

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: P968191

Luminaire Tested: **NAV-SB5B-727-U-SLR-HSS**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P968191  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB5B-727-U-SLR-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(5) 70 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND SPILL LIGHT  
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20639.4 lumens  
Efficiency: N/A  
Efficacy: 113.0 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4

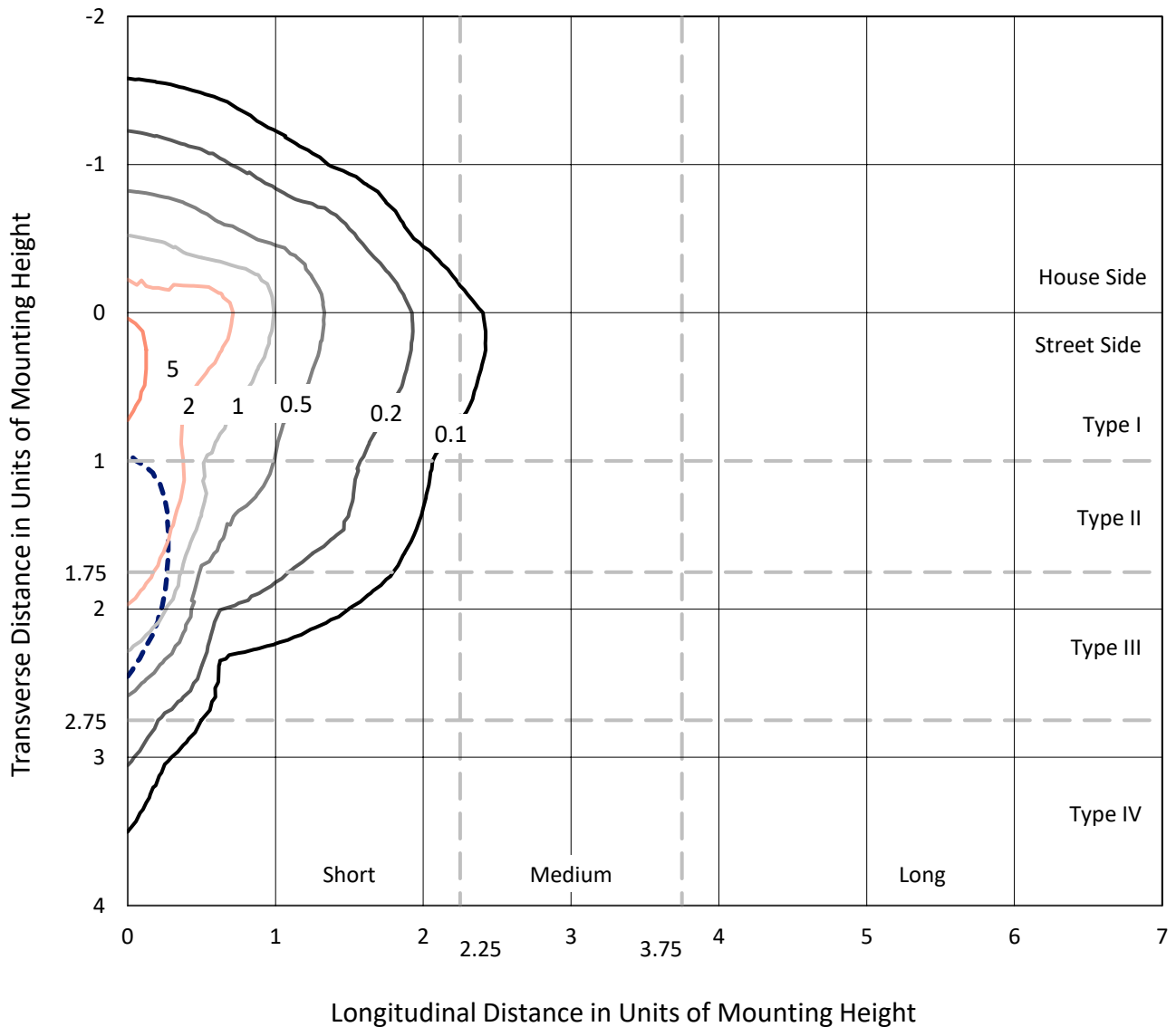
Input Watts (W): 182.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

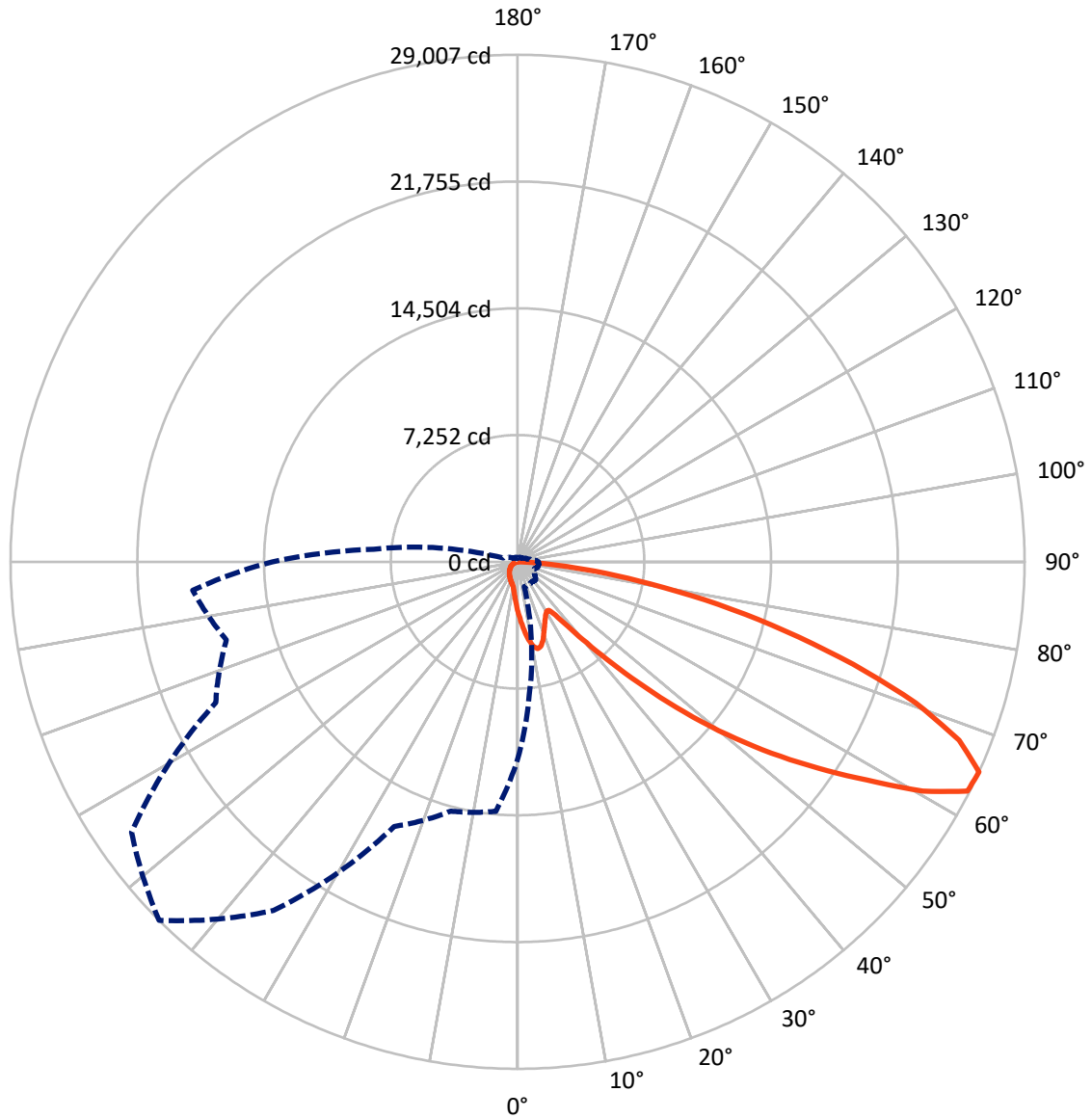
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.4 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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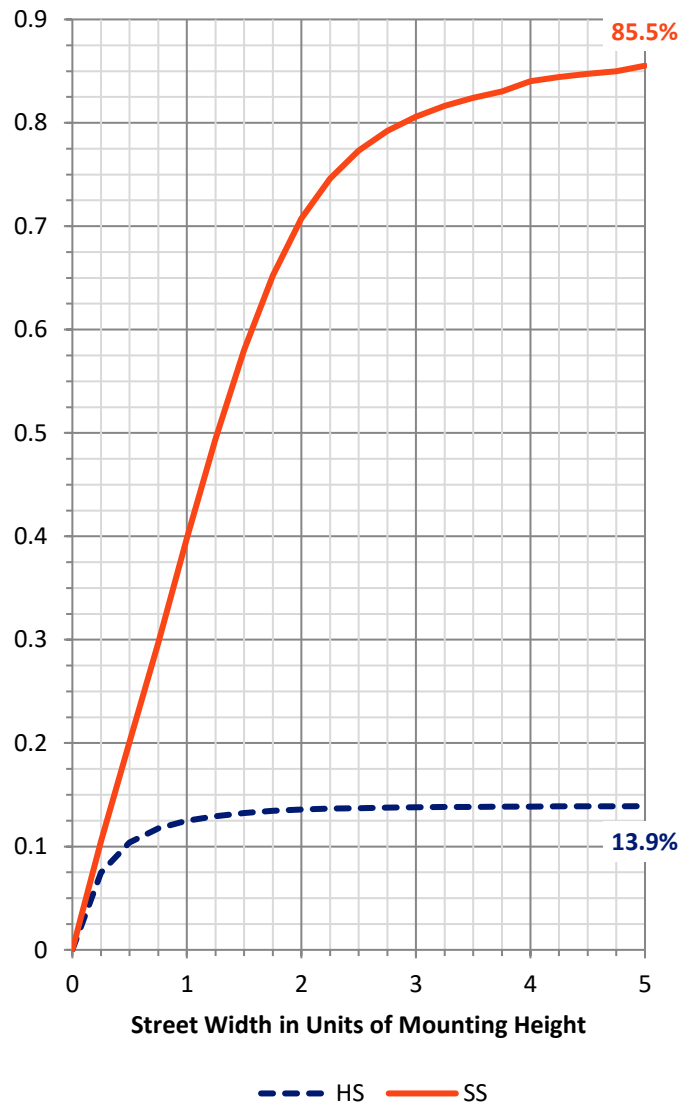
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2890.4	0.0	2890.4
	% Fixture	14.0	0.0	14.0
<b>Street Side</b>	Lumens	17749.0	0.0	17749.0
	% Fixture	86.0	0.0	86.0
<b>Total</b>	Lumens	20639.4	0.0	20639.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	281.4	1.4
10°-20°	843.5	4.1
20°-30°	1242.6	6.0
30°-40°	1596.4	7.7
40°-50°	2581.8	12.5
50°-60°	4527.5	21.9
60°-70°	5665.2	27.4
70°-80°	3310.4	16.0
80°-90°	590.6	2.9
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°	20639.4	100.0
0°-180°	20639.4	100.0

**Coefficient of Utilization**



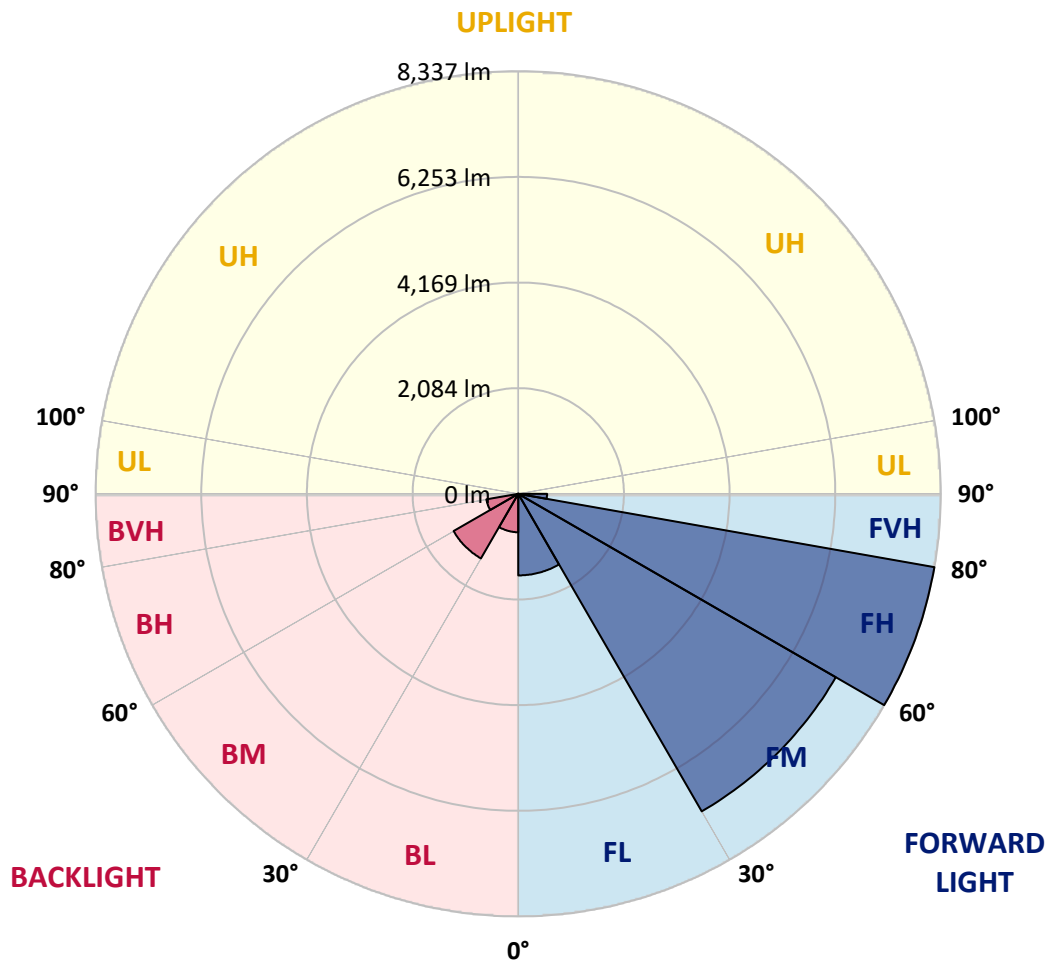
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1609.8	7.8			
FM (30°-60°)	7233.9	35.0			
FH (60°-80°)	8337.4	40.4			G4/12000
FVH (80°-90°)	567.9	2.8			G4/750
BL (0°-30°)	757.6	3.7	B2/1000		
BM (30°-60°)	1471.9	7.1	B2/2500		
BH (60°-80°)	638.2	3.1	B2/1000		G2/1000
BVH (80°-90°)	22.7	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9
2.5°	3229.0	3173.5	3140.8	3059.8	2978.8	2913.4	2825.2	2766.9	2697.2	2630.4	2570.7
5°	3598.7	3509.1	3401.1	3253.1	3118.0	2980.2	2846.5	2714.3	2574.9	2447.0	2368.8
7.5°	3911.5	3782.0	3591.6	3395.3	3223.3	3057.0	2900.5	2725.7	2556.5	2356.0	2249.4
10°	4150.3	3985.4	3735.2	3477.8	3280.2	3112.4	2960.3	2812.4	2641.7	2400.0	2266.4
12.5°	4295.4	4119.1	3821.9	3520.5	3294.4	3106.7	2988.7	2923.3	2856.5	2616.2	2459.8
15°	4402.0	4211.5	3883.0	3550.3	3261.7	3031.3	2944.6	3010.0	3086.8	2933.2	2752.6
17.5°	4512.9	4312.5	3962.6	3563.1	3173.5	2884.9	2848.0	3017.2	3194.8	3187.7	3008.6
20°	4618.1	4419.1	4032.3	3554.6	3031.3	2707.2	2739.9	2956.0	3162.1	3248.9	3152.2
22.5°	4739.0	4528.6	4099.2	3521.9	2846.5	2540.9	2643.2	2859.3	3039.8	3142.2	3112.4
25°	4886.9	4666.5	4193.0	3473.5	2647.5	2402.9	2545.1	2747.0	2893.5	2964.5	2963.1
27.5°	5046.1	4831.4	4318.1	3448.0	2486.8	2304.8	2434.2	2613.3	2744.1	2793.9	2793.9
30°	5243.7	5023.3	4466.0	3419.5	2381.6	2247.9	2319.1	2458.4	2586.3	2636.1	2636.1
32.5°	5459.9	5236.6	4608.2	3351.2	2317.6	2205.3	2206.7	2294.9	2411.4	2471.2	2479.7
35°	5730.1	5492.6	4760.3	3202.0	2266.4	2155.5	2097.3	2139.9	2236.5	2307.7	2326.1
37.5°	6115.4	5828.2	4946.5	2988.7	2191.0	2078.7	1982.0	1992.0	2065.9	2144.1	2172.6
40°	6647.1	6278.8	5165.6	2766.9	2083.0	1970.7	1855.5	1851.3	1905.3	1982.0	2013.3
42.5°	7366.6	6874.6	5428.6	2555.0	1979.2	1839.9	1721.9	1714.7	1757.4	1824.2	1856.9
45°	8316.3	7636.7	5751.4	2373.1	1898.2	1711.9	1595.3	1592.4	1628.0	1686.3	1720.5
47.5°	9532.0	8696.0	6074.0	2249.4	1855.5	1611.0	1491.5	1497.2	1528.5	1581.1	1605.3
50°	11106.0	10076.6	6172.2	2186.8	1855.5	1556.9	1399.1	1427.5	1453.1	1492.9	1507.2
52.5°	12992.8	11401.7	5848.0	2130.0	1866.8	1564.0	1320.9	1382.0	1400.6	1434.6	1440.3
55°	14741.7	12051.5	5027.6	2051.7	1869.7	1608.1	1254.1	1345.1	1379.1	1391.9	1390.5
57.5°	15756.8	11828.3	4065.0	1919.5	1858.3	1637.9	1211.4	1299.6	1365.0	1373.5	1360.7
60°	15563.5	11044.9	2993.0	1818.6	1774.5	1626.6	1198.6	1229.9	1333.7	1346.4	1329.4
62.5°	14073.4	9731.0	2077.3	1740.3	1589.6	1576.9	1194.3	1120.4	1265.5	1296.7	1272.5
65°	11312.1	7660.8	1467.3	1498.7	1393.4	1468.7	1171.6	1006.7	1183.0	1225.6	1188.7
67.5°	8206.9	5184.0	1059.2	1214.2	1262.6	1293.9	1120.4	924.2	1089.2	1146.1	1097.7
70°	5266.4	2799.6	743.6	802.0	1063.5	1099.1	1032.3	850.2	993.8	1059.2	1006.7
72.5°	3743.7	1653.6	534.6	561.6	854.5	915.6	908.6	767.8	882.9	962.6	900.1
75°	2583.5	911.4	361.1	401.0	619.9	743.6	701.0	659.7	747.8	828.9	767.8
77.5°	1619.5	408.1	216.1	278.7	406.6	584.4	480.6	510.4	582.9	658.4	594.3
80°	901.5	157.8	120.8	184.8	221.8	425.2	265.9	328.4	429.4	483.4	432.2
82.5°	196.2	19.9	54.0	79.6	86.7	247.4	140.7	190.5	270.2	265.9	230.3
85°	0.0	0.0	9.9	11.4	5.6	106.6	51.1	62.5	88.1	82.5	62.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0
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°	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9
2.5°	2559.3	2489.6	2438.5	2412.8	2391.5	2411.4	2422.8	2422.8	2471.2	2499.6	2510.9
5°	2319.1	2193.9	2098.6	2034.6	1996.3	2009.1	2023.2	2038.9	2100.0	2141.3	2168.3
7.5°	2152.7	1960.7	1815.7	1726.1	1679.2	1686.3	1696.3	1709.1	1768.7	1810.0	1845.5
10°	2121.3	1845.5	1640.8	1522.7	1466.0	1456.0	1450.3	1446.0	1481.5	1512.8	1541.3
12.5°	2249.4	1851.3	1565.5	1421.9	1352.2	1322.4	1288.2	1261.2	1266.9	1286.8	1322.4
15°	2478.2	1923.7	1541.3	1369.2	1282.5	1232.8	1192.9	1160.2	1153.1	1160.2	1165.9
17.5°	2739.9	2021.8	1538.4	1323.7	1215.6	1164.5	1131.8	1101.9	1091.9	1093.4	1100.5
20°	2913.4	2100.0	1529.9	1272.5	1151.7	1106.2	1077.8	1047.9	1037.9	1040.8	1042.2
22.5°	2930.4	2141.3	1517.1	1215.6	1087.7	1049.3	1020.9	993.8	992.4	992.4	1001.0
25°	2838.0	2141.3	1490.0	1164.5	1026.5	992.4	966.9	934.2	939.8	942.7	954.1
27.5°	2694.4	2090.1	1438.9	1123.3	974.0	938.4	912.9	882.9	890.1	894.3	907.1
30°	2552.2	2024.7	1377.8	1076.4	924.2	882.9	864.5	838.9	841.7	847.4	861.6
32.5°	2419.9	1955.0	1305.2	1037.9	874.4	833.2	819.0	790.6	794.8	800.5	816.1
35°	2289.1	1878.2	1220.0	992.4	828.9	787.7	776.3	743.6	746.5	755.0	772.0
37.5°	2148.4	1797.2	1150.3	946.9	784.8	742.2	730.8	696.7	699.6	709.5	729.4
40°	2000.5	1717.6	1082.0	898.6	737.9	695.3	685.3	648.3	651.2	662.6	683.9
42.5°	1851.3	1630.9	1029.4	836.1	689.6	644.1	634.2	600.0	604.2	617.0	638.4
45°	1713.3	1527.0	995.3	766.4	644.1	592.9	582.9	551.7	560.2	574.4	595.7
47.5°	1595.3	1420.4	981.0	708.1	595.7	540.3	531.8	506.1	520.4	536.1	553.1
50°	1494.3	1318.0	962.6	648.3	550.2	494.8	486.3	469.2	487.7	503.4	519.0
52.5°	1421.9	1201.5	922.8	594.3	510.4	456.4	453.6	445.1	462.1	476.3	490.6
55°	1359.3	1080.6	858.7	547.5	474.9	423.7	426.5	422.3	436.5	447.9	460.6
57.5°	1302.4	975.4	777.8	510.4	436.5	395.2	403.8	398.1	405.2	412.4	427.9
60°	1234.2	868.8	681.0	469.2	391.0	366.8	376.8	361.1	359.8	362.5	366.8
62.5°	1133.2	725.2	580.2	418.0	351.2	335.6	339.8	310.0	287.2	287.2	291.5
65°	992.4	582.9	486.3	361.1	305.7	292.9	290.1	247.4	216.1	213.3	226.1
67.5°	828.9	479.2	403.8	304.3	254.5	246.0	248.9	217.5	186.2	183.4	197.6
70°	675.4	396.7	325.6	243.1	196.2	204.8	217.5	186.2	156.4	152.1	164.9
72.5°	548.8	315.6	254.5	186.2	145.0	169.2	184.8	152.1	123.7	120.8	132.2
75°	423.7	231.8	182.0	126.6	105.2	130.8	145.0	110.9	88.1	83.8	93.9
77.5°	282.9	143.6	102.4	79.6	62.5	89.6	96.7	58.3	51.1	49.8	56.9
80°	172.0	66.8	44.1	38.4	21.3	32.7	38.4	24.2	27.1	28.4	34.1
82.5°	86.7	18.4	7.1	1.4	0.0	0.0	11.4	5.6	11.4	14.2	21.3
85°	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	7.1	12.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6
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):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9
2.5°	2590.6	2650.3	2707.2	2798.1	2892.0	2984.4	3078.3	3169.3	3202.0	3226.2	3280.2
5°	2292.0	2404.3	2535.1	2715.7	2909.1	3108.1	3310.0	3494.8	3578.8	3635.7	3763.6
7.5°	1983.5	2130.0	2317.6	2589.1	2892.0	3209.1	3526.2	3817.6	3952.7	4062.2	4257.0
10°	1677.7	1837.0	2074.5	2384.5	2793.9	3248.9	3686.8	4087.8	4262.7	4400.6	4665.1
12.5°	1409.1	1558.3	1807.2	2149.8	2640.4	3217.6	3779.3	4261.2	4467.5	4622.4	4912.4
15°	1220.0	1325.1	1545.5	1915.2	2458.4	3116.7	3784.9	4343.7	4569.8	4731.9	4983.5
17.5°	1114.7	1150.3	1293.9	1676.4	2256.4	2984.4	3732.3	4372.1	4613.8	4764.6	4939.5
20°	1057.8	1063.5	1103.3	1366.4	1997.7	2860.8	3682.5	4400.6	4655.1	4781.6	4834.2
22.5°	1012.4	1012.4	1022.3	1117.6	1663.6	2712.9	3666.9	4450.3	4711.9	4790.1	4682.1
25°	971.1	971.1	974.0	999.6	1318.0	2486.8	3657.0	4527.1	4790.1	4811.5	4514.3
27.5°	928.4	929.9	929.9	944.1	1062.1	2179.7	3614.4	4626.6	4884.0	4839.9	4353.7
30°	885.8	888.7	888.7	898.6	939.8	1820.0	3530.4	4746.1	5006.3	4877.0	4194.4
32.5°	843.2	846.0	846.0	854.5	884.4	1453.1	3425.2	4855.6	5130.0	4892.5	4046.6
35°	799.1	803.3	800.5	811.9	843.2	1156.0	3291.6	4965.1	5263.7	4942.3	3974.0
37.5°	755.0	757.9	756.4	767.8	803.3	998.1	3136.6	5047.5	5445.6	5053.2	4060.7
40°	710.9	709.5	709.5	722.3	760.7	952.6	2941.7	5178.3	5707.3	5248.0	4439.0
42.5°	665.4	665.4	662.6	676.8	723.8	918.5	2755.5	5412.9	6088.3	5558.0	5110.1
45°	624.2	622.8	617.0	629.9	688.2	858.7	2690.1	5850.9	6651.3	6059.9	5921.9
47.5°	584.4	582.9	568.8	580.2	645.5	804.7	2934.7	6567.5	7432.0	6797.8	6682.7
50°	548.8	550.2	523.3	533.2	602.9	763.5	3465.0	7497.4	8468.4	7791.6	7403.5
52.5°	516.1	516.1	480.6	486.3	550.2	726.5	3969.8	8505.4	9836.3	9178.0	8243.9
55°	483.4	480.6	440.7	443.6	497.6	673.9	4045.2	9489.3	11701.7	11263.8	9392.7
57.5°	446.5	440.7	403.8	403.8	449.3	635.6	3506.2	10245.8	14016.5	14329.3	11049.1
60°	401.0	396.7	372.5	365.4	410.9	669.7	2474.0	10333.9	15509.4	18405.7	14221.3
62.5°	342.7	348.4	335.6	325.6	373.9	695.3	1466.0	9624.4	15148.3	19702.4	18020.4
65°	270.2	292.9	290.1	282.9	410.9	585.8	865.9	8262.3	14040.7	18655.9	17245.5
67.5°	230.3	246.0	241.7	241.7	430.8	445.1	544.6	6455.1	12516.5	17414.6	15404.2
70°	196.2	211.9	196.2	196.2	325.6	270.2	376.8	4507.2	10871.4	16041.1	14195.6
72.5°	162.1	177.7	160.6	149.3	260.2	201.9	275.8	2816.7	9310.2	14610.9	13368.2
75°	123.7	142.2	129.4	115.2	172.0	150.7	209.0	1636.5	7713.4	12500.8	12189.4
77.5°	78.2	102.4	96.7	81.1	126.6	109.5	150.7	974.0	5951.9	9768.0	10484.6
80°	48.4	52.6	54.0	51.1	72.5	73.9	102.4	554.5	4073.6	6807.7	8191.2
82.5°	31.3	31.3	24.2	27.1	35.6	42.6	58.3	209.0	2394.4	4144.7	5701.6
85°	22.8	19.9	12.8	12.8	17.0	21.3	22.8	64.0	971.1	1636.5	2229.5
87.5°	11.4	9.9	4.3	5.6	8.5	7.1	5.6	2.9	244.6	523.3	366.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REPORT NUMBER: P968191  
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**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9	2857.9
2.5°	3308.6	3352.7	3355.5	3355.5	3317.1	3315.8	3237.6	3229.0
5°	3895.8	3924.3	3931.4	3917.1	3840.4	3783.5	3631.4	3598.7
7.5°	4433.3	4490.2	4490.2	4456.1	4330.9	4214.3	3993.9	3911.5
10°	4862.7	4928.1	4913.8	4844.3	4686.4	4525.7	4258.4	4150.3
12.5°	5071.7	5138.5	5101.5	5021.9	4868.3	4699.2	4417.6	4295.4
15°	5067.4	5048.9	5010.6	5000.6	4926.7	4798.7	4535.6	4402.0
17.5°	4886.9	4730.5	4700.6	4800.2	4894.0	4862.7	4638.0	4512.9
20°	4601.0	4328.1	4301.1	4491.5	4758.9	4895.4	4733.3	4618.1
22.5°	4299.7	4005.3	3942.8	4153.2	4555.6	4905.3	4854.2	4739.0
25°	4013.9	3718.1	3655.6	3851.7	4329.5	4888.3	4985.0	4886.9
27.5°	3775.0	3489.2	3430.9	3627.1	4112.0	4839.9	5115.8	5046.1
30°	3590.2	3325.7	3283.1	3472.1	3924.3	4780.2	5282.1	5243.7
32.5°	3482.1	3288.7	3304.4	3459.4	3823.4	4714.8	5441.4	5459.9
35°	3588.7	3597.2	3733.8	3797.7	3917.1	4704.9	5657.5	5730.1
37.5°	4119.1	4414.8	4697.8	4645.2	4376.4	4820.1	5980.3	6115.4
40°	5021.9	5629.1	6088.3	5887.8	5211.0	5172.7	6445.2	6647.1
42.5°	6125.3	7154.7	7911.2	7373.6	6287.3	5789.7	7109.2	7366.6
45°	7289.8	9035.8	10227.2	9109.7	7434.8	6654.2	8114.4	8316.3
47.5°	8516.8	11322.2	12863.3	11034.8	8498.4	7638.1	9485.0	9532.0
50°	9859.1	13828.8	15550.7	12958.7	9524.9	8765.6	11160.0	11106.0
52.5°	11137.2	16406.6	18181.0	14890.9	10426.3	10164.7	13103.7	12992.8
55°	12357.2	18983.0	20827.1	16747.9	11276.6	12013.1	15412.7	14741.7
57.5°	13771.9	21299.2	23554.2	18613.3	12465.2	14413.1	17994.8	15756.8
60°	15863.4	23931.0	26638.1	21169.7	14726.0	16935.6	18920.4	15563.5
62.5°	18533.6	26350.9	28880.4	23675.0	16996.7	17410.4	17556.9	14073.4
65°	19052.6	26963.8	29007.0	24344.8	16703.8	14768.6	14333.6	11312.1
67.5°	17676.3	25856.1	27238.1	23097.8	14775.8	11413.1	10756.2	8206.9
70°	16132.2	23744.7	24155.7	20977.9	12995.6	8394.5	7264.2	5266.4
72.5°	14549.7	20928.0	20077.8	18218.0	11421.7	6112.5	5239.5	3743.7
75°	12670.0	17224.2	15815.1	15136.9	9456.6	4797.3	3790.7	2583.5
77.5°	10146.3	12124.0	11747.2	11733.0	7106.3	3504.8	2529.5	1619.5
80°	7157.6	7868.4	7676.5	8836.7	4767.4	2542.2	1522.7	901.5
82.5°	3465.0	4350.8	4466.0	5262.2	2319.1	1495.8	351.2	196.2
85°	1356.5	2098.6	1770.2	1997.7	651.2	416.6	8.5	0.0
87.5°	152.1	243.1	223.2	176.3	79.6	17.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)