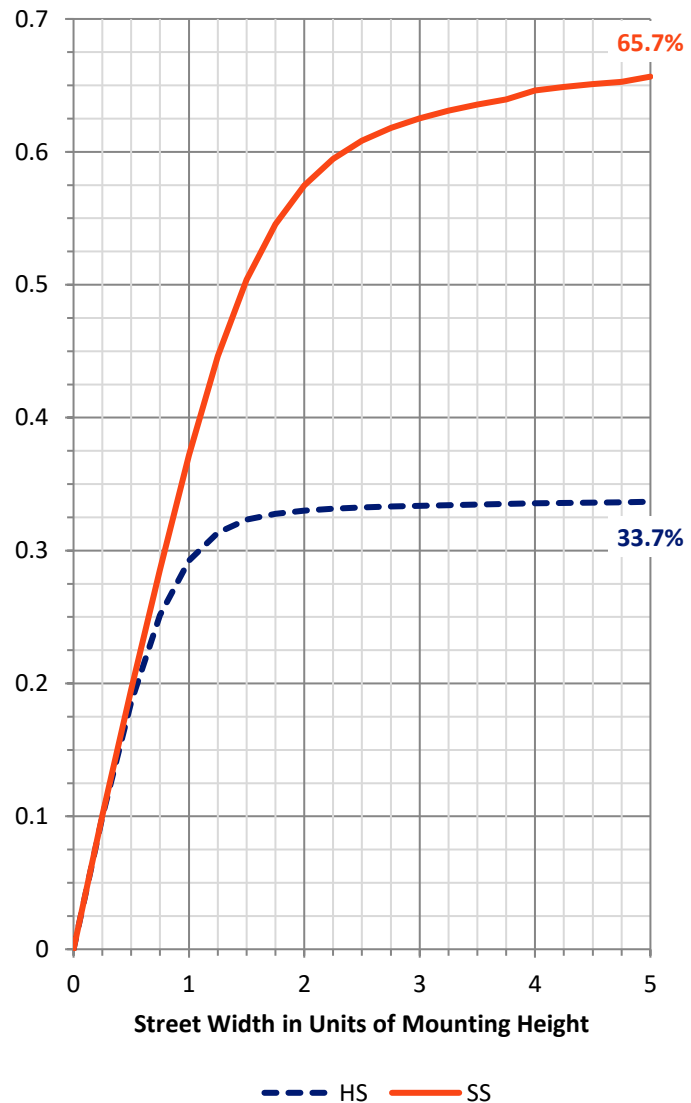
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1529.7	0.0	1529.7
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	2972.9	0.0	2972.9
	% Fixture	66.0	0.0	66.0
Total	Lumens	4502.6	0.0	4502.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.6	1.0
10°-20°	138.0	3.1
20°-30°	237.2	5.3
30°-40°	381.4	8.5
40°-50°	628.7	14.0
50°-60°	985.5	21.9
60°-70°	1363.9	30.3
70°-80°	617.2	13.7
80°-90°	104.1	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°	4502.6	100.0
0°-180°	4502.6	100.0



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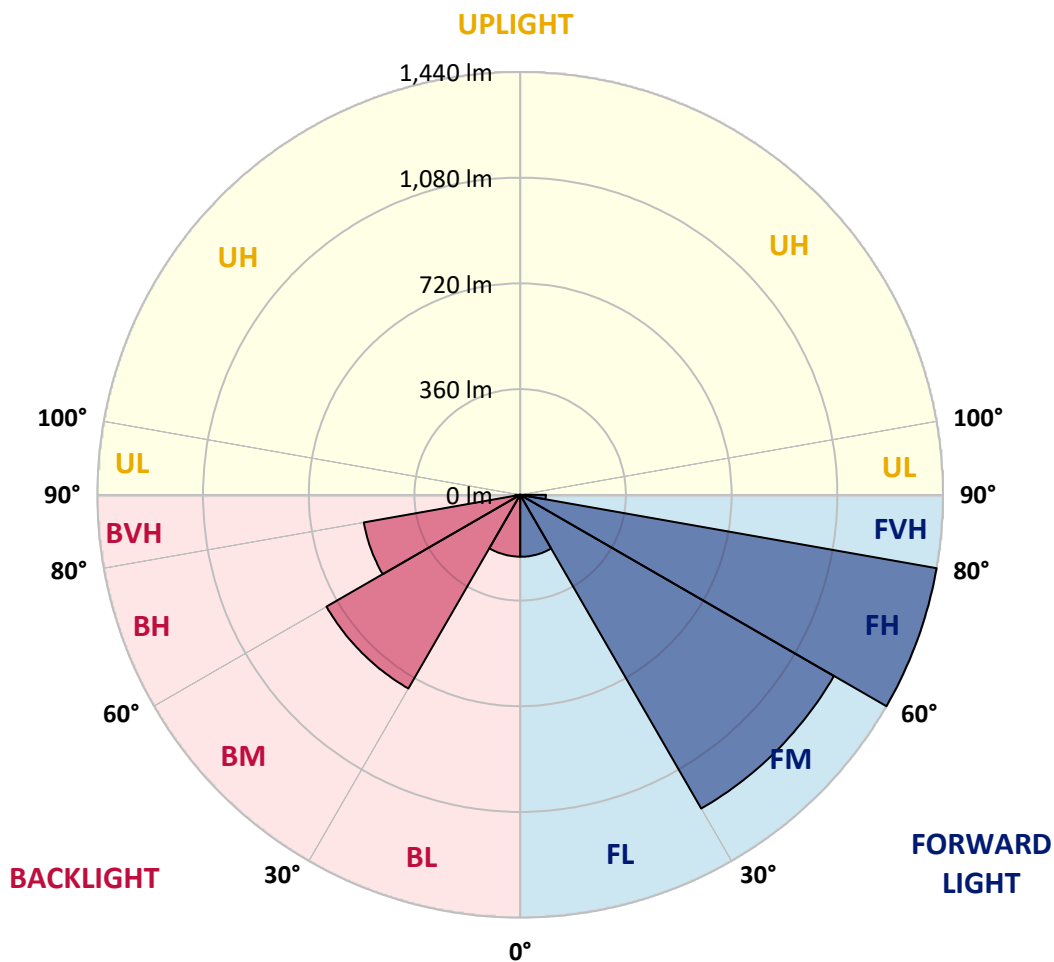
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	211.2	4.7			
FM	(30°-60°)	1233.9	27.4			
FH	(60°-80°)	1440.3	32.0			G1/1800
FVH	(80°-90°)	87.5	1.9			G1/100
BL	(0°-30°)	210.5	4.7	B1/500		
BM	(30°-60°)	761.8	16.9	B1/1000		
BH	(60°-80°)	540.8	12.0	B2/1000		G2/1000
BVH	(80°-90°)	16.6	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°	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7
2.5°	484.1	483.8	483.5	483.5	483.2	483.5	483.8	484.1	483.8	484.1	483.8
5°	483.2	483.2	482.9	482.9	482.9	482.9	483.2	483.5	483.2	483.8	483.2
7.5°	479.2	481.0	480.4	481.0	481.7	482.3	482.6	483.2	484.1	484.7	484.1
10°	474.1	475.0	475.3	475.9	477.1	478.6	479.8	481.3	483.5	484.1	484.7
12.5°	464.8	466.0	466.9	468.1	469.9	472.3	474.4	476.8	480.4	482.9	485.0
15°	457.8	459.3	459.6	461.1	463.0	465.7	468.4	472.0	476.8	481.0	485.3
17.5°	462.3	463.0	462.3	462.3	463.0	464.2	466.3	469.3	474.4	479.5	484.7
20°	475.9	475.9	475.3	475.0	474.4	473.2	472.9	472.6	475.9	479.8	484.4
22.5°	488.9	488.9	488.6	489.8	489.5	489.5	488.6	487.1	485.6	485.0	488.0
25°	497.0	498.2	498.8	500.7	501.9	503.7	504.3	504.0	501.9	498.2	497.3
27.5°	510.3	511.2	511.8	513.9	516.3	518.4	520.6	523.3	523.3	520.0	515.4
30°	535.9	534.7	535.3	535.9	538.0	541.1	543.8	547.4	549.2	548.0	542.0
32.5°	559.8	561.0	561.6	563.4	565.5	570.0	573.3	577.6	581.5	582.1	579.1
35°	594.8	594.1	593.2	599.6	602.0	607.1	611.0	617.1	620.1	622.8	621.0
37.5°	649.9	648.1	646.9	648.7	652.1	655.4	661.1	665.6	670.8	677.1	675.0
40°	728.1	731.7	726.5	729.0	731.7	724.1	729.3	733.5	742.2	742.5	742.2
42.5°	829.7	832.4	831.2	832.7	827.9	825.5	823.4	825.5	836.3	834.8	827.6
45°	931.3	935.3	934.3	935.0	944.3	940.4	943.7	944.3	955.5	952.4	947.0
47.5°	1018.2	1024.8	1026.3	1031.8	1044.4	1054.7	1068.9	1079.4	1084.8	1088.5	1092.7
50°	1087.0	1091.8	1100.2	1113.8	1132.2	1150.0	1182.0	1202.8	1221.8	1235.0	1248.6
52.5°	1132.5	1137.9	1150.9	1171.4	1197.9	1230.5	1267.9	1311.3	1351.5	1375.0	1395.2
55°	1151.2	1156.6	1172.6	1199.5	1234.7	1276.4	1330.0	1391.3	1444.7	1498.6	1529.7
57.5°	1140.3	1146.4	1164.8	1194.9	1237.5	1292.0	1358.7	1433.8	1511.9	1593.6	1656.1
60°	1108.4	1113.8	1134.6	1166.0	1214.5	1276.1	1356.0	1450.1	1559.9	1681.1	1799.6
62.5°	1064.3	1072.5	1090.9	1122.8	1171.1	1238.4	1329.4	1451.9	1609.3	1804.8	2035.5
65°	1008.2	1014.3	1030.6	1055.9	1109.0	1179.2	1275.5	1425.3	1631.0	1908.2	2237.6
66°	979.3	985.0	1000.1	1023.9	1072.5	1140.0	1236.2	1389.8	1606.9	1907.6	2259.0
67.5°	928.3	931.0	941.9	965.4	997.1	1057.7	1147.0	1290.8	1504.7	1827.1	2199.2
70°	778.7	782.6	793.2	805.3	817.0	838.7	901.2	996.2	1167.2	1476.3	1831.3
72.5°	538.7	544.7	556.1	578.5	596.9	624.3	648.7	680.4	737.1	951.8	1310.1
75°	389.4	391.5	408.4	447.6	484.7	539.6	588.1	603.5	584.2	580.9	769.7
77.5°	232.2	235.2	259.7	299.2	337.8	412.3	511.8	588.7	631.2	616.2	582.7
80°	97.7	101.9	116.4	126.7	158.6	221.1	319.4	440.0	552.2	621.3	605.6
82.5°	31.4	36.5	43.1	52.2	61.5	82.3	127.6	190.9	301.6	449.7	552.8
85°	11.5	11.8	16.3	22.6	25.0	29.0	37.1	57.3	101.9	168.6	313.7
87.5°	4.5	5.4	6.3	8.7	9.0	9.3	10.6	13.6	13.3	11.5	59.4
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°	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7
2.5°	484.1	484.7	484.4	484.7	484.7	484.1	484.1	485.3	484.4	485.0	485.0
5°	483.8	484.4	484.1	484.7	484.7	484.4	484.4	486.2	485.9	486.8	487.4
7.5°	485.0	485.3	485.0	485.0	485.9	485.6	485.9	486.5	488.0	489.5	490.7
10°	486.5	487.1	488.0	488.3	489.5	489.2	490.1	491.0	492.5	494.0	495.5
12.5°	488.6	490.4	493.1	493.7	494.9	495.8	497.3	498.2	499.4	501.9	503.7
15°	490.4	493.7	497.0	498.2	499.4	500.7	502.2	503.1	505.2	507.3	509.4
17.5°	491.0	494.9	499.1	500.7	501.9	504.0	505.8	507.6	510.0	512.7	515.1
20°	491.3	496.7	502.2	504.0	506.7	509.7	512.7	514.2	517.5	520.9	523.0
22.5°	494.0	500.7	508.2	511.5	514.2	519.7	523.6	526.0	529.9	532.6	533.5
25°	501.6	508.5	517.5	522.7	527.2	535.0	539.9	544.4	546.5	550.1	549.2
27.5°	515.1	520.6	532.3	539.3	545.0	555.2	564.6	568.8	572.1	573.9	571.8
30°	538.4	540.5	553.4	561.9	571.5	587.5	597.8	603.2	607.4	607.7	602.3
32.5°	573.0	569.7	581.2	593.2	605.9	625.2	639.1	644.8	648.1	648.4	636.4
35°	620.1	614.4	624.0	635.8	651.5	676.8	694.3	700.9	706.0	703.6	685.8
37.5°	679.5	679.2	683.7	698.8	716.6	749.2	767.6	771.2	770.9	763.6	736.8
40°	745.5	740.1	740.7	751.6	772.1	814.9	840.6	846.6	844.5	833.9	798.9
42.5°	828.8	826.4	818.2	824.0	843.0	895.1	926.2	932.2	934.0	916.6	875.2
45°	945.5	943.4	925.3	926.5	940.4	995.3	1027.5	1037.5	1037.8	1021.2	967.5
47.5°	1087.0	1085.1	1064.0	1058.0	1064.9	1113.8	1153.9	1156.0	1156.6	1133.7	1077.9
50°	1247.4	1242.3	1226.3	1220.0	1211.8	1265.8	1298.1	1297.8	1294.5	1269.1	1206.4
52.5°	1402.4	1413.9	1407.9	1395.5	1395.8	1434.7	1465.2	1448.3	1450.4	1426.3	1354.2
55°	1568.0	1597.3	1619.3	1623.8	1621.7	1641.6	1658.5	1628.3	1617.2	1613.2	1536.6
57.5°	1743.8	1818.6	1886.5	1914.8	1904.0	1940.5	1955.6	1924.2	1924.8	1955.6	1889.5
60°	1978.8	2167.6	2338.6	2391.7	2416.4	2476.7	2449.9	2448.1	2495.4	2535.2	2412.8
62.5°	2335.3	2648.0	2921.0	2960.5	2980.4	2994.0	2981.9	2949.0	2997.9	3002.7	2813.9
65°	2605.5	2972.5	3236.4	3285.9	3282.3	3213.2	3146.3	3080.5	3079.9	3031.7	2788.6
66°	2634.8	3003.3	3260.6	3304.3	3288.3	3181.9	3096.8	3011.4	2984.0	2911.6	2664.9
67.5°	2570.8	2949.6	3205.1	3244.3	3210.2	3048.2	2932.4	2816.9	2775.6	2674.9	2423.3
70°	2197.7	2588.0	2929.7	2986.4	2946.0	2731.0	2559.4	2432.4	2319.9	2220.7	2013.2
72.5°	1704.0	1996.0	2357.6	2416.7	2420.0	2251.7	2058.4	1936.6	1805.7	1706.1	1550.5
75°	1117.7	1338.5	1537.2	1517.3	1523.1	1390.7	1275.5	1174.1	1055.6	977.2	903.0
77.5°	653.3	732.3	714.2	664.7	623.1	489.8	350.5	240.7	209.9	219.0	247.0
80°	567.9	523.6	409.9	360.4	327.8	222.6	119.7	84.4	74.2	75.1	79.6
82.5°	611.3	634.3	520.6	428.6	373.7	262.1	140.8	70.3	50.7	59.1	65.1
85°	474.4	603.8	556.7	470.5	395.7	278.7	143.9	44.6	30.2	40.4	51.0
87.5°	135.1	213.8	171.0	151.1	121.8	83.2	34.4	17.8	16.3	21.1	29.3
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7
2.5°	485.3	485.3	486.2	486.5	486.8	486.8	487.4	487.4	487.7	488.9	488.6
5°	488.3	489.2	490.4	491.0	491.9	492.2	493.1	493.1	494.0	494.9	494.6
7.5°	491.9	492.8	493.7	494.6	495.5	496.7	496.4	496.1	495.8	495.2	494.6
10°	497.0	497.9	498.8	498.5	497.9	497.3	494.9	492.2	491.0	488.6	486.8
12.5°	505.5	506.4	505.5	503.1	499.7	495.8	490.7	486.2	483.5	479.8	477.7
15°	511.8	512.7	510.9	506.7	501.3	496.1	489.2	483.5	478.6	474.7	471.7
17.5°	516.6	516.0	512.1	507.3	501.6	497.3	491.0	484.7	478.9	473.5	469.3
20°	523.6	520.3	514.5	508.5	502.8	499.1	494.0	488.3	482.3	474.4	469.0
22.5°	532.6	526.6	519.0	513.0	507.6	504.0	498.8	493.4	487.7	478.6	471.1
25°	545.6	535.9	527.2	520.9	516.0	512.4	506.1	500.4	494.0	485.0	475.3
27.5°	563.7	549.8	540.8	534.4	529.6	525.4	517.2	510.3	502.2	493.1	481.7
30°	587.2	570.3	560.4	554.9	549.8	543.8	535.0	524.8	514.2	502.2	489.8
32.5°	616.5	597.5	588.1	582.7	576.1	567.9	556.4	542.9	527.2	511.2	495.8
35°	658.1	636.4	626.1	616.8	607.1	595.1	577.9	558.3	537.4	516.6	497.6
37.5°	699.4	679.2	666.5	656.9	641.8	622.2	598.4	571.2	543.5	516.9	494.0
40°	757.9	734.4	719.6	702.4	678.0	647.5	612.8	576.4	542.0	510.0	482.9
42.5°	829.7	802.9	780.8	749.8	711.8	667.7	619.8	573.3	531.4	494.6	464.8
45°	920.5	885.5	848.7	799.8	741.6	680.1	619.5	562.8	513.3	471.7	442.1
47.5°	1026.3	977.2	915.3	840.9	761.2	683.1	609.8	543.8	486.2	440.3	406.3
50°	1135.2	1064.0	976.3	872.5	771.2	675.6	588.4	512.7	450.6	398.4	361.6
52.5°	1269.4	1159.0	1031.5	893.9	767.0	653.3	552.8	469.0	402.6	351.7	309.4
55°	1429.3	1268.2	1083.9	905.7	748.3	613.1	498.8	411.7	342.0	295.6	257.6
57.5°	1693.8	1439.2	1173.5	923.2	711.5	553.4	433.1	342.9	277.5	238.0	207.5
60°	2149.8	1790.0	1362.9	966.3	660.5	468.4	349.6	268.7	214.7	183.1	161.7
62.5°	2468.0	2002.6	1464.9	951.5	573.9	368.9	258.5	192.1	156.5	135.7	121.2
65°	2406.1	1918.8	1342.1	808.3	449.7	260.9	171.9	130.0	109.8	96.8	89.6
66°	2295.2	1826.2	1248.6	725.6	390.0	217.5	141.8	107.7	94.4	85.1	80.2
67.5°	2092.8	1634.4	1080.6	582.4	291.9	160.4	107.7	83.8	76.6	71.8	68.5
70°	1732.7	1292.3	744.0	344.1	154.4	89.9	68.5	61.8	58.5	56.4	56.1
72.5°	1328.5	927.1	430.4	166.5	82.6	59.7	52.5	50.1	48.9	48.3	48.3
75°	820.6	523.0	192.4	83.5	57.0	48.9	45.5	44.3	44.0	44.0	44.0
77.5°	288.6	182.2	86.3	61.2	50.1	44.0	41.3	40.7	41.3	41.3	41.3
80°	79.6	70.3	62.4	54.3	45.2	40.7	38.3	38.0	39.2	39.5	38.3
82.5°	62.1	58.5	53.4	48.6	41.3	37.1	35.9	36.5	37.1	36.2	34.4
85°	53.1	50.7	37.4	37.4	33.5	32.3	32.0	32.6	32.3	29.9	27.4
87.5°	30.2	26.5	20.2	22.0	23.5	24.1	20.2	21.7	21.4	19.0	17.8
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):

	160°	165°	170°	175°	180°
0°	484.7	484.7	484.7	484.7	484.7
2.5°	489.2	489.2	489.8	489.8	489.5
5°	495.2	495.2	496.1	495.5	495.8
7.5°	494.0	492.8	492.8	492.2	491.9
10°	485.6	483.5	482.3	482.9	482.0
12.5°	475.9	474.1	472.9	472.6	472.3
15°	469.9	467.8	466.9	466.3	466.3
17.5°	466.6	464.2	463.0	462.0	461.7
20°	465.1	462.0	460.2	459.3	458.7
22.5°	465.7	462.0	459.6	458.4	457.8
25°	468.1	463.6	460.5	459.0	458.1
27.5°	472.3	466.3	463.0	460.8	459.6
30°	477.4	469.0	464.2	461.1	459.9
32.5°	480.7	469.3	463.3	458.7	457.5
35°	480.1	466.0	458.1	452.4	451.5
37.5°	474.1	457.2	447.6	440.0	439.1
40°	461.1	444.0	432.8	425.3	423.4
42.5°	443.0	425.3	413.2	406.3	403.8
45°	416.5	394.8	383.6	377.9	374.6
47.5°	379.1	358.6	346.2	341.4	337.2
50°	336.6	314.0	304.9	299.5	294.7
52.5°	286.5	267.2	260.3	255.2	251.2
55°	238.0	224.4	216.2	210.8	211.1
57.5°	191.2	183.1	178.5	172.8	173.4
60°	150.5	143.6	143.6	139.9	138.7
62.5°	114.9	112.2	111.3	110.1	108.0
65°	87.2	87.2	87.5	87.5	86.3
66°	78.4	79.3	80.5	80.5	79.0
67.5°	67.9	69.1	70.3	70.9	70.9
70°	56.1	57.6	58.2	58.8	58.5
72.5°	49.2	50.4	50.4	50.7	50.1
75°	44.6	45.2	45.5	44.9	44.6
77.5°	41.3	41.6	41.3	41.0	40.7
80°	37.4	37.1	36.2	35.0	34.7
82.5°	32.3	31.1	30.5	28.7	28.4
85°	25.9	24.4	23.2	20.8	19.6
87.5°	17.2	16.6	15.7	11.5	9.3
90°	0.0	0.0	0.0	0.0	0.0

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