

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: P196699

Luminaire Tested: **NAV-AF-01-D-UNV-SLL-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196699
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-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1200mA 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: 5725.2 lumens
Efficiency: N/A
Efficacy: 85.5 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

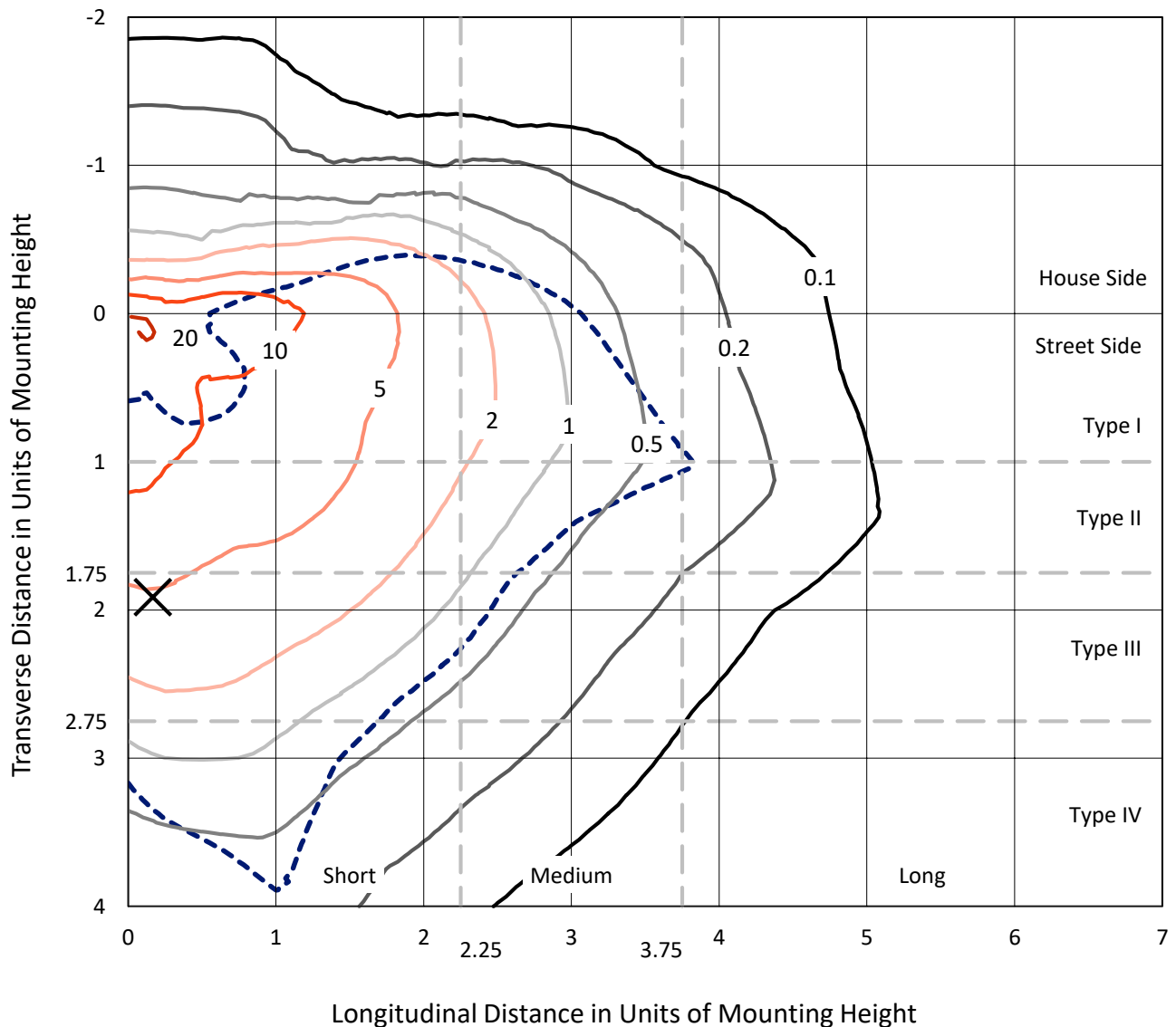
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

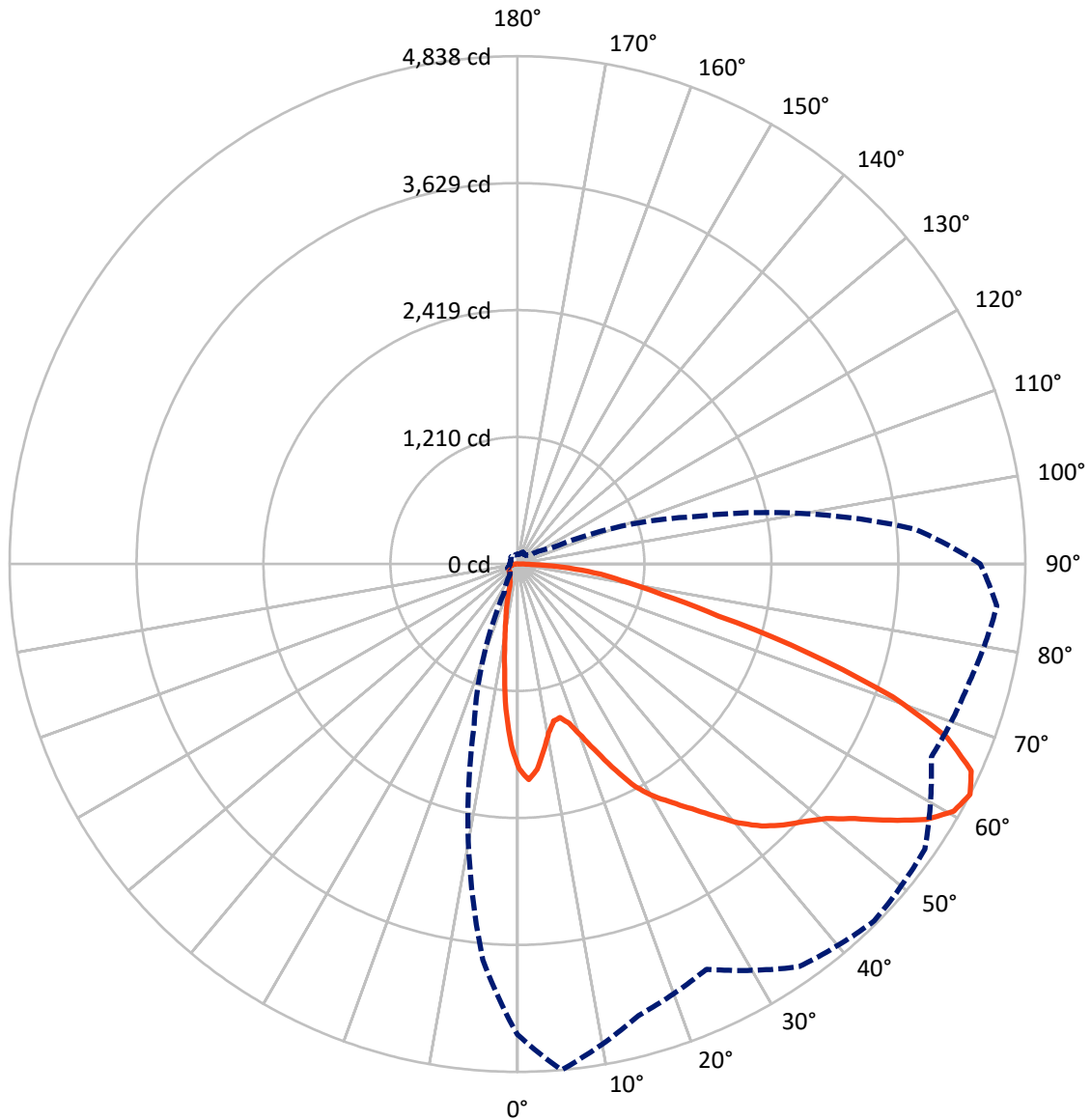
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 22.4 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	1014.2	0.0	1014.2
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	4711.0	0.0	4711.0
	% Fixture	82.3	0.0	82.3
Total	Lumens	5725.2	0.0	5725.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.9	2.5
10°-20°	259.3	4.5
20°-30°	372.9	6.5
30°-40°	571.1	10.0
40°-50°	835.0	14.6
50°-60°	1214.9	21.2
60°-70°	1407.6	24.6
70°-80°	733.8	12.8
80°-90°	188.6	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°	5725.2	100.0
0°-180°	5725.2	100.0



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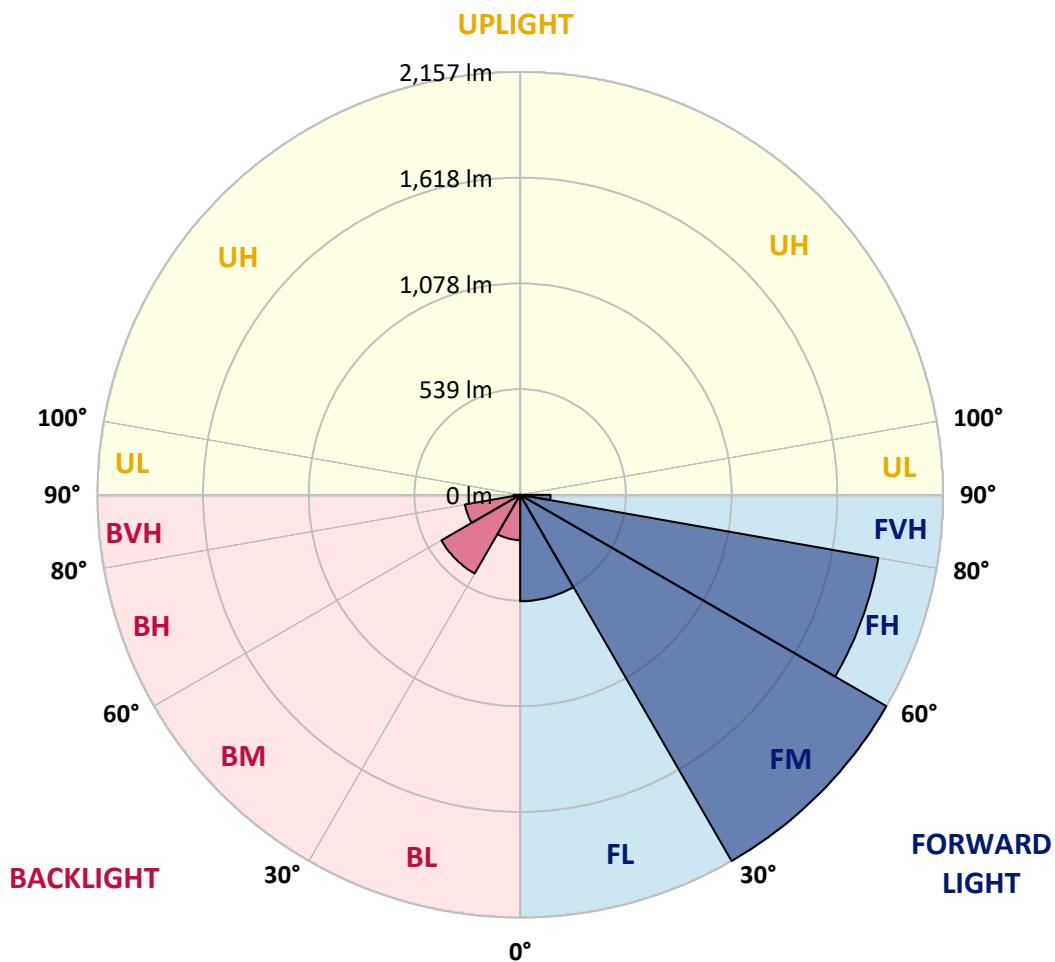
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	543.3	9.5			
FM	(30°-60°)	2157.0	37.7			
FH	(60°-80°)	1855.5	32.4			G2/5000
FVH	(80°-90°)	155.2	2.7			G2/225
BL	(0°-30°)	230.8	4.0	B1/500		
BM	(30°-60°)	464.0	8.1	B1/1000		
BH	(60°-80°)	286.0	5.0	B1/500		G1/500
BVH	(80°-90°)	33.4	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°	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8
2.5°	2015.0	2057.7	2106.6	2170.6	2214.1	2231.6	2246.2	2221.7	2198.0	2153.6	2137.7
5°	1882.1	1964.3	2099.2	2227.5	2340.4	2405.2	2425.0	2379.7	2299.3	2183.0	2121.6
7.5°	1684.9	1793.3	1982.9	2171.8	2333.8	2441.6	2449.6	2359.9	2201.3	2010.8	1911.2
10°	1512.7	1635.1	1854.6	2066.0	2237.4	2347.9	2326.2	2200.5	2009.2	1792.4	1680.0
12.5°	1412.6	1535.1	1758.8	1973.4	2134.9	2176.8	2132.8	2027.0	1845.6	1628.5	1515.1
15°	1391.4	1517.6	1724.7	1905.7	2005.8	1978.8	1935.2	1881.7	1752.6	1574.9	1465.2
17.5°	1455.4	1596.5	1770.0	1869.2	1865.0	1800.3	1763.8	1774.2	1752.2	1633.0	1518.4
20°	1587.0	1753.8	1885.0	1859.3	1752.9	1662.1	1641.0	1722.3	1824.0	1778.7	1653.0
22.5°	1760.0	1950.2	2041.9	1887.9	1694.5	1596.5	1592.4	1719.4	1954.7	1999.1	1845.9
25°	1955.5	2177.2	2200.1	1938.6	1688.3	1590.7	1587.0	1764.2	2112.1	2217.5	2062.3
27.5°	2194.7	2406.3	2332.0	2006.2	1715.6	1607.7	1610.2	1840.6	2276.0	2433.3	2305.9
30°	2374.9	2569.1	2413.4	2072.6	1759.6	1637.6	1643.8	1923.2	2364.5	2583.2	2500.6
32.5°	2543.3	2708.1	2491.4	2138.2	1824.0	1682.0	1703.6	2026.1	2470.7	2712.0	2684.5
35°	2729.8	2863.8	2578.2	2208.3	1916.1	1760.0	1791.2	2124.1	2576.2	2840.5	2866.8
37.5°	2941.0	3041.9	2672.5	2307.5	2048.9	1904.5	1922.0	2224.2	2649.6	2983.0	3062.2
40°	3161.0	3241.6	2775.4	2440.0	2242.0	2099.6	2107.9	2352.5	2707.3	3130.3	3252.0
42.5°	3349.9	3412.6	2878.8	2604.4	2463.7	2298.5	2305.5	2490.7	2762.5	3257.3	3403.9
45°	3501.0	3547.1	2976.3	2777.5	2700.3	2546.8	2544.9	2631.4	2836.4	3364.4	3520.6
47.5°	3641.7	3666.2	3085.1	2945.9	2945.6	2866.3	2807.0	2797.4	2934.8	3454.6	3622.2
50°	3802.8	3811.9	3228.7	3116.2	3245.3	3232.9	3123.2	3008.2	3062.2	3555.9	3728.9
52.5°	4027.0	4027.4	3406.8	3282.2	3576.2	3615.6	3488.1	3246.9	3250.7	3752.9	3913.2
55°	4290.5	4308.8	3638.8	3481.1	3922.3	3989.6	3869.6	3530.5	3521.3	4071.0	4212.1
57.5°	4494.4	4591.1	3909.1	3729.8	4245.7	4333.3	4236.5	3824.4	3853.8	4398.9	4458.7
60°	4551.6	4777.9	4178.5	4008.7	4519.3	4650.8	4552.5	4141.9	4179.2	4611.9	4529.7
62.5°	4483.1	4838.1	4452.9	4258.6	4681.5	4807.7	4737.2	4349.9	4444.5	4584.4	4409.7
65°	4280.1	4750.9	4691.1	4364.8	4588.2	4633.0	4614.3	4360.6	4588.6	4325.3	4078.0
67.5°	3806.1	4414.6	4584.8	4137.7	4151.9	4103.8	4079.3	4064.3	4426.6	3907.4	3555.0
70°	3095.5	3793.3	4078.0	3462.9	3358.2	3311.7	3231.3	3430.4	3978.7	3329.1	2925.6
72.5°	2384.4	2902.0	3345.0	2625.2	2407.6	2423.4	2332.0	2623.1	3296.0	2573.7	2233.7
75°	1693.2	1978.8	2670.0	1886.3	1598.1	1597.4	1590.3	1887.9	2600.6	1847.2	1634.3
77.5°	1220.4	1424.6	2091.8	1262.4	1134.1	1148.7	1125.4	1283.1	2027.5	1328.7	1210.8
80°	973.4	1054.8	1352.0	841.9	844.3	878.3	873.4	877.6	1333.7	962.2	905.3
82.5°	699.5	800.8	1033.6	645.0	558.4	594.5	601.5	650.8	941.0	680.3	596.9
85°	358.7	488.2	951.0	558.8	349.1	289.3	332.9	513.5	817.4	407.6	290.9
87.5°	69.7	135.4	697.0	310.6	156.9	79.3	130.8	217.5	475.3	73.9	36.2
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°	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8
2.5°	2110.8	2057.7	2007.8	1956.4	1916.5	1868.0	1820.3	1778.7	1738.5	1711.9	1720.2
5°	2059.3	1929.8	1813.6	1705.6	1642.6	1566.6	1498.9	1442.1	1398.1	1369.9	1386.8
7.5°	1824.8	1649.6	1496.5	1354.0	1264.4	1166.1	1087.1	1031.5	997.5	978.4	1006.2
10°	1585.0	1388.1	1216.3	1068.1	979.6	896.3	824.8	765.9	720.2	698.6	709.8
12.5°	1413.0	1194.3	1014.2	914.5	838.6	763.8	689.9	621.0	562.9	536.4	530.9
15°	1348.7	1090.1	906.2	795.0	719.4	638.0	558.4	484.4	429.2	406.3	401.4
17.5°	1376.8	1067.7	842.3	710.6	601.0	502.3	412.6	342.8	302.2	289.3	290.5
20°	1476.1	1075.9	790.8	623.9	488.6	371.5	281.9	233.7	216.3	213.4	216.7
22.5°	1612.2	1110.0	753.5	549.1	389.4	270.2	209.7	186.9	182.3	181.8	185.0
25°	1792.0	1176.4	728.5	482.8	307.6	214.1	182.7	169.8	166.1	166.8	170.2
27.5°	2003.7	1260.7	712.4	425.4	252.8	190.9	170.7	159.4	155.7	156.5	159.0
30°	2197.2	1334.6	688.3	382.3	227.0	182.7	164.0	152.8	147.8	147.8	149.4
32.5°	2370.3	1398.5	660.0	349.9	203.4	164.0	148.6	139.9	136.1	137.4	138.2
35°	2523.9	1432.2	638.0	330.8	184.3	151.1	135.7	126.6	121.6	122.5	123.7
37.5°	2675.0	1445.0	623.6	320.4	170.7	143.2	129.2	121.6	116.3	115.4	114.9
40°	2818.6	1442.1	609.7	317.5	161.4	137.4	125.0	118.3	112.9	111.7	111.2
42.5°	2942.7	1432.5	596.9	309.6	155.2	133.3	121.6	115.9	110.5	108.7	107.9
45°	3056.0	1426.7	582.8	295.1	158.5	131.5	119.9	113.7	108.7	106.6	105.9
47.5°	3181.7	1447.4	567.0	279.3	157.8	131.9	119.9	112.9	107.9	105.9	105.0
50°	3331.7	1517.6	547.5	257.8	150.2	141.2	119.5	111.7	107.1	105.9	104.3
52.5°	3543.4	1631.4	520.5	230.0	144.4	150.7	119.1	109.6	105.9	103.8	101.7
55°	3833.5	1745.1	485.6	200.5	135.4	144.0	119.9	107.1	102.9	100.8	98.4
57.5°	4071.3	1831.4	441.6	176.0	127.1	136.1	118.8	104.3	99.7	97.6	95.5
60°	4056.0	1839.7	399.8	160.3	122.1	122.5	121.6	102.1	96.7	95.0	93.4
62.5°	3804.9	1737.2	360.8	152.3	118.3	111.7	124.1	99.7	93.9	92.1	90.9
65°	3386.8	1498.5	340.1	152.3	114.9	105.9	108.3	96.2	90.9	89.3	88.4
67.5°	2856.8	1204.2	320.4	155.7	110.5	101.7	98.4	93.0	88.0	86.4	85.5
70°	2289.7	947.8	306.8	154.0	106.3	97.1	93.0	88.4	83.5	83.0	82.2
72.5°	1796.1	761.3	300.6	154.0	100.1	91.8	87.6	84.2	79.3	78.8	77.6
75°	1439.2	571.7	274.8	151.1	93.9	84.6	81.0	78.0	73.1	73.4	72.6
77.5°	1114.6	404.3	229.6	136.1	85.9	76.8	73.9	71.8	66.0	66.4	66.4
80°	871.7	263.2	178.1	112.9	76.8	67.6	65.5	63.9	57.7	58.6	58.6
82.5°	597.3	156.5	129.2	90.9	66.0	57.7	57.3	54.8	48.2	48.6	49.3
85°	326.2	102.9	85.9	67.2	51.9	46.9	46.1	44.8	38.6	38.6	39.0
87.5°	60.2	55.1	50.7	44.5	34.9	33.7	32.3	33.7	29.1	28.2	28.2
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°	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8
2.5°	1700.7	1672.0	1652.1	1634.7	1592.8	1595.6	1601.5	1609.8	1583.6	1597.4	1614.3
5°	1369.9	1346.2	1328.4	1300.5	1242.0	1221.2	1208.0	1202.2	1163.2	1171.5	1189.8
7.5°	1010.0	1009.5	1003.3	972.2	901.6	858.9	830.6	821.9	797.8	807.0	834.7
10°	711.1	718.6	715.6	687.8	624.8	594.1	587.9	605.2	605.7	623.6	671.2
12.5°	513.9	509.8	506.0	483.2	435.8	430.9	445.0	469.0	474.8	494.0	543.8
15°	383.6	373.5	371.5	353.7	322.6	327.1	337.5	349.9	350.4	363.7	404.7
17.5°	287.7	287.7	290.9	279.3	257.0	254.9	249.4	246.2	241.1	246.6	269.0
20°	223.3	233.7	242.0	235.4	215.0	205.1	194.7	188.0	184.3	184.7	191.3
22.5°	191.3	199.6	210.5	207.1	190.1	177.2	170.7	166.1	163.2	163.2	166.8
25°	175.2	180.6	190.5	188.9	174.4	164.0	158.5	154.0	150.7	150.2	154.0
27.5°	162.4	165.6	172.3	171.4	156.5	149.9	146.5	143.6	141.6	141.2	144.9
30°	150.7	152.3	155.7	154.4	143.2	136.6	135.4	134.1	132.9	133.3	138.6
32.5°	140.3	141.6	143.6	141.9	131.2	125.3	123.3	121.6	120.4	121.6	127.9
35°	128.7	132.4	134.9	134.1	122.5	115.4	110.8	106.6	105.0	106.3	113.3
37.5°	118.8	125.0	128.3	127.4	115.4	107.1	101.3	100.4	100.4	102.1	109.2
40°	114.9	119.5	122.5	121.2	109.2	100.8	97.6	96.2	96.7	98.4	105.9
42.5°	111.7	115.9	116.7	114.1	102.1	96.7	94.6	93.0	93.9	95.9	103.4
45°	108.7	112.1	111.7	107.9	96.2	92.6	92.6	91.3	91.8	93.4	101.3
47.5°	106.6	108.3	107.5	103.8	92.1	89.3	90.4	90.4	91.3	92.6	100.4
50°	103.4	104.6	103.8	100.4	88.8	86.4	87.6	89.3	90.0	91.3	98.4
52.5°	100.1	100.8	100.4	97.1	85.5	83.8	83.8	85.5	87.2	88.8	95.0
55°	96.7	97.6	98.0	95.5	83.0	81.4	81.0	81.0	82.6	85.1	91.8
57.5°	94.2	94.2	95.0	93.4	80.6	78.4	76.4	76.8	78.8	81.0	87.6
60°	91.3	91.8	93.0	91.3	77.2	73.9	72.2	74.3	75.2	77.2	84.2
62.5°	88.8	88.8	89.7	88.4	74.3	71.0	69.7	71.8	71.8	73.9	81.0
65°	86.8	86.4	86.4	85.9	71.3	68.1	67.2	68.1	68.5	70.6	77.6
67.5°	85.1	83.0	83.0	83.8	68.5	65.1	64.8	64.8	65.1	67.6	73.9
70°	81.4	79.6	79.3	82.2	65.5	61.4	61.4	60.6	61.4	62.8	69.3
72.5°	77.2	75.9	75.5	79.6	62.8	57.3	56.5	56.0	56.5	57.7	63.9
75°	71.8	71.0	71.8	78.0	59.8	52.8	51.5	51.1	51.1	51.5	58.1
77.5°	65.5	64.8	71.0	72.6	58.1	47.3	46.1	45.3	44.5	44.5	51.9
80°	58.1	57.7	68.5	61.4	55.6	41.5	39.5	38.2	37.3	36.9	44.5
82.5°	50.7	49.8	58.6	48.2	46.1	34.1	31.1	28.6	27.5	27.5	34.1
85°	41.5	41.1	46.1	35.3	32.0	24.9	20.8	18.7	17.1	17.1	22.0
87.5°	30.3	29.5	28.6	21.2	16.2	11.3	7.8	7.4	6.7	6.2	9.2
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°	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8	1951.8
2.5°	1639.7	1674.1	1739.3	1792.8	1864.3	1921.6	1986.7	2015.0
5°	1223.2	1277.7	1377.3	1462.4	1580.3	1689.4	1814.0	1882.1
7.5°	877.6	958.1	1033.6	1139.9	1287.3	1433.8	1594.8	1684.9
10°	726.0	799.9	864.7	940.1	1054.0	1218.8	1411.0	1512.7
12.5°	601.5	681.2	749.6	830.6	926.1	1075.1	1294.2	1412.6
15°	461.2	547.9	630.1	727.6	844.8	1014.9	1259.4	1391.4
17.5°	315.9	408.8	510.1	629.4	770.4	989.6	1292.6	1455.4
20°	214.5	282.7	392.7	533.8	703.6	977.6	1365.7	1587.0
22.5°	176.5	207.1	289.7	444.1	648.8	990.9	1484.4	1760.0
25°	161.9	178.5	225.4	365.3	606.9	1026.2	1645.1	1955.5
27.5°	152.8	166.8	197.5	308.8	568.2	1074.3	1840.6	2194.7
30°	147.4	160.6	186.4	279.8	532.9	1115.7	2008.7	2374.9
32.5°	135.4	145.4	166.5	263.2	507.7	1149.4	2156.9	2543.3
35°	120.8	132.9	150.2	252.4	506.9	1165.2	2296.4	2729.8
37.5°	115.4	127.1	139.9	246.6	511.9	1178.5	2467.0	2941.0
40°	112.1	122.5	132.9	245.8	516.0	1188.8	2633.8	3161.0
42.5°	109.2	119.5	131.5	240.0	514.3	1203.0	2781.6	3349.9
45°	108.3	118.8	134.5	231.2	513.9	1225.1	2899.0	3501.0
47.5°	107.5	123.3	133.7	221.7	512.2	1271.4	3031.5	3641.7
50°	106.6	131.5	127.9	208.3	499.8	1350.8	3209.6	3802.8
52.5°	106.3	132.9	121.6	190.1	477.4	1468.2	3470.3	4027.0
55°	104.6	126.2	110.8	166.1	445.0	1594.8	3749.7	4290.5
57.5°	100.8	112.5	104.6	142.4	398.5	1683.2	3956.0	4494.4
60°	110.1	96.7	100.4	130.3	342.8	1699.0	3965.1	4551.6
62.5°	105.0	88.0	96.2	126.2	303.8	1596.1	3783.6	4483.1
65°	83.8	83.5	92.6	130.3	298.1	1365.7	3477.4	4280.1
67.5°	76.4	80.1	88.8	135.4	301.8	1075.9	3026.6	3806.1
70°	71.3	75.9	83.8	139.9	308.4	847.7	2436.7	3095.5
72.5°	66.4	70.2	78.8	144.4	303.8	668.7	1950.2	2384.4
75°	60.2	63.5	71.8	132.4	260.7	491.4	1549.7	1693.2
77.5°	53.1	56.0	63.1	104.6	195.9	342.1	1160.7	1220.4
80°	45.7	46.9	52.3	76.4	127.9	204.7	883.4	973.4
82.5°	36.2	36.5	39.9	56.0	79.6	130.8	612.7	699.5
85°	23.3	24.0	25.7	39.5	53.5	83.8	313.0	358.7
87.5°	7.8	9.2	9.2	19.1	26.1	46.6	95.9	69.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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