

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: P196694

Luminaire Tested: **NAV-AF-02-D-UNV-SLL-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196694  
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-02-D-UNV-SLL-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 1050mA 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: 10404.8 lumens  
Efficiency: N/A  
Efficacy: 92.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

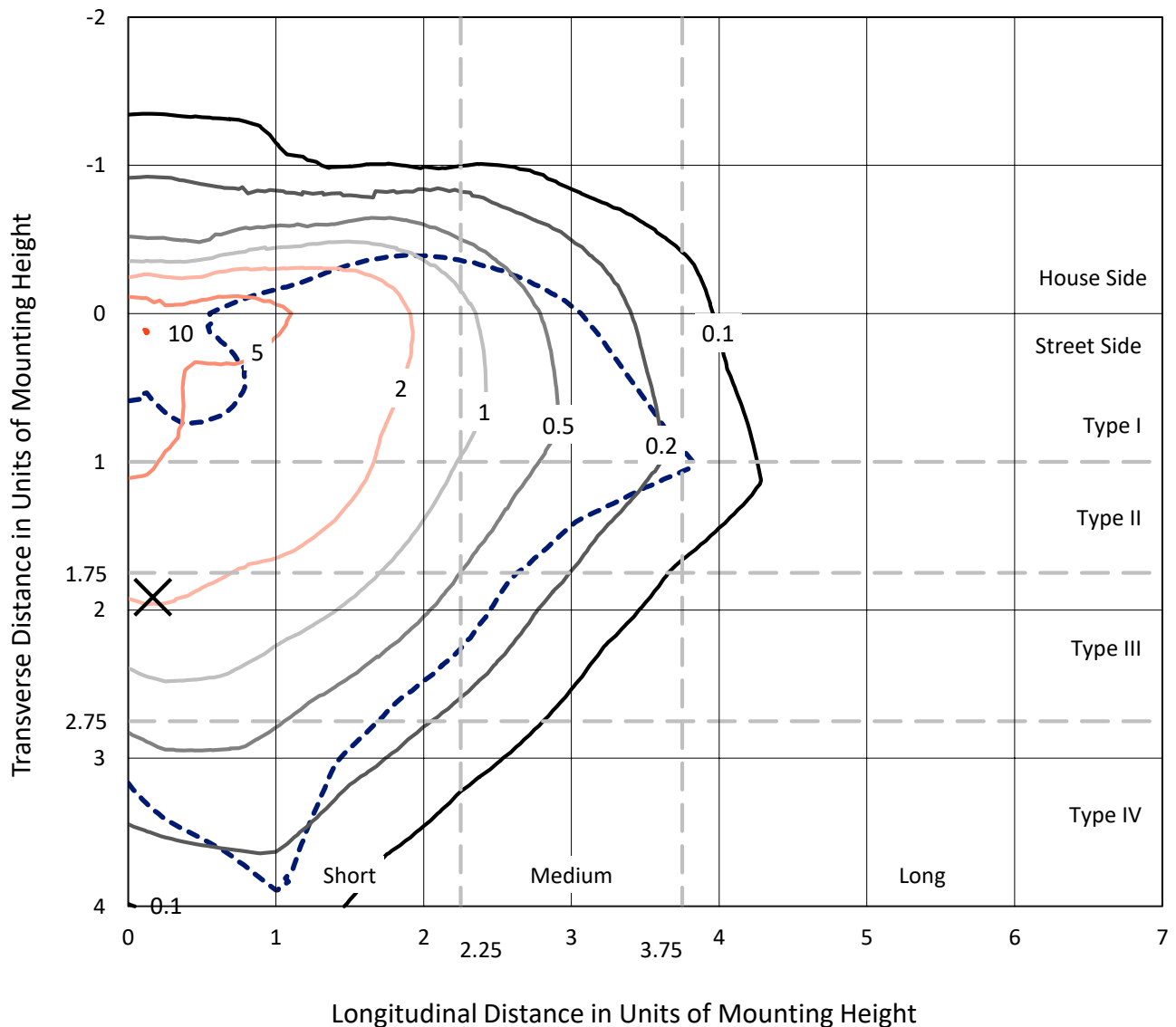
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

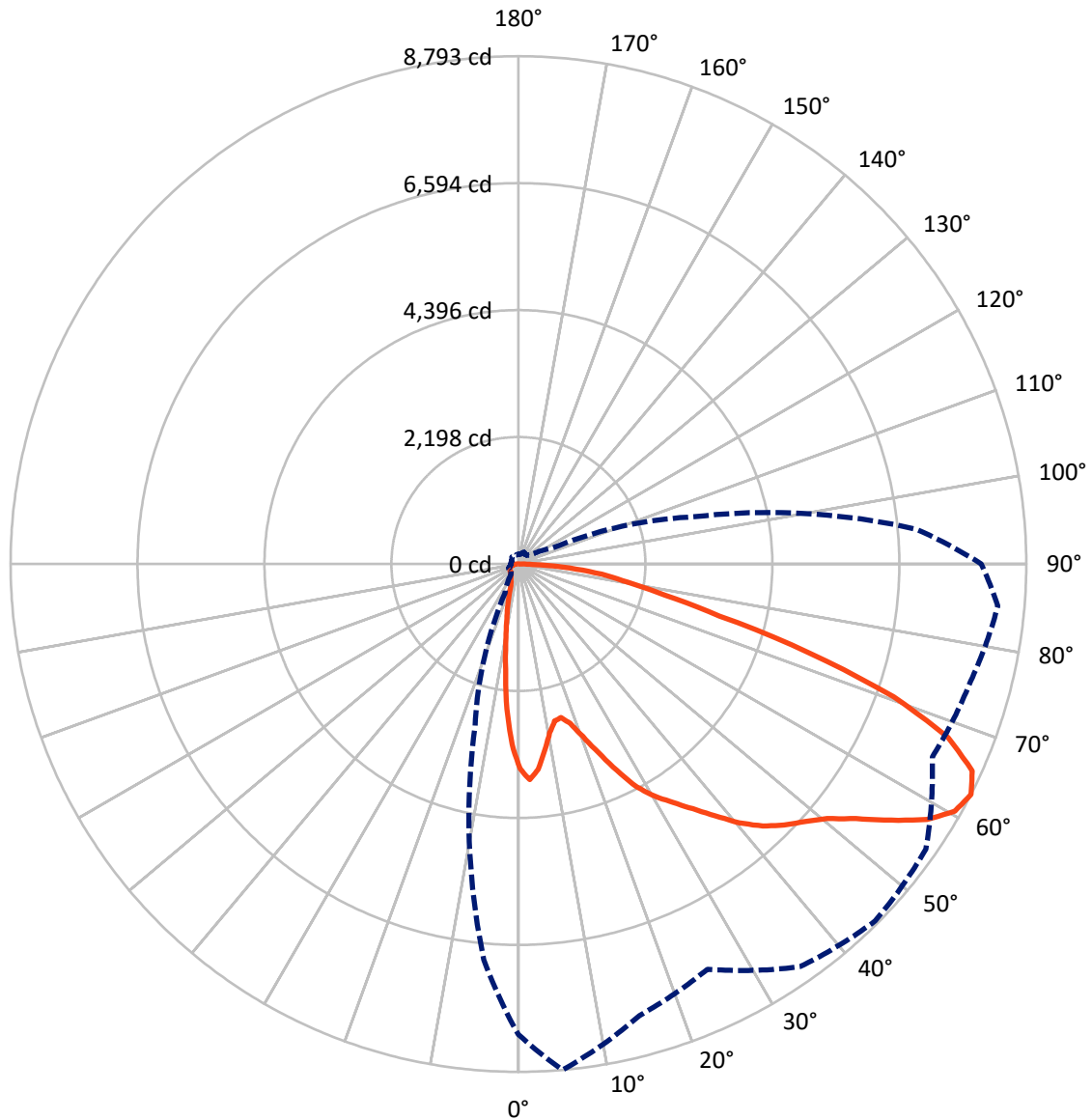
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 10.2 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
<b>House Side</b>	Lumens	1843.2	0.0	1843.2
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	8561.5	0.0	8561.5
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	10404.8	0.0	10404.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	258.0	2.5
10°-20°	471.2	4.5
20°-30°	677.7	6.5
30°-40°	1037.9	10.0
40°-50°	1517.5	14.6
50°-60°	2208.0	21.2
60°-70°	2558.2	24.6
70°-80°	1333.6	12.8
80°-90°	342.8	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°	10404.8	100.0
0°-180°	10404.8	100.0



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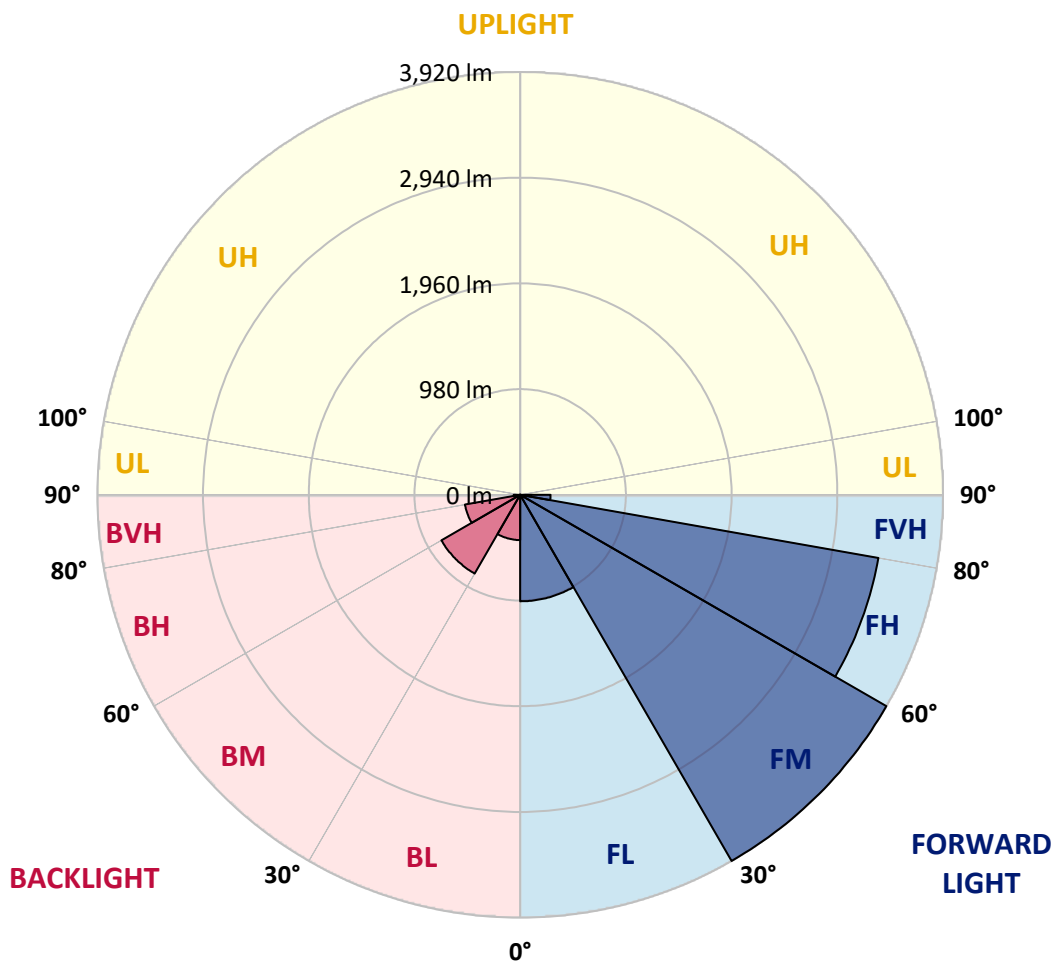
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	987.5	9.5			
FM	(30°-60°)	3920.0	37.7			
FH	(60°-80°)	3372.0	32.4			G2/5000
FVH	(80°-90°)	282.0	2.7			G3/500
BL	(0°-30°)	419.4	4.0	B1/500		
BM	(30°-60°)	843.3	8.1	B1/1000		
BH	(60°-80°)	519.7	5.0	B2/1000		G2/1000
BVH	(80°-90°)	60.8	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°	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2
2.5°	3661.9	3739.5	3828.6	3944.8	4024.0	4055.7	4082.0	4037.5	3994.5	3913.7	3885.2
5°	3420.5	3569.8	3815.0	4048.2	4253.4	4371.0	4407.2	4325.0	4178.6	3967.4	3855.8
7.5°	3062.1	3258.9	3603.8	3947.0	4241.2	4437.3	4451.8	4288.8	4000.6	3654.2	3473.3
10°	2749.1	2971.7	3370.6	3754.7	4066.2	4266.9	4227.7	3999.1	3651.3	3257.4	3053.0
12.5°	2567.3	2789.8	3196.4	3586.4	3879.9	3956.1	3876.1	3683.7	3354.0	2959.5	2753.6
15°	2528.7	2758.1	3134.5	3463.4	3645.2	3596.3	3517.0	3419.7	3185.1	2862.1	2663.0
17.5°	2644.9	2901.4	3216.8	3397.1	3389.6	3271.9	3205.4	3224.3	3184.4	2967.8	2759.6
20°	2884.1	3187.3	3425.8	3379.0	3185.8	3020.6	2982.1	3130.1	3314.8	3232.7	3004.0
22.5°	3198.7	3544.2	3710.9	3431.0	3079.5	2901.4	2893.8	3124.7	3552.4	3633.2	3354.8
25°	3553.9	3956.9	3998.4	3523.1	3068.1	2890.9	2884.1	3206.2	3838.4	4030.0	3747.8
27.5°	3988.5	4373.2	4238.1	3646.0	3117.9	2921.8	2926.3	3345.0	4136.3	4422.3	4190.6
30°	4316.0	4668.9	4386.1	3766.7	3197.9	2976.1	2987.4	3495.1	4297.0	4694.7	4544.5
32.5°	4622.2	4921.7	4527.9	3886.0	3314.8	3056.8	3096.1	3682.2	4490.2	4928.4	4878.8
35°	4960.9	5204.6	4685.6	4013.4	3482.3	3198.7	3255.3	3860.2	4681.8	5162.4	5209.9
37.5°	5345.0	5528.2	4856.8	4193.7	3723.7	3461.3	3492.9	4042.0	4815.4	5421.1	5565.2
40°	5744.8	5891.2	5044.0	4434.4	4074.5	3815.8	3830.8	4275.2	4920.2	5688.9	5910.0
42.5°	6088.0	6201.9	5231.8	4733.1	4477.3	4177.1	4190.0	4526.4	5020.6	5919.7	6186.0
45°	6362.6	6446.3	5409.1	5047.7	4907.4	4628.2	4625.3	4782.2	5154.9	6114.3	6398.1
47.5°	6618.4	6662.8	5606.7	5354.0	5353.2	5209.2	5101.2	5084.0	5333.6	6278.1	6582.9
50°	6911.0	6927.7	5867.8	5663.2	5898.0	5875.3	5676.1	5467.2	5565.2	6462.1	6776.8
52.5°	7318.4	7319.2	6191.4	5965.0	6499.2	6570.9	6339.2	5900.9	5907.7	6820.5	7111.6
55°	7797.5	7830.7	6613.0	6326.4	7128.3	7250.6	7032.5	6416.1	6399.6	7398.4	7654.9
57.5°	8167.9	8343.7	7104.1	6778.3	7716.0	7875.2	7699.4	6950.3	7003.8	7994.4	8103.0
60°	8272.0	8683.2	7593.8	7285.2	8213.1	8452.3	8273.5	7527.4	7595.2	8381.4	8232.0
62.5°	8147.6	8792.5	8092.4	7739.4	8508.1	8737.5	8609.2	7905.4	8077.3	8331.6	8013.9
65°	7778.6	8634.1	8525.5	7932.6	8338.3	8419.8	8385.8	7925.0	8339.1	7860.8	7411.3
67.5°	6917.1	8023.0	8332.3	7519.9	7545.6	7458.0	7413.5	7386.4	8045.0	7101.2	6460.7
70°	5625.5	6893.7	7411.3	6293.3	6103.1	6018.6	5872.2	6234.4	7230.9	6050.3	5317.0
72.5°	4333.2	5274.1	6078.9	4770.8	4375.5	4404.2	4238.1	4767.1	5989.9	4677.3	4059.4
75°	3077.2	3596.3	4852.3	3428.0	2904.4	2902.9	2890.1	3431.0	4726.3	3357.1	2970.1
77.5°	2218.0	2589.1	3801.4	2294.1	2061.0	2087.4	2045.3	2331.8	3684.4	2414.8	2200.6
80°	1769.0	1917.0	2457.1	1529.9	1534.4	1596.3	1587.2	1594.7	2423.9	1748.7	1645.3
82.5°	1271.1	1455.3	1878.5	1172.4	1014.7	1080.3	1093.1	1183.0	1710.2	1236.5	1084.8
85°	651.8	887.1	1728.4	1015.4	634.5	525.9	605.1	933.2	1485.4	740.8	528.9
87.5°	126.7	246.0	1266.7	564.4	285.1	144.1	237.6	395.3	863.8	134.3	65.7
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°	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2
2.5°	3836.1	3739.5	3649.0	3555.6	3483.0	3394.8	3308.1	3232.7	3159.4	3111.1	3126.2
5°	3742.5	3507.2	3296.1	3099.8	2985.2	2847.1	2724.2	2620.8	2540.9	2489.5	2520.5
7.5°	3316.3	2998.0	2719.6	2460.8	2297.9	2119.1	1975.7	1874.7	1812.8	1778.0	1828.7
10°	2880.3	2522.7	2210.5	1941.1	1780.4	1628.7	1499.0	1391.9	1308.9	1269.7	1290.1
12.5°	2568.0	2170.4	1842.9	1662.0	1523.8	1388.1	1253.9	1128.5	1023.0	974.7	964.9
15°	2451.0	1981.1	1646.9	1444.6	1307.4	1159.5	1014.7	880.4	780.0	738.6	729.6
17.5°	2502.4	1940.3	1530.7	1291.6	1092.4	912.9	749.8	623.1	549.2	525.9	528.0
20°	2682.7	1955.4	1437.1	1133.9	888.0	675.2	512.2	424.7	393.0	387.8	393.8
22.5°	2930.2	2017.3	1369.2	998.1	707.7	491.1	381.0	339.5	331.2	330.4	336.4
25°	3256.8	2137.9	1324.0	877.4	559.0	389.3	331.9	308.5	301.8	303.3	309.3
27.5°	3641.5	2291.1	1294.5	773.2	459.4	347.0	310.1	289.6	282.9	284.4	288.9
30°	3993.0	2425.4	1250.8	694.8	412.7	331.9	297.9	277.6	268.6	268.6	271.6
32.5°	4307.6	2541.6	1199.4	636.0	369.7	297.9	270.1	254.2	247.5	249.6	251.2
35°	4586.7	2602.7	1159.5	601.3	335.0	274.6	246.7	230.1	221.0	222.6	224.8
37.5°	4861.4	2626.0	1133.1	582.4	310.1	260.2	234.6	221.0	211.2	209.8	209.0
40°	5122.4	2620.8	1108.2	577.1	293.5	249.6	227.0	215.0	205.2	202.9	202.1
42.5°	5347.9	2603.4	1084.8	562.8	282.1	242.1	221.0	210.5	200.7	197.6	196.1
45°	5553.8	2592.8	1059.2	536.4	288.2	239.2	218.0	206.7	197.6	193.9	192.4
47.5°	5782.4	2630.6	1030.6	507.7	286.7	240.0	218.0	205.2	196.1	192.4	190.8
50°	6054.8	2758.1	995.1	468.5	273.0	256.5	217.3	202.9	194.6	192.4	189.3
52.5°	6439.5	2964.8	945.9	417.9	262.6	273.8	216.6	199.2	192.4	188.6	184.8
55°	6966.9	3171.5	882.6	364.4	246.0	261.7	218.0	194.6	187.1	183.3	178.7
57.5°	7399.1	3328.4	802.7	319.9	230.9	247.5	215.8	189.3	181.1	177.3	173.5
60°	7371.2	3343.6	726.5	291.1	221.8	222.6	221.0	185.6	175.8	172.7	169.8
62.5°	6914.8	3157.1	655.5	276.9	215.0	202.9	225.5	181.1	170.5	167.5	165.2
65°	6155.1	2723.4	617.9	276.9	209.0	192.4	196.8	175.1	165.2	162.2	160.7
67.5°	5191.8	2188.5	582.4	282.9	200.7	184.8	178.7	169.1	159.9	156.9	155.3
70°	4161.2	1722.3	557.6	279.9	193.2	176.6	169.1	160.7	151.7	150.9	149.3
72.5°	3264.3	1383.5	546.2	279.9	181.8	166.7	159.2	153.2	144.1	143.3	141.1
75°	2615.5	1038.8	499.5	274.6	170.5	153.9	147.1	141.8	132.8	133.6	131.9
77.5°	2025.5	734.8	417.2	247.5	156.1	139.6	134.3	130.6	119.9	120.7	120.7
80°	1584.3	478.3	323.6	205.2	139.6	122.9	119.2	116.2	104.9	106.4	106.4
82.5°	1085.6	284.4	234.6	165.2	119.9	104.9	104.2	99.5	87.5	88.3	89.8
85°	592.9	187.1	156.1	122.3	94.3	85.2	83.7	81.5	70.2	70.2	70.9
87.5°	109.4	100.3	92.0	80.8	63.4	61.0	58.9	61.0	52.8	51.4	51.4
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):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2
2.5°	3090.7	3038.7	3002.6	2970.9	2894.6	2900.0	2910.4	2925.5	2878.0	2902.9	2933.8
5°	2489.5	2446.6	2414.1	2363.5	2257.2	2219.5	2195.3	2184.7	2113.8	2128.9	2162.1
7.5°	1835.4	1834.7	1823.4	1766.8	1638.6	1560.9	1509.5	1493.7	1450.0	1466.6	1517.1
10°	1292.3	1305.8	1300.6	1250.0	1135.4	1079.6	1068.2	1099.9	1100.7	1133.1	1219.9
12.5°	933.9	926.4	919.6	878.1	792.1	783.1	808.7	852.4	863.0	897.8	988.2
15°	697.1	678.9	675.2	642.8	586.1	594.5	613.4	636.0	636.8	660.8	735.6
17.5°	522.8	522.8	528.9	507.7	467.0	463.2	453.4	447.3	438.3	448.1	488.8
20°	405.9	424.7	439.8	427.7	390.8	372.7	353.8	341.8	335.0	335.8	347.8
22.5°	347.8	362.8	382.5	376.4	345.5	322.1	310.1	301.8	296.5	296.5	303.3
25°	318.4	328.3	346.3	343.3	316.9	297.9	288.2	279.9	273.8	273.0	279.9
27.5°	295.0	301.0	313.0	311.6	284.4	272.4	266.3	261.0	257.2	256.5	263.4
30°	273.8	276.9	282.9	280.7	260.2	248.2	246.0	243.6	241.4	242.1	252.0
32.5°	255.0	257.2	261.0	258.0	238.4	227.8	224.1	221.0	218.7	221.0	232.4
35°	233.9	240.7	245.2	243.6	222.6	209.8	201.5	193.9	190.8	193.2	206.0
37.5°	215.8	227.0	233.2	231.6	209.8	194.6	184.1	182.6	182.6	185.6	198.5
40°	209.0	217.3	222.6	220.2	198.5	183.3	177.3	175.1	175.8	178.7	192.4
42.5°	202.9	210.5	212.0	207.5	185.6	175.8	172.0	169.1	170.5	174.3	187.8
45°	197.6	203.7	202.9	196.1	175.1	168.3	168.3	166.0	166.7	169.8	184.1
47.5°	193.9	196.8	195.3	188.6	167.5	162.2	164.4	164.4	166.0	168.3	182.6
50°	187.8	190.1	188.6	182.6	161.4	156.9	159.2	162.2	163.7	166.0	178.7
52.5°	181.8	183.3	182.6	176.6	155.3	152.4	152.4	155.3	158.4	161.4	172.7
55°	175.8	177.3	178.1	173.5	150.9	147.8	147.1	147.1	150.1	154.6	166.7
57.5°	171.2	171.2	172.7	169.8	146.4	142.6	138.8	139.6	143.3	147.1	159.2
60°	166.0	166.7	169.1	166.0	140.3	134.3	131.2	135.1	136.6	140.3	153.2
62.5°	161.4	161.4	162.9	160.7	135.1	129.0	126.7	130.6	130.6	134.3	147.1
65°	157.7	156.9	156.9	156.1	129.8	123.7	122.3	123.7	124.4	128.3	141.1
67.5°	154.6	150.9	150.9	152.4	124.4	118.4	117.7	117.7	118.4	122.9	134.3
70°	147.8	144.9	144.1	149.3	119.2	111.7	111.7	110.2	111.7	113.9	125.9
72.5°	140.3	138.1	137.3	144.9	113.9	104.2	102.6	101.8	102.6	104.9	116.2
75°	130.6	129.0	130.6	141.8	108.6	95.8	93.5	92.8	92.8	93.5	105.7
77.5°	119.2	117.7	129.0	131.9	105.7	86.0	83.7	82.3	80.8	80.8	94.3
80°	105.7	104.9	124.4	111.7	101.1	75.4	71.7	69.4	67.8	67.2	80.8
82.5°	92.0	90.5	106.4	87.5	83.7	61.8	56.6	52.0	49.8	49.8	61.8
85°	75.4	74.8	83.7	64.1	58.1	45.3	37.7	34.0	30.9	30.9	40.0
87.5°	55.0	53.5	52.0	38.5	29.4	20.3	14.3	13.5	12.0	11.4	16.6
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°	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2
2.5°	2979.8	3042.6	3161.0	3258.2	3388.0	3492.2	3610.6	3661.9
5°	2223.2	2322.1	2503.1	2657.7	2872.0	3070.4	3296.7	3420.5
7.5°	1594.7	1741.1	1878.5	2071.5	2339.3	2605.8	2898.4	3062.1
10°	1319.5	1453.7	1571.3	1708.7	1915.5	2214.9	2564.2	2749.1
12.5°	1093.1	1238.0	1362.5	1509.5	1683.0	1953.9	2352.3	2567.3
15°	838.1	995.8	1145.1	1322.5	1535.2	1844.6	2288.9	2528.7
17.5°	574.0	743.1	927.2	1143.6	1400.1	1798.5	2349.2	2644.9
20°	390.0	513.7	713.7	970.1	1278.7	1776.7	2482.0	2884.1
22.5°	320.5	376.4	526.5	807.2	1179.1	1800.7	2697.7	3198.7
25°	294.2	324.4	409.6	663.9	1103.0	1864.8	2989.7	3553.9
27.5°	277.6	303.3	359.1	561.3	1032.8	1952.4	3345.0	3988.5
30°	267.8	291.9	338.7	508.5	968.7	2027.9	3650.6	4316.0
32.5°	246.0	264.1	302.5	478.3	922.5	2088.9	3919.9	4622.2
35°	219.5	241.4	273.0	458.7	921.2	2117.6	4173.3	4960.9
37.5°	209.8	230.9	254.2	448.1	930.2	2141.7	4483.5	5345.0
40°	203.7	222.6	241.4	446.7	937.8	2160.6	4786.6	5744.8
42.5°	198.5	217.3	239.2	436.1	934.7	2186.3	5055.2	6088.0
45°	196.8	215.8	244.4	420.2	933.9	2226.2	5268.7	6362.6
47.5°	195.3	224.1	242.9	402.8	930.9	2310.8	5509.4	6618.4
50°	193.9	239.2	232.4	378.7	908.3	2454.8	5833.1	6911.0
52.5°	193.2	241.4	221.0	345.5	867.5	2668.3	6306.8	7318.4
55°	190.1	229.3	201.5	301.8	808.7	2898.4	6814.5	7797.5
57.5°	183.3	204.5	190.1	258.7	724.2	3059.0	7189.5	8167.9
60°	200.0	175.8	182.6	236.9	623.1	3087.7	7206.0	8272.0
62.5°	190.8	159.9	175.1	229.3	552.2	2900.7	6876.3	8147.6
65°	152.4	151.7	168.3	236.9	541.7	2482.0	6319.7	7778.6
67.5°	138.8	145.7	161.4	246.0	548.5	1955.4	5500.3	6917.1
70°	129.8	138.1	152.4	254.2	560.5	1540.4	4428.3	5625.5
72.5°	120.7	127.5	143.3	262.6	552.2	1215.3	3544.2	4333.2
75°	109.4	115.4	130.6	240.7	473.7	893.2	2816.1	3077.2
77.5°	96.5	101.8	114.7	190.1	356.0	621.5	2109.2	2218.0
80°	83.0	85.2	95.0	138.8	232.4	371.9	1605.3	1769.0
82.5°	65.7	66.4	72.4	101.8	144.9	237.6	1113.5	1271.1
85°	42.3	43.7	46.8	71.7	97.4	152.4	568.8	651.8
87.5°	14.3	16.6	16.6	34.8	47.5	84.4	174.3	126.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)