

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: P270376

Luminaire Tested: **NAV-AF-02-D-UNV-SLR-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270376
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-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 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: 10252.5 lumens
Efficiency: N/A
Efficacy: 79.5 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

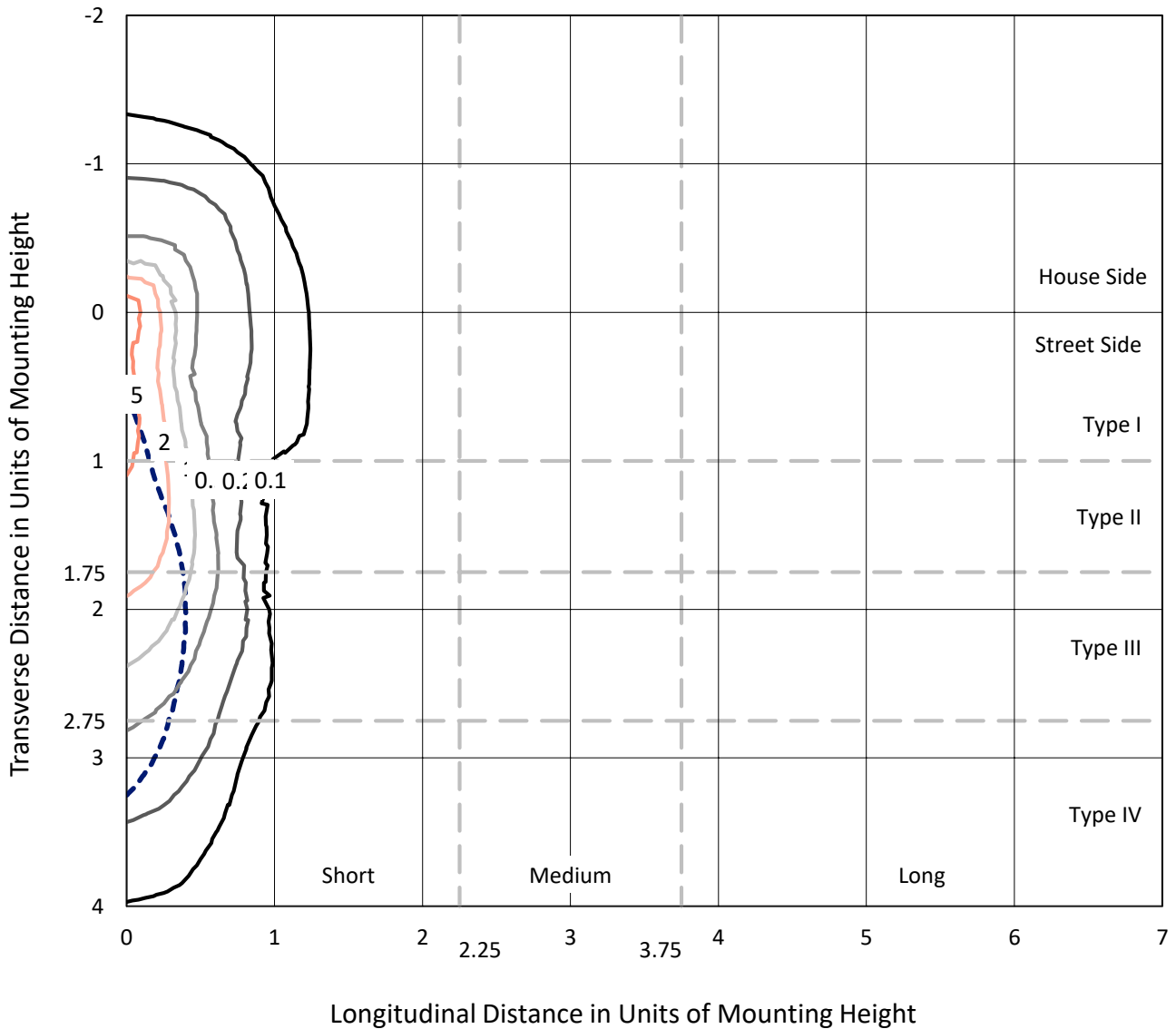


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Iso-Footcandle Lines of Horizontal Illumination

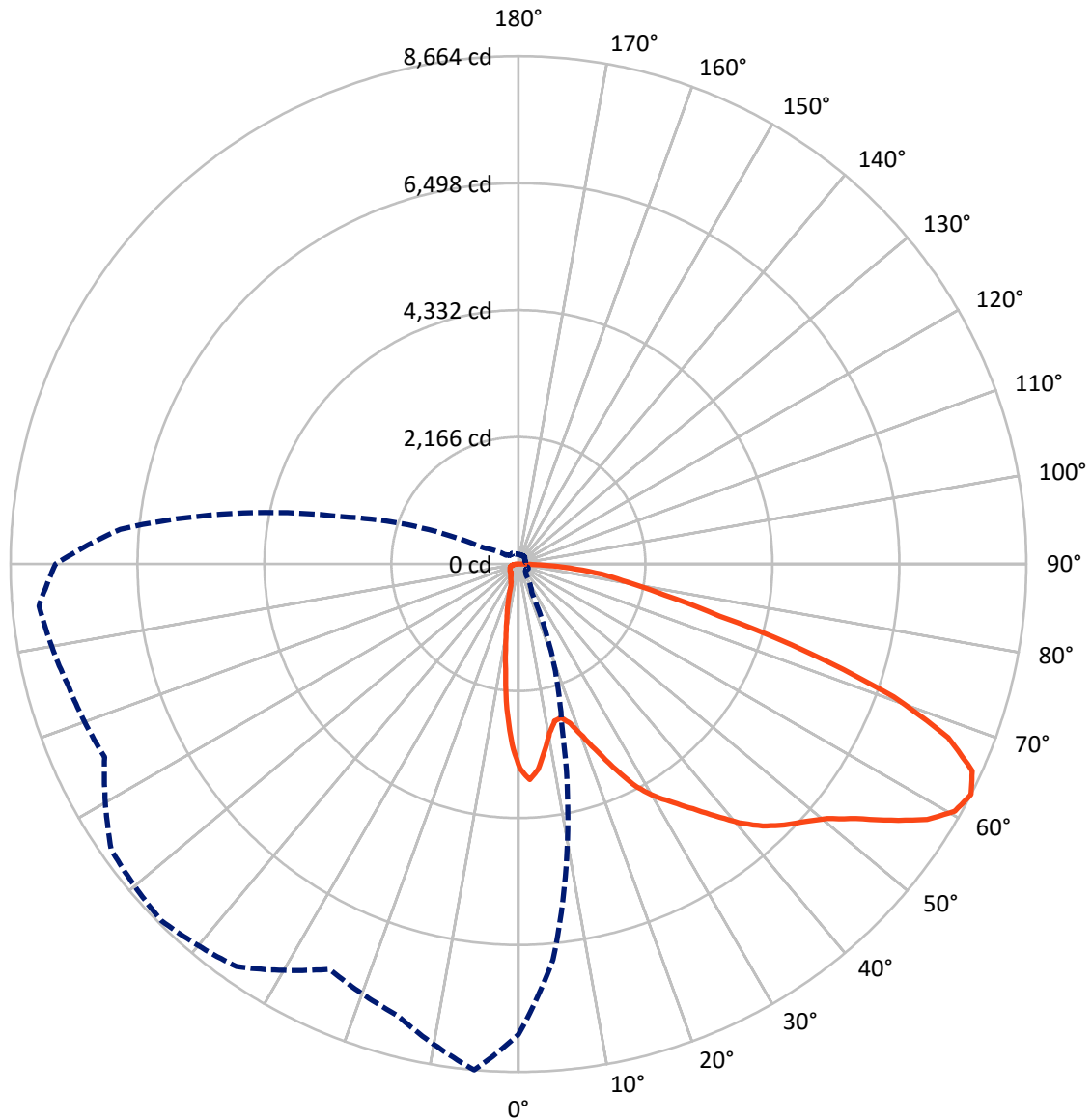
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.7 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
House Side	Lumens	1816.2	0.0	1816.2
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	8436.3	0.0	8436.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	10252.5	0.0	10252.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.2	2.5
10°-20°	464.3	4.5
20°-30°	667.8	6.5
30°-40°	1022.7	10.0
40°-50°	1495.3	14.6
50°-60°	2175.7	21.2
60°-70°	2520.8	24.6
70°-80°	1314.0	12.8
80°-90°	337.8	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°	10252.5	100.0
0°-180°	10252.5	100.0

Coefficient of Utilization



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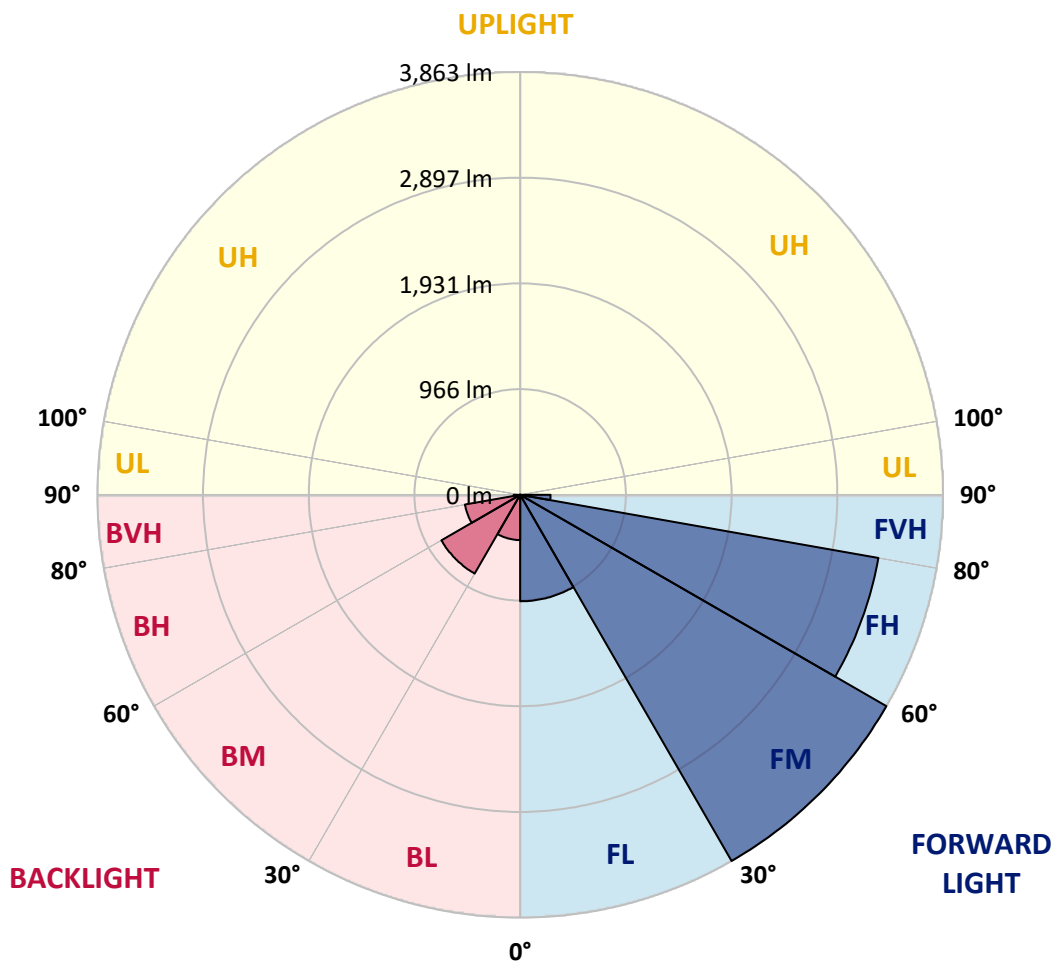
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	973.0	9.5			
FM	(30°-60°)	3862.7	37.7			
FH	(60°-80°)	3322.7	32.4			G2/5000
FVH	(80°-90°)	277.9	2.7			G3/500
BL	(0°-30°)	413.2	4.0	B1/500		
BM	(30°-60°)	831.0	8.1	B1/1000		
BH	(60°-80°)	512.1	5.0	B2/1000		G2/1000
BVH	(80°-90°)	59.9	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2
2.5°	3608.3	3557.7	3441.0	3338.5	3210.6	3114.8	2998.1	2936.3	2890.9	2860.5	2835.9
5°	3370.4	3248.5	3025.5	2830.0	2618.9	2466.4	2288.1	2190.6	2130.5	2097.8	2082.9
7.5°	3017.2	2856.0	2567.5	2305.2	2041.3	1851.0	1715.8	1571.5	1494.9	1445.2	1428.8
10°	2708.7	2526.8	2182.5	1887.3	1683.8	1548.4	1432.4	1300.1	1202.0	1116.6	1084.6
12.5°	2529.6	2317.7	1925.2	1658.5	1487.5	1342.4	1219.9	1077.2	973.9	884.7	850.4
15°	2491.8	2255.4	1817.5	1512.7	1303.1	1128.5	981.3	825.9	724.8	651.2	627.3
17.5°	2606.3	2314.8	1772.1	1379.6	1127.0	913.5	732.2	565.8	481.8	441.5	431.8
20°	2841.9	2445.6	1750.6	1260.1	955.9	703.3	506.3	384.4	342.8	330.8	330.0
22.5°	3151.9	2658.3	1774.4	1161.9	795.4	519.0	370.9	315.9	298.9	292.2	292.2
25°	3502.0	2945.9	1837.7	1086.8	654.1	403.7	319.6	290.0	275.8	269.1	269.9
27.5°	3930.2	3296.2	1923.8	1017.7	553.0	353.8	298.9	273.5	259.4	252.8	253.5
30°	4252.8	3597.2	1998.2	954.4	501.1	333.8	287.6	263.9	248.3	238.6	238.0
32.5°	4554.5	3862.5	2058.3	909.2	471.3	298.1	260.1	242.4	229.0	217.7	215.6
35°	4888.3	4112.4	2086.7	907.6	451.9	269.1	238.0	216.3	202.9	190.4	188.0
37.5°	5266.8	4417.9	2110.4	916.6	441.5	250.4	227.5	206.7	195.6	182.8	179.9
40°	5660.7	4716.6	2129.1	923.9	440.1	238.0	219.2	200.7	189.5	176.2	173.3
42.5°	5998.9	4981.3	2154.2	921.0	429.7	235.6	214.1	195.6	185.1	171.8	168.1
45°	6269.5	5191.7	2193.8	920.3	414.1	240.8	212.5	194.0	181.4	167.3	164.3
47.5°	6521.5	5428.7	2276.9	917.3	397.0	239.4	220.8	192.5	179.9	165.7	163.5
50°	6810.1	5747.6	2418.9	895.0	373.2	229.0	235.6	191.0	176.2	163.5	161.3
52.5°	7211.4	6214.6	2629.2	854.8	340.5	217.7	238.0	190.4	170.1	159.1	156.1
55°	7683.5	6714.8	2856.0	796.8	297.3	198.4	226.0	187.3	164.3	152.4	148.0
57.5°	8048.5	7084.3	3014.4	713.7	254.9	187.3	201.5	180.6	156.8	144.9	141.3
60°	8151.0	7100.7	3042.6	614.0	233.4	179.9	173.3	197.0	150.9	138.2	134.6
62.5°	8028.3	6775.7	2858.2	544.2	226.0	172.5	157.7	188.0	144.9	132.3	128.5
65°	7664.9	6227.2	2445.6	533.8	233.4	165.7	149.4	150.1	139.0	126.4	122.7
67.5°	6815.9	5419.8	1926.9	540.4	242.4	159.1	143.5	136.8	132.3	121.2	116.7
70°	5543.4	4363.5	1518.0	552.3	250.4	150.1	136.1	127.9	124.1	112.3	110.0
72.5°	4270.0	3492.3	1197.6	544.2	258.7	141.3	125.7	118.9	114.4	103.3	101.1
75°	3032.1	2775.0	880.2	466.8	237.2	128.5	113.7	107.7	104.1	92.2	91.4
77.5°	2185.4	2078.5	612.6	350.9	187.3	112.9	100.3	95.1	93.0	79.5	79.5
80°	1743.3	1581.8	366.5	229.0	136.8	93.7	84.0	81.7	79.5	66.1	67.0
82.5°	1252.5	1097.2	234.2	142.7	100.3	71.3	65.4	64.7	60.9	49.0	49.0
85°	642.3	560.5	150.1	95.8	70.6	46.2	43.1	41.6	39.3	30.5	30.5
87.5°	124.9	171.8	83.3	46.8	34.1	16.3	16.3	14.2	16.3	11.1	11.9
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°	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2
2.5°	2882.8	2867.8	2857.5	2852.3	2927.3	2958.6	2994.3	3045.6	3080.5	3065.6	3113.3
5°	2152.8	2163.2	2187.0	2224.2	2328.9	2378.7	2410.7	2453.1	2483.5	2453.1	2503.7
7.5°	1471.9	1487.5	1538.0	1614.7	1740.9	1796.7	1807.8	1808.6	1801.9	1752.1	1786.3
10°	1083.8	1052.6	1063.8	1118.7	1231.8	1281.5	1286.7	1273.3	1271.1	1251.1	1289.7
12.5°	840.0	796.8	771.6	780.5	865.2	906.2	912.9	920.3	950.8	960.4	1008.0
15°	626.7	604.4	585.8	577.6	633.3	665.4	669.1	686.8	718.9	727.7	768.6
17.5°	440.8	446.7	456.3	460.1	500.3	521.0	515.2	515.2	520.4	518.1	541.1
20°	336.8	348.6	367.2	385.1	421.5	433.4	418.5	399.9	388.1	382.0	387.3
22.5°	297.3	305.6	317.5	340.5	370.9	376.8	357.5	342.8	331.6	325.5	326.4
25°	275.8	284.0	293.7	312.3	338.2	341.1	323.4	313.7	304.7	298.9	297.3
27.5°	257.3	262.5	268.4	280.2	307.0	308.5	296.6	290.6	284.8	280.2	278.7
30°	240.0	242.4	244.6	256.5	276.5	278.7	272.8	269.9	267.6	264.6	264.6
32.5°	217.7	220.8	224.4	234.8	254.2	257.3	253.5	251.3	247.6	246.0	243.8
35°	191.0	198.4	206.7	219.2	240.0	241.6	237.2	230.4	221.5	219.2	217.7
37.5°	179.9	181.4	191.8	206.7	228.2	229.6	223.8	212.5	205.9	206.7	208.1
40°	172.5	174.7	180.6	195.6	217.1	219.2	214.1	205.9	199.2	200.0	202.2
42.5°	166.5	169.5	173.3	182.8	204.5	208.9	207.4	200.0	193.2	194.8	197.7
45°	163.5	165.7	165.7	172.5	193.2	200.0	200.7	194.8	189.5	191.0	194.8
47.5°	162.1	162.1	159.8	165.0	185.8	192.5	194.0	191.0	188.0	189.5	193.2
50°	159.8	156.8	154.6	159.1	179.9	185.8	187.3	185.1	186.6	189.5	191.8
52.5°	153.2	150.1	150.1	153.2	173.9	179.9	180.6	179.1	182.1	185.8	189.5
55°	144.9	144.9	145.6	148.7	170.9	175.3	174.7	173.3	176.2	180.6	184.3
57.5°	137.5	136.8	140.4	144.2	167.3	170.1	168.7	168.7	170.9	174.7	178.5
60°	133.0	129.4	132.3	138.2	163.5	166.5	164.3	163.5	167.3	170.1	173.3
62.5°	128.5	124.9	127.1	133.0	158.3	160.5	159.1	159.1	162.9	165.0	168.1
65°	121.9	120.5	121.9	127.9	153.9	154.6	154.6	155.3	158.3	159.8	162.9
67.5°	116.1	116.1	116.7	122.7	150.1	148.7	148.7	152.4	153.2	154.6	157.7
70°	108.5	110.0	110.0	117.5	147.2	142.0	142.7	145.6	147.2	148.7	149.4
72.5°	100.3	101.1	102.5	112.3	142.7	135.3	136.1	138.2	139.0	141.3	142.0
75°	91.4	92.2	94.4	107.1	139.7	128.5	127.1	128.5	130.1	131.6	130.9
77.5°	81.0	82.6	84.7	104.1	130.1	127.1	116.1	117.5	118.9	118.9	118.1
80°	68.5	70.6	74.3	99.6	110.0	122.7	103.3	104.1	104.8	104.8	103.3
82.5°	51.4	55.8	60.9	82.6	86.2	104.8	89.2	90.6	88.5	87.0	86.2
85°	33.4	37.2	44.6	57.2	63.2	82.6	73.7	74.3	69.9	69.1	69.1
87.5°	13.4	14.2	20.0	28.9	37.9	51.4	52.8	54.3	50.6	50.6	52.0
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2
2.5°	3185.3	3259.7	3345.2	3432.2	3503.5	3595.6	3684.8	3780.0	3828.3	3856.6	3936.2
5°	2582.4	2684.2	2805.4	2941.5	3054.4	3247.7	3455.9	3687.8	3799.3	3909.3	4117.6
7.5°	1847.3	1946.8	2088.1	2264.3	2424.9	2679.9	2954.2	3267.9	3422.5	3600.9	3942.0
10°	1371.5	1477.1	1604.9	1754.3	1912.8	2178.1	2485.8	2838.1	3008.5	3209.9	3597.9
12.5°	1112.1	1235.4	1367.8	1501.5	1637.6	1816.1	2138.7	2530.4	2713.3	2916.2	3305.0
15°	867.6	999.9	1142.6	1288.3	1423.5	1622.8	1952.0	2415.3	2624.0	2820.3	3138.5
17.5°	614.0	738.9	899.5	1076.3	1272.7	1508.3	1912.0	2465.8	2719.2	2924.4	3137.7
20°	418.5	504.8	665.4	874.9	1117.3	1416.1	1926.9	2643.4	2960.1	3185.3	3266.3
22.5°	334.4	375.4	483.9	697.3	983.5	1349.3	1987.8	2887.2	3305.8	3580.0	3500.5
25°	304.0	327.2	383.5	550.8	864.4	1304.6	2106.6	3209.1	3693.0	3971.0	3782.3
27.5°	285.4	305.6	342.0	452.7	761.9	1275.7	2257.6	3588.2	4129.4	4357.6	4075.9
30°	273.5	293.7	327.2	406.7	684.7	1232.6	2389.9	3934.7	4478.1	4625.9	4234.3
32.5°	250.4	266.1	293.7	364.3	626.7	1182.0	2504.4	4244.6	4807.3	4856.3	4424.5
35°	226.7	243.1	270.6	330.0	592.4	1142.6	2564.7	4519.6	5133.6	5086.8	4613.3
37.5°	217.7	231.1	256.5	305.6	573.8	1116.6	2587.7	4790.2	5483.9	5341.9	4744.8
40°	211.9	223.8	246.0	289.2	568.6	1092.0	2582.4	5047.4	5823.5	5605.8	4848.2
42.5°	207.4	217.7	238.6	278.0	554.6	1069.0	2565.4	5269.6	6095.5	5833.1	4947.1
45°	203.6	214.9	235.6	284.0	528.6	1043.7	2555.0	5472.7	6304.5	6024.9	5079.3
47.5°	202.2	214.9	236.4	282.4	500.3	1015.4	2592.1	5697.9	6486.7	6186.3	5255.5
50°	200.0	214.1	252.8	269.1	461.5	980.5	2717.7	5966.3	6677.6	6367.6	5483.9
52.5°	196.3	213.3	269.9	258.7	411.9	932.3	2921.4	6345.4	7007.7	6720.8	5821.2
55°	191.8	214.9	258.0	242.4	359.1	869.6	3125.2	6864.9	7542.9	7290.1	6305.9
57.5°	186.6	212.5	243.8	227.5	315.1	791.0	3279.7	7291.0	7984.5	7877.4	6901.4
60°	182.8	217.7	219.2	218.6	287.0	715.9	3294.7	7263.4	8111.5	8258.7	7484.1
62.5°	178.5	222.3	200.0	211.9	272.8	646.1	3111.0	6813.6	7896.8	8209.7	7959.3
65°	172.5	194.0	189.5	205.9	272.8	608.8	2683.5	6065.0	7302.9	7745.8	8217.2
67.5°	166.5	176.2	182.1	197.7	278.7	573.8	2156.6	5115.8	6366.2	6997.3	7927.3
70°	158.3	166.5	173.9	190.4	275.8	549.4	1697.1	4100.5	5239.3	5961.8	7125.1
72.5°	150.9	156.8	164.3	179.1	275.8	538.3	1363.4	3216.6	4000.1	4608.8	5902.4
75°	139.7	144.9	151.6	168.1	270.6	492.1	1023.6	2577.2	2926.6	3308.0	4657.3
77.5°	128.5	132.3	137.5	153.9	243.8	411.1	724.0	1995.9	2168.4	2379.5	3630.6
80°	114.4	117.5	121.2	137.5	202.2	318.9	471.3	1561.1	1621.4	1723.0	2388.5
82.5°	98.2	102.5	103.3	118.1	162.9	231.1	280.2	1069.7	1069.0	1218.5	1685.2
85°	80.3	82.6	84.0	93.0	120.5	153.9	184.3	584.3	521.0	730.1	1463.7
87.5°	60.1	58.0	60.1	62.4	79.5	90.6	98.9	107.7	64.7	132.3	851.1
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2	3495.2
2.5°	3978.6	4022.3	3996.3	3965.1	3887.1	3772.6	3684.8	3608.3
5°	4261.6	4342.8	4307.1	4191.1	3989.0	3759.1	3517.7	3370.4
7.5°	4226.0	4386.7	4372.5	4179.2	3889.3	3551.1	3211.4	3017.2
10°	3940.5	4165.8	4204.4	4006.7	3699.7	3321.4	2928.1	2708.7
12.5°	3629.8	3819.5	3898.3	3823.1	3533.9	3149.6	2749.0	2529.6
15°	3369.7	3465.7	3543.6	3592.0	3412.8	3088.7	2717.7	2491.8
17.5°	3177.1	3158.6	3223.9	3340.0	3347.4	3169.7	2858.9	2606.3
20°	3084.2	2938.5	2976.4	3139.2	3329.6	3375.7	3140.7	2841.9
22.5°	3079.0	2851.5	2858.9	3034.5	3380.9	3656.6	3492.3	3151.9
25°	3159.2	2841.9	2848.5	3023.2	3471.5	3939.8	3899.0	3502.0
27.5°	3296.2	2883.5	2879.1	3072.4	3592.7	4176.2	4309.3	3930.2
30°	3444.0	2943.7	2932.5	3151.2	3711.6	4321.9	4600.7	4252.8
32.5°	3628.3	3050.7	3012.0	3266.3	3829.0	4461.7	4849.7	4554.5
35°	3803.9	3207.6	3151.9	3431.3	3954.7	4617.1	5128.5	4888.3
37.5°	3982.9	3441.8	3410.5	3669.2	4132.4	4785.8	5447.4	5266.8
40°	4212.6	3774.8	3759.9	4015.0	4369.4	4970.1	5804.9	5660.7
42.5°	4460.2	4128.6	4116.0	4411.8	4663.9	5155.3	6111.2	5998.9
45°	4712.1	4557.6	4560.5	4835.5	4973.8	5330.0	6352.1	6269.5
47.5°	5009.6	5026.6	5132.9	5274.8	5275.7	5524.7	6565.4	6521.5
50°	5387.1	5593.0	5789.3	5811.7	5580.5	5781.9	6826.3	6810.1
52.5°	5814.5	6246.5	6474.8	6404.0	5877.8	6100.7	7212.1	7211.4
55°	6322.4	6929.6	7144.5	7024.0	6233.9	6516.3	7716.1	7683.5
57.5°	6848.6	7586.7	7760.0	7603.2	6679.2	7000.2	8221.6	8048.5
60°	7417.2	8152.5	8328.6	8093.0	7178.6	7482.7	8556.1	8151.0
62.5°	7789.7	8483.2	8609.6	8383.6	7626.3	7974.1	8664.0	8028.3
65°	7809.1	8263.2	8296.7	8216.3	7816.5	8400.8	8507.8	7664.9
67.5°	7278.2	7305.0	7348.9	7435.1	7409.8	8210.5	7905.7	6815.9
70°	6143.1	5786.3	5930.6	6013.9	6201.2	7302.9	6792.9	5543.4
72.5°	4697.2	4176.2	4339.7	4311.5	4701.0	5990.1	5196.9	4270.0
75°	3380.9	2847.8	2860.5	2862.0	3377.8	4781.3	3543.6	3032.1
77.5°	2297.8	2015.3	2056.8	2030.9	2260.6	3745.8	2551.2	2185.4
80°	1571.5	1563.9	1572.9	1511.9	1507.5	2421.1	1888.9	1743.3
82.5°	1165.6	1077.2	1064.5	999.9	1155.2	1851.0	1434.0	1252.5
85°	919.5	596.1	518.1	625.2	1000.5	1703.0	874.2	642.3
87.5°	389.5	234.2	142.0	281.0	556.1	1248.1	242.4	124.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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