

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: P197194

Luminaire Tested: **NAV-AF-04-D-UNV-SLR-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197194  
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-04-D-UNV-SLR-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 80 CRI, 3000K, 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: 14207 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 171  
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

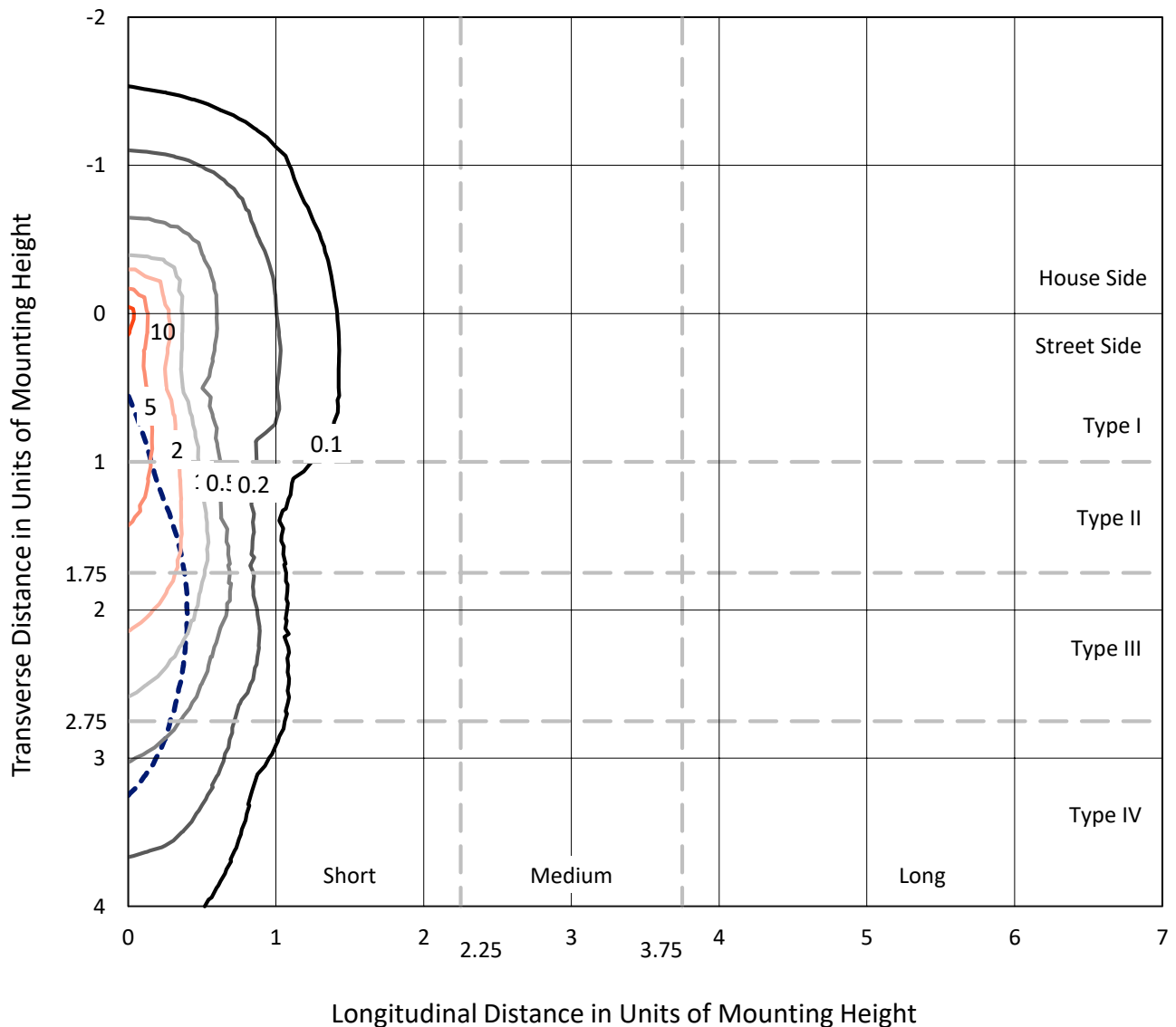


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

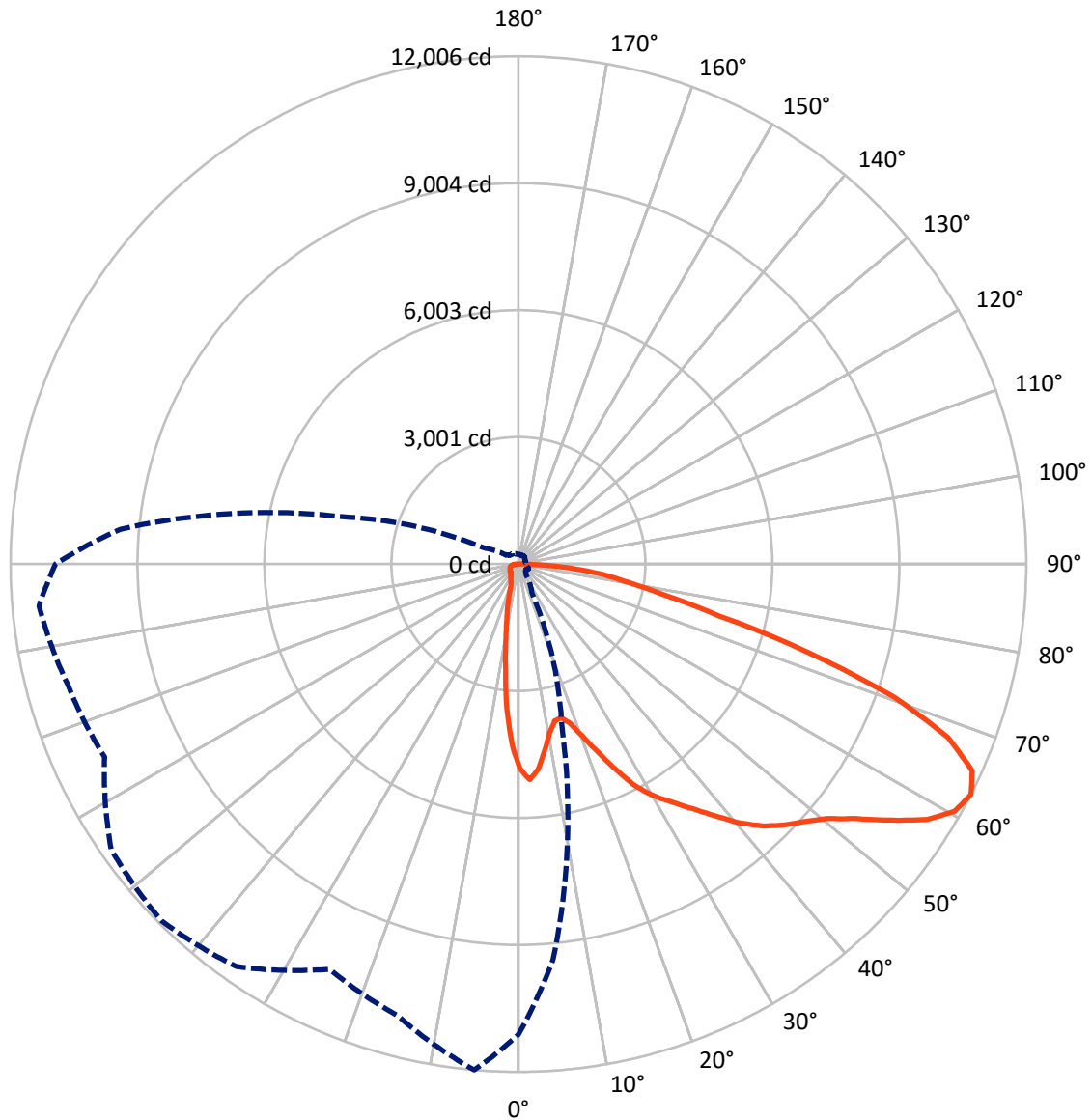


Based on 20 foot mounting height. Maximum calculated value = 12.1 fc  
 Type IV - Short - Non-Cutoff

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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	2516.8	0.0	2516.8
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	11690.2	0.0	11690.2
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	14207.0	0.0	14207.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	352.2	2.5
10°-20°	643.4	4.5
20°-30°	925.3	6.5
30°-40°	1417.2	10.0
40°-50°	2072.0	14.6
50°-60°	3014.8	21.2
60°-70°	3493.1	24.6
70°-80°	1820.9	12.8
80°-90°	468.1	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°	14207.0	100.0
0°-180°	14207.0	100.0



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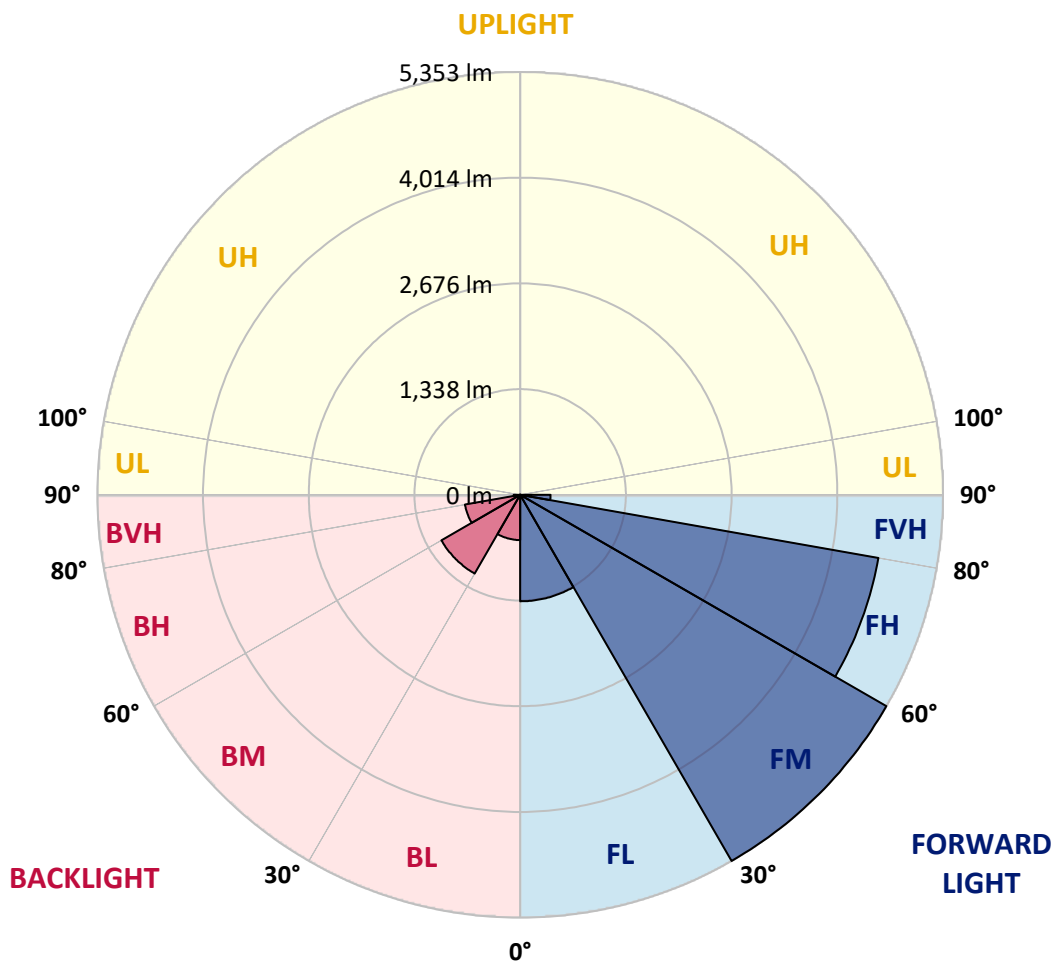
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1348.3	9.5			
FM	(30°-60°)	5352.5	37.7			
FH	(60°-80°)	4604.3	32.4			G2/5000
FVH	(80°-90°)	385.1	2.7			G3/500
BL	(0°-30°)	572.6	4.0	B2/1000		
BM	(30°-60°)	1151.5	8.1	B2/2500		
BH	(60°-80°)	709.7	5.0	B2/1000		G2/1000
BVH	(80°-90°)	83.0	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°	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4
2.5°	5000.0	4930.0	4768.3	4626.1	4448.9	4316.0	4154.3	4068.8	4006.0	3963.8	3929.8
5°	4670.4	4501.5	4192.4	3921.5	3629.0	3417.8	3170.6	3035.7	2952.2	2906.9	2886.3
7.5°	4181.1	3957.6	3557.9	3194.3	2828.6	2564.9	2377.4	2177.6	2071.5	2002.5	1979.8
10°	3753.6	3501.3	3024.3	2615.4	2333.1	2145.7	1985.0	1801.6	1665.6	1547.2	1502.9
12.5°	3505.4	3211.8	2667.9	2298.1	2061.2	1860.3	1690.4	1492.6	1349.4	1225.8	1178.4
15°	3452.8	3125.3	2518.6	2096.2	1805.7	1563.7	1359.7	1144.4	1004.3	902.4	869.4
17.5°	3611.5	3207.7	2455.7	1911.8	1561.6	1266.0	1014.6	783.9	667.5	611.9	598.5
20°	3938.0	3389.0	2425.8	1746.0	1324.7	974.5	701.5	532.6	474.9	458.4	457.4
22.5°	4367.6	3683.6	2458.8	1610.0	1102.2	719.0	514.0	437.8	414.1	404.8	404.8
25°	4852.7	4082.2	2546.4	1506.0	906.5	559.3	442.9	401.7	382.2	372.9	373.9
27.5°	5446.0	4567.4	2665.9	1410.2	766.4	490.3	414.1	379.1	359.5	350.2	351.3
30°	5893.1	4984.6	2768.9	1322.6	694.3	462.5	398.6	365.7	344.0	330.7	329.6
32.5°	6311.3	5352.3	2852.3	1259.8	653.1	413.1	360.5	335.8	317.3	301.8	298.7
35°	6773.8	5698.4	2891.4	1257.7	626.3	372.9	329.6	299.8	281.2	263.7	260.6
37.5°	7298.1	6121.8	2924.4	1270.1	611.9	347.1	315.2	286.4	270.9	253.4	249.3
40°	7844.1	6535.9	2950.2	1280.4	609.8	329.6	303.9	278.1	262.7	244.1	240.0
42.5°	8312.8	6902.6	2985.2	1276.3	595.4	326.5	296.7	270.9	256.5	237.9	232.8
45°	8687.7	7194.1	3039.8	1275.2	573.8	333.7	294.6	268.9	251.3	231.8	227.6
47.5°	9036.9	7522.7	3155.1	1271.1	550.1	331.7	305.9	266.8	249.3	229.7	226.6
50°	9436.6	7964.6	3351.9	1240.2	517.1	317.3	326.5	264.7	244.1	226.6	223.5
52.5°	9992.8	8611.5	3643.4	1184.6	471.8	301.8	329.6	263.7	235.9	220.4	216.3
55°	10646.9	9304.7	3957.6	1104.2	412.0	275.0	313.1	259.6	227.6	211.2	205.0
57.5°	11152.7	9816.7	4177.0	988.9	353.3	259.6	279.2	250.3	217.3	200.9	195.7
60°	11294.9	9839.4	4216.1	850.8	323.4	249.3	240.0	273.0	209.1	191.6	186.4
62.5°	11124.9	9389.2	3960.7	754.0	313.1	239.0	218.4	260.6	200.9	183.4	178.2
65°	10621.2	8629.0	3389.0	739.6	323.4	229.7	207.0	208.1	192.6	175.1	170.0
67.5°	9444.8	7510.3	2670.0	748.9	335.8	220.4	198.8	189.5	183.4	167.9	161.7
70°	7681.3	6046.6	2103.4	765.4	347.1	208.1	188.5	177.2	172.0	155.5	152.5
72.5°	5916.8	4839.3	1659.5	754.0	358.5	195.7	174.1	164.8	158.6	143.2	140.1
75°	4201.7	3845.3	1219.6	646.9	328.6	178.2	157.6	149.4	144.2	127.7	126.7
77.5°	3028.4	2880.1	848.8	486.2	259.6	156.6	139.1	131.9	128.8	110.2	110.2
80°	2415.5	2192.0	507.8	317.3	189.5	129.8	116.4	113.3	110.2	91.7	92.7
82.5°	1735.7	1520.4	324.5	197.8	139.1	98.9	90.6	89.6	84.5	68.0	68.0
85°	890.0	776.7	208.1	132.9	97.9	63.9	59.7	57.7	54.6	42.2	42.2
87.5°	173.1	237.9	115.4	64.9	47.4	22.7	22.7	19.6	22.7	15.5	16.5
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°	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4
2.5°	3994.7	3974.1	3959.6	3952.4	4056.5	4099.7	4149.2	4220.2	4268.7	4248.1	4314.0
5°	2983.1	2997.5	3030.5	3082.0	3227.2	3296.3	3340.6	3399.3	3441.5	3399.3	3469.3
7.5°	2039.6	2061.2	2131.2	2237.3	2412.5	2489.7	2505.2	2506.2	2496.9	2427.9	2475.3
10°	1501.9	1458.6	1474.0	1550.3	1706.8	1775.9	1783.1	1764.5	1761.4	1733.6	1787.2
12.5°	1164.0	1104.2	1069.2	1081.6	1199.0	1255.7	1264.9	1275.2	1317.5	1330.9	1396.8
15°	868.4	837.5	811.7	800.4	877.6	921.9	927.1	951.8	996.1	1008.5	1065.1
17.5°	610.8	619.1	632.5	637.6	693.2	722.1	713.8	713.8	721.1	718.0	749.9
20°	466.6	483.1	508.9	533.6	584.1	600.5	579.9	554.2	537.7	529.5	536.7
22.5°	412.0	423.4	439.8	471.8	514.0	522.3	495.5	474.9	459.4	451.2	452.2
25°	382.2	393.5	406.9	432.6	468.7	472.8	448.1	434.7	422.3	414.1	412.0
27.5°	356.4	363.6	371.9	388.3	425.4	427.5	411.0	402.8	394.5	388.3	386.3
30°	332.7	335.8	338.9	355.4	383.2	386.3	378.0	373.9	370.8	366.7	366.7
32.5°	301.8	305.9	311.1	325.5	352.3	356.4	351.3	348.2	343.0	341.0	337.9
35°	264.7	275.0	286.4	303.9	332.7	334.8	328.6	319.3	307.0	303.9	301.8
37.5°	249.3	251.3	265.8	286.4	316.2	318.3	310.1	294.6	285.3	286.4	288.4
40°	239.0	242.1	250.3	270.9	300.8	303.9	296.7	285.3	276.1	277.1	280.2
42.5°	230.7	234.9	240.0	253.4	283.3	289.5	287.4	277.1	267.8	269.9	274.0
45°	226.6	229.7	229.7	239.0	267.8	277.1	278.1	269.9	262.7	264.7	269.9
47.5°	224.6	224.6	221.5	228.7	257.5	266.8	268.9	264.7	260.6	262.7	267.8
50°	221.5	217.3	214.3	220.4	249.3	257.5	259.6	256.5	258.6	262.7	265.8
52.5°	212.2	208.1	208.1	212.2	241.0	249.3	250.3	248.2	252.4	257.5	262.7
55°	200.9	200.9	201.9	206.0	236.9	243.1	242.1	240.0	244.1	250.3	255.5
57.5°	190.6	189.5	194.7	199.8	231.8	235.9	233.8	233.8	236.9	242.1	247.2
60°	184.4	179.2	183.4	191.6	226.6	230.7	227.6	226.6	231.8	235.9	240.0
62.5°	178.2	173.1	176.1	184.4	219.4	222.5	220.4	220.4	225.6	228.7	232.8
65°	168.9	166.9	168.9	177.2	213.2	214.3	214.3	215.3	219.4	221.5	225.6
67.5°	160.7	160.7	161.7	170.0	208.1	206.0	206.0	211.2	212.2	214.3	218.4
70°	150.4	152.5	152.5	162.8	204.0	196.7	197.8	201.9	204.0	206.0	207.0
72.5°	139.1	140.1	142.2	155.5	197.8	187.5	188.5	191.6	192.6	195.7	196.7
75°	126.7	127.7	130.8	148.3	193.7	178.2	176.1	178.2	180.3	182.3	181.3
77.5°	112.3	114.3	117.4	144.2	180.3	176.1	160.7	162.8	164.8	164.8	163.8
80°	94.8	97.9	103.0	138.0	152.5	170.0	143.2	144.2	145.2	145.2	143.2
82.5°	71.1	77.3	84.5	114.3	119.5	145.2	123.6	125.7	122.6	120.5	119.5
85°	46.4	51.5	61.8	79.3	87.6	114.3	102.0	103.0	96.8	95.8	95.8
87.5°	18.5	19.6	27.8	40.2	52.5	71.1	73.1	75.2	70.0	70.0	72.1
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°	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4
2.5°	4413.9	4516.9	4635.4	4755.9	4854.8	4982.5	5106.1	5238.0	5304.9	5344.1	5454.3
5°	3578.5	3719.6	3887.5	4076.0	4232.6	4500.4	4788.9	5110.2	5264.8	5417.2	5705.6
7.5°	2559.8	2697.8	2893.5	3137.6	3360.1	3713.4	4093.5	4528.2	4742.5	4989.7	5462.5
10°	1900.5	2046.8	2223.9	2431.0	2650.4	3018.1	3444.6	3932.9	4168.7	4447.9	4985.6
12.5°	1541.0	1712.0	1895.4	2080.8	2269.3	2516.5	2963.5	3506.4	3759.8	4041.0	4579.7
15°	1202.1	1385.5	1583.2	1785.1	1972.6	2248.7	2705.0	3346.7	3636.2	3908.1	4349.0
17.5°	850.8	1023.9	1246.4	1491.6	1763.5	2090.0	2649.4	3416.8	3768.0	4052.3	4348.0
20°	579.9	699.4	921.9	1212.4	1548.2	1962.3	2670.0	3663.0	4101.8	4413.9	4526.2
22.5°	463.5	520.2	670.6	966.2	1362.8	1869.6	2754.4	4000.8	4580.8	4960.9	4850.7
25°	421.3	453.2	531.5	763.3	1198.0	1807.8	2919.3	4446.9	5117.5	5502.7	5241.1
27.5°	395.6	423.4	473.8	627.3	1055.8	1767.6	3128.4	4972.2	5722.1	6038.3	5647.9
30°	379.1	406.9	453.2	563.5	948.7	1707.9	3311.7	5452.2	6205.2	6410.2	5867.4
32.5°	347.1	368.8	406.9	504.7	868.4	1637.8	3470.3	5881.8	6661.5	6729.5	6131.1
35°	314.2	336.8	375.0	457.4	821.0	1583.2	3553.8	6262.9	7113.8	7048.9	6392.7
37.5°	301.8	320.4	355.4	423.4	795.2	1547.2	3585.7	6637.9	7598.9	7402.2	6575.0
40°	293.6	310.1	341.0	400.7	788.0	1513.2	3578.5	6994.3	8069.7	7767.9	6718.2
42.5°	287.4	301.8	330.7	385.3	768.4	1481.3	3554.8	7302.3	8446.7	8083.1	6855.2
45°	282.2	297.7	326.5	393.5	732.4	1446.2	3540.4	7583.5	8736.1	8348.8	7038.6
47.5°	280.2	297.7	327.6	391.4	693.2	1407.1	3591.9	7895.6	8988.5	8572.3	7282.7
50°	277.1	296.7	350.2	372.9	639.7	1358.7	3766.0	8267.4	9253.2	8823.7	7598.9
52.5°	271.9	295.6	373.9	358.5	570.7	1291.7	4048.2	8792.8	9710.6	9313.0	8066.6
55°	265.8	297.7	357.4	335.8	497.5	1205.2	4330.5	9512.8	10452.3	10102.0	8738.2
57.5°	258.6	294.6	337.9	315.2	436.8	1096.0	4544.7	10103.1	11064.1	10915.8	9563.3
60°	253.4	301.8	303.9	302.8	397.6	992.0	4565.3	10064.9	11240.3	11444.2	10370.9
62.5°	247.2	308.0	277.1	293.6	378.0	895.1	4310.9	9441.7	10942.6	11376.2	11029.1
65°	239.0	268.9	262.7	285.3	378.0	843.6	3718.6	8404.4	10119.5	10733.5	11386.5
67.5°	230.7	244.1	252.4	274.0	386.3	795.2	2988.3	7089.0	8821.6	9696.2	10984.8
70°	219.4	230.7	241.0	263.7	382.2	761.2	2351.7	5681.9	7260.0	8261.3	9873.3
72.5°	209.1	217.3	227.6	248.2	382.2	745.8	1889.2	4457.2	5542.9	6386.5	8178.9
75°	193.7	200.9	210.1	232.8	375.0	681.9	1418.4	3571.3	4055.4	4583.9	6453.5
77.5°	178.2	183.4	190.6	213.2	337.9	569.6	1003.3	2765.8	3004.8	3297.3	5030.9
80°	158.6	162.8	167.9	190.6	280.2	441.9	653.1	2163.2	2246.6	2387.7	3309.7
82.5°	136.0	142.2	143.2	163.8	225.6	320.4	388.3	1482.3	1481.3	1688.3	2335.2
85°	111.2	114.3	116.4	128.8	166.9	213.2	255.5	809.6	722.1	1011.5	2028.2
87.5°	83.4	80.3	83.4	86.5	110.2	125.7	137.0	149.4	89.6	183.4	1179.4
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°	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4	4843.4
2.5°	5513.0	5573.8	5537.7	5494.5	5386.3	5227.7	5106.1	5000.0
5°	5905.5	6017.7	5968.3	5807.6	5527.4	5209.1	4874.4	4670.4
7.5°	5856.0	6078.5	6058.9	5791.1	5389.4	4920.7	4450.0	4181.1
10°	5460.5	5772.6	5826.1	5552.1	5126.7	4602.4	4057.5	3753.6
12.5°	5029.9	5292.6	5401.8	5297.7	4897.0	4364.5	3809.2	3505.4
15°	4669.4	4802.2	4910.4	4977.4	4729.1	4280.0	3766.0	3452.8
17.5°	4402.6	4376.8	4467.5	4628.2	4638.5	4392.3	3961.7	3611.5
20°	4273.8	4071.9	4124.5	4350.0	4613.7	4677.6	4352.1	3938.0
22.5°	4266.6	3951.4	3961.7	4204.8	4684.8	5067.0	4839.3	4367.6
25°	4377.9	3938.0	3947.3	4189.3	4810.5	5459.4	5402.8	4852.7
27.5°	4567.4	3995.7	3989.5	4257.3	4978.4	5787.0	5971.4	5446.0
30°	4772.4	4079.1	4063.7	4366.5	5143.2	5988.9	6375.2	5893.1
32.5°	5027.8	4227.5	4173.9	4526.2	5306.0	6182.6	6720.3	6311.3
35°	5270.9	4444.8	4367.6	4754.9	5480.0	6397.8	7106.5	6773.8
37.5°	5519.2	4769.3	4726.0	5084.5	5726.2	6631.7	7548.4	7298.1
40°	5837.5	5230.8	5210.2	5563.5	6054.8	6887.1	8043.9	7844.1
42.5°	6180.5	5721.1	5703.6	6113.5	6462.7	7143.6	8468.3	8312.8
45°	6529.7	6315.4	6319.6	6700.7	6892.3	7385.7	8802.1	8687.7
47.5°	6941.7	6965.4	7112.7	7309.5	7310.5	7655.6	9097.7	9036.9
50°	7465.0	7750.3	8022.3	8053.2	7732.8	8012.0	9459.3	9436.6
52.5°	8057.3	8655.8	8972.0	8874.2	8144.9	8453.9	9993.9	9992.8
55°	8760.9	9602.4	9900.1	9733.3	8638.3	9029.7	10692.3	10646.9
57.5°	9490.2	10513.0	10753.0	10535.7	9255.3	9700.3	11392.7	11152.7
60°	10278.2	11296.9	11541.0	11214.5	9947.5	10368.8	11856.3	11294.9
62.5°	10794.2	11755.3	11930.4	11617.3	10567.6	11049.7	12005.6	11124.9
65°	10821.0	11450.4	11496.8	11385.5	10831.3	11641.0	11789.3	10621.2
67.5°	10085.5	10122.6	10183.4	10302.9	10267.9	11377.3	10954.9	9444.8
70°	8512.6	8018.2	8218.0	8333.4	8593.0	10119.5	9412.9	7681.3
72.5°	6509.1	5787.0	6013.6	5974.5	6514.2	8300.4	7201.3	5916.8
75°	4684.8	3946.2	3963.8	3965.8	4680.7	6625.5	4910.4	4201.7
77.5°	3184.0	2792.6	2850.2	2814.2	3132.5	5190.6	3535.2	3028.4
80°	2177.6	2167.3	2179.7	2095.2	2089.0	3355.0	2617.4	2415.5
82.5°	1615.2	1492.6	1475.1	1385.5	1600.7	2564.9	1987.0	1735.7
85°	1274.2	826.1	718.0	866.3	1386.5	2359.9	1211.4	890.0
87.5°	539.8	324.5	196.7	389.4	770.5	1729.5	335.8	173.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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