

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: P146593

Luminaire Tested: **LDRL-T3-F02-E-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P146593  
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-8030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3  
Light Source: (14) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4160.6 lumens  
Efficiency: N/A  
Efficacy: 75.6 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

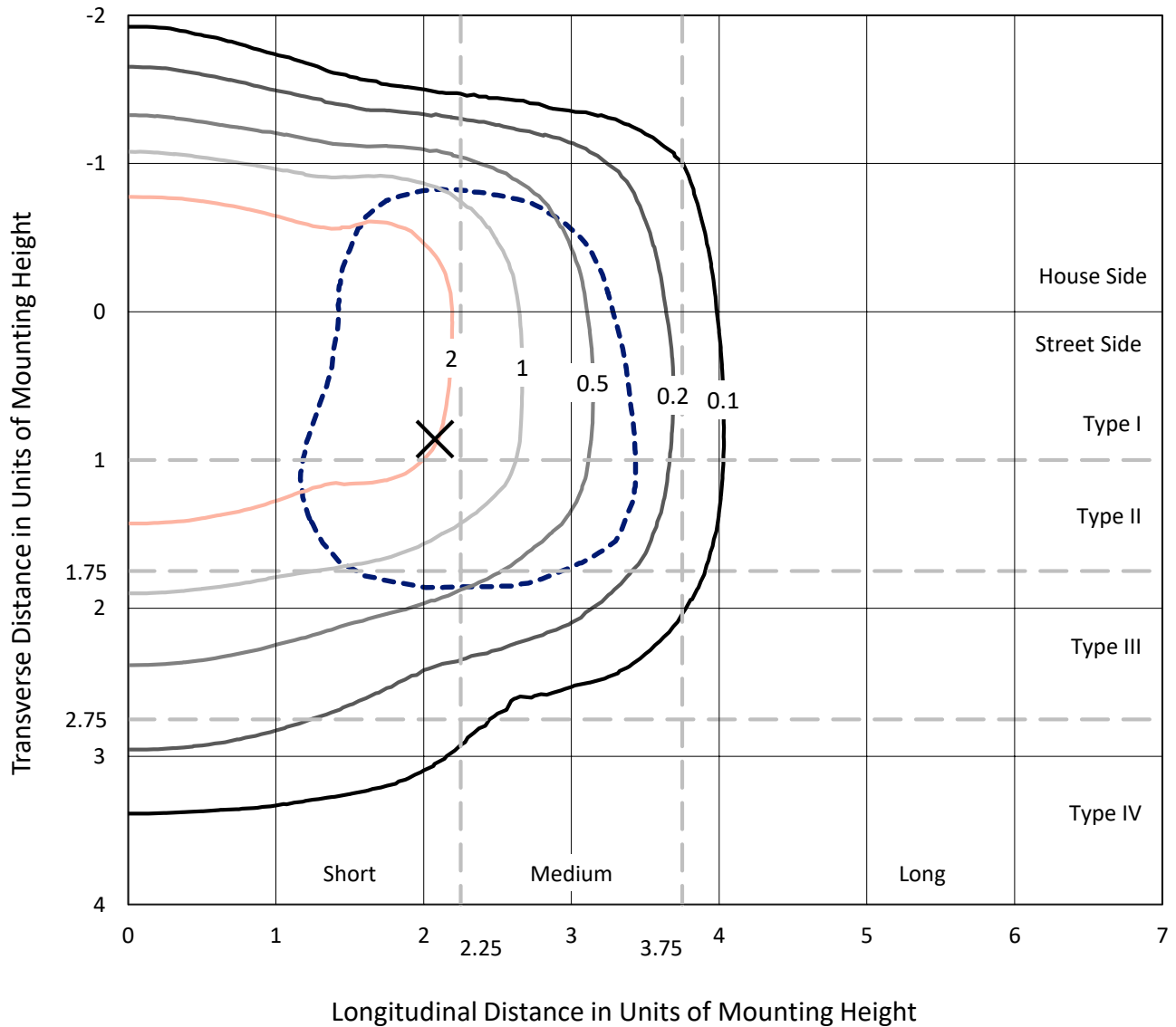
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

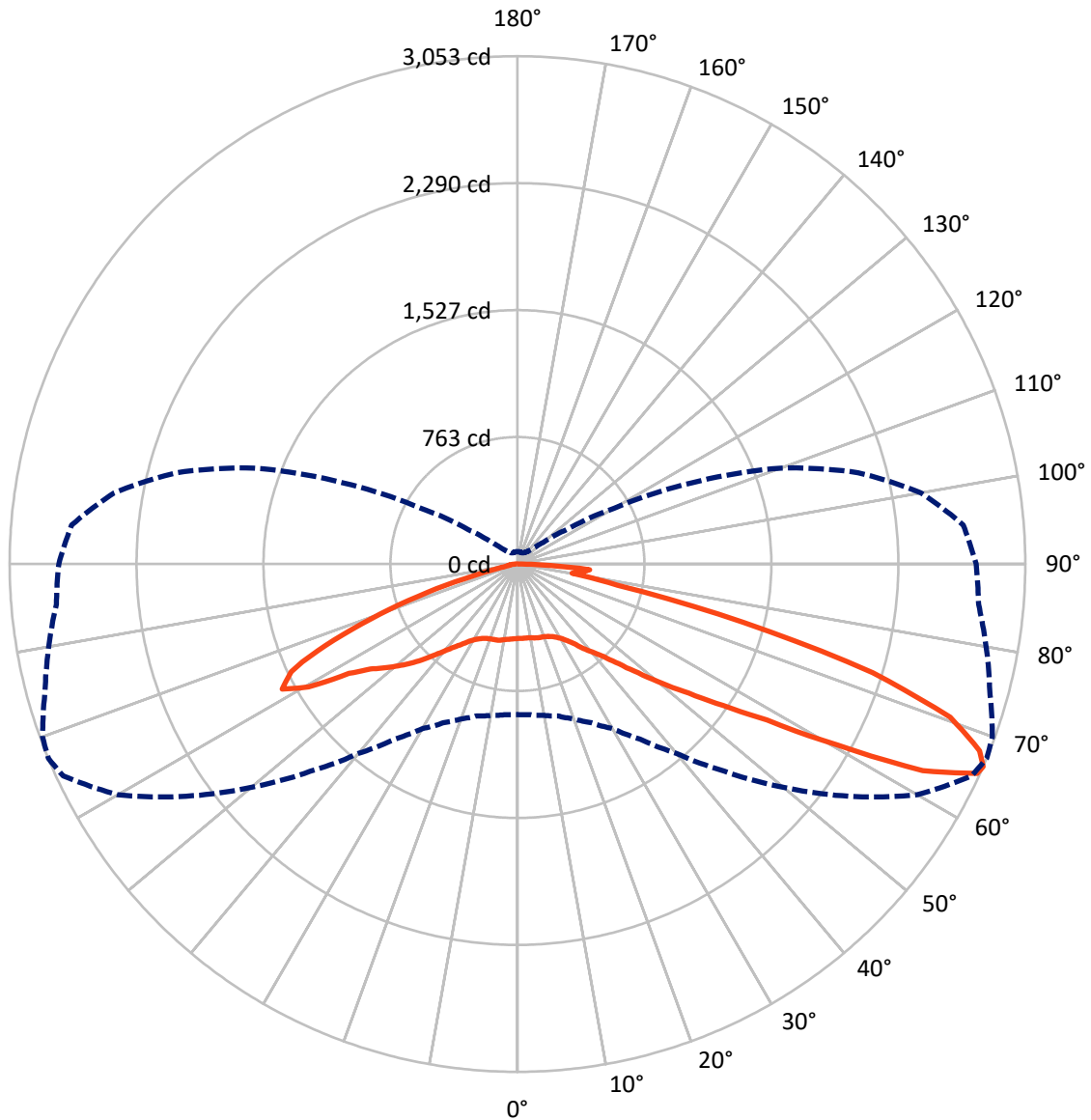
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.5 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	1413.5	0.0	1413.5
	% Fixture	34.0	0.0	34.0
<b>Street Side</b>	Lumens	2747.1	0.0	2747.1
	% Fixture	66.0	0.0	66.0
<b>Total</b>	Lumens	4160.6	0.0	4160.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.0	1.0
10°-20°	127.5	3.1
20°-30°	219.1	5.3
30°-40°	352.5	8.5
40°-50°	581.0	14.0
50°-60°	910.7	21.9
60°-70°	1260.3	30.3
70°-80°	570.4	13.7
80°-90°	96.2	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°	4160.6	100.0
0°-180°	4160.6	100.0



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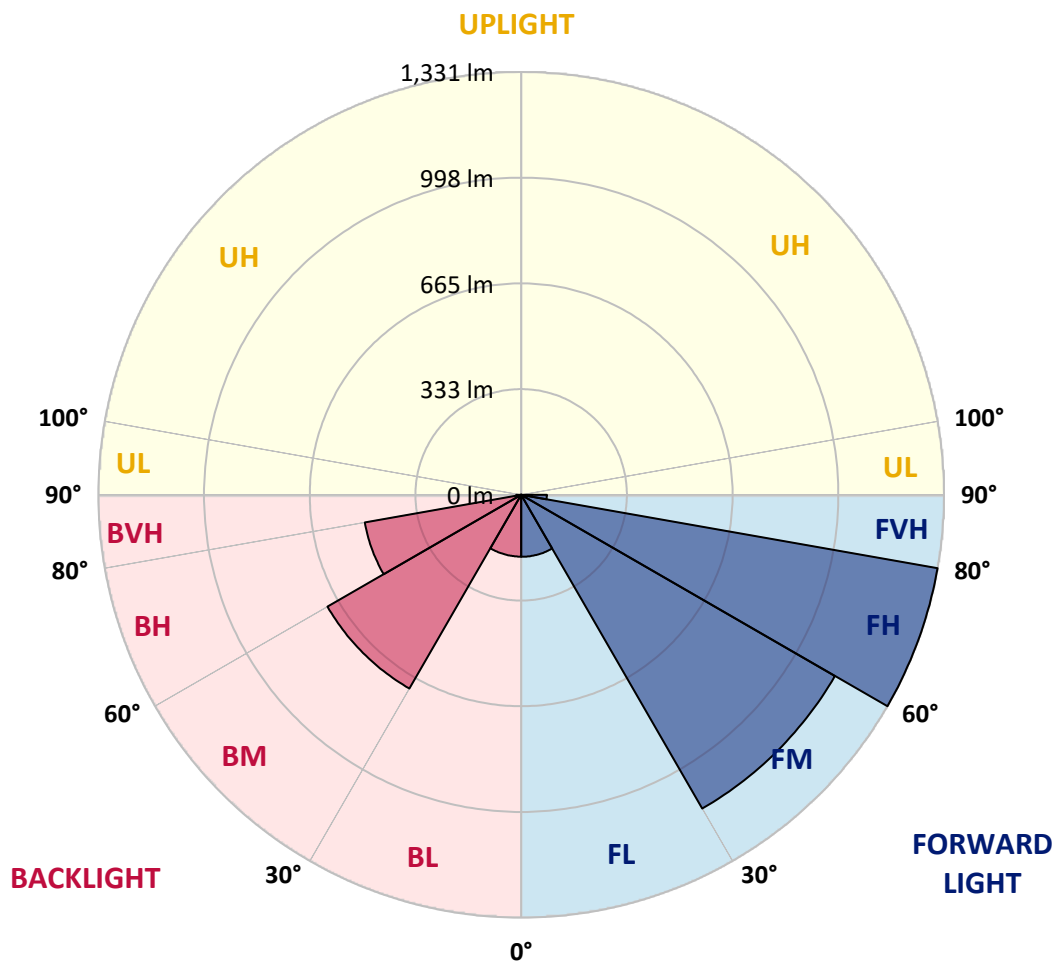
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	195.1	4.7			
FM	(30°-60°)	1140.2	27.4			
FH	(60°-80°)	1330.9	32.0			G1/1800
FVH	(80°-90°)	80.9	1.9			G1/100
BL	(0°-30°)	194.5	4.7	B1/500		
BM	(30°-60°)	703.9	16.9	B1/1000		
BH	(60°-80°)	499.7	12.0	B1/500		G1/500
BVH	(80°-90°)	15.4	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9
2.5°	447.3	447.0	446.7	446.7	446.5	446.7	447.0	447.3	447.0	447.3	447.0
5°	446.5	446.5	446.2	446.2	446.2	446.2	446.5	446.7	446.5	447.0	446.5
7.5°	442.8	444.5	444.0	444.5	445.1	445.6	445.9	446.5	447.3	447.9	447.3
10°	438.1	438.9	439.2	439.8	440.9	442.3	443.4	444.8	446.7	447.3	447.9
12.5°	429.5	430.6	431.4	432.5	434.2	436.4	438.4	440.6	444.0	446.2	448.1
15°	423.1	424.5	424.7	426.1	427.8	430.3	432.8	436.2	440.6	444.5	448.4
17.5°	427.2	427.8	427.2	427.2	427.8	428.9	430.9	433.6	438.4	443.1	447.9
20°	439.8	439.8	439.2	438.9	438.4	437.3	437.0	436.7	439.8	443.4	447.6
22.5°	451.8	451.8	451.5	452.6	452.3	452.3	451.5	450.1	448.7	448.1	450.9
25°	459.3	460.4	461.0	462.6	463.7	465.4	466.0	465.7	463.7	460.4	459.6
27.5°	471.6	472.4	472.9	474.9	477.1	479.1	481.0	483.5	483.5	480.5	476.3
30°	495.2	494.1	494.7	495.2	497.2	500.0	502.5	505.8	507.5	506.4	500.8
32.5°	517.3	518.4	518.9	520.6	522.6	526.7	529.8	533.7	537.3	537.9	535.1
35°	549.6	549.0	548.2	554.0	556.3	561.0	564.6	570.2	573.0	575.5	573.8
37.5°	600.6	598.9	597.8	599.5	602.5	605.6	610.9	615.1	619.8	625.7	623.7
40°	672.8	676.1	671.4	673.6	676.1	669.1	673.9	677.8	685.9	686.1	685.9
42.5°	766.7	769.2	768.1	769.5	765.0	762.8	760.8	762.8	772.8	771.4	764.7
45°	860.6	864.2	863.4	864.0	872.6	869.0	872.0	872.6	882.9	880.1	875.1
47.5°	940.9	947.0	948.4	953.4	965.1	974.6	987.7	997.4	1002.5	1005.8	1009.7
50°	1004.4	1008.9	1016.7	1029.2	1046.2	1062.7	1092.2	1111.4	1129.0	1141.3	1153.8
52.5°	1046.5	1051.5	1063.5	1082.4	1107.0	1137.1	1171.6	1211.8	1248.8	1270.6	1289.2
55°	1063.8	1068.8	1083.6	1108.4	1141.0	1179.4	1229.0	1285.6	1334.9	1384.8	1413.5
57.5°	1053.7	1059.3	1076.3	1104.2	1143.5	1193.9	1255.5	1324.9	1397.1	1472.6	1530.3
60°	1024.2	1029.2	1048.4	1077.4	1122.3	1179.2	1253.0	1340.0	1441.4	1553.4	1663.0
62.5°	983.5	991.0	1008.0	1037.6	1082.2	1144.3	1228.5	1341.6	1487.1	1667.7	1880.9
65°	931.7	937.2	952.3	975.7	1024.8	1089.7	1178.6	1317.1	1507.2	1763.3	2067.6
66°	904.9	910.2	924.2	946.2	991.0	1053.5	1142.4	1284.2	1484.9	1762.7	2087.4
67.5°	857.8	860.3	870.4	892.1	921.4	977.4	1059.9	1192.8	1390.4	1688.3	2032.2
70°	719.6	723.2	733.0	744.1	755.0	775.0	832.7	920.5	1078.5	1364.2	1692.2
72.5°	497.7	503.3	513.9	534.5	551.5	576.9	599.5	628.7	681.1	879.6	1210.6
75°	359.8	361.7	377.4	413.6	447.9	498.6	543.5	557.7	539.8	536.8	711.2
77.5°	214.6	217.4	240.0	276.5	312.1	381.0	472.9	544.0	583.3	569.4	538.4
80°	90.3	94.2	107.6	117.1	146.6	204.3	295.1	406.6	510.3	574.1	559.6
82.5°	29.0	33.7	39.9	48.2	56.9	76.1	117.9	176.4	278.7	415.5	510.8
85°	10.6	10.9	15.0	20.9	23.1	26.8	34.3	53.0	94.2	155.8	289.8
87.5°	4.2	5.0	5.9	8.1	8.4	8.6	9.8	12.5	12.3	10.6	54.9
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°	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9
2.5°	447.3	447.9	447.6	447.9	447.9	447.3	447.3	448.4	447.6	448.1	448.1
5°	447.0	447.6	447.3	447.9	447.9	447.6	447.6	449.3	449.0	449.8	450.4
7.5°	448.1	448.4	448.1	448.1	449.0	448.7	449.0	449.5	450.9	452.3	453.4
10°	449.5	450.1	450.9	451.2	452.3	452.0	452.9	453.7	455.1	456.5	457.9
12.5°	451.5	453.2	455.7	456.2	457.3	458.2	459.6	460.4	461.5	463.7	465.4
15°	453.2	456.2	459.3	460.4	461.5	462.6	464.0	464.9	466.8	468.8	470.7
17.5°	453.7	457.3	461.2	462.6	463.7	465.7	467.4	469.0	471.3	473.8	476.0
20°	454.0	459.0	464.0	465.7	468.2	471.0	473.8	475.2	478.2	481.3	483.3
22.5°	456.5	462.6	469.6	472.7	475.2	480.2	483.8	486.0	489.7	492.2	493.0
25°	463.5	469.9	478.2	483.0	487.2	494.4	498.9	503.0	505.0	508.3	507.5
27.5°	476.0	481.0	491.9	498.3	503.6	513.1	521.7	525.6	528.7	530.4	528.4
30°	497.5	499.4	511.4	519.2	528.1	542.9	552.4	557.4	561.3	561.6	556.6
32.5°	529.5	526.5	537.0	548.2	559.9	577.7	590.6	595.8	598.9	599.2	588.0
35°	573.0	567.7	576.6	587.5	602.0	625.4	641.6	647.7	652.4	650.2	633.8
37.5°	627.9	627.6	631.8	645.7	662.2	692.3	709.3	712.6	712.3	705.7	680.8
40°	688.9	683.9	684.5	694.5	713.5	753.0	776.7	782.3	780.3	770.6	738.3
42.5°	765.9	763.6	756.1	761.4	779.0	827.2	855.9	861.4	863.1	847.0	808.8
45°	873.7	871.8	855.0	856.1	869.0	919.7	949.5	958.7	959.0	943.7	894.1
47.5°	1004.4	1002.7	983.2	977.7	984.1	1029.2	1066.3	1068.2	1068.8	1047.6	996.1
50°	1152.7	1147.9	1133.2	1127.3	1119.8	1169.7	1199.5	1199.2	1196.2	1172.7	1114.8
52.5°	1295.9	1306.5	1300.9	1289.5	1289.8	1325.7	1353.9	1338.3	1340.2	1317.9	1251.3
55°	1448.9	1476.0	1496.3	1500.5	1498.5	1516.9	1532.5	1504.7	1494.4	1490.7	1419.9
57.5°	1611.4	1680.5	1743.2	1769.4	1759.4	1793.1	1807.1	1778.1	1778.6	1807.1	1746.0
60°	1828.5	2003.0	2161.0	2210.0	2232.9	2288.6	2263.8	2262.2	2305.9	2342.7	2229.6
62.5°	2157.9	2446.9	2699.2	2735.7	2754.1	2766.6	2755.4	2725.1	2770.2	2774.7	2600.2
65°	2407.6	2746.8	2990.7	3036.4	3033.0	2969.2	2907.3	2846.6	2846.0	2801.4	2576.8
66°	2434.7	2775.2	3013.0	3053.4	3038.6	2940.2	2861.6	2782.8	2757.4	2690.5	2462.5
67.5°	2375.6	2725.6	2961.7	2997.9	2966.4	2816.8	2709.7	2603.0	2564.8	2471.7	2239.3
70°	2030.8	2391.5	2707.2	2759.6	2722.3	2523.6	2365.0	2247.7	2143.7	2052.0	1860.3
72.5°	1574.6	1844.4	2178.6	2233.2	2236.2	2080.7	1902.1	1789.5	1668.5	1576.6	1432.8
75°	1032.8	1236.8	1420.5	1402.1	1407.4	1285.1	1178.6	1085.0	975.4	903.0	834.4
77.5°	603.7	676.7	659.9	614.2	575.8	452.6	323.8	222.4	194.0	202.3	228.3
80°	524.8	483.8	378.7	333.0	302.9	205.7	110.6	78.0	68.6	69.4	73.6
82.5°	564.9	586.1	481.0	396.0	345.3	242.2	130.2	64.9	46.8	54.6	60.2
85°	438.4	557.9	514.5	434.8	365.6	257.5	132.9	41.2	27.9	37.3	47.1
87.5°	124.9	197.6	158.0	139.6	112.6	76.9	31.8	16.4	15.0	19.5	27.0
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°	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9	447.9
2.5°	448.4	448.4	449.3	449.5	449.8	449.8	450.4	450.4	450.6	451.8	451.5
5°	451.2	452.0	453.2	453.7	454.6	454.8	455.7	455.7	456.5	457.3	457.1
7.5°	454.6	455.4	456.2	457.1	457.9	459.0	458.7	458.5	458.2	457.6	457.1
10°	459.3	460.1	461.0	460.7	460.1	459.6	457.3	454.8	453.7	451.5	449.8
12.5°	467.1	467.9	467.1	464.9	461.8	458.2	453.4	449.3	446.7	443.4	441.5
15°	472.9	473.8	472.1	468.2	463.2	458.5	452.0	446.7	442.3	438.7	435.9
17.5°	477.4	476.8	473.2	468.8	463.5	459.6	453.7	447.9	442.6	437.5	433.6
20°	483.8	480.7	475.5	469.9	464.6	461.2	456.5	451.2	445.6	438.4	433.4
22.5°	492.2	486.6	479.6	474.1	469.0	465.7	461.0	455.9	450.6	442.3	435.3
25°	504.2	495.2	487.2	481.3	476.8	473.5	467.6	462.4	456.5	448.1	439.2
27.5°	520.9	508.1	499.7	493.8	489.4	485.5	478.0	471.6	464.0	455.7	445.1
30°	542.6	527.0	517.8	512.8	508.1	502.5	494.4	484.9	475.2	464.0	452.6
32.5°	569.7	552.1	543.5	538.4	532.3	524.8	514.2	501.6	487.2	472.4	458.2
35°	608.1	588.0	578.6	569.9	561.0	549.9	534.0	515.9	496.6	477.4	459.8
37.5°	646.3	627.6	615.9	607.0	593.1	574.9	552.9	527.8	502.2	477.7	456.5
40°	700.4	678.6	665.0	649.1	626.5	598.4	566.3	532.6	500.8	471.3	446.2
42.5°	766.7	741.9	721.5	692.8	657.7	617.0	572.7	529.8	491.1	457.1	429.5
45°	850.6	818.2	784.2	739.1	685.3	628.5	572.4	520.0	474.3	435.9	408.6
47.5°	948.4	903.0	845.8	777.0	703.4	631.2	563.5	502.5	449.3	406.9	375.4
50°	1049.0	983.2	902.1	806.3	712.6	624.3	543.7	473.8	416.4	368.2	334.2
52.5°	1173.0	1071.0	953.1	826.0	708.7	603.7	510.8	433.4	372.1	325.0	285.9
55°	1320.7	1171.9	1001.6	836.9	691.4	566.6	461.0	380.4	316.0	273.1	238.0
57.5°	1565.1	1329.9	1084.4	853.1	657.4	511.4	400.2	316.9	256.4	219.9	191.7
60°	1986.5	1654.1	1259.4	892.9	610.3	432.8	323.0	248.3	198.4	169.2	149.4
62.5°	2280.6	1850.5	1353.6	879.3	530.4	340.8	238.8	177.5	144.6	125.4	112.0
65°	2223.4	1773.1	1240.2	746.9	415.5	241.1	158.9	120.1	101.4	89.5	82.8
66°	2120.9	1687.5	1153.8	670.5	360.4	200.9	131.0	99.5	87.2	78.6	74.1
67.5°	1933.9	1510.2	998.6	538.2	269.8	148.3	99.5	77.5	70.8	66.3	63.3
70°	1601.1	1194.2	687.5	318.0	142.7	83.1	63.3	57.1	54.1	52.1	51.8
72.5°	1227.6	856.7	397.7	153.8	76.4	55.2	48.5	46.3	45.1	44.6	44.6
75°	758.3	483.3	177.8	77.2	52.7	45.1	42.1	41.0	40.7	40.7	40.7
77.5°	266.7	168.3	79.7	56.6	46.3	40.7	38.2	37.6	38.2	38.2	38.2
80°	73.6	64.9	57.7	50.2	41.8	37.6	35.4	35.1	36.2	36.5	35.4
82.5°	57.4	54.1	49.3	44.9	38.2	34.3	33.2	33.7	34.3	33.4	31.8
85°	49.1	46.8	34.6	34.6	30.9	29.8	29.5	30.1	29.8	27.6	25.4
87.5°	27.9	24.5	18.7	20.3	21.7	22.3	18.7	20.1	19.8	17.6	16.4
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):**

	160°	165°	170°	175°	180°
0°	447.9	447.9	447.9	447.9	447.9
2.5°	452.0	452.0	452.6	452.6	452.3
5°	457.6	457.6	458.5	457.9	458.2
7.5°	456.5	455.4	455.4	454.8	454.6
10°	448.7	446.7	445.6	446.2	445.4
12.5°	439.8	438.1	437.0	436.7	436.4
15°	434.2	432.3	431.4	430.9	430.9
17.5°	431.1	428.9	427.8	427.0	426.7
20°	429.7	427.0	425.3	424.5	423.9
22.5°	430.3	427.0	424.7	423.6	423.1
25°	432.5	428.4	425.6	424.2	423.3
27.5°	436.4	430.9	427.8	425.8	424.7
30°	441.2	433.4	428.9	426.1	425.0
32.5°	444.2	433.6	428.1	423.9	422.8
35°	443.7	430.6	423.3	418.0	417.2
37.5°	438.1	422.5	413.6	406.6	405.8
40°	426.1	410.2	399.9	393.0	391.3
42.5°	409.4	393.0	381.8	375.4	373.2
45°	384.9	364.8	354.5	349.2	346.1
47.5°	350.3	331.4	319.9	315.5	311.6
50°	311.0	290.1	281.8	276.7	272.3
52.5°	264.8	246.9	240.5	235.8	232.2
55°	219.9	207.3	199.8	194.8	195.1
57.5°	176.7	169.2	165.0	159.7	160.2
60°	139.1	132.7	132.7	129.3	128.2
62.5°	106.2	103.7	102.8	101.7	99.8
65°	80.5	80.5	80.8	80.8	79.7
66°	72.5	73.3	74.4	74.4	73.0
67.5°	62.7	63.8	64.9	65.5	65.5
70°	51.8	53.2	53.8	54.3	54.1
72.5°	45.4	46.5	46.5	46.8	46.3
75°	41.2	41.8	42.1	41.5	41.2
77.5°	38.2	38.5	38.2	37.9	37.6
80°	34.6	34.3	33.4	32.3	32.0
82.5°	29.8	28.7	28.1	26.5	26.2
85°	24.0	22.6	21.5	19.2	18.1
87.5°	15.9	15.3	14.5	10.6	8.6
90°	0.0	0.0	0.0	0.0	0.0

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