

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: P146580

Luminaire Tested: **LDRL-T3-E01-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146580
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-E01-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (21) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2985.8 lumens
Efficiency: N/A
Efficacy: 120.9 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

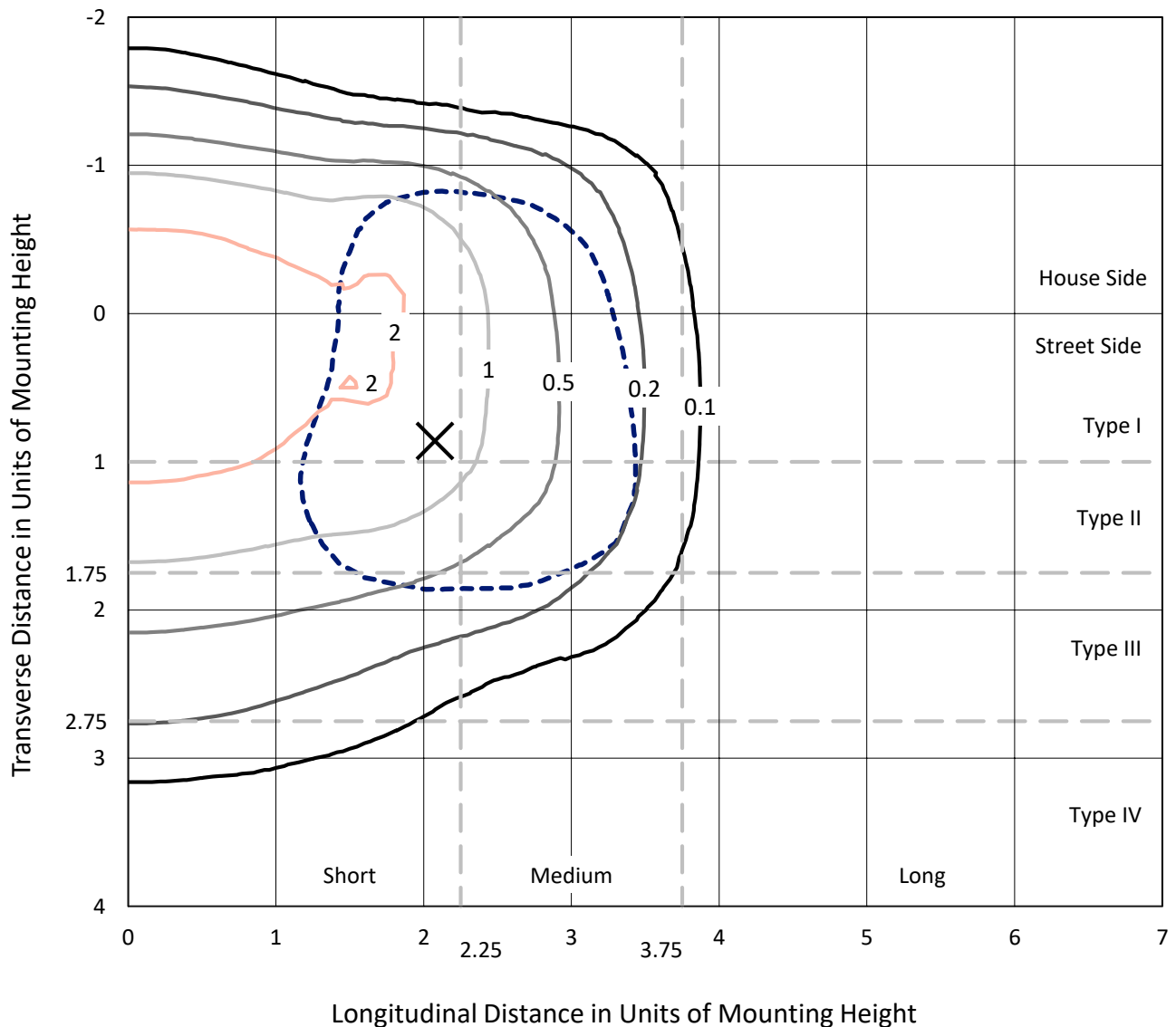
Input Watts (W): 24.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

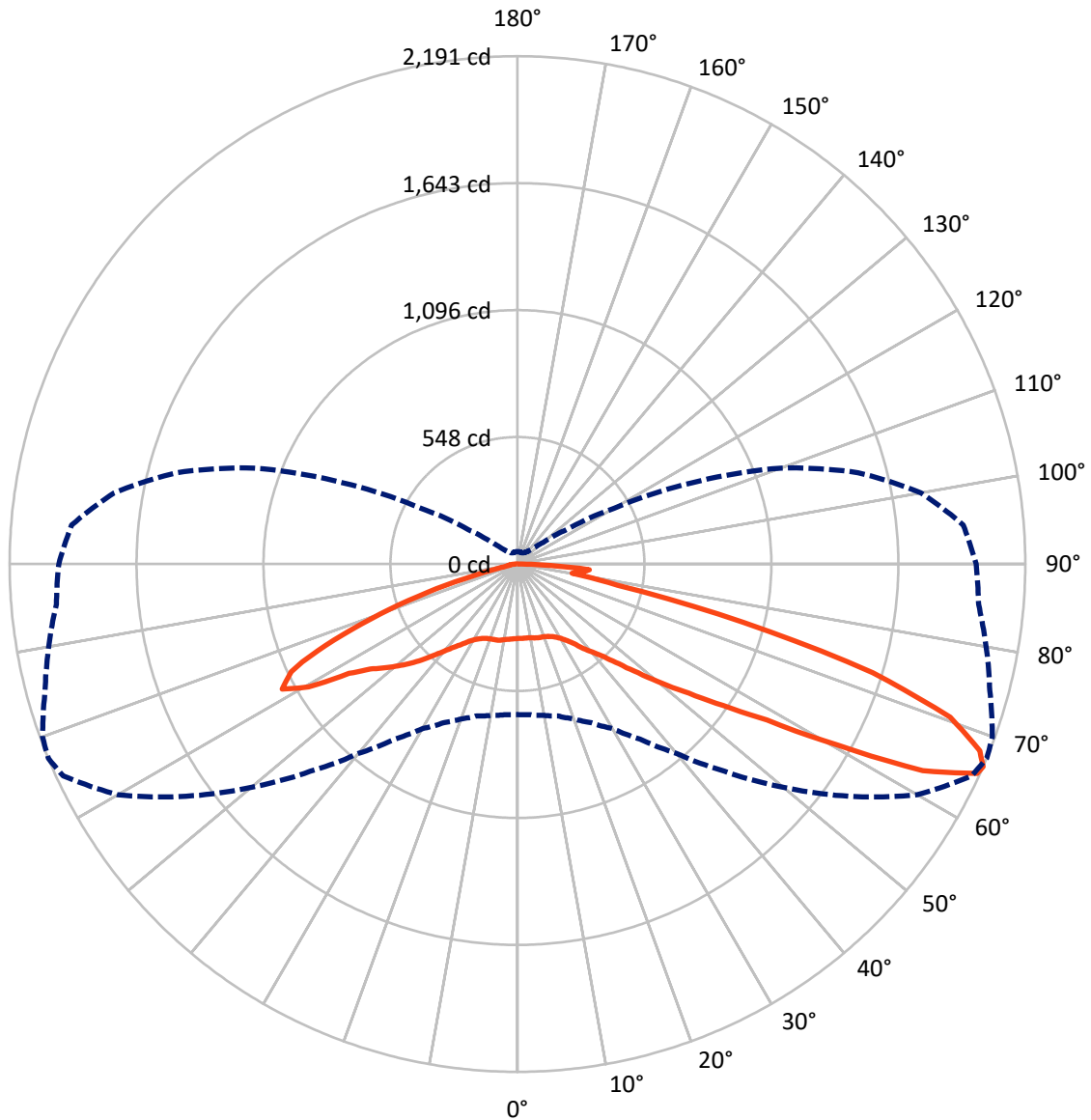
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.2 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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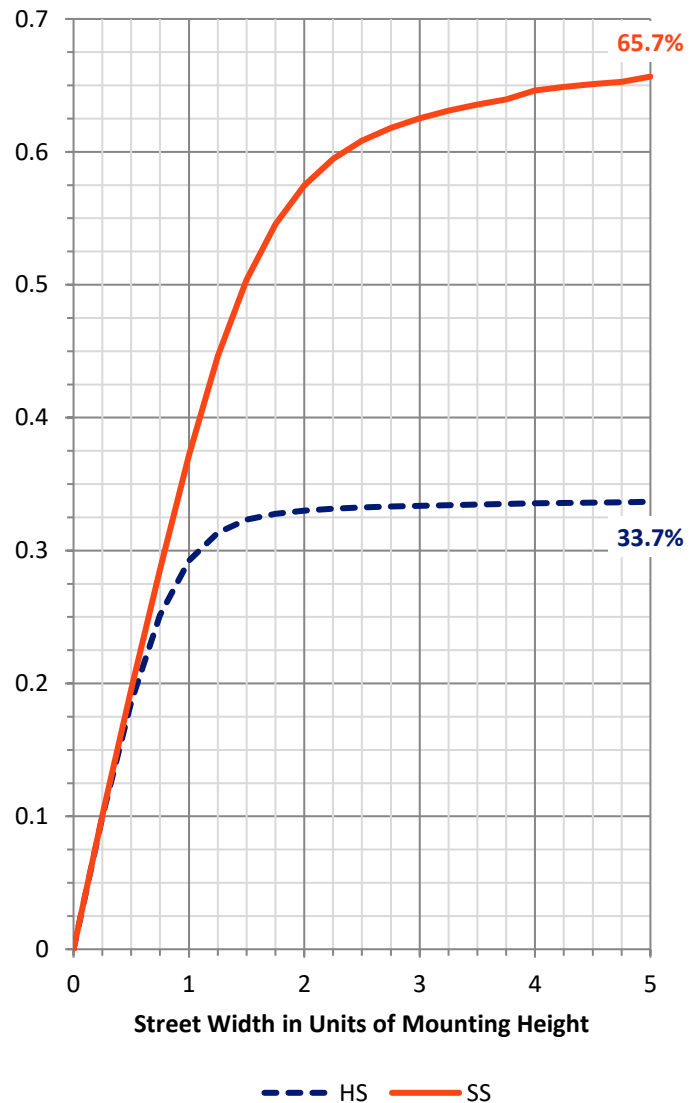
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1014.4	0.0	1014.4
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	1971.4	0.0	1971.4
	% Fixture	66.0	0.0	66.0
Total	Lumens	2985.8	0.0	2985.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.9	1.0
10°-20°	91.5	3.1
20°-30°	157.3	5.3
30°-40°	253.0	8.5
40°-50°	416.9	14.0
50°-60°	653.5	21.9
60°-70°	904.4	30.3
70°-80°	409.3	13.7
80°-90°	69.1	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°	2985.8	100.0
0°-180°	2985.8	100.0



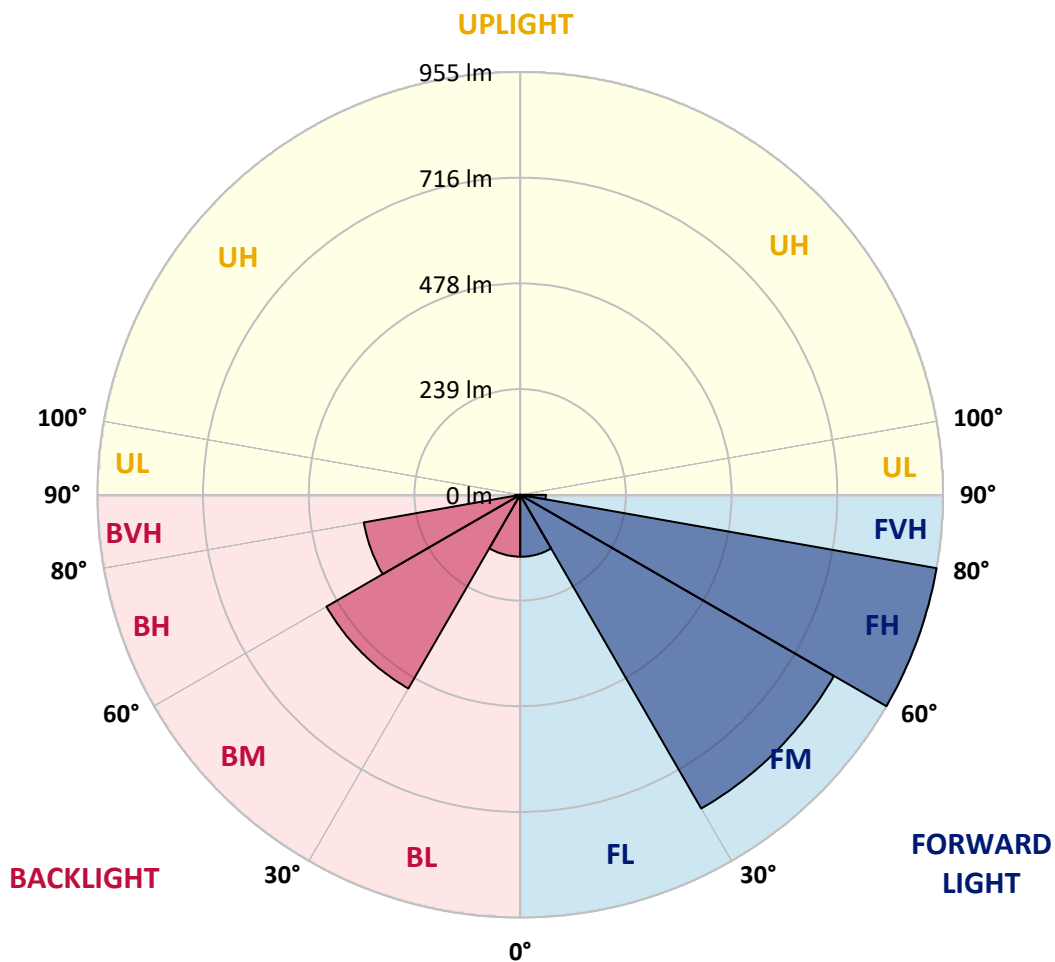
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	140.0	4.7			
FM	(30°-60°)	818.2	27.4			
FH	(60°-80°)	955.1	32.0			G1/1800
FVH	(80°-90°)	58.0	1.9			G1/100
BL	(0°-30°)	139.6	4.7	B1/500		
BM	(30°-60°)	505.2	16.9	B1/1000		
BH	(60°-80°)	358.6	12.0	B1/500		G1/500
BVH	(80°-90°)	11.0	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°	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4
2.5°	321.0	320.8	320.6	320.6	320.4	320.6	320.8	321.0	320.8	321.0	320.8
5°	320.4	320.4	320.2	320.2	320.2	320.2	320.4	320.6	320.4	320.8	320.4
7.5°	317.8	319.0	318.6	319.0	319.4	319.8	320.0	320.4	321.0	321.4	321.0
10°	314.4	315.0	315.2	315.6	316.4	317.4	318.2	319.2	320.6	321.0	321.4
12.5°	308.2	309.0	309.6	310.4	311.6	313.2	314.6	316.2	318.6	320.2	321.6
15°	303.6	304.6	304.8	305.8	307.0	308.8	310.6	313.0	316.2	319.0	321.8
17.5°	306.6	307.0	306.6	306.6	307.0	307.8	309.2	311.2	314.6	318.0	321.4
20°	315.6	315.6	315.2	315.0	314.6	313.8	313.6	313.4	315.6	318.2	321.2
22.5°	324.2	324.2	324.0	324.8	324.6	324.6	324.0	323.0	322.0	321.6	323.6
25°	329.6	330.4	330.8	332.0	332.8	334.0	334.4	334.2	332.8	330.4	329.8
27.5°	338.4	339.0	339.4	340.8	342.4	343.8	345.2	347.0	347.0	344.8	341.8
30°	355.4	354.6	355.0	355.4	356.8	358.8	360.6	363.0	364.2	363.4	359.4
32.5°	371.2	372.0	372.4	373.6	375.0	378.0	380.2	383.0	385.6	386.0	384.0
35°	394.4	394.0	393.4	397.6	399.2	402.6	405.2	409.2	411.2	413.0	411.8
37.5°	431.0	429.8	429.0	430.2	432.4	434.6	438.4	441.4	444.8	449.0	447.6
40°	482.8	485.2	481.8	483.4	485.2	480.2	483.6	486.4	492.2	492.4	492.2
42.5°	550.2	552.0	551.2	552.2	549.0	547.4	546.0	547.4	554.6	553.6	548.8
45°	617.6	620.2	619.6	620.0	626.2	623.6	625.8	626.2	633.6	631.6	628.0
47.5°	675.2	679.6	680.6	684.2	692.6	699.4	708.8	715.8	719.4	721.8	724.6
50°	720.8	724.0	729.6	738.6	750.8	762.6	783.8	797.6	810.2	819.0	828.0
52.5°	751.0	754.6	763.2	776.8	794.4	816.0	840.8	869.6	896.2	911.8	925.2
55°	763.4	767.0	777.6	795.4	818.8	846.4	882.0	922.6	958.0	993.8	1014.4
57.5°	756.2	760.2	772.4	792.4	820.6	856.8	901.0	950.8	1002.6	1056.8	1098.2
60°	735.0	738.6	752.4	773.2	805.4	846.2	899.2	961.6	1034.4	1114.8	1193.4
62.5°	705.8	711.2	723.4	744.6	776.6	821.2	881.6	962.8	1067.2	1196.8	1349.8
65°	668.6	672.6	683.4	700.2	735.4	782.0	845.8	945.2	1081.6	1265.4	1483.8
66°	649.4	653.2	663.2	679.0	711.2	756.0	819.8	921.6	1065.6	1265.0	1498.0
67.5°	615.6	617.4	624.6	640.2	661.2	701.4	760.6	856.0	997.8	1211.6	1458.4
70°	516.4	519.0	526.0	534.0	541.8	556.2	597.6	660.6	774.0	979.0	1214.4
72.5°	357.2	361.2	368.8	383.6	395.8	414.0	430.2	451.2	488.8	631.2	868.8
75°	258.2	259.6	270.8	296.8	321.4	357.8	390.0	400.2	387.4	385.2	510.4
77.5°	154.0	156.0	172.2	198.4	224.0	273.4	339.4	390.4	418.6	408.6	386.4
80°	64.8	67.6	77.2	84.0	105.2	146.6	211.8	291.8	366.2	412.0	401.6
82.5°	20.8	24.2	28.6	34.6	40.8	54.6	84.6	126.6	200.0	298.2	366.6
85°	7.6	7.8	10.8	15.0	16.6	19.2	24.6	38.0	67.6	111.8	208.0
87.5°	3.0	3.6	4.2	5.8	6.0	6.2	7.0	9.0	8.8	7.6	39.4
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°	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4
2.5°	321.0	321.4	321.2	321.4	321.4	321.0	321.0	321.8	321.2	321.6	321.6
5°	320.8	321.2	321.0	321.4	321.4	321.2	321.2	322.4	322.2	322.8	323.2
7.5°	321.6	321.8	321.6	321.6	322.2	322.0	322.2	322.6	323.6	324.6	325.4
10°	322.6	323.0	323.6	323.8	324.6	324.4	325.0	325.6	326.6	327.6	328.6
12.5°	324.0	325.2	327.0	327.4	328.2	328.8	329.8	330.4	331.2	332.8	334.0
15°	325.2	327.4	329.6	330.4	331.2	332.0	333.0	333.6	335.0	336.4	337.8
17.5°	325.6	328.2	331.0	332.0	332.8	334.2	335.4	336.6	338.2	340.0	341.6
20°	325.8	329.4	333.0	334.2	336.0	338.0	340.0	341.0	343.2	345.4	346.8
22.5°	327.6	332.0	337.0	339.2	341.0	344.6	347.2	348.8	351.4	353.2	353.8
25°	332.6	337.2	343.2	346.6	349.6	354.8	358.0	361.0	362.4	364.8	364.2
27.5°	341.6	345.2	353.0	357.6	361.4	368.2	374.4	377.2	379.4	380.6	379.2
30°	357.0	358.4	367.0	372.6	379.0	389.6	396.4	400.0	402.8	403.0	399.4
32.5°	380.0	377.8	385.4	393.4	401.8	414.6	423.8	427.6	429.8	430.0	422.0
35°	411.2	407.4	413.8	421.6	432.0	448.8	460.4	464.8	468.2	466.6	454.8
37.5°	450.6	450.4	453.4	463.4	475.2	496.8	509.0	511.4	511.2	506.4	488.6
40°	494.4	490.8	491.2	498.4	512.0	540.4	557.4	561.4	560.0	553.0	529.8
42.5°	549.6	548.0	542.6	546.4	559.0	593.6	614.2	618.2	619.4	607.8	580.4
45°	627.0	625.6	613.6	614.4	623.6	660.0	681.4	688.0	688.2	677.2	641.6
47.5°	720.8	719.6	705.6	701.6	706.2	738.6	765.2	766.6	767.0	751.8	714.8
50°	827.2	823.8	813.2	809.0	803.6	839.4	860.8	860.6	858.4	841.6	800.0
52.5°	930.0	937.6	933.6	925.4	925.6	951.4	971.6	960.4	961.8	945.8	898.0
55°	1039.8	1059.2	1073.8	1076.8	1075.4	1088.6	1099.8	1079.8	1072.4	1069.8	1019.0
57.5°	1156.4	1206.0	1251.0	1269.8	1262.6	1286.8	1296.8	1276.0	1276.4	1296.8	1253.0
60°	1312.2	1437.4	1550.8	1586.0	1602.4	1642.4	1624.6	1623.4	1654.8	1681.2	1600.0
62.5°	1548.6	1756.0	1937.0	1963.2	1976.4	1985.4	1977.4	1955.6	1988.0	1991.2	1866.0
65°	1727.8	1971.2	2146.2	2179.0	2176.6	2130.8	2086.4	2042.8	2042.4	2010.4	1849.2
66°	1747.2	1991.6	2162.2	2191.2	2180.6	2110.0	2053.6	1997.0	1978.8	1930.8	1767.2
67.5°	1704.8	1956.0	2125.4	2151.4	2128.8	2021.4	1944.6	1868.0	1840.6	1773.8	1607.0
70°	1457.4	1716.2	1942.8	1980.4	1953.6	1811.0	1697.2	1613.0	1538.4	1472.6	1335.0
72.5°	1130.0	1323.6	1563.4	1602.6	1604.8	1493.2	1365.0	1284.2	1197.4	1131.4	1028.2
75°	741.2	887.6	1019.4	1006.2	1010.0	922.2	845.8	778.6	700.0	648.0	598.8
77.5°	433.2	485.6	473.6	440.8	413.2	324.8	232.4	159.6	139.2	145.2	163.8
80°	376.6	347.2	271.8	239.0	217.4	147.6	79.4	56.0	49.2	49.8	52.8
82.5°	405.4	420.6	345.2	284.2	247.8	173.8	93.4	46.6	33.6	39.2	43.2
85°	314.6	400.4	369.2	312.0	262.4	184.8	95.4	29.6	20.0	26.8	33.8
87.5°	89.6	141.8	113.4	100.2	80.8	55.2	22.8	11.8	10.8	14.0	19.4
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4
2.5°	321.8	321.8	322.4	322.6	322.8	322.8	323.2	323.2	323.4	324.2	324.0
5°	323.8	324.4	325.2	325.6	326.2	326.4	327.0	327.0	327.6	328.2	328.0
7.5°	326.2	326.8	327.4	328.0	328.6	329.4	329.2	329.0	328.8	328.4	328.0
10°	329.6	330.2	330.8	330.6	330.2	329.8	328.2	326.4	325.6	324.0	322.8
12.5°	335.2	335.8	335.2	333.6	331.4	328.8	325.4	322.4	320.6	318.2	316.8
15°	339.4	340.0	338.8	336.0	332.4	329.0	324.4	320.6	317.4	314.8	312.8
17.5°	342.6	342.2	339.6	336.4	332.6	329.8	325.6	321.4	317.6	314.0	311.2
20°	347.2	345.0	341.2	337.2	333.4	331.0	327.6	323.8	319.8	314.6	311.0
22.5°	353.2	349.2	344.2	340.2	336.6	334.2	330.8	327.2	323.4	317.4	312.4
25°	361.8	355.4	349.6	345.4	342.2	339.8	335.6	331.8	327.6	321.6	315.2
27.5°	373.8	364.6	358.6	354.4	351.2	348.4	343.0	338.4	333.0	327.0	319.4
30°	389.4	378.2	371.6	368.0	364.6	360.6	354.8	348.0	341.0	333.0	324.8
32.5°	408.8	396.2	390.0	386.4	382.0	376.6	369.0	360.0	349.6	339.0	328.8
35°	436.4	422.0	415.2	409.0	402.6	394.6	383.2	370.2	356.4	342.6	330.0
37.5°	463.8	450.4	442.0	435.6	425.6	412.6	396.8	378.8	360.4	342.8	327.6
40°	502.6	487.0	477.2	465.8	449.6	429.4	406.4	382.2	359.4	338.2	320.2
42.5°	550.2	532.4	517.8	497.2	472.0	442.8	411.0	380.2	352.4	328.0	308.2
45°	610.4	587.2	562.8	530.4	491.8	451.0	410.8	373.2	340.4	312.8	293.2
47.5°	680.6	648.0	607.0	557.6	504.8	453.0	404.4	360.6	322.4	292.0	269.4
50°	752.8	705.6	647.4	578.6	511.4	448.0	390.2	340.0	298.8	264.2	239.8
52.5°	841.8	768.6	684.0	592.8	508.6	433.2	366.6	311.0	267.0	233.2	205.2
55°	947.8	841.0	718.8	600.6	496.2	406.6	330.8	273.0	226.8	196.0	170.8
57.5°	1123.2	954.4	778.2	612.2	471.8	367.0	287.2	227.4	184.0	157.8	137.6
60°	1425.6	1187.0	903.8	640.8	438.0	310.6	231.8	178.2	142.4	121.4	107.2
62.5°	1636.6	1328.0	971.4	631.0	380.6	244.6	171.4	127.4	103.8	90.0	80.4
65°	1595.6	1272.4	890.0	536.0	298.2	173.0	114.0	86.2	72.8	64.2	59.4
66°	1522.0	1211.0	828.0	481.2	258.6	144.2	94.0	71.4	62.6	56.4	53.2
67.5°	1387.8	1083.8	716.6	386.2	193.6	106.4	71.4	55.6	50.8	47.6	45.4
70°	1149.0	857.0	493.4	228.2	102.4	59.6	45.4	41.0	38.8	37.4	37.2
72.5°	881.0	614.8	285.4	110.4	54.8	39.6	34.8	33.2	32.4	32.0	32.0
75°	544.2	346.8	127.6	55.4	37.8	32.4	30.2	29.4	29.2	29.2	29.2
77.5°	191.4	120.8	57.2	40.6	33.2	29.2	27.4	27.0	27.4	27.4	27.4
80°	52.8	46.6	41.4	36.0	30.0	27.0	25.4	25.2	26.0	26.2	25.4
82.5°	41.2	38.8	35.4	32.2	27.4	24.6	23.8	24.2	24.6	24.0	22.8
85°	35.2	33.6	24.8	24.8	22.2	21.4	21.2	21.6	21.4	19.8	18.2
87.5°	20.0	17.6	13.4	14.6	15.6	16.0	13.4	14.4	14.2	12.6	11.8
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°	321.4	321.4	321.4	321.4	321.4
2.5°	324.4	324.4	324.8	324.8	324.6
5°	328.4	328.4	329.0	328.6	328.8
7.5°	327.6	326.8	326.8	326.4	326.2
10°	322.0	320.6	319.8	320.2	319.6
12.5°	315.6	314.4	313.6	313.4	313.2
15°	311.6	310.2	309.6	309.2	309.2
17.5°	309.4	307.8	307.0	306.4	306.2
20°	308.4	306.4	305.2	304.6	304.2
22.5°	308.8	306.4	304.8	304.0	303.6
25°	310.4	307.4	305.4	304.4	303.8
27.5°	313.2	309.2	307.0	305.6	304.8
30°	316.6	311.0	307.8	305.8	305.0
32.5°	318.8	311.2	307.2	304.2	303.4
35°	318.4	309.0	303.8	300.0	299.4
37.5°	314.4	303.2	296.8	291.8	291.2
40°	305.8	294.4	287.0	282.0	280.8
42.5°	293.8	282.0	274.0	269.4	267.8
45°	276.2	261.8	254.4	250.6	248.4
47.5°	251.4	237.8	229.6	226.4	223.6
50°	223.2	208.2	202.2	198.6	195.4
52.5°	190.0	177.2	172.6	169.2	166.6
55°	157.8	148.8	143.4	139.8	140.0
57.5°	126.8	121.4	118.4	114.6	115.0
60°	99.8	95.2	95.2	92.8	92.0
62.5°	76.2	74.4	73.8	73.0	71.6
65°	57.8	57.8	58.0	58.0	57.2
66°	52.0	52.6	53.4	53.4	52.4
67.5°	45.0	45.8	46.6	47.0	47.0
70°	37.2	38.2	38.6	39.0	38.8
72.5°	32.6	33.4	33.4	33.6	33.2
75°	29.6	30.0	30.2	29.8	29.6
77.5°	27.4	27.6	27.4	27.2	27.0
80°	24.8	24.6	24.0	23.2	23.0
82.5°	21.4	20.6	20.2	19.0	18.8
85°	17.2	16.2	15.4	13.8	13.0
87.5°	11.4	11.0	10.4	7.6	6.2
90°	0.0	0.0	0.0	0.0	0.0

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