

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: P196771

Luminaire Tested: **NAV-AF-01-D-UNV-T2R-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196771  
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-01-D-UNV-T2R-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6792.6 lumens  
Efficiency: N/A  
Efficacy: 101.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

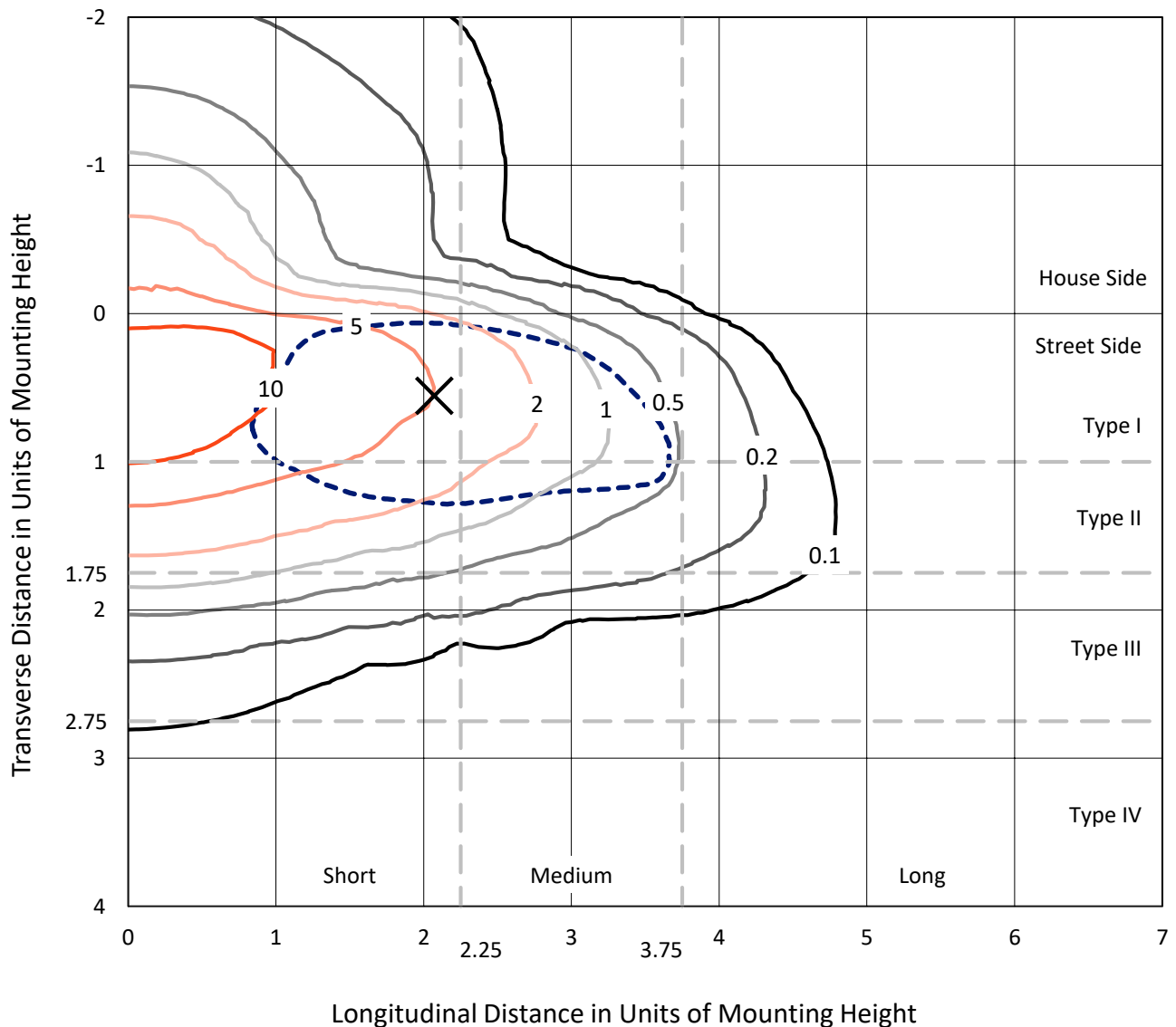
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

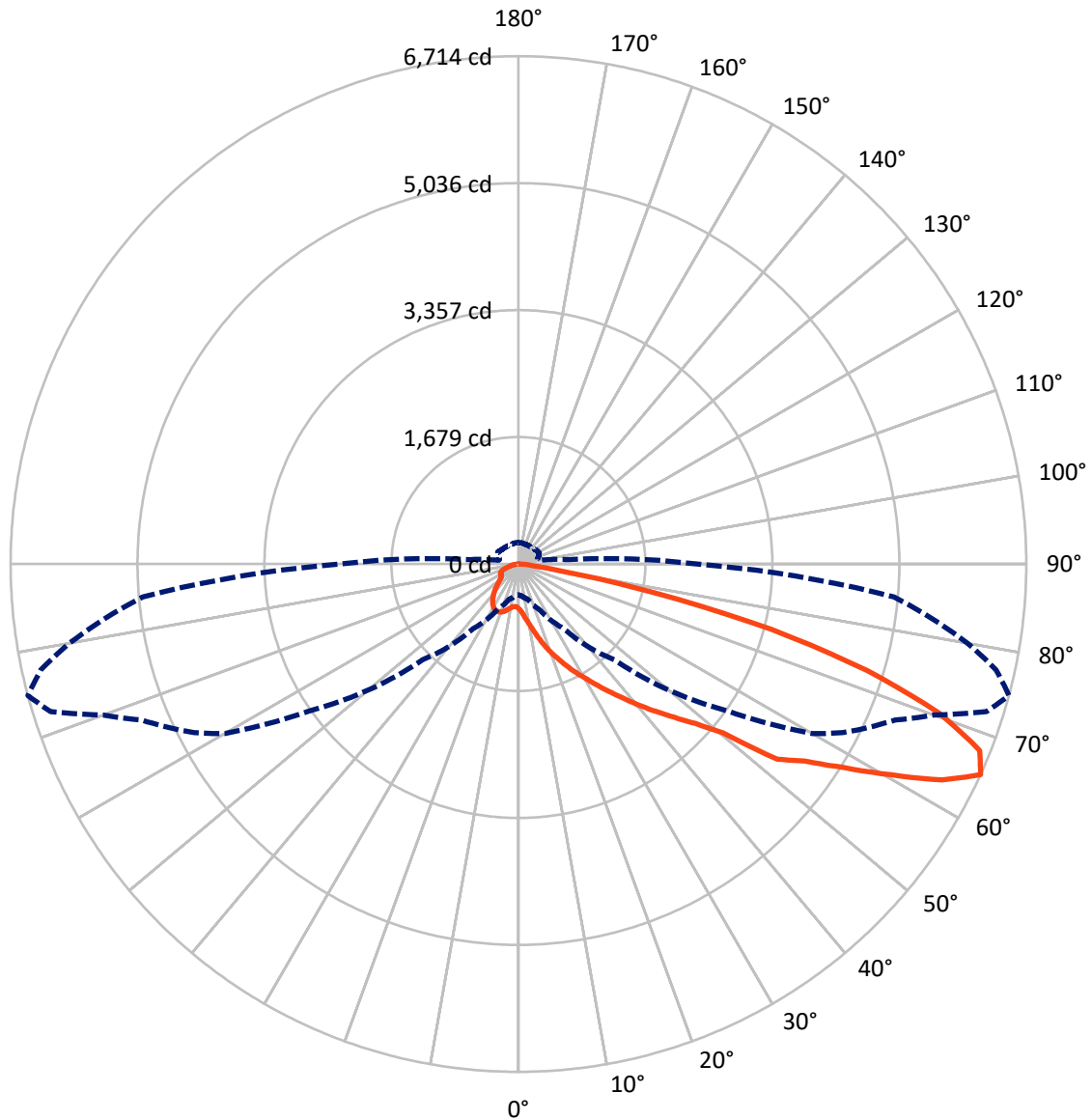
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.9 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	1020.7	0.0	1020.7
	% Fixture	15.0	0.0	15.0
<b>Street Side</b>	Lumens	5772.0	0.0	5772.0
	% Fixture	85.0	0.0	85.0
<b>Total</b>	Lumens	6792.6	0.0	6792.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.5	1.0
10°-20°	265.4	3.9
20°-30°	535.6	7.9
30°-40°	909.5	13.4
40°-50°	1268.6	18.7
50°-60°	1554.8	22.9
60°-70°	1462.9	21.5
70°-80°	641.5	9.4
80°-90°	84.9	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°	6792.6	100.0
0°-180°	6792.6	100.0

**Coefficient of Utilization**



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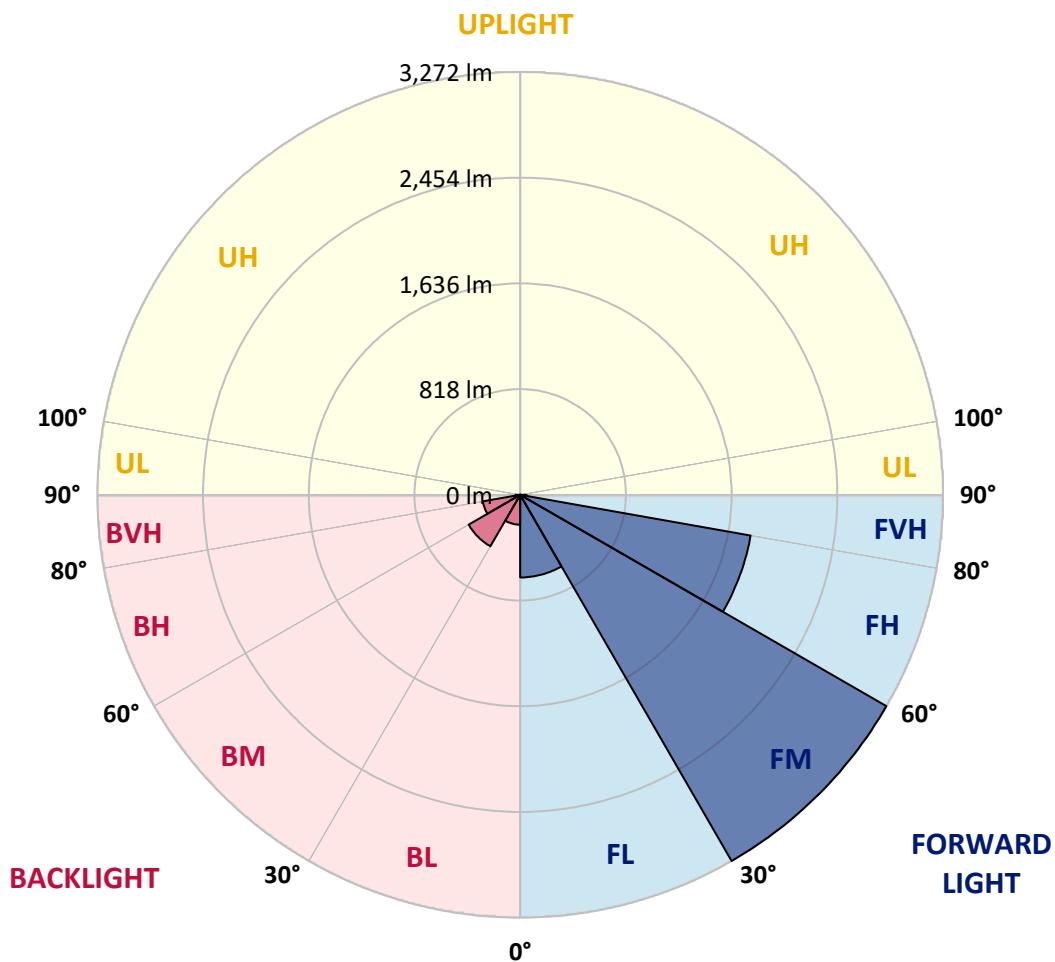
CATALOG NUMBER: NAV-AF-01-D-UNV-T2R-7030-1200

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	639.4	9.4			
FM (30°-60°)	3272.4	48.2			
FH (60°-80°)	1811.0	26.7			G2/5000
FVH (80°-90°)	49.2	0.7			G1/100
BL (0°-30°)	231.1	3.4	B1/500		
BM (30°-60°)	460.6	6.8	B1/1000		
BH (60°-80°)	293.4	4.3	B1/500		G1/500
BVH (80°-90°)	35.7	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
0°	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6
2.5°	741.1	732.5	733.3	721.2	703.5	684.1	668.0	659.4	652.1	649.9	637.8
5°	969.2	958.4	954.5	926.8	885.4	836.2	787.3	768.3	752.8	743.3	719.9
7.5°	1156.0	1150.3	1145.1	1119.6	1078.6	1015.4	936.8	908.7	882.9	854.3	826.2
10°	1282.9	1280.7	1278.7	1261.0	1226.8	1172.0	1087.2	1056.5	1024.1	987.8	951.1
12.5°	1378.9	1378.9	1380.6	1366.0	1345.2	1302.8	1225.9	1197.4	1164.6	1126.6	1084.6
15°	1443.4	1445.0	1454.0	1458.4	1447.5	1420.4	1352.9	1327.9	1296.8	1259.2	1217.7
17.5°	1486.0	1489.5	1502.9	1517.2	1530.9	1521.4	1471.4	1448.0	1420.0	1385.4	1346.5
20°	1585.5	1581.1	1581.5	1577.2	1597.5	1604.9	1577.2	1557.8	1535.3	1503.7	1468.3
22.5°	1794.1	1786.0	1764.7	1710.8	1686.1	1683.5	1667.1	1656.7	1639.4	1619.5	1584.1
25°	2066.4	2057.0	2015.0	1925.9	1852.5	1784.6	1754.3	1747.9	1736.6	1723.2	1697.8
27.5°	2347.7	2337.3	2283.3	2171.0	2075.1	1938.0	1843.9	1835.2	1824.8	1819.1	1807.1
30°	2595.2	2584.1	2530.9	2416.9	2301.0	2137.6	1964.4	1934.1	1916.4	1918.1	1911.3
32.5°	2812.7	2802.7	2743.1	2626.8	2509.2	2350.7	2120.8	2073.7	2034.0	2019.3	2024.5
35°	2995.1	2985.9	2920.7	2803.6	2685.1	2553.4	2322.2	2251.3	2186.5	2145.9	2141.2
37.5°	3102.2	3097.0	3051.2	2951.7	2834.3	2737.5	2547.7	2469.2	2373.6	2314.4	2288.4
40°	3096.1	3101.8	3093.9	3049.0	2957.8	2887.4	2782.9	2705.0	2611.8	2523.6	2470.8
42.5°	3007.9	3015.8	3050.7	3074.1	3049.4	3006.7	2988.1	2930.3	2846.3	2753.0	2680.0
45°	2886.9	2893.8	2939.3	3023.5	3093.9	3106.0	3167.9	3138.9	3068.0	2988.5	2908.2
47.5°	2701.6	2715.0	2767.6	2901.7	3069.3	3186.0	3318.6	3332.1	3291.0	3225.4	3150.2
50°	2433.2	2451.0	2524.9	2715.4	2976.0	3268.1	3543.0	3593.9	3577.4	3510.9	3434.9
52.5°	2158.4	2176.1	2274.7	2477.4	2825.6	3301.9	3763.8	3894.2	3988.4	4057.2	4070.6
55°	1872.3	1892.3	2000.2	2233.6	2625.1	3258.9	3921.5	4069.7	4165.2	4236.8	4265.8
57.5°	1549.6	1572.0	1676.6	1912.6	2341.7	3087.0	4096.9	4306.9	4449.0	4559.7	4621.8
60°	1179.2	1207.4	1315.8	1553.4	1969.2	2757.8	4175.2	4485.7	4711.8	4877.8	4976.2
62.5°	747.6	776.1	888.9	1135.6	1545.3	2307.9	3953.9	4407.2	4792.5	5038.1	5218.7
65°	407.9	420.4	483.2	668.8	1041.8	1790.6	3392.9	3927.6	4482.8	4830.6	5108.1
67.5°	305.9	307.7	314.1	359.6	554.8	1209.1	2652.7	3142.3	3758.9	4206.6	4538.1
70°	267.9	267.9	268.8	269.3	301.2	655.1	1797.2	2247.9	2813.1	3266.0	3677.7
72.5°	240.3	237.6	236.8	231.6	235.9	335.8	978.3	1383.2	1859.8	2367.9	2752.1
75°	207.4	206.9	206.9	201.8	204.5	236.3	424.4	663.8	1033.1	1506.3	1884.5
77.5°	179.3	176.4	176.8	173.7	181.9	181.1	201.4	273.4	449.8	791.2	1104.9
80°	147.8	145.7	147.0	145.2	158.2	134.0	135.7	167.2	223.4	347.0	489.2
82.5°	109.4	110.3	118.4	117.6	133.1	90.3	99.4	124.9	150.3	172.8	187.9
85°	63.9	65.2	85.1	89.5	97.7	47.5	60.9	74.3	83.8	92.9	96.8
87.5°	6.9	9.1	47.5	48.8	43.6	14.3	24.6	31.1	33.4	35.4	31.1
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):**

	67.5°	70°	72.5°	75°	77.5°	80°	85°	90°	95°	100°	102.5°
0°	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6
2.5°	633.9	628.4	622.2	618.7	612.7	607.6	598.0	590.2	581.6	575.6	572.9
5°	708.2	694.9	680.5	670.2	657.2	646.0	624.4	598.5	590.2	572.9	568.7
7.5°	805.0	780.8	756.6	736.7	714.3	695.7	659.4	612.7	606.7	579.1	572.9
10°	918.7	883.3	847.5	816.7	783.8	755.3	701.8	636.1	629.6	594.2	588.2
12.5°	1045.7	1002.5	956.2	910.4	871.6	831.4	758.4	672.4	662.0	620.0	611.9
15°	1176.6	1130.0	1076.4	1021.1	973.2	920.0	827.9	719.9	700.9	651.6	640.4
17.5°	1305.8	1255.3	1199.1	1137.3	1081.1	1017.6	903.1	773.0	740.2	682.8	668.4
20°	1430.8	1379.3	1320.1	1259.6	1189.7	1117.0	980.0	825.4	775.2	708.6	690.1
22.5°	1544.4	1500.3	1441.1	1371.5	1300.6	1219.0	1058.2	877.7	805.9	728.5	704.8
25°	1664.1	1623.9	1565.1	1498.2	1415.6	1324.9	1139.0	927.3	830.5	739.3	709.9
27.5°	1785.1	1750.6	1695.1	1624.8	1536.1	1435.4	1221.2	973.2	850.4	742.9	707.4
30°	1914.2	1887.5	1836.5	1757.9	1668.4	1557.0	1310.6	1018.1	862.9	738.0	695.7
32.5°	2036.6	2035.7	1990.3	1908.6	1812.3	1689.5	1404.8	1063.4	869.3	724.6	675.4
35°	2163.6	2181.4	2147.2	2069.4	1967.9	1831.7	1509.0	1111.8	869.8	700.9	649.0
37.5°	2307.9	2339.5	2324.4	2250.4	2143.7	1993.8	1631.2	1166.3	867.3	668.0	610.5
40°	2472.1	2515.3	2514.9	2452.7	2338.5	2175.3	1773.4	1227.2	861.2	627.0	565.2
42.5°	2660.1	2711.5	2725.8	2664.4	2549.0	2373.6	1936.3	1294.1	851.6	586.4	517.3
45°	2875.2	2920.7	2947.5	2890.5	2774.6	2589.7	2123.5	1370.2	839.9	534.1	462.3
47.5°	3105.5	3158.3	3198.6	3149.7	3026.2	2836.0	2345.1	1468.3	835.8	474.5	403.1
50°	3391.2	3445.7	3532.6	3510.5	3442.6	3289.7	2814.0	1700.0	837.5	417.8	353.5
52.5°	4100.0	4224.8	4334.6	4285.7	4124.5	3862.2	3195.1	1828.7	801.1	371.6	318.9
55°	4313.8	4455.6	4617.7	4597.3	4442.6	4178.1	3496.3	1936.3	766.1	337.9	296.4
57.5°	4688.0	4855.3	5081.6	5077.4	4887.7	4590.0	3883.8	2065.1	751.0	318.5	285.1
60°	5084.3	5297.3	5610.1	5659.0	5452.9	5143.1	4341.9	2223.2	753.2	307.7	278.7
62.5°	5373.8	5686.2	6141.3	6287.4	6044.4	5703.2	4817.2	2381.5	740.2	295.1	271.0
65°	5391.5	5841.3	6486.9	6714.2	6468.3	6029.7	4984.9	2350.2	662.4	278.3	258.4
67.5°	4959.4	5545.4	6329.6	6578.9	6327.4	5828.3	4691.0	2054.7	538.4	248.9	236.8
70°	4130.5	4810.8	5624.8	5902.7	5694.8	5189.7	4082.6	1641.2	402.3	210.0	204.5
72.5°	3192.0	3826.4	4565.7	4822.8	4663.8	4219.6	3220.1	1196.1	287.4	170.2	166.0
75°	2282.0	2822.1	3358.8	3457.0	3300.0	2892.2	2089.2	747.2	201.4	139.6	133.6
77.5°	1413.0	1764.3	1957.1	1830.8	1630.8	1355.6	850.4	369.1	134.0	113.6	107.6
80°	627.0	735.9	687.0	612.3	483.6	397.6	259.7	163.8	86.5	87.7	84.2
82.5°	210.9	223.0	216.9	215.7	194.5	170.2	110.3	70.9	48.4	56.2	54.8
85°	102.8	107.6	108.0	111.9	97.2	75.6	29.8	28.1	20.8	30.3	31.5
87.5°	31.1	31.5	28.5	31.1	25.0	17.3	5.6	7.7	4.0	7.3	7.3
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°	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6	588.6
2.5°	568.2	566.5	563.4	560.1	559.2	554.8	553.5	551.4	550.1	547.9	546.2
5°	563.0	560.1	556.5	552.7	552.7	546.7	544.0	541.5	541.5	537.5	535.8
7.5°	568.2	564.4	560.5	557.0	558.4	551.4	548.8	546.2	545.8	541.9	540.2
10°	582.9	579.1	574.2	570.8	569.6	563.9	560.9	557.0	554.4	551.8	549.2
12.5°	605.4	600.2	594.2	586.8	583.8	579.1	574.2	569.1	563.0	560.5	556.5
15°	632.2	623.6	615.3	606.3	598.0	593.3	586.8	578.6	570.5	566.9	561.7
17.5°	654.3	645.1	633.4	622.7	608.0	604.1	595.0	585.1	571.7	570.5	562.5
20°	672.8	659.0	644.7	631.7	609.2	607.2	595.9	584.2	565.2	565.2	555.7
22.5°	683.2	664.2	647.4	630.0	601.9	600.2	587.3	573.4	550.1	551.0	539.3
25°	684.9	662.0	640.8	620.0	587.7	584.6	568.2	553.1	527.6	525.9	513.7
27.5°	678.0	651.1	626.6	601.5	566.5	560.1	541.9	523.7	498.7	494.3	481.4
30°	662.0	630.4	602.8	573.8	537.1	526.7	507.7	489.2	463.7	458.1	446.0
32.5°	636.6	600.6	570.0	541.1	500.4	487.4	468.4	449.8	425.2	420.8	409.6
35°	602.8	562.5	530.2	499.6	458.9	445.6	427.3	411.0	388.5	386.8	378.9
37.5°	560.5	518.6	484.0	454.6	416.2	409.1	390.6	378.6	359.9	361.6	357.9
40°	512.5	469.7	436.8	411.0	377.7	371.6	360.3	351.3	335.3	340.2	340.6
42.5°	464.2	421.3	391.4	368.2	339.7	335.8	328.0	322.8	310.8	320.2	324.1
45°	409.1	369.4	343.9	326.2	305.1	305.1	301.2	300.8	292.6	305.9	309.9
47.5°	356.0	324.9	307.2	296.4	281.8	288.7	287.4	290.8	284.7	298.6	302.1
50°	315.9	294.2	283.4	278.3	267.9	278.7	281.4	286.0	280.9	293.0	295.5
52.5°	290.4	276.1	270.1	268.8	261.4	274.8	279.1	283.4	277.4	288.7	288.2
55°	276.1	266.6	264.4	267.0	261.4	274.3	278.7	281.8	276.5	284.3	283.8
57.5°	271.0	265.7	267.0	271.0	267.0	277.8	280.0	283.4	278.3	281.8	283.4
60°	270.5	270.5	275.7	280.9	278.3	286.0	287.4	287.0	282.2	282.7	283.4
62.5°	267.9	274.3	283.0	291.2	290.4	299.9	300.8	295.1	291.2	287.0	285.6
65°	259.7	270.5	283.0	294.2	296.0	310.8	312.4	306.8	304.2	296.8	291.2
67.5°	241.6	255.3	270.1	283.8	287.0	306.8	310.8	312.8	314.1	309.4	302.1
70°	210.9	225.2	240.3	256.2	260.6	282.7	290.8	300.8	308.5	315.4	312.8
72.5°	171.5	184.5	197.4	212.2	218.6	241.6	252.4	269.7	281.8	299.5	306.8
75°	136.1	143.9	151.7	160.7	166.0	188.4	201.8	222.6	239.0	263.7	280.0
77.5°	107.2	111.0	114.9	118.9	121.0	133.6	144.3	165.1	184.1	215.2	239.4
80°	82.5	84.6	85.1	86.5	85.5	91.6	95.5	108.0	124.4	155.1	183.7
82.5°	53.1	54.8	55.7	57.9	53.5	61.4	63.9	65.2	73.9	96.3	116.7
85°	29.8	30.3	30.7	31.5	25.4	33.4	33.7	31.5	30.7	39.8	44.9
87.5°	7.3	6.9	7.3	7.3	3.1	6.9	6.9	4.8	3.5	6.4	5.1
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):**

	135°	145°	155°	165°	175°	180°
0°	588.6	588.6	588.6	588.6	588.6	588.6
2.5°	542.3	541.5	541.9	539.7	538.8	539.3
5°	533.6	532.0	532.0	530.7	529.0	529.0
7.5°	537.5	534.1	532.7	530.2	527.6	528.0
10°	543.6	537.5	533.1	529.4	526.3	526.3
12.5°	547.5	536.7	530.2	525.0	521.6	521.6
15°	548.4	532.0	522.5	516.8	513.3	513.3
17.5°	543.1	522.5	510.4	503.0	499.1	500.0
20°	530.2	504.7	490.5	482.7	478.8	479.2
22.5°	509.9	480.5	464.2	455.1	451.1	451.1
25°	482.3	450.2	432.5	425.2	421.7	421.7
27.5°	450.7	417.8	402.3	396.7	394.5	394.5
30°	415.3	388.1	376.8	372.9	369.4	369.4
32.5°	385.4	366.0	362.0	356.9	347.9	347.5
35°	361.6	359.6	356.5	340.9	328.0	326.2
37.5°	348.7	361.6	342.6	315.9	305.5	305.1
40°	341.8	353.9	321.1	308.1	306.8	306.8
42.5°	325.4	334.0	319.8	312.4	312.4	312.8
45°	308.1	315.4	322.8	316.3	318.5	318.9
47.5°	296.0	310.8	322.8	317.2	321.4	324.1
50°	284.7	306.4	316.3	316.3	321.1	321.4
52.5°	282.2	300.4	310.3	315.0	315.4	313.2
55°	282.7	295.5	305.5	311.6	308.9	308.9
57.5°	282.2	293.0	301.7	303.7	305.1	305.1
60°	282.7	289.5	296.4	295.5	299.9	299.9
62.5°	283.8	284.7	288.2	287.4	293.8	293.8
65°	287.0	278.7	276.5	277.4	285.1	284.7
67.5°	292.6	270.5	263.7	264.0	275.3	273.4
70°	300.8	259.3	248.9	246.3	265.3	262.3
72.5°	303.3	246.3	229.9	227.3	238.5	229.9
75°	291.2	235.9	209.6	200.9	196.2	193.6
77.5°	259.7	229.5	188.4	170.2	162.9	161.1
80°	215.2	216.0	160.7	139.1	161.6	161.1
82.5°	162.5	186.8	128.8	120.5	117.1	97.7
85°	78.6	140.4	99.0	82.9	49.7	47.1
87.5°	6.9	58.8	57.1	37.1	16.8	16.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)