

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: P270456

Luminaire Tested: **NAV-AF-03-D-UNV-SLR-7027-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270456  
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-03-D-UNV-SLR-7027-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 2700K, 1200mA 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: 15247.3 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 191  
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

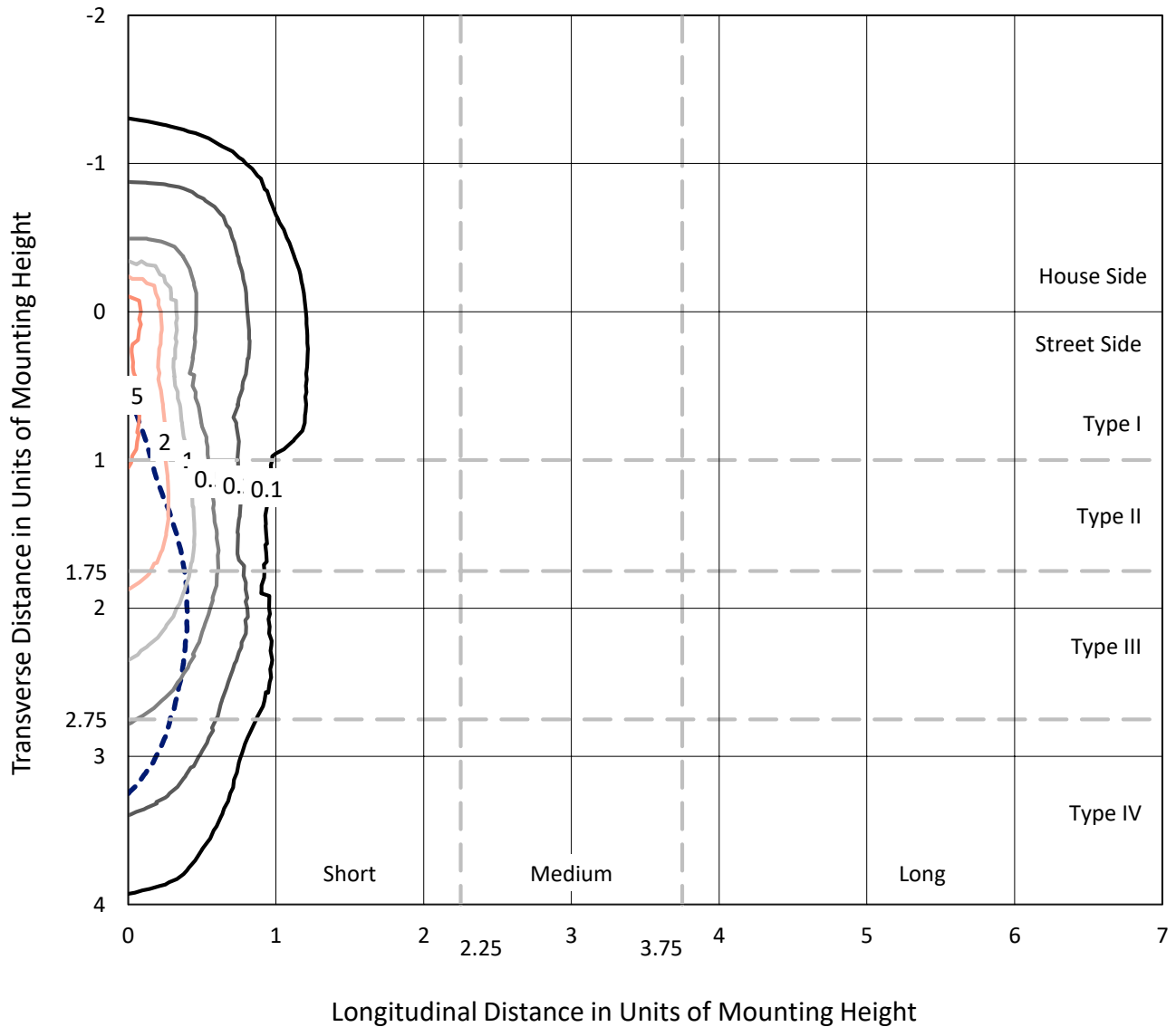


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### Iso-Footcandle Lines of Horizontal Illumination

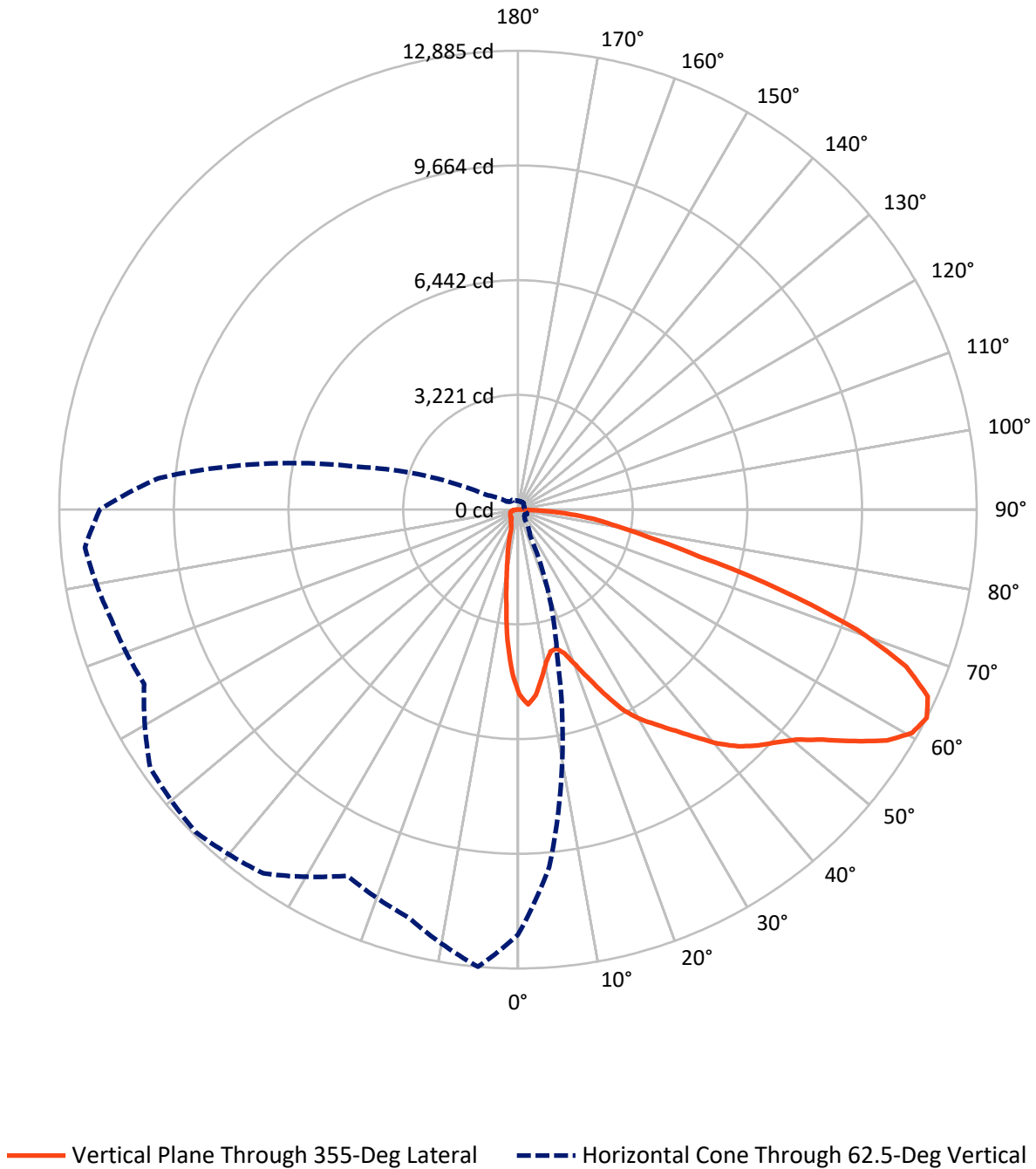
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.3 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2701.1	0.0	2701.1
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	12546.2	0.0	12546.2
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	15247.3	0.0	15247.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	378.0	2.5
10°-20°	690.5	4.5
20°-30°	993.1	6.5
30°-40°	1521.0	10.0
40°-50°	2223.7	14.6
50°-60°	3235.6	21.2
60°-70°	3748.8	24.6
70°-80°	1954.2	12.8
80°-90°	502.3	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°	15247.3	100.0
0°-180°	15247.3	100.0



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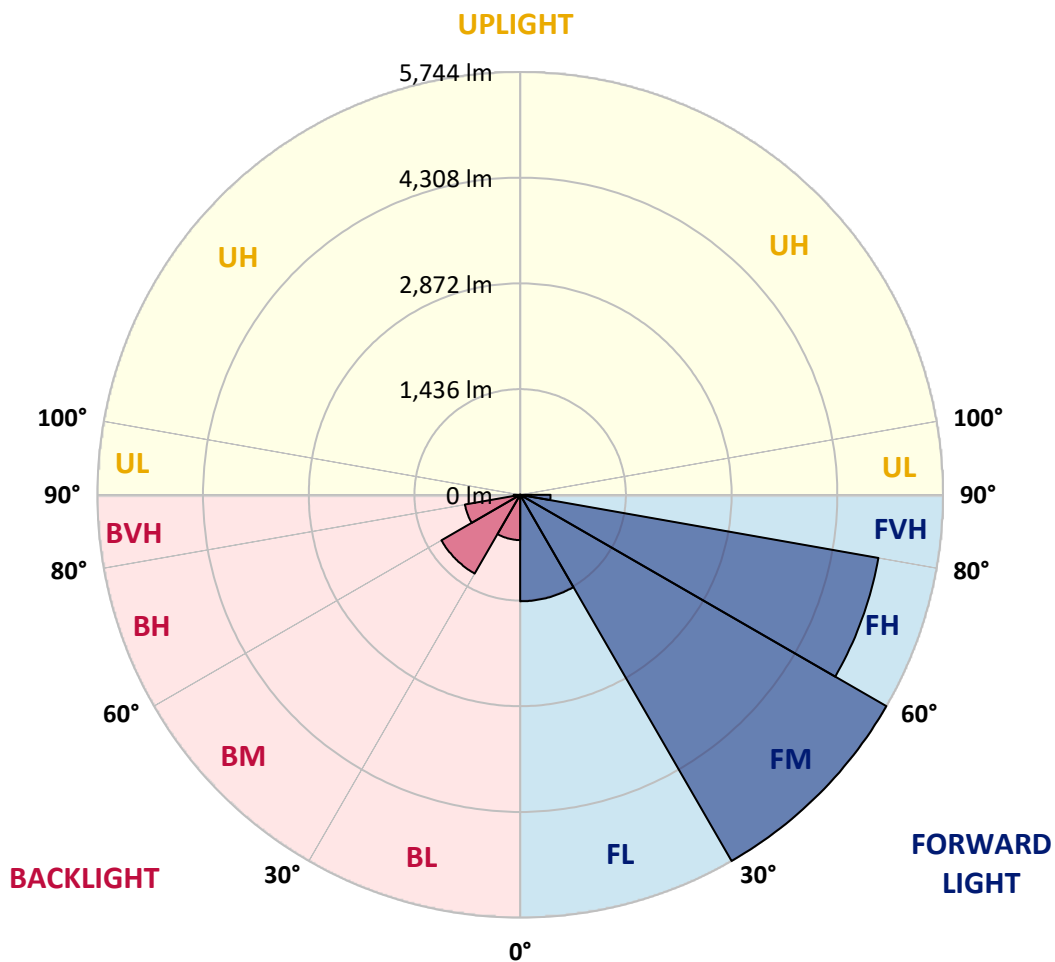
CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7027-1200

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1447.0	9.5			
FM (30°-60°)	5744.5	37.7			
FH (60°-80°)	4941.4	32.4			G2/5000
FVH (80°-90°)	413.3	2.7			G3/500
BL (0°-30°)	614.5	4.0	B2/1000		
BM (30°-60°)	1235.8	8.1	B2/2500		
BH (60°-80°)	761.6	5.0	B2/1000		G2/1000
BVH (80°-90°)	89.1	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: 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°	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1
2.5°	5366.1	5290.9	5117.5	4964.8	4774.8	4632.1	4458.5	4366.8	4299.4	4254.1	4217.5
5°	5012.5	4831.1	4499.4	4208.6	3894.7	3668.0	3402.8	3258.0	3168.4	3119.8	3097.6
7.5°	4487.3	4247.4	3818.4	3428.2	3035.7	2752.8	2551.5	2337.0	2223.1	2149.1	2124.9
10°	4028.4	3757.6	3245.8	2806.9	2503.9	2302.7	2130.3	1933.5	1787.5	1660.4	1612.9
12.5°	3762.0	3446.9	2863.3	2466.3	2212.2	1996.6	1814.1	1601.9	1448.2	1315.6	1264.8
15°	3705.7	3354.1	2703.0	2249.7	1938.0	1678.2	1459.2	1228.3	1077.8	968.5	933.1
17.5°	3875.9	3442.6	2635.5	2051.8	1676.0	1358.6	1088.9	841.4	716.4	656.8	642.3
20°	4226.3	3637.1	2603.5	1873.9	1421.7	1045.7	752.9	571.5	509.7	491.9	490.8
22.5°	4687.4	3953.4	2638.9	1727.9	1182.9	771.6	551.6	469.9	444.4	434.5	434.5
25°	5208.1	4381.2	2732.9	1616.3	972.9	600.2	475.4	431.1	410.2	400.1	401.4
27.5°	5844.8	4901.8	2861.0	1513.5	822.5	526.2	444.4	406.8	385.8	375.9	377.0
30°	6324.6	5349.5	2971.7	1419.5	745.1	496.4	427.9	392.5	369.3	354.9	353.8
32.5°	6773.5	5744.2	3061.2	1352.0	700.9	443.4	386.9	360.4	340.5	323.8	320.5
35°	7269.9	6115.8	3103.1	1349.9	672.1	400.1	353.8	321.8	301.8	283.1	279.7
37.5°	7832.5	6570.1	3138.6	1363.1	656.8	372.5	338.3	307.3	290.7	271.9	267.5
40°	8418.5	7014.4	3166.2	1374.1	654.4	353.8	326.2	298.4	281.9	261.9	257.5
42.5°	8921.4	7408.1	3203.7	1369.7	639.0	350.5	318.4	290.7	275.3	255.4	249.9
45°	9323.9	7720.9	3262.4	1368.6	615.8	358.2	316.2	288.5	269.8	248.7	244.2
47.5°	9698.6	8073.5	3386.3	1364.2	590.4	356.0	328.3	286.3	267.5	246.6	243.3
50°	10127.6	8547.8	3597.4	1331.0	555.0	340.5	350.5	284.1	261.9	243.3	239.8
52.5°	10724.5	9242.1	3910.2	1271.3	506.4	323.8	353.8	283.1	253.1	236.6	232.1
55°	11426.6	9986.1	4247.4	1185.1	442.1	295.2	336.1	278.6	244.2	226.6	219.9
57.5°	11969.3	10535.5	4482.8	1061.3	379.2	278.6	299.6	268.7	233.3	215.6	210.1
60°	12121.9	10559.8	4524.9	913.1	347.1	267.5	257.5	292.9	224.4	205.6	200.1
62.5°	11939.6	10076.7	4250.7	809.3	336.1	256.5	234.4	279.7	215.6	196.8	191.2
65°	11399.0	9260.8	3637.1	793.7	347.1	246.6	222.2	223.3	206.7	187.9	182.4
67.5°	10136.5	8060.3	2865.6	803.8	360.4	236.6	213.3	203.5	196.8	180.2	173.6
70°	8243.7	6489.4	2257.4	821.4	372.5	223.3	202.3	190.1	184.6	166.9	163.6
72.5°	6350.1	5193.7	1781.0	809.3	384.7	210.1	186.8	176.8	170.3	153.7	150.3
75°	4509.4	4126.9	1308.9	694.3	352.7	191.2	169.2	160.3	154.8	137.1	136.0
77.5°	3250.2	3091.0	910.9	521.7	278.6	168.1	149.3	141.6	138.2	118.2	118.2
80°	2592.4	2352.5	545.0	340.5	203.5	139.2	125.0	121.6	118.2	98.4	99.5
82.5°	1862.7	1631.7	348.3	212.3	149.3	106.1	97.2	96.2	90.6	72.9	72.9
85°	955.2	833.5	223.3	142.7	105.0	68.5	64.0	62.0	58.6	45.4	45.4
87.5°	185.7	255.4	123.8	69.7	50.8	24.3	24.3	21.0	24.3	16.6	17.6
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°	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1
2.5°	4287.3	4265.1	4249.6	4241.8	4353.5	4400.0	4453.0	4529.3	4581.3	4559.1	4629.9
5°	3201.6	3217.0	3252.5	3307.6	3463.5	3537.6	3585.1	3648.1	3693.6	3648.1	3723.4
7.5°	2188.9	2212.2	2287.4	2401.2	2589.2	2672.0	2688.5	2689.7	2679.7	2605.8	2656.6
10°	1611.7	1565.3	1581.9	1663.8	1831.9	1905.9	1913.6	1893.7	1890.5	1860.6	1918.2
12.5°	1249.3	1185.1	1147.6	1160.8	1286.8	1347.5	1357.6	1368.6	1413.9	1428.3	1499.1
15°	931.9	898.8	871.1	859.0	942.0	989.5	995.0	1021.6	1069.1	1082.3	1143.2
17.5°	655.6	664.3	678.8	684.2	743.9	775.0	766.2	766.2	773.9	770.6	804.8
20°	500.7	518.5	546.1	572.7	626.8	644.5	622.3	594.8	577.2	568.3	576.0
22.5°	442.1	454.4	472.1	506.4	551.6	560.5	531.7	509.7	493.1	484.1	485.4
25°	410.2	422.4	436.7	464.3	503.1	507.5	481.0	466.5	453.3	444.4	442.1
27.5°	382.5	390.3	399.0	416.8	456.6	458.8	441.1	432.3	423.5	416.8	414.6
30°	357.0	360.4	363.8	381.4	411.2	414.6	405.8	401.4	397.9	393.5	393.5
32.5°	323.8	328.3	333.9	349.4	378.0	382.5	377.0	373.6	368.1	365.9	362.6
35°	284.1	295.2	307.3	326.2	357.0	359.3	352.7	342.8	329.5	326.2	323.8
37.5°	267.5	269.8	285.2	307.3	339.4	341.5	332.7	316.2	306.2	307.3	309.6
40°	256.5	259.8	268.7	290.7	322.9	326.2	318.4	306.2	296.4	297.3	300.8
42.5°	247.7	252.1	257.5	271.9	304.0	310.6	308.5	297.3	287.5	289.7	294.0
45°	243.3	246.6	246.6	256.5	287.5	297.3	298.4	289.7	281.9	284.1	289.7
47.5°	240.9	240.9	237.7	245.4	276.4	286.3	288.5	284.1	279.7	281.9	287.5
50°	237.7	233.3	230.0	236.6	267.5	276.4	278.6	275.3	277.4	281.9	285.2
52.5°	227.7	223.3	223.3	227.7	258.7	267.5	268.7	266.4	270.8	276.4	281.9
55°	215.6	215.6	216.8	221.2	254.3	260.9	259.8	257.5	261.9	268.7	274.2
57.5°	204.5	203.5	208.9	214.4	248.7	253.1	250.9	250.9	254.3	259.8	265.3
60°	197.8	192.3	196.8	205.6	243.3	247.7	244.2	243.3	248.7	253.1	257.5
62.5°	191.2	185.7	189.1	197.8	235.4	238.8	236.6	236.6	242.2	245.4	249.9
65°	181.3	179.1	181.3	190.1	228.9	230.0	230.0	231.0	235.4	237.7	242.2
67.5°	172.5	172.5	173.6	182.4	223.3	221.2	221.2	226.6	227.7	230.0	234.4
70°	161.3	163.6	163.6	174.7	218.8	211.1	212.3	216.8	218.8	221.2	222.2
72.5°	149.3	150.3	152.5	166.9	212.3	201.2	202.3	205.6	206.7	210.1	211.1
75°	136.0	137.1	140.3	159.2	207.9	191.2	189.1	191.2	193.4	195.7	194.6
77.5°	120.6	122.7	126.0	154.8	193.4	189.1	172.5	174.7	176.8	176.8	175.8
80°	101.7	105.0	110.5	148.1	163.6	182.4	153.7	154.8	155.9	155.9	153.7
82.5°	76.3	83.0	90.6	122.7	128.3	155.9	132.7	134.8	131.5	129.4	128.3
85°	49.8	55.2	66.4	85.1	94.0	122.7	109.5	110.5	103.9	102.9	102.9
87.5°	19.9	21.0	29.9	43.1	56.4	76.3	78.5	80.7	75.2	75.2	77.3
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°	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1
2.5°	4737.1	4847.7	4974.9	5104.1	5210.3	5347.4	5480.0	5621.6	5693.4	5735.4	5853.6
5°	3840.6	3992.0	4172.2	4374.4	4542.5	4829.9	5139.6	5484.4	5650.2	5813.9	6123.4
7.5°	2747.1	2895.3	3105.4	3367.3	3606.2	3985.4	4393.3	4859.8	5089.7	5355.1	5862.5
10°	2039.7	2196.6	2386.7	2608.9	2844.5	3239.2	3696.9	4220.9	4474.0	4773.7	5350.7
12.5°	1653.8	1837.4	2034.1	2233.1	2435.5	2700.8	3180.5	3763.2	4035.0	4336.8	4915.0
15°	1290.1	1487.0	1699.1	1915.8	2117.0	2413.3	2903.1	3591.9	3902.4	4194.2	4667.5
17.5°	913.1	1098.8	1337.7	1600.8	1892.5	2243.1	2843.3	3667.1	4044.0	4349.1	4666.3
20°	622.3	750.7	989.5	1301.1	1661.5	2105.9	2865.6	3931.3	4402.1	4737.1	4857.7
22.5°	497.5	558.2	719.7	1037.0	1462.6	2006.5	2956.1	4293.8	4916.2	5324.2	5205.9
25°	452.1	486.4	570.5	819.2	1285.7	1940.2	3133.0	4772.4	5492.1	5905.6	5624.8
27.5°	424.4	454.4	508.5	673.3	1133.1	1897.1	3357.4	5336.3	6141.2	6480.6	6061.6
30°	406.8	436.7	486.4	604.6	1018.1	1832.9	3554.2	5851.5	6659.7	6879.6	6296.9
32.5°	372.5	395.8	436.7	541.7	931.9	1757.8	3724.5	6312.5	7149.3	7222.4	6580.1
35°	337.1	361.5	402.4	490.8	881.1	1699.1	3814.1	6721.5	7634.6	7564.9	6860.9
37.5°	323.8	343.8	381.4	454.4	853.5	1660.4	3848.2	7123.9	8155.4	7944.3	7056.5
40°	315.0	332.7	365.9	430.1	845.8	1624.0	3840.6	7506.4	8660.6	8336.7	7210.2
42.5°	308.5	323.8	354.9	413.5	824.7	1589.7	3815.1	7837.0	9065.2	8674.9	7357.2
45°	302.9	319.4	350.5	422.4	785.9	1552.1	3799.7	8138.7	9375.8	8960.1	7553.9
47.5°	300.8	319.4	351.5	420.0	743.9	1510.1	3854.9	8473.7	9646.7	9200.0	7816.0
50°	297.3	318.4	375.9	400.1	686.6	1458.2	4041.7	8872.7	9930.9	9469.8	8155.4
52.5°	291.9	317.3	401.4	384.7	612.5	1386.4	4344.7	9436.6	10421.6	9994.9	8657.2
55°	285.2	319.4	383.7	360.4	534.0	1293.5	4647.7	10209.3	11217.7	10841.7	9378.0
57.5°	277.4	316.2	362.6	338.3	468.7	1176.3	4877.4	10842.8	11874.2	11715.1	10263.6
60°	271.9	323.8	326.2	325.0	426.8	1064.6	4899.6	10801.9	12063.2	12282.3	11130.3
62.5°	265.3	330.5	297.3	315.0	405.8	960.6	4626.6	10133.2	11743.8	12209.3	11836.6
65°	256.5	288.5	281.9	306.2	405.8	905.4	3990.9	9019.9	10860.6	11519.4	12220.4
67.5°	247.7	261.9	270.8	294.0	414.6	853.5	3207.0	7608.1	9467.5	10406.1	11789.1
70°	235.4	247.7	258.7	283.1	410.2	817.0	2523.9	6098.1	7791.7	8866.2	10596.3
72.5°	224.4	233.3	244.2	266.4	410.2	800.4	2027.6	4783.6	5948.8	6854.2	8777.8
75°	207.9	215.6	225.6	249.9	402.4	731.8	1522.3	3832.8	4352.4	4919.5	6926.0
77.5°	191.2	196.8	204.5	228.9	362.6	611.3	1076.8	2968.3	3224.7	3538.8	5399.4
80°	170.3	174.7	180.2	204.5	300.8	474.2	700.9	2321.6	2411.1	2562.5	3552.0
82.5°	146.0	152.5	153.7	175.8	242.2	343.8	416.8	1590.8	1589.7	1811.9	2506.2
85°	119.4	122.7	125.0	138.2	179.1	228.9	274.2	868.9	775.0	1085.6	2176.8
87.5°	89.6	86.2	89.6	92.9	118.2	134.8	147.1	160.3	96.2	196.8	1265.8
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°	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1	5198.1
2.5°	5916.6	5982.0	5943.2	5896.8	5780.8	5610.5	5480.0	5366.1
5°	6337.9	6458.5	6405.4	6232.9	5932.1	5590.6	5231.3	5012.5
7.5°	6284.8	6523.6	6502.7	6215.3	5784.0	5281.0	4775.7	4487.3
10°	5860.4	6195.3	6252.7	5958.6	5502.1	4939.4	4354.7	4028.4
12.5°	5398.3	5680.2	5797.3	5685.6	5255.7	4684.0	4088.1	3762.0
15°	5011.3	5153.8	5269.9	5341.9	5075.5	4593.5	4041.7	3705.7
17.5°	4724.9	4697.2	4794.7	4967.1	4978.0	4713.9	4251.8	3875.9
20°	4586.7	4370.1	4426.5	4668.6	4951.5	5020.1	4670.7	4226.3
22.5°	4579.0	4240.8	4251.8	4512.6	5027.9	5438.0	5193.7	4687.4
25°	4698.4	4226.3	4236.2	4496.0	5162.6	5859.3	5798.4	5208.1
27.5°	4901.8	4288.2	4281.6	4569.0	5342.8	6210.7	6408.7	5844.8
30°	5121.9	4377.8	4361.2	4686.3	5519.8	6427.5	6842.0	6324.6
32.5°	5395.9	4537.0	4479.6	4857.7	5694.4	6635.3	7212.3	6773.5
35°	5656.8	4770.3	4687.4	5103.0	5881.4	6866.4	7626.9	7269.9
37.5°	5923.3	5118.5	5072.1	5456.8	6145.6	7117.4	8101.2	7832.5
40°	6264.9	5613.8	5591.7	5970.9	6498.2	7391.4	8632.9	8418.5
42.5°	6633.1	6140.1	6121.2	6561.2	6936.0	7666.8	9088.4	8921.4
45°	7007.9	6777.9	6782.4	7191.3	7397.0	7926.6	9446.5	9323.9
47.5°	7450.1	7475.4	7633.5	7844.7	7845.7	8216.2	9763.9	9698.6
50°	8011.7	8317.9	8609.7	8643.0	8299.1	8598.7	10151.9	10127.6
52.5°	8647.4	9289.6	9629.0	9524.0	8741.2	9072.9	10725.7	10724.5
55°	9402.4	10305.5	10625.1	10446.0	9270.8	9690.9	11475.2	11426.6
57.5°	10185.1	11282.8	11540.4	11307.1	9933.0	10410.5	12227.0	11969.3
60°	11030.7	12124.2	12386.1	12035.8	10675.9	11128.1	12724.4	12121.9
62.5°	11584.6	12616.1	12804.0	12467.9	11341.5	11858.9	12884.7	11939.6
65°	11613.4	12288.9	12338.6	12219.3	11624.4	12493.4	12652.5	11399.0
67.5°	10824.0	10863.8	10929.0	11057.3	11019.8	12210.4	11757.0	10136.5
70°	9135.9	8605.4	8819.7	8943.5	9222.2	10860.6	10102.2	8243.7
72.5°	6985.7	6210.7	6454.0	6411.9	6991.2	8908.2	7728.7	6350.1
75°	5027.9	4235.1	4254.1	4256.2	5023.4	7110.7	5269.9	4509.4
77.5°	3417.2	2997.0	3059.0	3020.2	3361.8	5570.7	3794.1	3250.2
80°	2337.0	2326.0	2339.2	2248.5	2242.0	3600.6	2809.1	2592.4
82.5°	1733.4	1601.9	1583.2	1487.0	1718.0	2752.8	2132.5	1862.7
85°	1367.5	886.5	770.6	929.7	1488.0	2532.7	1300.0	955.2
87.5°	579.2	348.3	211.1	417.9	826.9	1856.2	360.4	185.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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