

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: P195247

Luminaire Tested: **NAV-AF-01-D-UNV-SLL-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195247
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24264)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-SLL-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4360 lumens
Efficiency: N/A
Efficacy: 99.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

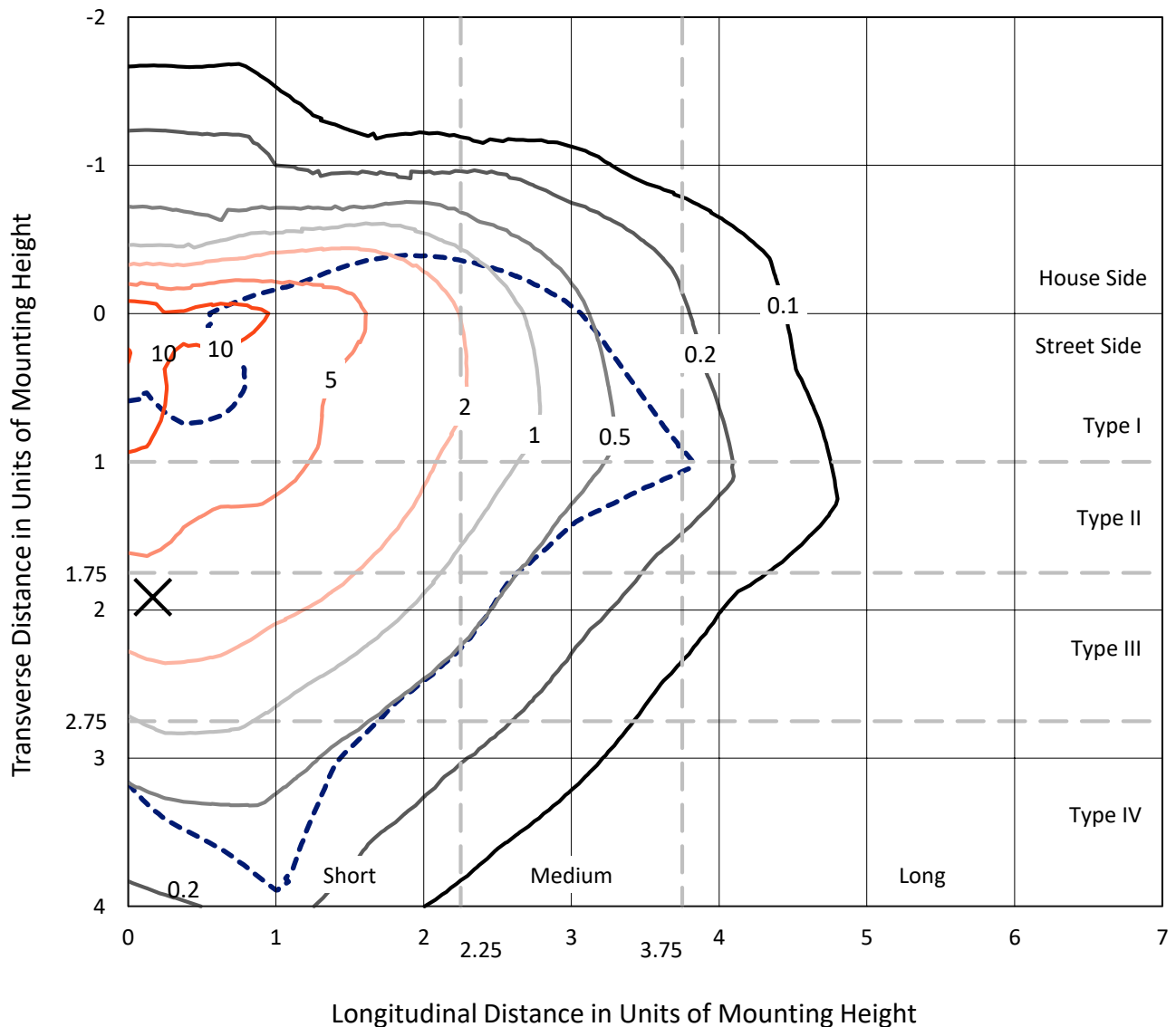
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

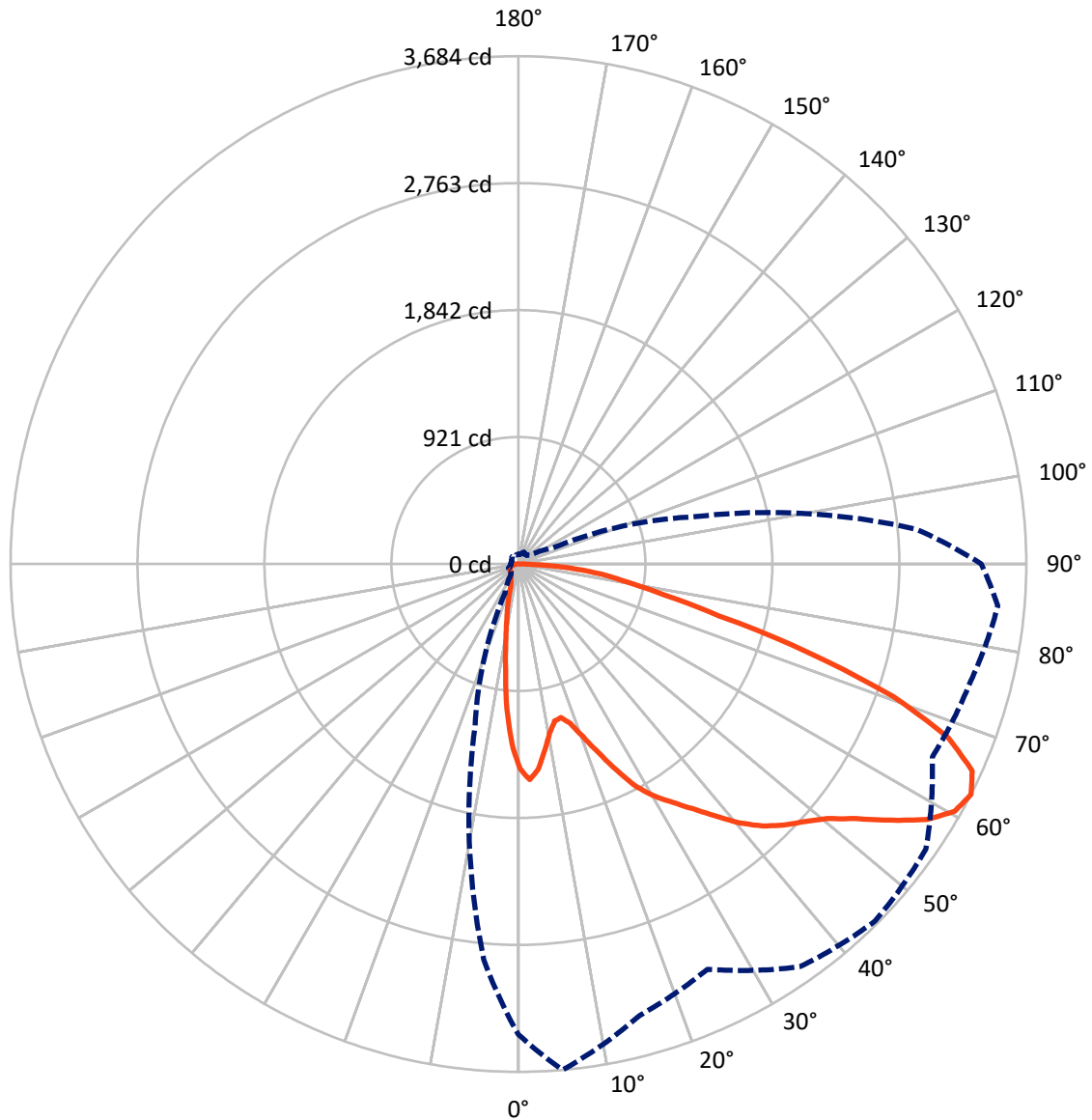
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	772.4	0.0	772.4
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	3587.6	0.0	3587.6
	% Fixture	82.3	0.0	82.3
Total	Lumens	4360.0	0.0	4360.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	2.5
10°-20°	197.4	4.5
20°-30°	284.0	6.5
30°-40°	434.9	10.0
40°-50°	635.9	14.6
50°-60°	925.2	21.2
60°-70°	1072.0	24.6
70°-80°	558.8	12.8
80°-90°	143.6	3.3
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°	4360.0	100.0
0°-180°	4360.0	100.0



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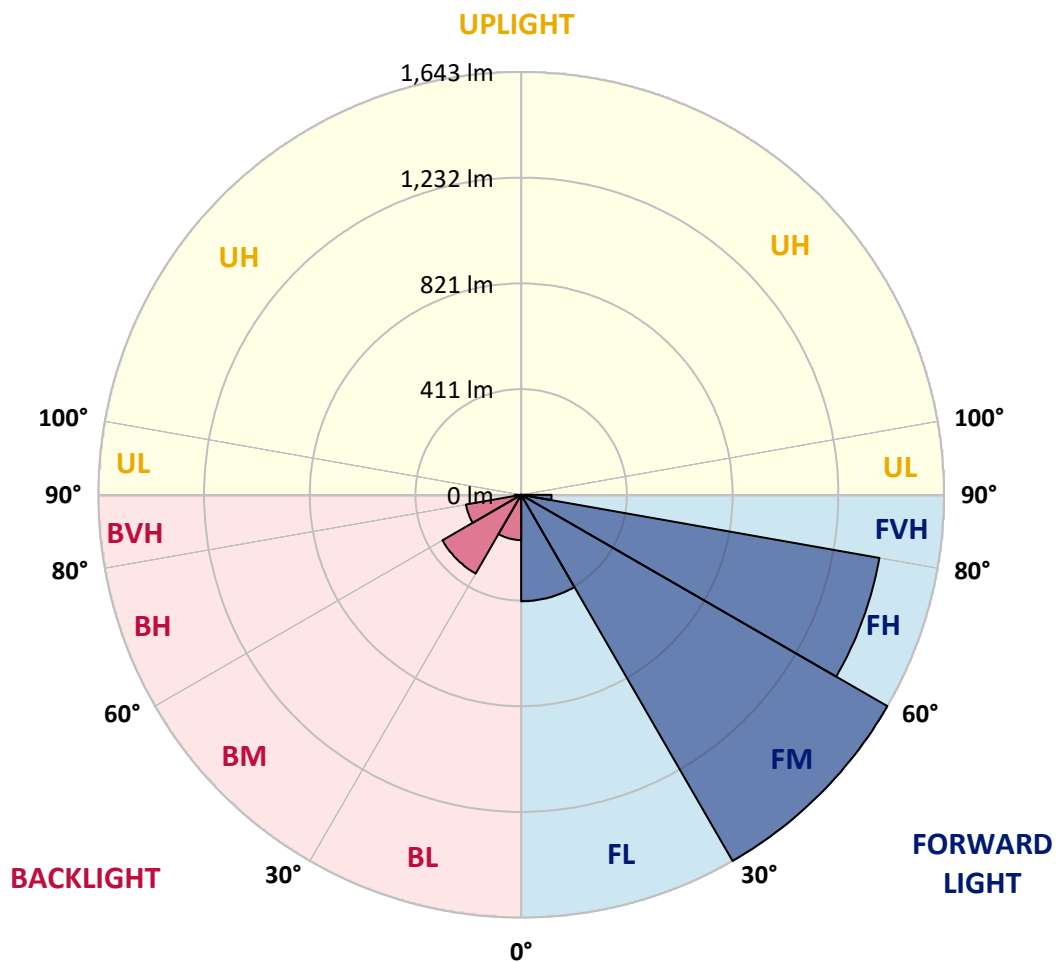
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	413.8	9.5			
FM	(30°-60°)	1642.6	37.7			
FH	(60°-80°)	1413.0	32.4			G1/1800
FVH	(80°-90°)	118.2	2.7			G2/225
BL	(0°-30°)	175.7	4.0	B1/500		
BM	(30°-60°)	353.4	8.1	B1/1000		
BH	(60°-80°)	217.8	5.0	B1/500		G1/500
BVH	(80°-90°)	25.5	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4
2.5°	1534.5	1567.0	1604.3	1653.0	1686.2	1699.5	1710.5	1691.9	1673.9	1640.0	1628.0
5°	1433.3	1495.9	1598.6	1696.3	1782.3	1831.6	1846.8	1812.3	1751.0	1662.5	1615.7
7.5°	1283.1	1365.7	1510.1	1654.0	1777.2	1859.4	1865.4	1797.2	1676.4	1531.3	1455.4
10°	1152.0	1245.2	1412.4	1573.3	1703.9	1788.0	1771.6	1675.8	1530.0	1365.0	1279.4
12.5°	1075.8	1169.0	1339.4	1502.8	1625.8	1657.7	1624.2	1543.6	1405.5	1240.2	1153.8
15°	1059.6	1155.7	1313.5	1451.3	1527.5	1507.0	1473.8	1433.0	1334.7	1199.4	1115.9
17.5°	1108.3	1215.8	1347.9	1423.5	1420.3	1371.0	1343.2	1351.1	1334.4	1243.6	1156.4
20°	1208.5	1335.6	1435.5	1415.9	1335.0	1265.8	1249.6	1311.6	1389.0	1354.6	1258.8
22.5°	1340.4	1485.1	1555.0	1437.7	1290.4	1215.8	1212.6	1309.4	1488.6	1522.4	1405.8
25°	1489.3	1658.1	1675.5	1476.3	1285.7	1211.4	1208.5	1343.5	1608.4	1688.7	1570.5
27.5°	1671.3	1832.6	1776.0	1527.8	1306.5	1224.3	1226.2	1401.7	1733.3	1853.1	1756.1
30°	1808.5	1956.5	1837.9	1578.4	1340.0	1247.1	1251.8	1464.6	1800.6	1967.2	1904.3
32.5°	1936.9	2062.4	1897.4	1628.4	1389.0	1280.9	1297.4	1543.0	1881.6	2065.2	2044.4
35°	2078.8	2180.9	1963.4	1681.8	1459.2	1340.4	1364.1	1617.6	1961.9	2163.2	2183.1
37.5°	2239.7	2316.6	2035.2	1757.3	1560.4	1450.4	1463.6	1693.8	2017.8	2271.7	2332.0
40°	2407.3	2468.6	2113.6	1858.2	1707.4	1599.0	1605.3	1791.5	2061.8	2383.9	2476.5
42.5°	2551.1	2598.8	2192.3	1983.4	1876.2	1750.4	1755.7	1896.7	2103.8	2480.6	2592.2
45°	2666.2	2701.3	2266.6	2115.2	2056.4	1939.4	1938.2	2003.9	2160.1	2562.2	2681.0
47.5°	2773.3	2792.0	2349.4	2243.5	2243.2	2182.8	2137.6	2130.4	2235.0	2630.8	2758.5
50°	2896.0	2903.0	2458.8	2373.1	2471.5	2462.0	2378.5	2290.9	2332.0	2707.9	2839.7
52.5°	3066.7	3067.0	2594.4	2499.6	2723.4	2753.4	2656.4	2472.7	2475.6	2858.1	2980.1
55°	3267.4	3281.4	2771.1	2651.0	2987.0	3038.3	2946.9	2688.6	2681.7	3100.2	3207.7
57.5°	3422.7	3496.3	2976.9	2840.4	3233.3	3300.0	3226.4	2912.4	2934.9	3350.0	3395.5
60°	3466.3	3638.6	3182.1	3052.8	3441.6	3541.8	3466.9	3154.3	3182.7	3512.1	3449.5
62.5°	3414.1	3684.4	3391.1	3243.1	3565.2	3661.3	3607.6	3312.7	3384.7	3491.3	3358.2
65°	3259.5	3618.0	3572.5	3324.0	3494.1	3528.2	3514.0	3320.9	3494.4	3294.0	3105.6
67.5°	2898.5	3362.0	3491.6	3151.1	3161.9	3125.2	3106.5	3095.2	3371.1	2975.7	2707.3
70°	2357.3	2888.7	3105.6	2637.1	2557.4	2522.0	2460.7	2612.4	3030.0	2535.3	2228.0
72.5°	1815.8	2210.0	2547.3	1999.2	1833.5	1845.5	1776.0	1997.6	2510.0	1960.0	1701.1
75°	1289.5	1507.0	2033.3	1436.5	1217.1	1216.4	1211.1	1437.7	1980.5	1406.7	1244.6
77.5°	929.4	1084.9	1592.9	961.3	863.6	874.7	857.0	977.1	1543.9	1011.9	922.1
80°	741.3	803.3	1029.6	641.1	643.0	668.9	665.1	668.3	1015.7	732.8	689.5
82.5°	532.7	609.8	787.1	491.3	425.2	452.7	458.1	495.7	716.7	518.1	454.6
85°	273.1	371.8	724.2	425.5	265.9	220.3	253.5	391.0	622.4	310.4	221.6
87.5°	53.1	103.1	530.8	236.5	119.5	60.4	99.6	165.6	362.0	56.3	27.5
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4
2.5°	1607.5	1567.0	1529.1	1489.9	1459.5	1422.6	1386.2	1354.6	1323.9	1303.7	1310.0
5°	1568.3	1469.7	1381.1	1298.9	1250.9	1193.0	1141.5	1098.2	1064.7	1043.2	1056.2
7.5°	1389.7	1256.3	1139.6	1031.2	962.9	888.0	827.9	785.6	759.6	745.1	766.3
10°	1207.0	1057.1	926.2	813.4	746.1	682.5	628.1	583.2	548.5	532.0	540.6
12.5°	1076.1	909.5	772.3	696.4	638.6	581.7	525.4	472.9	428.7	408.4	404.3
15°	1027.1	830.1	690.1	605.4	547.8	485.9	425.2	368.9	326.9	309.5	305.7
17.5°	1048.6	813.1	641.4	541.2	457.7	382.5	314.2	261.1	230.1	220.3	221.3
20°	1124.1	819.4	602.2	475.1	372.1	282.9	214.6	178.0	164.7	162.5	165.0
22.5°	1227.8	845.3	573.8	418.2	296.5	205.8	159.6	142.3	138.8	138.5	141.0
25°	1364.7	895.9	554.8	367.7	234.2	163.1	139.1	129.3	126.4	127.1	129.6
27.5°	1525.9	960.1	542.5	324.0	192.5	145.4	129.9	121.4	118.5	119.2	121.1
30°	1673.2	1016.3	524.1	291.1	172.9	139.1	124.9	116.3	112.5	112.5	113.8
32.5°	1805.1	1065.0	502.6	266.5	154.9	124.9	113.2	106.5	103.7	104.6	105.3
35°	1922.0	1090.6	485.9	252.0	140.4	115.1	103.4	96.4	92.6	93.3	94.2
37.5°	2037.1	1100.4	474.8	244.0	129.9	109.1	98.3	92.6	88.5	87.9	87.6
40°	2146.5	1098.2	464.4	241.8	123.0	104.6	95.2	90.1	86.0	85.0	84.7
42.5°	2241.0	1090.9	454.6	235.8	118.2	101.5	92.6	88.2	84.1	82.8	82.2
45°	2327.3	1086.5	443.8	224.8	120.8	100.2	91.4	86.6	82.8	81.2	80.6
47.5°	2423.1	1102.3	431.8	212.8	120.1	100.5	91.4	86.0	82.2	80.6	80.0
50°	2537.2	1155.7	417.0	196.3	114.4	107.5	91.0	85.0	81.6	80.6	79.3
52.5°	2698.4	1242.4	396.4	175.1	110.0	114.8	90.7	83.5	80.6	79.0	77.5
55°	2919.4	1329.0	369.9	152.7	103.1	109.7	91.4	81.6	78.4	76.8	74.9
57.5°	3100.5	1394.7	336.4	134.0	96.7	103.7	90.4	79.3	75.9	74.3	72.7
60°	3088.8	1401.1	304.4	122.0	92.9	93.3	92.6	77.8	73.7	72.4	71.1
62.5°	2897.6	1323.0	274.7	116.0	90.1	85.0	94.5	75.9	71.4	70.2	69.2
65°	2579.2	1141.2	258.9	116.0	87.6	80.6	82.5	73.3	69.2	68.0	67.3
67.5°	2175.6	917.1	244.0	118.5	84.1	77.5	74.9	70.8	67.0	65.8	65.1
70°	1743.7	721.7	233.6	117.3	80.9	74.0	70.8	67.3	63.5	63.2	62.6
72.5°	1367.9	579.8	228.9	117.3	76.2	69.9	66.7	64.2	60.4	60.1	59.1
75°	1096.0	435.3	209.3	115.1	71.4	64.5	61.6	59.4	55.6	56.0	55.3
77.5°	848.8	307.9	174.8	103.7	65.4	58.5	56.3	54.7	50.3	50.6	50.6
80°	663.9	200.4	135.6	86.0	58.5	51.5	49.9	48.7	43.9	44.6	44.6
82.5°	454.9	119.2	98.3	69.2	50.3	43.9	43.6	41.7	36.7	37.0	37.6
85°	248.5	78.4	65.4	51.2	39.5	35.7	35.1	34.1	29.4	29.4	29.7
87.5°	45.8	42.0	38.6	33.8	26.6	25.6	24.7	25.6	22.1	21.5	21.5
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4
2.5°	1295.2	1273.3	1258.2	1244.9	1213.0	1215.2	1219.6	1225.9	1206.0	1216.4	1229.4
5°	1043.2	1025.2	1011.6	990.4	945.8	930.0	919.9	915.5	885.8	892.1	906.0
7.5°	769.1	768.8	764.1	740.4	686.6	654.1	632.6	625.9	607.6	614.5	635.7
10°	541.5	547.2	545.0	523.8	475.8	452.4	447.6	460.9	461.2	474.8	511.2
12.5°	391.4	388.2	385.4	368.0	331.9	328.1	338.9	357.2	361.6	376.2	414.1
15°	292.1	284.5	282.9	269.3	245.6	249.1	257.0	266.5	266.8	276.9	308.2
17.5°	219.1	219.1	221.6	212.8	195.7	194.1	190.0	187.5	183.7	187.8	204.8
20°	170.1	178.0	184.3	179.2	163.8	156.2	148.3	143.2	140.4	140.7	145.7
22.5°	145.7	152.1	160.3	157.7	144.8	135.0	129.9	126.4	124.2	124.2	127.1
25°	133.4	137.5	145.1	143.8	132.8	124.9	120.8	117.3	114.8	114.4	117.3
27.5°	123.6	126.1	131.2	130.6	119.2	114.1	111.6	109.4	107.8	107.5	110.3
30°	114.8	116.0	118.5	117.6	109.1	104.0	103.1	102.1	101.2	101.5	105.6
32.5°	106.8	107.8	109.4	108.1	99.9	95.5	93.9	92.6	91.7	92.6	97.4
35°	98.0	100.8	102.7	102.1	93.3	87.9	84.4	81.2	80.0	80.9	86.3
37.5°	90.4	95.2	97.7	97.0	87.9	81.6	77.1	76.5	76.5	77.8	83.1
40°	87.6	91.0	93.3	92.3	83.1	76.8	74.3	73.3	73.7	74.9	80.6
42.5°	85.0	88.2	88.8	86.9	77.8	73.7	72.1	70.8	71.4	73.0	78.7
45°	82.8	85.4	85.0	82.2	73.3	70.5	70.5	69.5	69.9	71.1	77.1
47.5°	81.2	82.5	81.9	79.0	70.2	68.0	68.9	68.9	69.5	70.5	76.5
50°	78.7	79.7	79.0	76.5	67.7	65.8	66.7	68.0	68.6	69.5	74.9
52.5°	76.2	76.8	76.5	74.0	65.1	63.9	63.9	65.1	66.4	67.7	72.4
55°	73.7	74.3	74.6	72.7	63.2	62.0	61.6	61.6	62.9	64.8	69.9
57.5°	71.8	71.8	72.4	71.1	61.3	59.7	58.2	58.5	60.1	61.6	66.7
60°	69.5	69.9	70.8	69.5	58.8	56.3	55.0	56.6	57.2	58.8	64.2
62.5°	67.7	67.7	68.3	67.3	56.6	54.1	53.1	54.7	54.7	56.3	61.6
65°	66.1	65.8	65.8	65.4	54.4	51.8	51.2	51.8	52.2	53.7	59.1
67.5°	64.8	63.2	63.2	63.9	52.2	49.6	49.3	49.3	49.6	51.5	56.3
70°	62.0	60.7	60.4	62.6	49.9	46.8	46.8	46.2	46.8	47.7	52.8
72.5°	58.8	57.9	57.5	60.7	47.7	43.6	43.0	42.7	43.0	43.9	48.7
75°	54.7	54.1	54.7	59.4	45.5	40.1	39.2	38.9	38.9	39.2	44.3
77.5°	49.9	49.3	54.1	55.3	44.3	36.0	35.1	34.5	33.8	33.8	39.5
80°	44.3	43.9	52.2	46.8	42.4	31.6	30.0	29.1	28.5	28.1	33.8
82.5°	38.6	37.9	44.6	36.7	35.1	25.9	23.7	21.8	20.9	20.9	25.9
85°	31.6	31.3	35.1	26.9	24.3	19.0	15.8	14.2	13.0	13.0	16.8
87.5°	23.1	22.4	21.8	16.1	12.3	8.5	6.0	5.7	5.1	4.7	7.0
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4
2.5°	1248.7	1274.9	1324.6	1365.3	1419.7	1463.3	1513.0	1534.5
5°	931.6	973.0	1048.9	1113.7	1203.5	1286.6	1381.5	1433.3
7.5°	668.3	729.6	787.1	868.1	980.3	1091.9	1214.5	1283.1
10°	552.9	609.2	658.5	716.0	802.6	928.1	1074.5	1152.0
12.5°	458.1	518.8	570.9	632.6	705.3	818.8	985.7	1075.8
15°	351.2	417.3	479.9	554.2	643.3	772.9	959.1	1059.6
17.5°	240.6	311.4	388.5	479.2	586.7	753.6	984.4	1108.3
20°	163.4	215.3	299.1	406.5	535.8	744.5	1040.0	1208.5
22.5°	134.4	157.7	220.7	338.3	494.1	754.6	1130.5	1340.4
25°	123.3	135.9	171.7	278.2	462.2	781.5	1252.8	1489.3
27.5°	116.3	127.1	150.5	235.2	432.8	818.1	1401.7	1671.3
30°	112.2	122.3	141.9	213.1	405.9	849.7	1529.7	1808.5
32.5°	103.1	110.6	126.8	200.4	386.6	875.3	1642.6	1936.9
35°	92.0	101.2	114.4	192.2	386.0	887.4	1748.8	2078.8
37.5°	87.9	96.7	106.5	187.8	389.8	897.5	1878.7	2239.7
40°	85.4	93.3	101.2	187.1	392.9	905.4	2005.8	2407.3
42.5°	83.1	91.0	100.2	182.7	391.7	916.1	2118.3	2551.1
45°	82.5	90.4	102.4	176.1	391.4	932.9	2207.8	2666.2
47.5°	81.9	93.9	101.8	168.8	390.1	968.3	2308.6	2773.3
50°	81.2	100.2	97.4	158.7	380.6	1028.7	2444.3	2896.0
52.5°	80.9	101.2	92.6	144.8	363.5	1118.1	2642.8	3066.7
55°	79.7	96.1	84.4	126.4	338.9	1214.5	2855.5	3267.4
57.5°	76.8	85.7	79.7	108.4	303.5	1281.9	3012.7	3422.7
60°	83.8	73.7	76.5	99.3	261.1	1293.9	3019.6	3466.3
62.5°	80.0	67.0	73.3	96.1	231.4	1215.5	2881.5	3414.1
65°	63.9	63.5	70.5	99.3	227.0	1040.0	2648.2	3259.5
67.5°	58.2	61.0	67.7	103.1	229.8	819.4	2304.9	2898.5
70°	54.4	57.9	63.9	106.5	234.9	645.5	1855.6	2357.3
72.5°	50.6	53.4	60.1	110.0	231.4	509.3	1485.1	1815.8
75°	45.8	48.4	54.7	100.8	198.5	374.3	1180.1	1289.5
77.5°	40.5	42.7	48.1	79.7	149.2	260.5	883.9	929.4
80°	34.8	35.7	39.8	58.2	97.4	155.8	672.7	741.3
82.5°	27.5	27.8	30.3	42.7	60.7	99.6	466.6	532.7
85°	17.7	18.3	19.6	30.0	40.8	63.9	238.4	273.1
87.5°	6.0	7.0	7.0	14.5	19.9	35.4	73.0	53.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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