

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: P196724

Luminaire Tested: **NAV-AF-02-D-UNV-SLR-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196724
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-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 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: 11413.2 lumens
Efficiency: N/A
Efficacy: 88.5 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

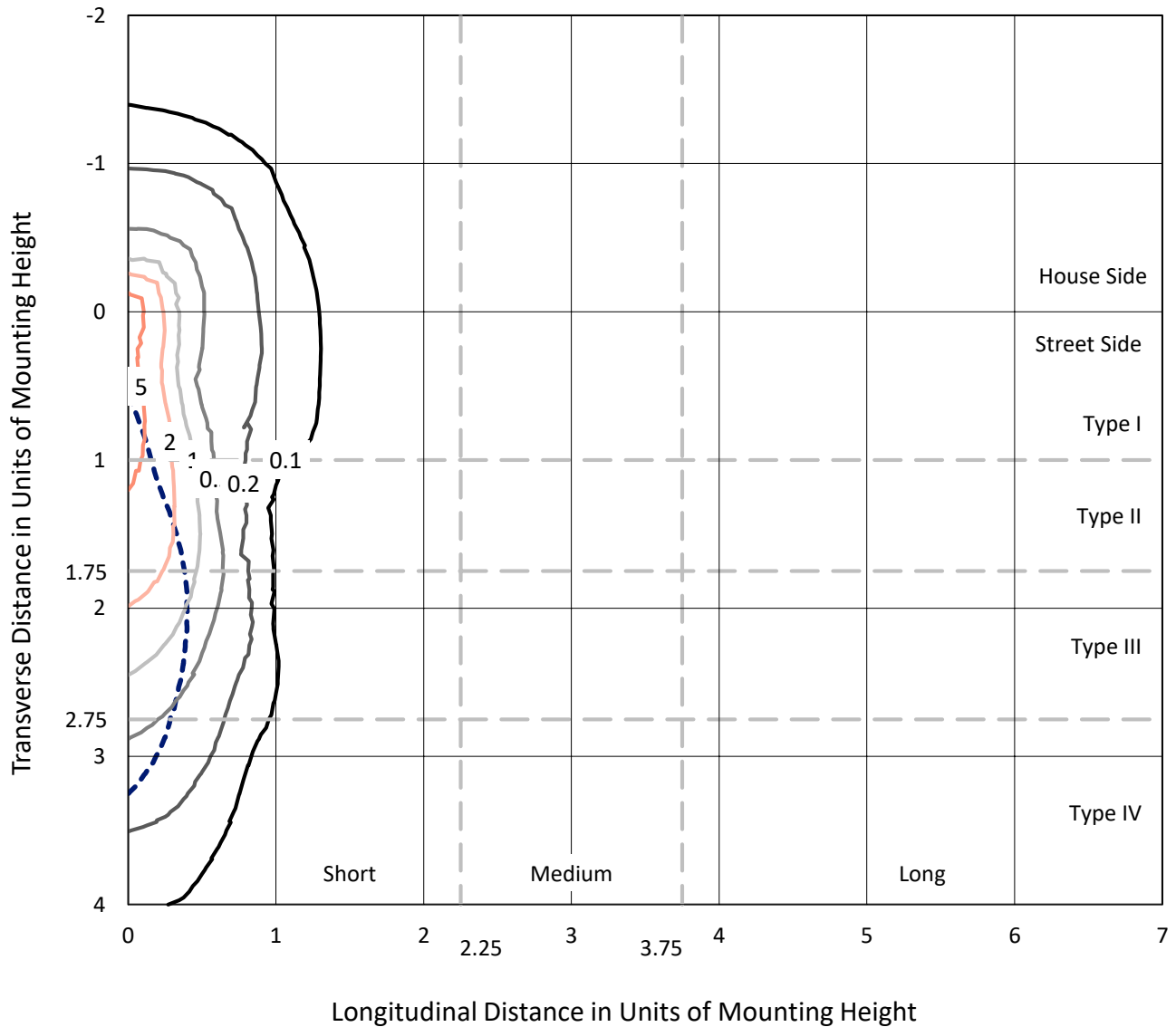


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Iso-Footcandle Lines of Horizontal Illumination

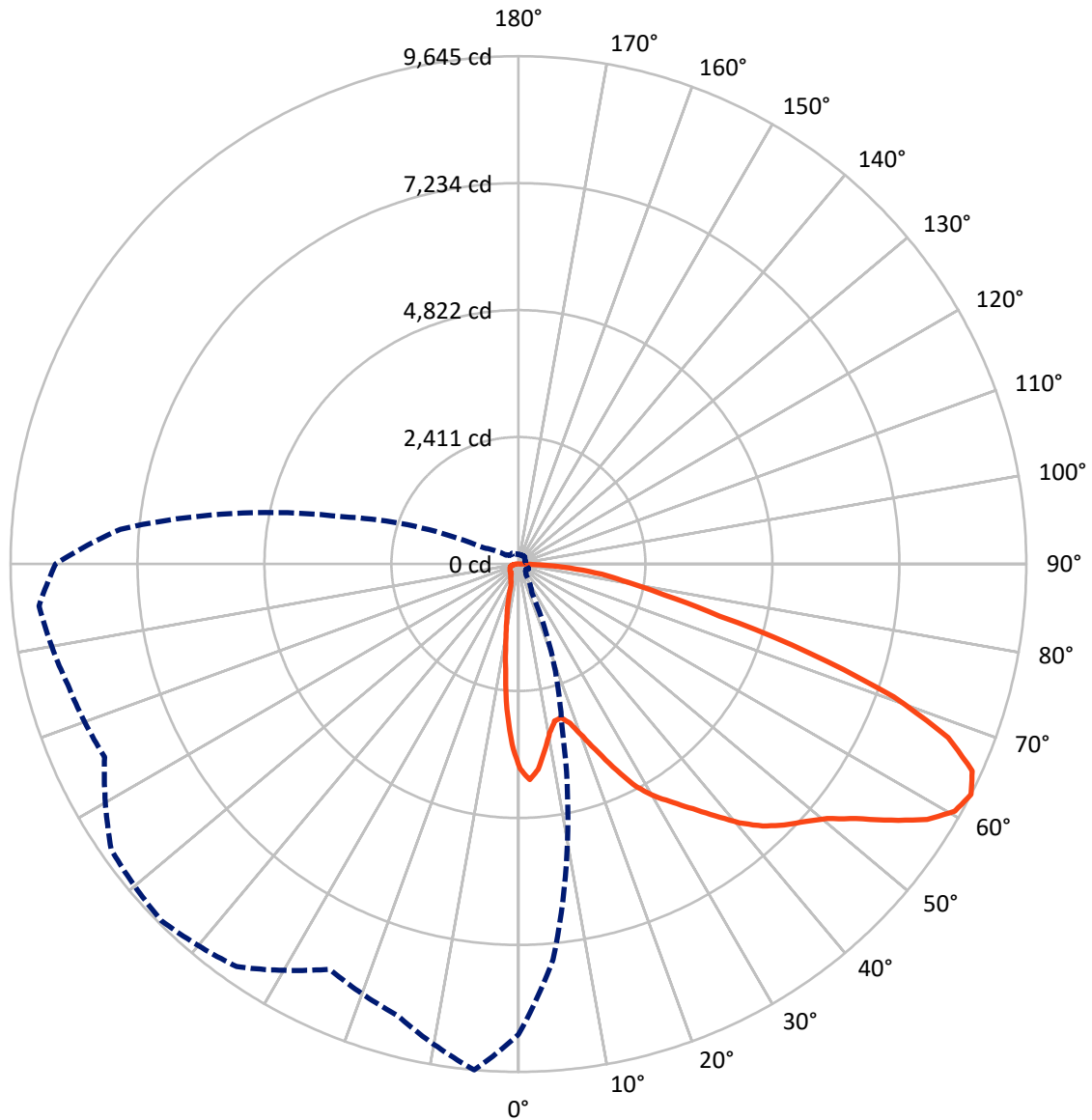
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.7 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	2021.9	0.0	2021.9
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	9391.3	0.0	9391.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	11413.2	0.0	11413.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.0	2.5
10°-20°	516.8	4.5
20°-30°	743.4	6.5
30°-40°	1138.5	10.0
40°-50°	1664.6	14.6
50°-60°	2422.0	21.2
60°-70°	2806.2	24.6
70°-80°	1462.8	12.8
80°-90°	376.0	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°	11413.2	100.0
0°-180°	11413.2	100.0



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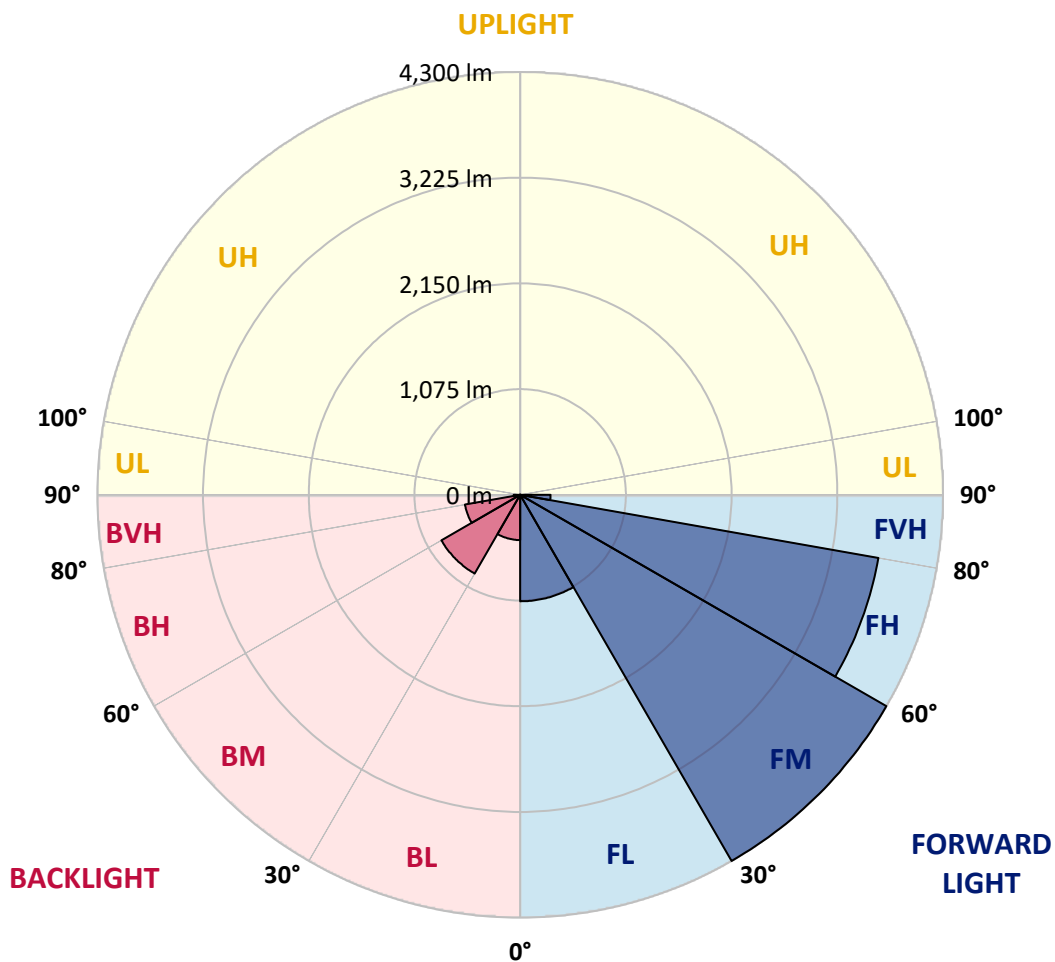
CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1083.2	9.5			
FM	(30°-60°)	4300.0	37.7			
FH	(60°-80°)	3698.9	32.4			G2/5000
FVH	(80°-90°)	309.3	2.7			G3/500
BL	(0°-30°)	460.0	4.0	B1/500		
BM	(30°-60°)	925.1	8.1	B1/1000		
BH	(60°-80°)	570.1	5.0	B2/1000		G2/1000
BVH	(80°-90°)	66.7	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°	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9
2.5°	4016.8	3960.5	3830.6	3716.4	3574.1	3467.4	3337.5	3268.7	3218.2	3184.3	3156.9
5°	3752.0	3616.3	3368.0	3150.4	2915.4	2745.6	2547.1	2438.6	2371.7	2335.3	2318.7
7.5°	3358.8	3179.3	2858.2	2566.2	2272.4	2060.5	1910.0	1749.4	1664.1	1608.8	1590.5
10°	3015.4	2812.8	2429.6	2101.0	1874.4	1723.7	1594.6	1447.3	1338.1	1243.0	1207.4
12.5°	2816.0	2580.1	2143.2	1846.2	1655.9	1494.4	1358.0	1199.1	1084.1	984.8	946.7
15°	2773.9	2510.7	2023.3	1684.0	1450.6	1256.2	1092.4	919.4	806.9	724.9	698.3
17.5°	2901.3	2576.9	1972.7	1535.8	1254.6	1016.9	815.1	629.8	536.3	491.5	480.7
20°	3163.6	2722.5	1948.8	1402.7	1064.1	782.9	563.6	427.9	381.6	368.2	367.4
22.5°	3508.7	2959.2	1975.3	1293.4	885.4	577.7	412.9	351.7	332.7	325.3	325.3
25°	3898.5	3279.4	2045.7	1209.8	728.2	449.4	355.8	322.8	307.0	299.6	300.4
27.5°	4375.1	3669.3	2141.6	1132.9	615.6	393.9	332.7	304.5	288.8	281.4	282.2
30°	4734.2	4004.4	2224.4	1062.5	557.8	371.6	320.2	293.8	276.4	265.6	264.9
32.5°	5070.1	4299.8	2291.3	1012.1	524.7	331.8	289.6	269.8	254.9	242.4	240.0
35°	5441.7	4577.9	2322.9	1010.4	503.1	299.6	264.9	240.8	225.9	211.9	209.3
37.5°	5863.0	4918.0	2349.3	1020.4	491.5	278.8	253.3	230.1	217.7	203.5	200.3
40°	6301.5	5250.6	2370.1	1028.5	489.9	264.9	244.0	223.4	211.0	196.1	192.9
42.5°	6678.0	5545.2	2398.1	1025.3	478.3	262.3	238.3	217.7	206.1	191.2	187.1
45°	6979.3	5779.4	2442.1	1024.5	461.0	268.1	236.6	216.0	201.9	186.2	182.9
47.5°	7259.8	6043.3	2534.7	1021.1	441.9	266.5	245.8	214.3	200.3	184.5	182.0
50°	7581.0	6398.3	2692.7	996.3	415.4	254.9	262.3	212.6	196.1	182.0	179.6
52.5°	8027.8	6918.1	2926.9	951.6	379.0	242.4	264.9	211.9	189.4	177.1	173.8
55°	8553.3	7475.0	3179.3	887.0	331.0	220.9	251.6	208.5	182.9	169.7	164.7
57.5°	8959.6	7886.3	3355.6	794.5	283.8	208.5	224.3	201.0	174.6	161.3	157.3
60°	9073.8	7904.5	3387.0	683.5	259.8	200.3	192.9	219.3	168.0	153.9	149.8
62.5°	8937.2	7542.8	3181.8	605.8	251.6	192.0	175.5	209.3	161.3	147.3	143.1
65°	8532.6	6932.2	2722.5	594.2	259.8	184.5	166.3	167.1	154.7	140.7	136.6
67.5°	7587.5	6033.4	2145.0	601.6	269.8	177.1	159.7	152.3	147.3	134.9	129.9
70°	6170.9	4857.5	1689.8	614.8	278.8	167.1	151.5	142.4	138.2	125.0	122.5
72.5°	4753.4	3887.7	1333.2	605.8	288.0	157.3	139.9	132.4	127.4	115.0	112.5
75°	3375.4	3089.1	979.8	519.6	264.0	143.1	126.6	119.9	115.9	102.6	101.8
77.5°	2432.8	2313.8	681.9	390.6	208.5	125.7	111.7	105.9	103.5	88.5	88.5
80°	1940.6	1760.9	408.0	254.9	152.3	104.3	93.5	91.0	88.5	73.6	74.6
82.5°	1394.3	1221.4	260.7	158.9	111.7	79.4	72.8	72.0	67.8	54.6	54.6
85°	715.0	624.0	167.1	106.7	78.6	51.4	48.0	46.3	43.8	34.0	34.0
87.5°	139.0	191.2	92.7	52.1	38.0	18.2	18.2	15.8	18.2	12.4	13.2
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9
2.5°	3209.2	3192.5	3181.0	3175.2	3258.7	3293.5	3333.3	3390.4	3429.2	3412.7	3465.7
5°	2396.5	2408.1	2434.6	2476.0	2592.6	2648.0	2683.6	2730.8	2764.7	2730.8	2787.1
7.5°	1638.5	1655.9	1712.1	1797.5	1938.0	2000.1	2012.5	2013.3	2005.9	1950.5	1988.5
10°	1206.5	1171.8	1184.2	1245.4	1371.2	1426.6	1432.4	1417.5	1415.0	1392.7	1435.7
12.5°	935.1	887.0	859.0	868.9	963.2	1008.8	1016.2	1024.5	1058.4	1069.1	1122.1
15°	697.6	672.8	652.1	643.0	705.0	740.7	744.8	764.6	800.3	810.1	855.6
17.5°	490.7	497.3	508.0	512.2	556.9	580.0	573.5	573.5	579.3	576.8	602.4
20°	374.9	388.1	408.8	428.7	469.2	482.5	465.9	445.2	432.0	425.3	431.1
22.5°	331.0	340.2	353.4	379.0	412.9	419.5	398.0	381.6	369.1	362.4	363.3
25°	307.0	316.1	326.9	347.6	376.5	379.7	360.0	349.2	339.2	332.7	331.0
27.5°	286.4	292.2	298.8	311.9	341.8	343.4	330.2	323.5	317.0	311.9	310.3
30°	267.2	269.8	272.3	285.5	307.8	310.3	303.7	300.4	297.9	294.6	294.6
32.5°	242.4	245.8	249.8	261.4	283.0	286.4	282.2	279.7	275.6	273.9	271.4
35°	212.6	220.9	230.1	244.0	267.2	269.0	264.0	256.5	246.6	244.0	242.4
37.5°	200.3	201.9	213.5	230.1	254.0	255.6	249.1	236.6	229.2	230.1	231.7
40°	192.0	194.5	201.0	217.7	241.7	244.0	238.3	229.2	221.8	222.6	225.1
42.5°	185.4	188.7	192.9	203.5	227.6	232.5	230.9	222.6	215.1	216.8	220.1
45°	182.0	184.5	184.5	192.0	215.1	222.6	223.4	216.8	211.0	212.6	216.8
47.5°	180.4	180.4	177.9	183.7	206.8	214.3	216.0	212.6	209.3	211.0	215.1
50°	177.9	174.6	172.1	177.1	200.3	206.8	208.5	206.1	207.7	211.0	213.5
52.5°	170.5	167.1	167.1	170.5	193.6	200.3	201.0	199.4	202.7	206.8	211.0
55°	161.3	161.3	162.1	165.5	190.3	195.2	194.5	192.9	196.1	201.0	205.2
57.5°	153.1	152.3	156.3	160.5	186.2	189.4	187.8	187.8	190.3	194.5	198.7
60°	148.1	144.0	147.3	153.9	182.0	185.4	182.9	182.0	186.2	189.4	192.9
62.5°	143.1	139.0	141.5	148.1	176.2	178.7	177.1	177.1	181.3	183.7	187.1
65°	135.7	134.1	135.7	142.4	171.3	172.1	172.1	172.9	176.2	177.9	181.3
67.5°	129.2	129.2	129.9	136.6	167.1	165.5	165.5	169.7	170.5	172.1	175.5
70°	120.8	122.5	122.5	130.8	163.9	158.1	158.9	162.1	163.9	165.5	166.3
72.5°	111.7	112.5	114.1	125.0	158.9	150.6	151.5	153.9	154.7	157.3	158.1
75°	101.8	102.6	105.1	119.2	155.5	143.1	141.5	143.1	144.8	146.5	145.7
77.5°	90.2	91.9	94.3	115.9	144.8	141.5	129.2	130.8	132.4	132.4	131.5
80°	76.2	78.6	82.7	110.9	122.5	136.6	115.0	115.9	116.7	116.7	115.0
82.5°	57.2	62.1	67.8	91.9	96.0	116.7	99.3	100.9	98.5	96.8	96.0
85°	37.2	41.4	49.6	63.7	70.4	91.9	82.0	82.7	77.8	76.9	76.9
87.5°	14.9	15.8	22.3	32.2	42.2	57.2	58.8	60.4	56.3	56.3	57.9
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9
2.5°	3545.9	3628.7	3723.9	3820.7	3900.1	4002.7	4102.0	4207.9	4261.7	4293.2	4381.8
5°	2874.8	2988.1	3123.0	3274.5	3400.2	3615.4	3847.1	4105.3	4229.4	4351.9	4583.7
7.5°	2056.4	2167.2	2324.5	2520.6	2699.4	2983.3	3288.6	3637.8	3809.9	4008.5	4388.3
10°	1526.8	1644.3	1786.6	1952.9	2129.3	2424.7	2767.2	3159.4	3349.1	3573.3	4005.2
12.5°	1238.0	1375.3	1522.6	1671.5	1823.0	2021.7	2380.8	2816.9	3020.5	3246.3	3679.2
15°	965.8	1113.1	1271.9	1434.1	1584.7	1806.5	2173.0	2688.7	2921.1	3139.6	3493.8
17.5°	683.5	822.5	1001.3	1198.2	1416.8	1679.0	2128.4	2744.9	3027.0	3255.5	3492.9
20°	465.9	561.9	740.7	973.9	1243.8	1576.4	2145.0	2942.7	3295.2	3545.9	3636.1
22.5°	372.3	417.9	538.7	776.2	1094.8	1502.0	2212.8	3214.1	3680.0	3985.3	3896.8
25°	338.4	364.2	426.9	613.2	962.3	1452.3	2345.1	3572.4	4111.1	4420.6	4210.5
27.5°	317.7	340.2	380.7	504.0	848.2	1420.1	2513.2	3994.4	4596.9	4850.9	4537.3
30°	304.5	326.9	364.2	452.7	762.2	1372.1	2660.5	4380.1	4985.0	5149.6	4713.6
32.5°	278.8	296.2	326.9	405.5	697.6	1315.8	2787.9	4725.1	5351.5	5406.1	4925.4
35°	252.4	270.6	301.2	367.4	659.5	1271.9	2855.0	5031.3	5714.8	5662.7	5135.6
37.5°	242.4	257.3	285.5	340.2	638.8	1243.0	2880.6	5332.5	6104.7	5946.6	5282.0
40°	235.9	249.1	273.9	321.9	633.0	1215.6	2874.8	5618.8	6482.8	6240.4	5397.1
42.5°	230.9	242.4	265.6	309.5	617.4	1190.0	2855.8	5866.2	6785.6	6493.5	5507.1
45°	226.7	239.2	262.3	316.1	588.4	1161.9	2844.2	6092.2	7018.2	6707.0	5654.3
47.5°	225.1	239.2	263.2	314.4	556.9	1130.4	2885.5	6342.9	7221.0	6886.6	5850.5
50°	222.6	238.3	281.4	299.6	513.8	1091.5	3025.4	6641.7	7433.6	7088.5	6104.7
52.5°	218.5	237.5	300.4	288.0	458.5	1037.8	3252.1	7063.7	7801.0	7481.6	6480.2
55°	213.5	239.2	287.2	269.8	399.7	968.1	3479.0	7642.1	8396.8	8115.4	7019.8
57.5°	207.7	236.6	271.4	253.3	350.8	880.5	3651.0	8116.4	8888.4	8769.2	7682.7
60°	203.5	242.4	244.0	243.3	319.5	796.9	3667.7	8085.7	9029.8	9193.7	8331.4
62.5°	198.7	247.5	222.6	235.9	303.7	719.2	3463.2	7585.0	8790.8	9139.1	8860.3
65°	192.0	216.0	211.0	229.2	303.7	677.7	2987.3	6751.6	8129.6	8622.7	9147.4
67.5°	185.4	196.1	202.7	220.1	310.3	638.8	2400.7	5695.0	7086.9	7789.4	8824.7
70°	176.2	185.4	193.6	211.9	307.0	611.6	1889.2	4564.7	5832.4	6636.7	7931.7
72.5°	168.0	174.6	182.9	199.4	307.0	599.2	1517.7	3580.7	4452.9	5130.6	6570.6
75°	155.5	161.3	168.8	187.1	301.2	547.8	1139.5	2869.0	3257.9	3682.5	5184.5
77.5°	143.1	147.3	153.1	171.3	271.4	457.6	806.0	2221.9	2413.9	2648.9	4041.6
80°	127.4	130.8	134.9	153.1	225.1	355.0	524.7	1737.8	1804.9	1918.1	2658.9
82.5°	109.3	114.1	115.0	131.5	181.3	257.3	311.9	1190.8	1190.0	1356.4	1876.0
85°	89.4	91.9	93.5	103.5	134.1	171.3	205.2	650.4	580.0	812.7	1629.4
87.5°	66.9	64.6	66.9	69.5	88.5	100.9	110.1	119.9	72.0	147.3	947.5
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9	3890.9
2.5°	4429.0	4477.7	4448.7	4414.0	4327.1	4199.7	4102.0	4016.8
5°	4744.1	4834.4	4794.7	4665.6	4440.6	4184.7	3915.9	3752.0
7.5°	4704.4	4883.3	4867.5	4652.3	4329.6	3953.1	3574.9	3358.8
10°	4386.6	4637.4	4680.4	4460.3	4118.5	3697.4	3259.6	3015.4
12.5°	4040.7	4251.9	4339.6	4255.9	3934.0	3506.2	3060.2	2816.0
15°	3751.2	3858.0	3944.8	3998.6	3799.2	3438.4	3025.4	2773.9
17.5°	3536.8	3516.2	3588.9	3718.1	3726.3	3528.5	3182.6	2901.3
20°	3433.4	3271.2	3313.4	3494.6	3706.5	3757.8	3496.3	3163.6
22.5°	3427.6	3174.3	3182.6	3378.0	3763.6	4070.6	3887.7	3508.7
25°	3516.9	3163.6	3171.0	3365.5	3864.5	4385.8	4340.4	3898.5
27.5°	3669.3	3209.9	3205.0	3420.2	3999.4	4649.0	4797.1	4375.1
30°	3833.9	3277.0	3264.5	3507.9	4131.8	4811.2	5121.5	4734.2
32.5°	4039.1	3396.1	3353.0	3636.1	4262.5	4966.8	5398.7	5070.1
35°	4234.5	3570.7	3508.7	3819.8	4402.4	5139.8	5709.1	5441.7
37.5°	4433.8	3831.4	3796.6	4084.6	4600.2	5327.6	6064.1	5863.0
40°	4689.5	4202.1	4185.6	4469.5	4864.1	5532.8	6462.1	6301.5
42.5°	4965.1	4596.0	4582.0	4911.3	5191.9	5738.9	6803.0	6678.0
45°	5245.6	5073.6	5076.8	5382.9	5536.9	5933.4	7071.2	6979.3
47.5°	5576.7	5595.7	5714.0	5872.0	5872.9	6150.1	7308.7	7259.8
50°	5997.0	6226.2	6444.7	6469.6	6212.2	6436.5	7599.1	7581.0
52.5°	6472.8	6953.7	7207.8	7129.0	6543.2	6791.4	8028.6	8027.8
55°	7038.1	7714.1	7953.3	7819.2	6939.6	7254.0	8589.6	8553.3
57.5°	7623.9	8445.6	8638.5	8463.9	7435.3	7792.7	9152.3	8959.6
60°	8256.9	9075.4	9271.5	9009.2	7991.3	8329.8	9524.7	9073.8
62.5°	8671.6	9443.6	9584.3	9332.7	8489.6	8876.8	9644.8	8937.2
65°	8693.1	9198.7	9235.9	9146.5	8701.4	9351.8	9470.9	8532.6
67.5°	8102.2	8132.0	8180.9	8276.8	8248.7	9140.0	8800.7	7587.5
70°	6838.6	6441.4	6602.0	6694.7	6903.2	8129.6	7561.9	6170.9
72.5°	5229.0	4649.0	4831.0	4799.6	5233.2	6668.2	5785.2	4753.4
75°	3763.6	3170.2	3184.3	3186.0	3760.2	5322.6	3944.8	3375.4
77.5°	2557.9	2243.4	2289.7	2260.8	2516.5	4169.9	2840.0	2432.8
80°	1749.4	1741.0	1751.0	1683.1	1678.2	2695.2	2102.7	1940.6
82.5°	1297.6	1199.1	1185.0	1113.1	1286.0	2060.5	1596.3	1394.3
85°	1023.6	663.6	576.8	696.0	1113.8	1895.8	973.2	715.0
87.5°	433.6	260.7	158.1	312.8	619.0	1389.4	269.8	139.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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