

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: P197187

Luminaire Tested: **NAV-AF-03-D-UNV-SLR-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197187
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-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 615mA 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: 8601 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 96
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

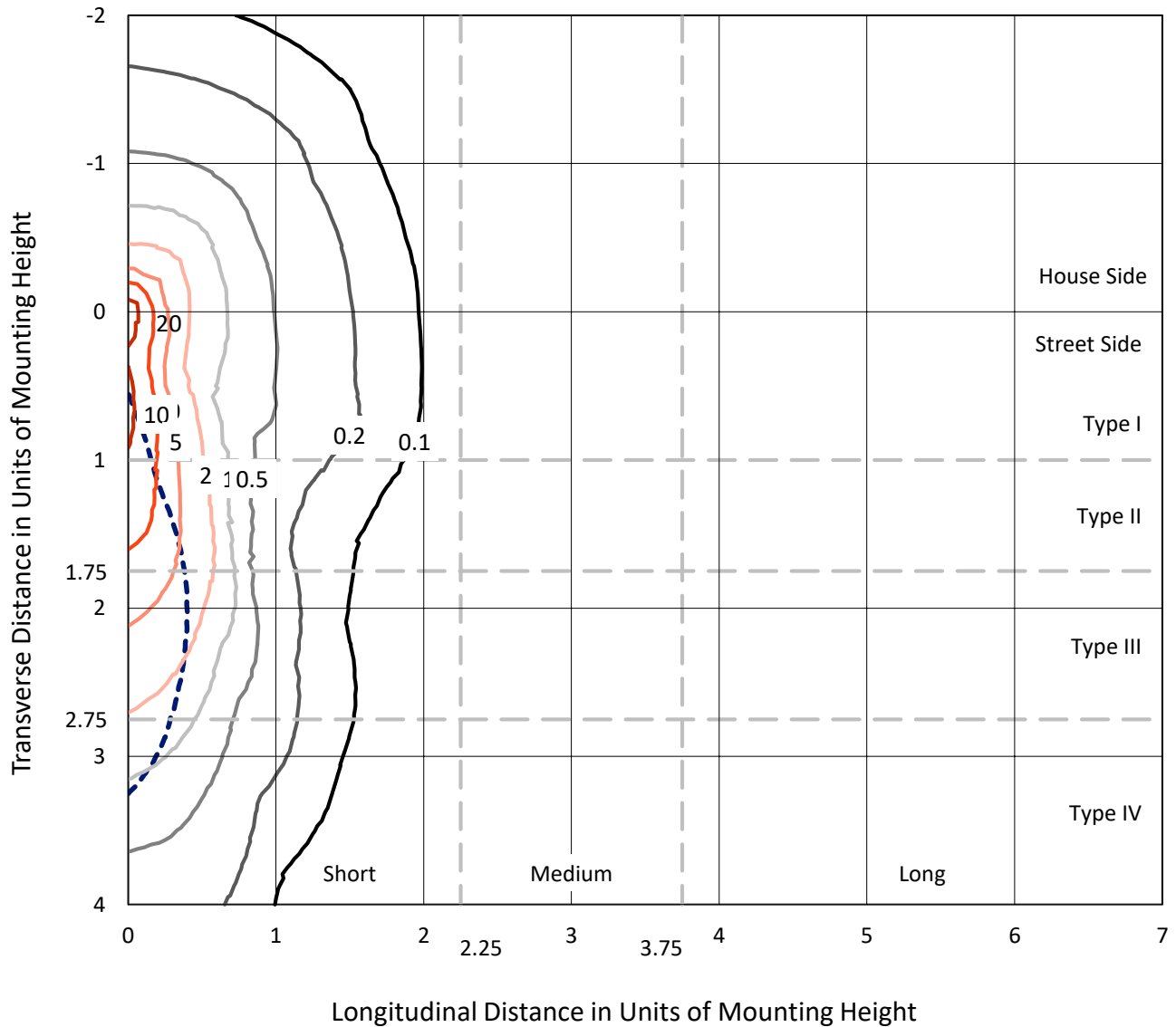


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Iso-Footcandle Lines of Horizontal Illumination

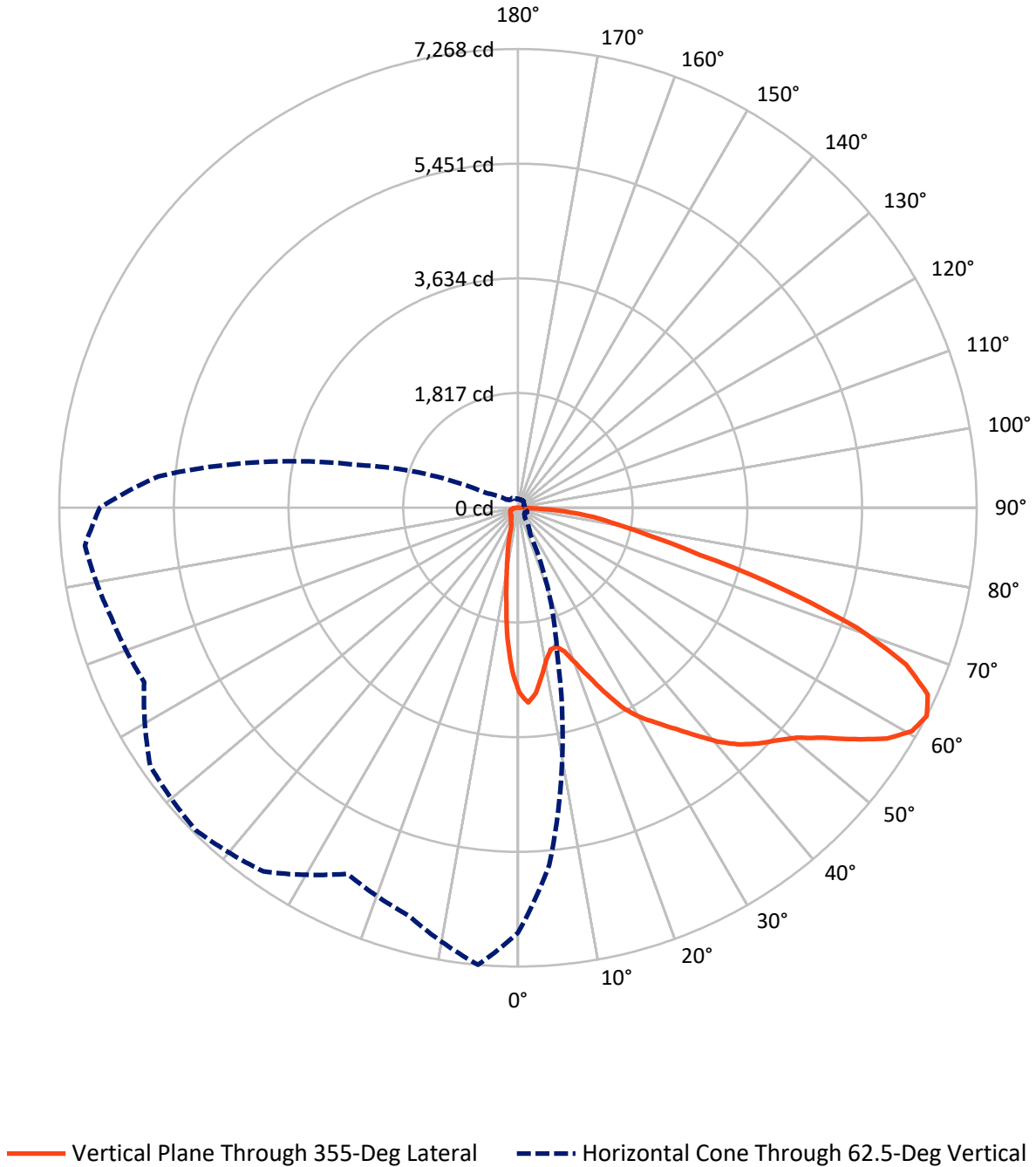
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 29.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1523.7	0.0	1523.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	7077.3	0.0	7077.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	8601.0	0.0	8601.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.2	2.5
10°-20°	389.5	4.5
20°-30°	560.2	6.5
30°-40°	858.0	10.0
40°-50°	1254.4	14.6
50°-60°	1825.2	21.2
60°-70°	2114.7	24.6
70°-80°	1102.4	12.8
80°-90°	283.4	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°	8601.0	100.0
0°-180°	8601.0	100.0



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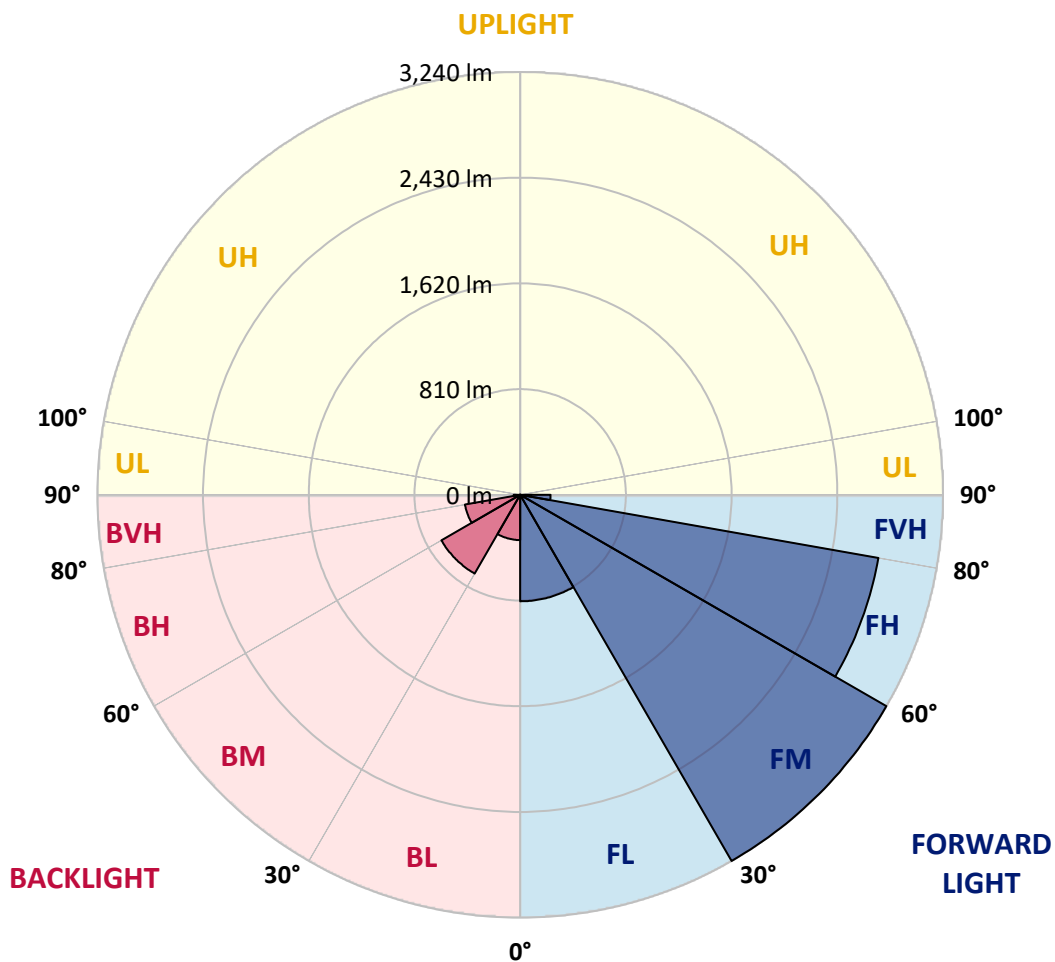
CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-8030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	816.3	9.5			
FM	(30°-60°)	3240.5	37.7			
FH	(60°-80°)	2787.5	32.4			G2/5000
FVH	(80°-90°)	233.1	2.7			G3/500
BL	(0°-30°)	346.7	4.0	B1/500		
BM	(30°-60°)	697.1	8.1	B1/1000		
BH	(60°-80°)	429.6	5.0	B1/500		G1/500
BVH	(80°-90°)	50.2	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°	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	3027.0	2984.6	2886.7	2800.7	2693.4	2613.0	2515.1	2463.3	2425.3	2399.7	2379.1
5°	2827.5	2725.2	2538.1	2374.1	2197.0	2069.2	1919.5	1837.8	1787.3	1759.9	1747.4
7.5°	2531.3	2395.9	2154.0	1933.8	1712.5	1552.8	1439.3	1318.3	1254.1	1212.3	1198.6
10°	2272.5	2119.7	1830.9	1583.4	1412.5	1299.0	1201.7	1090.7	1008.4	936.7	909.9
12.5°	2122.2	1944.4	1615.2	1391.3	1247.9	1126.3	1023.4	903.6	816.9	742.1	713.4
15°	2090.4	1892.1	1524.7	1269.1	1093.2	946.7	823.2	692.8	608.0	546.3	526.3
17.5°	2186.4	1941.9	1486.7	1157.4	945.4	766.4	614.3	474.6	404.1	370.4	362.3
20°	2384.1	2051.7	1468.6	1057.0	802.0	589.9	424.7	322.4	287.5	277.5	276.9
22.5°	2644.1	2230.1	1488.6	974.7	667.3	435.3	311.2	265.0	250.7	245.1	245.1
25°	2937.9	2471.4	1541.6	911.7	548.8	338.6	268.2	243.2	231.4	225.7	226.4
27.5°	3297.1	2765.1	1613.9	853.7	464.0	296.8	250.7	229.5	217.6	212.0	212.7
30°	3567.7	3017.7	1676.3	800.7	420.3	280.0	241.3	221.4	208.3	200.2	199.6
32.5°	3820.9	3240.3	1726.8	762.7	395.4	250.1	218.3	203.3	192.1	182.7	180.8
35°	4100.9	3449.9	1750.5	761.4	379.2	225.7	199.6	181.5	170.2	159.6	157.8
37.5°	4418.3	3706.2	1770.5	768.9	370.4	210.2	190.8	173.4	164.0	153.4	150.9
40°	4748.9	3956.9	1786.0	775.2	369.2	199.6	184.0	168.4	159.0	147.8	145.3
42.5°	5032.6	4178.9	1807.2	772.7	360.5	197.7	179.6	164.0	155.3	144.1	140.9
45°	5259.6	4355.3	1840.3	772.0	347.4	202.1	178.4	162.8	152.2	140.3	137.8
47.5°	5471.0	4554.3	1910.1	769.5	333.0	200.8	185.2	161.5	150.9	139.1	137.2
50°	5713.0	4821.8	2029.3	750.8	313.1	192.1	197.7	160.3	147.8	137.2	135.3
52.5°	6049.7	5213.4	2205.7	717.2	285.6	182.7	199.6	159.6	142.8	133.5	131.0
55°	6445.7	5633.1	2395.9	668.5	249.4	166.5	189.6	157.2	137.8	127.8	124.1
57.5°	6751.9	5943.1	2528.8	598.7	213.9	157.2	169.0	151.5	131.6	121.6	118.5
60°	6838.0	5956.8	2552.5	515.1	195.8	150.9	145.3	165.3	126.6	116.0	112.9
62.5°	6735.1	5684.3	2397.8	456.5	189.6	144.7	132.2	157.8	121.6	111.0	107.9
65°	6430.1	5224.0	2051.7	447.8	195.8	139.1	125.3	126.0	116.6	106.0	102.9
67.5°	5718.0	4546.8	1616.4	453.4	203.3	133.5	120.4	114.7	111.0	101.6	97.9
70°	4650.3	3660.6	1273.4	463.3	210.2	126.0	114.1	107.3	104.1	94.2	92.3
72.5°	3582.1	2929.8	1004.6	456.5	217.0	118.5	105.4	99.8	96.0	86.7	84.8
75°	2543.7	2328.0	738.4	391.6	198.9	107.9	95.4	90.4	87.3	77.3	76.7
77.5°	1833.4	1743.6	513.9	294.3	157.2	94.8	84.2	79.8	78.0	66.7	66.7
80°	1462.4	1327.1	307.4	192.1	114.7	78.6	70.5	68.6	66.7	55.5	56.1
82.5°	1050.8	920.5	196.4	119.7	84.2	59.9	54.9	54.3	51.1	41.2	41.2
85°	538.8	470.2	126.0	80.4	59.2	38.7	36.2	34.9	33.1	25.6	25.6
87.5°	104.8	144.1	69.8	39.3	28.7	13.7	13.7	11.8	13.7	9.4	10.0
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°	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	2418.4	2405.9	2397.2	2392.8	2455.8	2482.0	2511.9	2555.0	2584.3	2571.8	2611.7
5°	1806.0	1814.7	1834.7	1865.9	1953.8	1995.6	2022.4	2057.9	2083.5	2057.9	2100.3
7.5°	1234.8	1247.9	1290.3	1354.5	1460.5	1507.3	1516.6	1517.3	1511.7	1469.9	1498.6
10°	909.2	883.0	892.4	938.5	1033.3	1075.1	1079.5	1068.3	1066.4	1049.5	1082.0
12.5°	704.7	668.5	647.3	654.8	725.9	760.2	765.8	772.0	797.6	805.7	845.6
15°	525.7	507.0	491.4	484.6	531.3	558.1	561.3	576.2	603.0	610.5	644.8
17.5°	369.8	374.8	382.9	386.0	419.7	437.2	432.2	432.2	436.5	434.7	454.0
20°	282.5	292.5	308.1	323.0	353.6	363.6	351.1	335.5	325.5	320.5	324.9
22.5°	249.4	256.3	266.3	285.6	311.2	316.2	300.0	287.5	278.1	273.1	273.8
25°	231.4	238.2	246.3	261.9	283.7	286.2	271.3	263.2	255.7	250.7	249.4
27.5°	215.8	220.1	225.1	235.1	257.6	258.8	248.8	243.8	238.8	235.1	233.9
30°	201.4	203.3	205.2	215.1	232.0	233.9	228.9	226.4	224.5	222.0	222.0
32.5°	182.7	185.2	188.3	197.1	213.3	215.8	212.7	210.8	207.7	206.4	204.5
35°	160.3	166.5	173.4	184.0	201.4	202.7	198.9	193.3	185.8	184.0	182.7
37.5°	150.9	152.2	160.9	173.4	191.5	192.7	187.7	178.4	172.7	173.4	174.6
40°	144.7	146.6	151.5	164.0	182.1	184.0	179.6	172.7	167.1	167.8	169.6
42.5°	139.7	142.2	145.3	153.4	171.5	175.2	174.0	167.8	162.1	163.4	165.9
45°	137.2	139.1	139.1	144.7	162.1	167.8	168.4	163.4	159.0	160.3	163.4
47.5°	135.9	135.9	134.1	138.4	155.9	161.5	162.8	160.3	157.8	159.0	162.1
50°	134.1	131.6	129.7	133.5	150.9	155.9	157.2	155.3	156.5	159.0	160.9
52.5°	128.5	126.0	126.0	128.5	145.9	150.9	151.5	150.3	152.8	155.9	159.0
55°	121.6	121.6	122.2	124.7	143.4	147.2	146.6	145.3	147.8	151.5	154.7
57.5°	115.4	114.7	117.9	121.0	140.3	142.8	141.6	141.6	143.4	146.6	149.7
60°	111.6	108.5	111.0	116.0	137.2	139.7	137.8	137.2	140.3	142.8	145.3
62.5°	107.9	104.8	106.6	111.6	132.8	134.7	133.5	133.5	136.6	138.4	140.9
65°	102.3	101.0	102.3	107.3	129.1	129.7	129.7	130.3	132.8	134.1	136.6
67.5°	97.3	97.3	97.9	102.9	126.0	124.7	124.7	127.8	128.5	129.7	132.2
70°	91.0	92.3	92.3	98.5	123.5	119.1	119.7	122.2	123.5	124.7	125.3
72.5°	84.2	84.8	86.1	94.2	119.7	113.5	114.1	116.0	116.6	118.5	119.1
75°	76.7	77.3	79.2	89.8	117.2	107.9	106.6	107.9	109.1	110.4	109.8
77.5°	68.0	69.2	71.1	87.3	109.1	106.6	97.3	98.5	99.8	99.8	99.2
80°	57.4	59.2	62.4	83.6	92.3	102.9	86.7	87.3	87.9	87.9	86.7
82.5°	43.0	46.8	51.1	69.2	72.3	87.9	74.8	76.1	74.2	73.0	72.3
85°	28.1	31.2	37.4	48.0	53.0	69.2	61.7	62.4	58.6	58.0	58.0
87.5°	11.2	11.8	16.8	24.3	31.8	43.0	44.3	45.5	42.4	42.4	43.7
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°	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	2672.2	2734.6	2806.3	2879.2	2939.1	3016.4	3091.3	3171.1	3211.6	3235.3	3302.1
5°	2166.4	2251.9	2353.5	2467.7	2562.4	2724.6	2899.2	3093.8	3187.3	3279.6	3454.2
7.5°	1549.7	1633.3	1751.7	1899.5	2034.2	2248.1	2478.3	2741.4	2871.1	3020.8	3307.0
10°	1150.6	1239.1	1346.4	1471.7	1604.6	1827.2	2085.4	2381.0	2523.8	2692.8	3018.3
12.5°	932.9	1036.5	1147.5	1259.7	1373.8	1523.5	1794.1	2122.8	2276.2	2446.5	2772.6
15°	727.8	838.8	958.5	1080.7	1194.2	1361.4	1637.6	2026.1	2201.4	2366.0	2632.9
17.5°	515.1	619.9	754.6	903.0	1067.6	1265.3	1603.9	2068.5	2281.2	2453.3	2632.3
20°	351.1	423.4	558.1	734.0	937.3	1188.0	1616.4	2217.6	2483.2	2672.2	2740.2
22.5°	280.6	314.9	406.0	585.0	825.0	1131.9	1667.6	2422.1	2773.2	3003.3	2936.6
25°	255.1	274.4	321.8	462.1	725.3	1094.4	1767.3	2692.2	3098.1	3331.4	3173.0
27.5°	239.5	256.3	286.9	379.8	639.2	1070.1	1893.9	3010.2	3464.2	3655.6	3419.3
30°	229.5	246.3	274.4	341.1	574.4	1034.0	2004.9	3300.8	3756.7	3880.8	3552.1
32.5°	210.2	223.3	246.3	305.6	525.7	991.6	2101.0	3560.9	4032.9	4074.1	3711.8
35°	190.2	203.9	227.0	276.9	497.0	958.5	2151.5	3791.6	4306.7	4267.4	3870.2
37.5°	182.7	193.9	215.1	256.3	481.4	936.7	2170.8	4018.6	4600.4	4481.3	3980.6
40°	177.7	187.7	206.4	242.6	477.1	916.1	2166.4	4234.4	4885.4	4702.7	4067.2
42.5°	174.0	182.7	200.2	233.2	465.2	896.8	2152.1	4420.8	5113.7	4893.5	4150.2
45°	170.9	180.2	197.7	238.2	443.4	875.6	2143.4	4591.1	5288.9	5054.4	4261.2
47.5°	169.6	180.2	198.3	237.0	419.7	851.9	2174.6	4780.0	5441.7	5189.7	4409.0
50°	167.8	179.6	212.0	225.7	387.3	822.6	2279.9	5005.2	5602.0	5341.9	4600.4
52.5°	164.6	179.0	226.4	217.0	345.5	782.0	2450.8	5323.2	5878.8	5638.1	4883.6
55°	160.9	180.2	216.4	203.3	301.2	729.6	2621.7	5759.1	6327.9	6115.8	5290.2
57.5°	156.5	178.4	204.5	190.8	264.4	663.5	2751.4	6116.4	6698.3	6608.5	5789.7
60°	153.4	182.7	184.0	183.3	240.7	600.5	2763.9	6093.4	6804.9	6928.4	6278.6
62.5°	149.7	186.5	167.8	177.7	228.9	541.9	2609.8	5716.1	6624.7	6887.2	6677.1
65°	144.7	162.8	159.0	172.7	228.9	510.7	2251.3	5088.1	6126.4	6498.1	6893.5
67.5°	139.7	147.8	152.8	165.9	233.9	481.4	1809.1	4291.7	5340.7	5870.1	6650.3
70°	132.8	139.7	145.9	159.6	231.4	460.9	1423.7	3439.9	4395.3	5001.4	5977.4
72.5°	126.6	131.6	137.8	150.3	231.4	451.5	1143.7	2698.4	3355.7	3866.4	4951.5
75°	117.2	121.6	127.2	140.9	227.0	412.8	858.7	2162.1	2455.2	2775.1	3907.0
77.5°	107.9	111.0	115.4	129.1	204.5	344.9	607.4	1674.4	1819.1	1996.2	3045.8
80°	96.0	98.5	101.6	115.4	169.6	267.5	395.4	1309.6	1360.1	1445.5	2003.7
82.5°	82.3	86.1	86.7	99.2	136.6	193.9	235.1	897.4	896.8	1022.1	1413.7
85°	67.4	69.2	70.5	78.0	101.0	129.1	154.7	490.2	437.2	612.4	1227.9
87.5°	50.5	48.6	50.5	52.4	66.7	76.1	82.9	90.4	54.3	111.0	714.0
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	3337.6	3374.4	3352.6	3326.4	3260.9	3164.9	3091.3	3027.0
5°	3575.2	3643.2	3613.2	3516.0	3346.3	3153.6	2951.0	2827.5
7.5°	3545.3	3680.0	3668.1	3506.0	3262.8	2979.0	2694.0	2531.3
10°	3305.8	3494.8	3527.2	3361.3	3103.7	2786.3	2456.4	2272.5
12.5°	3045.1	3204.1	3270.3	3207.3	2964.7	2642.3	2306.1	2122.2
15°	2826.9	2907.3	2972.8	3013.3	2863.0	2591.1	2279.9	2090.4
17.5°	2665.3	2649.8	2704.6	2801.9	2808.2	2659.1	2398.4	2186.4
20°	2587.4	2465.2	2497.0	2633.5	2793.2	2831.8	2634.8	2384.1
22.5°	2583.0	2392.2	2398.4	2545.6	2836.2	3067.6	2929.8	2644.1
25°	2650.4	2384.1	2389.7	2536.3	2912.3	3305.2	3270.9	2937.9
27.5°	2765.1	2419.0	2415.3	2577.4	3013.9	3503.5	3615.1	3297.1
30°	2889.2	2469.5	2460.2	2643.5	3113.7	3625.7	3859.6	3567.7
32.5°	3043.9	2559.3	2526.9	2740.2	3212.3	3743.0	4068.5	3820.9
35°	3191.1	2690.9	2644.1	2878.6	3317.6	3873.3	4302.3	4100.9
37.5°	3341.3	2887.4	2861.2	3078.2	3466.7	4014.9	4569.9	4418.3
40°	3534.0	3166.7	3154.3	3368.2	3665.6	4169.5	4869.8	4748.9
42.5°	3741.7	3463.6	3453.0	3701.2	3912.6	4324.8	5126.8	5032.6
45°	3953.1	3823.4	3825.9	4056.6	4172.6	4471.3	5328.8	5259.6
47.5°	4202.6	4216.9	4306.1	4425.2	4425.8	4634.7	5507.8	5471.0
50°	4519.4	4692.1	4856.7	4875.4	4681.5	4850.5	5726.7	5713.0
52.5°	4877.9	5240.3	5431.7	5372.5	4930.9	5118.0	6050.3	6049.7
55°	5303.9	5813.4	5993.6	5892.6	5229.7	5466.6	6473.2	6445.7
57.5°	5745.4	6364.6	6509.9	6378.4	5603.2	5872.6	6897.2	6751.9
60°	6222.5	6839.2	6987.0	6789.3	6022.3	6277.3	7177.8	6838.0
62.5°	6534.9	7116.7	7222.7	7033.2	6397.7	6689.6	7268.3	6735.1
65°	6551.1	6932.1	6960.2	6892.9	6557.3	7047.5	7137.3	6430.1
67.5°	6105.8	6128.3	6165.1	6237.4	6216.2	6887.9	6632.2	5718.0
70°	5153.6	4854.2	4975.2	5045.1	5202.2	6126.4	5698.6	4650.3
72.5°	3940.6	3503.5	3640.7	3617.0	3943.8	5025.1	4359.7	3582.1
75°	2836.2	2389.1	2399.7	2400.9	2833.7	4011.1	2972.8	2543.7
77.5°	1927.6	1690.6	1725.6	1703.7	1896.4	3142.4	2140.3	1833.4
80°	1318.3	1312.1	1319.6	1268.4	1264.7	2031.1	1584.6	1462.4
82.5°	977.8	903.6	893.0	838.8	969.1	1552.8	1203.0	1050.8
85°	771.4	500.1	434.7	524.5	839.4	1428.7	733.4	538.8
87.5°	326.8	196.4	119.1	235.7	466.5	1047.1	203.3	104.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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