

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: P270455

Luminaire Tested: **NAV-AF-03-D-UNV-SLR-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270455
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-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 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: 11230.1 lumens
Efficiency: N/A
Efficacy: 90.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 124
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

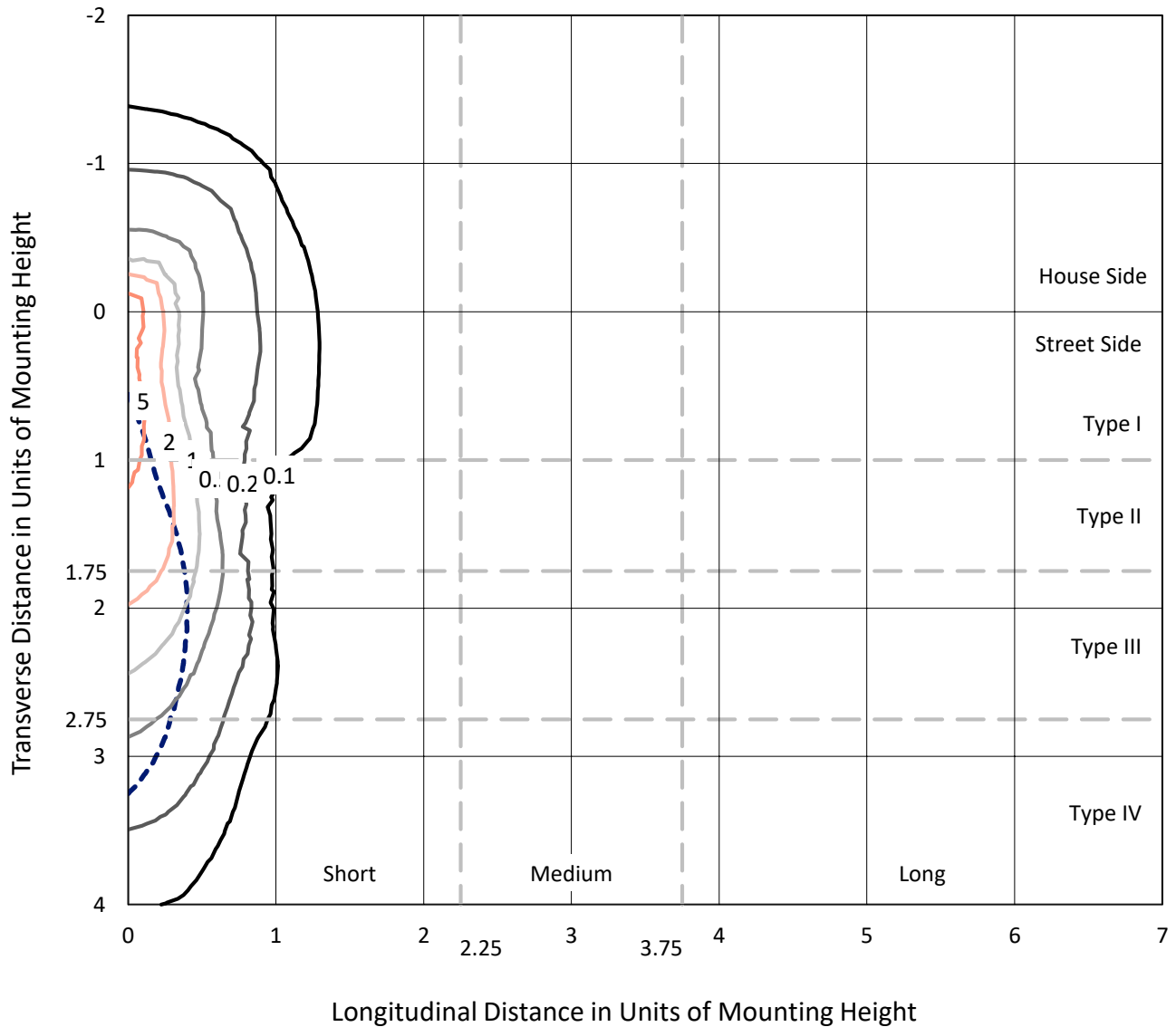


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Iso-Footcandle Lines of Horizontal Illumination

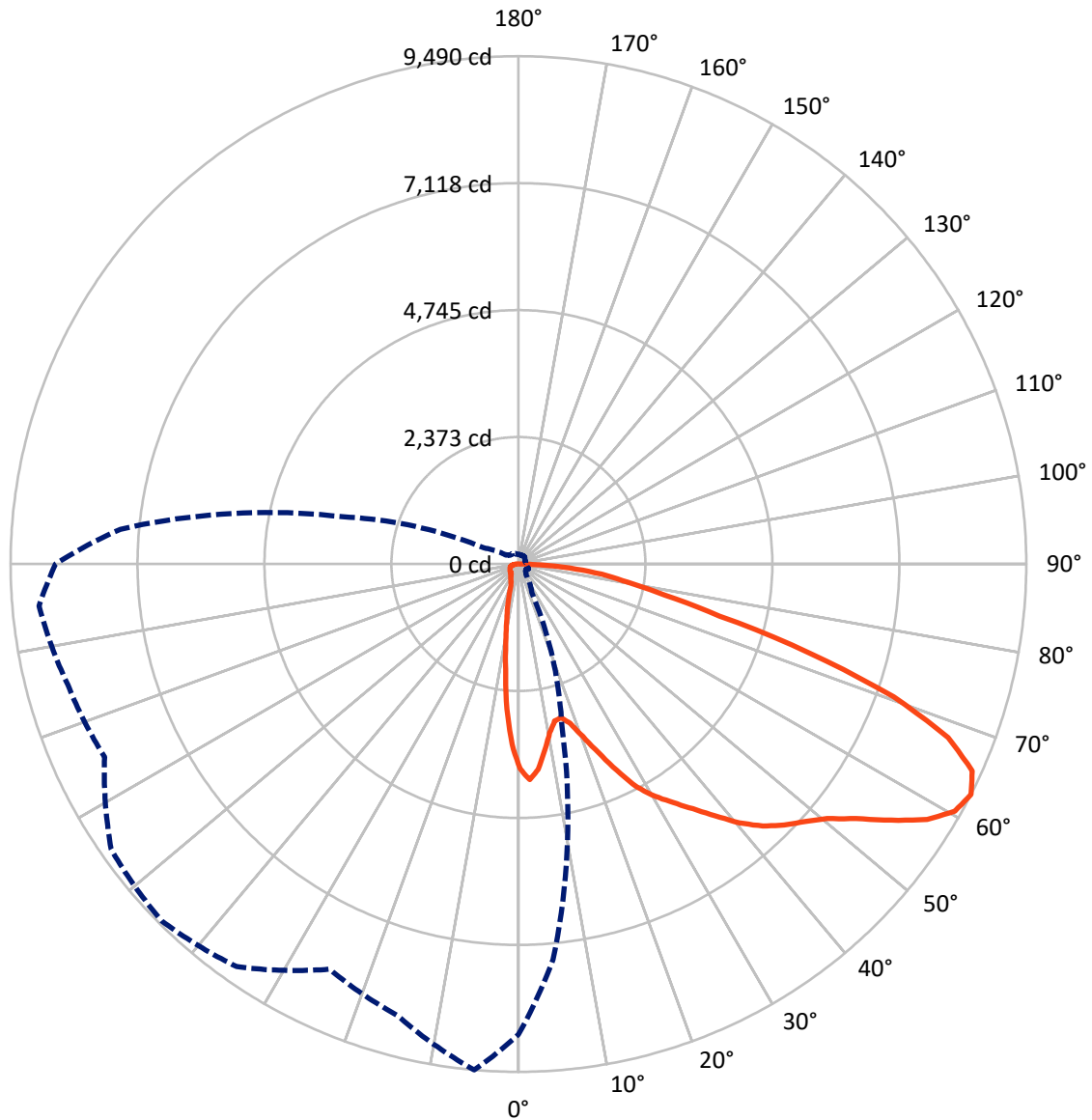
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.6 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	1989.4	0.0	1989.4
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	9240.7	0.0	9240.7
	% Fixture	82.3	0.0	82.3
Total	Lumens	11230.1	0.0	11230.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.4	2.5
10°-20°	508.6	4.5
20°-30°	731.4	6.5
30°-40°	1120.3	10.0
40°-50°	1637.9	14.6
50°-60°	2383.1	21.2
60°-70°	2761.1	24.6
70°-80°	1439.3	12.8
80°-90°	370.0	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°	11230.1	100.0
0°-180°	11230.1	100.0



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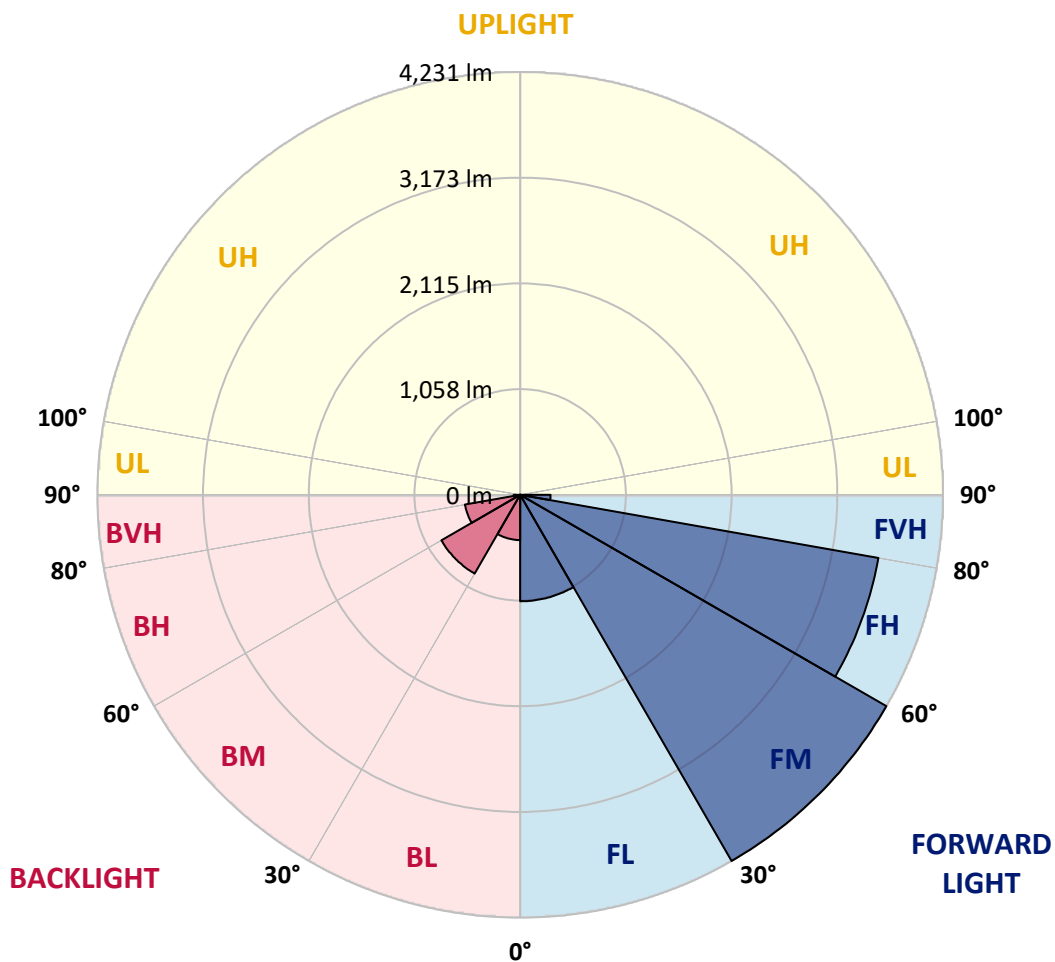
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1065.8	9.5			
FM	(30°-60°)	4231.0	37.7			
FH	(60°-80°)	3639.5	32.4			G2/5000
FVH	(80°-90°)	304.4	2.7			G3/500
BL	(0°-30°)	452.6	4.0	B1/500		
BM	(30°-60°)	910.2	8.1	B1/1000		
BH	(60°-80°)	561.0	5.0	B2/1000		G2/1000
BVH	(80°-90°)	65.6	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°	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5
2.5°	3952.4	3896.9	3769.1	3656.8	3516.8	3411.7	3283.8	3216.2	3166.5	3133.2	3106.2
5°	3691.8	3558.2	3313.9	3099.8	2868.6	2701.7	2506.2	2399.6	2333.5	2297.8	2281.5
7.5°	3305.0	3128.3	2812.5	2525.0	2235.9	2027.5	1879.3	1721.3	1637.4	1583.0	1564.9
10°	2967.1	2767.6	2390.6	2067.4	1844.3	1696.1	1569.1	1424.2	1316.6	1223.0	1188.0
12.5°	2770.8	2538.8	2109.0	1816.6	1629.3	1470.5	1336.1	1179.8	1066.6	968.9	931.5
15°	2729.3	2470.3	1990.9	1657.0	1427.3	1236.0	1074.8	904.7	793.9	713.3	687.3
17.5°	2854.8	2535.6	1941.1	1511.2	1234.5	1000.7	802.0	619.7	527.7	483.6	473.0
20°	3112.8	2678.8	1917.5	1380.2	1047.2	770.2	554.6	420.9	375.3	362.3	361.5
22.5°	3452.4	2911.8	1943.7	1272.7	871.3	568.4	406.4	346.0	327.3	319.9	319.9
25°	3835.9	3226.8	2012.8	1190.4	716.6	442.1	350.1	317.6	302.1	294.7	295.5
27.5°	4304.9	3610.4	2107.2	1114.6	605.7	387.6	327.3	299.7	284.1	276.9	277.7
30°	4658.3	3940.1	2188.7	1045.4	548.9	365.6	315.1	289.1	271.9	261.3	260.6
32.5°	4988.8	4230.7	2254.7	995.9	516.3	326.5	285.0	265.4	250.7	238.6	236.2
35°	5354.4	4504.5	2285.6	994.2	495.1	294.7	260.6	237.0	222.3	208.4	206.0
37.5°	5768.9	4839.0	2311.7	1003.9	483.6	274.4	249.2	226.4	214.2	200.3	197.1
40°	6200.5	5166.3	2332.0	1012.1	482.0	260.6	240.1	219.8	207.6	193.0	189.7
42.5°	6570.9	5456.2	2359.7	1008.8	470.6	258.2	234.5	214.2	202.7	188.0	184.1
45°	6867.4	5686.7	2402.8	1008.1	453.6	263.8	232.9	212.4	198.6	183.3	179.9
47.5°	7143.3	5946.4	2494.1	1004.8	434.8	262.1	241.9	210.9	197.1	181.5	179.1
50°	7459.3	6295.7	2649.6	980.3	408.8	250.7	258.2	209.2	193.0	179.1	176.6
52.5°	7898.9	6807.0	2880.0	936.4	372.9	238.6	260.6	208.4	186.5	174.2	170.9
55°	8416.0	7355.1	3128.3	872.9	325.6	217.4	247.6	205.3	179.9	166.9	162.1
57.5°	8815.7	7759.6	3301.8	781.6	279.4	205.3	220.7	197.8	171.8	158.8	154.7
60°	8928.2	7777.6	3332.7	672.7	255.7	197.1	189.7	215.8	165.3	151.5	147.4
62.5°	8793.8	7421.8	3130.8	596.0	247.6	189.0	172.7	206.0	158.8	144.9	140.9
65°	8395.6	6820.9	2678.8	584.6	255.7	181.5	163.8	164.5	152.3	138.3	134.3
67.5°	7465.9	5936.7	2110.5	592.0	265.4	174.2	157.2	149.7	144.9	132.7	127.7
70°	6071.9	4779.6	1662.8	605.0	274.4	164.5	148.9	140.0	136.0	123.0	120.6
72.5°	4677.0	3825.3	1311.7	596.0	283.3	154.7	137.6	130.3	125.5	113.1	110.8
75°	3321.4	3039.5	964.2	511.3	259.7	140.9	124.5	118.0	113.9	101.0	100.2
77.5°	2393.9	2276.7	670.9	384.4	205.3	123.7	110.0	104.3	101.8	87.1	87.1
80°	1909.3	1732.7	401.5	250.7	149.7	102.5	91.9	89.7	87.1	72.5	73.3
82.5°	1372.0	1201.8	256.5	156.3	110.0	78.2	71.7	70.8	66.7	53.8	53.8
85°	703.6	613.9	164.5	105.0	77.3	50.5	47.3	45.6	43.2	33.3	33.3
87.5°	136.8	188.0	91.2	51.4	37.5	18.0	18.0	15.5	18.0	12.1	13.0
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°	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5
2.5°	3157.6	3141.4	3130.0	3124.2	3206.5	3240.6	3279.8	3335.9	3374.3	3358.0	3410.1
5°	2358.1	2369.5	2395.5	2436.3	2551.0	2605.5	2640.6	2687.0	2720.3	2687.0	2742.3
7.5°	1612.2	1629.3	1684.7	1768.6	1906.9	1968.0	1980.3	1981.0	1973.8	1919.1	1956.6
10°	1187.2	1153.0	1165.2	1225.5	1349.3	1403.7	1409.4	1394.8	1392.4	1370.4	1412.8
12.5°	920.1	872.9	845.1	854.9	947.8	992.5	1000.0	1008.1	1041.5	1052.0	1104.0
15°	686.5	662.1	641.6	632.6	693.8	728.7	732.7	752.4	787.4	797.2	841.9
17.5°	482.8	489.3	499.9	503.9	548.0	570.9	564.2	564.2	570.0	567.5	592.8
20°	368.8	381.9	402.3	421.8	461.6	474.8	458.5	438.1	425.1	418.5	424.2
22.5°	325.6	334.7	347.6	372.9	406.4	412.9	391.7	375.3	363.2	356.6	357.4
25°	302.1	311.1	321.7	342.0	370.6	373.8	354.2	343.6	333.8	327.3	325.6
27.5°	281.7	287.5	293.9	307.0	336.2	337.9	324.8	318.4	311.8	307.0	305.3
30°	263.1	265.4	267.9	280.9	302.9	305.3	298.9	295.5	293.1	289.9	289.9
32.5°	238.6	241.9	245.9	257.4	278.5	281.7	277.7	275.2	271.2	269.5	267.1
35°	209.2	217.4	226.4	240.1	263.1	264.6	259.7	252.5	242.6	240.1	238.6
37.5°	197.1	198.6	210.1	226.4	250.0	251.5	245.1	232.9	225.6	226.4	228.0
40°	189.0	191.3	197.8	214.2	237.7	240.1	234.5	225.6	218.2	219.0	221.5
42.5°	182.4	185.7	189.7	200.3	223.9	228.8	227.2	219.0	211.7	213.3	216.6
45°	179.1	181.5	181.5	189.0	211.7	219.0	219.8	213.3	207.6	209.2	213.3
47.5°	177.5	177.5	175.1	180.7	203.6	210.9	212.4	209.2	206.0	207.6	211.7
50°	175.1	171.8	169.4	174.2	197.1	203.6	205.3	202.7	204.4	207.6	210.1
52.5°	167.8	164.5	164.5	167.8	190.5	197.1	197.8	196.2	199.6	203.6	207.6
55°	158.8	158.8	159.5	162.9	187.2	192.1	191.3	189.7	193.0	197.8	201.8
57.5°	150.6	149.7	153.9	157.9	183.3	186.5	184.8	184.8	187.2	191.3	195.4
60°	145.7	141.8	144.9	151.5	179.1	182.4	179.9	179.1	183.3	186.5	189.7
62.5°	140.9	136.8	139.2	145.7	173.5	175.9	174.2	174.2	178.4	180.7	184.1
65°	133.6	132.0	133.6	140.0	168.5	169.4	169.4	170.1	173.5	175.1	178.4
67.5°	127.0	127.0	127.7	134.3	164.5	162.9	162.9	166.9	167.8	169.4	172.7
70°	118.8	120.6	120.6	128.6	161.2	155.5	156.3	159.5	161.2	162.9	163.8
72.5°	110.0	110.8	112.4	123.0	156.3	148.2	148.9	151.5	152.3	154.7	155.5
75°	100.2	101.0	103.5	117.3	153.2	140.9	139.2	140.9	142.6	144.1	143.3
77.5°	88.8	90.4	92.9	113.9	142.6	139.2	127.0	128.6	130.3	130.3	129.4
80°	74.9	77.3	81.4	109.1	120.6	134.3	113.1	113.9	114.9	114.9	113.1
82.5°	56.1	61.1	66.7	90.4	94.4	114.9	97.7	99.4	96.8	95.3	94.4
85°	36.7	40.8	48.9	62.7	69.2	90.4	80.6	81.4	76.5	75.7	75.7
87.5°	14.6	15.5	22.0	31.8	41.5	56.1	57.9	59.5	55.3	55.3	57.0
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°	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5
2.5°	3489.0	3570.5	3664.0	3759.3	3837.5	3938.4	4036.3	4140.4	4193.4	4224.3	4311.4
5°	2828.7	2940.2	3072.9	3222.0	3345.6	3557.4	3785.4	4039.5	4161.6	4282.1	4510.1
7.5°	2023.4	2132.4	2287.3	2480.2	2656.1	2935.3	3235.9	3579.3	3748.7	3944.2	4318.0
10°	1502.2	1617.8	1758.0	1921.7	2095.0	2385.7	2722.9	3108.8	3295.3	3515.8	3941.0
12.5°	1218.1	1353.2	1498.3	1644.7	1793.7	1989.1	2342.6	2771.7	2972.0	3194.3	3620.1
15°	950.1	1095.2	1251.5	1411.1	1559.3	1777.4	2138.1	2645.5	2874.2	3089.2	3437.8
17.5°	672.7	809.4	985.3	1179.0	1394.0	1652.2	2094.2	2700.8	2978.5	3203.3	3436.9
20°	458.5	552.8	728.7	958.3	1223.9	1551.2	2110.5	2895.4	3242.3	3489.0	3577.8
22.5°	366.4	411.2	530.1	763.7	1077.2	1477.8	2177.3	3162.6	3621.0	3921.5	3834.2
25°	333.0	358.2	420.1	603.3	947.0	1429.1	2307.6	3515.1	4045.2	4349.8	4142.9
27.5°	312.7	334.7	374.6	495.9	834.5	1397.3	2472.9	3930.4	4523.1	4773.1	4464.4
30°	299.7	321.7	358.2	445.4	749.9	1350.1	2617.8	4309.8	4904.9	5067.0	4637.9
32.5°	274.4	291.5	321.7	398.9	686.5	1294.6	2743.2	4649.3	5265.8	5319.5	4846.4
35°	248.3	266.3	296.4	361.5	648.9	1251.5	2809.1	4950.6	5623.2	5571.8	5053.1
37.5°	238.6	253.2	280.9	334.7	628.6	1223.0	2834.4	5247.0	6006.6	5851.1	5197.4
40°	232.0	245.1	269.5	316.7	622.9	1196.2	2828.7	5528.7	6378.8	6140.3	5310.5
42.5°	227.2	238.6	261.3	304.5	607.4	1170.9	2810.0	5772.1	6676.8	6389.4	5418.8
45°	223.0	235.4	258.2	311.1	578.9	1143.3	2798.6	5994.5	6905.6	6599.5	5563.7
47.5°	221.5	235.4	258.9	309.5	548.0	1112.2	2839.3	6241.2	7105.1	6776.2	5756.7
50°	219.0	234.5	276.9	294.7	505.7	1074.0	2976.9	6535.1	7314.3	6974.8	6006.6
52.5°	215.0	233.6	295.5	283.3	451.0	1021.1	3200.0	6950.4	7675.8	7361.6	6376.3
55°	210.1	235.4	282.5	265.4	393.3	952.7	3423.1	7519.5	8262.2	7985.3	6907.2
57.5°	204.4	232.9	267.1	249.2	345.3	866.3	3592.4	7986.1	8745.8	8628.5	7559.4
60°	200.3	238.6	240.1	239.4	314.2	784.1	3608.8	7956.0	8885.0	9046.2	8197.8
62.5°	195.4	243.5	219.0	232.0	298.9	707.5	3407.6	7463.4	8649.7	8992.6	8718.1
65°	189.0	212.4	207.6	225.6	298.9	666.8	2939.4	6643.4	7999.0	8484.4	9000.7
67.5°	182.4	193.0	199.6	216.6	305.3	628.6	2362.2	5603.5	6973.2	7664.5	8683.0
70°	173.5	182.4	190.5	208.4	302.1	601.8	1859.0	4491.3	5738.8	6530.1	7804.6
72.5°	165.3	171.8	179.9	196.2	302.1	589.5	1493.3	3523.2	4381.5	5048.4	6465.1
75°	153.2	158.8	166.0	184.1	296.4	539.1	1121.3	2823.0	3205.7	3623.4	5101.3
77.5°	140.9	144.9	150.6	168.5	267.1	450.3	793.1	2186.3	2375.2	2606.4	3976.7
80°	125.5	128.6	132.7	150.6	221.5	349.4	516.3	1710.0	1775.9	1887.3	2616.1
82.5°	107.4	112.4	113.1	129.4	178.4	253.2	307.0	1171.7	1170.9	1334.5	1845.8
85°	87.9	90.4	91.9	101.8	132.0	168.5	201.8	640.0	570.9	799.6	1603.2
87.5°	65.9	63.5	65.9	68.5	87.1	99.4	108.2	118.0	70.8	144.9	932.4
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°	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5
2.5°	4357.8	4405.8	4377.4	4343.1	4257.6	4132.3	4036.3	3952.4
5°	4668.0	4756.9	4717.7	4590.7	4369.3	4117.7	3853.0	3691.8
7.5°	4629.0	4804.9	4789.4	4577.7	4260.1	3889.7	3517.6	3305.0
10°	4316.3	4563.0	4605.3	4388.8	4052.4	3638.0	3207.3	2967.1
12.5°	3976.0	4183.5	4270.0	4187.7	3870.8	3449.9	3011.1	2770.8
15°	3691.0	3796.0	3881.4	3934.4	3738.1	3383.1	2976.9	2729.3
17.5°	3480.0	3459.7	3531.3	3658.3	3666.5	3471.9	3131.6	2854.8
20°	3378.3	3218.6	3260.2	3438.5	3646.9	3697.5	3440.1	3112.8
22.5°	3372.5	3123.4	3131.6	3323.8	3703.2	4005.3	3825.3	3452.4
25°	3460.5	3112.8	3120.2	3311.5	3802.5	4315.5	4270.7	3835.9
27.5°	3610.4	3158.4	3153.6	3365.3	3935.3	4574.3	4720.1	4304.9
30°	3772.4	3224.3	3212.2	3451.6	4065.5	4734.0	5039.3	4658.3
32.5°	3974.3	3341.7	3299.4	3577.8	4194.1	4887.0	5312.0	4988.8
35°	4166.5	3513.5	3452.4	3758.6	4331.7	5057.3	5617.5	5354.4
37.5°	4362.7	3769.9	3735.7	4019.0	4526.4	5242.1	5966.8	5768.9
40°	4614.4	4134.7	4118.4	4397.7	4786.1	5444.0	6358.5	6200.5
42.5°	4885.4	4522.2	4508.5	4832.5	5108.5	5646.7	6693.9	6570.9
45°	5161.5	4992.2	4995.4	5296.6	5448.1	5838.2	6957.7	6867.4
47.5°	5487.1	5505.9	5622.3	5777.9	5778.6	6051.4	7191.4	7143.3
50°	5900.8	6126.4	6341.3	6365.7	6112.4	6333.2	7477.2	7459.3
52.5°	6369.1	6842.1	7092.1	7014.8	6438.2	6682.5	7899.8	7898.9
55°	6925.2	7590.4	7825.7	7693.8	6828.2	7137.7	8451.9	8416.0
57.5°	7501.7	8310.2	8499.9	8328.0	7315.9	7667.8	9005.5	8815.7
60°	8124.5	8929.8	9122.7	8864.7	7863.1	8196.1	9371.9	8928.2
62.5°	8532.5	9292.2	9430.5	9183.1	8353.2	8734.4	9490.1	8793.8
65°	8553.7	9051.1	9087.8	8999.8	8561.7	9201.8	9318.9	8395.6
67.5°	7972.3	8001.6	8049.6	8144.0	8116.4	8993.3	8659.5	7465.9
70°	6728.9	6338.1	6496.1	6587.2	6792.4	7999.0	7440.5	6071.9
72.5°	5145.2	4574.3	4753.6	4722.6	5149.3	6561.2	5692.4	4677.0
75°	3703.2	3119.4	3133.2	3134.8	3699.8	5237.2	3881.4	3321.4
77.5°	2516.8	2207.4	2252.9	2224.6	2476.1	4103.0	2794.4	2393.9
80°	1721.3	1713.2	1722.9	1656.1	1651.3	2651.9	2068.9	1909.3
82.5°	1276.8	1179.8	1166.0	1095.2	1265.4	2027.5	1570.6	1372.0
85°	1007.2	653.0	567.5	684.8	1095.9	1865.4	957.6	703.6
87.5°	426.6	256.5	155.5	307.8	609.1	1367.1	265.4	136.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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