

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: P270701

Luminaire Tested: **NAV-AF-06-D-UNV-T2R-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270701  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24459)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-06-D-UNV-T2R-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 32796.2 lumens  
Efficiency: N/A  
Efficacy: 98.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G4

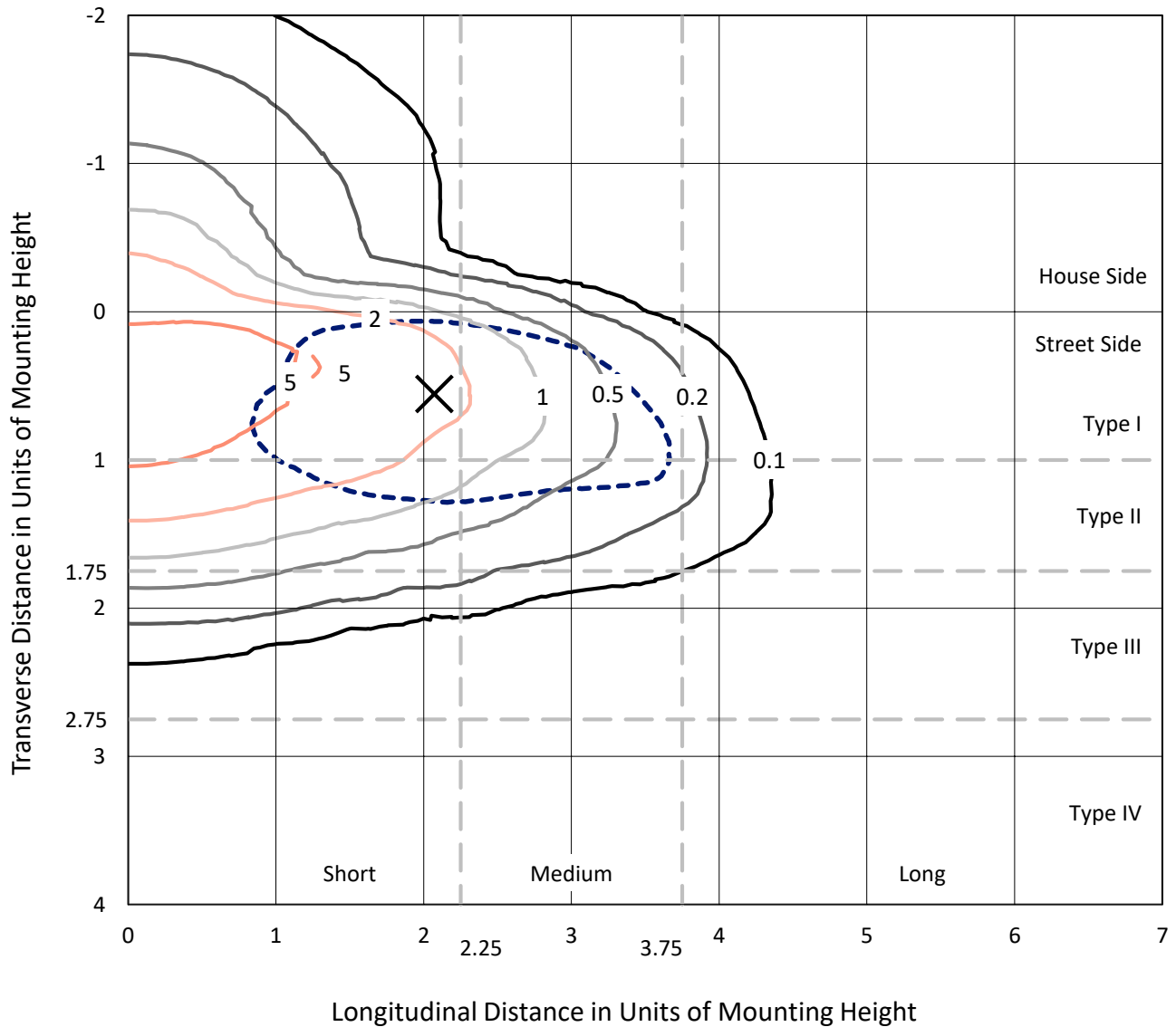
Input Watts (W): 333  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

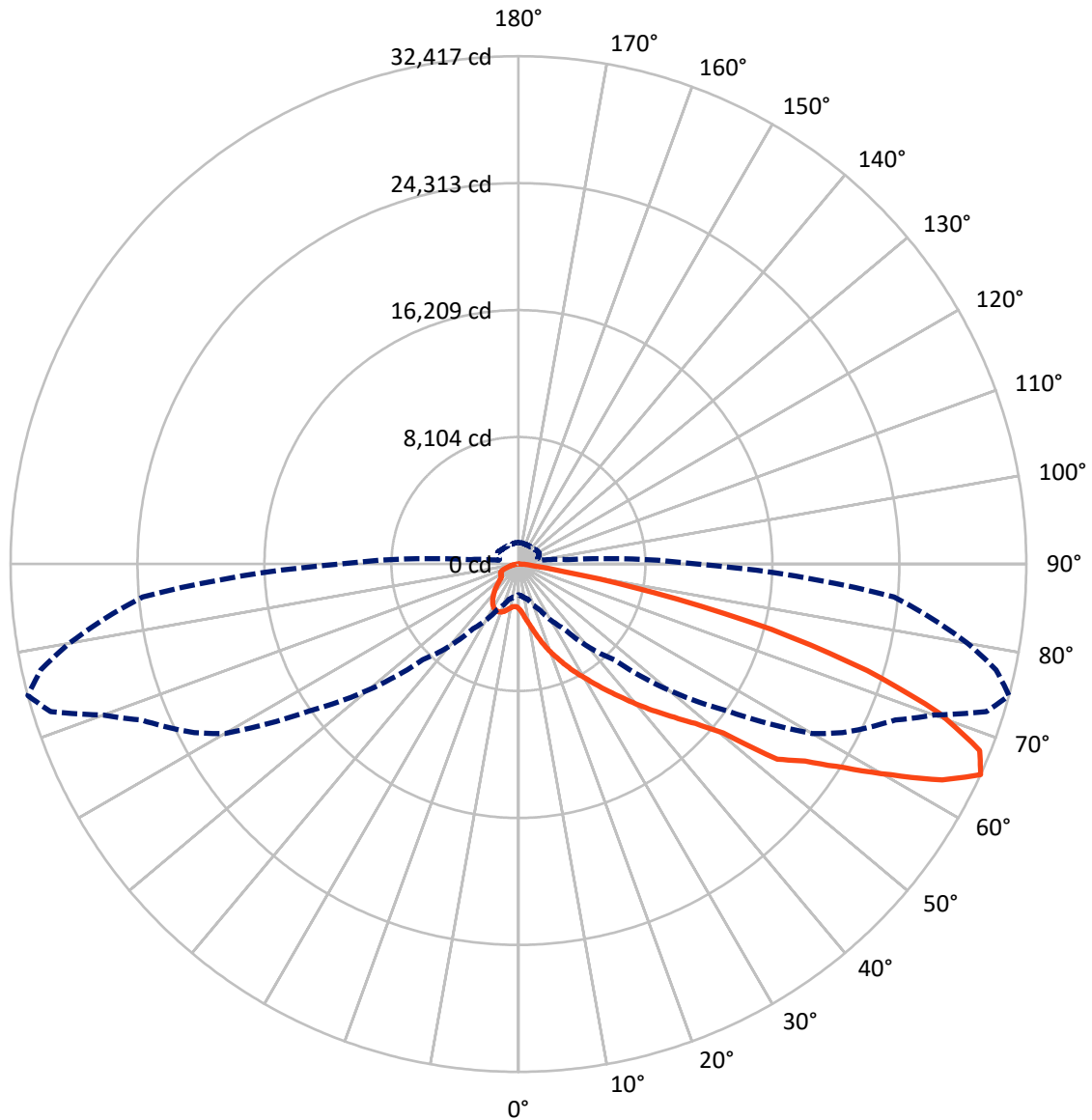
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.1 fc  
 Type II - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4928.1	0.0	4928.1
	% Fixture	15.0	0.0	15.0
<b>Street Side</b>	Lumens	27868.1	0.0	27868.1
	% Fixture	85.0	0.0	85.0
<b>Total</b>	Lumens	32796.2	0.0	32796.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	335.5	1.0
10°-20°	1281.3	3.9
20°-30°	2585.9	7.9
30°-40°	4391.5	13.4
40°-50°	6125.1	18.7
50°-60°	7507.0	22.9
60°-70°	7063.1	21.5
70°-80°	3097.1	9.4
80°-90°	409.8	1.2
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°	32796.2	100.0
0°-180°	32796.2	100.0



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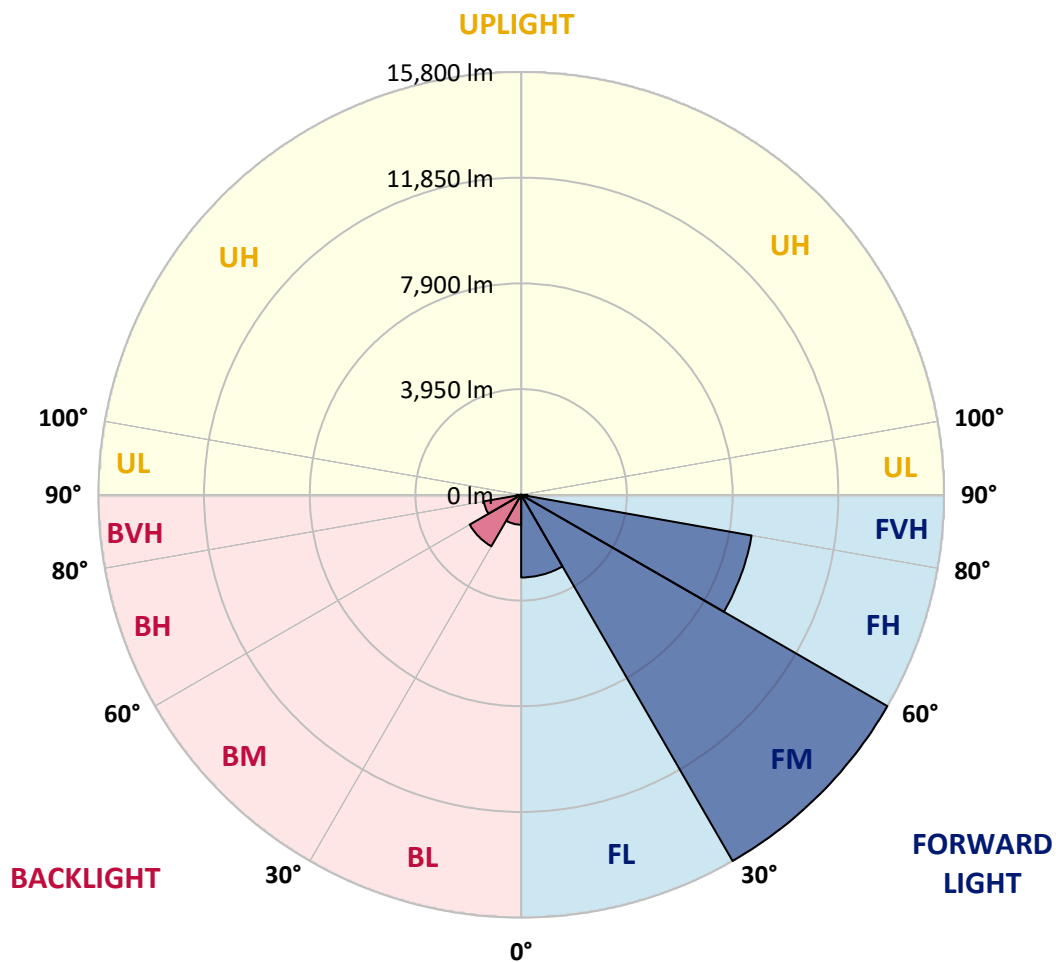
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3087.0	9.4			
FM	(30°-60°)	15799.7	48.2			
FH	(60°-80°)	8743.8	26.7			G4/12000
FVH	(80°-90°)	237.6	0.7			G3/500
BL	(0°-30°)	1115.6	3.4	B3/2500		
BM	(30°-60°)	2223.8	6.8	B2/2500		
BH	(60°-80°)	1416.4	4.3	B3/2500		G3/2500
BVH	(80°-90°)	172.2	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
0°	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6
2.5°	3578.0	3536.4	3540.5	3482.1	3396.5	3302.7	3225.5	3183.8	3148.3	3137.9	3079.4
5°	4679.6	4627.4	4608.8	4475.1	4274.9	4037.1	3801.3	3709.6	3634.5	3588.5	3475.8
7.5°	5581.0	5553.9	5528.8	5405.7	5207.6	4902.9	4523.1	4387.6	4262.4	4124.7	3989.1
10°	6194.4	6183.9	6173.5	6088.0	5923.2	5658.2	5249.2	5101.0	4944.6	4769.5	4592.0
12.5°	6657.5	6657.5	6665.9	6594.8	6494.7	6290.3	5918.9	5781.2	5622.8	5439.1	5236.7
15°	6968.3	6976.6	7020.6	7041.4	6989.3	6857.8	6532.4	6411.4	6261.0	6079.5	5879.2
17.5°	7174.9	7191.7	7256.2	7325.0	7392.0	7346.0	7103.9	6991.2	6855.8	6688.8	6501.0
20°	7654.7	7633.8	7636.0	7615.1	7713.1	7748.7	7615.1	7521.2	7412.8	7260.5	7089.3
22.5°	8662.4	8622.8	8520.7	8259.8	8140.9	8128.4	8049.2	7999.0	7915.5	7819.6	7648.4
25°	9976.8	9930.9	9728.6	9298.9	8944.2	8616.5	8470.5	8439.2	8385.0	8320.3	8197.3
27.5°	11335.1	11285.0	11024.2	10481.8	10018.5	9357.3	8902.5	8860.7	8810.5	8783.4	8725.1
30°	12530.5	12476.3	12219.6	11668.9	11109.8	10321.0	9484.5	9338.4	9252.9	9261.3	9227.8
32.5°	13579.9	13532.0	13244.2	12682.8	12115.4	11349.6	10239.7	10012.2	9820.5	9749.5	9774.5
35°	14460.3	14416.5	14101.6	13536.2	12964.5	12328.2	11211.9	10869.9	10556.8	10360.7	10337.9
37.5°	14977.8	14952.7	14731.7	14251.8	13684.3	13216.9	12301.0	11921.3	11460.2	11174.5	11049.2
40°	14948.6	14975.7	14938.2	14721.2	14281.0	13940.8	13435.9	13060.5	12609.8	12184.3	11929.8
42.5°	14523.0	14560.5	14729.6	14842.2	14723.3	14516.7	14427.0	14147.4	13742.7	13292.0	12939.5
45°	13938.8	13972.1	14191.2	14598.0	14938.2	14996.6	15294.9	15155.1	14813.1	14429.1	14041.0
47.5°	13043.7	13108.4	13362.9	14009.7	14819.2	15382.5	16023.1	16087.7	15889.5	15572.4	15209.5
50°	11748.2	11833.7	12190.4	13110.6	14368.6	15779.0	17105.9	17352.1	17272.8	16951.5	16584.2
52.5°	10421.2	10506.8	10982.5	11960.9	13642.6	15941.7	18172.1	18802.1	19256.8	19588.6	19653.3
55°	9040.2	9136.0	9657.7	10784.3	12674.5	15735.2	18933.4	19649.2	20110.1	20456.6	20596.2
57.5°	7481.7	7590.0	8094.9	9234.1	11305.9	14904.8	19780.6	20794.5	21480.9	22015.0	22315.4
60°	5693.5	5829.2	6353.0	7500.4	9507.4	13314.9	20158.1	21658.2	22749.3	23550.5	24026.2
62.5°	3609.4	3747.1	4291.7	5482.9	7460.8	11143.1	19090.1	21278.5	23139.6	24324.7	25196.6
65°	1969.5	2030.0	2332.4	3229.6	5030.1	8645.7	16381.9	18962.7	21643.7	23323.1	24662.5
67.5°	1477.2	1485.4	1516.8	1735.9	2678.8	5837.5	12808.0	15171.8	18149.0	20310.5	21910.6
70°	1293.5	1293.5	1297.7	1299.8	1454.1	3162.9	8677.1	10853.1	13582.1	15768.6	17756.7
72.5°	1160.0	1147.5	1143.4	1118.3	1139.1	1621.1	4723.5	6678.4	8979.5	11433.1	13287.9
75°	1001.4	999.4	999.4	974.3	986.9	1141.2	2048.8	3204.7	4988.5	7272.9	9098.6
77.5°	865.8	851.2	853.3	838.7	878.4	874.2	972.2	1320.7	2171.9	3820.1	5334.8
80°	713.6	703.2	709.3	700.9	763.6	646.8	655.1	807.3	1078.7	1675.2	2361.7
82.5°	527.8	532.1	571.6	567.5	642.6	436.0	479.9	602.9	726.0	834.5	907.6
85°	308.7	315.0	411.1	431.8	471.5	229.4	294.1	358.9	404.7	448.6	467.4
87.5°	33.3	43.7	229.4	235.7	210.7	68.8	118.9	150.2	160.6	171.0	150.2
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):**

	67.5°	70°	72.5°	75°	77.5°	80°	85°	90°	95°	100°	102.5°
0°	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6
2.5°	3060.6	3033.5	3004.3	2987.7	2958.4	2933.3	2887.5	2850.0	2808.2	2778.9	2766.5
5°	3419.5	3354.8	3286.0	3236.0	3173.4	3119.1	3014.7	2889.6	2850.0	2766.5	2745.6
7.5°	3886.8	3769.9	3653.1	3557.2	3448.8	3359.0	3183.8	2958.4	2929.3	2795.6	2766.5
10°	4435.6	4264.4	4091.3	3943.2	3784.6	3646.8	3388.1	3071.0	3039.8	2868.6	2839.5
12.5°	5049.0	4840.2	4617.1	4395.9	4208.1	4014.0	3661.5	3246.4	3196.3	2994.0	2954.3
15°	5681.2	5455.8	5197.1	4930.0	4698.4	4441.8	3997.4	3475.8	3384.1	3146.3	3092.0
17.5°	6304.9	6060.9	5789.5	5491.2	5220.1	4913.3	4360.5	3732.5	3573.8	3296.4	3227.6
20°	6907.8	6659.6	6373.7	6081.6	5743.8	5393.2	4731.8	3984.9	3742.9	3421.6	3331.9
22.5°	7456.7	7243.8	6957.9	6622.0	6280.0	5885.5	5109.4	4237.3	3891.0	3517.6	3402.8
25°	8034.5	7840.4	7556.7	7233.3	6834.8	6396.7	5499.6	4477.3	4009.9	3569.8	3427.8
27.5°	8618.7	8451.8	8184.6	7844.5	7416.9	6930.9	5895.9	4698.4	4106.0	3586.5	3415.4
30°	9242.5	9113.1	8866.9	8487.2	8055.3	7517.0	6327.9	4915.4	4166.3	3563.4	3359.0
32.5°	9832.8	9828.7	9609.7	9215.4	8750.1	8157.6	6782.7	5134.5	4197.7	3498.8	3260.9
35°	10446.3	10531.8	10367.0	9991.5	9501.2	8844.0	7285.4	5368.1	4199.8	3384.1	3133.6
37.5°	11143.1	11295.4	11222.3	10865.7	10350.4	9626.3	7875.9	5631.0	4187.3	3225.5	2948.0
40°	11935.9	12144.5	12142.5	11842.0	11291.2	10502.7	8562.4	5925.2	4158.1	3027.3	2729.0
42.5°	12843.4	13091.8	13160.6	12864.4	12307.3	11460.2	9348.9	6248.6	4112.3	2831.2	2497.4
45°	13882.4	14101.6	14230.9	13955.4	13396.3	12503.4	10252.3	6615.7	4055.8	2578.8	2232.4
47.5°	14994.5	15249.1	15443.0	15207.2	14610.7	13692.7	11322.5	7089.3	4034.9	2290.8	1946.5
50°	16373.5	16636.4	17055.8	16949.4	16621.9	15883.3	13586.2	8207.6	4043.4	2017.6	1706.6
52.5°	19795.2	20398.2	20928.1	20692.3	19914.0	18647.6	15426.4	8829.4	3868.1	1794.3	1539.8
55°	20827.9	21512.3	22294.6	22196.5	21449.5	20172.8	16880.6	9348.9	3699.1	1631.5	1431.2
57.5°	22634.7	23442.1	24535.2	24514.4	23598.6	22161.0	18751.9	9970.6	3626.1	1537.5	1377.0
60°	24547.9	25576.5	27087.0	27322.7	26327.4	24831.6	20963.4	10734.1	3636.5	1485.4	1345.8
62.5°	25945.7	27454.1	29651.1	30356.2	29183.6	27535.4	23258.5	11497.8	3573.8	1425.0	1308.1
65°	26031.3	28203.0	31320.0	32417.4	31230.4	29112.7	24068.0	11347.6	3198.3	1343.7	1247.7
67.5°	23945.0	26774.0	30560.7	31764.4	30550.2	28140.6	22649.2	9920.5	2599.5	1201.8	1143.4
70°	19943.4	23227.1	27157.9	28499.4	27495.9	25057.0	19711.7	7923.9	1942.3	1013.9	986.9
72.5°	15411.9	18474.5	22044.2	23285.7	22517.9	20373.1	15547.3	5774.9	1387.4	821.9	801.2
75°	11017.9	13625.9	16217.1	16690.7	15933.3	13963.9	10087.4	3607.2	972.2	673.9	644.7
77.5°	6822.3	8518.4	9449.0	8839.9	7873.9	6544.8	4106.0	1781.7	646.8	548.8	519.5
80°	3027.3	3553.1	3317.4	2956.3	2334.7	1919.4	1253.9	790.7	417.3	423.6	406.8
82.5°	1018.0	1076.6	1047.3	1041.0	938.9	821.9	532.1	342.2	233.6	271.2	265.0
85°	496.6	519.5	521.6	540.4	469.5	365.2	144.0	135.6	100.2	146.1	152.4
87.5°	150.2	152.4	137.7	150.2	121.0	83.5	27.0	37.5	18.8	35.5	35.5
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):**

	105°	107.5°	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°
0°	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6
2.5°	2743.6	2735.2	2720.5	2703.9	2699.8	2678.8	2672.5	2662.1	2655.8	2645.5	2637.2
5°	2718.5	2703.9	2687.2	2668.4	2668.4	2639.2	2626.7	2614.2	2614.2	2595.5	2587.1
7.5°	2743.6	2724.7	2706.0	2689.3	2695.5	2662.1	2649.6	2637.2	2635.1	2616.3	2607.9
10°	2814.5	2795.6	2772.8	2756.1	2749.8	2722.7	2708.1	2689.3	2676.8	2664.3	2651.7
12.5°	2922.9	2897.9	2868.6	2833.3	2818.6	2795.6	2772.8	2747.6	2718.5	2706.0	2687.2
15°	3052.4	3010.6	2971.0	2927.1	2887.5	2864.5	2833.3	2793.5	2753.9	2737.2	2712.3
17.5°	3158.7	3115.0	3058.5	3006.4	2935.5	2916.6	2872.9	2824.9	2760.2	2753.9	2716.5
20°	3248.5	3181.6	3112.7	3050.3	2941.7	2931.3	2877.0	2820.7	2729.0	2729.0	2683.1
22.5°	3298.4	3206.7	3125.4	3041.9	2906.2	2897.9	2835.3	2768.5	2655.8	2660.2	2603.7
25°	3306.8	3196.3	3094.0	2994.0	2837.4	2822.8	2743.6	2670.5	2547.5	2539.1	2480.7
27.5°	3273.5	3144.1	3025.2	2904.2	2735.2	2703.9	2616.3	2528.6	2407.6	2386.7	2324.2
30°	3196.3	3043.9	2910.5	2770.6	2593.2	2543.2	2451.5	2361.7	2238.7	2211.4	2153.1
32.5°	3073.2	2900.0	2751.9	2612.1	2416.0	2353.4	2261.7	2171.9	2052.9	2032.1	1977.9
35°	2910.5	2716.5	2559.9	2411.8	2215.7	2151.0	2063.3	1984.0	1875.7	1867.2	1829.7
37.5°	2706.0	2503.5	2336.8	2194.7	2009.1	1975.7	1886.0	1827.6	1738.0	1746.2	1727.5
40°	2474.4	2267.9	2109.3	1984.0	1823.5	1794.3	1739.9	1696.2	1618.9	1641.9	1644.1
42.5°	2240.7	2034.2	1890.3	1777.6	1639.9	1621.1	1583.5	1558.5	1500.1	1546.0	1564.8
45°	1975.7	1783.9	1660.7	1575.2	1473.0	1473.0	1454.1	1452.1	1412.5	1477.2	1495.9
47.5°	1719.1	1568.9	1483.5	1431.2	1360.4	1393.7	1387.4	1404.1	1374.9	1441.7	1458.4
50°	1525.1	1420.8	1368.7	1343.7	1293.5	1345.8	1358.1	1381.1	1356.1	1414.6	1427.0
52.5°	1402.1	1333.2	1304.0	1297.7	1262.2	1326.8	1347.7	1368.7	1339.5	1393.7	1391.6
55°	1333.2	1287.4	1276.9	1289.3	1262.2	1324.8	1345.8	1360.4	1335.2	1372.8	1370.8
57.5°	1308.1	1283.0	1289.3	1308.1	1289.3	1341.4	1351.9	1368.7	1343.7	1360.4	1368.7
60°	1306.0	1306.0	1331.1	1356.1	1343.7	1381.1	1387.4	1385.4	1362.4	1364.4	1368.7
62.5°	1293.5	1324.8	1366.5	1406.1	1402.1	1447.9	1452.1	1425.0	1406.1	1385.4	1379.1
65°	1253.9	1306.0	1366.5	1420.8	1429.2	1500.1	1508.4	1481.2	1468.8	1433.3	1406.1
67.5°	1166.3	1233.1	1304.0	1370.8	1385.4	1481.2	1500.1	1510.5	1516.8	1493.8	1458.4
70°	1018.0	1086.9	1160.0	1237.1	1258.0	1364.4	1404.1	1452.1	1489.7	1523.0	1510.5
72.5°	828.2	890.8	953.5	1024.3	1055.7	1166.3	1218.5	1301.9	1360.4	1445.8	1481.2
75°	657.2	694.7	732.3	776.1	801.2	909.7	974.3	1074.5	1153.8	1272.7	1351.9
77.5°	517.5	536.2	555.0	573.7	584.2	644.7	696.8	796.9	888.8	1039.0	1155.8
80°	398.5	408.9	411.1	417.3	413.1	442.2	461.1	521.6	600.8	748.9	886.6
82.5°	256.6	265.0	269.1	279.6	258.7	296.3	308.7	315.0	356.7	465.2	563.2
85°	144.0	146.1	148.1	152.4	123.1	160.6	162.8	152.4	148.1	192.0	217.0
87.5°	35.5	33.3	35.5	35.5	14.6	33.3	33.3	22.9	16.7	31.4	25.1
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):**

	135°	145°	155°	165°	175°	180°
0°	2841.6	2841.6	2841.6	2841.6	2841.6	2841.6
2.5°	2618.4	2614.2	2616.3	2605.9	2601.6	2603.7
5°	2576.6	2568.3	2568.3	2562.1	2553.7	2553.7
7.5°	2595.5	2578.8	2572.4	2559.9	2547.5	2549.5
10°	2624.6	2595.5	2574.5	2555.8	2541.1	2541.1
12.5°	2643.4	2591.3	2559.9	2534.8	2518.2	2518.2
15°	2647.6	2568.3	2522.4	2495.2	2478.6	2478.6
17.5°	2622.5	2522.4	2464.1	2428.5	2409.8	2413.8
20°	2559.9	2436.8	2368.0	2330.5	2311.7	2313.8
22.5°	2461.8	2320.1	2240.7	2197.0	2178.1	2178.1
25°	2328.3	2174.0	2088.4	2052.9	2036.3	2036.3
27.5°	2176.1	2017.6	1942.3	1915.2	1904.9	1904.9
30°	2004.9	1873.5	1819.2	1800.6	1783.9	1783.9
32.5°	1861.0	1767.1	1748.3	1723.3	1679.6	1677.5
35°	1746.2	1735.9	1721.2	1646.1	1583.5	1575.2
37.5°	1683.7	1746.2	1654.5	1525.1	1475.0	1473.0
40°	1650.2	1708.7	1550.1	1487.6	1481.2	1481.2
42.5°	1571.0	1612.7	1543.8	1508.4	1508.4	1510.5
45°	1487.6	1523.0	1558.5	1527.2	1537.5	1539.8
47.5°	1429.2	1500.1	1558.5	1531.4	1552.2	1564.8
50°	1374.9	1479.1	1527.2	1527.2	1550.1	1552.2
52.5°	1362.4	1450.0	1498.1	1520.9	1523.0	1512.6
55°	1364.4	1427.0	1475.0	1504.2	1491.7	1491.7
57.5°	1362.4	1414.6	1456.2	1466.8	1473.0	1473.0
60°	1364.4	1397.9	1431.2	1427.0	1447.9	1447.9
62.5°	1370.8	1374.9	1391.6	1387.4	1418.8	1418.8
65°	1385.4	1345.8	1335.2	1339.5	1377.0	1374.9
67.5°	1412.5	1306.0	1272.7	1274.8	1329.0	1320.7
70°	1452.1	1251.8	1201.8	1189.1	1281.1	1266.4
72.5°	1464.5	1189.1	1109.9	1097.4	1151.6	1109.9
75°	1406.1	1139.1	1011.9	970.2	947.3	934.6
77.5°	1253.9	1107.8	909.7	821.9	786.6	778.2
80°	1039.0	1043.2	776.1	671.8	780.3	778.2
82.5°	784.5	901.3	621.7	582.1	565.5	471.5
85°	379.8	678.1	477.8	400.6	239.9	227.5
87.5°	33.3	283.8	275.4	179.4	81.3	77.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)