

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: P195722

Luminaire Tested: **NAV-AF-02-D-UNV-SLL-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195722  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24264)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-SLL-7050-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT  
ELIMINATOR LEFT OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7088 lumens  
Efficiency: N/A  
Efficacy: 107.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

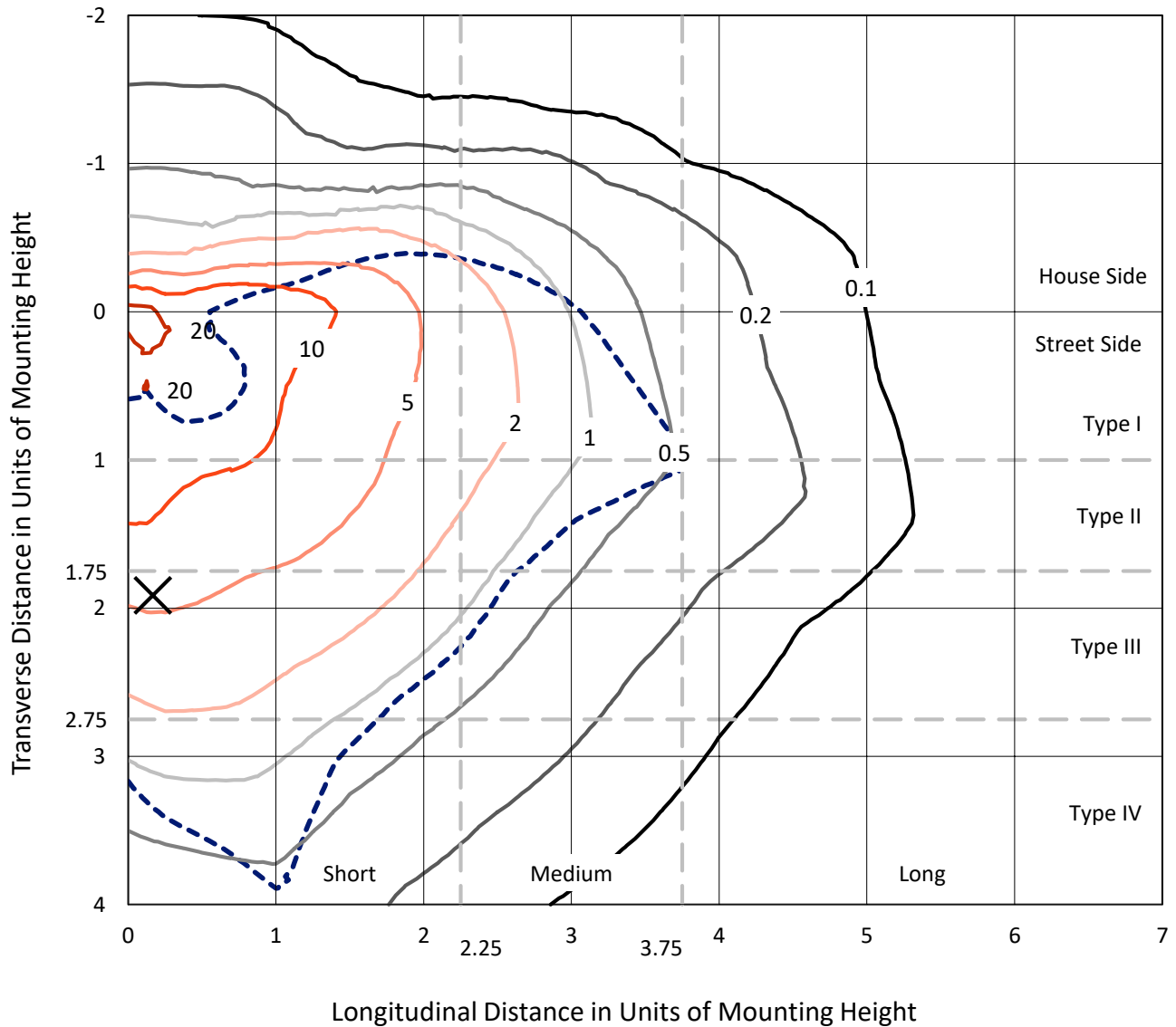
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

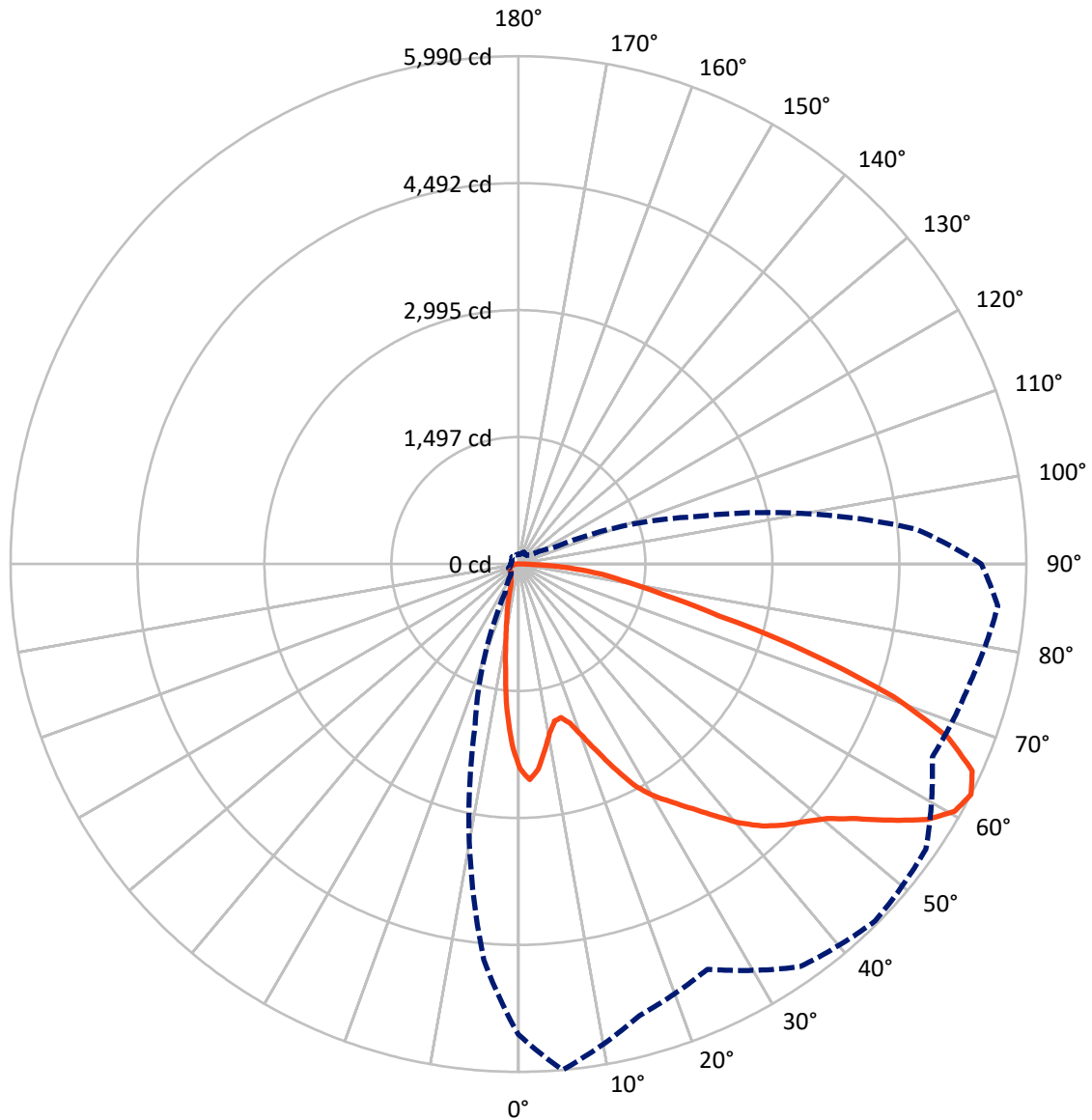
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 27.7 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral      - - - Horizontal Cone Through 62.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1255.7	0.0	1255.7
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	5832.3	0.0	5832.3
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	7088.0	0.0	7088.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.7	2.5
10°-20°	321.0	4.5
20°-30°	461.7	6.5
30°-40°	707.1	10.0
40°-50°	1033.7	14.6
50°-60°	1504.1	21.2
60°-70°	1742.7	24.6
70°-80°	908.5	12.8
80°-90°	233.5	3.3
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°	7088.0	100.0
0°-180°	7088.0	100.0



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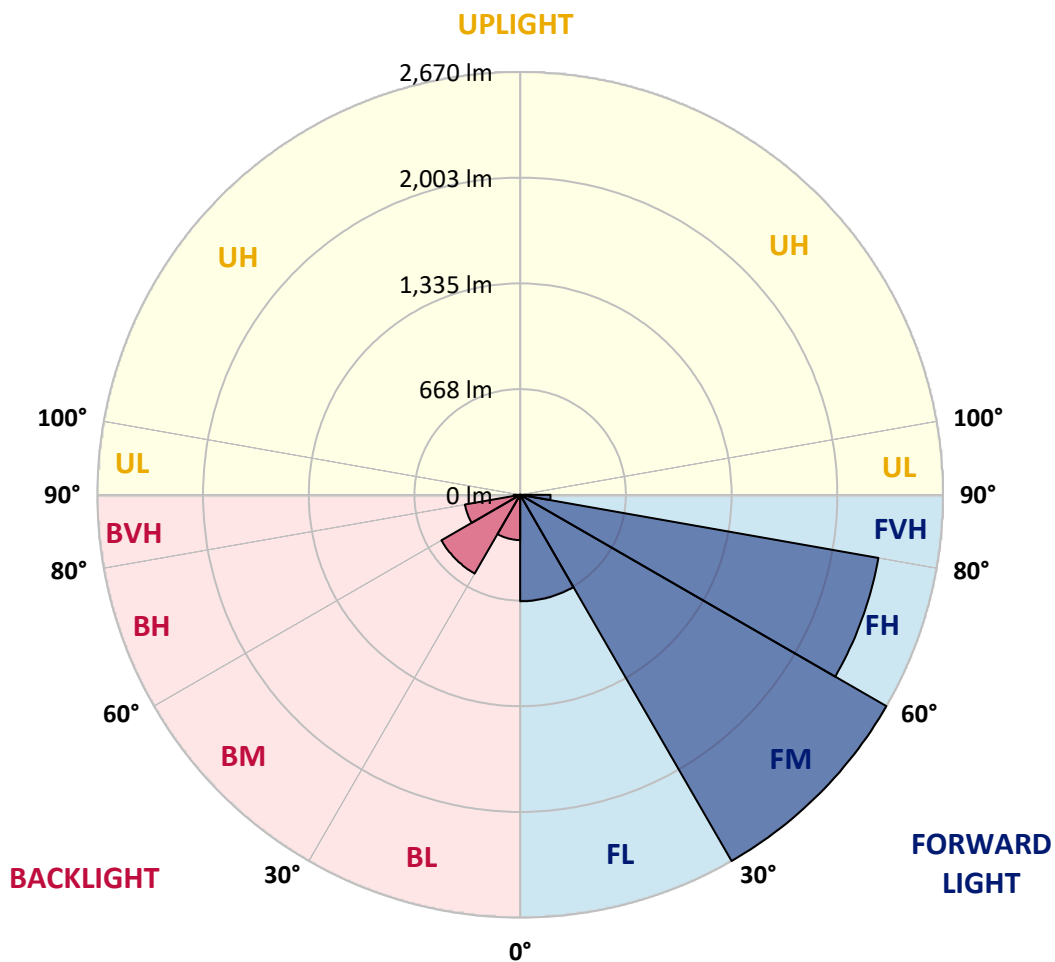
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	672.7	9.5			
FM	(30°-60°)	2670.4	37.7			
FH	(60°-80°)	2297.1	32.4			G2/5000
FVH	(80°-90°)	192.1	2.7			G2/225
BL	(0°-30°)	285.7	4.0	B1/500		
BM	(30°-60°)	574.5	8.1	B1/1000		
BH	(60°-80°)	354.1	5.0	B1/500		G1/500
BVH	(80°-90°)	41.4	0.6			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4
2.5°	2494.6	2547.5	2608.1	2687.3	2741.2	2762.8	2780.8	2750.5	2721.2	2666.2	2646.7
5°	2330.1	2431.9	2598.9	2757.7	2897.5	2977.6	3002.3	2946.3	2846.6	2702.7	2626.6
7.5°	2086.0	2220.1	2455.0	2688.8	2889.2	3022.9	3032.6	2921.6	2725.3	2489.4	2366.1
10°	1872.7	2024.3	2296.2	2557.8	2770.0	2906.7	2880.0	2724.3	2487.4	2219.1	2079.8
12.5°	1748.9	1900.5	2177.5	2443.2	2643.1	2695.0	2640.5	2509.5	2284.9	2016.1	1875.8
15°	1722.7	1878.9	2135.3	2359.4	2483.2	2449.8	2395.9	2329.6	2169.8	1949.8	1814.1
17.5°	1801.8	1976.5	2191.3	2314.2	2309.0	2228.9	2183.6	2196.5	2169.2	2021.8	1879.9
20°	1964.7	2171.3	2333.7	2301.8	2170.3	2057.7	2031.5	2132.2	2258.2	2202.1	2046.4
22.5°	2179.0	2414.4	2528.0	2337.3	2097.8	1976.5	1971.4	2128.6	2420.0	2475.0	2285.4
25°	2421.1	2695.5	2723.8	2400.0	2090.1	1969.3	1964.7	2184.1	2614.8	2745.3	2553.1
27.5°	2717.1	2979.2	2887.2	2483.8	2124.0	1990.4	1993.5	2278.7	2817.8	3012.6	2854.8
30°	2940.1	3180.6	2987.9	2566.0	2178.5	2027.4	2035.1	2381.0	2927.3	3198.1	3095.8
32.5°	3148.8	3352.8	3084.5	2647.2	2258.2	2082.4	2109.1	2508.4	3058.8	3357.4	3323.5
35°	3379.5	3545.5	3191.9	2734.0	2372.2	2179.0	2217.6	2629.7	3189.4	3516.7	3549.1
37.5°	3641.1	3766.0	3308.6	2856.9	2536.7	2357.9	2379.4	2753.6	3280.3	3693.0	3791.2
40°	3913.5	4013.2	3436.1	3020.8	2775.7	2599.4	2609.7	2912.4	3351.8	3875.5	4026.0
42.5°	4147.3	4224.9	3564.0	3224.3	3050.1	2845.6	2854.3	3083.5	3420.1	4032.7	4214.1
45°	4334.4	4391.4	3684.8	3438.6	3343.0	3152.9	3150.8	3257.7	3511.6	4165.3	4358.5
47.5°	4508.6	4538.9	3819.4	3647.3	3646.8	3548.6	3475.1	3463.3	3633.4	4276.8	4484.4
50°	4708.0	4719.3	3997.3	3858.0	4017.8	4002.4	3866.7	3724.4	3791.2	4402.2	4616.5
52.5°	4985.5	4986.0	4217.7	4063.5	4427.4	4476.2	4318.4	4019.9	4024.5	4646.3	4844.7
55°	5311.9	5334.5	4505.0	4309.7	4856.0	4939.3	4790.7	4370.9	4359.6	5040.0	5214.7
57.5°	5564.2	5683.9	4839.6	4617.5	5256.3	5364.8	5245.0	4734.7	4771.2	5446.0	5520.0
60°	5635.1	5915.2	5173.1	4962.9	5595.0	5757.9	5636.1	5127.9	5174.1	5709.6	5607.9
62.5°	5550.3	5989.7	5512.8	5272.3	5796.0	5952.2	5864.8	5385.3	5502.5	5675.7	5459.3
65°	5299.0	5881.8	5807.8	5403.8	5680.3	5735.8	5712.7	5398.7	5680.8	5355.0	5048.7
67.5°	4712.1	5465.5	5676.2	5122.7	5140.2	5080.6	5050.3	5031.8	5480.4	4837.5	4401.2
70°	3832.3	4696.2	5048.7	4287.1	4157.6	4100.0	4000.3	4247.0	4925.9	4121.6	3622.1
72.5°	2951.9	3592.8	4141.1	3250.0	2980.7	3000.3	2887.2	3247.4	4080.5	3186.3	2765.4
75°	2096.3	2449.8	3305.5	2335.2	1978.6	1977.6	1968.8	2337.3	3219.7	2286.9	2023.3
77.5°	1510.9	1763.8	2589.6	1562.8	1404.0	1422.0	1393.2	1588.5	2510.0	1645.1	1499.1
80°	1205.1	1305.9	1673.8	1042.2	1045.3	1087.4	1081.3	1086.4	1651.2	1191.3	1120.9
82.5°	866.0	991.3	1279.7	798.6	691.2	735.9	744.7	805.8	1165.1	842.3	739.0
85°	444.0	604.4	1177.4	691.7	432.2	358.2	412.2	635.7	1011.9	504.7	360.3
87.5°	86.3	167.5	862.9	384.4	194.3	98.2	161.9	269.3	588.4	91.5	44.7
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):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4
2.5°	2613.3	2547.5	2485.8	2422.1	2372.8	2312.6	2253.5	2202.1	2152.3	2119.4	2129.7
5°	2549.5	2389.2	2245.3	2111.7	2033.6	1939.5	1855.8	1785.3	1730.9	1695.9	1717.0
7.5°	2259.2	2042.3	1852.7	1676.4	1565.4	1443.6	1346.0	1277.1	1234.9	1211.3	1245.7
10°	1962.1	1718.5	1505.8	1322.3	1212.8	1109.5	1021.2	948.2	891.6	864.9	878.8
12.5°	1749.4	1478.5	1255.5	1132.2	1038.1	945.6	854.1	768.8	696.9	664.0	657.3
15°	1669.7	1349.5	1121.9	984.2	890.6	789.9	691.2	599.7	531.4	503.1	497.0
17.5°	1704.7	1321.8	1042.7	879.8	744.2	621.8	510.8	424.5	374.1	358.2	359.7
20°	1827.5	1332.1	979.0	772.4	604.9	460.0	349.0	289.3	267.8	264.2	268.3
22.5°	1996.1	1374.2	932.8	679.9	482.1	334.6	259.5	231.3	225.6	225.1	229.2
25°	2218.6	1456.4	901.9	597.7	380.8	265.2	226.1	210.2	205.6	206.6	210.7
27.5°	2480.7	1560.8	881.9	526.8	313.0	236.4	211.2	197.3	192.7	193.7	196.8
30°	2720.2	1652.2	852.1	473.3	281.1	226.1	203.0	189.1	183.0	183.0	185.0
32.5°	2934.5	1731.4	817.1	433.2	251.8	203.0	184.0	173.2	168.6	170.1	171.1
35°	3124.6	1773.0	789.9	409.6	228.2	187.1	168.1	156.7	150.6	151.6	153.1
37.5°	3311.7	1788.9	771.9	396.7	211.2	177.3	159.8	150.6	143.9	142.9	142.4
40°	3489.5	1785.3	754.9	393.1	199.9	170.1	154.7	146.5	139.8	138.2	137.7
42.5°	3643.2	1773.5	739.0	383.4	192.2	165.0	150.6	143.4	136.7	134.6	133.6
45°	3783.5	1766.3	721.5	365.4	196.3	162.9	148.5	140.8	134.6	132.1	131.0
47.5°	3939.2	1792.0	702.0	345.9	195.3	163.4	148.5	139.8	133.6	131.0	130.0
50°	4124.7	1878.9	677.9	319.1	186.0	174.7	148.0	138.2	132.6	131.0	129.0
52.5°	4386.8	2019.7	644.5	284.7	178.8	186.6	147.5	135.7	131.0	128.5	125.9
55°	4746.0	2160.5	601.3	248.2	167.5	178.3	148.5	132.6	127.5	124.9	121.8
57.5°	5040.5	2267.4	546.8	217.9	157.3	168.6	147.0	129.0	123.3	120.8	118.2
60°	5021.5	2277.7	494.9	198.4	151.1	151.6	150.6	126.4	119.7	117.7	115.6
62.5°	4710.6	2150.7	446.6	188.6	146.5	138.2	153.7	123.3	116.1	114.1	112.5
65°	4193.1	1855.2	420.9	188.6	142.4	131.0	134.1	119.2	112.5	110.5	109.5
67.5°	3536.8	1490.9	396.7	192.7	136.7	125.9	121.8	115.1	109.0	106.9	105.9
70°	2834.8	1173.3	379.8	190.7	131.6	120.3	115.1	109.5	103.3	102.8	101.8
72.5°	2223.7	942.5	372.1	190.7	123.9	113.6	108.4	104.3	98.2	97.6	96.1
75°	1781.8	707.7	340.2	187.1	116.1	104.8	100.2	96.6	90.4	91.0	89.9
77.5°	1379.9	500.6	284.2	168.6	106.4	95.1	91.5	88.9	81.7	82.2	82.2
80°	1079.2	325.8	220.5	139.8	95.1	83.8	81.2	79.1	71.4	72.5	72.5
82.5°	739.5	193.7	159.8	112.5	81.7	71.4	70.9	67.8	59.6	60.1	61.2
85°	403.9	127.5	106.4	83.3	64.2	58.1	57.0	55.5	47.8	47.8	48.3
87.5°	74.5	68.4	62.7	55.0	43.2	41.6	40.1	41.6	36.0	34.9	34.9
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°	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4
2.5°	2105.5	2070.1	2045.4	2023.8	1971.9	1975.5	1982.7	1993.0	1960.6	1977.6	1998.6
5°	1695.9	1666.6	1644.5	1610.1	1537.6	1511.9	1495.5	1488.3	1440.0	1450.3	1472.9
7.5°	1250.4	1249.8	1242.1	1203.6	1116.2	1063.3	1028.3	1017.6	987.7	999.1	1033.5
10°	880.3	889.6	886.0	851.6	773.4	735.4	727.7	749.3	749.8	771.9	831.0
12.5°	636.2	631.1	626.5	598.2	539.6	533.4	550.9	580.7	587.9	611.6	673.2
15°	474.9	462.5	460.0	437.9	399.3	405.0	417.8	433.2	433.7	450.2	501.1
17.5°	356.1	356.1	360.3	345.9	318.1	315.5	308.9	304.8	298.6	305.3	333.0
20°	276.5	289.3	299.6	291.4	266.2	253.9	241.0	232.8	228.2	228.7	236.9
22.5°	236.9	247.2	260.6	256.4	235.4	219.4	211.2	205.6	202.0	202.0	206.6
25°	216.9	223.6	235.9	233.8	215.8	203.0	196.3	190.7	186.6	186.0	190.7
27.5°	200.9	205.1	213.3	212.2	193.7	185.5	181.4	177.8	175.2	174.7	179.4
30°	186.6	188.6	192.7	191.2	177.3	169.1	167.5	166.0	164.5	165.0	171.6
32.5°	173.7	175.2	177.8	175.8	162.4	155.2	152.6	150.6	149.0	150.6	158.3
35°	159.3	163.9	167.0	166.0	151.6	142.9	137.2	132.1	130.0	131.6	140.3
37.5°	147.0	154.7	158.8	157.8	142.9	132.6	125.4	124.4	124.4	126.4	135.2
40°	142.4	148.0	151.6	150.1	135.2	124.9	120.8	119.2	119.7	121.8	131.0
42.5°	138.2	143.4	144.4	141.3	126.4	119.7	117.2	115.1	116.1	118.7	128.0
45°	134.6	138.8	138.2	133.6	119.2	114.6	114.6	113.1	113.6	115.6	125.4
47.5°	132.1	134.1	133.1	128.5	114.1	110.5	112.0	112.0	113.1	114.6	124.4
50°	128.0	129.5	128.5	124.4	110.0	106.9	108.4	110.5	111.5	113.1	121.8
52.5°	123.9	124.9	124.4	120.3	105.9	103.8	103.8	105.9	107.9	110.0	117.7
55°	119.7	120.8	121.3	118.2	102.8	100.7	100.2	100.2	102.3	105.4	113.6
57.5°	116.7	116.7	117.7	115.6	99.7	97.1	94.6	95.1	97.6	100.2	108.4
60°	113.1	113.6	115.1	113.1	95.6	91.5	89.4	92.0	93.0	95.6	104.3
62.5°	110.0	110.0	111.0	109.5	92.0	87.9	86.3	88.9	88.9	91.5	100.2
65°	107.4	106.9	106.9	106.4	88.4	84.3	83.3	84.3	84.8	87.4	96.1
67.5°	105.4	102.8	102.8	103.8	84.8	80.7	80.2	80.2	80.7	83.8	91.5
70°	100.7	98.7	98.2	101.8	81.2	76.1	76.1	75.0	76.1	77.6	85.8
72.5°	95.6	94.0	93.5	98.7	77.6	70.9	69.9	69.4	69.9	71.4	79.1
75°	88.9	87.9	88.9	96.6	74.0	65.3	63.7	63.2	63.2	63.7	71.9
77.5°	81.2	80.2	87.9	89.9	71.9	58.6	57.0	56.0	55.0	55.0	64.2
80°	71.9	71.4	84.8	76.1	68.9	51.4	48.8	47.3	46.3	45.7	55.0
82.5°	62.7	61.7	72.5	59.6	57.0	42.1	38.5	35.5	33.9	33.9	42.1
85°	51.4	50.9	57.0	43.7	39.6	30.8	25.7	23.1	21.1	21.1	27.2
87.5°	37.5	36.5	35.5	26.2	20.0	13.9	9.8	9.3	8.2	7.7	11.3
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):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4	2416.4
2.5°	2030.0	2072.6	2153.3	2219.6	2308.0	2378.9	2459.6	2494.6
5°	1514.5	1581.8	1705.2	1810.5	1956.5	2091.6	2245.8	2330.1
7.5°	1086.4	1186.1	1279.7	1411.2	1593.7	1775.1	1974.5	2086.0
10°	898.8	990.3	1070.5	1164.0	1304.8	1508.9	1746.8	1872.7
12.5°	744.7	843.3	928.1	1028.3	1146.6	1331.0	1602.4	1748.9
15°	571.0	678.4	780.1	900.9	1045.8	1256.5	1559.2	1722.7
17.5°	391.1	506.2	631.6	779.1	953.8	1225.2	1600.3	1801.8
20°	265.7	350.0	486.2	660.9	871.1	1210.3	1690.8	1964.7
22.5°	218.4	256.4	358.7	549.9	803.3	1226.7	1837.8	2179.0
25°	200.4	221.0	279.1	452.2	751.3	1270.4	2036.7	2421.1
27.5°	189.1	206.6	244.6	382.4	703.6	1330.0	2278.7	2717.1
30°	182.4	198.9	230.7	346.4	659.9	1381.4	2486.8	2940.1
32.5°	167.5	179.9	206.1	325.8	628.5	1423.0	2670.3	3148.8
35°	149.6	164.5	186.0	312.5	627.5	1442.6	2843.0	3379.5
37.5°	142.9	157.3	173.2	305.3	633.7	1459.0	3054.2	3641.1
40°	138.8	151.6	164.5	304.2	638.8	1471.9	3260.8	3913.5
42.5°	135.2	148.0	162.9	297.0	636.7	1489.3	3443.8	4147.3
45°	134.1	147.0	166.5	286.3	636.2	1516.6	3589.2	4334.4
47.5°	133.1	152.6	165.5	274.4	634.2	1574.1	3753.1	4508.6
50°	132.1	162.9	158.3	258.0	618.8	1672.3	3973.6	4708.0
52.5°	131.6	164.5	150.6	235.4	591.0	1817.7	4296.4	4985.5
55°	129.5	156.2	137.2	205.6	550.9	1974.5	4642.2	5311.9
57.5°	124.9	139.3	129.5	176.3	493.4	2083.9	4897.6	5564.2
60°	136.2	119.7	124.4	161.4	424.5	2103.5	4908.9	5635.1
62.5°	130.0	109.0	119.2	156.2	376.2	1976.0	4684.4	5550.3
65°	103.8	103.3	114.6	161.4	369.0	1690.8	4305.1	5299.0
67.5°	94.6	99.2	110.0	167.5	373.6	1332.1	3747.0	4712.1
70°	88.4	94.0	103.8	173.2	381.8	1049.4	3016.7	3832.3
72.5°	82.2	86.9	97.6	178.8	376.2	827.9	2414.4	2951.9
75°	74.5	78.6	88.9	163.9	322.7	608.5	1918.5	2096.3
77.5°	65.8	69.4	78.1	129.5	242.6	423.5	1436.9	1510.9
80°	56.5	58.1	64.8	94.6	158.3	253.4	1093.6	1205.1
82.5°	44.7	45.2	49.3	69.4	98.7	161.9	758.5	866.0
85°	28.8	29.8	31.9	48.8	66.3	103.8	387.5	444.0
87.5°	9.8	11.3	11.3	23.6	32.4	57.6	118.7	86.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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