

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: P197251

Luminaire Tested: **NAV-AF-01-D-UNV-T2R-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197251  
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-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 80 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: 5731 lumens  
Efficiency: N/A  
Efficacy: 85.5 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 - G1

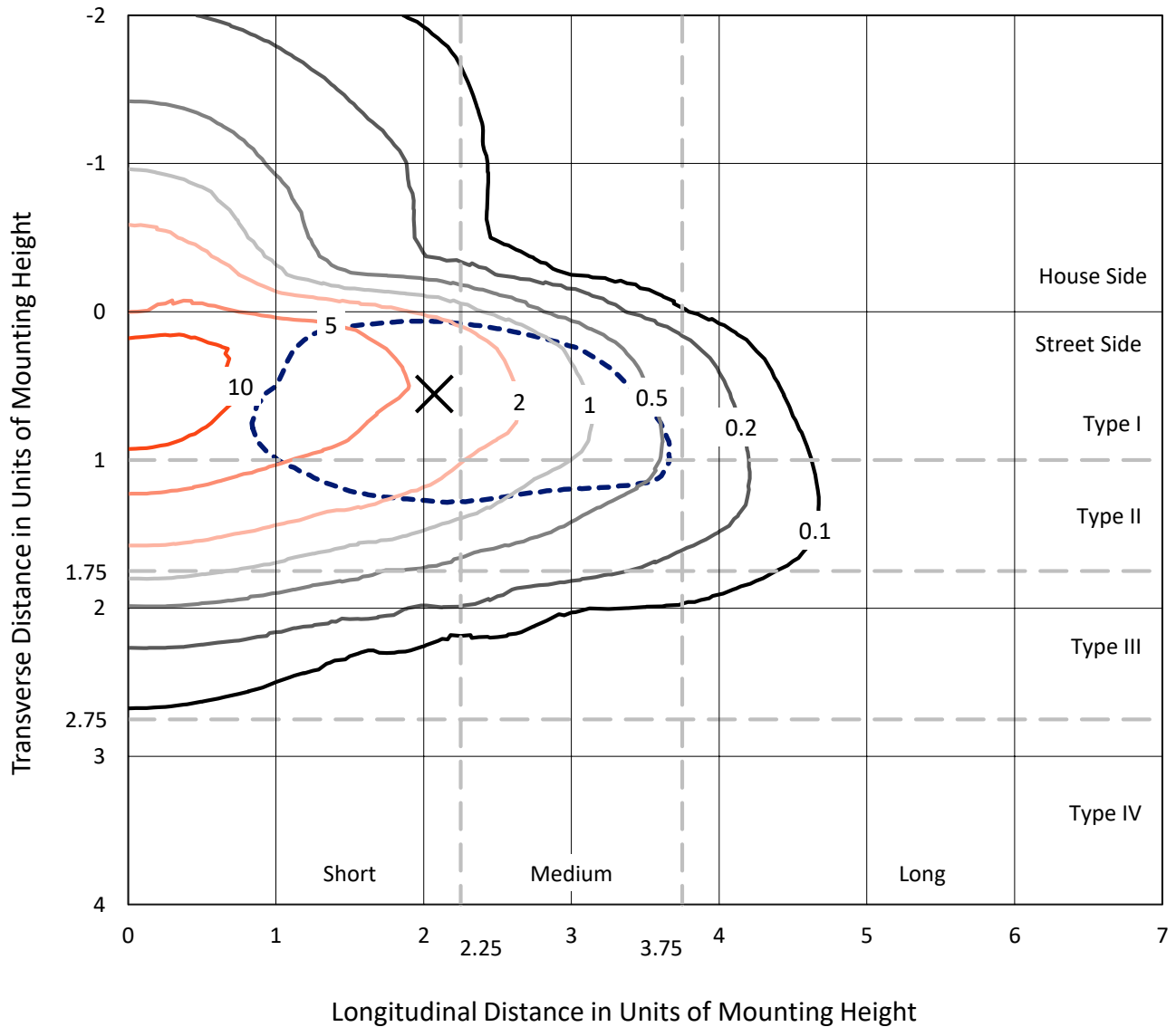
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

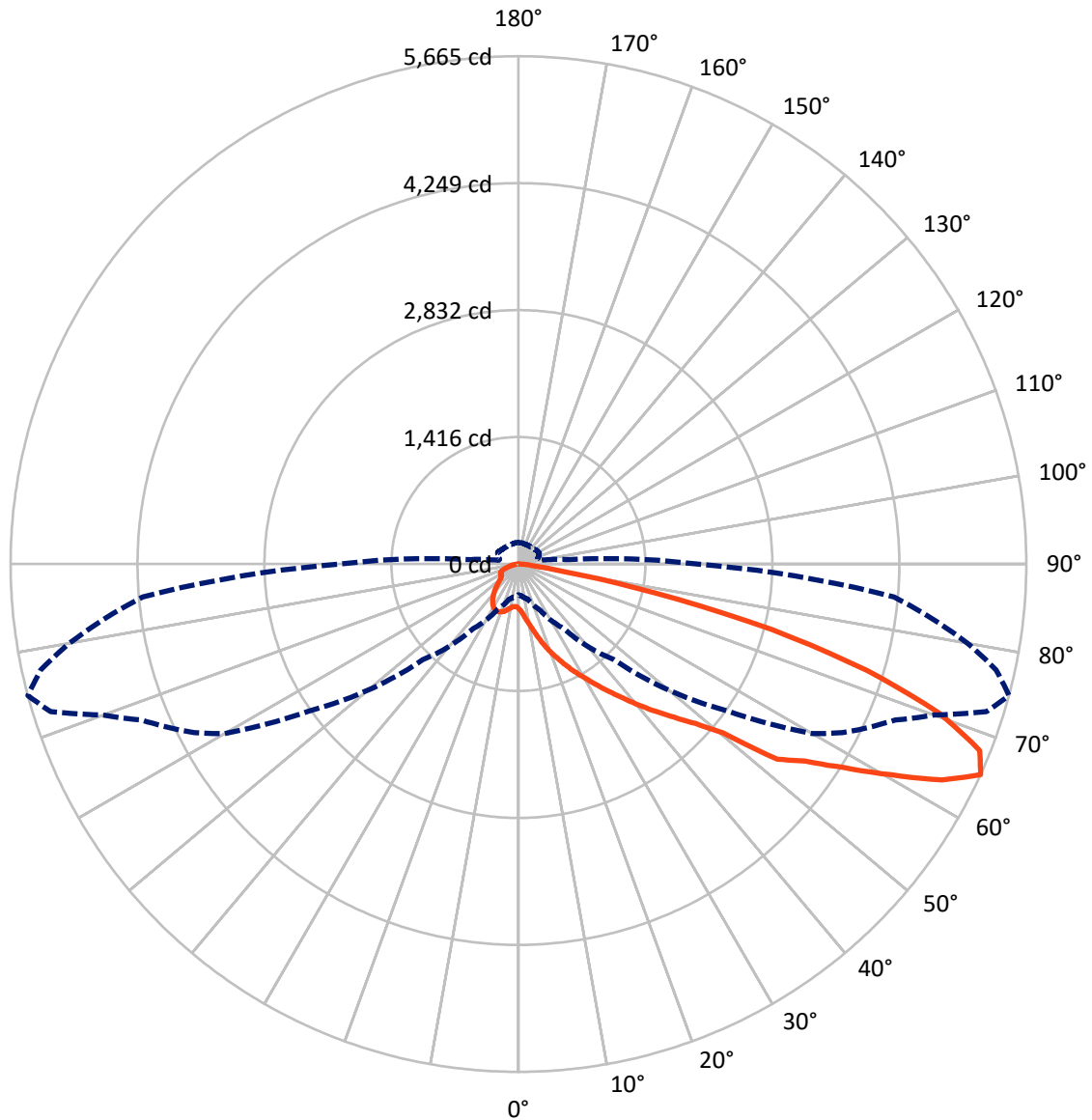
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.2 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	861.2	0.0	861.2
	% Fixture	15.0	0.0	15.0
<b>Street Side</b>	Lumens	4869.8	0.0	4869.8
	% Fixture	85.0	0.0	85.0
<b>Total</b>	Lumens	5731.0	0.0	5731.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.6	1.0
10°-20°	223.9	3.9
20°-30°	451.9	7.9
30°-40°	767.4	13.4
40°-50°	1070.3	18.7
50°-60°	1311.8	22.9
60°-70°	1234.2	21.5
70°-80°	541.2	9.4
80°-90°	71.6	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°	5731.0	100.0
0°-180°	5731.0	100.0

**Coefficient of Utilization**



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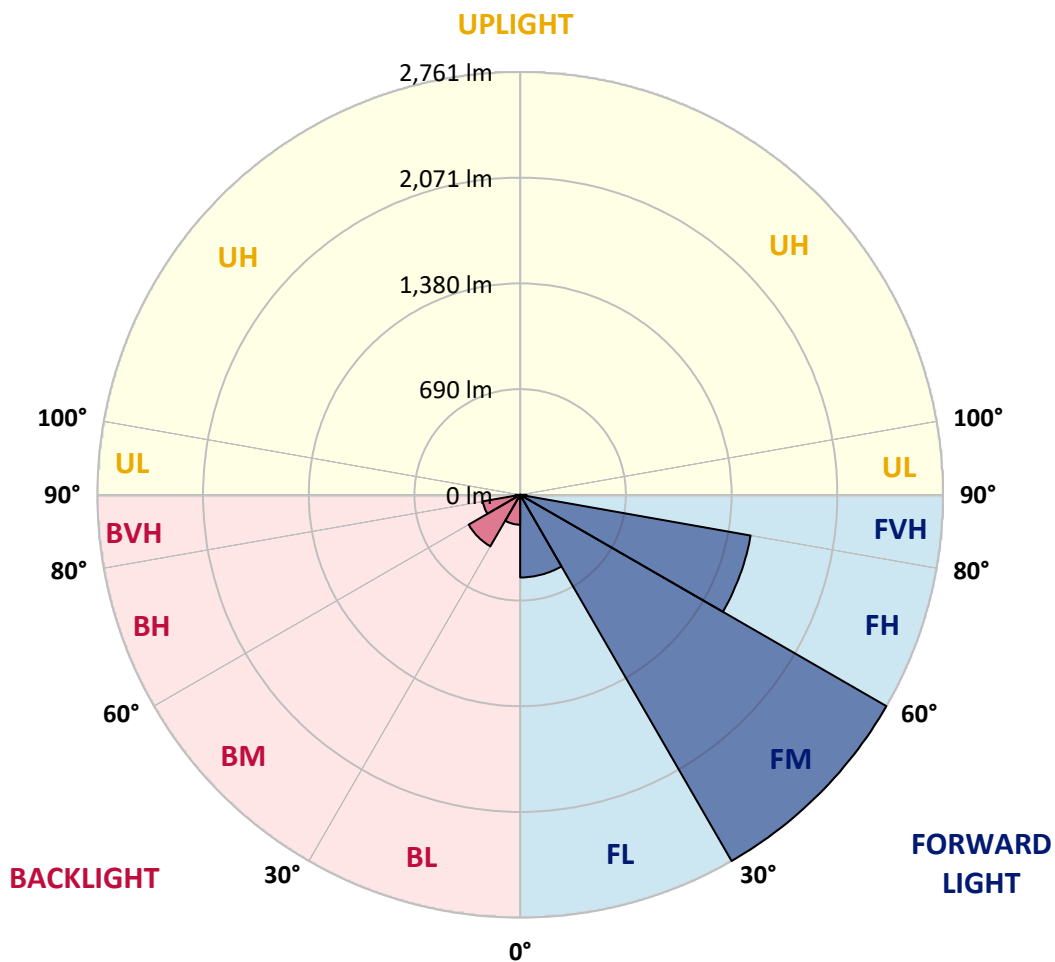
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	539.4	9.4			
FM (30°-60°)	2760.9	48.2			
FH (60°-80°)	1527.9	26.7			G1/1800
FVH (80°-90°)	41.5	0.7			G1/100
BL (0°-30°)	195.0	3.4	B1/500		
BM (30°-60°)	388.6	6.8	B1/1000		
BH (60°-80°)	247.5	4.3	B1/500		G1/500
BVH (80°-90°)	30.1	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-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
0°	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6
2.5°	625.3	618.0	618.7	608.5	593.5	577.1	563.6	556.3	550.1	548.3	538.1
5°	817.7	808.6	805.4	782.0	747.0	705.5	664.3	648.2	635.1	627.1	607.4
7.5°	975.2	970.5	966.1	944.6	910.0	856.8	790.4	766.7	744.8	720.8	697.1
10°	1082.4	1080.6	1078.8	1063.8	1035.0	988.7	917.3	891.4	864.1	833.4	802.4
12.5°	1163.4	1163.4	1164.8	1152.4	1134.9	1099.2	1034.3	1010.2	982.5	950.5	915.1
15°	1217.7	1219.2	1226.8	1230.5	1221.3	1198.4	1141.5	1120.4	1094.1	1062.4	1027.4
17.5°	1253.8	1256.7	1268.0	1280.0	1291.7	1283.7	1241.4	1221.7	1198.0	1168.8	1136.0
20°	1337.6	1334.0	1334.4	1330.7	1347.8	1354.0	1330.7	1314.3	1295.3	1268.7	1238.8
22.5°	1513.7	1506.8	1488.9	1443.4	1422.6	1420.4	1406.5	1397.8	1383.2	1366.4	1336.5
25°	1743.4	1735.4	1700.0	1624.9	1562.9	1505.7	1480.2	1474.7	1465.2	1453.9	1432.4
27.5°	1980.8	1972.0	1926.4	1831.6	1750.7	1635.1	1555.7	1548.4	1539.6	1534.9	1524.7
30°	2189.7	2180.2	2135.3	2039.1	1941.4	1803.6	1657.4	1631.9	1616.9	1618.4	1612.5
32.5°	2373.0	2364.7	2314.3	2216.3	2117.1	1983.3	1789.4	1749.6	1716.1	1703.7	1708.1
35°	2526.9	2519.2	2464.2	2365.4	2265.5	2154.3	1959.2	1899.5	1844.8	1810.5	1806.5
37.5°	2617.3	2612.9	2574.3	2490.4	2391.3	2309.6	2149.6	2083.2	2002.6	1952.7	1930.8
40°	2612.2	2616.9	2610.4	2572.5	2495.5	2436.1	2347.9	2282.3	2203.5	2129.1	2084.7
42.5°	2537.8	2544.4	2573.9	2593.6	2572.8	2536.7	2521.1	2472.2	2401.5	2322.7	2261.1
45°	2435.7	2441.6	2479.9	2551.0	2610.4	2620.6	2672.7	2648.3	2588.5	2521.4	2453.6
47.5°	2279.3	2290.6	2335.1	2448.1	2589.6	2688.0	2800.0	2811.3	2776.6	2721.2	2657.8
50°	2052.9	2067.9	2130.2	2291.0	2510.9	2757.3	2989.2	3032.2	3018.3	2962.2	2898.0
52.5°	1821.1	1836.0	1919.1	2090.1	2384.0	2785.7	3175.5	3285.6	3365.1	3423.0	3434.3
55°	1579.7	1596.5	1687.6	1884.5	2214.8	2749.7	3308.6	3433.6	3514.2	3574.7	3599.1
57.5°	1307.4	1326.3	1414.6	1613.6	1975.7	2604.5	3456.6	3633.8	3753.7	3847.0	3899.5
60°	994.9	1018.6	1110.1	1310.7	1661.4	2326.7	3522.6	3784.7	3975.4	4115.4	4198.5
62.5°	630.7	654.8	749.9	958.1	1303.7	1947.2	3335.9	3718.3	4043.5	4250.6	4403.0
65°	344.2	354.7	407.6	564.4	879.0	1510.8	2862.7	3313.7	3782.1	4075.6	4309.7
67.5°	258.1	259.6	265.0	303.3	468.1	1020.1	2238.1	2651.2	3171.5	3549.2	3828.8
70°	226.0	226.0	226.8	227.1	254.1	552.7	1516.3	1896.5	2373.4	2755.5	3102.9
72.5°	202.7	200.5	199.8	195.4	199.1	283.3	825.4	1167.0	1569.1	1997.9	2322.0
75°	175.0	174.6	174.6	170.3	172.4	199.4	358.0	560.0	871.7	1270.9	1589.9
77.5°	151.3	148.7	149.1	146.6	153.5	152.8	169.9	230.8	379.5	667.5	932.2
80°	124.7	122.9	124.0	122.5	133.4	113.0	114.5	141.1	188.5	292.8	412.7
82.5°	92.2	93.0	99.9	99.2	112.3	76.2	83.9	105.4	126.9	145.8	158.6
85°	54.0	55.1	71.8	75.5	82.4	40.1	51.4	62.7	70.7	78.4	81.7
87.5°	5.8	7.7	40.1	41.2	36.8	12.0	20.8	26.2	28.1	29.9	26.2
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°	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6
2.5°	534.8	530.1	525.0	522.1	517.0	512.6	504.6	498.0	490.7	485.6	483.4
5°	597.5	586.2	574.2	565.5	554.5	545.0	526.8	504.9	498.0	483.4	479.8
7.5°	679.2	658.8	638.4	621.6	602.6	587.0	556.3	517.0	511.9	488.5	483.4
10°	775.1	745.2	714.9	689.1	661.3	637.3	592.1	536.7	531.2	501.3	496.2
12.5°	882.3	845.8	806.8	768.2	735.4	701.4	639.8	567.3	558.5	523.2	516.2
15°	992.7	953.4	908.2	861.5	821.0	776.2	698.5	607.4	591.3	549.8	540.3
17.5°	1101.8	1059.1	1011.7	959.6	912.2	858.6	762.0	652.2	624.5	576.0	564.0
20°	1207.1	1163.7	1113.8	1062.7	1003.7	942.4	826.9	696.3	654.1	597.9	582.2
22.5°	1303.0	1265.8	1215.9	1157.2	1097.4	1028.5	892.9	740.5	679.9	614.7	594.6
25°	1404.0	1370.1	1320.5	1264.0	1194.4	1117.8	961.0	782.4	700.7	623.8	599.0
27.5°	1506.1	1476.9	1430.2	1370.8	1296.1	1211.1	1030.3	821.0	717.5	626.7	596.8
30°	1615.1	1592.5	1549.5	1483.1	1407.6	1313.6	1105.8	858.9	728.1	622.7	587.0
32.5°	1718.3	1717.5	1679.2	1610.3	1529.0	1425.5	1185.2	897.2	733.5	611.4	569.8
35°	1825.4	1840.4	1811.6	1746.0	1660.3	1545.4	1273.1	938.1	733.9	591.3	547.6
37.5°	1947.2	1973.8	1961.1	1898.7	1808.7	1682.2	1376.3	984.0	731.7	563.6	515.1
40°	2085.8	2122.2	2121.8	2069.3	1973.1	1835.3	1496.2	1035.4	726.6	529.0	476.9
42.5°	2244.3	2287.7	2299.8	2248.0	2150.6	2002.6	1633.7	1091.9	718.6	494.7	436.4
45°	2425.9	2464.2	2486.8	2438.7	2341.0	2184.9	1791.5	1156.1	708.7	450.6	390.1
47.5°	2620.2	2664.7	2698.6	2657.4	2553.1	2392.7	1978.6	1238.8	705.1	400.3	340.2
50°	2861.2	2907.1	2980.4	2961.8	2904.6	2775.5	2374.1	1434.3	706.6	352.5	298.2
52.5°	3459.1	3564.5	3657.1	3615.9	3479.9	3258.6	2695.7	1542.9	675.9	313.5	269.1
55°	3639.6	3759.2	3895.9	3878.8	3748.2	3525.1	2949.8	1633.7	646.4	285.1	250.1
57.5°	3955.3	4096.4	4287.4	4283.8	4123.7	3872.6	3276.8	1742.3	633.6	268.7	240.6
60°	4289.6	4469.4	4733.3	4774.5	4600.6	4339.2	3663.3	1875.8	635.5	259.6	235.2
62.5°	4533.9	4797.5	5181.4	5304.6	5099.7	4811.7	4064.3	2009.2	624.5	249.0	228.6
65°	4548.8	4928.4	5473.1	5664.8	5457.4	5087.3	4205.8	1982.9	558.9	234.8	218.0
67.5°	4184.3	4678.6	5340.3	5550.7	5338.5	4917.4	3957.9	1733.6	454.3	210.0	199.8
70°	3485.0	4058.9	4745.7	4980.1	4804.8	4378.6	3444.5	1384.7	339.4	177.2	172.4
72.5°	2693.1	3228.3	3852.1	4069.1	3934.9	3560.1	2716.8	1009.2	242.4	143.6	140.0
75°	1925.3	2381.1	2833.9	2916.6	2784.3	2440.1	1762.7	630.4	169.9	117.8	112.7
77.5°	1192.2	1488.6	1651.2	1544.7	1375.9	1143.7	717.5	311.4	113.0	95.9	90.8
80°	529.0	620.9	579.7	516.6	408.0	335.4	219.1	138.2	72.9	74.0	71.1
82.5°	177.9	188.1	183.0	181.9	164.1	143.6	93.0	59.8	40.8	47.4	46.3
85°	86.8	90.8	91.1	94.4	82.0	63.8	25.2	23.7	17.5	25.5	26.6
87.5°	26.2	26.6	24.1	26.2	21.1	14.6	4.7	6.6	3.3	6.2	6.2
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°	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6	496.6
2.5°	479.4	478.0	475.4	472.5	471.8	468.1	467.0	465.2	464.1	462.3	460.8
5°	475.0	472.5	469.6	466.3	466.3	461.2	459.0	456.8	456.8	453.5	452.1
7.5°	479.4	476.1	472.9	469.9	471.0	465.2	463.0	460.8	460.5	457.2	455.7
10°	491.8	488.5	484.5	481.6	480.5	475.8	473.2	469.9	467.8	465.6	463.4
12.5°	510.8	506.4	501.3	495.1	492.5	488.5	484.5	480.2	475.0	472.9	469.6
15°	533.4	526.1	519.2	511.5	504.6	500.6	495.1	488.2	481.2	478.3	474.0
17.5°	552.0	544.3	534.5	525.4	513.0	509.7	502.0	493.6	482.3	481.2	474.7
20°	567.6	556.0	544.0	533.0	514.1	512.2	502.8	492.9	476.9	476.9	468.8
22.5°	576.4	560.4	546.1	531.6	507.9	506.4	495.5	483.8	464.1	464.8	455.0
25°	577.9	558.5	540.7	523.2	495.8	493.3	479.4	466.7	445.2	443.7	433.5
27.5°	572.0	549.4	528.6	507.5	478.0	472.5	457.2	441.9	420.7	417.1	406.1
30°	558.5	531.9	508.6	484.2	453.2	444.4	428.4	412.7	391.2	386.5	376.2
32.5°	537.0	506.8	480.9	456.5	422.2	411.2	395.2	379.5	358.7	355.1	345.6
35°	508.6	474.7	447.3	421.5	387.2	375.9	360.6	346.7	327.8	326.3	319.7
37.5°	472.9	437.5	408.3	383.5	351.1	345.3	329.6	319.4	303.7	305.2	301.9
40°	432.4	396.3	368.6	346.7	318.6	313.5	304.1	296.4	282.9	286.9	287.3
42.5°	391.6	355.5	330.3	310.6	286.6	283.3	276.7	272.3	262.1	270.2	273.4
45°	345.3	311.7	290.2	275.3	257.4	257.4	254.1	253.7	246.8	258.1	261.4
47.5°	300.4	274.2	259.2	250.1	237.7	243.5	242.4	245.4	240.3	251.9	254.8
50°	266.5	248.3	239.2	234.8	226.0	235.2	237.3	241.4	237.0	247.2	249.4
52.5°	245.0	233.0	227.9	226.8	220.6	231.9	235.5	239.2	234.1	243.5	243.2
55°	233.0	224.9	223.1	225.3	220.6	231.5	235.2	237.7	233.3	239.9	239.5
57.5°	228.6	224.2	225.3	228.6	225.3	234.4	236.2	239.2	234.8	237.7	239.2
60°	228.2	228.2	232.6	237.0	234.8	241.4	242.4	242.1	238.1	238.4	239.2
62.5°	226.0	231.5	238.8	245.7	245.0	253.0	253.7	249.0	245.7	242.1	241.0
65°	219.1	228.2	238.8	248.3	249.7	262.1	263.6	258.9	256.7	250.5	245.7
67.5°	203.8	215.5	227.9	239.5	242.1	258.9	262.1	264.0	265.0	261.0	254.8
70°	177.9	189.9	202.7	216.2	219.8	238.4	245.4	253.7	260.3	266.1	264.0
72.5°	144.7	155.7	166.6	179.0	184.5	203.8	212.9	227.5	237.7	252.7	258.9
75°	114.8	121.4	128.0	135.6	140.0	159.0	170.3	187.8	201.6	222.4	236.2
77.5°	90.4	93.7	97.0	100.3	102.1	112.7	121.8	139.3	155.3	181.6	202.0
80°	69.6	71.5	71.8	72.9	72.2	77.3	80.6	91.1	105.0	130.9	154.9
82.5°	44.8	46.3	47.0	48.9	45.2	51.8	54.0	55.1	62.3	81.3	98.4
85°	25.2	25.5	25.9	26.6	21.5	28.1	28.4	26.6	25.9	33.5	37.9
87.5°	6.2	5.8	6.2	6.2	2.6	5.8	5.8	4.0	2.9	5.5	4.4
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°	496.6	496.6	496.6	496.6	496.6	496.6
2.5°	457.5	456.8	457.2	455.4	454.6	455.0
5°	450.3	448.8	448.8	447.7	446.2	446.2
7.5°	453.5	450.6	449.5	447.3	445.2	445.5
10°	458.6	453.5	449.9	446.6	444.1	444.1
12.5°	461.9	452.8	447.3	443.0	440.0	440.0
15°	462.7	448.8	440.8	436.0	433.1	433.1
17.5°	458.3	440.8	430.6	424.4	421.1	421.8
20°	447.3	425.8	413.8	407.2	404.0	404.3
22.5°	430.2	405.4	391.6	383.9	380.6	380.6
25°	406.9	379.9	364.9	358.7	355.8	355.8
27.5°	380.3	352.5	339.4	334.7	332.9	332.9
30°	350.4	327.4	317.9	314.6	311.7	311.7
32.5°	325.2	308.8	305.5	301.1	293.5	293.1
35°	305.2	303.3	300.8	287.7	276.7	275.3
37.5°	294.2	305.2	289.1	266.5	257.8	257.4
40°	288.4	298.6	270.9	259.9	258.9	258.9
42.5°	274.5	281.8	269.8	263.6	263.6	264.0
45°	259.9	266.1	272.3	266.9	268.7	269.1
47.5°	249.7	262.1	272.3	267.6	271.2	273.4
50°	240.3	258.5	266.9	266.9	270.9	271.2
52.5°	238.1	253.4	261.8	265.8	266.1	264.3
55°	238.4	249.4	257.8	262.9	260.7	260.7
57.5°	238.1	247.2	254.5	256.3	257.4	257.4
60°	238.4	244.3	250.1	249.4	253.0	253.0
62.5°	239.5	240.3	243.2	242.4	247.9	247.9
65°	242.1	235.2	233.3	234.1	240.6	240.3
67.5°	246.8	228.2	222.4	222.8	232.2	230.8
70°	253.7	218.7	210.0	207.8	223.9	221.3
72.5°	255.9	207.8	194.0	191.8	201.2	194.0
75°	245.7	199.1	176.8	169.5	165.5	163.3
77.5°	219.1	193.6	159.0	143.6	137.4	136.0
80°	181.6	182.3	135.6	117.4	136.4	136.0
82.5°	137.1	157.5	108.6	101.7	98.8	82.4
85°	66.4	118.5	83.5	70.0	41.9	39.7
87.5°	5.8	49.6	48.1	31.4	14.2	13.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

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