

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: P196700

Luminaire Tested: **NAV-AF-02-D-UNV-SLL-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196700  
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-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 1200mA 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: 11413.2 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

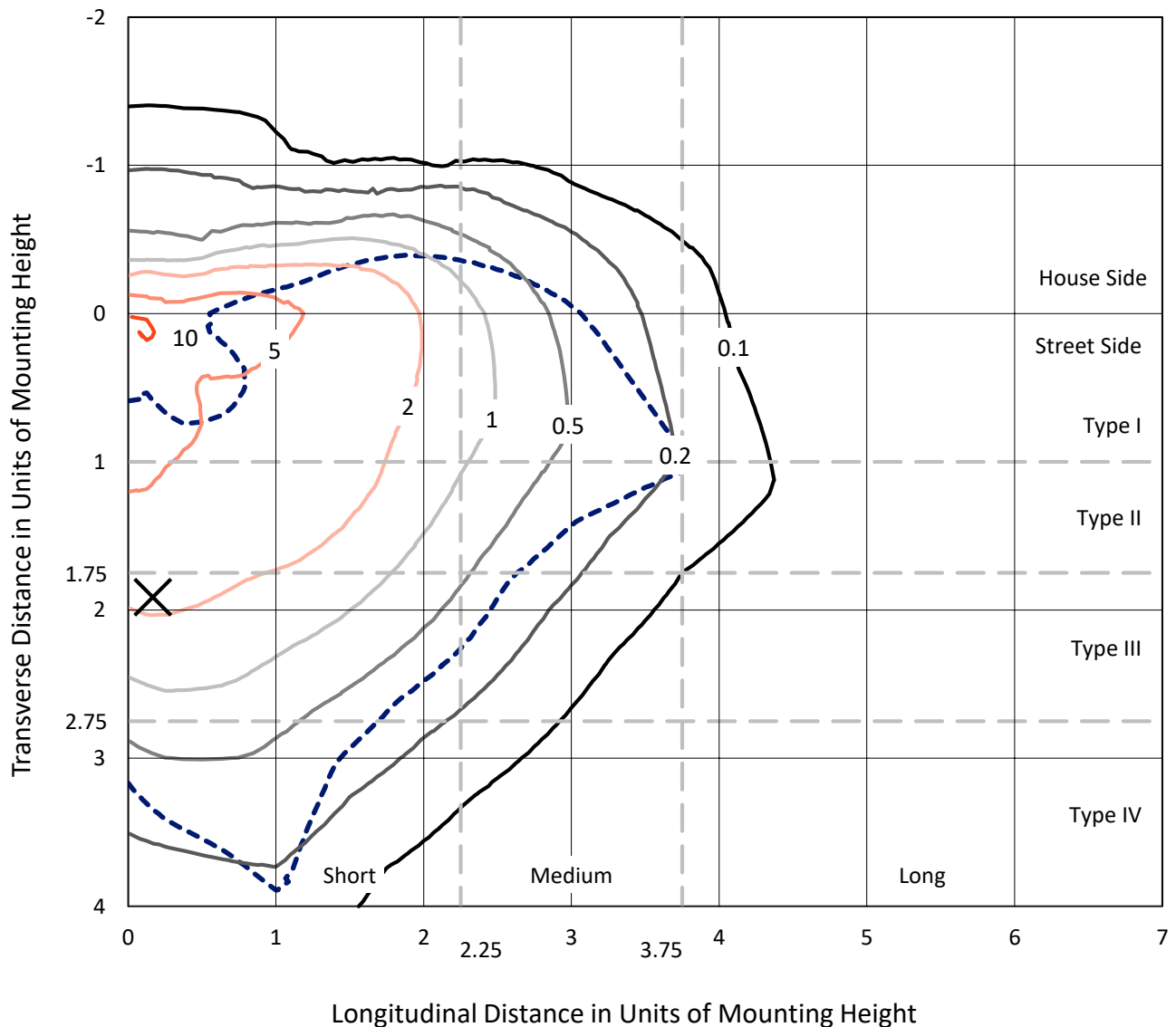
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

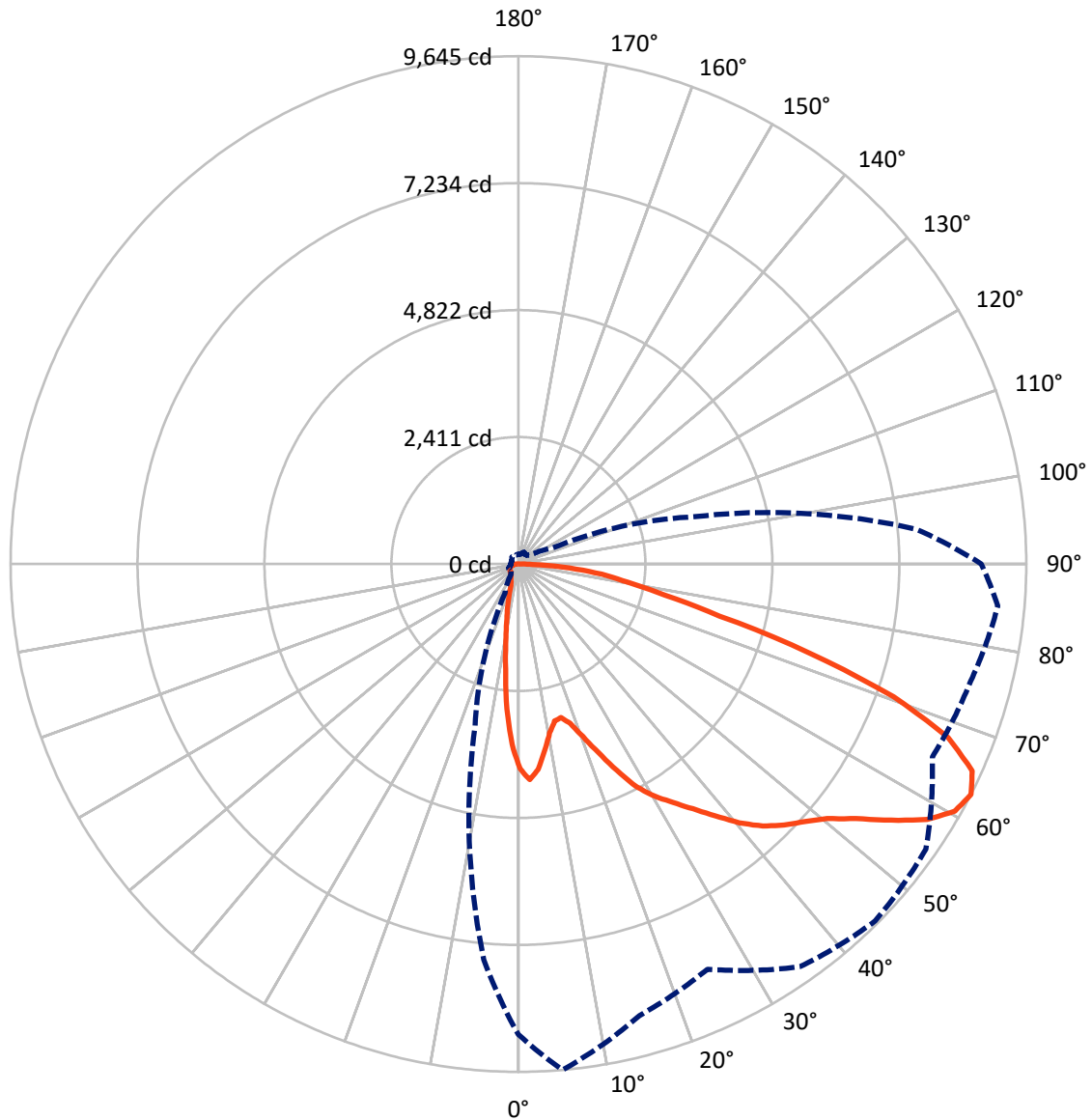
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 11.2 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	2021.9	0.0	2021.9
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	9391.3	0.0	9391.3
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	11413.2	0.0	11413.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	283.0	2.5
10°-20°	516.8	4.5
20°-30°	743.4	6.5
30°-40°	1138.5	10.0
40°-50°	1664.6	14.6
50°-60°	2422.0	21.2
60°-70°	2806.2	24.6
70°-80°	1462.8	12.8
80°-90°	376.0	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°	11413.2	100.0
0°-180°	11413.2	100.0

**Coefficient of Utilization**



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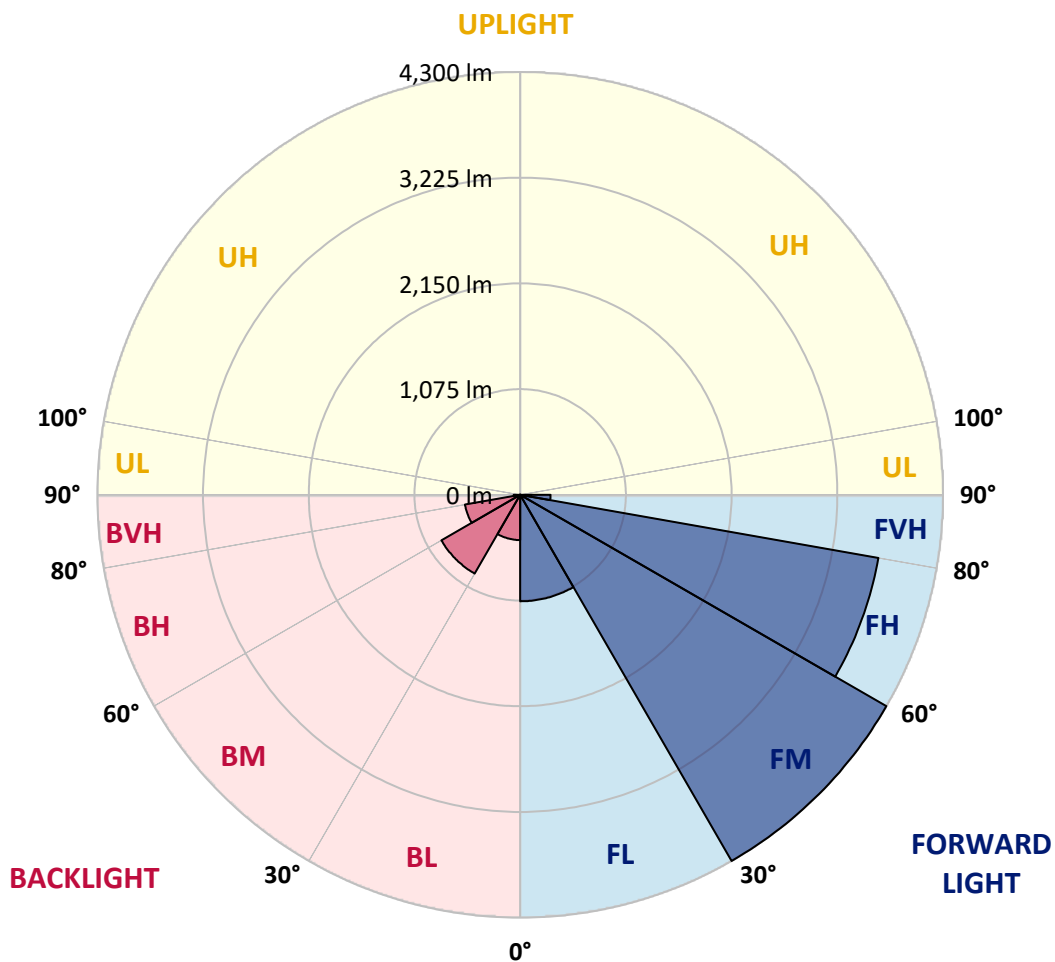
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1083.2	9.5			
FM	(30°-60°)	4300.0	37.7			
FH	(60°-80°)	3698.9	32.4			G2/5000
FVH	(80°-90°)	309.3	2.7			G3/500
BL	(0°-30°)	460.0	4.0	B1/500		
BM	(30°-60°)	925.1	8.1	B1/1000		
BH	(60°-80°)	570.1	5.0	B2/1000		G2/1000
BVH	(80°-90°)	66.7	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9
2.5°	4016.8	4102.0	4199.7	4327.1	4414.0	4448.7	4477.7	4429.0	4381.8	4293.2	4261.7
5°	3752.0	3915.9	4184.7	4440.6	4665.6	4794.7	4834.4	4744.1	4583.7	4351.9	4229.4
7.5°	3358.8	3574.9	3953.1	4329.6	4652.3	4867.5	4883.3	4704.4	4388.3	4008.5	3809.9
10°	3015.4	3259.6	3697.4	4118.5	4460.3	4680.4	4637.4	4386.6	4005.2	3573.3	3349.1
12.5°	2816.0	3060.2	3506.2	3934.0	4255.9	4339.6	4251.9	4040.7	3679.2	3246.3	3020.5
15°	2773.9	3025.4	3438.4	3799.2	3998.6	3944.8	3858.0	3751.2	3493.8	3139.6	2921.1
17.5°	2901.3	3182.6	3528.5	3726.3	3718.1	3588.9	3516.2	3536.8	3492.9	3255.5	3027.0
20°	3163.6	3496.3	3757.8	3706.5	3494.6	3313.4	3271.2	3433.4	3636.1	3545.9	3295.2
22.5°	3508.7	3887.7	4070.6	3763.6	3378.0	3182.6	3174.3	3427.6	3896.8	3985.3	3680.0
25°	3898.5	4340.4	4385.8	3864.5	3365.5	3171.0	3163.6	3516.9	4210.5	4420.6	4111.1
27.5°	4375.1	4797.1	4649.0	3999.4	3420.2	3205.0	3209.9	3669.3	4537.3	4850.9	4596.9
30°	4734.2	5121.5	4811.2	4131.8	3507.9	3264.5	3277.0	3833.9	4713.6	5149.6	4985.0
32.5°	5070.1	5398.7	4966.8	4262.5	3636.1	3353.0	3396.1	4039.1	4925.4	5406.1	5351.5
35°	5441.7	5709.1	5139.8	4402.4	3819.8	3508.7	3570.7	4234.5	5135.6	5662.7	5714.8
37.5°	5863.0	6064.1	5327.6	4600.2	4084.6	3796.6	3831.4	4433.8	5282.0	5946.6	6104.7
40°	6301.5	6462.1	5532.8	4864.1	4469.5	4185.6	4202.1	4689.5	5397.1	6240.4	6482.8
42.5°	6678.0	6803.0	5738.9	5191.9	4911.3	4582.0	4596.0	4965.1	5507.1	6493.5	6785.6
45°	6979.3	7071.2	5933.4	5536.9	5382.9	5076.8	5073.6	5245.6	5654.3	6707.0	7018.2
47.5°	7259.8	7308.7	6150.1	5872.9	5872.0	5714.0	5595.7	5576.7	5850.5	6886.6	7221.0
50°	7581.0	7599.1	6436.5	6212.2	6469.6	6444.7	6226.2	5997.0	6104.7	7088.5	7433.6
52.5°	8027.8	8028.6	6791.4	6543.2	7129.0	7207.8	6953.7	6472.8	6480.2	7481.6	7801.0
55°	8553.3	8589.6	7254.0	6939.6	7819.2	7953.3	7714.1	7038.1	7019.8	8115.4	8396.8
57.5°	8959.6	9152.3	7792.7	7435.3	8463.9	8638.5	8445.6	7623.9	7682.7	8769.2	8888.4
60°	9073.8	9524.7	8329.8	7991.3	9009.2	9271.5	9075.4	8256.9	8331.4	9193.7	9029.8
62.5°	8937.2	9644.8	8876.8	8489.6	9332.7	9584.3	9443.6	8671.6	8860.3	9139.1	8790.8
65°	8532.6	9470.9	9351.8	8701.4	9146.5	9235.9	9198.7	8693.1	9147.4	8622.7	8129.6
67.5°	7587.5	8800.7	9140.0	8248.7	8276.8	8180.9	8132.0	8102.2	8824.7	7789.4	7086.9
70°	6170.9	7561.9	8129.6	6903.2	6694.7	6602.0	6441.4	6838.6	7931.7	6636.7	5832.4
72.5°	4753.4	5785.2	6668.2	5233.2	4799.6	4831.0	4649.0	5229.0	6570.6	5130.6	4452.9
75°	3375.4	3944.8	5322.6	3760.2	3186.0	3184.3	3170.2	3763.6	5184.5	3682.5	3257.9
77.5°	2432.8	2840.0	4169.9	2516.5	2260.8	2289.7	2243.4	2557.9	4041.6	2648.9	2413.9
80°	1940.6	2102.7	2695.2	1678.2	1683.1	1751.0	1741.0	1749.4	2658.9	1918.1	1804.9
82.5°	1394.3	1596.3	2060.5	1286.0	1113.1	1185.0	1199.1	1297.6	1876.0	1356.4	1190.0
85°	715.0	973.2	1895.8	1113.8	696.0	576.8	663.6	1023.6	1629.4	812.7	580.0
87.5°	139.0	269.8	1389.4	619.0	312.8	158.1	260.7	433.6	947.5	147.3	72.0
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°	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9
2.5°	4207.9	4102.0	4002.7	3900.1	3820.7	3723.9	3628.7	3545.9	3465.7	3412.7	3429.2
5°	4105.3	3847.1	3615.4	3400.2	3274.5	3123.0	2988.1	2874.8	2787.1	2730.8	2764.7
7.5°	3637.8	3288.6	2983.3	2699.4	2520.6	2324.5	2167.2	2056.4	1988.5	1950.5	2005.9
10°	3159.4	2767.2	2424.7	2129.3	1952.9	1786.6	1644.3	1526.8	1435.7	1392.7	1415.0
12.5°	2816.9	2380.8	2021.7	1823.0	1671.5	1522.6	1375.3	1238.0	1122.1	1069.1	1058.4
15°	2688.7	2173.0	1806.5	1584.7	1434.1	1271.9	1113.1	965.8	855.6	810.1	800.3
17.5°	2744.9	2128.4	1679.0	1416.8	1198.2	1001.3	822.5	683.5	602.4	576.8	579.3
20°	2942.7	2145.0	1576.4	1243.8	973.9	740.7	561.9	465.9	431.1	425.3	432.0
22.5°	3214.1	2212.8	1502.0	1094.8	776.2	538.7	417.9	372.3	363.3	362.4	369.1
25°	3572.4	2345.1	1452.3	962.3	613.2	426.9	364.2	338.4	331.0	332.7	339.2
27.5°	3994.4	2513.2	1420.1	848.2	504.0	380.7	340.2	317.7	310.3	311.9	317.0
30°	4380.1	2660.5	1372.1	762.2	452.7	364.2	326.9	304.5	294.6	294.6	297.9
32.5°	4725.1	2787.9	1315.8	697.6	405.5	326.9	296.2	278.8	271.4	273.9	275.6
35°	5031.3	2855.0	1271.9	659.5	367.4	301.2	270.6	252.4	242.4	244.0	246.6
37.5°	5332.5	2880.6	1243.0	638.8	340.2	285.5	257.3	242.4	231.7	230.1	229.2
40°	5618.8	2874.8	1215.6	633.0	321.9	273.9	249.1	235.9	225.1	222.6	221.8
42.5°	5866.2	2855.8	1190.0	617.4	309.5	265.6	242.4	230.9	220.1	216.8	215.1
45°	6092.2	2844.2	1161.9	588.4	316.1	262.3	239.2	226.7	216.8	212.6	211.0
47.5°	6342.9	2885.5	1130.4	556.9	314.4	263.2	239.2	225.1	215.1	211.0	209.3
50°	6641.7	3025.4	1091.5	513.8	299.6	281.4	238.3	222.6	213.5	211.0	207.7
52.5°	7063.7	3252.1	1037.8	458.5	288.0	300.4	237.5	218.5	211.0	206.8	202.7
55°	7642.1	3479.0	968.1	399.7	269.8	287.2	239.2	213.5	205.2	201.0	196.1
57.5°	8116.4	3651.0	880.5	350.8	253.3	271.4	236.6	207.7	198.7	194.5	190.3
60°	8085.7	3667.7	796.9	319.5	243.3	244.0	242.4	203.5	192.9	189.4	186.2
62.5°	7585.0	3463.2	719.2	303.7	235.9	222.6	247.5	198.7	187.1	183.7	181.3
65°	6751.6	2987.3	677.7	303.7	229.2	211.0	216.0	192.0	181.3	177.9	176.2
67.5°	5695.0	2400.7	638.8	310.3	220.1	202.7	196.1	185.4	175.5	172.1	170.5
70°	4564.7	1889.2	611.6	307.0	211.9	193.6	185.4	176.2	166.3	165.5	163.9
72.5°	3580.7	1517.7	599.2	307.0	199.4	182.9	174.6	168.0	158.1	157.3	154.7
75°	2869.0	1139.5	547.8	301.2	187.1	168.8	161.3	155.5	145.7	146.5	144.8
77.5°	2221.9	806.0	457.6	271.4	171.3	153.1	147.3	143.1	131.5	132.4	132.4
80°	1737.8	524.7	355.0	225.1	153.1	134.9	130.8	127.4	115.0	116.7	116.7
82.5°	1190.8	311.9	257.3	181.3	131.5	115.0	114.1	109.3	96.0	96.8	98.5
85°	650.4	205.2	171.3	134.1	103.5	93.5	91.9	89.4	76.9	76.9	77.8
87.5°	119.9	110.1	100.9	88.5	69.5	66.9	64.6	66.9	57.9	56.3	56.3
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):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9
2.5°	3390.4	3333.3	3293.5	3258.7	3175.2	3181.0	3192.5	3209.2	3156.9	3184.3	3218.2
5°	2730.8	2683.6	2648.0	2592.6	2476.0	2434.6	2408.1	2396.5	2318.7	2335.3	2371.7
7.5°	2013.3	2012.5	2000.1	1938.0	1797.5	1712.1	1655.9	1638.5	1590.5	1608.8	1664.1
10°	1417.5	1432.4	1426.6	1371.2	1245.4	1184.2	1171.8	1206.5	1207.4	1243.0	1338.1
12.5°	1024.5	1016.2	1008.8	963.2	868.9	859.0	887.0	935.1	946.7	984.8	1084.1
15°	764.6	744.8	740.7	705.0	643.0	652.1	672.8	697.6	698.3	724.9	806.9
17.5°	573.5	573.5	580.0	556.9	512.2	508.0	497.3	490.7	480.7	491.5	536.3
20°	445.2	465.9	482.5	469.2	428.7	408.8	388.1	374.9	367.4	368.2	381.6
22.5°	381.6	398.0	419.5	412.9	379.0	353.4	340.2	331.0	325.3	325.3	332.7
25°	349.2	360.0	379.7	376.5	347.6	326.9	316.1	307.0	300.4	299.6	307.0
27.5°	323.5	330.2	343.4	341.8	311.9	298.8	292.2	286.4	282.2	281.4	288.8
30°	300.4	303.7	310.3	307.8	285.5	272.3	269.8	267.2	264.9	265.6	276.4
32.5°	279.7	282.2	286.4	283.0	261.4	249.8	245.8	242.4	240.0	242.4	254.9
35°	256.5	264.0	269.0	267.2	244.0	230.1	220.9	212.6	209.3	211.9	225.9
37.5°	236.6	249.1	255.6	254.0	230.1	213.5	201.9	200.3	200.3	203.5	217.7
40°	229.2	238.3	244.0	241.7	217.7	201.0	194.5	192.0	192.9	196.1	211.0
42.5°	222.6	230.9	232.5	227.6	203.5	192.9	188.7	185.4	187.1	191.2	206.1
45°	216.8	223.4	222.6	215.1	192.0	184.5	184.5	182.0	182.9	186.2	201.9
47.5°	212.6	216.0	214.3	206.8	183.7	177.9	180.4	180.4	182.0	184.5	200.3
50°	206.1	208.5	206.8	200.3	177.1	172.1	174.6	177.9	179.6	182.0	196.1
52.5°	199.4	201.0	200.3	193.6	170.5	167.1	167.1	170.5	173.8	177.1	189.4
55°	192.9	194.5	195.2	190.3	165.5	162.1	161.3	161.3	164.7	169.7	182.9
57.5°	187.8	187.8	189.4	186.2	160.5	156.3	152.3	153.1	157.3	161.3	174.6
60°	182.0	182.9	185.4	182.0	153.9	147.3	144.0	148.1	149.8	153.9	168.0
62.5°	177.1	177.1	178.7	176.2	148.1	141.5	139.0	143.1	143.1	147.3	161.3
65°	172.9	172.1	172.1	171.3	142.4	135.7	134.1	135.7	136.6	140.7	154.7
67.5°	169.7	165.5	165.5	167.1	136.6	129.9	129.2	129.2	129.9	134.9	147.3
70°	162.1	158.9	158.1	163.9	130.8	122.5	122.5	120.8	122.5	125.0	138.2
72.5°	153.9	151.5	150.6	158.9	125.0	114.1	112.5	111.7	112.5	115.0	127.4
75°	143.1	141.5	143.1	155.5	119.2	105.1	102.6	101.8	101.8	102.6	115.9
77.5°	130.8	129.2	141.5	144.8	115.9	94.3	91.9	90.2	88.5	88.5	103.5
80°	115.9	115.0	136.6	122.5	110.9	82.7	78.6	76.2	74.6	73.6	88.5
82.5°	100.9	99.3	116.7	96.0	91.9	67.8	62.1	57.2	54.6	54.6	67.8
85°	82.7	82.0	91.9	70.4	63.7	49.6	41.4	37.2	34.0	34.0	43.8
87.5°	60.4	58.8	57.2	42.2	32.2	22.3	15.8	14.9	13.2	12.4	18.2
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):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9
2.5°	3268.7	3337.5	3467.4	3574.1	3716.4	3830.6	3960.5	4016.8
5°	2438.6	2547.1	2745.6	2915.4	3150.4	3368.0	3616.3	3752.0
7.5°	1749.4	1910.0	2060.5	2272.4	2566.2	2858.2	3179.3	3358.8
10°	1447.3	1594.6	1723.7	1874.4	2101.0	2429.6	2812.8	3015.4
12.5°	1199.1	1358.0	1494.4	1655.9	1846.2	2143.2	2580.1	2816.0
15°	919.4	1092.4	1256.2	1450.6	1684.0	2023.3	2510.7	2773.9
17.5°	629.8	815.1	1016.9	1254.6	1535.8	1972.7	2576.9	2901.3
20°	427.9	563.6	782.9	1064.1	1402.7	1948.8	2722.5	3163.6
22.5°	351.7	412.9	577.7	885.4	1293.4	1975.3	2959.2	3508.7
25°	322.8	355.8	449.4	728.2	1209.8	2045.7	3279.4	3898.5
27.5°	304.5	332.7	393.9	615.6	1132.9	2141.6	3669.3	4375.1
30°	293.8	320.2	371.6	557.8	1062.5	2224.4	4004.4	4734.2
32.5°	269.8	289.6	331.8	524.7	1012.1	2291.3	4299.8	5070.1
35°	240.8	264.9	299.6	503.1	1010.4	2322.9	4577.9	5441.7
37.5°	230.1	253.3	278.8	491.5	1020.4	2349.3	4918.0	5863.0
40°	223.4	244.0	264.9	489.9	1028.5	2370.1	5250.6	6301.5
42.5°	217.7	238.3	262.3	478.3	1025.3	2398.1	5545.2	6678.0
45°	216.0	236.6	268.1	461.0	1024.5	2442.1	5779.4	6979.3
47.5°	214.3	245.8	266.5	441.9	1021.1	2534.7	6043.3	7259.8
50°	212.6	262.3	254.9	415.4	996.3	2692.7	6398.3	7581.0
52.5°	211.9	264.9	242.4	379.0	951.6	2926.9	6918.1	8027.8
55°	208.5	251.6	220.9	331.0	887.0	3179.3	7475.0	8553.3
57.5°	201.0	224.3	208.5	283.8	794.5	3355.6	7886.3	8959.6
60°	219.3	192.9	200.3	259.8	683.5	3387.0	7904.5	9073.8
62.5°	209.3	175.5	192.0	251.6	605.8	3181.8	7542.8	8937.2
65°	167.1	166.3	184.5	259.8	594.2	2722.5	6932.2	8532.6
67.5°	152.3	159.7	177.1	269.8	601.6	2145.0	6033.4	7587.5
70°	142.4	151.5	167.1	278.8	614.8	1689.8	4857.5	6170.9
72.5°	132.4	139.9	157.3	288.0	605.8	1333.2	3887.7	4753.4
75°	119.9	126.6	143.1	264.0	519.6	979.8	3089.1	3375.4
77.5°	105.9	111.7	125.7	208.5	390.6	681.9	2313.8	2432.8
80°	91.0	93.5	104.3	152.3	254.9	408.0	1760.9	1940.6
82.5°	72.0	72.8	79.4	111.7	158.9	260.7	1221.4	1394.3
85°	46.3	48.0	51.4	78.6	106.7	167.1	624.0	715.0
87.5°	15.8	18.2	18.2	38.0	52.1	92.7	191.2	139.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)