

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: P146581

Luminaire Tested: **LDRL-T3-E01-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146581
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-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (21) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3063.8 lumens
Efficiency: N/A
Efficacy: 124.0 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

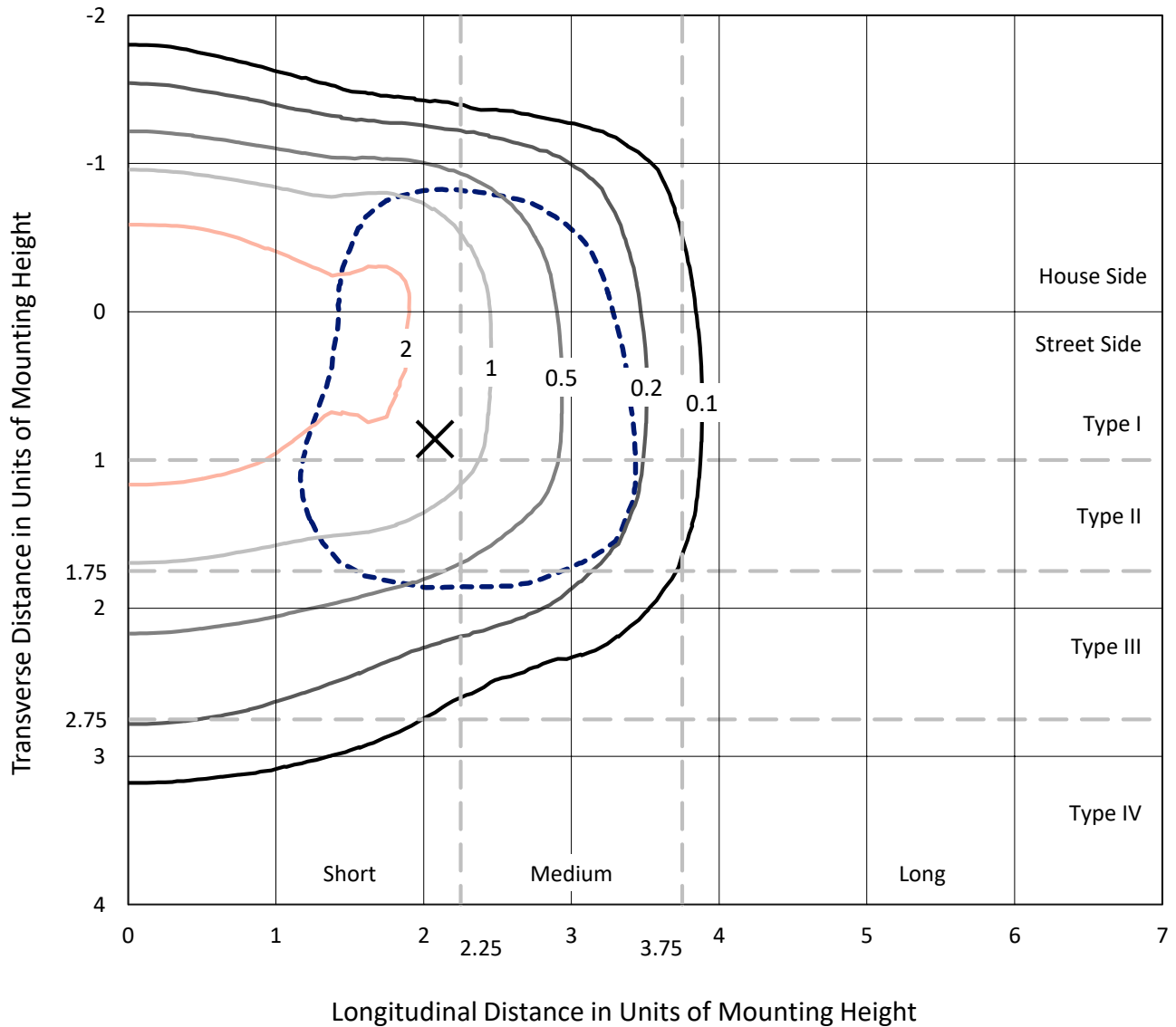
Input Watts (W): 24.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

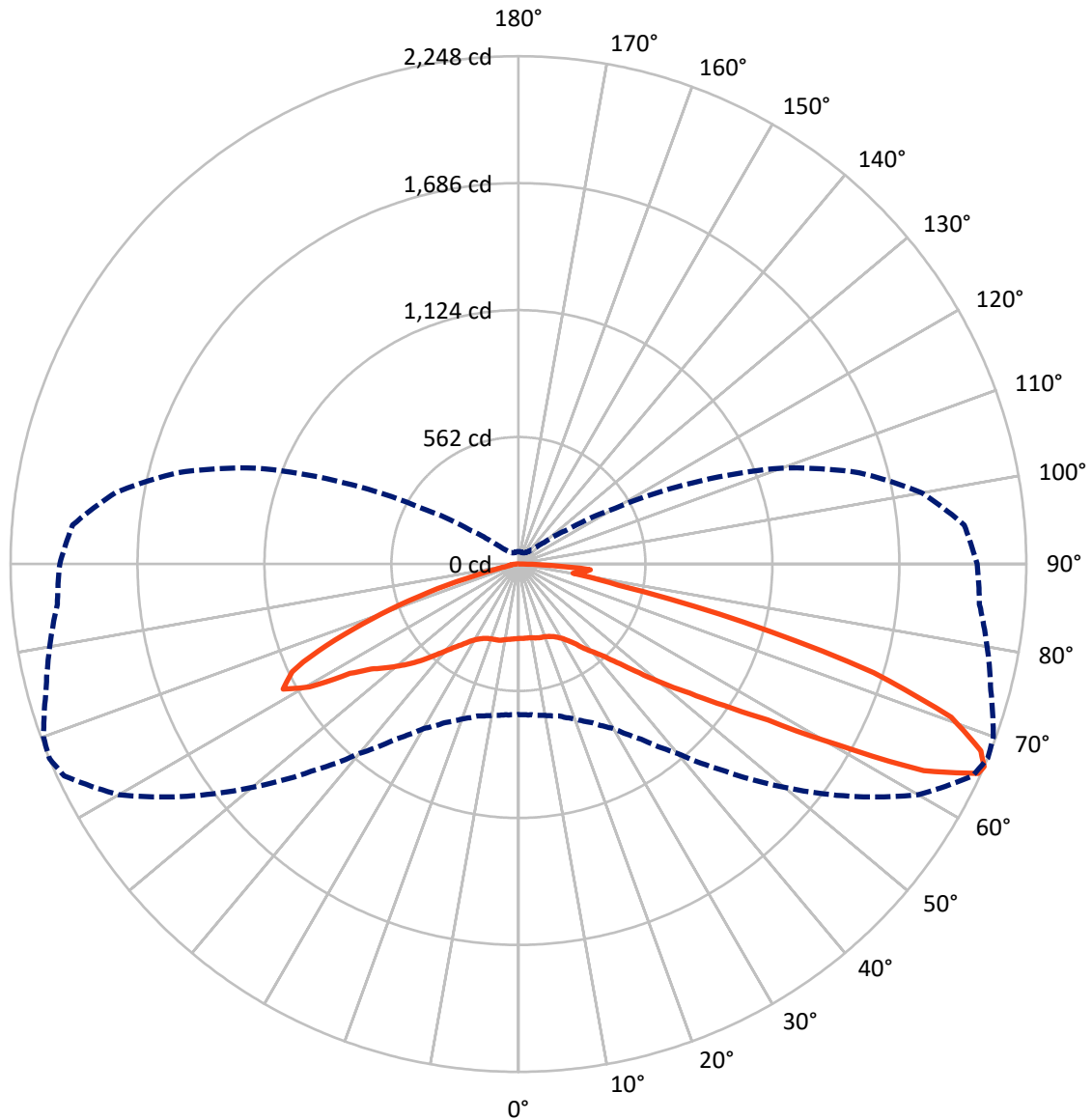
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.3 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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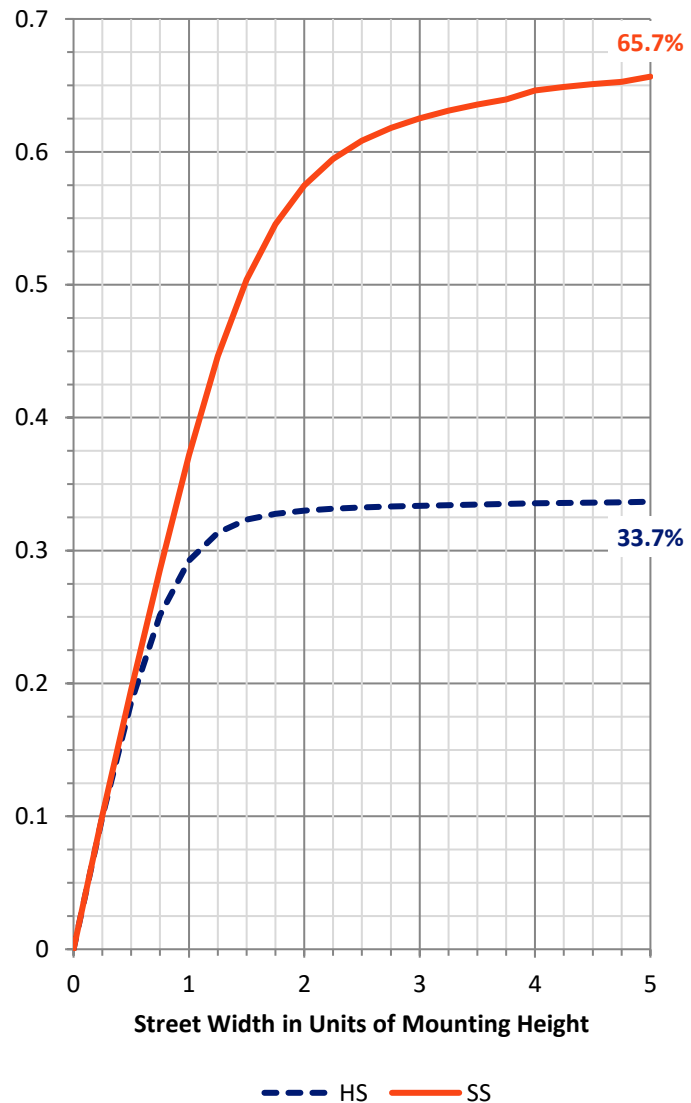
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1040.9	0.0	1040.9
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	2022.9	0.0	2022.9
	% Fixture	66.0	0.0	66.0
Total	Lumens	3063.8	0.0	3063.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.7	1.0
10°-20°	93.9	3.1
20°-30°	161.4	5.3
30°-40°	259.6	8.5
40°-50°	427.8	14.0
50°-60°	670.6	21.9
60°-70°	928.0	30.3
70°-80°	420.0	13.7
80°-90°	70.9	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°	3063.8	100.0
0°-180°	3063.8	100.0



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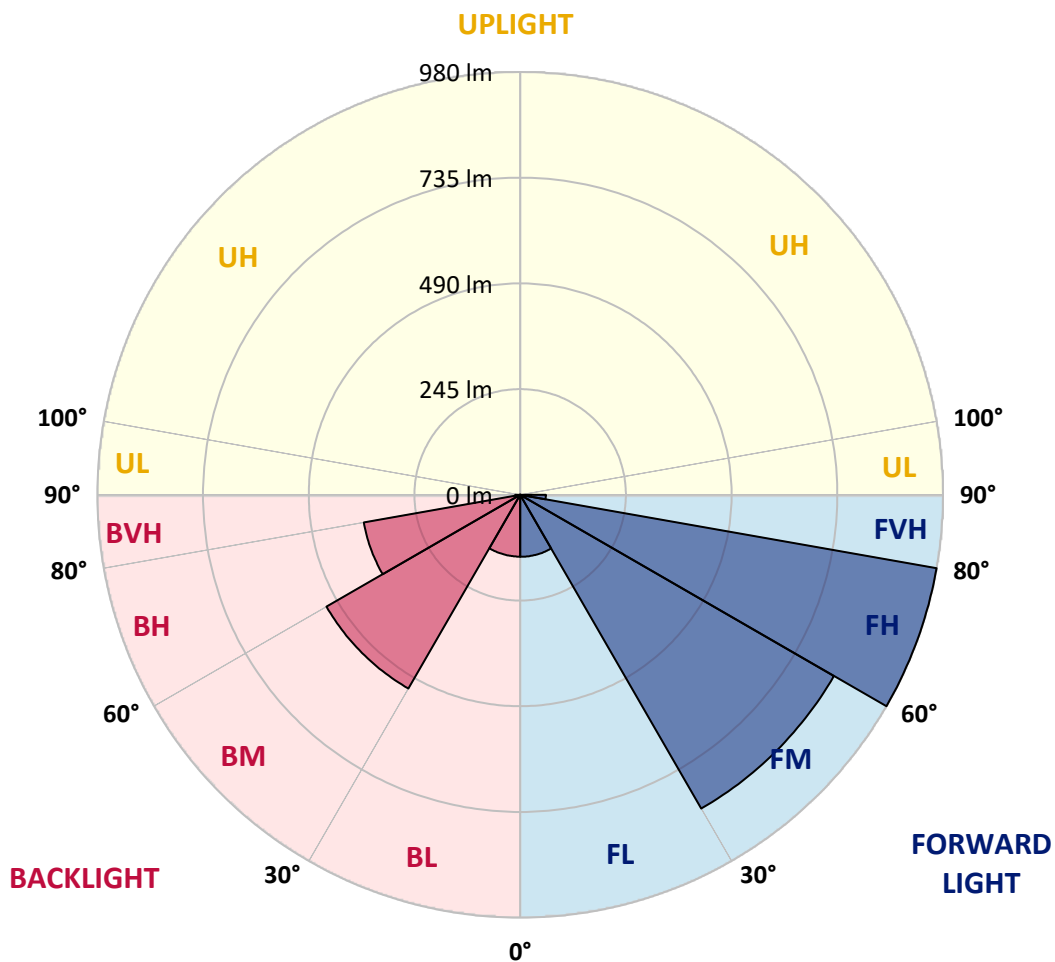
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	143.7	4.7			
FM	(30°-60°)	839.6	27.4			
FH	(60°-80°)	980.1	32.0			G1/1800
FVH	(80°-90°)	59.5	1.9			G1/100
BL	(0°-30°)	143.2	4.7	B1/500		
BM	(30°-60°)	518.4	16.9	B1/1000		
BH	(60°-80°)	368.0	12.0	B1/500		G1/500
BVH	(80°-90°)	11.3	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°	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8
2.5°	329.4	329.2	329.0	329.0	328.8	329.0	329.2	329.4	329.2	329.4	329.2
5°	328.8	328.8	328.6	328.6	328.6	328.6	328.8	329.0	328.8	329.2	328.8
7.5°	326.1	327.3	326.9	327.3	327.7	328.1	328.4	328.8	329.4	329.8	329.4
10°	322.6	323.2	323.4	323.8	324.7	325.7	326.5	327.5	329.0	329.4	329.8
12.5°	316.2	317.1	317.7	318.5	319.7	321.4	322.8	324.5	326.9	328.6	330.0
15°	311.5	312.6	312.8	313.8	315.0	316.9	318.7	321.2	324.5	327.3	330.2
17.5°	314.6	315.0	314.6	314.6	315.0	315.8	317.3	319.3	322.8	326.3	329.8
20°	323.8	323.8	323.4	323.2	322.8	322.0	321.8	321.6	323.8	326.5	329.6
22.5°	332.7	332.7	332.5	333.3	333.1	333.1	332.5	331.4	330.4	330.0	332.0
25°	338.2	339.0	339.4	340.7	341.5	342.7	343.1	342.9	341.5	339.0	338.4
27.5°	347.2	347.8	348.3	349.7	351.3	352.8	354.2	356.1	356.1	353.8	350.7
30°	364.7	363.9	364.3	364.7	366.1	368.2	370.0	372.5	373.7	372.9	368.8
32.5°	380.9	381.7	382.1	383.4	384.8	387.9	390.1	393.0	395.7	396.1	394.0
35°	404.7	404.3	403.7	408.0	409.6	413.1	415.8	419.9	421.9	423.8	422.6
37.5°	442.3	441.0	440.2	441.4	443.7	445.9	449.8	452.9	456.4	460.7	459.3
40°	495.4	497.9	494.4	496.0	497.9	492.7	496.2	499.1	505.0	505.3	505.0
42.5°	564.6	566.4	565.6	566.6	563.3	561.7	560.3	561.7	569.1	568.1	563.1
45°	633.7	636.4	635.8	636.2	642.5	639.9	642.1	642.5	650.1	648.1	644.4
47.5°	692.8	697.3	698.4	702.1	710.7	717.7	727.3	734.5	738.2	740.6	743.5
50°	739.6	742.9	748.6	757.9	770.4	782.5	804.3	818.4	831.4	840.4	849.6
52.5°	770.6	774.3	783.1	797.1	815.1	837.3	862.7	892.3	919.6	935.6	949.4
55°	783.3	787.0	797.9	816.2	840.2	868.5	905.0	946.7	983.0	1019.7	1040.9
57.5°	775.9	780.0	792.6	813.1	842.0	879.2	924.5	975.6	1028.8	1084.4	1126.9
60°	754.2	757.9	772.0	793.4	826.4	868.3	922.7	986.7	1061.4	1143.9	1224.6
62.5°	724.2	729.8	742.3	764.0	796.9	842.6	904.6	987.9	1095.1	1228.0	1385.0
65°	686.1	690.2	701.2	718.5	754.6	802.4	867.9	969.9	1109.8	1298.4	1522.5
66°	666.4	670.3	680.5	696.7	729.8	775.7	841.2	945.7	1093.4	1298.0	1537.1
67.5°	631.7	633.5	640.9	656.9	678.5	719.7	780.5	878.3	1023.8	1243.2	1496.5
70°	529.9	532.5	539.7	547.9	555.9	570.7	613.2	677.8	794.2	1004.6	1246.1
72.5°	366.5	370.6	378.4	393.6	406.1	424.8	441.4	463.0	501.6	647.7	891.5
75°	264.9	266.4	277.9	304.5	329.8	367.1	400.2	410.6	397.5	395.3	523.7
77.5°	158.0	160.1	176.7	203.6	229.8	280.5	348.3	400.6	429.5	419.3	396.5
80°	66.5	69.4	79.2	86.2	107.9	150.4	217.3	299.4	375.8	422.8	412.1
82.5°	21.3	24.8	29.3	35.5	41.9	56.0	86.8	129.9	205.2	306.0	376.2
85°	7.8	8.0	11.1	15.4	17.0	19.7	25.2	39.0	69.4	114.7	213.4
87.5°	3.1	3.7	4.3	6.0	6.2	6.4	7.2	9.2	9.0	7.8	40.4
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°	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8
2.5°	329.4	329.8	329.6	329.8	329.8	329.4	329.4	330.2	329.6	330.0	330.0
5°	329.2	329.6	329.4	329.8	329.8	329.6	329.6	330.8	330.6	331.2	331.6
7.5°	330.0	330.2	330.0	330.0	330.6	330.4	330.6	331.0	332.0	333.1	333.9
10°	331.0	331.4	332.0	332.3	333.1	332.9	333.5	334.1	335.1	336.2	337.2
12.5°	332.5	333.7	335.5	335.9	336.8	337.4	338.4	339.0	339.8	341.5	342.7
15°	333.7	335.9	338.2	339.0	339.8	340.7	341.7	342.3	343.7	345.2	346.6
17.5°	334.1	336.8	339.6	340.7	341.5	342.9	344.2	345.4	347.0	348.9	350.5
20°	334.3	338.0	341.7	342.9	344.8	346.8	348.9	349.9	352.2	354.4	355.9
22.5°	336.2	340.7	345.8	348.1	349.9	353.6	356.3	357.9	360.6	362.4	363.0
25°	341.3	346.0	352.2	355.6	358.7	364.1	367.3	370.4	371.9	374.3	373.7
27.5°	350.5	354.2	362.2	366.9	370.8	377.8	384.2	387.0	389.3	390.5	389.1
30°	366.3	367.8	376.6	382.3	388.9	399.8	406.7	410.4	413.3	413.5	409.8
32.5°	389.9	387.7	395.5	403.7	412.3	425.4	434.9	438.8	441.0	441.2	433.0
35°	421.9	418.0	424.6	432.6	443.3	460.5	472.4	476.9	480.4	478.8	466.7
37.5°	462.4	462.2	465.2	475.5	487.6	509.8	522.3	524.8	524.5	519.6	501.4
40°	507.3	503.6	504.0	511.4	525.4	554.5	572.0	576.1	574.6	567.4	543.6
42.5°	563.9	562.3	556.8	560.7	573.6	609.1	630.2	634.3	635.6	623.7	595.6
45°	643.4	641.9	629.6	630.4	639.9	677.2	699.2	706.0	706.2	694.9	658.3
47.5°	739.6	738.4	724.0	719.9	724.6	757.9	785.2	786.6	787.0	771.4	733.5
50°	848.8	845.3	834.4	830.1	824.6	861.3	883.3	883.1	880.8	863.6	820.9
52.5°	954.3	962.1	958.0	949.6	949.8	976.2	997.0	985.5	986.9	970.5	921.4
55°	1066.9	1086.9	1101.8	1104.9	1103.5	1117.0	1128.5	1108.0	1100.4	1097.7	1045.6
57.5°	1186.6	1237.5	1283.7	1302.9	1295.6	1320.4	1330.7	1309.3	1309.7	1330.7	1285.7
60°	1346.5	1474.9	1591.3	1627.4	1644.2	1685.3	1667.0	1665.8	1698.0	1725.1	1641.8
62.5°	1589.0	1801.8	1987.6	2014.5	2028.0	2037.2	2029.0	2006.7	2039.9	2043.2	1914.7
65°	1772.9	2022.7	2202.2	2235.9	2233.4	2186.4	2140.9	2096.1	2095.7	2062.9	1897.5
66°	1792.8	2043.6	2218.6	2248.4	2237.5	2165.1	2107.2	2049.1	2030.5	1981.2	1813.3
67.5°	1749.3	2007.1	2180.9	2207.6	2184.4	2074.2	1995.4	1916.8	1888.6	1820.1	1649.0
70°	1495.4	1761.0	1993.5	2032.1	2004.6	1858.3	1741.5	1655.1	1578.6	1511.0	1369.9
72.5°	1159.5	1358.2	1604.2	1644.4	1646.7	1532.2	1400.6	1317.7	1228.7	1160.9	1055.0
75°	760.5	910.8	1046.0	1032.5	1036.4	946.3	867.9	798.9	718.3	664.9	614.4
77.5°	444.5	498.3	486.0	452.3	424.0	333.3	238.5	163.8	142.8	149.0	168.1
80°	386.4	356.3	278.9	245.2	223.1	151.5	81.5	57.5	50.5	51.1	54.2
82.5°	416.0	431.6	354.2	291.6	254.3	178.3	95.8	47.8	34.5	40.2	44.3
85°	322.8	410.9	378.8	320.1	269.3	189.6	97.9	30.4	20.5	27.5	34.7
87.5°	91.9	145.5	116.4	102.8	82.9	56.6	23.4	12.1	11.1	14.4	19.9
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8
2.5°	330.2	330.2	330.8	331.0	331.2	331.2	331.6	331.6	331.8	332.7	332.5
5°	332.3	332.9	333.7	334.1	334.7	334.9	335.5	335.5	336.2	336.8	336.6
7.5°	334.7	335.3	335.9	336.6	337.2	338.0	337.8	337.6	337.4	337.0	336.6
10°	338.2	338.8	339.4	339.2	338.8	338.4	336.8	334.9	334.1	332.5	331.2
12.5°	344.0	344.6	344.0	342.3	340.1	337.4	333.9	330.8	329.0	326.5	325.1
15°	348.3	348.9	347.6	344.8	341.1	337.6	332.9	329.0	325.7	323.0	321.0
17.5°	351.5	351.1	348.5	345.2	341.3	338.4	334.1	329.8	325.9	322.2	319.3
20°	356.3	354.0	350.1	346.0	342.1	339.6	336.2	332.3	328.1	322.8	319.1
22.5°	362.4	358.3	353.2	349.1	345.4	342.9	339.4	335.7	331.8	325.7	320.6
25°	371.2	364.7	358.7	354.4	351.1	348.7	344.4	340.5	336.2	330.0	323.4
27.5°	383.6	374.1	368.0	363.7	360.4	357.5	352.0	347.2	341.7	335.5	327.7
30°	399.6	388.1	381.3	377.6	374.1	370.0	364.1	357.1	349.9	341.7	333.3
32.5°	419.5	406.5	400.2	396.5	392.0	386.4	378.6	369.4	358.7	347.8	337.4
35°	447.8	433.0	426.0	419.7	413.1	404.9	393.2	379.9	365.7	351.5	338.6
37.5°	475.9	462.2	453.5	447.0	436.7	423.4	407.2	388.7	369.8	351.7	336.2
40°	515.7	499.7	489.7	478.0	461.3	440.6	417.0	392.2	368.8	347.0	328.6
42.5°	564.6	546.3	531.3	510.2	484.3	454.4	421.7	390.1	361.6	336.6	316.2
45°	626.3	602.5	577.5	544.2	504.6	462.8	421.5	382.9	349.3	321.0	300.9
47.5°	698.4	664.9	622.8	572.2	518.0	464.8	415.0	370.0	330.8	299.6	276.4
50°	772.5	724.0	664.3	593.7	524.8	459.7	400.4	348.9	306.6	271.1	246.1
52.5°	863.8	788.7	701.9	608.3	521.9	444.5	376.2	319.1	274.0	239.3	210.6
55°	972.5	863.0	737.6	616.3	509.2	417.2	339.4	280.1	232.7	201.1	175.3
57.5°	1152.5	979.3	798.5	628.2	484.1	376.6	294.7	233.3	188.8	161.9	141.2
60°	1462.8	1218.0	927.4	657.5	449.4	318.7	237.9	182.9	146.1	124.6	110.0
62.5°	1679.3	1362.7	996.8	647.5	390.5	251.0	175.9	130.7	106.5	92.3	82.5
65°	1637.3	1305.6	913.2	550.0	306.0	177.5	117.0	88.5	74.7	65.9	61.0
66°	1561.7	1242.6	849.6	493.8	265.4	148.0	96.5	73.3	64.2	57.9	54.6
67.5°	1424.0	1112.1	735.3	396.3	198.7	109.2	73.3	57.1	52.1	48.8	46.6
70°	1179.0	879.4	506.3	234.2	105.1	61.2	46.6	42.1	39.8	38.4	38.2
72.5°	904.0	630.8	292.9	113.3	56.2	40.6	35.7	34.1	33.2	32.8	32.8
75°	558.4	355.9	130.9	56.8	38.8	33.2	31.0	30.2	30.0	30.0	30.0
77.5°	196.4	124.0	58.7	41.7	34.1	30.0	28.1	27.7	28.1	28.1	28.1
80°	54.2	47.8	42.5	36.9	30.8	27.7	26.1	25.9	26.7	26.9	26.1
82.5°	42.3	39.8	36.3	33.0	28.1	25.2	24.4	24.8	25.2	24.6	23.4
85°	36.1	34.5	25.4	25.4	22.8	22.0	21.8	22.2	22.0	20.3	18.7
87.5°	20.5	18.1	13.7	15.0	16.0	16.4	13.7	14.8	14.6	12.9	12.1
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):

	160°	165°	170°	175°	180°
0°	329.8	329.8	329.8	329.8	329.8
2.5°	332.9	332.9	333.3	333.3	333.1
5°	337.0	337.0	337.6	337.2	337.4
7.5°	336.2	335.3	335.3	334.9	334.7
10°	330.4	329.0	328.1	328.6	327.9
12.5°	323.8	322.6	321.8	321.6	321.4
15°	319.7	318.3	317.7	317.3	317.3
17.5°	317.5	315.8	315.0	314.4	314.2
20°	316.5	314.4	313.2	312.6	312.1
22.5°	316.9	314.4	312.8	311.9	311.5
25°	318.5	315.4	313.4	312.3	311.7
27.5°	321.4	317.3	315.0	313.6	312.8
30°	324.9	319.1	315.8	313.8	313.0
32.5°	327.1	319.3	315.2	312.1	311.3
35°	326.7	317.1	311.7	307.8	307.2
37.5°	322.6	311.1	304.5	299.4	298.8
40°	313.8	302.1	294.5	289.4	288.1
42.5°	301.5	289.4	281.2	276.4	274.8
45°	283.4	268.6	261.0	257.1	254.9
47.5°	258.0	244.0	235.6	232.3	229.4
50°	229.0	213.6	207.5	203.8	200.5
52.5°	195.0	181.8	177.1	173.6	170.9
55°	161.9	152.7	147.1	143.4	143.7
57.5°	130.1	124.6	121.5	117.6	118.0
60°	102.4	97.7	97.7	95.2	94.4
62.5°	78.2	76.3	75.7	74.9	73.5
65°	59.3	59.3	59.5	59.5	58.7
66°	53.4	54.0	54.8	54.8	53.8
67.5°	46.2	47.0	47.8	48.2	48.2
70°	38.2	39.2	39.6	40.0	39.8
72.5°	33.5	34.3	34.3	34.5	34.1
75°	30.4	30.8	31.0	30.6	30.4
77.5°	28.1	28.3	28.1	27.9	27.7
80°	25.4	25.2	24.6	23.8	23.6
82.5°	22.0	21.1	20.7	19.5	19.3
85°	17.6	16.6	15.8	14.2	13.3
87.5°	11.7	11.3	10.7	7.8	6.4
90°	0.0	0.0	0.0	0.0	0.0

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