

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: P966577

Luminaire Tested: **NAV-SB4C-722-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966577
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-SB4C-722-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 2200K, 615mA 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: 19396.1 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

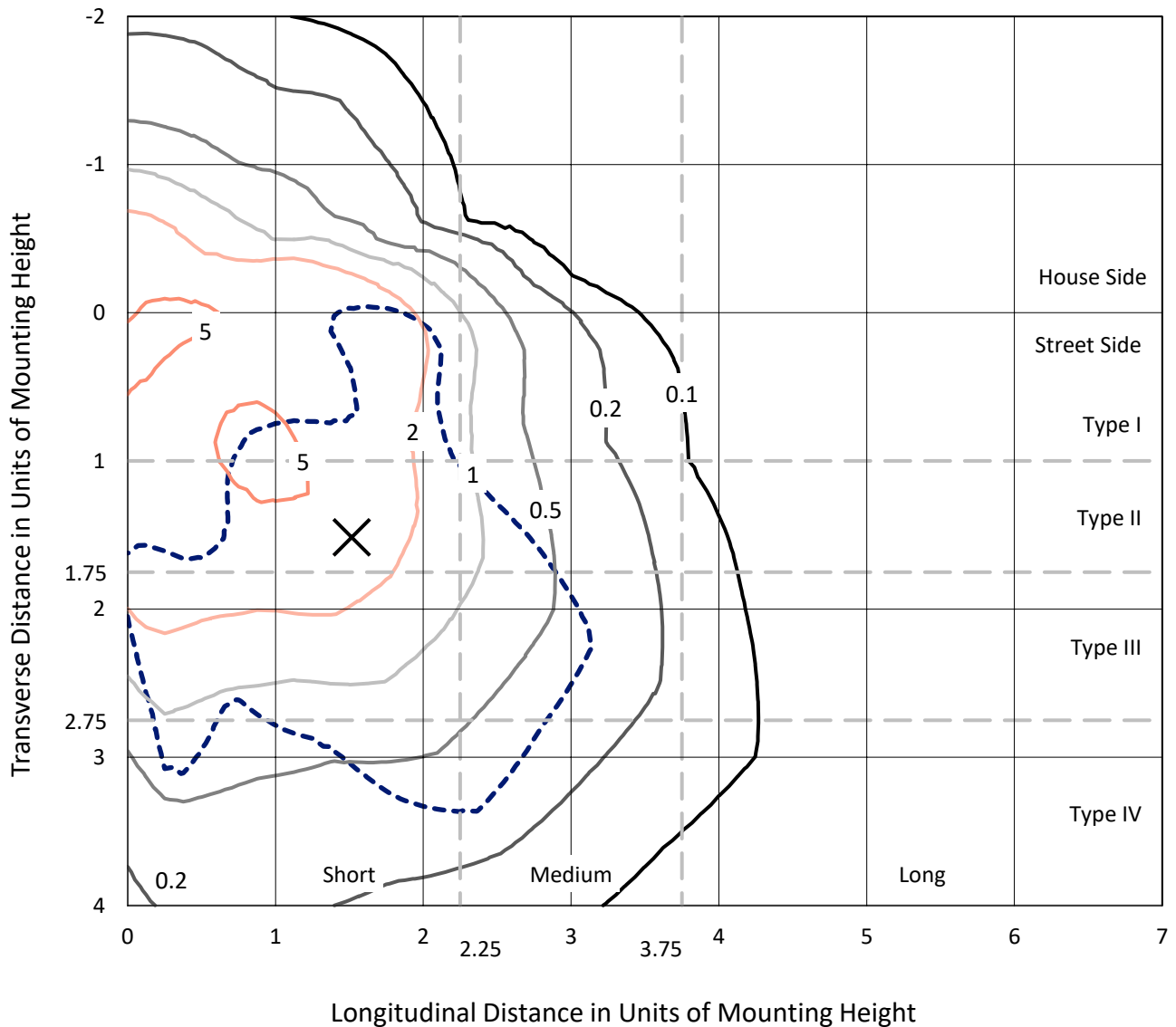
Input Watts (W): 200.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

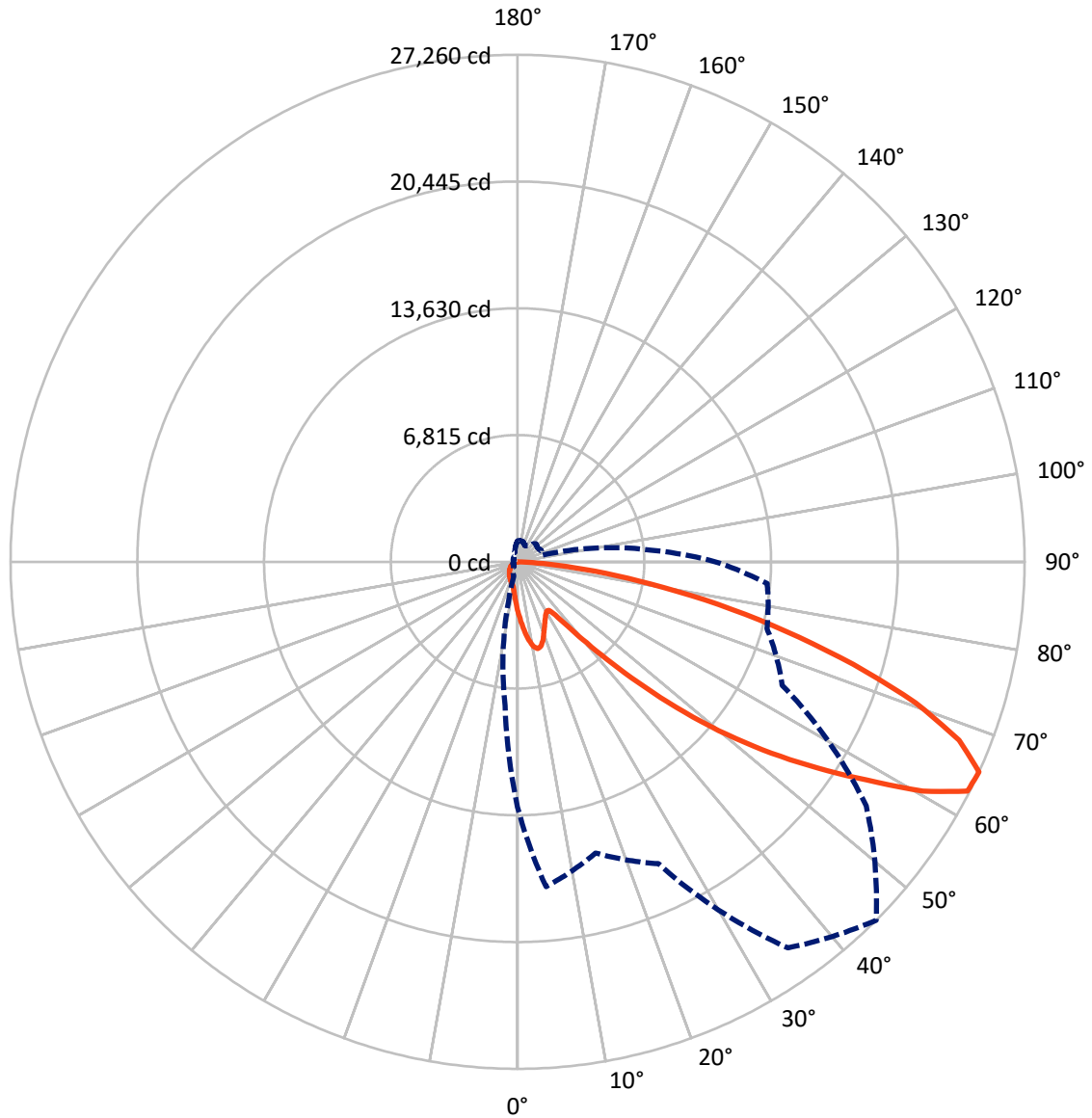
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.1 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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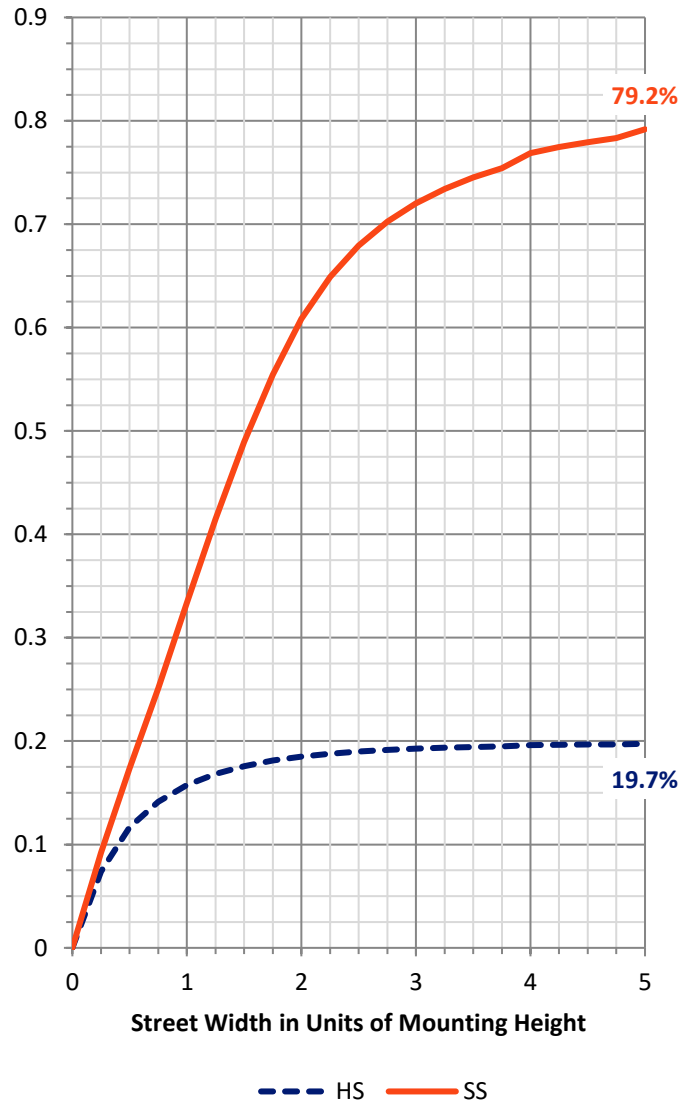
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3855.3	0.0	3855.3
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	15540.7	0.0	15540.7
	% Fixture	80.1	0.0	80.1
Total	Lumens	19396.1	0.0	19396.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.4	1.4
10°-20°	792.7	4.1
20°-30°	1167.7	6.0
30°-40°	1500.2	7.7
40°-50°	2426.3	12.5
50°-60°	4254.8	21.9
60°-70°	5323.9	27.4
70°-80°	3111.0	16.0
80°-90°	555.1	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°	19396.1	100.0
0°-180°	19396.1	100.0

Coefficient of Utilization

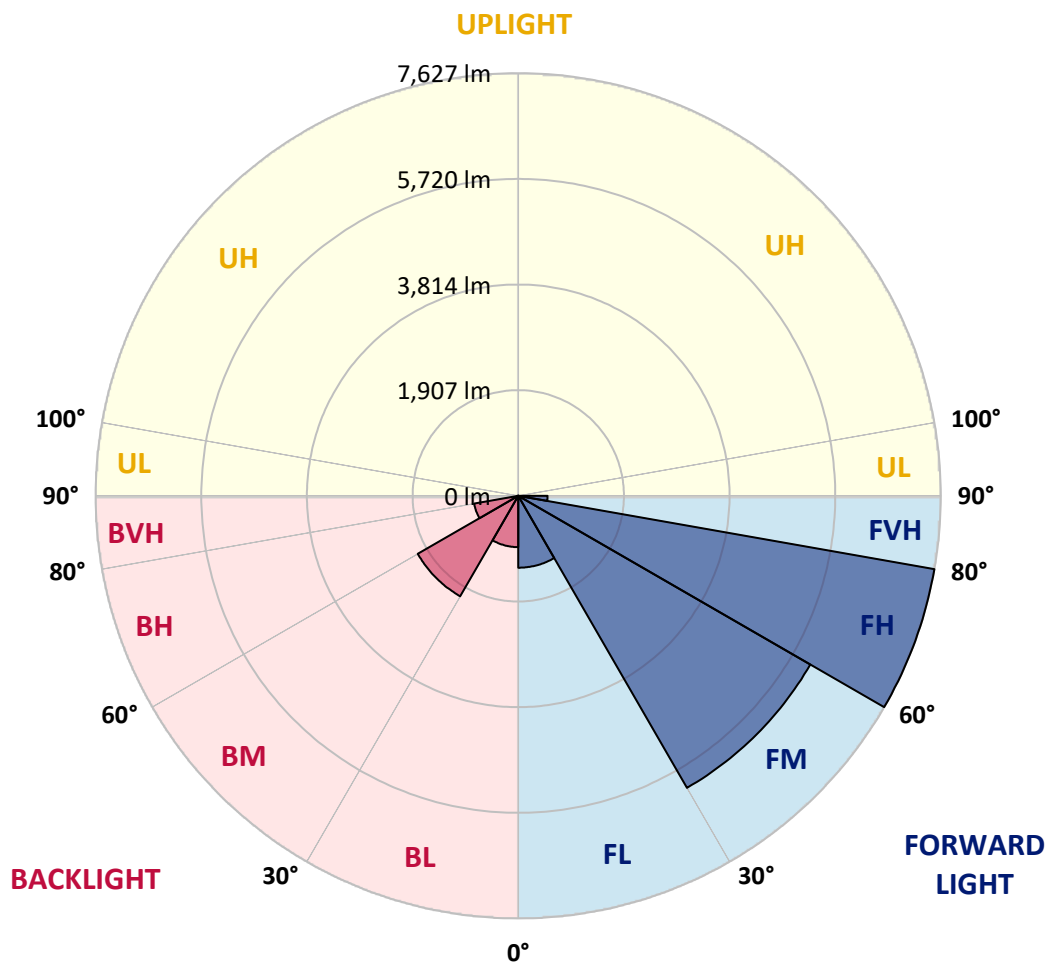


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1297.8	6.7			
FM (30°-60°)	6086.7	31.4			
FH (60°-80°)	7627.1	39.3			G4/12000
FVH (80°-90°)	529.0	2.7			G4/750
BL (0°-30°)	927.0	4.8	B2/1000		
BM (30°-60°)	2094.6	10.8	B2/2500		
BH (60°-80°)	807.8	4.2	B2/1000		G2/1000
BVH (80°-90°)	26.0	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°	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7
2.5°	3009.1	3031.8	3082.6	3109.3	3150.7	3153.4	3153.4	3117.3	3116.0	3042.5	3034.5
5°	3363.2	3416.6	3536.9	3661.2	3687.8	3694.5	3681.2	3609.0	3555.6	3412.6	3381.9
7.5°	3714.6	3817.5	4000.6	4166.2	4219.7	4219.7	4187.6	4070.1	3960.5	3753.3	3675.9
10°	4005.9	4135.5	4384.0	4569.8	4631.3	4617.8	4552.4	4404.1	4253.0	4001.9	3900.3
12.5°	4198.3	4344.0	4616.5	4766.1	4829.0	4794.2	4719.4	4575.1	4416.1	4151.6	4036.7
15°	4294.5	4446.9	4683.3	4762.2	4744.8	4708.7	4699.4	4629.9	4509.6	4262.5	4136.8
17.5°	4336.0	4477.6	4641.9	4592.5	4445.5	4417.4	4510.9	4599.2	4569.8	4358.6	4241.0
20°	4374.7	4493.6	4543.0	4323.9	4067.3	4042.0	4221.1	4472.2	4600.5	4448.2	4340.0
22.5°	4428.1	4501.6	4400.0	4040.7	3764.0	3705.3	3903.0	4281.1	4609.8	4561.8	4453.5
25°	4501.6	4521.7	4242.4	3772.1	3494.1	3435.3	3619.7	4068.7	4593.8	4684.7	4592.5
27.5°	4589.8	4548.3	4091.4	3547.6	3279.0	3224.2	3408.6	3864.2	4548.3	4807.6	4742.2
30°	4704.8	4583.1	3941.7	3373.9	3125.3	3085.2	3263.0	3687.8	4492.3	4964.0	4927.9
32.5°	4821.0	4597.8	3802.7	3272.3	3090.6	3105.3	3251.0	3593.0	4430.8	5113.6	5130.9
35°	4946.5	4644.6	3734.7	3372.6	3380.6	3508.8	3568.9	3681.2	4421.4	5316.7	5384.8
37.5°	5117.6	4748.8	3816.2	3870.9	4148.9	4414.8	4365.4	4112.8	4529.7	5620.0	5747.0
40°	5363.4	4931.9	4171.5	4719.4	5289.9	5721.5	5533.2	4897.1	4861.1	6056.9	6246.7
42.5°	5721.5	5223.2	4802.2	5756.3	6723.7	7434.5	6929.5	5908.6	5440.9	6681.0	6922.7
45°	6250.7	5694.8	5565.2	6850.6	8491.5	9611.2	8560.9	6986.9	6253.3	7625.6	7815.3
47.5°	6984.2	6388.3	6280.1	8003.7	10640.0	12088.4	10370.1	7986.4	7178.0	8913.7	8957.8
50°	7958.3	7322.3	6957.5	9265.1	12995.8	14613.8	12178.0	8951.1	8237.6	10487.7	10437.0
52.5°	9243.8	8625.1	7747.3	10466.4	15418.3	17085.8	13993.9	9798.3	9552.4	12314.3	12210.1
55°	10996.8	10585.3	8826.9	11612.8	17839.4	19572.5	15739.0	10597.3	11289.5	14484.3	13853.6
57.5°	13172.2	13466.1	10383.6	12942.3	20016.1	22135.3	17492.0	11714.3	13545.0	16910.8	14807.7
60°	14575.1	17297.0	13364.6	14907.8	22489.3	25033.5	19894.5	13838.9	15915.3	17780.7	14625.9
62.5°	14235.7	18515.5	16934.8	17417.2	24763.6	27140.7	22248.9	15972.8	16361.6	16499.2	13225.6
65°	13194.8	17532.1	16206.6	17904.9	25339.4	27259.6	22878.2	15697.6	13879.0	13470.1	10630.7
67.5°	11762.5	16365.7	14476.3	16611.5	24298.5	25597.3	21706.3	13885.7	10725.6	10108.2	7712.5
70°	10216.5	15074.9	13340.5	15160.4	22314.4	22700.5	19714.1	12212.8	7888.8	6826.6	4949.2
72.5°	8749.4	13730.7	12562.8	13673.2	19667.3	18868.3	17120.6	10733.6	5744.3	4923.9	3518.2
75°	7248.8	11747.7	11455.1	11906.8	16186.6	14862.4	14225.1	8887.0	4508.3	3562.3	2427.8
77.5°	5593.3	9179.6	9853.0	9535.1	11393.7	11039.6	11026.2	6678.3	3293.7	2377.1	1521.9
80°	3828.2	6397.6	7697.7	6726.4	7394.5	7214.1	8304.4	4480.3	2389.1	1431.1	847.2
82.5°	2250.2	3895.0	5358.1	3256.3	4088.7	4197.0	4945.2	2179.4	1405.7	330.0	184.4
85°	912.7	1537.9	2095.1	1274.7	1972.2	1663.6	1877.4	611.9	391.5	8.0	0.0
87.5°	229.8	491.7	344.7	143.0	228.5	209.8	165.6	74.8	16.0	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°	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7
2.5°	2982.3	2951.6	2875.4	2799.3	2737.9	2655.0	2600.2	2534.7	2472.0	2415.8	2405.2
5°	3297.7	3196.2	3057.2	2930.3	2800.6	2675.0	2550.8	2419.8	2299.6	2226.1	2179.4
7.5°	3554.3	3375.2	3190.8	3029.2	2872.8	2725.8	2561.5	2402.5	2214.1	2113.9	2022.9
10°	3745.3	3510.1	3268.3	3082.6	2924.9	2782.0	2643.0	2482.7	2255.5	2129.8	1993.6
12.5°	3870.9	3591.7	3308.4	3095.9	2919.6	2808.7	2747.2	2684.4	2458.6	2311.6	2113.9
15°	3957.8	3649.1	3336.5	3065.3	2848.8	2767.2	2828.7	2900.9	2756.5	2586.9	2329.0
17.5°	4052.6	3723.9	3348.5	2982.3	2711.1	2676.4	2835.4	3002.4	2995.8	2827.4	2574.8
20°	4152.9	3789.4	3340.5	2848.8	2544.0	2574.8	2778.0	2971.7	3053.2	2962.4	2737.9
22.5°	4255.8	3852.3	3309.7	2675.0	2387.7	2484.0	2687.0	2856.8	2952.9	2924.9	2753.9
25°	4385.4	3940.4	3264.3	2488.0	2258.2	2391.7	2581.5	2719.1	2786.0	2784.6	2667.0
27.5°	4540.3	4058.0	3240.2	2337.0	2165.9	2287.6	2455.9	2578.8	2625.6	2625.6	2532.1
30°	4720.7	4197.0	3213.6	2238.1	2112.5	2179.4	2310.2	2430.5	2477.3	2477.3	2398.5
32.5°	4921.1	4330.6	3149.4	2178.0	2072.4	2073.8	2156.6	2266.2	2322.3	2330.3	2274.2
35°	5161.7	4473.5	3009.1	2129.8	2025.7	1970.9	2010.9	2101.9	2168.6	2186.0	2151.3
37.5°	5477.0	4648.6	2808.7	2059.0	1953.5	1862.6	1872.0	1941.5	2014.9	2041.7	2018.9
40°	5900.6	4854.4	2600.2	1957.5	1852.0	1743.7	1739.7	1790.5	1862.6	1892.0	1880.1
42.5°	6460.5	5101.5	2401.2	1860.0	1729.1	1618.2	1611.4	1651.5	1714.3	1745.1	1739.7
45°	7176.6	5404.8	2230.1	1783.8	1608.7	1499.2	1496.5	1529.9	1584.8	1616.8	1610.1
47.5°	8172.1	5708.2	2113.9	1743.7	1513.9	1401.7	1407.0	1436.4	1485.8	1508.6	1499.2
50°	9469.6	5800.4	2055.0	1743.7	1463.1	1314.8	1341.5	1365.6	1403.0	1416.3	1404.4
52.5°	10714.8	5495.7	2001.6	1754.4	1469.8	1241.3	1298.8	1316.1	1348.2	1353.5	1336.2
55°	11325.5	4724.7	1928.1	1757.1	1511.3	1178.5	1264.0	1296.1	1308.1	1306.8	1277.4
57.5°	11115.7	3820.2	1803.9	1746.4	1539.2	1138.5	1221.3	1282.8	1290.8	1278.7	1224.0
60°	10379.5	2812.7	1709.0	1667.6	1528.6	1126.4	1155.8	1253.4	1265.4	1249.4	1159.8
62.5°	9144.8	1952.2	1635.5	1493.8	1481.8	1122.4	1052.9	1189.2	1218.6	1195.9	1065.0
65°	7199.4	1378.9	1408.4	1309.4	1380.3	1101.1	946.0	1111.7	1151.8	1117.0	932.6
67.5°	4871.7	995.5	1141.1	1186.5	1216.0	1052.9	868.5	1023.6	1077.0	1031.6	779.0
70°	2631.0	698.8	753.6	999.5	1032.9	970.1	799.1	934.0	995.5	946.0	634.7
72.5°	1554.0	502.5	527.8	803.1	860.5	853.8	721.5	829.7	904.6	845.8	515.8
75°	856.5	339.4	376.8	582.6	698.8	658.8	620.0	702.8	779.0	721.5	398.2
77.5°	383.5	203.1	261.9	382.1	549.2	451.6	479.7	547.9	618.7	558.5	265.9
80°	148.3	113.6	173.7	208.5	399.5	249.9	308.6	403.5	454.3	406.2	161.6
82.5°	18.8	50.7	74.8	81.5	232.5	132.3	179.1	253.9	249.9	216.5	81.5
85°	0.0	9.3	10.7	5.3	100.2	48.1	58.8	82.8	77.5	58.8	6.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	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°	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7
2.5°	2339.7	2291.6	2267.5	2247.5	2266.2	2276.8	2276.8	2322.3	2349.0	2359.8	2434.6
5°	2061.8	1972.2	1912.0	1876.1	1888.0	1901.4	1916.1	1973.5	2012.3	2037.7	2153.9
7.5°	1842.6	1706.3	1622.2	1578.0	1584.8	1594.1	1606.1	1662.2	1701.0	1734.4	1864.0
10°	1734.4	1542.0	1431.1	1377.6	1368.3	1362.9	1358.9	1392.3	1421.7	1448.4	1576.7
12.5°	1739.7	1471.2	1336.2	1270.7	1242.6	1210.6	1185.2	1190.5	1209.3	1242.6	1324.2
15°	1807.9	1448.4	1286.8	1205.2	1158.5	1121.0	1090.3	1083.6	1090.3	1095.6	1146.5
17.5°	1900.0	1445.8	1243.9	1142.5	1094.3	1063.6	1035.6	1026.2	1027.6	1034.2	1047.6
20°	1973.5	1437.8	1195.9	1082.3	1039.6	1012.8	984.8	975.4	978.1	979.4	994.1
22.5°	2012.3	1425.7	1142.5	1022.2	986.2	959.4	934.0	932.6	932.6	940.6	951.4
25°	2012.3	1400.4	1094.3	964.7	932.6	908.6	877.9	883.2	885.9	896.6	912.7
27.5°	1964.2	1352.2	1055.5	915.3	881.9	857.8	829.7	836.5	840.5	852.5	872.5
30°	1902.7	1294.8	1011.5	868.5	829.7	812.4	788.3	791.0	796.3	809.7	832.4
32.5°	1837.2	1226.6	975.4	821.7	783.0	769.7	742.9	746.9	752.2	767.0	792.3
35°	1765.2	1146.5	932.6	779.0	740.3	729.6	698.8	701.5	709.5	725.6	750.9
37.5°	1688.9	1081.0	889.9	737.6	697.5	686.7	654.8	657.4	666.8	685.4	709.5
40°	1614.1	1016.8	844.5	693.5	653.4	644.0	609.3	611.9	622.7	642.7	668.1
42.5°	1532.6	967.4	785.7	648.0	605.3	595.9	563.9	567.8	579.9	599.9	625.4
45°	1435.1	935.3	720.2	605.3	557.2	547.9	518.4	526.4	539.9	559.9	586.6
47.5°	1334.9	922.0	665.4	559.9	507.8	499.7	475.7	489.0	503.8	519.8	549.2
50°	1238.6	904.6	609.3	517.1	465.0	456.9	441.0	458.3	473.0	487.7	515.8
52.5°	1129.0	867.2	558.5	479.7	429.0	426.2	418.2	434.3	447.6	460.9	485.0
55°	1015.5	807.1	514.4	446.3	398.2	400.9	396.9	410.2	420.9	433.0	454.3
57.5°	916.7	730.9	479.7	410.2	371.5	379.5	374.1	380.8	387.4	402.2	419.5
60°	816.4	640.0	441.0	367.5	344.7	354.1	339.4	338.0	340.7	344.7	376.8
62.5°	681.4	545.2	392.9	330.0	315.3	319.4	291.3	269.9	269.9	273.9	322.1
65°	547.9	456.9	339.4	287.3	275.2	272.5	232.5	203.1	200.4	212.5	253.9
67.5°	450.3	379.5	286.0	239.1	231.1	233.8	204.5	175.1	172.4	185.7	216.5
70°	372.8	306.0	228.5	184.4	192.4	204.5	175.1	147.0	143.0	155.0	184.4
72.5°	296.6	239.1	175.1	136.3	159.0	173.7	143.0	116.2	113.6	124.2	152.3
75°	217.8	171.1	118.9	98.9	122.9	136.3	104.2	82.8	78.8	88.1	116.2
77.5°	135.0	96.2	74.8	58.8	84.2	90.8	54.7	48.1	46.7	53.4	73.5
80°	62.8	41.4	36.1	20.1	30.7	36.1	22.8	25.4	26.8	32.1	45.4
82.5°	17.3	6.7	1.3	0.0	0.0	10.7	5.3	10.7	13.3	20.1	29.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	6.7	12.0	21.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	10.7
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7	2685.7
2.5°	2490.6	2544.0	2629.6	2717.8	2804.7	2892.9	2978.3	3009.1
5°	2259.5	2382.4	2552.1	2733.9	2920.9	3110.7	3284.3	3363.2
7.5°	2001.6	2178.0	2433.2	2717.8	3015.8	3313.7	3587.7	3714.6
10°	1726.3	1949.4	2240.8	2625.6	3053.2	3464.7	3841.5	4005.9
12.5°	1464.4	1698.3	2020.3	2481.3	3023.7	3551.6	4004.6	4198.3
15°	1245.4	1452.4	1799.8	2310.2	2928.9	3557.0	4082.1	4294.5
17.5°	1081.0	1216.0	1575.3	2120.5	2804.7	3507.4	4108.8	4336.0
20°	999.5	1036.9	1284.1	1877.4	2688.4	3460.7	4135.5	4374.7
22.5°	951.4	960.7	1050.2	1563.3	2549.5	3446.0	4182.3	4428.1
25°	912.7	915.3	939.3	1238.6	2337.0	3436.7	4254.5	4501.6
27.5°	873.9	873.9	887.2	998.1	2048.4	3396.5	4347.9	4589.8
30°	835.1	835.1	844.5	883.2	1710.3	3317.7	4460.2	4704.8
32.5°	795.0	795.0	803.1	831.1	1365.6	3218.9	4563.1	4821.0
35°	754.9	752.2	763.0	792.3	1086.3	3093.2	4666.0	4946.5
37.5°	712.2	710.8	721.5	754.9	938.0	2947.6	4743.5	5117.6
40°	666.8	666.8	678.8	714.8	895.2	2764.5	4866.4	5363.4
42.5°	625.4	622.7	636.0	680.1	863.2	2589.6	5086.9	5721.5
45°	585.3	579.9	591.9	646.7	807.1	2528.1	5498.4	6250.7
47.5°	547.9	534.4	545.2	606.6	756.2	2757.9	6171.8	6984.2
50°	517.1	491.7	501.0	566.5	717.5	3256.3	7045.7	7958.3
52.5°	485.0	451.6	456.9	517.1	682.8	3730.6	7993.1	9243.8
55°	451.6	414.2	416.9	467.7	633.3	3801.4	8917.7	10996.8
57.5°	414.2	379.5	379.5	422.2	597.3	3295.1	9628.5	13172.2
60°	372.8	350.0	343.4	386.1	629.3	2325.0	9711.4	14575.1
62.5°	327.4	315.3	306.0	351.4	653.4	1377.6	9044.6	14235.7
65°	275.2	272.5	265.9	386.1	550.5	813.7	7764.6	13194.8
67.5°	231.1	227.1	227.1	404.9	418.2	511.8	6066.3	11762.5
70°	199.1	184.4	184.4	306.0	253.9	354.1	4235.7	10216.5
72.5°	167.0	151.0	140.3	244.6	189.7	259.2	2647.0	8749.4
75°	133.7	121.6	108.2	161.6	141.7	196.4	1537.9	7248.8
77.5°	96.2	90.8	76.2	118.9	102.9	141.7	915.3	5593.3
80°	49.4	50.7	48.1	68.2	69.5	96.2	521.1	3828.2
82.5°	29.4	22.8	25.4	33.4	40.1	54.7	196.4	2250.2
85°	18.8	12.0	12.0	16.0	20.1	21.4	60.2	912.7
87.5°	9.3	4.0	5.3	8.0	6.7	5.3	2.7	229.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)