

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: P966112

Luminaire Tested: **NAV-SB4B-730-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966112
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-SB4B-730-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17654.6 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

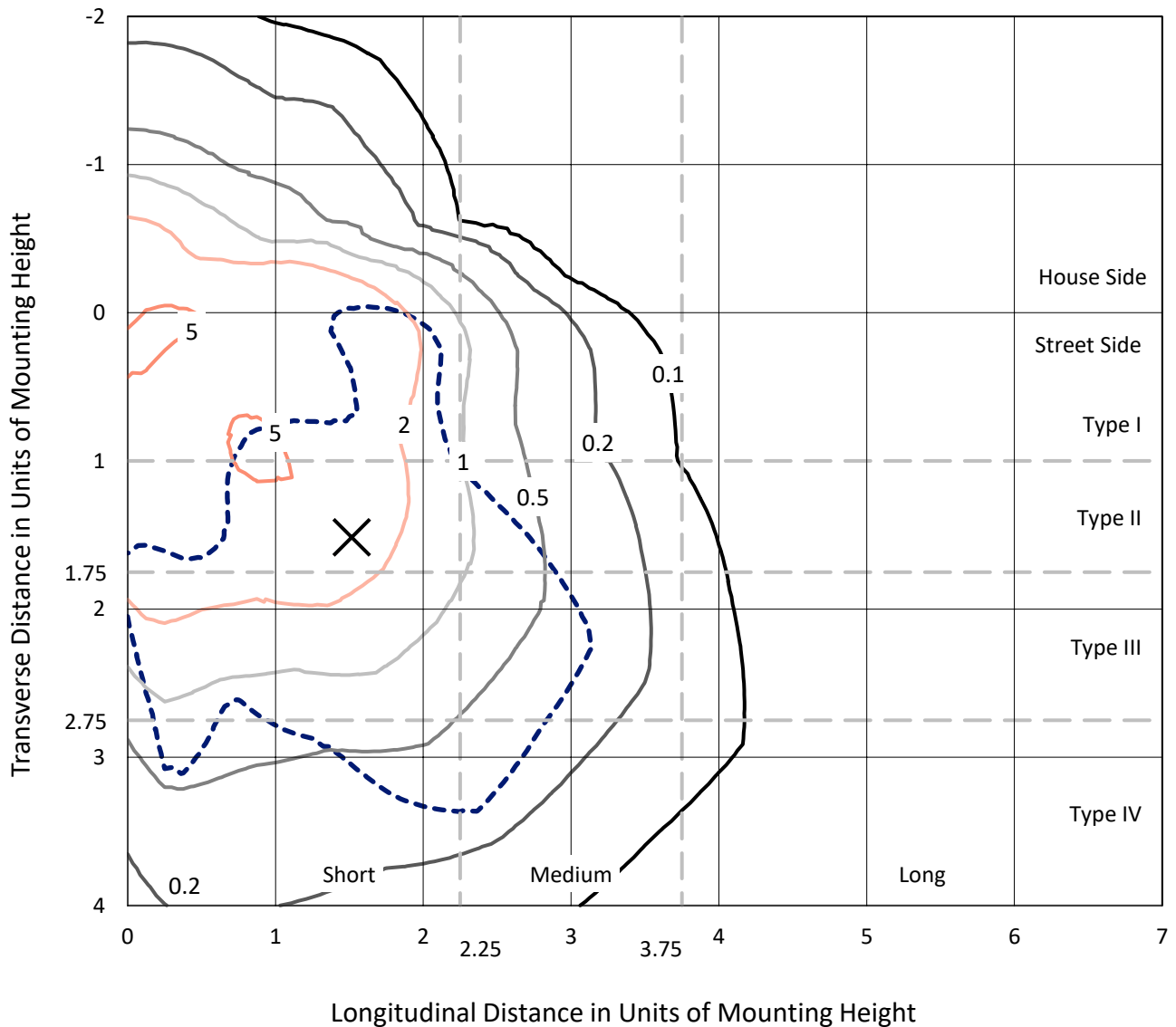
Input Watts (W): 147
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

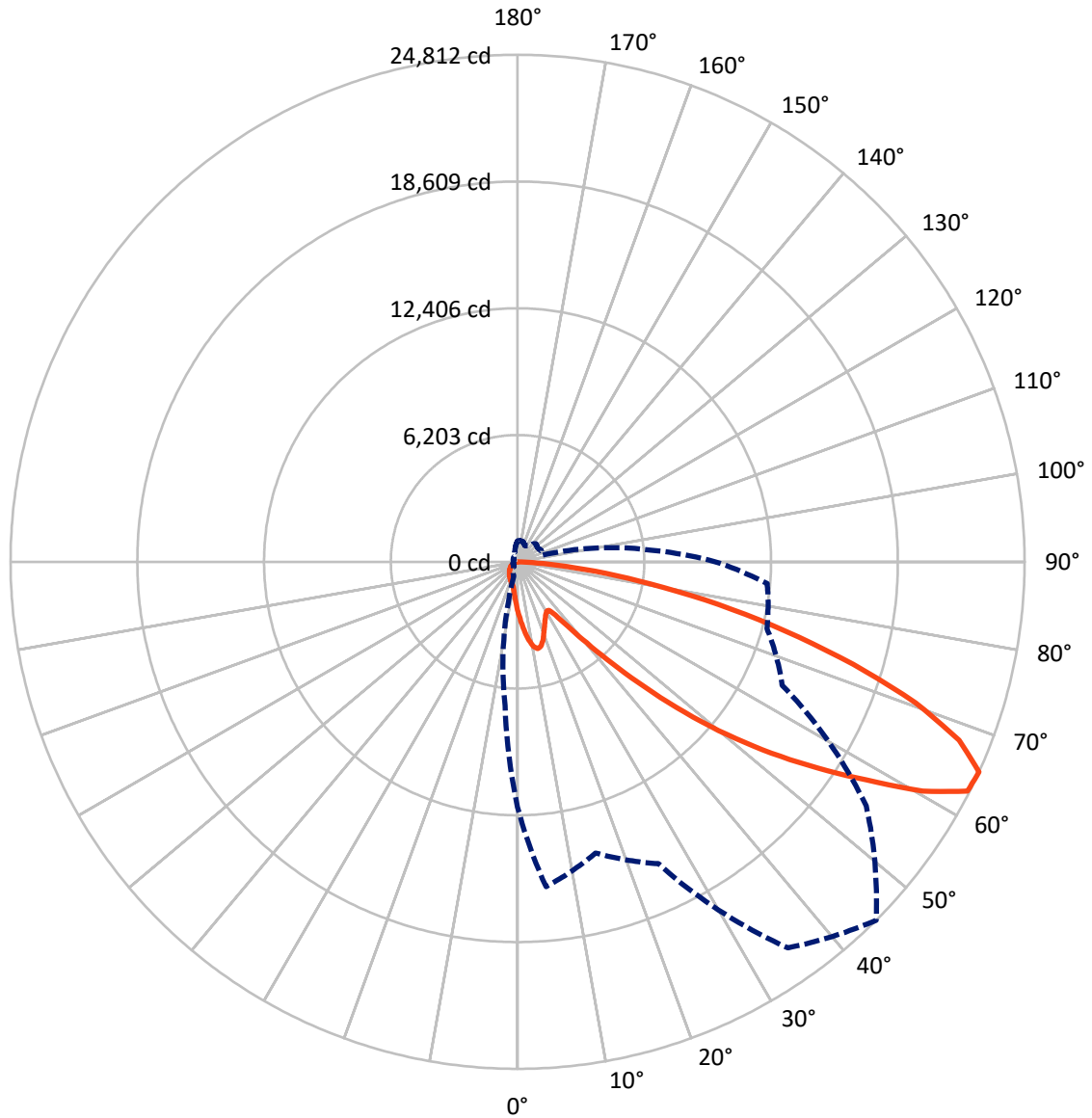
✕ Max cd
 - - - 1/2 Max cd



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 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3509.2	0.0	3509.2
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	14145.4	0.0	14145.4
	% Fixture	80.1	0.0	80.1
Total	Lumens	17654.6	0.0	17654.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.7	1.4
10°-20°	721.5	4.1
20°-30°	1062.9	6.0
30°-40°	1365.5	7.7
40°-50°	2208.5	12.5
50°-60°	3872.8	21.9
60°-70°	4845.9	27.4
70°-80°	2831.7	16.0
80°-90°	505.2	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°	17654.6	100.0
0°-180°	17654.6	100.0

Coefficient of Utilization



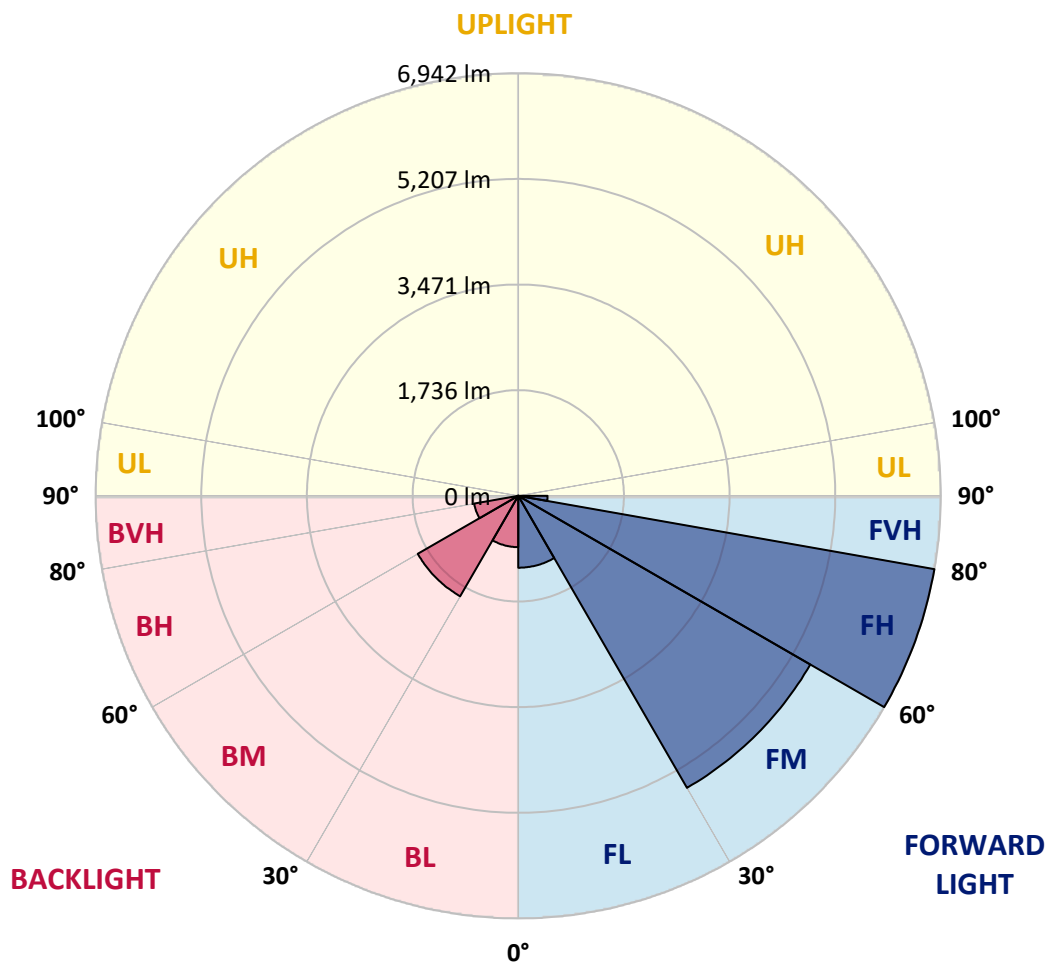
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1181.3	6.7			
FM (30°-60°)	5540.2	31.4			
FH (60°-80°)	6942.3	39.3			G3/7500
FVH (80°-90°)	481.5	2.7			G3/500
BL (0°-30°)	843.8	4.8	B2/1000		
BM (30°-60°)	1906.5	10.8	B2/2500		
BH (60°-80°)	735.2	4.2	B2/1000		G2/1000
BVH (80°-90°)	23.7	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-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6
2.5°	2738.9	2759.6	2805.8	2830.1	2867.8	2870.3	2870.3	2837.4	2836.2	2769.3	2762.1
5°	3061.3	3109.8	3219.3	3332.5	3356.8	3362.8	3350.7	3285.0	3236.3	3106.3	3078.3
7.5°	3381.1	3474.7	3641.3	3792.2	3840.8	3840.8	3811.7	3704.6	3604.8	3416.3	3345.8
10°	3646.2	3764.2	3990.4	4159.4	4215.4	4203.2	4143.7	4008.7	3871.2	3642.5	3550.2
12.5°	3821.4	3953.9	4202.0	4338.2	4395.4	4363.8	4295.7	4164.4	4019.6	3778.8	3674.2
15°	3908.9	4047.6	4262.9	4334.6	4318.8	4285.9	4277.4	4214.2	4104.7	3879.7	3765.4
17.5°	3946.7	4075.5	4225.2	4180.2	4046.4	4020.8	4105.9	4186.2	4159.4	3967.3	3860.3
20°	3981.9	4090.2	4135.2	3935.7	3702.2	3679.0	3842.0	4070.7	4187.4	4048.7	3950.2
22.5°	4030.5	4097.4	4005.0	3677.8	3426.1	3372.6	3552.5	3896.7	4195.9	4152.2	4053.7
25°	4097.4	4115.7	3861.5	3433.3	3180.4	3126.9	3294.8	3703.4	4181.4	4264.1	4180.2
27.5°	4177.7	4140.0	3724.0	3229.1	2984.6	2934.8	3102.6	3517.3	4140.0	4375.9	4316.4
30°	4282.3	4171.6	3587.8	3070.9	2844.7	2808.3	2970.0	3356.8	4088.9	4518.2	4485.4
32.5°	4388.1	4185.0	3461.3	2978.5	2813.1	2826.5	2959.1	3270.4	4033.0	4654.4	4670.3
35°	4502.4	4227.6	3399.3	3069.8	3077.0	3193.8	3248.5	3350.7	4024.5	4839.3	4901.3
37.5°	4658.1	4322.4	3473.5	3523.3	3776.3	4018.4	3973.4	3743.5	4123.0	5115.4	5231.0
40°	4881.9	4489.1	3797.0	4295.7	4815.0	5207.8	5036.3	4457.4	4424.6	5513.1	5685.8
42.5°	5207.8	4754.2	4371.1	5239.5	6120.0	6767.0	6307.3	5378.1	4952.4	6081.1	6301.2
45°	5689.5	5183.5	5065.5	6235.6	7729.0	8748.3	7792.3	6359.6	5691.9	6941.0	7113.7
47.5°	6357.2	5814.7	5716.2	7285.2	9684.7	11003.2	9439.0	7269.3	6533.6	8113.4	8153.6
50°	7243.8	6664.9	6332.9	8433.3	11828.9	13301.7	11084.7	8147.4	7498.0	9546.1	9499.9
52.5°	8413.8	7850.7	7051.6	9526.7	14033.9	15551.8	12737.5	8918.5	8694.8	11208.7	11113.8
55°	10009.4	9634.9	8034.4	10570.1	16237.7	17815.1	14325.8	9645.9	10275.8	13183.8	12609.8
57.5°	11989.4	12257.1	9451.2	11780.3	18219.0	20147.8	15921.5	10662.6	12328.8	15392.4	13478.1
60°	13266.5	15743.9	12164.6	13569.4	20470.2	22785.9	18108.3	12596.3	14486.3	16184.2	13312.7
62.5°	12957.5	16853.2	15414.4	15853.4	22540.2	24703.8	20251.2	14538.7	14892.5	15017.9	12038.1
65°	12010.1	15958.0	14751.5	16297.3	23064.3	24812.1	20824.1	14288.1	12632.8	12260.6	9676.2
67.5°	10706.3	14896.2	13176.5	15120.0	22116.9	23299.1	19757.5	12639.0	9762.6	9200.7	7020.0
70°	9299.2	13721.4	12142.8	13799.2	20310.8	20662.4	17944.1	11116.2	7180.5	6213.7	4504.9
72.5°	7963.8	12497.8	11434.9	12445.6	17901.5	17174.2	15583.4	9769.9	5228.5	4481.8	3202.3
75°	6598.0	10693.0	10426.6	10837.7	14733.2	13528.0	12947.9	8089.1	4103.5	3242.5	2209.9
77.5°	5091.1	8355.4	8968.3	8678.9	10370.6	10048.4	10036.2	6078.7	2998.0	2163.7	1385.3
80°	3484.5	5823.2	7006.6	6122.4	6730.6	6566.4	7558.8	4078.0	2174.6	1302.6	771.1
82.5°	2048.2	3545.3	4877.1	2963.9	3721.7	3820.2	4501.2	1983.7	1279.5	300.4	167.8
85°	830.7	1399.8	1907.0	1160.3	1795.2	1514.2	1708.8	557.0	356.4	7.3	0.0
87.5°	209.2	447.6	313.8	130.2	208.0	191.0	150.8	68.1	14.6	0.0	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°	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6
2.5°	2714.6	2686.6	2617.3	2547.9	2492.0	2416.6	2366.7	2307.2	2250.0	2198.9	2189.2
5°	3001.6	2909.2	2782.7	2667.2	2549.2	2434.9	2321.7	2202.5	2093.2	2026.2	1983.7
7.5°	3235.1	3072.1	2904.3	2757.1	2614.9	2481.1	2331.5	2186.7	2015.3	1924.0	1841.3
10°	3409.0	3195.0	2974.9	2805.8	2662.3	2532.2	2405.7	2259.7	2053.0	1938.7	1814.6
12.5°	3523.3	3269.2	3011.3	2817.9	2657.4	2556.5	2500.6	2443.4	2237.9	2104.0	1924.0
15°	3602.5	3321.5	3036.9	2790.0	2592.9	2518.8	2574.7	2640.4	2509.1	2354.6	2119.9
17.5°	3688.8	3389.6	3047.8	2714.6	2467.7	2436.1	2580.8	2732.9	2726.8	2573.5	2343.7
20°	3780.0	3449.2	3040.6	2592.9	2315.7	2343.7	2528.5	2704.9	2779.1	2696.4	2492.0
22.5°	3873.7	3506.3	3012.6	2434.9	2173.4	2260.9	2445.9	2600.3	2687.9	2662.3	2506.6
25°	3991.7	3586.6	2971.3	2264.6	2055.4	2177.0	2349.7	2475.0	2535.8	2534.6	2427.6
27.5°	4132.7	3693.7	2949.3	2127.2	1971.5	2082.2	2235.4	2347.2	2389.9	2389.9	2304.7
30°	4296.9	3820.2	2925.0	2037.2	1922.8	1983.7	2102.9	2212.3	2254.9	2254.9	2183.1
32.5°	4479.4	3941.7	2866.6	1982.5	1886.3	1887.5	1963.0	2062.7	2113.8	2121.0	2070.0
35°	4698.3	4071.9	2738.9	1938.7	1843.8	1794.0	1830.4	1913.1	1973.9	1989.7	1958.2
37.5°	4985.3	4231.2	2556.5	1874.2	1778.1	1695.5	1704.0	1767.2	1834.0	1858.4	1837.7
40°	5370.8	4418.5	2366.7	1781.8	1685.7	1587.2	1583.5	1629.7	1695.5	1722.2	1711.2
42.5°	5880.4	4643.6	2185.5	1693.0	1573.8	1472.8	1466.8	1503.3	1560.4	1588.3	1583.5
45°	6532.3	4919.6	2029.9	1623.6	1464.3	1364.6	1362.1	1392.6	1442.5	1471.6	1465.5
47.5°	7438.4	5195.7	1924.0	1587.2	1378.0	1275.8	1280.6	1307.4	1352.4	1373.1	1364.6
50°	8619.3	5279.6	1870.5	1587.2	1331.8	1196.8	1221.1	1243.0	1277.0	1289.1	1278.3
52.5°	9752.9	5002.3	1821.9	1596.8	1337.8	1129.9	1182.1	1198.0	1227.1	1232.0	1216.3
55°	10308.6	4300.6	1755.0	1599.3	1375.6	1072.7	1150.6	1179.8	1190.6	1189.4	1162.7
57.5°	10117.7	3477.2	1641.8	1589.6	1401.1	1036.2	1111.6	1167.6	1174.9	1163.9	1114.1
60°	9447.5	2560.1	1555.5	1517.8	1391.3	1025.3	1052.1	1140.8	1151.8	1137.1	1055.6
62.5°	8323.8	1776.9	1488.6	1359.8	1348.8	1021.6	958.4	1082.4	1109.2	1088.6	969.3
65°	6553.0	1255.1	1281.9	1191.9	1256.3	1002.1	861.1	1011.9	1048.4	1016.8	848.9
67.5°	4434.4	906.1	1038.6	1080.0	1106.8	958.4	790.6	931.6	980.3	938.9	709.1
70°	2394.7	636.1	685.9	909.7	940.1	882.9	727.3	850.1	906.1	861.1	577.7
72.5°	1414.5	457.3	480.4	730.9	783.2	777.2	656.7	755.2	823.4	769.9	469.4
75°	779.6	308.9	343.0	530.2	636.1	599.6	564.4	639.7	709.1	656.7	362.4
77.5°	349.0	184.9	238.4	347.9	499.9	411.1	436.6	498.7	563.1	508.4	242.0
80°	135.0	103.4	158.2	189.7	363.7	227.4	281.0	367.3	413.5	369.7	147.2
82.5°	17.0	46.2	68.1	74.2	211.7	120.4	163.0	231.0	227.4	197.0	74.2
85°	0.0	8.5	9.7	4.8	91.2	43.8	53.5	75.4	70.5	53.5	6.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6
2.5°	2129.6	2085.8	2063.9	2045.7	2062.7	2072.4	2072.4	2113.8	2138.1	2147.9	2215.9
5°	1876.7	1795.2	1740.4	1707.5	1718.5	1730.7	1744.0	1796.3	1831.6	1854.7	1960.5
7.5°	1677.2	1553.1	1476.5	1436.3	1442.5	1451.0	1461.9	1513.0	1548.3	1578.6	1696.6
10°	1578.6	1403.5	1302.6	1253.9	1245.4	1240.6	1236.9	1267.3	1294.1	1318.4	1435.1
12.5°	1583.5	1339.1	1216.3	1156.6	1131.1	1101.9	1078.8	1083.6	1100.6	1131.1	1205.3
15°	1645.5	1318.4	1171.3	1097.1	1054.4	1020.4	992.4	986.4	992.4	997.3	1043.6
17.5°	1729.5	1316.0	1132.3	1039.9	996.1	968.1	942.6	934.1	935.3	941.4	953.6
20°	1796.3	1308.6	1088.6	985.1	946.2	921.9	896.4	887.9	890.3	891.4	904.9
22.5°	1831.6	1297.8	1039.9	930.4	897.6	873.2	850.1	848.9	848.9	856.2	865.9
25°	1831.6	1274.6	996.1	878.1	848.9	827.1	799.1	803.9	806.4	816.1	830.7
27.5°	1787.8	1230.8	960.8	833.1	802.7	780.8	755.2	761.4	765.0	775.9	794.2
30°	1731.9	1178.5	920.7	790.6	755.2	739.4	717.6	720.0	724.9	737.1	757.7
32.5°	1672.3	1116.5	887.9	747.9	712.7	700.6	676.2	679.9	684.7	698.1	721.2
35°	1606.6	1043.6	848.9	709.1	673.8	664.1	636.1	638.5	645.9	660.4	683.5
37.5°	1537.3	983.9	810.0	671.4	634.9	625.1	595.9	598.4	606.9	623.9	645.9
40°	1469.2	925.6	768.6	631.2	594.7	586.2	554.6	557.0	566.7	585.0	608.1
42.5°	1395.0	880.6	715.1	589.9	550.9	542.4	513.2	516.9	527.9	546.1	569.2
45°	1306.3	851.4	655.6	550.9	507.2	498.7	471.9	479.2	491.4	509.6	533.9
47.5°	1215.0	839.2	605.7	509.6	462.2	454.9	433.0	445.2	458.5	473.1	499.9
50°	1127.4	823.4	554.6	470.7	423.2	415.9	401.4	417.2	430.5	443.9	469.4
52.5°	1027.7	789.4	508.4	436.6	390.4	388.0	380.7	395.2	407.4	419.6	441.5
55°	924.3	734.6	468.2	406.2	362.4	364.9	361.2	373.4	383.1	394.0	413.5
57.5°	834.4	665.2	436.6	373.4	338.1	345.4	340.5	346.7	352.7	366.1	381.9
60°	743.1	582.6	401.4	334.5	313.8	322.3	308.9	307.7	310.2	313.8	343.0
62.5°	620.2	496.2	357.5	300.4	287.0	290.7	265.2	245.7	245.7	249.3	293.2
65°	498.7	415.9	308.9	261.5	250.5	248.2	211.7	184.9	182.4	193.4	231.0
67.5°	409.9	345.4	260.2	217.7	210.4	212.8	186.0	159.3	156.9	169.0	197.0
70°	339.3	278.5	208.0	167.8	175.2	186.0	159.3	133.8	130.2	141.0	167.8
72.5°	270.0	217.7	159.3	124.0	144.7	158.2	130.2	105.8	103.4	113.1	138.7
75°	198.2	155.7	108.2	90.0	111.9	124.0	94.9	75.4	71.8	80.3	105.8
77.5°	122.8	87.5	68.1	53.5	76.7	82.7	49.8	43.8	42.5	48.7	66.9
80°	57.2	37.7	32.8	18.2	28.0	32.8	20.7	23.1	24.3	29.2	41.3
82.5°	15.8	6.0	1.2	0.0	0.0	9.7	4.8	9.7	12.2	18.2	26.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.0	11.0	19.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.7
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: P966112
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CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6	2444.6
2.5°	2267.0	2315.7	2393.5	2473.8	2552.9	2633.1	2710.9	2738.9
5°	2056.7	2168.5	2323.0	2488.4	2658.6	2831.4	2989.4	3061.3
7.5°	1821.9	1982.5	2214.7	2473.8	2745.1	3016.3	3265.5	3381.1
10°	1571.3	1774.5	2039.6	2389.9	2779.1	3153.6	3496.6	3646.2
12.5°	1333.0	1545.8	1839.0	2258.5	2752.3	3232.7	3645.0	3821.4
15°	1133.5	1322.0	1638.3	2102.9	2665.9	3237.6	3715.5	3908.9
17.5°	983.9	1106.8	1433.9	1930.2	2552.9	3192.6	3739.9	3946.7
20°	909.7	943.8	1168.8	1708.8	2447.0	3150.0	3764.2	3981.9
22.5°	865.9	874.4	955.9	1423.0	2320.5	3136.6	3806.7	4030.5
25°	830.7	833.1	855.0	1127.4	2127.2	3128.1	3872.4	4097.4
27.5°	795.4	795.4	807.6	908.6	1864.5	3091.6	3957.5	4177.7
30°	760.1	760.1	768.6	803.9	1556.8	3019.9	4059.7	4282.3
32.5°	723.6	723.6	730.9	756.4	1243.0	2929.9	4153.4	4388.1
35°	687.2	684.7	694.4	721.2	988.8	2815.6	4247.0	4502.4
37.5°	648.2	647.0	656.7	687.2	853.8	2682.9	4317.6	4658.1
40°	606.9	606.9	617.9	650.7	814.9	2516.4	4429.4	4881.9
42.5°	569.2	566.7	578.9	619.1	785.7	2357.0	4630.1	5207.8
45°	532.7	527.9	538.7	588.7	734.6	2301.1	5004.8	5689.5
47.5°	498.7	486.5	496.2	552.2	688.4	2510.2	5617.7	6357.2
50°	470.7	447.6	456.1	515.7	653.1	2963.9	6413.1	7243.8
52.5°	441.5	411.1	415.9	470.7	621.5	3395.7	7275.4	8413.8
55°	411.1	377.0	379.5	425.7	576.5	3460.1	8117.1	10009.4
57.5°	377.0	345.4	345.4	384.4	543.7	2999.1	8764.1	11989.4
60°	339.3	318.7	312.5	351.5	572.9	2116.2	8839.5	13266.5
62.5°	298.0	287.0	278.5	319.9	594.7	1253.9	8232.6	12957.5
65°	250.5	248.2	242.0	351.5	501.1	740.7	7067.5	12010.1
67.5°	210.4	206.7	206.7	368.5	380.7	465.9	5521.7	10706.3
70°	181.2	167.8	167.8	278.5	231.0	322.3	3855.4	9299.2
72.5°	152.0	137.5	127.7	222.5	172.7	236.0	2409.4	7963.8
75°	121.7	110.7	98.5	147.2	128.9	178.8	1399.8	6598.0
77.5°	87.5	82.7	69.3	108.2	93.7	128.9	833.1	5091.1
80°	45.0	46.2	43.8	62.0	63.2	87.5	474.4	3484.5
82.5°	26.8	20.7	23.1	30.4	36.5	49.8	178.8	2048.2
85°	17.0	11.0	11.0	14.6	18.2	19.5	54.7	830.7
87.5°	8.5	3.7	4.8	7.3	6.0	4.8	2.5	209.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)