

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: P196715

Luminaire Tested: **NAV-AF-05-D-UNV-SLR-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196715
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-05-D-UNV-SLR-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 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: 20752.7 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 210
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

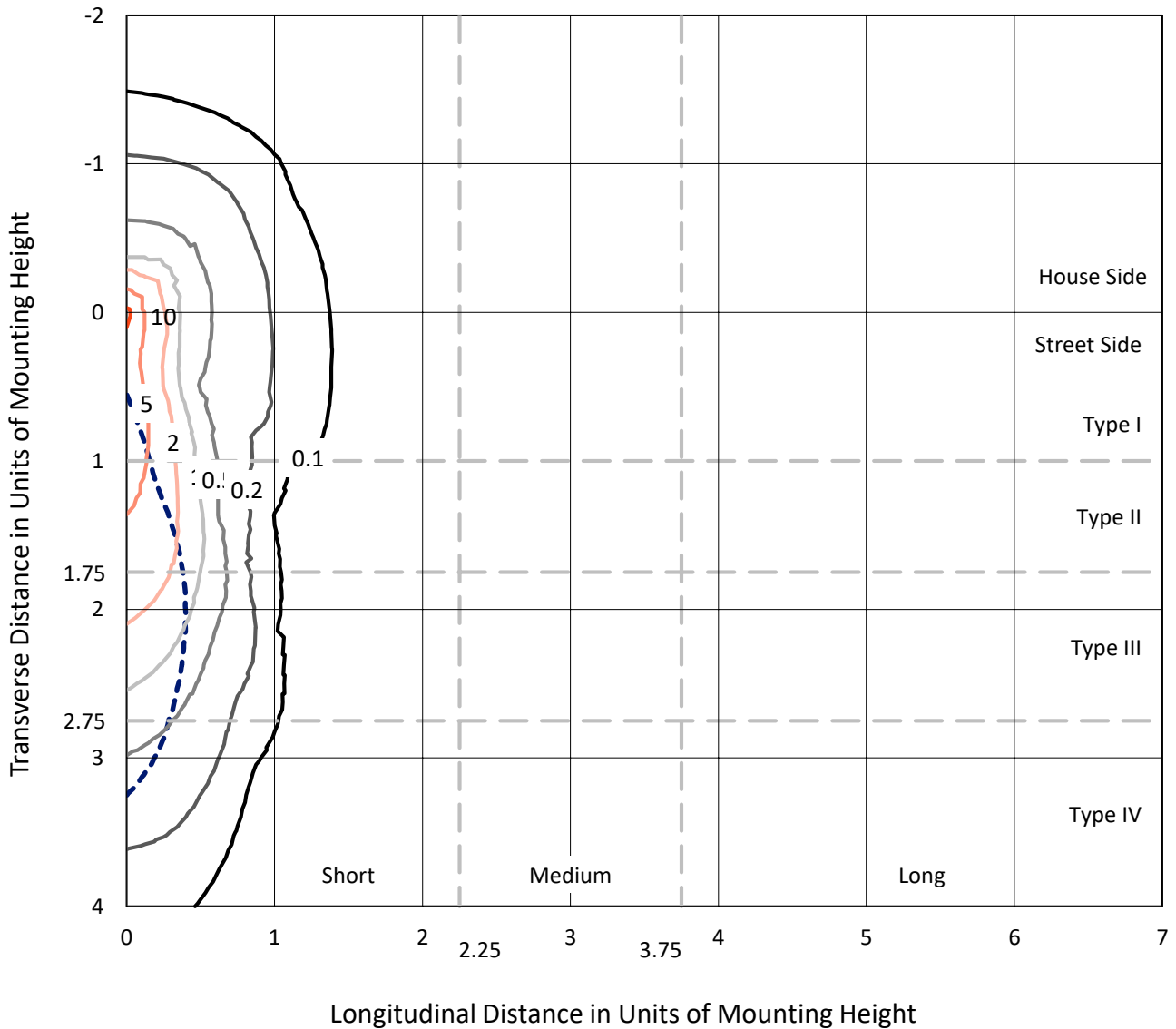


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Iso-Footcandle Lines of Horizontal Illumination

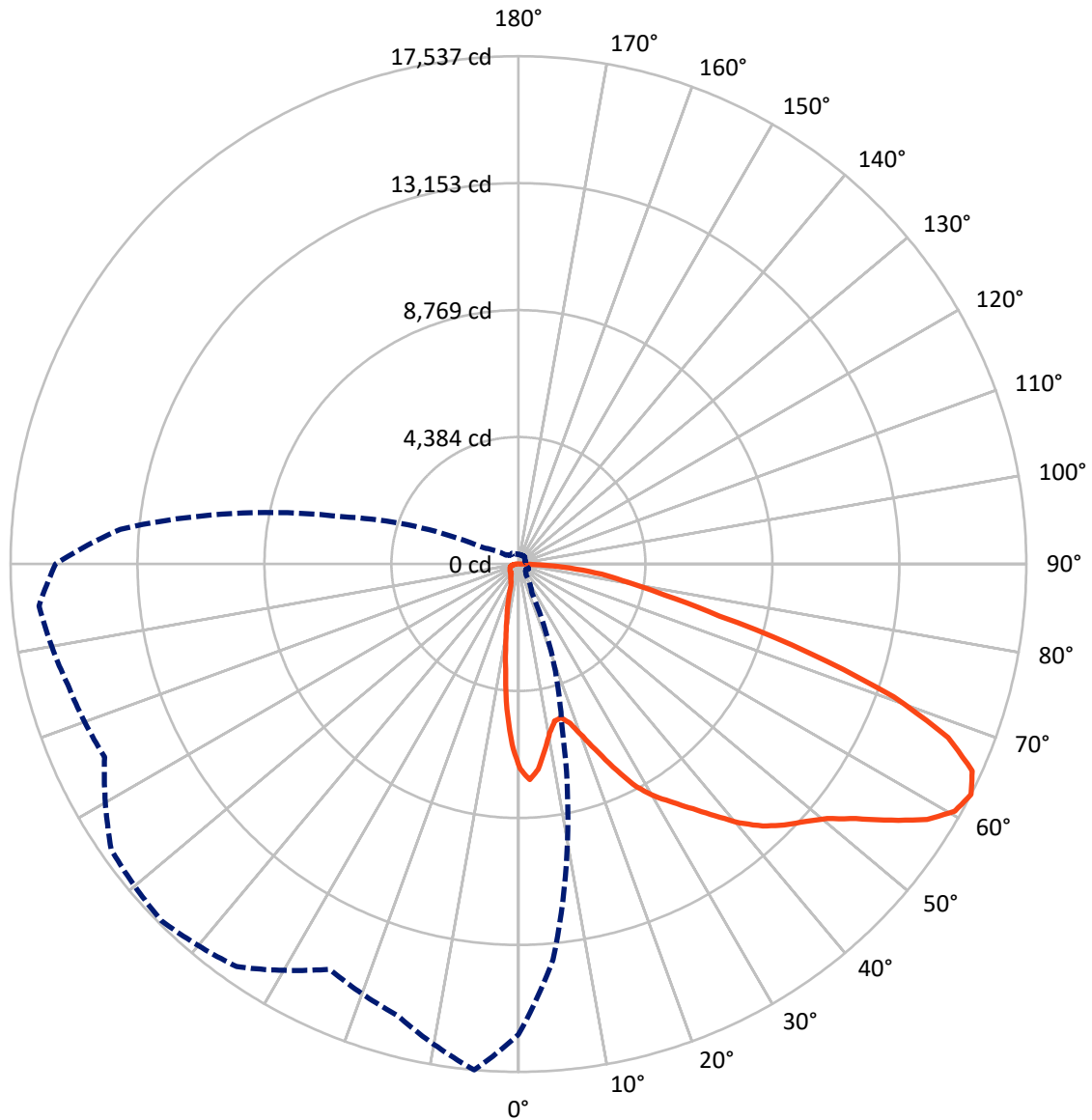
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.3 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	3676.4	0.0	3676.4
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	17076.3	0.0	17076.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	20752.7	0.0	20752.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	514.5	2.5
10°-20°	939.8	4.5
20°-30°	1351.7	6.5
30°-40°	2070.2	10.0
40°-50°	3026.7	14.6
50°-60°	4403.9	21.2
60°-70°	5102.5	24.6
70°-80°	2659.8	12.8
80°-90°	683.7	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°	20752.7	100.0
0°-180°	20752.7	100.0

Coefficient of Utilization



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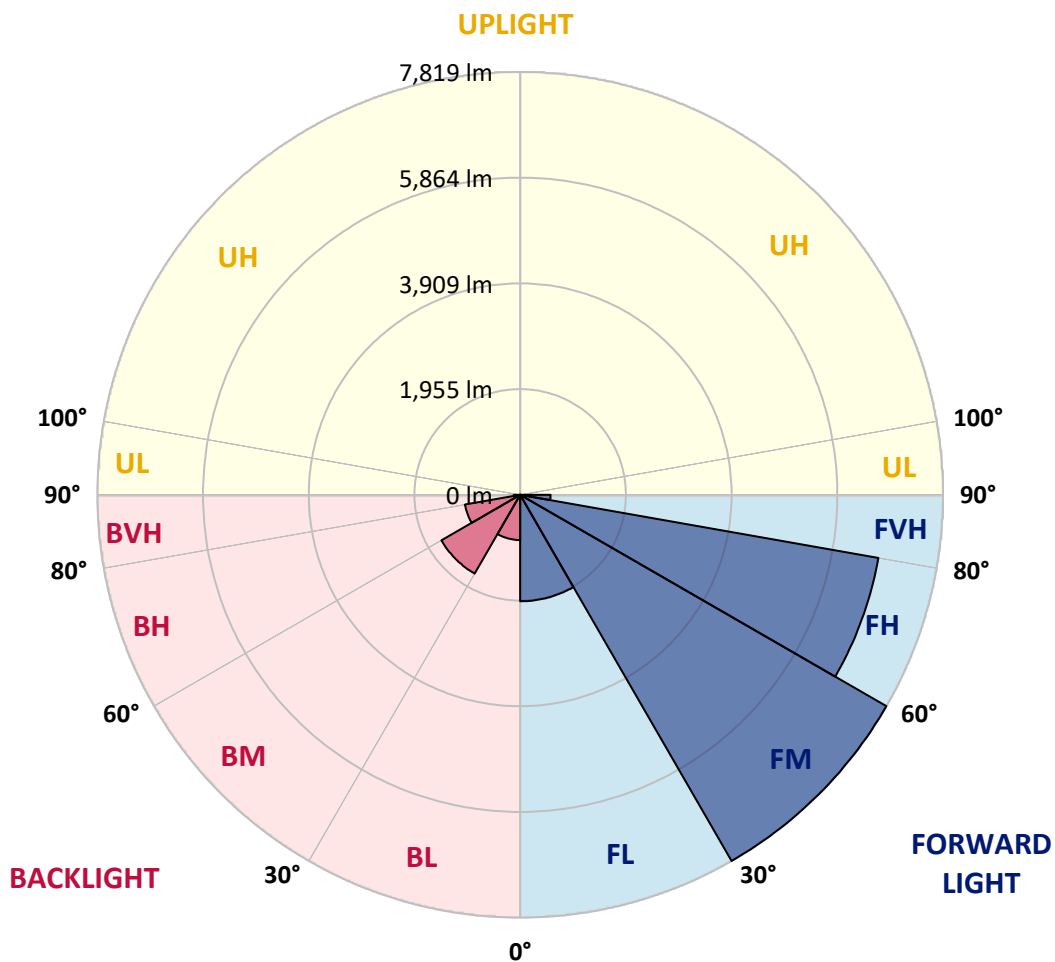
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1969.5	9.5			
FM	(30°-60°)	7818.7	37.7			
FH	(60°-80°)	6725.7	32.4			G3/7500
FVH	(80°-90°)	562.5	2.7			G4/750
BL	(0°-30°)	836.4	4.0	B2/1000		
BM	(30°-60°)	1682.1	8.1	B2/2500		
BH	(60°-80°)	1036.6	5.0	B3/2500		G3/2500
BVH	(80°-90°)	121.2	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0
2.5°	7303.8	7201.4	6965.2	6757.5	6498.7	6304.6	6068.4	5943.4	5851.7	5789.9	5740.4
5°	6822.2	6575.4	6124.1	5728.4	5301.0	4992.5	4631.4	4434.3	4312.5	4246.3	4216.1
7.5°	6107.5	5781.0	5197.1	4666.0	4131.8	3746.6	3472.8	3180.9	3025.9	2925.1	2892.0
10°	5483.0	5114.4	4417.8	3820.4	3408.2	3134.2	2899.5	2631.7	2433.1	2260.0	2195.3
12.5°	5120.4	4691.6	3897.2	3357.0	3010.8	2717.5	2469.2	2180.3	1971.1	1790.5	1721.4
15°	5043.7	4565.2	3679.0	3062.0	2637.7	2284.1	1986.3	1671.6	1467.1	1318.1	1269.9
17.5°	5275.4	4685.6	3587.2	2792.6	2281.2	1849.2	1482.1	1145.0	975.0	893.7	874.2
20°	5752.4	4950.4	3543.5	2550.4	1935.0	1423.4	1024.7	777.9	693.7	669.5	668.1
22.5°	6379.8	5380.7	3591.7	2351.8	1610.1	1050.3	750.8	639.5	604.9	591.3	591.3
25°	7088.5	5963.1	3719.6	2199.8	1324.1	817.0	647.1	586.8	558.2	544.6	546.2
27.5°	7955.2	6671.8	3894.1	2059.9	1119.5	716.2	604.9	553.7	525.1	511.6	513.1
30°	8608.3	7281.1	4044.6	1932.0	1014.2	675.6	582.4	534.2	502.6	483.0	481.5
32.5°	9219.2	7818.4	4166.5	1840.3	954.0	603.3	526.6	490.6	463.5	440.9	436.4
35°	9894.7	8323.9	4223.6	1837.2	914.8	544.6	481.5	437.9	410.9	385.2	380.7
37.5°	10660.7	8942.4	4271.8	1855.2	893.7	507.1	460.4	418.4	395.7	370.2	364.2
40°	11458.1	9547.2	4309.4	1870.3	890.8	481.5	443.9	406.2	383.7	356.6	350.6
42.5°	12142.7	10082.9	4360.5	1864.3	869.7	477.0	433.3	395.7	374.6	347.6	340.1
45°	12690.5	10508.7	4440.3	1862.8	838.1	487.6	430.4	392.7	367.1	338.6	332.5
47.5°	13200.6	10988.6	4608.9	1856.8	803.5	484.4	446.9	389.7	364.2	335.5	331.0
50°	13784.3	11634.2	4896.2	1811.6	755.3	463.5	477.0	386.7	356.6	331.0	326.4
52.5°	14596.9	12579.1	5322.0	1730.3	689.1	440.9	481.5	385.2	344.6	322.0	316.0
55°	15552.4	13591.8	5781.0	1613.0	601.9	401.7	457.5	379.1	332.5	308.4	299.5
57.5°	16291.2	14339.6	6101.5	1444.5	516.1	379.1	407.7	365.7	317.5	293.4	285.9
60°	16498.8	14372.7	6158.6	1242.9	472.4	364.2	350.6	398.7	305.5	279.9	272.4
62.5°	16250.5	13715.2	5785.5	1101.5	457.5	349.1	319.0	380.7	293.4	267.8	260.2
65°	15514.9	12604.7	4950.4	1080.3	472.4	335.5	302.4	304.0	281.4	255.7	248.2
67.5°	13796.3	10970.6	3900.1	1093.9	490.6	322.0	290.4	276.9	267.8	245.3	236.2
70°	11220.4	8832.5	3072.6	1117.9	507.1	304.0	275.4	258.8	251.3	227.3	222.7
72.5°	8642.9	7069.0	2424.0	1101.5	523.7	285.9	254.2	240.7	231.7	209.1	204.7
75°	6137.6	5617.0	1781.6	945.0	479.9	260.2	230.2	218.2	210.7	186.7	185.0
77.5°	4423.8	4207.1	1239.9	710.1	379.1	228.7	203.1	192.7	188.0	161.0	161.0
80°	3528.5	3202.0	741.8	463.5	276.9	189.6	170.0	165.5	161.0	134.0	135.4
82.5°	2535.4	2220.9	473.9	288.9	203.1	144.4	132.4	130.9	123.4	99.3	99.3
85°	1300.0	1134.5	304.0	194.2	142.9	93.3	87.3	84.2	79.8	61.7	61.7
87.5°	252.8	347.6	168.5	94.8	69.2	33.1	33.1	28.6	33.1	22.6	24.0
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°	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0
2.5°	5835.1	5805.1	5783.9	5773.5	5925.4	5988.6	6060.8	6164.6	6235.4	6205.3	6301.6
5°	4357.6	4378.7	4426.7	4502.0	4714.2	4814.9	4879.6	4965.4	5027.1	4965.4	5067.8
7.5°	2979.3	3010.8	3113.3	3268.2	3523.9	3636.8	3659.4	3660.8	3647.3	3546.5	3615.7
10°	2193.8	2130.7	2153.2	2264.5	2493.3	2594.1	2604.6	2577.5	2573.0	2532.4	2610.6
12.5°	1700.3	1613.0	1561.9	1579.9	1751.4	1834.3	1847.8	1862.8	1924.5	1944.0	2040.3
15°	1268.5	1223.2	1185.7	1169.2	1281.9	1346.7	1354.2	1390.4	1455.0	1473.1	1555.9
17.5°	892.3	904.3	923.9	931.4	1012.7	1054.8	1042.8	1042.8	1053.3	1048.8	1095.5
20°	681.7	705.7	743.3	779.4	853.2	877.3	847.1	809.5	785.5	773.4	783.9
22.5°	601.9	618.4	642.5	689.1	750.8	762.8	723.8	693.7	671.1	659.1	660.6
25°	558.2	574.8	594.4	631.9	684.6	690.6	654.6	635.1	616.9	604.9	601.9
27.5°	520.6	531.1	543.2	567.3	621.4	624.4	600.4	588.4	576.4	567.3	564.3
30°	485.9	490.6	495.1	519.1	559.7	564.3	552.2	546.2	541.7	535.7	535.7
32.5°	440.9	446.9	454.4	475.5	514.6	520.6	513.1	508.6	501.1	498.0	493.6
35°	386.7	401.7	418.4	443.9	485.9	489.1	479.9	466.4	448.4	443.9	440.9
37.5°	364.2	367.1	388.2	418.4	461.9	464.9	452.9	430.4	416.9	418.4	421.3
40°	349.1	353.6	365.7	395.7	439.3	443.9	433.3	416.9	403.2	404.8	409.2
42.5°	337.1	343.1	350.6	370.2	413.8	422.9	419.8	404.8	391.2	394.2	400.2
45°	331.0	335.5	335.5	349.1	391.2	404.8	406.2	394.2	383.7	386.7	394.2
47.5°	328.0	328.0	323.5	334.0	376.2	389.7	392.7	386.7	380.7	383.7	391.2
50°	323.5	317.5	313.0	322.0	364.2	376.2	379.1	374.6	377.7	383.7	388.2
52.5°	310.0	304.0	304.0	310.0	352.2	364.2	365.7	362.6	368.6	376.2	383.7
55°	293.4	293.4	294.9	300.9	346.1	355.1	353.6	350.6	356.6	365.7	373.1
57.5°	278.4	276.9	284.4	291.9	338.6	344.6	341.6	341.6	346.1	353.6	361.1
60°	269.4	261.7	267.8	279.9	331.0	337.1	332.5	331.0	338.6	344.6	350.6
62.5°	260.2	252.8	257.3	269.4	320.4	325.0	322.0	322.0	329.5	334.0	340.1
65°	246.8	243.7	246.8	258.8	311.5	313.0	313.0	314.4	320.4	323.5	329.5
67.5°	234.7	234.7	236.2	248.2	304.0	300.9	300.9	308.4	310.0	313.0	319.0
70°	219.7	222.7	222.7	237.7	297.9	287.4	288.9	294.9	297.9	300.9	302.4
72.5°	203.1	204.7	207.6	227.3	288.9	273.8	275.4	279.9	281.4	285.9	287.4
75°	185.0	186.7	191.1	216.7	282.9	260.2	257.3	260.2	263.4	266.4	264.9
77.5°	164.0	167.0	171.5	210.7	263.4	257.3	234.7	237.7	240.7	240.7	239.3
80°	138.4	142.9	150.4	201.6	222.7	248.2	209.1	210.7	212.2	212.2	209.1
82.5°	103.8	112.9	123.4	167.0	174.6	212.2	180.6	183.5	179.0	176.0	174.6
85°	67.7	75.3	90.2	115.9	128.0	167.0	148.9	150.4	141.5	140.0	140.0
87.5°	27.1	28.6	40.7	58.7	76.7	103.8	106.8	109.8	102.2	102.2	105.3
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°	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0
2.5°	6447.6	6598.0	6771.1	6947.1	7091.6	7278.2	7458.7	7651.3	7749.1	7806.2	7967.3
5°	5227.3	5433.4	5678.6	5954.0	6182.8	6573.9	6995.3	7464.7	7690.4	7913.1	8334.4
7.5°	3739.2	3940.8	4226.7	4583.2	4908.3	5424.4	5979.6	6614.5	6927.6	7288.6	7979.3
10°	2776.2	2989.8	3248.6	3551.0	3871.5	4408.7	5031.6	5744.9	6089.4	6497.2	7282.6
12.5°	2251.0	2500.7	2768.6	3039.5	3314.8	3675.9	4329.0	5122.0	5492.1	5902.8	6689.8
15°	1756.1	2023.8	2312.7	2607.6	2881.5	3284.8	3951.3	4888.7	5311.5	5708.8	6352.8
17.5°	1242.9	1495.6	1820.7	2178.7	2576.0	3053.0	3870.1	4991.1	5504.2	5919.4	6351.2
20°	847.1	1021.7	1346.7	1771.0	2261.5	2866.4	3900.1	5350.7	5991.7	6447.6	6611.6
22.5°	677.1	759.9	979.5	1411.4	1990.7	2731.1	4023.5	5844.2	6691.4	7246.5	7085.6
25°	615.4	662.1	776.4	1115.0	1749.9	2640.7	4264.3	6495.7	7475.3	8037.9	7655.8
27.5°	577.8	618.4	692.1	916.3	1542.3	2582.1	4569.8	7263.1	8358.6	8820.4	8250.1
30°	553.7	594.4	662.1	823.0	1385.9	2494.7	4837.6	7964.2	9064.1	9363.6	8570.7
32.5°	507.1	538.6	594.4	737.3	1268.5	2392.4	5069.3	8591.7	9730.7	9830.0	8955.9
35°	458.9	492.0	547.7	668.1	1199.2	2312.7	5191.1	9148.5	10391.3	10296.5	9338.1
37.5°	440.9	467.9	519.1	618.4	1161.7	2260.0	5237.8	9696.2	11100.0	10812.7	9604.3
40°	428.9	452.9	498.0	585.3	1151.0	2210.5	5227.3	10216.9	11787.7	11346.8	9813.5
42.5°	419.8	440.9	483.0	562.8	1122.5	2163.8	5192.6	10666.7	12338.4	11807.2	10013.6
45°	412.2	434.9	477.0	574.8	1069.8	2112.5	5171.6	11077.5	12761.2	12195.4	10281.6
47.5°	409.2	434.9	478.4	571.8	1012.7	2055.3	5246.8	11533.4	13129.8	12521.9	10638.1
50°	404.8	433.3	511.6	544.6	934.3	1984.7	5501.1	12076.5	13516.6	12889.1	11100.0
52.5°	397.2	431.8	546.2	523.7	833.5	1886.9	5913.4	12844.0	14184.6	13603.9	11783.2
55°	388.2	434.9	522.1	490.6	726.8	1760.5	6325.7	13895.7	15268.0	14756.4	12764.2
57.5°	377.7	430.4	493.6	460.4	638.0	1600.9	6638.7	14757.8	16161.7	15945.1	13969.5
60°	370.2	440.9	443.9	442.4	580.8	1449.0	6668.7	14702.3	16419.1	16717.0	15149.2
62.5°	361.1	449.9	404.8	428.9	552.2	1307.7	6297.0	13791.9	15984.2	16617.7	16110.6
65°	349.1	392.7	383.7	416.9	552.2	1232.3	5432.0	12276.7	14782.0	15678.8	16632.7
67.5°	337.1	356.6	368.6	400.2	564.3	1161.7	4365.1	10355.3	12886.0	14163.6	16046.0
70°	320.4	337.1	352.2	385.2	558.2	1111.9	3435.2	8299.8	10605.0	12067.5	14422.3
72.5°	305.5	317.5	332.5	362.6	558.2	1089.5	2759.6	6510.8	8096.6	9329.0	11947.2
75°	282.9	293.4	306.9	340.1	547.7	996.1	2072.0	5216.7	5923.9	6695.9	9426.8
77.5°	260.2	267.8	278.4	311.5	493.6	832.1	1465.6	4040.1	4389.2	4816.4	7348.9
80°	231.7	237.7	245.3	278.4	409.2	645.5	954.0	3159.8	3281.7	3487.9	4834.5
82.5°	198.7	207.6	209.1	239.3	329.5	467.9	567.3	2165.2	2163.8	2466.2	3411.1
85°	162.5	167.0	170.0	188.0	243.7	311.5	373.1	1182.7	1054.8	1477.6	2962.7
87.5°	122.0	117.4	122.0	126.4	161.0	183.5	200.2	218.2	130.9	267.8	1722.9
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0
2.5°	8053.1	8141.8	8089.1	8025.9	7868.0	7636.2	7458.7	7303.8
5°	8626.3	8790.4	8718.2	8483.4	8074.2	7609.2	7120.1	6822.2
7.5°	8554.1	8879.2	8850.5	8459.3	7872.4	7187.8	6500.3	6107.5
10°	7976.4	8432.2	8510.4	8110.2	7488.8	6722.9	5927.0	5483.0
12.5°	7347.3	7731.0	7890.6	7738.7	7153.2	6375.4	5564.3	5120.4
15°	6820.7	7014.8	7172.8	7270.6	6908.0	6252.0	5501.1	5043.7
17.5°	6431.0	6393.5	6525.8	6760.5	6775.6	6415.9	5787.0	5275.4
20°	6243.0	5948.0	6024.8	6354.3	6739.4	6832.7	6357.2	5752.4
22.5°	6232.3	5771.9	5787.0	6142.1	6843.2	7401.6	7069.0	6379.8
25°	6395.0	5752.4	5765.9	6119.5	7026.9	7974.9	7892.1	7088.5
27.5°	6671.8	5836.6	5827.7	6218.8	7272.1	8453.3	8722.6	7955.2
30°	6971.2	5958.6	5935.9	6378.3	7512.8	8748.2	9312.5	8608.3
32.5°	7344.3	6175.3	6097.0	6611.6	7750.7	9031.1	9816.5	9219.2
35°	7699.5	6492.7	6379.8	6945.6	8004.9	9345.6	10380.8	9894.7
37.5°	8062.1	6966.7	6903.4	7427.1	8364.6	9687.2	11026.3	10660.7
40°	8527.0	7640.7	7610.7	8126.8	8844.5	10060.3	11750.1	11458.1
42.5°	9028.1	8357.0	8331.4	8930.3	9440.3	10435.0	12370.0	12142.7
45°	9538.3	9225.2	9231.2	9788.0	10067.8	10788.6	12857.5	12690.5
47.5°	10140.1	10174.7	10389.8	10677.3	10678.7	11182.8	13289.3	13200.6
50°	10904.4	11321.2	11718.5	11763.6	11295.7	11703.5	13817.5	13784.3
52.5°	11769.6	12643.8	13105.7	12962.8	11897.5	12348.9	14598.4	14596.9
55°	12797.3	14026.6	14461.4	14217.7	12618.3	13190.0	15618.6	15552.4
57.5°	13862.6	15356.8	15707.3	15389.9	13519.5	14169.7	16641.9	16291.2
60°	15013.8	16501.9	16858.4	16381.5	14530.7	15146.1	17318.9	16498.8
62.5°	15767.5	17171.4	17427.2	16969.8	15436.4	16140.8	17537.1	16250.5
65°	15806.6	16726.1	16793.7	16631.2	15821.8	17004.3	17221.1	15514.9
67.5°	14732.3	14786.5	14875.3	15049.8	14998.7	16619.2	16002.3	13796.3
70°	12434.7	11712.5	12004.4	12172.9	12552.0	14782.0	13749.7	11220.4
72.5°	9508.1	8453.3	8784.3	8727.2	9515.6	12124.7	10519.3	8642.9
75°	6843.2	5764.4	5789.9	5793.0	6837.2	9678.0	7172.8	6137.6
77.5°	4650.9	4079.2	4163.5	4110.8	4575.8	7582.0	5164.0	4423.8
80°	3180.9	3165.9	3184.0	3060.6	3051.5	4900.8	3823.4	3528.5
82.5°	2359.4	2180.3	2154.7	2023.8	2338.2	3746.6	2902.6	2535.4
85°	1861.3	1206.8	1048.8	1265.4	2025.3	3447.2	1769.5	1300.0
87.5°	788.5	473.9	287.4	568.8	1125.5	2526.4	490.6	252.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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