

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: P968158

Luminaire Tested: **NAV-SB5B-722-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P968158
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-722-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 2200K, 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: 18381.3 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

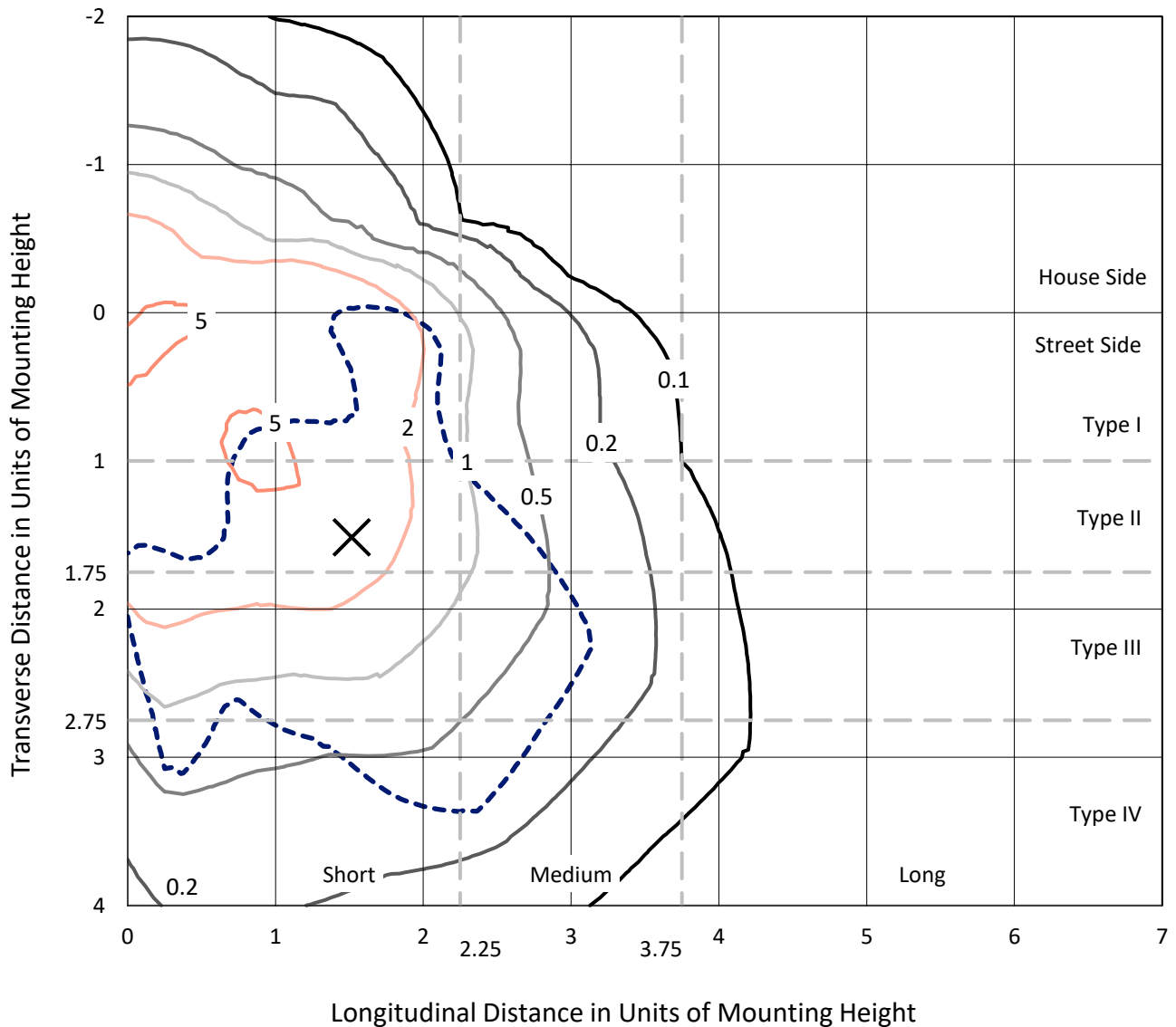
Input Watts (W): 182.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

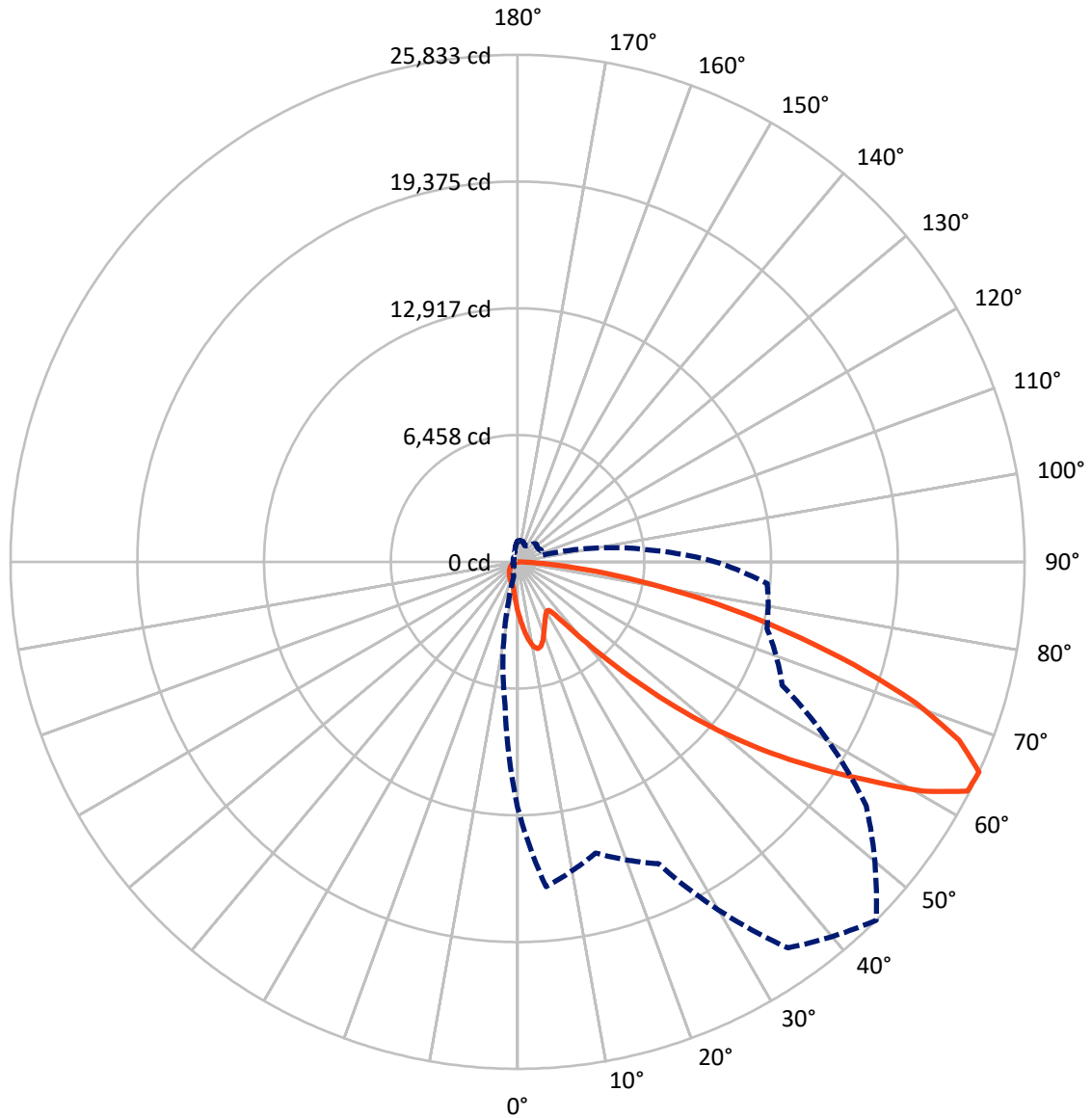
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.7 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	3653.6	0.0	3653.6
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	14727.7	0.0	14727.7
	% Fixture	80.1	0.0	80.1
Total	Lumens	18381.3	0.0	18381.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.6	1.4
10°-20°	751.2	4.1
20°-30°	1106.6	6.0
30°-40°	1421.7	7.7
40°-50°	2299.4	12.5
50°-60°	4032.2	21.9
60°-70°	5045.3	27.4
70°-80°	2948.3	16.0
80°-90°	526.0	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°	18381.3	100.0
0°-180°	18381.3	100.0

Coefficient of Utilization



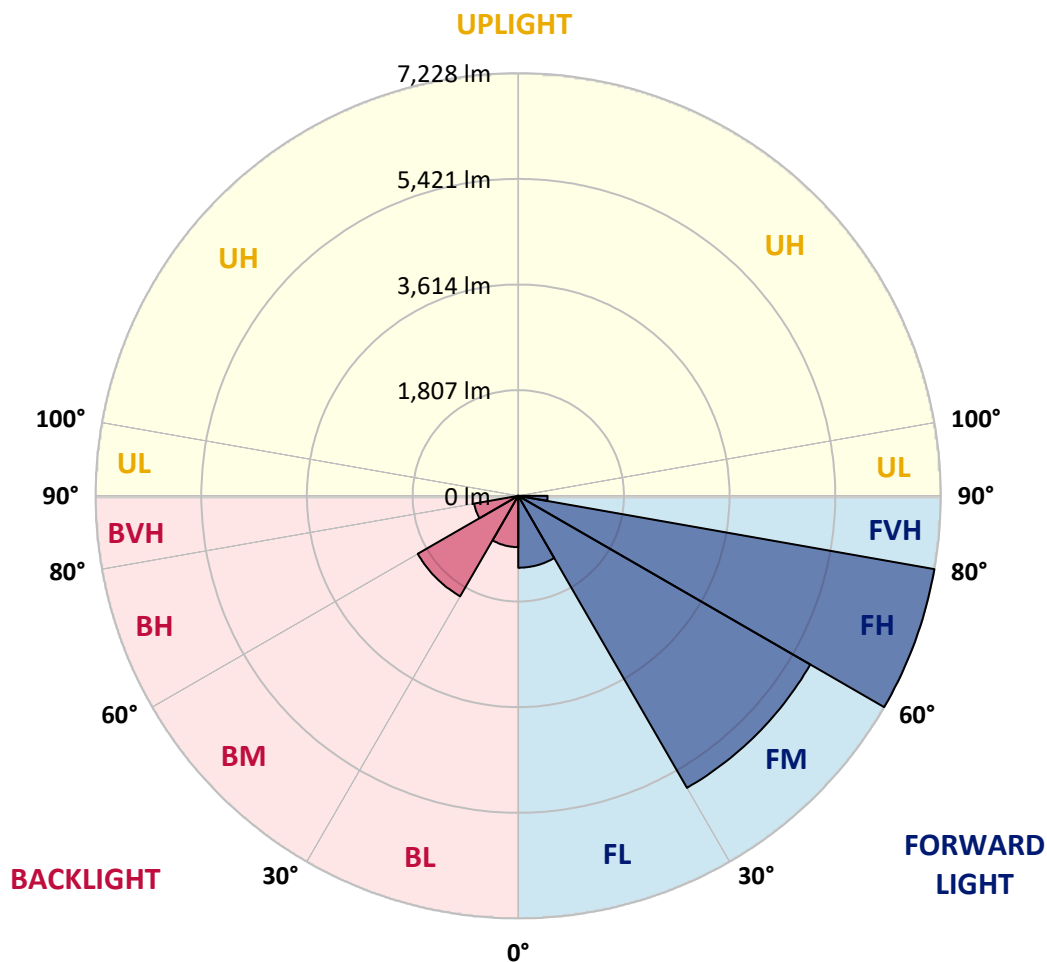
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1229.9	6.7			
FM (30°-60°)	5768.3	31.4			
FH (60°-80°)	7228.1	39.3			G3/7500
FVH (80°-90°)	501.4	2.7			G4/750
BL (0°-30°)	878.5	4.8	B2/1000		
BM (30°-60°)	1985.0	10.8	B2/2500		
BH (60°-80°)	765.5	4.2	B2/1000		G2/1000
BVH (80°-90°)	24.7	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°	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2
2.5°	2851.7	2873.2	2921.4	2946.7	2985.9	2988.4	2988.4	2954.3	2952.9	2883.3	2875.7
5°	3187.2	3237.9	3351.9	3469.6	3494.9	3501.3	3488.6	3420.2	3369.6	3234.1	3205.0
7.5°	3520.3	3617.7	3791.3	3948.3	3998.9	3998.9	3968.5	3857.1	3753.2	3557.0	3483.6
10°	3796.3	3919.2	4154.6	4330.7	4388.9	4376.2	4314.2	4173.7	4030.6	3792.5	3696.3
12.5°	3978.6	4116.7	4375.0	4516.9	4576.3	4543.4	4472.5	4335.8	4185.1	3934.4	3825.4
15°	4069.9	4214.2	4438.4	4513.1	4496.6	4462.3	4453.5	4387.6	4273.7	4039.4	3920.4
17.5°	4109.1	4243.3	4399.1	4352.3	4213.0	4186.3	4275.0	4358.5	4330.7	4130.6	4019.1
20°	4145.8	4258.5	4305.3	4097.6	3854.5	3830.5	4000.2	4238.3	4359.8	4215.4	4112.9
22.5°	4196.5	4266.2	4169.9	3829.2	3567.1	3511.4	3698.8	4057.2	4368.7	4323.0	4220.5
25°	4266.2	4285.1	4020.5	3574.7	3311.4	3255.6	3430.4	3855.8	4353.5	4439.6	4352.3
27.5°	4349.7	4310.4	3877.4	3362.0	3107.5	3055.5	3230.3	3662.1	4310.4	4556.1	4494.0
30°	4458.5	4343.3	3735.5	3197.4	2961.8	2923.8	3092.2	3494.9	4257.2	4704.2	4670.0
32.5°	4568.7	4357.3	3603.8	3101.1	2928.9	2942.9	3080.8	3405.0	4199.0	4846.1	4862.5
35°	4687.7	4401.6	3539.2	3196.1	3203.7	3325.3	3382.2	3488.6	4190.1	5038.5	5103.1
37.5°	4849.9	4500.4	3616.5	3668.4	3931.8	4183.7	4136.9	3897.7	4292.7	5326.0	5446.2
40°	5082.9	4673.8	3953.3	4472.5	5013.2	5422.2	5243.7	4640.9	4606.8	5740.1	5919.9
42.5°	5422.2	4949.9	4551.0	5455.2	6371.9	7045.5	6567.0	5599.5	5156.3	6331.4	6560.6
45°	5923.7	5396.9	5274.0	6492.2	8047.2	9108.4	8113.1	6621.4	5926.2	7226.7	7406.4
47.5°	6618.8	6054.1	5951.6	7585.0	10083.4	11456.0	9827.6	7568.6	6802.4	8447.3	8489.2
50°	7541.9	6939.2	6593.5	8780.4	12315.9	13849.3	11540.9	8482.8	7806.6	9939.0	9890.9
52.5°	8760.2	8173.9	7341.9	9918.8	14611.6	16191.9	13261.8	9285.7	9052.6	11670.0	11571.3
55°	10421.5	10031.5	8365.0	11005.2	16906.1	18548.5	14915.5	10042.8	10698.8	13726.5	13128.8
57.5°	12483.0	12761.6	9840.3	12265.2	18968.9	20977.2	16576.9	11101.5	12836.3	16026.1	14033.0
60°	13812.6	16392.0	12665.3	14127.9	21312.8	23723.8	18853.6	13114.9	15082.7	16850.4	13860.7
62.5°	13490.9	17546.9	16048.8	16506.0	23468.0	25720.7	21084.9	15137.1	15505.6	15636.1	12533.7
65°	12504.5	16614.8	15358.7	16968.2	24013.8	25833.4	21681.3	14876.2	13152.9	12765.3	10074.5
67.5°	11147.1	15509.4	13718.9	15742.4	23027.3	24258.2	20570.7	13159.2	10164.4	9579.4	7309.0
70°	9681.9	14286.1	12642.6	14367.2	21146.9	21512.8	18682.7	11573.8	7476.1	6469.4	4690.3
72.5°	8291.6	13012.3	11905.6	12957.8	18638.4	17881.1	16224.8	10172.0	5443.8	4666.2	3334.1
75°	6869.6	11133.1	10855.9	11283.8	15339.7	14084.8	13480.8	8422.0	4272.4	3375.9	2300.8
77.5°	5300.7	8699.4	9337.5	9036.2	10797.6	10462.0	10449.4	6328.9	3121.4	2252.7	1442.3
80°	3627.9	6063.0	7295.0	6374.5	7007.6	6836.6	7869.9	4245.9	2264.1	1356.2	802.8
82.5°	2132.4	3691.2	5077.7	3086.0	3874.8	3977.4	4686.5	2065.3	1332.1	312.7	174.8
85°	864.9	1457.4	1985.5	1208.1	1869.0	1576.6	1779.1	579.9	371.0	7.6	0.0
87.5°	217.8	466.0	326.7	135.5	216.6	198.8	157.0	70.9	15.2	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°	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2
2.5°	2826.3	2797.2	2725.1	2652.9	2594.6	2516.1	2464.2	2402.1	2342.6	2289.4	2279.3
5°	3125.2	3029.0	2897.3	2776.9	2654.1	2535.1	2417.4	2293.2	2179.3	2109.7	2065.3
7.5°	3368.4	3198.6	3023.9	2870.6	2722.5	2583.2	2427.5	2276.7	2098.3	2003.3	1917.2
10°	3549.4	3326.5	3097.3	2921.4	2771.9	2636.4	2504.7	2352.8	2137.4	2018.4	1889.3
12.5°	3668.4	3403.7	3135.3	2934.0	2766.8	2661.7	2603.5	2543.9	2329.9	2190.6	2003.3
15°	3750.7	3458.2	3161.9	2904.8	2699.7	2622.5	2680.7	2749.0	2612.3	2451.5	2207.1
17.5°	3840.7	3529.1	3173.3	2826.3	2569.3	2536.4	2687.0	2845.3	2839.0	2679.5	2440.1
20°	3935.6	3591.2	3165.7	2699.7	2411.0	2440.1	2632.6	2816.2	2893.5	2807.4	2594.6
22.5°	4033.1	3650.6	3136.6	2535.1	2262.9	2354.0	2546.5	2707.3	2798.5	2771.9	2609.9
25°	4156.0	3734.3	3093.6	2357.8	2140.0	2266.7	2446.5	2576.8	2640.2	2639.0	2527.5
27.5°	4302.8	3845.7	3070.7	2214.7	2052.7	2167.9	2327.5	2443.9	2488.3	2488.3	2399.6
30°	4473.8	3977.4	3045.4	2121.0	2002.0	2065.3	2189.4	2303.4	2347.7	2347.7	2272.9
32.5°	4663.8	4104.0	2984.6	2064.0	1964.0	1965.2	2043.7	2147.6	2200.8	2208.4	2155.2
35°	4891.6	4239.5	2851.7	2018.4	1919.7	1867.8	1905.8	1991.9	2055.1	2071.6	2038.7
37.5°	5190.5	4405.3	2661.7	1951.3	1851.3	1765.2	1774.1	1839.9	1909.6	1934.9	1913.4
40°	5591.9	4600.4	2464.2	1855.1	1755.1	1652.5	1648.7	1696.8	1765.2	1793.0	1781.7
42.5°	6122.4	4834.6	2275.5	1762.7	1638.6	1533.5	1527.1	1565.1	1624.6	1653.7	1648.7
45°	6801.2	5122.1	2113.4	1690.5	1524.6	1420.8	1418.2	1449.9	1501.8	1532.2	1525.9
47.5°	7744.6	5409.5	2003.3	1652.5	1434.7	1328.3	1333.4	1361.3	1408.1	1429.7	1420.8
50°	8974.2	5497.0	1947.5	1652.5	1386.6	1246.0	1271.3	1294.2	1329.6	1342.2	1330.9
52.5°	10154.3	5208.2	1896.9	1662.7	1392.9	1176.4	1230.8	1247.3	1277.7	1282.8	1266.3
55°	10733.0	4477.6	1827.3	1665.1	1432.1	1116.8	1197.9	1228.3	1239.7	1238.4	1210.5
57.5°	10534.2	3620.3	1709.5	1655.1	1458.8	1078.9	1157.4	1215.6	1223.2	1211.9	1159.9
60°	9836.5	2665.5	1619.6	1580.3	1448.6	1067.4	1095.3	1187.8	1199.1	1184.0	1099.1
62.5°	8666.5	1850.0	1549.9	1415.7	1404.4	1063.6	997.8	1127.0	1154.9	1133.3	1009.2
65°	6822.7	1306.8	1334.7	1241.0	1308.1	1043.4	896.6	1053.5	1091.5	1058.6	883.9
67.5°	4616.9	943.4	1081.4	1124.4	1152.3	997.8	823.1	970.0	1020.6	977.5	738.2
70°	2493.3	662.3	714.2	947.2	978.9	919.3	757.3	885.1	943.4	896.6	601.5
72.5°	1472.7	476.1	500.2	761.1	815.5	809.1	683.8	786.4	857.3	801.6	488.8
75°	811.7	321.6	357.1	552.1	662.3	624.3	587.5	666.0	738.2	683.8	377.3
77.5°	363.5	192.5	248.2	362.1	520.4	428.0	454.6	519.2	586.3	529.3	251.9
80°	140.5	107.6	164.6	197.5	378.6	236.8	292.5	382.4	430.5	385.0	153.2
82.5°	17.7	48.1	70.9	77.3	220.4	125.4	169.6	240.6	236.8	205.1	77.3
85°	0.0	8.8	10.1	5.0	95.0	45.6	55.8	78.5	73.5	55.8	6.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2
2.5°	2217.3	2171.7	2148.9	2129.8	2147.6	2157.7	2157.7	2200.8	2226.1	2236.2	2307.2
5°	1953.9	1869.0	1812.1	1777.9	1789.2	1802.0	1815.9	1870.3	1907.0	1931.1	2041.3
7.5°	1746.2	1617.0	1537.3	1495.5	1501.8	1510.6	1522.0	1575.2	1612.0	1643.6	1766.5
10°	1643.6	1461.2	1356.2	1305.5	1296.6	1291.6	1287.8	1319.5	1347.4	1372.7	1494.2
12.5°	1648.7	1394.2	1266.3	1204.3	1177.6	1147.3	1123.2	1128.2	1145.9	1177.6	1254.9
15°	1713.3	1372.7	1219.4	1142.2	1097.9	1062.4	1033.3	1026.9	1033.3	1038.3	1086.5
17.5°	1800.6	1370.1	1179.0	1082.7	1037.1	1008.0	981.3	972.5	973.7	980.1	992.8
20°	1870.3	1362.5	1133.3	1025.7	985.1	959.8	933.3	924.3	926.9	928.1	942.1
22.5°	1907.0	1351.2	1082.7	968.7	934.5	909.2	885.1	883.9	883.9	891.4	901.6
25°	1907.0	1327.1	1037.1	914.3	883.9	861.1	832.0	837.0	839.6	849.7	864.9
27.5°	1861.4	1281.5	1000.4	867.4	835.8	812.9	786.4	792.7	796.5	807.9	826.9
30°	1803.2	1227.0	958.6	823.1	786.4	769.9	747.1	749.7	754.7	767.4	788.9
32.5°	1741.2	1162.5	924.3	778.8	742.0	729.4	704.1	707.9	712.9	726.8	750.9
35°	1672.8	1086.5	883.9	738.2	701.5	691.4	662.3	664.8	672.4	687.6	711.7
37.5°	1600.5	1024.4	843.4	698.9	661.0	650.9	620.4	623.0	631.9	649.6	672.4
40°	1529.7	963.6	800.3	657.2	619.2	610.4	577.4	579.9	590.1	609.1	633.1
42.5°	1452.4	916.8	744.6	614.2	573.6	564.8	534.3	538.1	549.6	568.6	592.7
45°	1360.0	886.4	682.5	573.6	528.1	519.2	491.3	498.9	511.6	530.5	555.9
47.5°	1265.1	873.7	630.6	530.5	481.2	473.6	450.8	463.5	477.3	492.6	520.4
50°	1173.8	857.3	577.4	490.1	440.6	433.1	417.9	434.3	448.2	462.2	488.8
52.5°	1070.0	821.8	529.3	454.6	406.5	404.0	396.4	411.5	424.2	436.9	459.6
55°	962.4	764.9	487.5	422.9	377.3	379.9	376.1	388.8	398.8	410.3	430.5
57.5°	868.7	692.7	454.6	388.8	352.0	359.7	354.5	360.9	367.3	381.2	397.6
60°	773.7	606.6	417.9	348.2	326.7	335.6	321.6	320.4	322.9	326.7	357.1
62.5°	645.9	516.6	372.3	312.7	298.9	302.7	276.0	255.8	255.8	259.6	305.1
65°	519.2	433.1	321.6	272.2	260.9	258.3	220.4	192.5	189.9	201.3	240.6
67.5°	426.7	359.7	271.0	226.6	219.0	221.6	193.7	165.8	163.4	176.0	205.1
70°	353.3	290.0	216.6	174.8	182.3	193.7	165.8	139.3	135.5	146.9	174.8
72.5°	281.2	226.6	165.8	129.1	150.7	164.6	135.5	110.2	107.6	117.8	144.3
75°	206.4	162.1	112.7	93.7	116.5	129.1	98.8	78.5	74.7	83.5	110.2
77.5°	127.9	91.1	70.9	55.8	79.7	86.1	52.0	45.6	44.3	50.6	69.6
80°	59.6	39.3	34.2	19.0	29.1	34.2	21.5	24.1	25.3	30.3	43.0
82.5°	16.5	6.4	1.2	0.0	0.0	10.1	5.0	10.1	12.7	19.0	27.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	6.4	11.4	20.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	10.1
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2	2545.2
2.5°	2360.4	2411.0	2492.1	2575.6	2657.9	2741.5	2822.5	2851.7
5°	2141.3	2257.8	2418.6	2590.8	2768.1	2947.9	3112.5	3187.2
7.5°	1896.9	2064.0	2305.9	2575.6	2858.0	3140.4	3399.9	3520.3
10°	1636.0	1847.5	2123.6	2488.3	2893.5	3283.5	3640.6	3796.3
12.5°	1387.8	1609.5	1914.6	2351.5	2865.6	3365.8	3795.1	3978.6
15°	1180.2	1376.5	1705.7	2189.4	2775.7	3370.8	3868.5	4069.9
17.5°	1024.4	1152.3	1492.9	2009.6	2657.9	3324.0	3893.8	4109.1
20°	947.2	982.7	1216.9	1779.1	2547.7	3279.7	3919.2	4145.8
22.5°	901.6	910.4	995.3	1481.5	2416.0	3265.8	3963.5	4196.5
25°	864.9	867.4	890.2	1173.8	2214.7	3256.8	4031.8	4266.2
27.5°	828.1	828.1	840.8	945.9	1941.2	3218.9	4120.5	4349.7
30°	791.4	791.4	800.3	837.0	1620.8	3144.2	4226.9	4458.5
32.5°	753.5	753.5	761.1	787.6	1294.2	3050.5	4324.4	4568.7
35°	715.4	712.9	723.0	750.9	1029.5	2931.4	4421.8	4687.7
37.5°	675.0	673.6	683.8	715.4	888.9	2793.4	4495.3	4849.9
40°	631.9	631.9	643.3	677.4	848.4	2619.9	4611.8	5082.9
42.5°	592.7	590.1	602.7	644.5	818.1	2454.1	4820.8	5422.2
45°	554.6	549.6	561.0	612.8	764.9	2395.8	5210.8	5923.7
47.5°	519.2	506.6	516.6	574.9	716.7	2613.6	5849.0	6618.8
50°	490.1	466.0	474.9	536.9	680.0	3086.0	6677.1	7541.9
52.5°	459.6	428.0	433.1	490.1	647.1	3535.4	7574.9	8760.2
55°	428.0	392.6	395.0	443.2	600.2	3602.6	8451.1	10421.5
57.5°	392.6	359.7	359.7	400.2	566.0	3122.7	9124.9	12483.0
60°	353.3	331.8	325.4	365.9	596.4	2203.3	9203.4	13812.6
62.5°	310.3	298.9	290.0	333.0	619.2	1305.5	8571.5	13490.9
65°	260.9	258.3	251.9	365.9	521.7	771.2	7358.4	12504.5
67.5°	219.0	215.2	215.2	383.7	396.4	485.0	5748.9	11147.1
70°	188.7	174.8	174.8	290.0	240.6	335.6	4014.1	9681.9
72.5°	158.3	143.1	132.9	231.8	179.8	245.7	2508.5	8291.6
75°	126.6	115.2	102.6	153.2	134.3	186.1	1457.4	6869.6
77.5°	91.1	86.1	72.2	112.7	97.5	134.3	867.4	5300.7
80°	46.8	48.1	45.6	64.6	65.8	91.1	493.8	3627.9
82.5°	27.9	21.5	24.1	31.7	38.0	52.0	186.1	2132.4
85°	17.7	11.4	11.4	15.2	19.0	20.3	57.0	864.9
87.5°	8.8	3.8	5.0	7.6	6.4	5.0	2.6	217.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)