

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: P270371

Luminaire Tested: **NAV-AF-02-D-UNV-SLL-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270371  
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-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 800mA 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: 7551.5 lumens  
Efficiency: N/A  
Efficacy: 88.8 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): 85  
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

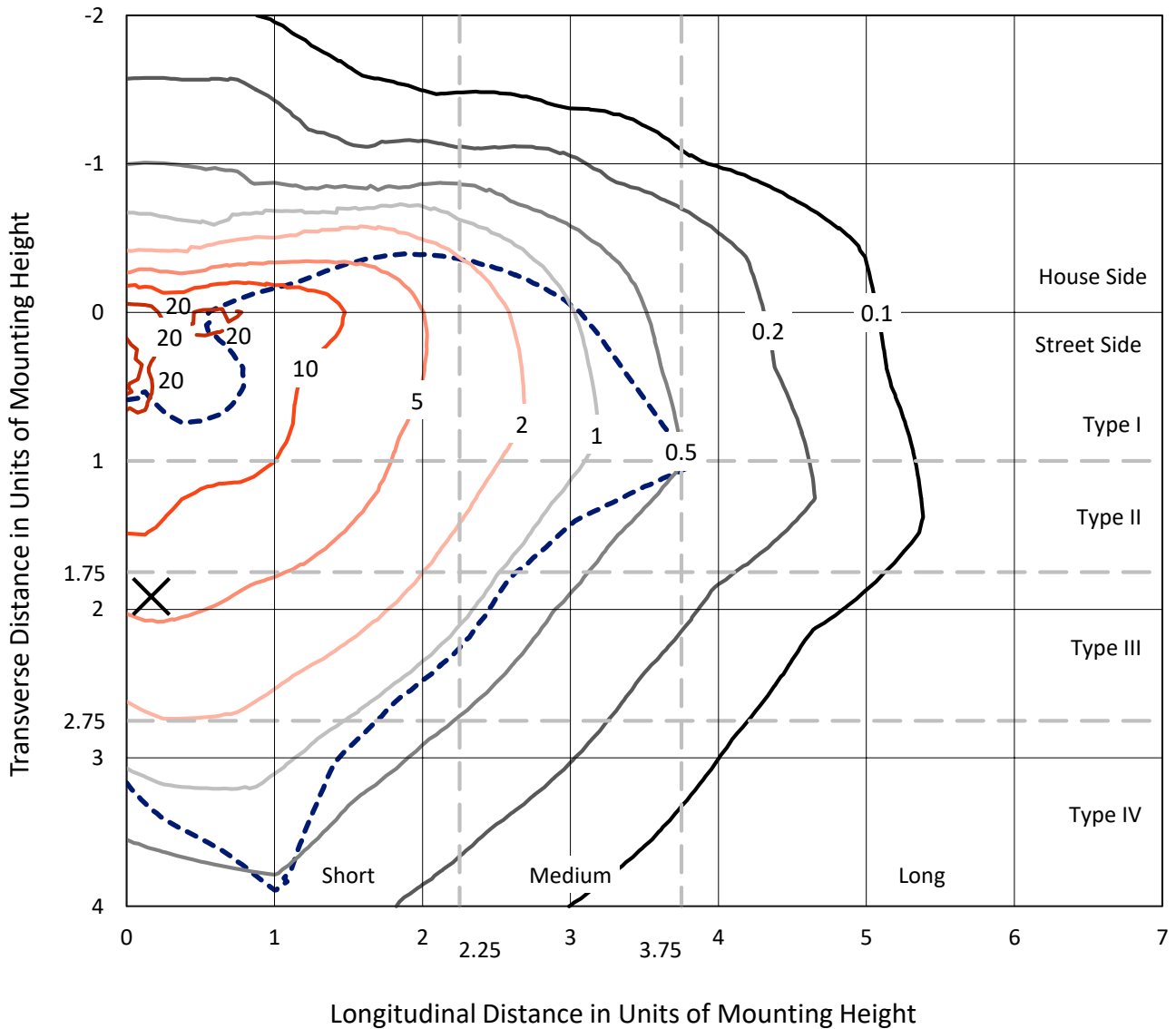


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### Iso-Footcandle Lines of Horizontal Illumination

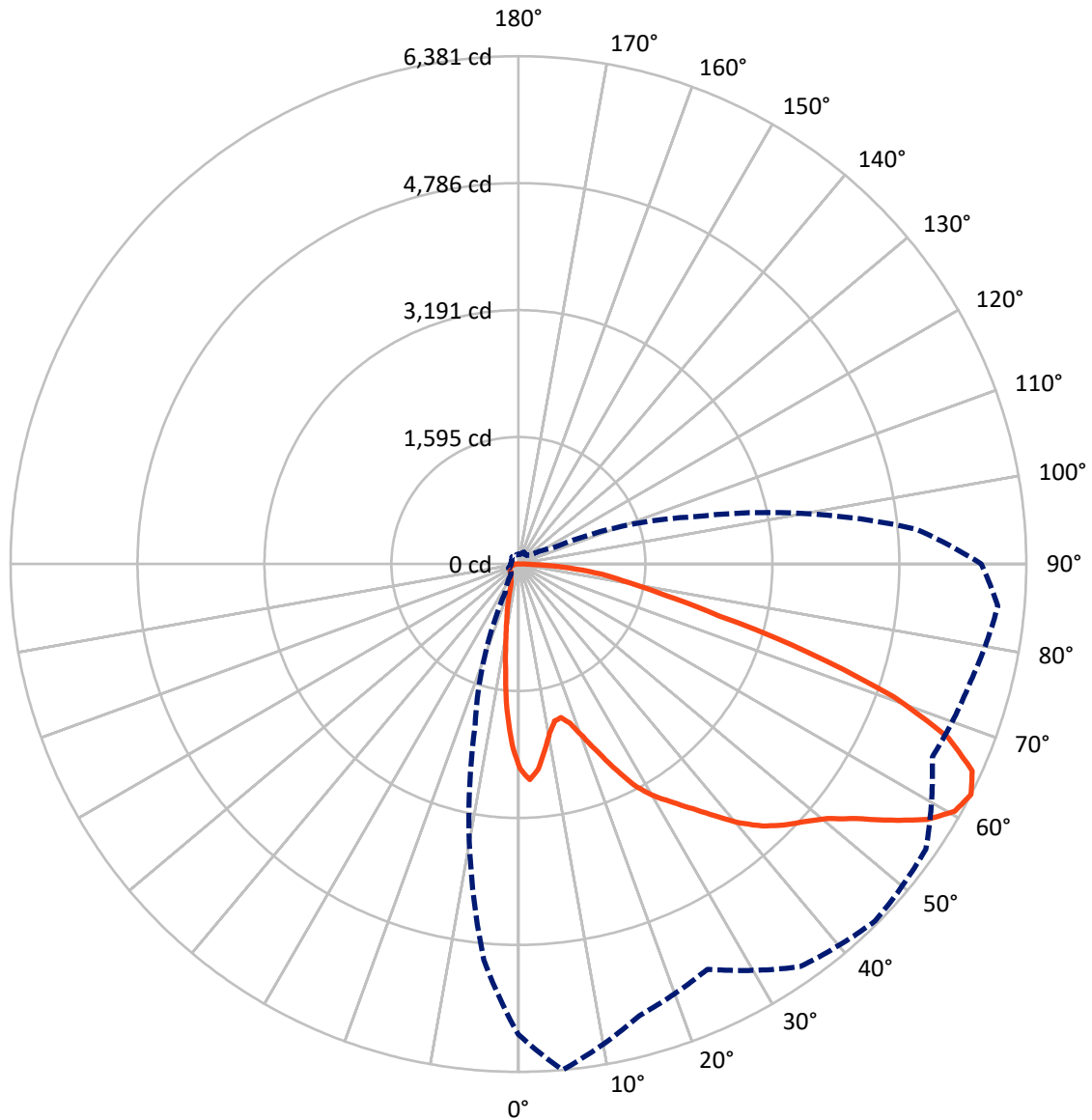
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 29.5 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	1337.7	0.0	1337.7
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	6213.7	0.0	6213.7
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	7551.5	0.0	7551.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	187.2	2.5
10°-20°	342.0	4.5
20°-30°	491.8	6.5
30°-40°	753.3	10.0
40°-50°	1101.3	14.6
50°-60°	1602.5	21.2
60°-70°	1856.7	24.6
70°-80°	967.9	12.8
80°-90°	248.8	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°	7551.5	100.0
0°-180°	7551.5	100.0



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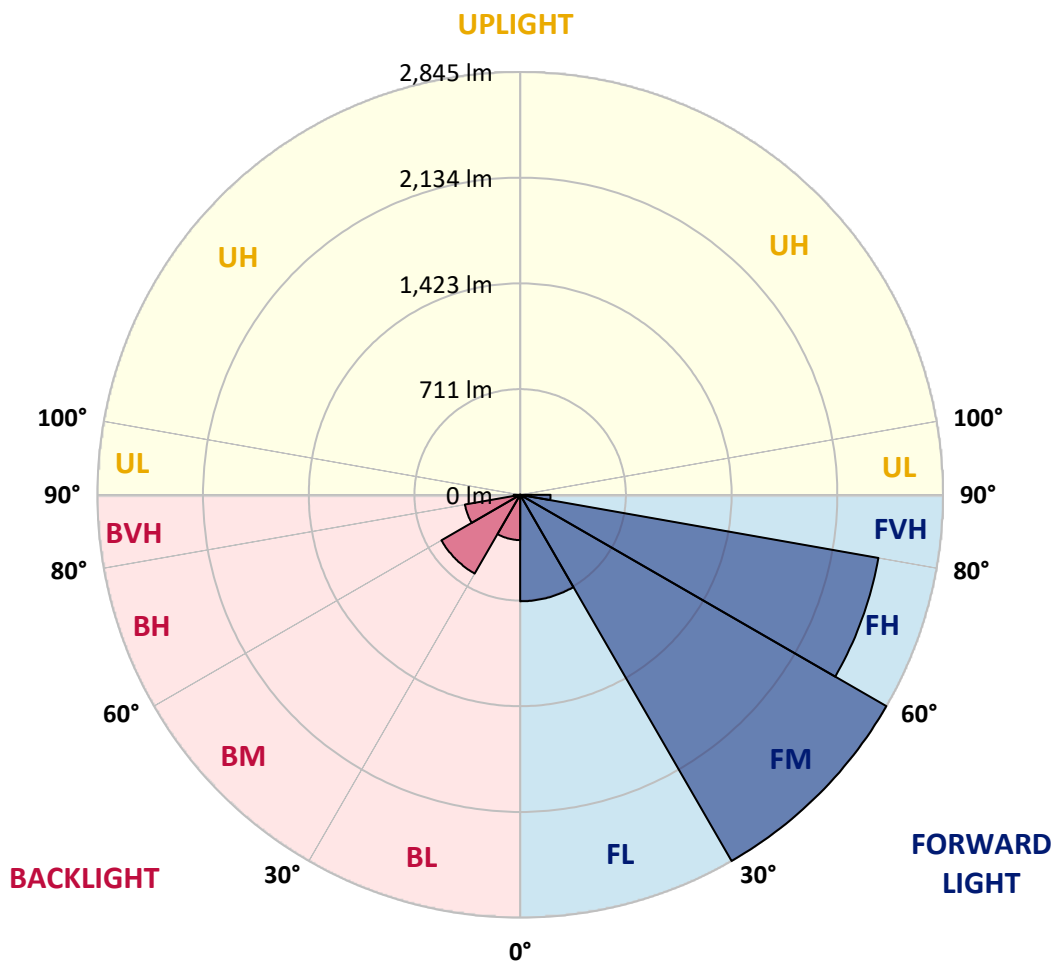
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	716.7	9.5			
FM	(30°-60°)	2845.1	37.7			
FH	(60°-80°)	2447.3	32.4			G2/5000
FVH	(80°-90°)	204.7	2.7			G2/225
BL	(0°-30°)	304.4	4.0	B1/500		
BM	(30°-60°)	612.1	8.1	B1/1000		
BH	(60°-80°)	377.2	5.0	B1/500		G1/500
BVH	(80°-90°)	44.1	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°	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5
2.5°	2657.6	2714.0	2778.6	2863.0	2920.5	2943.4	2962.7	2930.4	2899.1	2840.6	2819.8
5°	2482.5	2590.9	2768.8	2938.0	3086.9	3172.4	3198.7	3138.9	3032.8	2879.4	2798.4
7.5°	2222.3	2365.2	2615.5	2864.7	3078.2	3220.6	3230.9	3112.6	2903.5	2652.2	2520.9
10°	1995.1	2156.7	2446.4	2725.0	2951.1	3096.7	3068.3	2902.5	2650.0	2364.2	2215.8
12.5°	1863.3	2024.8	2319.9	2602.8	2815.9	2871.3	2813.2	2673.5	2434.2	2147.9	1998.5
15°	1835.2	2001.8	2275.0	2513.6	2645.7	2610.0	2552.5	2481.9	2311.7	2077.3	1932.8
17.5°	1919.6	2105.7	2334.7	2465.5	2460.0	2374.6	2326.4	2340.2	2311.1	2154.0	2002.9
20°	2093.2	2313.2	2486.2	2452.4	2312.1	2192.4	2164.3	2271.6	2405.8	2346.2	2180.2
22.5°	2321.5	2572.2	2693.3	2490.1	2235.1	2105.7	2100.2	2267.9	2578.2	2636.9	2434.9
25°	2579.5	2871.8	2901.9	2556.9	2226.8	2098.1	2093.2	2327.0	2785.9	2924.9	2720.1
27.5°	2894.8	3174.0	3075.9	2646.1	2262.9	2120.5	2123.9	2427.7	3002.0	3209.6	3041.5
30°	3132.4	3388.6	3183.4	2733.8	2321.0	2160.0	2168.1	2536.6	3118.6	3407.2	3298.2
32.5°	3354.7	3572.1	3286.3	2820.3	2405.8	2218.5	2247.0	2672.5	3259.0	3577.1	3540.8
35°	3600.5	3777.4	3400.7	2912.8	2527.4	2321.5	2362.5	2801.6	3398.0	3746.7	3781.2
37.5°	3879.2	4012.3	3524.9	3043.6	2702.6	2512.0	2535.0	2933.7	3494.9	3934.5	4039.0
40°	4169.5	4275.7	3660.8	3218.4	2957.2	2769.4	2780.3	3102.8	3570.9	4128.9	4289.2
42.5°	4418.6	4501.1	3797.0	3435.2	3249.6	3031.6	3040.9	3285.1	3643.7	4296.5	4489.6
45°	4617.8	4678.6	3925.8	3663.5	3561.7	3359.0	3356.8	3470.7	3741.3	4437.6	4643.6
47.5°	4803.4	4835.8	4069.2	3885.8	3885.2	3780.6	3702.4	3689.8	3870.9	4556.6	4777.6
50°	5015.9	5028.0	4258.7	4110.3	4280.6	4264.2	4119.5	3968.0	4039.0	4690.1	4918.4
52.5°	5311.6	5312.0	4493.5	4329.3	4716.9	4768.9	4600.8	4282.7	4287.7	4950.2	5161.5
55°	5659.2	5683.2	4799.6	4591.5	5173.6	5262.4	5104.0	4656.8	4644.6	5369.6	5555.7
57.5°	5928.1	6055.7	5156.0	4919.5	5600.0	5715.6	5588.0	5044.3	5083.1	5802.2	5880.9
60°	6003.6	6302.0	5511.5	5287.5	5961.0	6134.4	6004.7	5463.2	5512.4	6083.1	5974.5
62.5°	5913.3	6381.4	5873.3	5617.0	6174.9	6341.5	6248.4	5737.6	5862.3	6046.9	5816.3
65°	5645.6	6266.4	6187.5	5757.2	6051.8	6110.9	6086.2	5751.8	6052.3	5705.2	5379.0
67.5°	5020.3	5823.0	6047.4	5457.7	5476.3	5412.8	5380.5	5360.8	5838.9	5153.8	4689.1
70°	4082.8	5003.3	5379.0	4567.4	4429.5	4368.2	4261.9	4524.8	5248.0	4391.2	3858.9
72.5°	3145.0	3827.8	4411.9	3462.5	3175.7	3196.4	3075.9	3459.8	4347.3	3394.7	2946.3
75°	2233.4	2610.0	3521.6	2487.9	2108.0	2106.9	2097.5	2490.1	3430.3	2436.6	2155.7
77.5°	1609.8	1879.2	2759.0	1665.0	1495.9	1515.0	1484.3	1692.3	2674.2	1752.7	1597.1
80°	1283.9	1391.2	1783.2	1110.3	1113.7	1158.5	1151.9	1157.5	1759.2	1269.1	1194.1
82.5°	922.6	1056.1	1363.4	850.9	736.4	784.0	793.4	858.5	1241.3	897.3	787.4
85°	473.0	643.8	1254.4	737.0	460.6	381.6	439.1	677.3	1078.1	537.6	383.8
87.5°	91.9	178.6	919.2	409.5	207.0	104.7	172.5	286.9	626.8	97.5	47.6
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°	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5
2.5°	2784.1	2714.0	2648.4	2580.6	2527.9	2464.0	2400.9	2346.2	2293.1	2258.0	2268.9
5°	2716.2	2545.4	2392.1	2249.7	2166.5	2066.3	1977.1	1902.2	1844.1	1806.9	1829.3
7.5°	2406.9	2175.9	1973.8	1786.0	1667.8	1538.0	1434.0	1360.7	1315.7	1290.5	1327.2
10°	2090.4	1830.9	1604.3	1408.8	1292.1	1182.1	1087.9	1010.1	950.0	921.5	936.3
12.5°	1863.8	1575.3	1337.5	1206.2	1106.1	1007.4	910.1	819.2	742.4	707.3	700.3
15°	1779.0	1437.7	1195.3	1048.5	948.9	841.5	736.4	639.0	566.1	536.0	529.5
17.5°	1816.2	1408.3	1110.9	937.3	792.8	662.5	544.3	452.2	398.6	381.6	383.2
20°	1946.9	1419.2	1043.0	822.9	644.4	490.0	371.8	308.3	285.2	281.3	285.8
22.5°	2126.6	1464.1	993.7	724.4	513.7	356.4	276.5	246.3	240.3	239.8	244.2
25°	2363.7	1551.7	960.8	636.8	405.8	282.5	240.9	223.9	218.9	220.2	224.4
27.5°	2643.0	1662.9	939.5	561.3	333.5	251.9	225.0	210.3	205.4	206.4	209.8
30°	2898.0	1760.3	907.7	504.3	299.4	240.9	216.3	201.5	194.9	194.9	197.1
32.5°	3126.5	1844.6	870.5	461.5	268.2	216.3	196.0	184.5	179.7	181.3	182.4
35°	3328.9	1889.0	841.5	436.3	243.1	199.3	179.0	166.9	160.4	161.5	163.1
37.5°	3528.3	1905.9	822.4	422.7	225.0	189.0	170.3	160.4	153.3	152.3	151.6
40°	3717.6	1902.2	804.3	418.9	213.0	181.3	164.7	156.0	148.8	147.3	146.8
42.5°	3881.3	1889.6	787.4	408.5	204.8	175.8	160.4	152.7	145.6	143.5	142.3
45°	4030.9	1881.9	768.7	389.2	209.1	173.6	158.2	150.0	143.5	140.8	139.6
47.5°	4196.8	1909.2	747.8	368.5	208.0	174.1	158.2	148.8	142.3	139.6	138.5
50°	4394.5	2001.8	722.1	340.0	198.2	186.2	157.7	147.3	141.3	139.6	137.4
52.5°	4673.7	2151.8	686.7	303.4	190.5	198.7	157.2	144.5	139.6	136.9	134.1
55°	5056.4	2301.7	640.6	264.5	178.6	190.0	158.2	141.3	135.7	133.0	129.7
57.5°	5370.1	2415.7	582.6	232.1	167.5	179.7	156.6	137.4	131.4	128.6	125.9
60°	5349.9	2426.6	527.2	211.3	160.9	161.5	160.4	134.7	127.6	125.4	123.2
62.5°	5018.7	2291.3	475.8	201.0	156.0	147.3	163.8	131.4	123.7	121.5	120.0
65°	4467.2	1976.6	448.4	201.0	151.6	139.6	142.9	127.0	120.0	117.7	116.6
67.5°	3768.1	1588.4	422.7	205.4	145.6	134.1	129.7	122.7	116.2	113.8	112.7
70°	3020.1	1250.0	404.6	203.1	140.1	128.1	122.7	116.6	110.0	109.6	108.4
72.5°	2369.1	1004.1	396.4	203.1	132.0	121.0	115.5	111.1	104.7	104.1	102.3
75°	1898.3	753.9	362.5	199.3	123.7	111.7	106.8	102.9	96.4	96.8	95.8
77.5°	1470.0	533.4	302.8	179.7	113.4	101.2	97.5	94.7	87.0	87.7	87.7
80°	1149.8	347.1	234.8	148.8	101.2	89.2	86.4	84.4	76.0	77.3	77.3
82.5°	788.0	206.4	170.3	120.0	87.0	76.0	75.5	72.3	63.5	64.0	65.1
85°	430.4	135.7	113.4	88.8	68.5	61.9	60.7	59.1	50.9	50.9	51.5
87.5°	79.4	72.9	66.8	58.6	46.1	44.3	42.7	44.3	38.3	37.2	37.2
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):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5
2.5°	2243.2	2205.3	2179.2	2156.1	2100.9	2104.6	2112.4	2123.4	2088.7	2106.9	2129.3
5°	1806.9	1775.6	1752.1	1715.5	1638.1	1610.8	1593.4	1585.7	1534.1	1545.2	1569.2
7.5°	1332.1	1331.6	1323.4	1282.3	1189.3	1132.9	1095.7	1084.2	1052.4	1064.4	1101.1
10°	937.9	947.7	943.8	907.3	824.0	783.5	775.2	798.4	798.9	822.4	885.4
12.5°	677.9	672.3	667.4	637.3	574.8	568.4	587.0	618.8	626.4	651.5	717.2
15°	505.9	492.8	490.0	466.5	425.4	431.5	445.1	461.5	462.1	479.6	533.9
17.5°	379.4	379.4	383.8	368.5	338.9	336.1	329.0	324.6	318.1	325.2	354.8
20°	294.6	308.3	319.2	310.5	283.7	270.5	256.7	248.0	243.1	243.6	252.5
22.5°	252.5	263.4	277.5	273.3	250.7	233.7	225.0	218.9	215.1	215.1	220.2
25°	231.0	238.2	251.3	249.1	230.0	216.3	209.1	203.1	198.7	198.2	203.1
27.5°	214.1	218.5	227.2	226.2	206.4	197.6	193.2	189.5	186.7	186.2	191.1
30°	198.7	201.0	205.4	203.6	189.0	180.1	178.6	176.8	175.2	175.8	182.8
32.5°	185.1	186.7	189.5	187.2	173.1	165.4	162.7	160.4	158.8	160.4	168.6
35°	169.7	174.7	178.0	176.8	161.5	152.3	146.2	140.8	138.5	140.1	149.5
37.5°	156.6	164.7	169.2	168.2	152.3	141.3	133.6	132.5	132.5	134.7	144.0
40°	151.6	157.7	161.5	159.9	144.0	133.0	128.6	127.0	127.6	129.7	139.6
42.5°	147.3	152.7	153.9	150.6	134.7	127.6	124.9	122.7	123.7	126.5	136.4
45°	143.5	147.9	147.3	142.3	127.0	122.1	122.1	120.5	121.0	123.2	133.6
47.5°	140.8	142.9	141.8	136.9	121.5	117.7	119.4	119.4	120.5	122.1	132.5
50°	136.4	138.0	136.9	132.5	117.1	113.8	115.5	117.7	118.8	120.5	129.7
52.5°	132.0	133.0	132.5	128.1	112.7	110.6	110.6	112.7	115.0	117.1	125.4
55°	127.6	128.6	129.3	125.9	109.6	107.3	106.8	106.8	109.0	112.3	121.0
57.5°	124.2	124.2	125.4	123.2	106.2	103.5	100.7	101.2	104.1	106.8	115.5
60°	120.5	121.0	122.7	120.5	101.9	97.5	95.3	98.1	99.2	101.9	111.1
62.5°	117.1	117.1	118.2	116.6	98.1	93.7	91.9	94.7	94.7	97.5	106.8
65°	114.4	113.8	113.8	113.4	94.2	89.8	88.8	89.8	90.3	93.1	102.3
67.5°	112.3	109.6	109.6	110.6	90.3	86.0	85.3	85.3	86.0	89.2	97.5
70°	107.3	105.1	104.7	108.4	86.4	81.0	81.0	79.9	81.0	82.6	91.4
72.5°	101.9	100.3	99.6	105.1	82.6	75.5	74.5	73.9	74.5	76.0	84.4
75°	94.7	93.7	94.7	102.9	78.8	69.4	67.9	67.4	67.4	67.9	76.6
77.5°	86.4	85.3	93.7	95.8	76.6	62.4	60.7	59.6	58.6	58.6	68.5
80°	76.6	76.0	90.3	81.0	73.4	54.7	52.0	50.3	49.2	48.7	58.6
82.5°	66.8	65.7	77.3	63.5	60.7	44.8	41.1	37.8	36.1	36.1	44.8
85°	54.7	54.2	60.7	46.5	42.2	32.9	27.4	24.7	22.5	22.5	29.0
87.5°	40.0	38.8	37.8	27.9	21.4	14.8	10.4	9.8	8.8	8.3	12.0
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):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5
2.5°	2162.7	2208.2	2294.1	2364.8	2458.9	2534.5	2620.4	2657.6
5°	1613.5	1685.3	1816.7	1928.9	2084.4	2228.4	2392.6	2482.5
7.5°	1157.5	1263.6	1363.4	1503.6	1697.8	1891.1	2103.7	2222.3
10°	957.7	1055.1	1140.5	1240.1	1390.1	1607.5	1861.1	1995.1
12.5°	793.4	898.5	988.9	1095.7	1221.5	1418.1	1707.1	1863.3
15°	608.3	722.7	831.1	959.7	1114.2	1338.7	1661.1	1835.2
17.5°	416.6	539.3	672.9	830.0	1016.3	1305.2	1705.1	1919.6
20°	283.1	372.8	518.0	704.1	928.0	1289.4	1801.3	2093.2
22.5°	232.8	273.3	382.1	585.9	855.7	1306.9	1957.9	2321.5
25°	213.5	235.4	297.2	481.9	800.5	1353.4	2169.9	2579.5
27.5°	201.5	220.2	260.6	407.3	749.5	1416.9	2427.7	2894.8
30°	194.4	211.9	245.9	369.1	703.1	1471.8	2649.6	3132.4
32.5°	178.6	191.6	219.5	347.1	669.6	1516.1	2844.9	3354.7
35°	159.3	175.2	198.2	332.9	668.5	1536.9	3028.9	3600.5
37.5°	152.3	167.5	184.5	325.2	675.0	1554.4	3253.9	3879.2
40°	147.9	161.5	175.2	324.2	680.6	1568.1	3474.0	4169.5
42.5°	144.0	157.7	173.6	316.5	678.4	1586.8	3668.9	4418.6
45°	142.9	156.6	177.3	305.0	677.9	1615.7	3823.9	4617.8
47.5°	141.8	162.7	176.2	292.4	675.6	1677.0	3998.5	4803.4
50°	140.8	173.6	168.6	274.8	659.3	1781.7	4233.4	5015.9
52.5°	140.1	175.2	160.4	250.7	629.6	1936.6	4577.4	5311.6
55°	138.0	166.5	146.2	218.9	587.0	2103.7	4945.8	5659.2
57.5°	133.0	148.4	138.0	187.7	525.6	2220.3	5218.0	5928.1
60°	145.0	127.6	132.5	171.9	452.2	2241.0	5229.9	6003.6
62.5°	138.5	116.2	127.0	166.5	400.9	2105.3	4990.8	5913.3
65°	110.6	110.0	122.1	171.9	393.1	1801.3	4586.7	5645.6
67.5°	100.7	105.7	117.1	178.6	398.0	1419.2	3992.0	5020.3
70°	94.2	100.3	110.6	184.5	406.8	1118.0	3214.0	4082.8
72.5°	87.7	92.5	104.1	190.5	400.9	882.0	2572.2	3145.0
75°	79.4	83.8	94.7	174.7	343.8	648.2	2044.0	2233.4
77.5°	70.1	73.9	83.3	138.0	258.4	451.2	1530.9	1609.8
80°	60.2	61.9	69.0	100.7	168.6	269.9	1165.1	1283.9
82.5°	47.6	48.1	52.6	73.9	105.1	172.5	808.1	922.6
85°	30.6	31.8	34.0	52.0	70.6	110.6	412.9	473.0
87.5°	10.4	12.0	12.0	25.2	34.5	61.4	126.5	91.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)