

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: P196683

Luminaire Tested: **NAV-AF-03-D-UNV-SLL-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196683
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-03-D-UNV-SLL-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10195 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

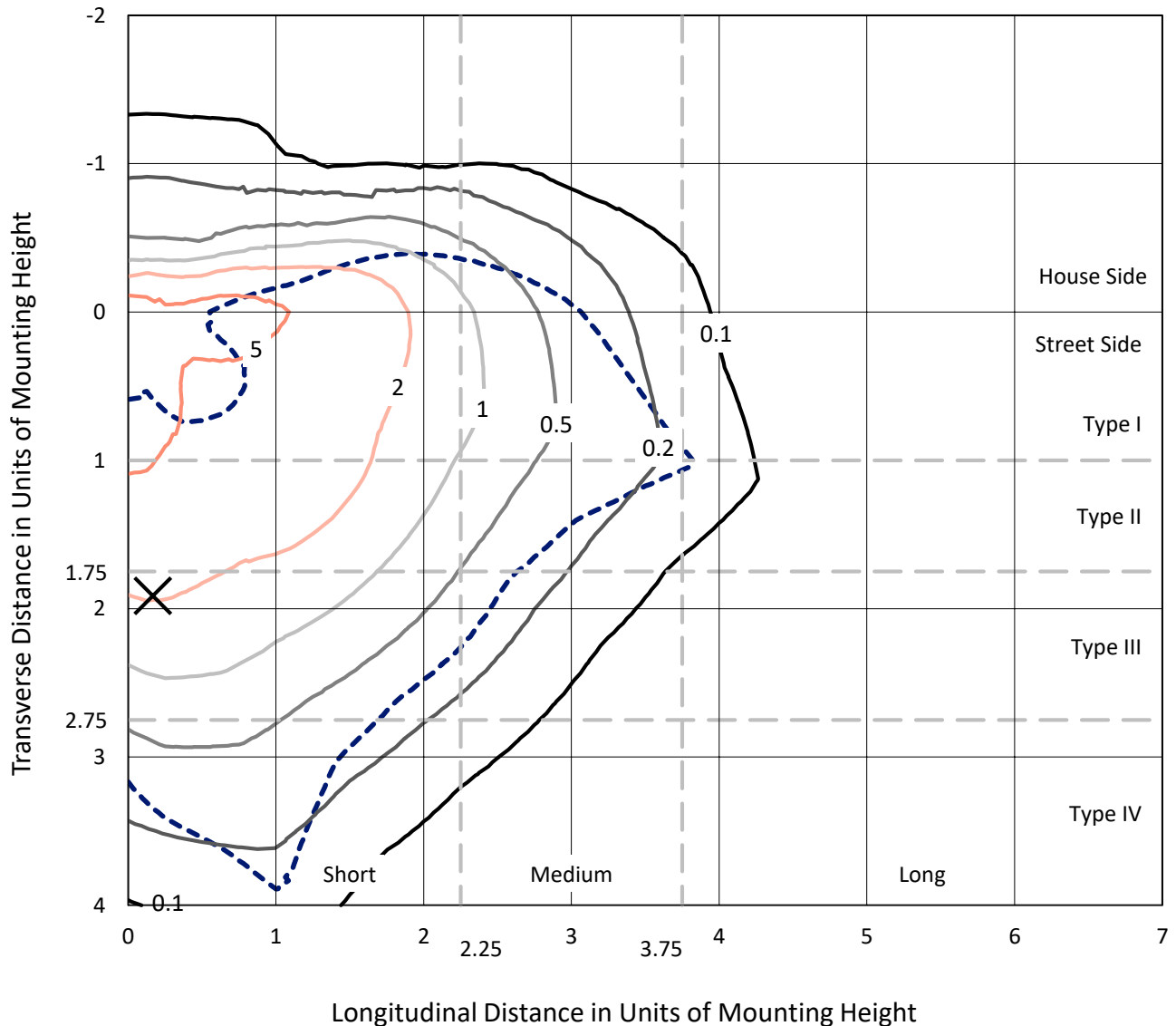
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

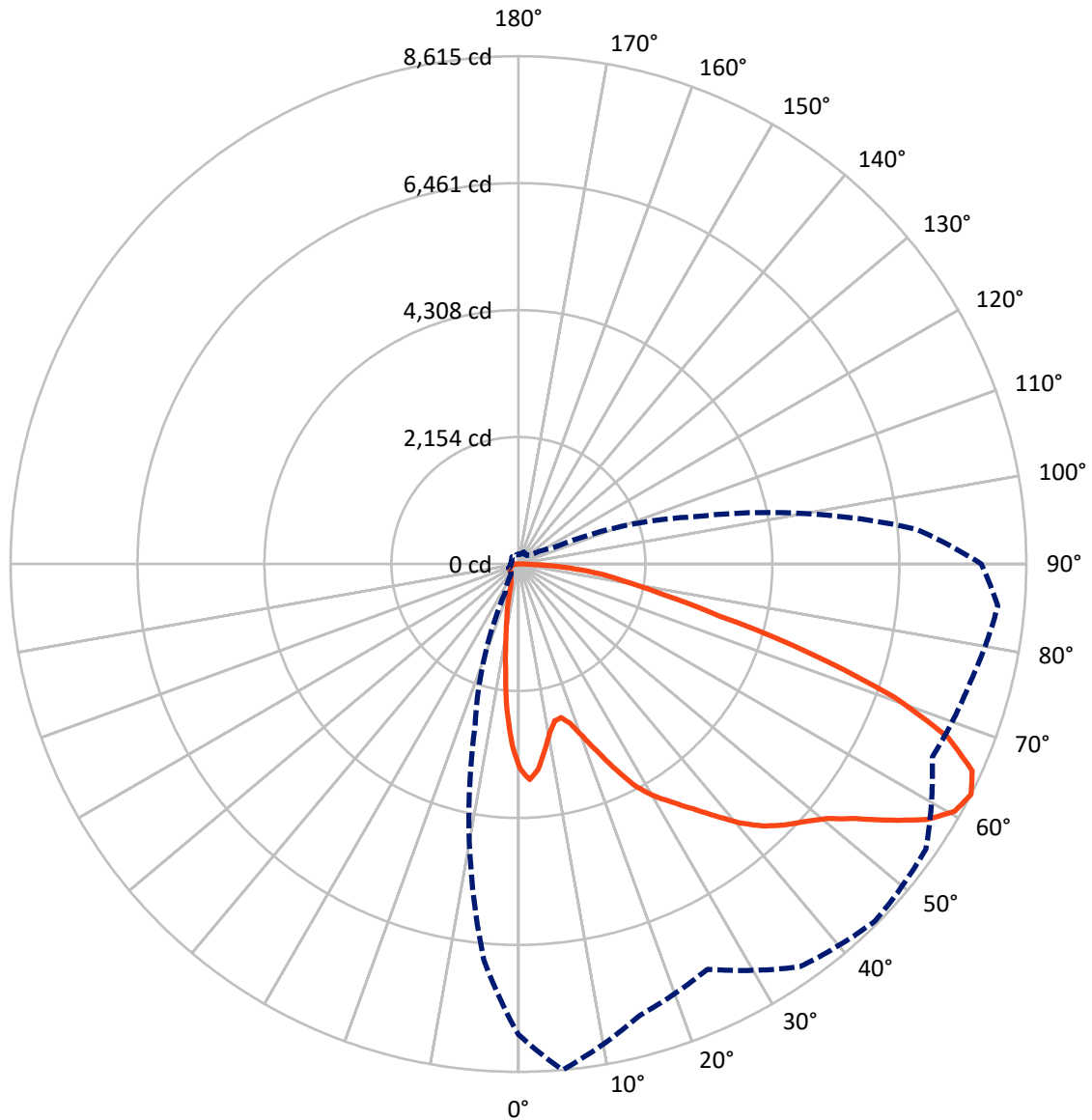
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 10 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	1806.1	0.0	1806.1
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	8388.9	0.0	8388.9
	% Fixture	82.3	0.0	82.3
Total	Lumens	10195.0	0.0	10195.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.8	2.5
10°-20°	461.7	4.5
20°-30°	664.0	6.5
30°-40°	1017.0	10.0
40°-50°	1486.9	14.6
50°-60°	2163.4	21.2
60°-70°	2506.6	24.6
70°-80°	1306.7	12.8
80°-90°	335.9	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°	10195.0	100.0
0°-180°	10195.0	100.0



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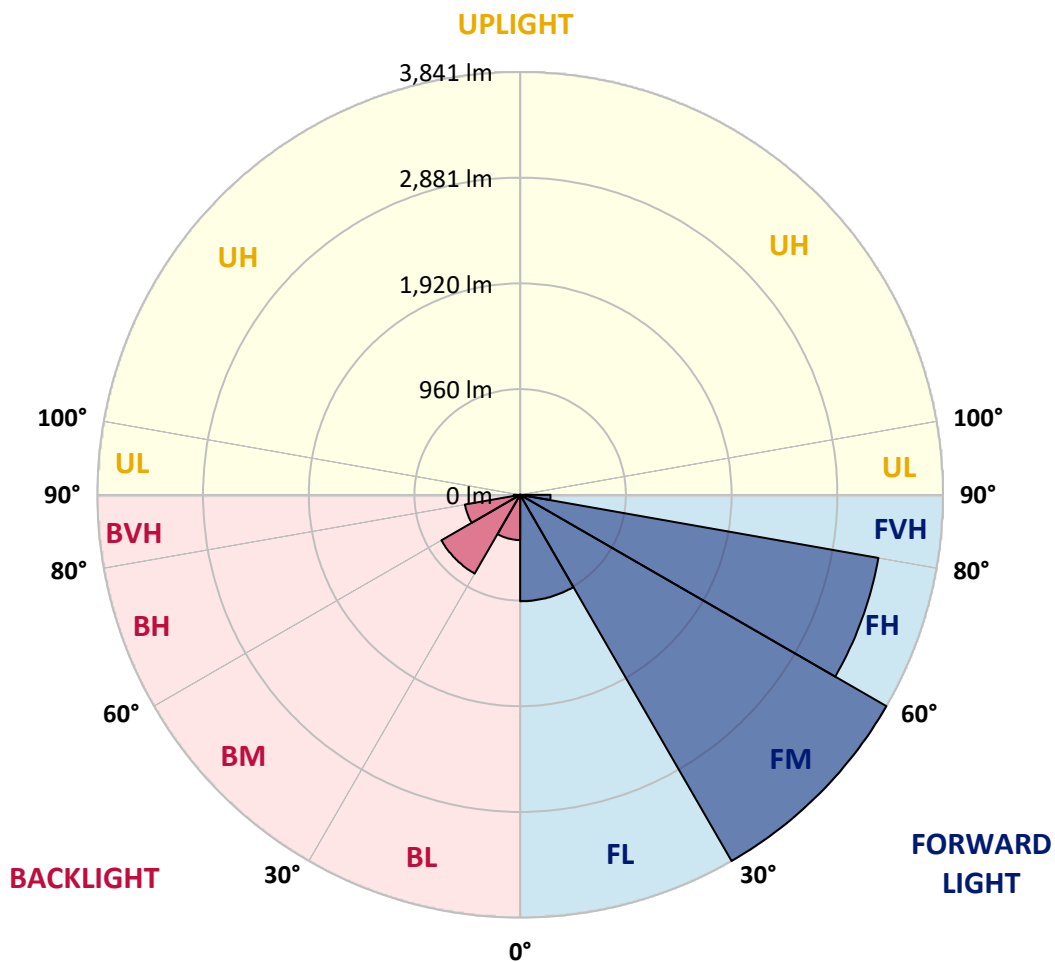
CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-7030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	967.5	9.5			
FM	(30°-60°)	3841.0	37.7			
FH	(60°-80°)	3304.0	32.4			G2/5000
FVH	(80°-90°)	276.3	2.7			G3/500
BL	(0°-30°)	410.9	4.0	B1/500		
BM	(30°-60°)	826.3	8.1	B1/1000		
BH	(60°-80°)	509.3	5.0	B2/1000		G2/1000
BVH	(80°-90°)	59.6	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6
2.5°	3588.1	3664.1	3751.4	3865.3	3942.8	3973.9	3999.8	3956.2	3914.0	3834.9	3806.8
5°	3351.5	3497.8	3738.1	3966.5	4167.5	4282.9	4318.4	4237.7	4094.4	3887.5	3777.9
7.5°	3000.4	3193.3	3531.2	3867.4	4155.6	4347.9	4361.9	4202.3	3919.9	3580.7	3403.2
10°	2693.6	2911.6	3302.7	3679.0	3984.2	4180.8	4142.4	3918.5	3577.7	3191.8	2991.5
12.5°	2515.4	2733.5	3131.9	3514.1	3801.6	3876.3	3798.0	3609.5	3286.4	2899.8	2698.0
15°	2477.8	2702.5	3071.4	3393.6	3571.8	3523.7	3446.1	3350.8	3120.9	2804.4	2609.3
17.5°	2591.6	2842.9	3151.9	3328.6	3321.2	3205.8	3140.7	3159.3	3120.1	2907.9	2703.9
20°	2825.9	3123.0	3356.7	3310.9	3121.6	2959.8	2922.0	3066.9	3248.0	3167.4	2943.5
22.5°	3134.2	3472.7	3636.0	3361.8	3017.4	2842.9	2835.5	3061.8	3480.9	3560.0	3287.2
25°	3482.3	3877.1	3917.7	3452.0	3006.3	2832.5	2825.9	3141.5	3761.0	3948.7	3672.3
27.5°	3908.1	4285.0	4152.7	3572.6	3055.1	2862.9	2867.3	3277.6	4053.0	4333.1	4106.2
30°	4228.9	4574.8	4297.6	3690.8	3133.4	2916.1	2927.2	3424.6	4210.5	4600.1	4452.9
32.5°	4529.1	4822.4	4436.6	3807.5	3248.0	2995.3	3033.6	3608.0	4399.7	4829.2	4780.3
35°	4861.0	5099.6	4591.1	3932.5	3412.0	3134.2	3189.6	3782.4	4587.5	5058.2	5104.8
37.5°	5237.2	5416.7	4758.9	4109.1	3648.6	3391.4	3422.4	3960.5	4718.3	5311.8	5453.0
40°	5628.9	5772.3	4942.3	4344.9	3992.4	3738.9	3753.6	4189.0	4820.9	5574.2	5790.8
42.5°	5965.2	6076.9	5126.3	4637.7	4387.1	4092.9	4105.4	4435.2	4919.3	5800.5	6061.3
45°	6234.4	6316.4	5299.9	4945.9	4808.4	4535.0	4532.0	4685.7	5050.8	5991.1	6269.1
47.5°	6484.9	6528.6	5493.7	5246.1	5245.3	5104.1	4998.4	4981.3	5226.1	6151.6	6450.1
50°	6771.7	6787.9	5749.4	5549.1	5778.9	5756.8	5561.7	5356.9	5453.0	6331.9	6640.1
52.5°	7170.9	7171.7	6066.5	5844.9	6368.1	6438.3	6211.4	5782.0	5788.5	6683.1	6968.3
55°	7640.3	7672.8	6479.7	6198.9	6984.6	7104.4	6890.8	6286.8	6270.5	7249.3	7500.5
57.5°	8003.2	8175.5	6960.9	6641.7	7560.4	7716.4	7544.2	6810.1	6862.7	7833.3	7939.7
60°	8105.2	8508.1	7440.7	7138.4	8047.6	8281.9	8106.7	7375.6	7442.2	8212.4	8066.1
62.5°	7983.2	8615.3	7929.3	7583.3	8336.6	8561.3	8435.7	7745.9	7914.5	8163.7	7852.5
65°	7621.8	8460.1	8353.6	7772.6	8170.3	8250.0	8216.9	7765.2	8171.0	7702.3	7261.8
67.5°	6777.7	7861.3	8164.4	7368.2	7393.3	7307.6	7264.0	7237.5	7882.7	6957.9	6330.4
70°	5512.1	6754.7	7261.8	6166.4	5980.1	5897.3	5753.8	6108.6	7085.1	5928.3	5209.8
72.5°	4246.0	5167.6	5956.4	4674.6	4287.4	4315.4	4152.7	4671.0	5869.2	4583.0	3977.6
75°	3015.1	3523.7	4754.4	3358.8	2845.8	2844.4	2831.9	3361.8	4631.1	3289.4	2910.2
77.5°	2173.1	2536.9	3724.7	2247.9	2019.4	2045.4	2004.0	2284.8	3610.3	2366.1	2156.2
80°	1733.4	1878.2	2407.5	1499.0	1503.5	1564.1	1555.3	1562.6	2375.0	1713.4	1612.1
82.5°	1245.5	1426.0	1840.6	1148.8	994.3	1058.5	1071.1	1159.0	1675.7	1211.5	1063.0
85°	638.6	869.2	1693.5	995.0	621.6	515.2	592.8	914.4	1455.5	725.9	518.2
87.5°	124.2	241.0	1241.0	553.0	279.3	141.2	232.8	387.4	846.3	131.5	64.4
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6
2.5°	3758.7	3664.1	3575.5	3483.8	3412.8	3326.4	3241.4	3167.4	3095.8	3048.5	3063.2
5°	3667.1	3436.5	3229.4	3037.3	2925.0	2789.7	2669.2	2567.9	2489.6	2439.3	2469.6
7.5°	3249.5	2937.6	2664.9	2411.3	2251.7	2076.4	1936.0	1836.8	1776.2	1742.2	1791.8
10°	2822.2	2471.9	2165.8	1901.9	1744.6	1596.0	1468.8	1363.8	1282.4	1244.0	1264.0
12.5°	2516.2	2126.6	1805.8	1628.4	1493.1	1360.1	1228.5	1105.8	1002.4	955.0	945.4
15°	2401.6	1941.1	1613.6	1415.6	1281.1	1136.2	994.3	862.6	764.3	723.7	714.8
17.5°	2451.9	1901.2	1499.8	1265.4	1070.3	894.4	734.8	610.5	538.1	515.2	517.5
20°	2628.6	1916.0	1408.2	1111.0	870.0	661.6	501.9	416.2	385.1	379.9	385.9
22.5°	2871.0	1976.6	1341.6	978.0	693.4	481.2	373.3	332.5	324.5	323.7	329.6
25°	3191.1	2094.8	1297.2	859.7	547.7	381.5	325.3	302.3	295.6	297.1	303.0
27.5°	3568.1	2245.0	1268.5	757.7	450.1	340.1	303.8	283.8	277.2	278.7	283.1
30°	3912.6	2376.5	1225.6	680.8	404.4	325.3	291.9	272.0	263.2	263.2	266.1
32.5°	4220.8	2490.3	1175.3	623.1	362.2	291.9	264.6	249.1	242.4	244.6	246.2
35°	4494.3	2550.2	1136.2	589.1	328.3	269.1	241.7	225.4	216.6	218.1	220.2
37.5°	4763.3	2573.2	1110.3	570.7	303.8	255.0	229.9	216.6	206.9	205.5	204.8
40°	5019.2	2567.9	1085.8	565.5	287.6	244.6	222.5	210.7	201.0	198.9	198.1
42.5°	5240.1	2550.9	1063.0	551.4	276.4	237.3	216.6	206.3	196.6	193.7	192.2
45°	5441.8	2540.6	1037.9	525.5	282.3	234.4	213.6	202.5	193.7	190.0	188.5
47.5°	5665.8	2577.5	1009.8	497.4	280.9	235.0	213.6	201.0	192.2	188.5	187.1
50°	5932.8	2702.5	975.0	459.0	267.5	251.3	212.8	198.9	190.6	188.5	185.5
52.5°	6309.7	2904.9	926.9	409.5	257.2	268.3	212.2	195.1	188.5	184.7	181.2
55°	6826.4	3107.6	864.9	357.1	241.0	256.5	213.6	190.6	183.3	179.6	175.2
57.5°	7250.0	3261.3	786.4	313.5	226.1	242.4	211.4	185.5	177.4	173.7	170.0
60°	7222.6	3276.1	711.9	285.2	217.3	218.1	216.6	181.8	172.2	169.3	166.3
62.5°	6775.3	3093.4	642.3	271.3	210.7	198.9	221.0	177.4	167.0	164.1	161.9
65°	6031.0	2668.4	605.4	271.3	204.8	188.5	193.0	171.5	161.9	159.0	157.5
67.5°	5087.1	2144.4	570.7	277.2	196.6	181.2	175.2	165.5	156.7	153.7	152.3
70°	4077.3	1687.6	546.3	274.2	189.2	172.9	165.5	157.5	148.6	147.8	146.4
72.5°	3198.4	1355.7	535.2	274.2	178.1	163.4	156.0	150.0	141.2	140.4	138.2
75°	2562.7	1017.9	489.4	269.1	167.0	150.8	144.1	139.0	130.1	130.8	129.4
77.5°	1984.7	720.0	408.7	242.4	153.0	136.8	131.5	127.9	117.6	118.2	118.2
80°	1552.2	468.6	317.1	201.0	136.8	120.5	116.8	113.8	102.7	104.3	104.3
82.5°	1063.7	278.7	229.9	161.9	117.6	102.7	102.0	97.6	85.8	86.6	88.0
85°	581.0	183.3	153.0	119.7	92.5	83.5	82.1	79.9	68.8	68.8	69.5
87.5°	107.2	98.4	90.1	79.1	62.1	59.9	57.7	59.9	51.8	50.3	50.3
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°	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6
2.5°	3028.4	2977.5	2942.1	2910.8	2836.3	2841.4	2851.7	2866.5	2820.0	2844.4	2874.7
5°	2439.3	2397.1	2365.5	2315.9	2211.6	2174.7	2151.1	2140.7	2071.2	2086.0	2118.5
7.5°	1798.4	1797.8	1786.6	1731.2	1605.6	1529.4	1479.2	1463.6	1420.7	1437.0	1486.5
10°	1266.2	1279.5	1274.4	1224.8	1112.5	1057.7	1046.7	1077.8	1078.5	1110.3	1195.3
12.5°	915.1	907.7	901.1	860.4	776.2	767.3	792.4	835.3	845.6	879.6	968.4
15°	683.0	665.3	661.6	629.8	574.3	582.5	600.9	623.1	623.9	647.6	720.7
17.5°	512.2	512.2	518.2	497.4	457.6	453.9	444.2	438.3	429.5	439.1	479.0
20°	397.7	416.2	430.9	419.1	383.0	365.2	346.7	334.9	328.3	329.0	340.8
22.5°	340.8	355.5	374.8	368.9	338.6	315.6	303.8	295.6	290.5	290.5	297.1
25°	311.9	321.6	339.2	336.3	310.4	291.9	282.3	274.2	268.3	267.5	274.2
27.5°	289.0	294.9	306.8	305.3	278.7	266.8	260.9	255.7	252.1	251.3	258.0
30°	268.3	271.3	277.2	275.0	255.0	243.2	241.0	238.7	236.5	237.3	246.9
32.5°	249.8	252.1	255.7	252.8	233.6	223.2	219.5	216.6	214.3	216.6	227.7
35°	229.1	235.8	240.3	238.7	218.1	205.5	197.3	190.0	187.1	189.2	201.8
37.5°	211.4	222.5	228.5	226.9	205.5	190.6	180.4	178.8	178.8	181.8	194.4
40°	204.8	212.8	218.1	215.9	194.4	179.6	173.7	171.5	172.2	175.2	188.5
42.5°	198.9	206.3	207.7	203.3	181.8	172.2	168.6	165.5	167.0	170.8	184.1
45°	193.7	199.6	198.9	192.2	171.5	164.9	164.9	162.6	163.4	166.3	180.4
47.5°	190.0	193.0	191.4	184.7	164.1	159.0	161.1	161.1	162.6	164.9	178.8
50°	184.1	186.3	184.7	178.8	158.2	153.7	156.0	159.0	160.4	162.6	175.2
52.5°	178.1	179.6	178.8	172.9	152.3	149.3	149.3	152.3	155.2	158.2	169.3
55°	172.2	173.7	174.5	170.0	147.8	144.9	144.1	144.1	147.1	151.6	163.4
57.5°	167.8	167.8	169.3	166.3	143.4	139.8	136.0	136.8	140.4	144.1	156.0
60°	162.6	163.4	165.5	162.6	137.4	131.5	128.6	132.3	133.9	137.4	150.0
62.5°	158.2	158.2	159.6	157.5	132.3	126.4	124.2	127.9	127.9	131.5	144.1
65°	154.5	153.7	153.7	153.0	127.2	121.3	119.7	121.3	122.0	125.6	138.2
67.5°	151.6	147.8	147.8	149.3	122.0	116.1	115.3	115.3	116.1	120.5	131.5
70°	144.9	141.9	141.2	146.4	116.8	109.4	109.4	107.9	109.4	111.7	123.5
72.5°	137.4	135.3	134.5	141.9	111.7	102.0	100.5	99.8	100.5	102.7	113.8
75°	127.9	126.4	127.9	139.0	106.4	93.9	91.7	90.9	90.9	91.7	103.5
77.5°	116.8	115.3	126.4	129.4	103.5	84.2	82.1	80.6	79.1	79.1	92.5
80°	103.5	102.7	122.0	109.4	99.1	74.0	70.3	68.0	66.5	65.8	79.1
82.5°	90.1	88.7	104.3	85.8	82.1	60.6	55.4	51.1	48.8	48.8	60.6
85°	74.0	73.2	82.1	62.9	57.0	44.4	36.9	33.3	30.3	30.3	39.3
87.5°	54.0	52.5	51.1	37.7	28.9	20.0	14.1	13.3	11.8	11.0	16.3
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°	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6	3475.6
2.5°	2919.9	2981.1	3097.2	3192.5	3319.8	3421.7	3537.9	3588.1
5°	2178.4	2275.3	2452.7	2604.2	2814.1	3008.5	3230.2	3351.5
7.5°	1562.6	1706.1	1840.6	2029.8	2292.3	2553.2	2839.9	3000.4
10°	1292.9	1424.4	1539.7	1674.3	1876.8	2170.2	2512.5	2693.6
12.5°	1071.1	1213.0	1334.9	1479.2	1649.2	1914.5	2304.9	2515.4
15°	821.2	975.6	1122.1	1295.9	1504.3	1807.3	2242.6	2477.8
17.5°	562.5	728.1	908.5	1120.6	1372.0	1762.3	2301.9	2591.6
20°	382.2	503.3	699.3	950.5	1252.8	1740.8	2431.9	2825.9
22.5°	314.1	368.9	515.9	790.9	1155.3	1764.4	2643.3	3134.2
25°	288.3	317.8	401.4	650.5	1080.7	1827.3	2929.5	3482.3
27.5°	272.0	297.1	351.9	550.0	1012.0	1913.0	3277.6	3908.1
30°	262.4	286.0	331.9	498.2	949.1	1987.0	3576.9	4228.9
32.5°	241.0	258.7	296.4	468.6	904.0	2046.9	3840.8	4529.1
35°	215.1	236.5	267.5	449.4	902.6	2075.0	4089.2	4861.0
37.5°	205.5	226.1	249.1	439.1	911.4	2098.6	4393.0	5237.2
40°	199.6	218.1	236.5	437.6	918.8	2117.0	4690.2	5628.9
42.5°	194.4	212.8	234.4	427.2	915.8	2142.1	4953.3	5965.2
45°	193.0	211.4	239.5	411.7	915.1	2181.4	5162.5	6234.4
47.5°	191.4	219.5	237.9	394.8	912.2	2264.2	5398.3	6484.9
50°	190.0	234.4	227.7	371.1	890.0	2405.4	5715.5	6771.7
52.5°	189.2	236.5	216.6	338.6	850.0	2614.5	6179.6	7170.9
55°	186.3	224.7	197.3	295.6	792.4	2839.9	6677.1	7640.3
57.5°	179.6	200.3	186.3	253.6	709.6	2997.4	7044.5	8003.2
60°	195.9	172.2	178.8	232.0	610.5	3025.5	7060.8	8105.2
62.5°	187.1	156.7	171.5	224.7	541.1	2842.2	6737.7	7983.2
65°	149.3	148.6	164.9	232.0	530.8	2431.9	6192.2	7621.8
67.5°	136.0	142.7	158.2	241.0	537.3	1916.0	5389.4	6777.7
70°	127.2	135.3	149.3	249.1	549.2	1509.4	4339.0	5512.1
72.5°	118.2	124.9	140.4	257.2	541.1	1190.8	3472.7	4246.0
75°	107.2	113.1	127.9	235.8	464.3	875.1	2759.4	3015.1
77.5°	94.6	99.8	112.3	186.3	348.9	609.1	2066.7	2173.1
80°	81.3	83.5	93.1	136.0	227.7	364.4	1573.0	1733.4
82.5°	64.4	65.0	70.9	99.8	141.9	232.8	1091.1	1245.5
85°	41.4	42.8	45.8	70.3	95.4	149.3	557.3	638.6
87.5°	14.1	16.3	16.3	34.0	46.6	82.8	170.8	124.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)