

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: P196232

Luminaire Tested: **NAV-AF-02-D-UNV-SLR-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196232  
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-SLR-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT  
ELIMINATOR RIGHT OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8891.5 lumens  
Efficiency: N/A  
Efficacy: 104.6 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 - G3

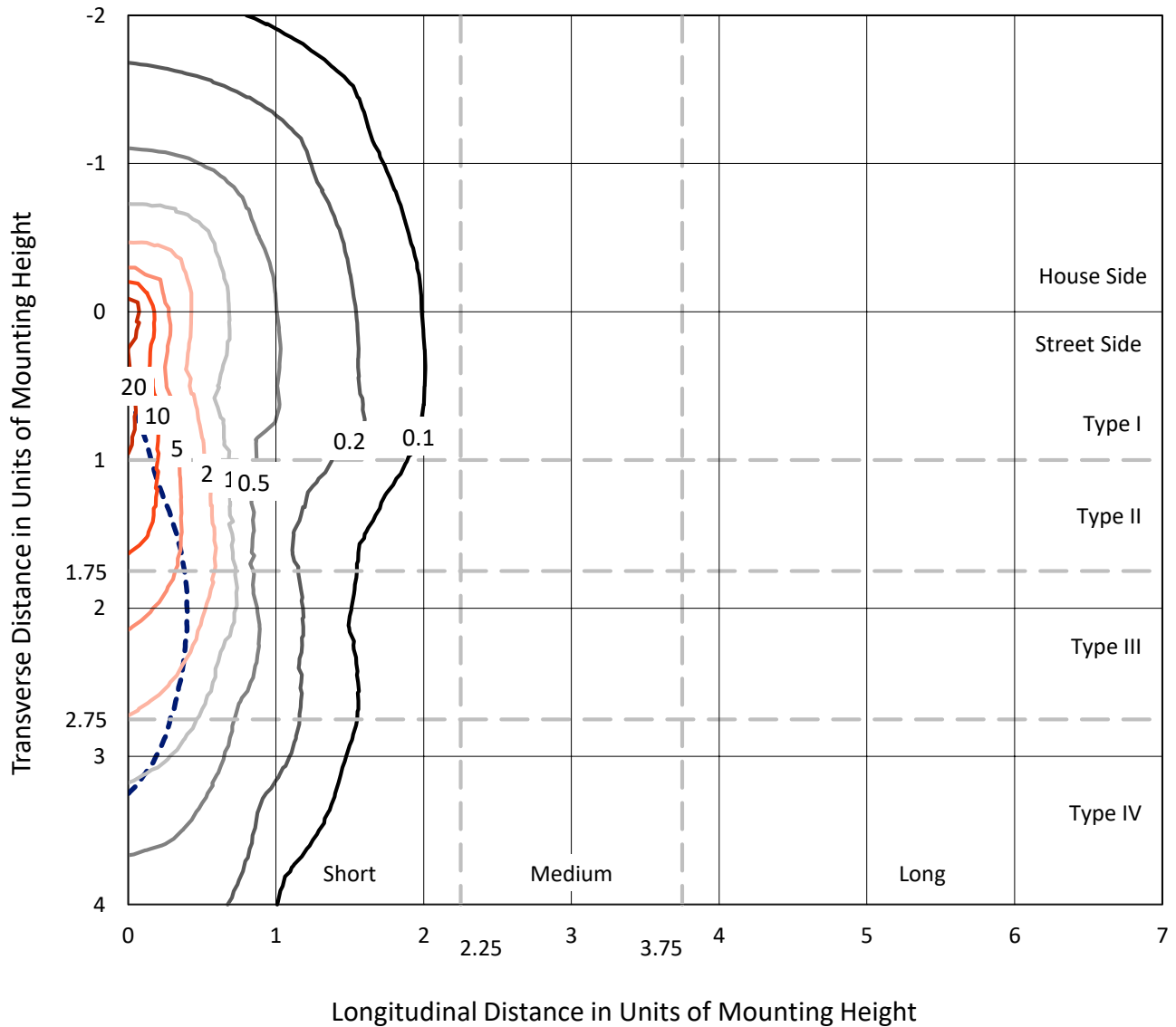
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

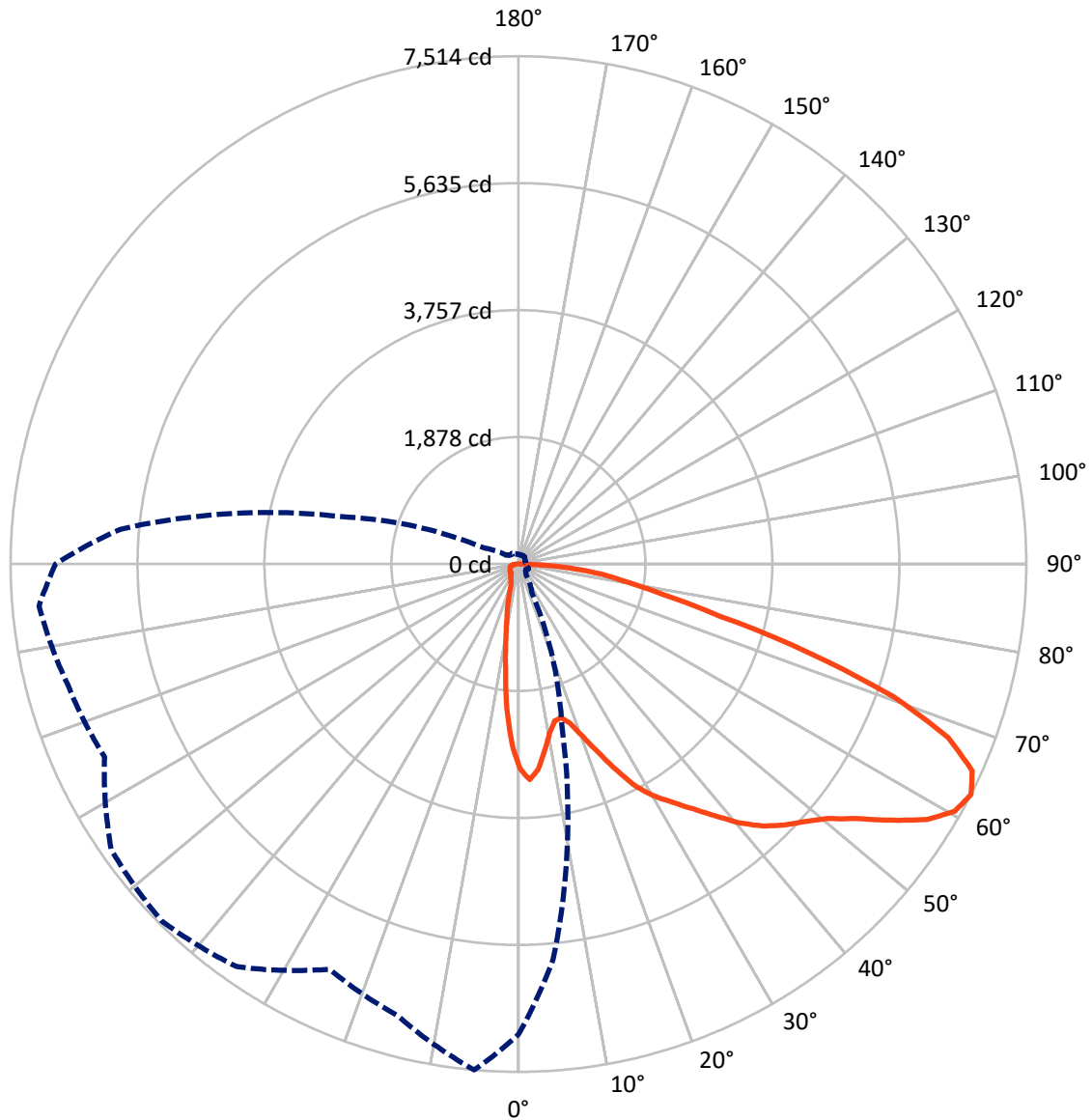
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 30.3 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral    - - - Horizontal Cone Through 62.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1575.1	0.0	1575.1
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	7316.4	0.0	7316.4
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	8891.5	0.0	8891.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	220.4	2.5
10°-20°	402.6	4.5
20°-30°	579.1	6.5
30°-40°	887.0	10.0
40°-50°	1296.8	14.6
50°-60°	1886.8	21.2
60°-70°	2186.1	24.6
70°-80°	1139.6	12.8
80°-90°	292.9	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°	8891.5	100.0
0°-180°	8891.5	100.0



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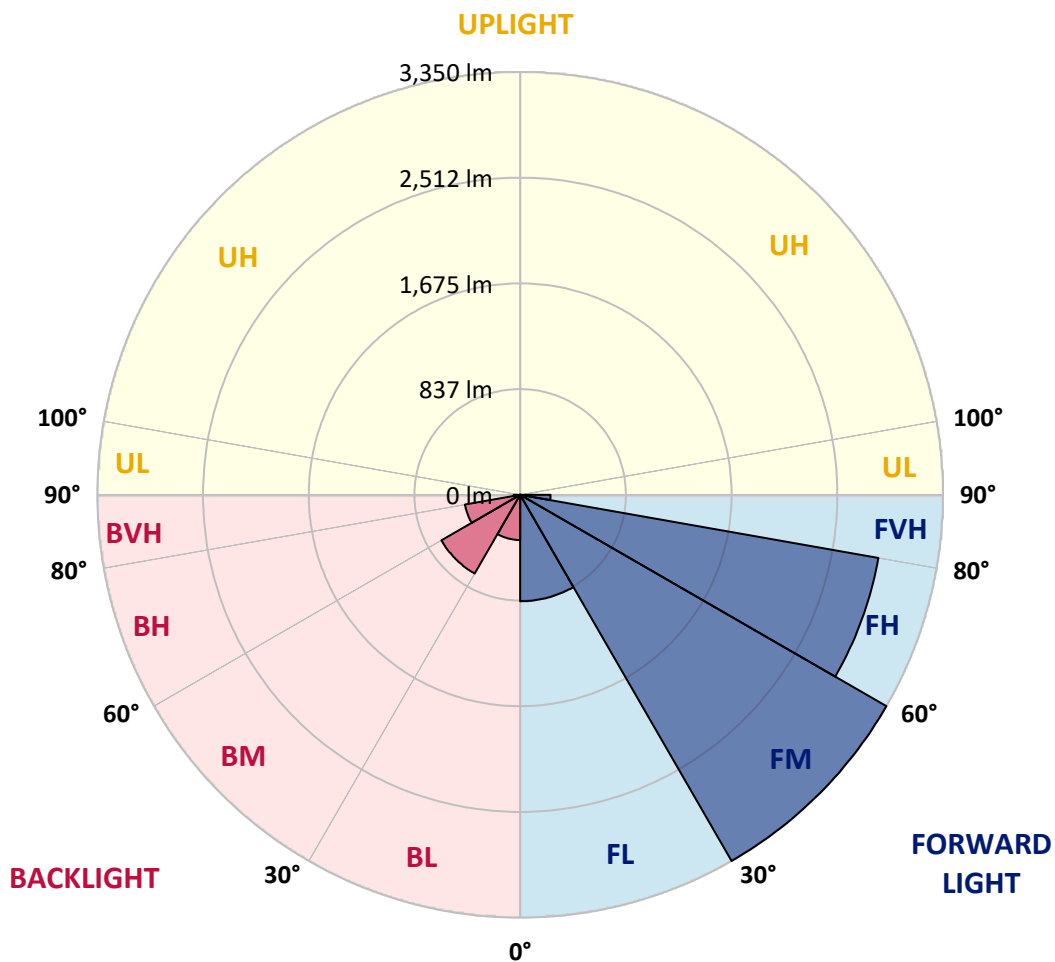
CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-800

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	843.8	9.5			
FM (30°-60°)	3349.9	37.7			
FH (60°-80°)	2881.6	32.4			G2/5000
FVH (80°-90°)	241.0	2.7			G3/500
BL (0°-30°)	358.4	4.0	B1/500		
BM (30°-60°)	720.7	8.1	B1/1000		
BH (60°-80°)	444.1	5.0	B1/500		G1/500
BVH (80°-90°)	51.9	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-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3
2.5°	3129.3	3085.4	2984.3	2895.3	2784.4	2701.2	2600.0	2546.5	2507.2	2480.8	2459.5
5°	2923.0	2817.2	2623.9	2454.3	2271.3	2139.1	1984.3	1899.8	1847.7	1819.3	1806.4
7.5°	2616.7	2476.9	2226.8	1999.2	1770.3	1605.2	1487.9	1362.9	1296.5	1253.2	1239.1
10°	2349.2	2191.3	1892.8	1636.8	1460.2	1342.8	1242.3	1127.5	1042.5	968.3	940.6
12.5°	2193.8	2010.1	1669.8	1438.3	1290.0	1164.3	1057.9	934.2	844.5	767.2	737.5
15°	2161.0	1956.0	1576.3	1311.9	1130.2	978.7	851.0	716.3	628.6	564.8	544.1
17.5°	2260.2	2007.5	1536.9	1196.5	977.3	792.3	635.0	490.6	417.8	382.9	374.6
20°	2464.6	2121.0	1518.3	1092.7	829.1	609.9	439.1	333.3	297.2	286.8	286.2
22.5°	2733.4	2305.4	1538.8	1007.6	689.8	450.0	321.7	273.9	259.1	253.4	253.4
25°	3037.0	2554.8	1593.7	942.5	567.3	350.1	277.2	251.4	239.2	233.3	234.1
27.5°	3408.5	2858.5	1668.4	882.6	479.7	306.9	259.1	237.2	224.9	219.2	219.8
30°	3688.2	3119.6	1732.9	827.8	434.5	289.5	249.5	228.8	215.3	206.9	206.3
32.5°	3949.9	3349.8	1785.2	788.5	408.8	258.5	225.7	210.2	198.6	188.9	187.0
35°	4239.4	3566.4	1809.6	787.2	392.0	233.3	206.3	187.6	175.9	165.0	163.1
37.5°	4567.6	3831.4	1830.3	794.9	382.9	217.3	197.2	179.2	169.5	158.6	156.0
40°	4909.2	4090.5	1846.3	801.4	381.7	206.3	190.2	174.1	164.4	152.8	150.2
42.5°	5202.5	4320.0	1868.3	798.7	372.7	204.4	185.7	169.5	160.5	148.9	145.7
45°	5437.2	4502.4	1902.5	798.1	359.1	208.9	184.3	168.3	157.3	145.1	142.5
47.5°	5655.8	4708.1	1974.7	795.5	344.2	207.6	191.5	166.9	156.0	143.7	141.8
50°	5905.9	4984.6	2097.8	776.2	323.7	198.6	204.4	165.7	152.8	141.8	139.9
52.5°	6254.0	5389.5	2280.3	741.3	295.2	188.9	206.3	165.0	147.6	138.0	135.3
55°	6663.4	5823.4	2476.9	691.1	257.9	172.2	196.0	162.4	142.5	132.2	128.3
57.5°	6979.9	6143.8	2614.2	618.9	221.2	162.4	174.7	156.6	136.1	125.7	122.4
60°	7068.9	6158.0	2638.7	532.5	202.4	156.0	150.2	170.8	130.8	119.9	116.7
62.5°	6962.5	5876.2	2478.8	471.9	196.0	149.6	136.7	163.1	125.7	114.8	111.5
65°	6647.3	5400.5	2121.0	462.9	202.4	143.7	129.6	130.2	120.6	109.6	106.4
67.5°	5911.1	4700.4	1671.0	468.7	210.2	138.0	124.4	118.7	114.8	105.1	101.2
70°	4807.4	3784.3	1316.4	479.0	217.3	130.2	117.9	110.9	107.6	97.4	95.4
72.5°	3703.1	3028.8	1038.6	471.9	224.3	122.4	108.9	103.1	99.3	89.6	87.7
75°	2629.7	2406.6	763.3	404.9	205.6	111.5	98.6	93.5	90.2	79.9	79.3
77.5°	1895.3	1802.5	531.2	304.3	162.4	98.0	87.1	82.6	80.6	68.9	68.9
80°	1511.8	1371.9	317.8	198.6	118.7	81.2	72.8	70.9	68.9	57.4	58.0
82.5°	1086.3	951.5	203.1	123.8	87.1	61.9	56.8	56.1	52.9	42.6	42.6
85°	557.0	486.1	130.2	83.2	61.3	40.0	37.4	36.1	34.2	26.4	26.4
87.5°	108.3	148.9	72.2	40.6	29.7	14.2	14.2	12.3	14.2	9.7	10.3
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):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3
2.5°	2500.1	2487.2	2478.2	2473.6	2538.8	2565.9	2596.8	2641.3	2671.5	2658.6	2699.9
5°	1867.0	1876.0	1896.7	1928.9	2019.8	2063.0	2090.7	2127.4	2153.9	2127.4	2171.3
7.5°	1276.4	1290.0	1333.8	1400.2	1509.9	1558.2	1567.9	1568.5	1562.7	1519.5	1549.2
10°	940.0	912.9	922.5	970.3	1068.3	1111.4	1115.9	1104.4	1102.4	1085.0	1118.5
12.5°	728.4	691.1	669.2	676.9	750.4	785.8	791.7	798.1	824.5	832.9	874.2
15°	543.5	524.2	508.0	500.9	549.2	576.9	580.2	595.7	623.4	631.2	666.6
17.5°	382.3	387.5	395.9	399.1	433.8	451.9	446.7	446.7	451.3	449.4	469.3
20°	292.1	302.4	318.4	334.0	365.5	375.8	362.9	346.9	336.6	331.3	335.8
22.5°	257.9	264.9	275.3	295.2	321.7	326.8	310.1	297.2	287.6	282.3	283.1
25°	239.2	246.2	254.6	270.8	293.3	295.9	280.4	272.1	264.3	259.1	257.9
27.5°	223.1	227.6	232.7	243.1	266.3	267.5	257.3	252.1	246.9	243.1	241.7
30°	208.3	210.2	212.1	222.4	239.8	241.7	236.6	234.1	232.1	229.6	229.6
32.5°	188.9	191.5	194.7	203.7	220.4	223.1	219.8	217.9	214.7	213.4	211.4
35°	165.7	172.2	179.2	190.2	208.3	209.5	205.6	199.9	192.1	190.2	188.9
37.5°	156.0	157.3	166.3	179.2	197.9	199.2	194.1	184.3	178.6	179.2	180.6
40°	149.6	151.5	156.6	169.5	188.2	190.2	185.7	178.6	172.8	173.4	175.3
42.5°	144.4	147.0	150.2	158.6	177.3	181.2	179.8	173.4	167.7	168.9	171.4
45°	141.8	143.7	143.7	149.6	167.7	173.4	174.1	168.9	164.4	165.7	168.9
47.5°	140.6	140.6	138.6	143.1	161.2	166.9	168.3	165.7	163.1	164.4	167.7
50°	138.6	136.1	134.1	138.0	156.0	161.2	162.4	160.5	161.8	164.4	166.3
52.5°	132.8	130.2	130.2	132.8	150.9	156.0	156.6	155.4	157.9	161.2	164.4
55°	125.7	125.7	126.3	128.9	148.2	152.1	151.5	150.2	152.8	156.6	159.9
57.5°	119.3	118.7	121.8	125.1	145.1	147.6	146.4	146.4	148.2	151.5	154.8
60°	115.4	112.2	114.8	119.9	141.8	144.4	142.5	141.8	145.1	147.6	150.2
62.5°	111.5	108.3	110.3	115.4	137.3	139.2	138.0	138.0	141.2	143.1	145.7
65°	105.8	104.4	105.8	110.9	133.5	134.1	134.1	134.7	137.3	138.6	141.2
67.5°	100.6	100.6	101.2	106.4	130.2	128.9	128.9	132.2	132.8	134.1	136.7
70°	94.1	95.4	95.4	101.9	127.7	123.2	123.8	126.3	127.7	128.9	129.6
72.5°	87.1	87.7	89.0	97.4	123.8	117.3	117.9	119.9	120.6	122.4	123.2
75°	79.3	79.9	81.8	92.9	121.2	111.5	110.3	111.5	112.8	114.1	113.4
77.5°	70.3	71.6	73.4	90.2	112.8	110.3	100.6	101.9	103.1	103.1	102.5
80°	59.3	61.3	64.4	86.3	95.4	106.4	89.6	90.2	90.9	90.9	89.6
82.5°	44.5	48.4	52.9	71.6	74.8	90.9	77.3	78.7	76.7	75.4	74.8
85°	29.1	32.2	38.7	49.6	54.8	71.6	63.8	64.4	60.6	59.9	59.9
87.5°	11.6	12.3	17.4	25.2	32.8	44.5	45.7	47.1	43.9	43.9	45.1
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):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3
2.5°	2762.5	2826.9	2901.1	2976.5	3038.4	3118.4	3195.7	3278.1	3320.1	3344.6	3413.6
5°	2239.6	2327.9	2433.0	2551.0	2649.0	2816.6	2997.1	3198.3	3294.9	3390.4	3570.9
7.5°	1602.0	1688.4	1810.9	1963.7	2103.0	2324.0	2562.0	2834.0	2968.1	3122.9	3418.7
10°	1189.4	1280.9	1391.8	1521.4	1658.7	1888.9	2155.8	2461.4	2609.0	2783.8	3120.2
12.5°	964.4	1071.4	1186.2	1302.2	1420.3	1574.9	1854.7	2194.5	2353.1	2529.0	2866.2
15°	752.4	867.1	990.8	1117.3	1234.6	1407.4	1692.9	2094.6	2275.8	2445.9	2721.9
17.5°	532.5	640.8	780.1	933.5	1103.7	1308.0	1658.1	2138.4	2358.2	2536.2	2721.2
20°	362.9	437.7	576.9	758.8	968.9	1228.2	1671.0	2292.4	2567.1	2762.5	2832.8
22.5°	290.1	325.6	419.7	604.7	852.9	1170.1	1723.9	2504.0	2866.9	3104.8	3035.8
25°	263.7	283.7	332.7	477.7	749.7	1131.4	1827.0	2783.0	3202.8	3443.9	3280.1
27.5°	247.6	264.9	296.6	392.6	660.8	1106.3	1957.9	3111.9	3581.2	3779.1	3534.8
30°	237.2	254.6	283.7	352.6	593.7	1068.9	2072.6	3412.3	3883.5	4011.8	3672.1
32.5°	217.3	230.8	254.6	315.9	543.5	1025.0	2171.9	3681.1	4169.1	4211.7	3837.1
35°	196.6	210.8	234.7	286.2	513.8	990.8	2224.1	3919.6	4452.2	4411.6	4000.9
37.5°	188.9	200.5	222.4	264.9	497.7	968.3	2244.1	4154.3	4755.8	4632.6	4115.0
40°	183.7	194.1	213.4	250.8	493.2	947.0	2239.6	4377.4	5050.4	4861.6	4204.6
42.5°	179.8	188.9	206.9	241.1	480.9	927.1	2224.8	4570.1	5286.4	5058.8	4290.4
45°	176.7	186.3	204.4	246.2	458.4	905.1	2215.8	4746.2	5467.6	5225.1	4405.1
47.5°	175.3	186.3	205.0	245.0	433.8	880.7	2248.0	4941.5	5625.5	5365.1	4557.9
50°	173.4	185.7	219.2	233.3	400.4	850.4	2357.0	5174.2	5791.1	5522.3	4755.8
52.5°	170.2	185.1	234.1	224.3	357.1	808.4	2533.5	5503.0	6077.4	5828.6	5048.5
55°	166.3	186.3	223.7	210.2	311.4	754.3	2710.2	5953.6	6541.6	6322.3	5468.8
57.5°	161.8	184.3	211.4	197.2	273.3	685.9	2844.3	6323.1	6924.6	6831.7	5985.2
60°	158.6	188.9	190.2	189.6	248.9	620.8	2857.2	6299.1	7034.7	7162.4	6490.6
62.5°	154.8	192.7	173.4	183.7	236.6	560.3	2698.0	5909.2	6848.5	7119.8	6902.6
65°	149.6	168.3	164.4	178.6	236.6	527.9	2327.3	5259.9	6333.3	6717.6	7126.3
67.5°	144.4	152.8	157.9	171.4	241.7	497.7	1870.3	4436.6	5521.1	6068.3	6874.8
70°	137.3	144.4	150.9	165.0	239.2	476.4	1471.8	3556.1	4543.7	5170.3	6179.2
72.5°	130.8	136.1	142.5	155.4	239.2	466.8	1182.3	2789.5	3469.0	3997.0	5118.7
75°	121.2	125.7	131.6	145.7	234.7	426.8	887.7	2235.1	2538.1	2868.9	4038.9
77.5°	111.5	114.8	119.3	133.5	211.4	356.5	627.9	1730.9	1880.5	2063.6	3148.6
80°	99.3	101.9	105.1	119.3	175.3	276.6	408.8	1353.9	1406.0	1494.3	2071.4
82.5°	85.1	89.0	89.6	102.5	141.2	200.5	243.1	927.7	927.1	1056.6	1461.5
85°	69.7	71.6	72.8	80.6	104.4	133.5	159.9	506.7	451.9	633.1	1269.4
87.5°	52.2	50.3	52.2	54.1	68.9	78.7	85.7	93.5	56.1	114.8	738.2
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°	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3
2.5°	3450.3	3488.4	3465.8	3438.8	3371.0	3271.7	3195.7	3129.3
5°	3695.9	3766.2	3735.3	3634.7	3459.3	3260.1	3050.6	2923.0
7.5°	3665.0	3804.3	3792.0	3624.4	3373.0	3079.6	2785.0	2616.7
10°	3417.5	3612.8	3646.3	3474.9	3208.6	2880.4	2539.4	2349.2
12.5°	3147.9	3312.4	3380.8	3315.6	3064.8	2731.5	2384.0	2193.8
15°	2922.4	3005.5	3073.1	3115.1	2959.7	2678.6	2357.0	2161.0
17.5°	2755.3	2739.3	2795.9	2896.6	2903.0	2748.9	2479.4	2260.2
20°	2674.8	2548.4	2581.3	2722.5	2887.5	2927.5	2723.8	2464.6
22.5°	2670.3	2473.0	2479.4	2631.5	2932.0	3171.1	3028.8	2733.4
25°	2739.9	2464.6	2470.4	2621.9	3010.6	3416.8	3381.4	3037.0
27.5°	2858.5	2500.7	2496.8	2664.5	3115.7	3621.9	3737.2	3408.5
30°	2986.8	2553.0	2543.3	2732.8	3218.9	3748.2	3989.9	3688.2
32.5°	3146.7	2645.8	2612.2	2832.8	3320.7	3869.4	4205.9	3949.9
35°	3298.8	2781.8	2733.4	2975.9	3429.6	4004.1	4447.7	4239.4
37.5°	3454.2	2984.9	2957.8	3182.1	3583.8	4150.4	4724.2	4567.6
40°	3653.4	3273.6	3260.8	3481.9	3789.4	4310.3	5034.4	4909.2
42.5°	3868.1	3580.5	3569.6	3826.1	4044.7	4470.8	5299.9	5202.5
45°	4086.6	3952.6	3955.1	4193.7	4313.6	4622.3	5508.8	5437.2
47.5°	4344.5	4359.3	4451.5	4574.6	4575.2	4791.3	5693.8	5655.8
50°	4672.0	4850.5	5020.7	5040.1	4839.6	5014.3	5920.1	5905.9
52.5°	5042.7	5417.2	5615.2	5553.9	5097.5	5290.9	6254.7	6254.0
55°	5483.0	6009.7	6196.0	6091.6	5406.3	5651.3	6691.7	6663.4
57.5°	5939.5	6579.6	6729.8	6593.7	5792.5	6070.9	7130.2	6979.9
60°	6432.6	7070.2	7223.0	7018.7	6225.7	6489.4	7420.3	7068.9
62.5°	6755.6	7357.1	7466.7	7270.7	6613.8	6915.5	7513.8	6962.5
65°	6772.3	7166.3	7195.2	7125.7	6778.8	7285.6	7378.3	6647.3
67.5°	6312.0	6335.2	6373.3	6448.1	6426.2	7120.5	6856.1	5911.1
70°	5327.6	5018.2	5143.3	5215.4	5378.0	6333.3	5891.1	4807.4
72.5°	4073.7	3621.9	3763.6	3739.2	4077.0	5194.9	4506.9	3703.1
75°	2932.0	2469.8	2480.8	2482.0	2929.4	4146.5	3073.1	2629.7
77.5°	1992.7	1747.7	1783.8	1761.3	1960.5	3248.6	2212.5	1895.3
80°	1362.9	1356.4	1364.1	1311.3	1307.4	2099.7	1638.2	1511.8
82.5°	1010.9	934.2	923.2	867.1	1001.9	1605.2	1243.6	1086.3
85°	797.5	517.0	449.4	542.2	867.8	1476.9	758.1	557.0
87.5°	337.8	203.1	123.2	243.7	482.2	1082.4	210.2	108.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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