

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: P270704

Luminaire Tested: **NAV-AF-06-D-UNV-T2R-7027-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270704  
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-7027-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 35977.2 lumens  
Efficiency: N/A  
Efficacy: 94.2 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): 382  
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

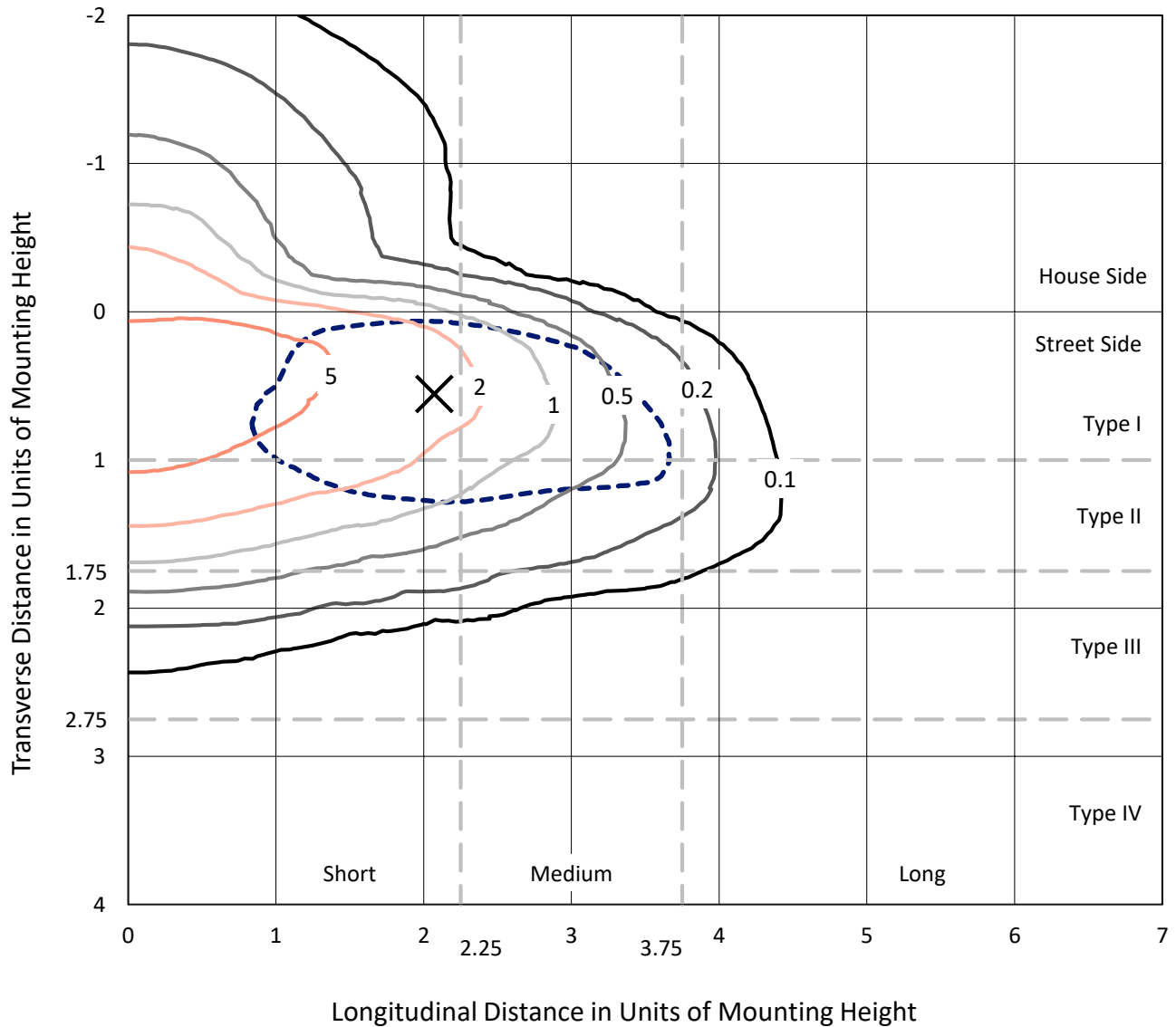


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### Iso-Footcandle Lines of Horizontal Illumination

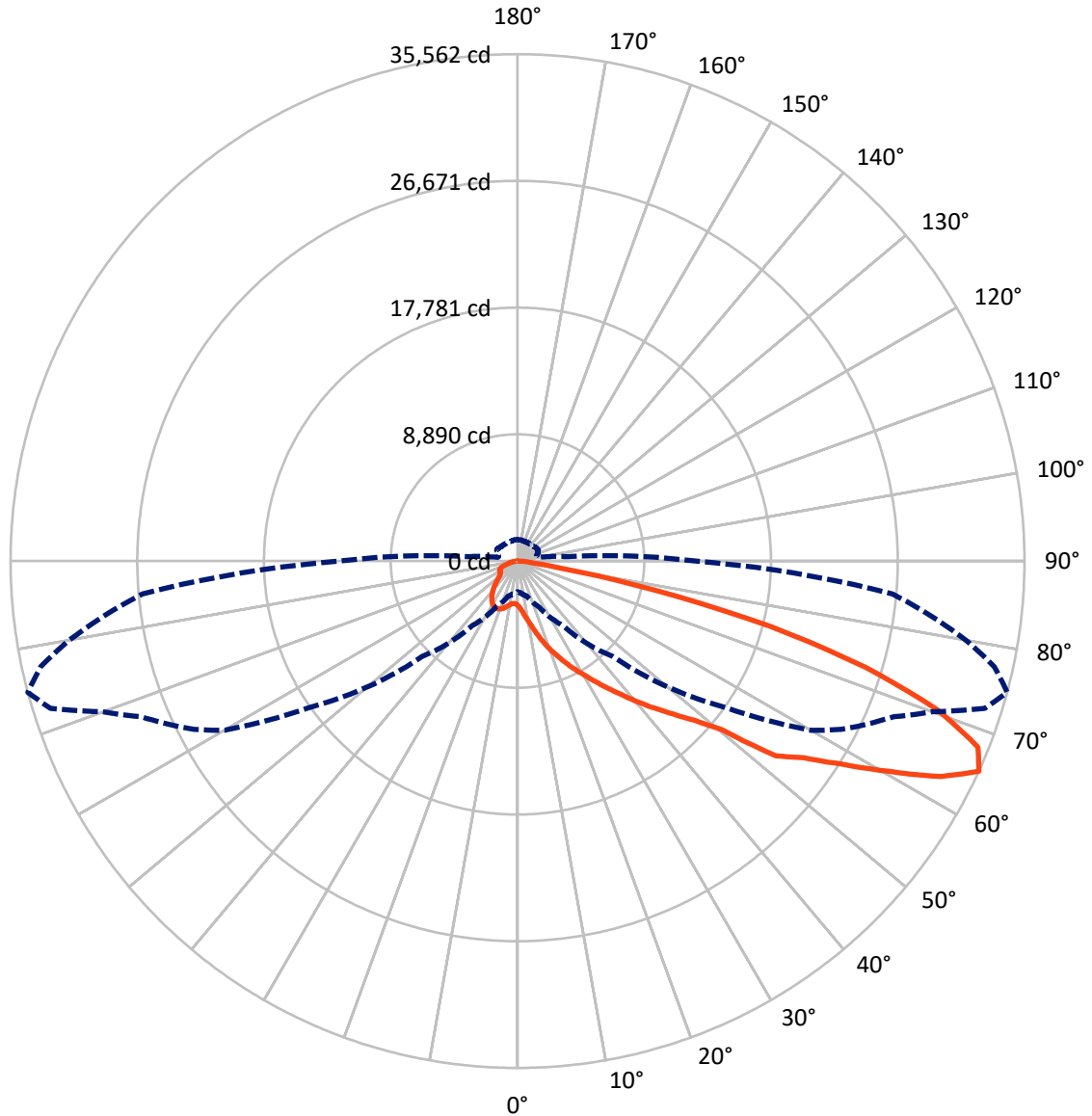
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.9 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	5406.1	0.0	5406.1
	% Fixture	15.0	0.0	15.0
<b>Street Side</b>	Lumens	30571.1	0.0	30571.1
	% Fixture	85.0	0.0	85.0
<b>Total</b>	Lumens	35977.2	0.0	35977.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	368.0	1.0
10°-20°	1405.6	3.9
20°-30°	2836.7	7.9
30°-40°	4817.4	13.4
40°-50°	6719.1	18.7
50°-60°	8235.2	22.9
60°-70°	7748.1	21.5
70°-80°	3397.5	9.4
80°-90°	449.5	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°	35977.2	100.0
0°-180°	35977.2	100.0



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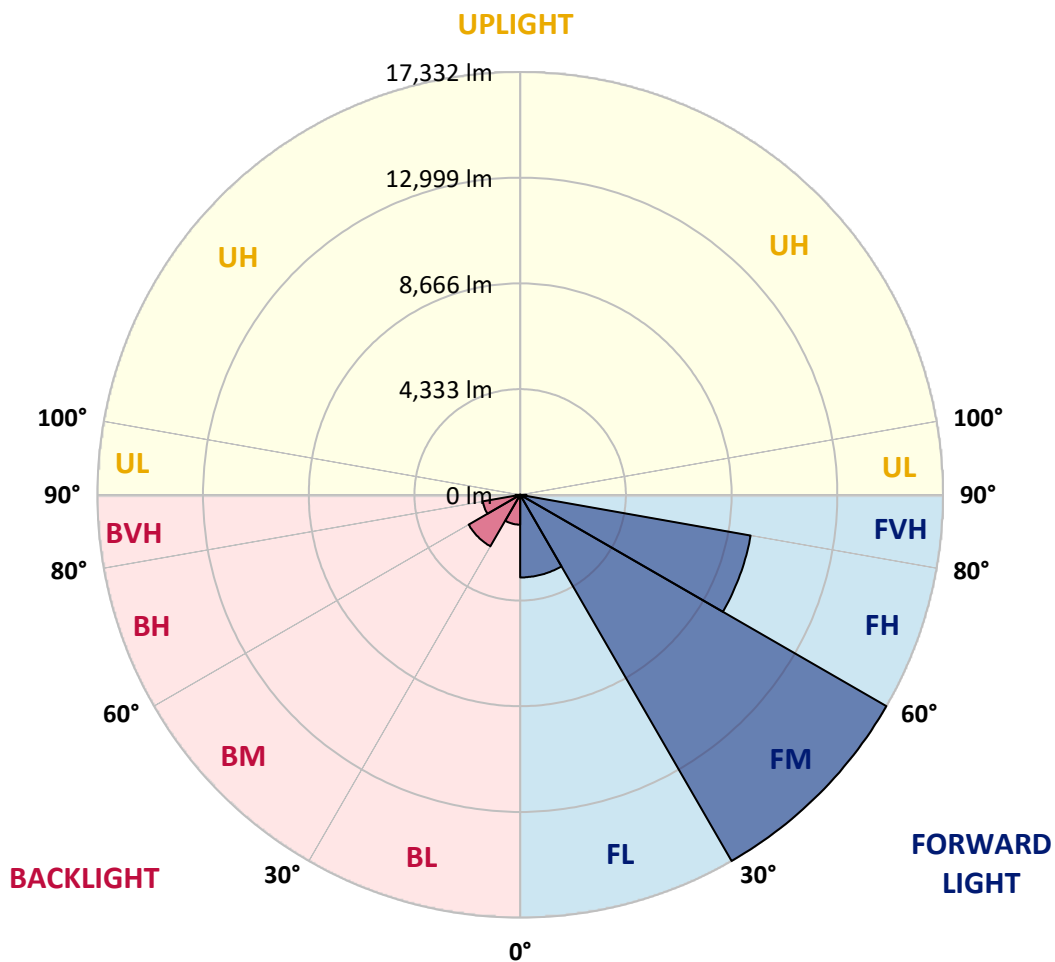
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3386.4	9.4			
FM (30°-60°)	17332.2	48.2			
FH (60°-80°)	9591.8	26.7			G4/12000
FVH (80°-90°)	260.6	0.7			G3/500
BL (0°-30°)	1223.8	3.4	B3/2500		
BM (30°-60°)	2439.5	6.8	B2/2500		
BH (60°-80°)	1553.8	4.3	B3/2500		G3/2500
BVH (80°-90°)	188.9	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°	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2
2.5°	3925.1	3879.3	3883.9	3819.9	3726.0	3623.0	3538.3	3492.5	3453.7	3442.1	3378.2
5°	5133.5	5076.3	5055.8	4909.2	4689.5	4428.6	4170.0	4069.3	3986.9	3936.6	3812.9
7.5°	6122.3	6092.6	6065.0	5930.0	5712.6	5378.4	4961.9	4813.1	4675.8	4524.8	4376.1
10°	6795.0	6783.7	6772.2	6678.4	6497.6	6207.0	5758.3	5595.8	5424.2	5232.0	5037.4
12.5°	7303.2	7303.2	7312.5	7234.6	7124.6	6900.4	6492.9	6341.9	6168.0	5966.6	5744.7
15°	7644.2	7653.4	7701.4	7724.3	7667.2	7522.9	7165.9	7033.2	6868.4	6669.2	6449.6
17.5°	7870.8	7889.2	7960.2	8035.6	8108.8	8058.4	7792.9	7669.4	7520.7	7337.5	7131.6
20°	8397.3	8374.3	8376.6	8353.8	8461.3	8500.2	8353.8	8250.8	8131.7	7964.6	7776.9
22.5°	9502.7	9459.2	9347.0	9060.9	8930.5	8916.8	8829.8	8774.9	8683.2	8578.0	8390.3
25°	10944.5	10894.1	10672.1	10200.8	9811.6	9452.3	9292.1	9257.8	9198.3	9127.3	8992.3
27.5°	12434.5	12379.5	12093.4	11498.5	10990.4	10264.8	9765.8	9720.1	9665.1	9635.4	9571.4
30°	13746.0	13686.3	13404.9	12800.7	12187.3	11322.1	10404.3	10244.2	10150.4	10159.6	10122.9
32.5°	14897.1	14844.5	14528.6	13912.9	13290.5	12450.5	11232.9	10983.4	10773.0	10695.1	10722.4
35°	15862.9	15814.9	15469.4	14849.1	14222.0	13524.0	12299.5	11924.1	11580.8	11365.6	11340.6
37.5°	16430.5	16403.1	16160.5	15634.1	15011.5	14498.9	13494.2	13077.6	12571.8	12258.2	12120.9
40°	16398.5	16428.3	16387.1	16149.0	15666.1	15293.0	14739.2	14327.2	13832.9	13366.1	13086.8
42.5°	15931.6	15972.9	16158.3	16281.8	16151.3	15924.8	15826.2	15519.7	15075.6	14581.3	14194.5
45°	15290.8	15327.4	15567.6	16014.1	16387.1	16451.1	16778.5	16625.1	16249.7	15828.7	15402.9
47.5°	14308.9	14379.9	14659.1	15368.7	16256.5	16874.5	17577.1	17648.1	17430.7	17082.8	16684.6
50°	12887.7	12981.4	13372.9	14382.1	15762.2	17309.4	18765.1	19035.1	18948.0	18595.6	18192.8
52.5°	11432.0	11525.9	12047.7	13121.2	14965.9	17487.9	19934.6	20625.8	21124.6	21488.5	21559.5
55°	9916.8	10022.2	10594.4	11830.3	13903.8	17261.3	20769.9	21554.9	22060.8	22440.6	22594.0
57.5°	8207.3	8326.3	8880.1	10129.7	12402.4	16350.4	21699.1	22811.4	23564.3	24150.4	24479.9
60°	6245.8	6394.7	6969.1	8227.8	10429.6	14606.4	22113.3	23758.9	24956.0	25834.7	26356.6
62.5°	3959.4	4110.6	4707.8	6014.7	8184.4	12224.0	20941.6	23342.4	25383.9	26684.0	27640.6
65°	2160.6	2226.9	2558.7	3542.8	5518.1	9484.3	17970.9	20802.0	23742.9	25585.3	27054.7
67.5°	1620.5	1629.5	1663.9	1904.1	2938.6	6403.7	14050.3	16643.3	19909.3	22280.4	24035.9
70°	1419.1	1419.1	1423.5	1425.9	1595.2	3469.7	9518.7	11905.7	14899.4	17297.9	19479.0
72.5°	1272.4	1258.7	1254.3	1226.7	1249.6	1778.4	5181.7	7326.0	9850.5	12542.0	14576.6
75°	1098.5	1096.3	1096.3	1068.9	1082.5	1251.9	2247.5	3515.4	5472.2	7978.3	9981.0
77.5°	949.8	933.8	936.0	920.0	963.5	959.0	1066.6	1448.7	2382.6	4190.7	5852.2
80°	782.8	771.3	778.1	768.9	837.7	709.5	718.6	885.6	1183.2	1837.8	2590.8
82.5°	579.0	583.5	627.0	622.5	704.9	478.3	526.3	661.4	796.4	915.6	995.6
85°	338.8	345.6	450.9	473.8	517.2	251.7	322.8	393.6	444.0	492.1	512.7
87.5°	36.7	48.1	251.7	258.6	231.1	75.5	130.4	164.7	176.2	187.7	164.7
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):**

	67.5°	70°	72.5°	75°	77.5°	80°	85°	90°	95°	100°	102.5°
0°	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2
2.5°	3357.5	3327.9	3295.7	3277.3	3245.3	3217.9	3167.6	3126.3	3080.6	3048.6	3034.8
5°	3751.1	3680.3	3604.7	3549.7	3481.1	3421.6	3307.2	3169.8	3126.3	3034.8	3011.9
7.5°	4263.9	4135.6	4007.5	3902.2	3783.2	3684.8	3492.5	3245.3	3213.3	3066.9	3034.8
10°	4865.8	4678.2	4488.1	4325.6	4151.6	4000.6	3716.8	3369.0	3334.6	3146.9	3115.0
12.5°	5538.6	5309.8	5064.9	4822.3	4616.3	4403.4	4016.6	3561.2	3506.3	3284.3	3240.7
15°	6232.1	5985.0	5701.2	5408.2	5154.1	4872.6	4385.2	3812.9	3712.2	3451.4	3391.8
17.5°	6916.4	6648.6	6351.1	6023.9	5726.3	5389.9	4783.4	4094.5	3920.6	3616.1	3540.6
20°	7577.8	7305.6	6992.0	6671.5	6300.8	5916.2	5190.8	4371.4	4106.0	3753.5	3655.1
22.5°	8179.7	7946.3	7632.8	7264.4	6889.0	6456.4	5605.1	4648.3	4268.4	3858.7	3732.8
25°	8813.8	8600.9	8289.6	7934.9	7497.8	7017.1	6032.9	4911.6	4398.9	3915.9	3760.3
27.5°	9454.7	9271.4	8978.6	8605.6	8136.3	7603.1	6467.8	5154.1	4504.1	3934.2	3746.7
30°	10138.9	9997.0	9726.9	9310.5	8836.6	8246.3	6941.7	5392.2	4570.5	3909.1	3684.8
32.5°	10786.6	10782.0	10541.7	10109.2	9598.7	8948.7	7440.5	5632.6	4604.8	3838.2	3577.2
35°	11459.5	11553.3	11372.5	10960.6	10422.8	9701.8	7992.1	5888.7	4607.1	3712.2	3437.6
37.5°	12224.0	12391.0	12310.9	11919.5	11354.1	10560.0	8639.8	6177.1	4593.5	3538.3	3233.9
40°	13093.7	13322.6	13320.2	12990.6	12386.4	11521.3	9392.8	6499.9	4561.4	3320.9	2993.6
42.5°	14089.1	14361.6	14437.1	14112.2	13500.9	12571.8	10255.6	6854.6	4511.0	3105.8	2739.7
45°	15229.0	15469.4	15611.1	15309.0	14695.7	13716.1	11246.6	7257.4	4449.2	2828.9	2448.9
47.5°	16448.9	16728.1	16941.0	16682.3	16027.6	15020.6	12420.8	7776.9	4426.4	2513.0	2135.4
50°	17961.7	18250.1	18710.1	18593.4	18234.1	17423.9	14904.0	9003.7	4435.6	2213.2	1872.2
52.5°	21715.2	22376.6	22958.0	22699.4	21845.6	20456.4	16922.6	9685.7	4243.2	1968.2	1689.1
55°	22848.0	23598.7	24457.1	24349.5	23530.1	22129.3	18517.8	10255.6	4057.9	1789.8	1570.1
57.5°	24830.1	25715.8	26915.0	26892.2	25887.4	24310.6	20570.7	10937.7	3977.8	1686.7	1510.5
60°	26928.9	28057.1	29714.1	29972.8	28881.0	27240.1	22996.8	11775.3	3989.3	1629.5	1476.3
62.5°	28462.2	30116.9	32527.0	33300.4	32014.2	30206.1	25514.4	12613.0	3920.6	1563.2	1435.0
65°	28556.0	30938.5	34358.0	35561.7	34259.5	31936.5	26402.4	12448.3	3508.6	1473.8	1368.7
67.5°	26267.3	29370.9	33524.8	34845.3	33513.3	30870.0	24846.1	10882.7	2851.7	1318.4	1254.3
70°	21877.6	25480.1	29792.0	31263.6	30162.7	27487.2	21623.6	8692.4	2130.8	1112.3	1082.5
72.5°	16906.6	20266.4	24182.4	25544.2	24702.0	22349.1	17055.4	6335.0	1522.0	901.8	878.8
75°	12086.5	14947.4	17790.0	18309.6	17478.9	15318.3	11065.9	3957.2	1066.6	739.2	707.2
77.5°	7484.0	9344.8	10365.5	9697.3	8637.6	7179.7	4504.1	1954.5	709.5	602.0	569.9
80°	3320.9	3897.7	3639.0	3243.2	2561.1	2105.5	1375.6	867.5	457.7	464.7	446.3
82.5°	1117.0	1180.9	1148.9	1142.0	1029.8	901.8	583.5	375.3	256.3	297.5	290.6
85°	544.7	569.9	572.2	592.8	515.0	400.6	157.9	148.8	109.9	160.2	167.1
87.5°	164.7	167.1	151.1	164.7	132.7	91.5	29.7	41.2	20.7	38.8	38.8
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°	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2
2.5°	3009.6	3000.5	2984.4	2966.2	2961.6	2938.6	2931.8	2920.4	2913.6	2902.1	2892.9
5°	2982.2	2966.2	2947.9	2927.2	2927.2	2895.1	2881.5	2867.7	2867.7	2847.2	2837.9
7.5°	3009.6	2989.0	2968.4	2950.2	2957.0	2920.4	2906.6	2892.9	2890.7	2870.1	2860.8
10°	3087.5	3066.9	3041.8	3023.3	3016.5	2986.8	2970.8	2950.2	2936.4	2922.6	2908.9
12.5°	3206.5	3179.0	3146.9	3108.0	3092.1	3066.9	3041.8	3014.3	2982.2	2968.4	2947.9
15°	3348.3	3302.6	3259.1	3211.0	3167.6	3142.5	3108.0	3064.6	3021.1	3002.8	2975.2
17.5°	3465.1	3417.1	3355.2	3297.9	3220.2	3199.7	3151.6	3099.0	3027.9	3021.1	2979.9
20°	3563.4	3490.3	3414.7	3346.0	3227.0	3215.7	3156.1	3094.3	2993.6	2993.6	2943.2
22.5°	3618.5	3517.8	3428.6	3336.9	3188.2	3179.0	3110.3	3037.1	2913.6	2918.1	2856.3
25°	3627.5	3506.3	3394.2	3284.3	3112.6	3096.5	3009.6	2929.6	2794.4	2785.4	2721.2
27.5°	3591.0	3449.0	3318.6	3185.8	3000.5	2966.2	2870.1	2773.8	2641.1	2618.3	2549.6
30°	3506.3	3339.2	3192.8	3039.3	2844.8	2790.0	2689.3	2590.8	2455.7	2426.1	2362.0
32.5°	3371.2	3181.3	3018.8	2865.5	2650.3	2581.6	2480.9	2382.6	2252.1	2229.1	2169.6
35°	3192.8	2979.9	2808.2	2645.8	2430.6	2359.7	2263.5	2176.6	2057.6	2048.3	2007.3
37.5°	2968.4	2746.5	2563.4	2407.6	2204.0	2167.4	2068.9	2004.8	1906.6	1915.6	1895.1
40°	2714.4	2487.9	2313.9	2176.6	2000.3	1968.2	1908.8	1860.7	1775.9	1801.2	1803.4
42.5°	2458.0	2231.5	2073.6	1950.0	1798.9	1778.4	1737.1	1709.7	1645.5	1695.9	1716.5
45°	2167.4	1956.9	1821.9	1728.0	1615.8	1615.8	1595.2	1593.0	1549.4	1620.5	1641.1
47.5°	1885.9	1721.2	1627.3	1570.1	1492.3	1528.8	1522.0	1540.4	1508.3	1581.5	1599.8
50°	1673.1	1558.6	1501.3	1473.8	1419.1	1476.3	1490.0	1515.1	1487.7	1551.7	1565.4
52.5°	1538.0	1462.5	1430.5	1423.5	1384.6	1455.7	1478.5	1501.3	1469.4	1528.8	1526.6
55°	1462.5	1412.1	1400.6	1414.4	1384.6	1453.3	1476.3	1492.3	1464.7	1506.0	1503.7
57.5°	1435.0	1407.6	1414.4	1435.0	1414.4	1471.7	1483.1	1501.3	1473.8	1492.3	1501.3
60°	1432.7	1432.7	1460.1	1487.7	1473.8	1515.1	1522.0	1519.8	1494.5	1496.8	1501.3
62.5°	1419.1	1453.3	1499.1	1542.6	1538.0	1588.4	1593.0	1563.2	1542.6	1519.8	1512.8
65°	1375.6	1432.7	1499.1	1558.6	1567.7	1645.5	1654.7	1624.9	1611.2	1572.4	1542.6
67.5°	1279.4	1352.6	1430.5	1503.7	1519.8	1624.9	1645.5	1657.1	1663.9	1638.7	1599.8
70°	1117.0	1192.4	1272.4	1357.2	1380.1	1496.8	1540.4	1593.0	1634.1	1670.8	1657.1
72.5°	908.6	977.3	1045.9	1123.8	1158.0	1279.4	1336.6	1428.1	1492.3	1586.0	1624.9
75°	720.9	762.1	803.4	851.5	878.8	997.8	1068.9	1178.7	1265.6	1396.1	1483.1
77.5°	567.5	588.2	608.8	629.4	640.9	707.2	764.4	874.3	975.0	1139.8	1268.0
80°	437.1	448.6	450.9	457.7	453.1	485.3	505.7	572.2	659.1	821.6	972.7
82.5°	281.4	290.6	295.3	306.7	283.9	324.9	338.8	345.6	391.4	510.3	617.9
85°	157.9	160.2	162.6	167.1	135.0	176.2	178.6	167.1	162.6	210.6	238.1
87.5°	38.8	36.7	38.8	38.8	16.0	36.7	36.7	25.2	18.3	34.3	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):**

	135°	145°	155°	165°	175°	180°
0°	3117.2	3117.2	3117.2	3117.2	3117.2	3117.2
2.5°	2872.3	2867.7	2870.1	2858.5	2854.1	2856.3
5°	2826.5	2817.4	2817.4	2810.4	2801.4	2801.4
7.5°	2847.2	2828.9	2821.9	2808.2	2794.4	2796.9
10°	2879.2	2847.2	2824.2	2803.7	2787.6	2787.6
12.5°	2899.8	2842.5	2808.2	2780.8	2762.5	2762.5
15°	2904.4	2817.4	2767.0	2737.2	2719.0	2719.0
17.5°	2876.9	2767.0	2702.9	2664.1	2643.4	2648.1
20°	2808.2	2673.1	2597.7	2556.4	2535.8	2538.3
22.5°	2700.7	2545.0	2458.0	2410.1	2389.4	2389.4
25°	2554.2	2384.8	2290.9	2252.1	2233.7	2233.7
27.5°	2387.1	2213.2	2130.8	2101.0	2089.5	2089.5
30°	2199.4	2055.2	1995.8	1975.2	1956.9	1956.9
32.5°	2041.5	1938.5	1917.9	1890.5	1842.5	1840.1
35°	1915.6	1904.1	1888.1	1805.9	1737.1	1728.0
37.5°	1846.9	1915.6	1814.9	1673.1	1618.0	1615.8
40°	1810.4	1874.5	1700.5	1631.9	1624.9	1624.9
42.5°	1723.4	1769.1	1693.7	1654.7	1654.7	1657.1
45°	1631.9	1670.8	1709.7	1675.2	1686.7	1689.1
47.5°	1567.7	1645.5	1709.7	1679.9	1702.7	1716.5
50°	1508.3	1622.7	1675.2	1675.2	1700.5	1702.7
52.5°	1494.5	1590.7	1643.3	1668.4	1670.8	1659.3
55°	1496.8	1565.4	1618.0	1650.1	1636.4	1636.4
57.5°	1494.5	1551.7	1597.5	1609.0	1615.8	1615.8
60°	1496.8	1533.4	1570.1	1565.4	1588.4	1588.4
62.5°	1503.7	1508.3	1526.6	1522.0	1556.4	1556.4
65°	1519.8	1476.3	1464.7	1469.4	1510.5	1508.3
67.5°	1549.4	1432.7	1396.1	1398.4	1457.9	1448.7
70°	1593.0	1373.1	1318.4	1304.6	1405.3	1389.3
72.5°	1606.7	1304.6	1217.7	1203.9	1263.3	1217.7
75°	1542.6	1249.6	1110.0	1064.2	1039.1	1025.3
77.5°	1375.6	1215.2	997.8	901.8	862.8	853.7
80°	1139.8	1144.4	851.5	737.0	855.9	853.7
82.5°	860.5	988.8	682.1	638.5	620.2	517.2
85°	416.5	743.8	524.2	439.5	263.3	249.5
87.5°	36.7	311.3	302.1	196.8	89.2	84.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)