

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: P197196

Luminaire Tested: **NAV-AF-06-D-UNV-SLR-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197196
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-06-D-UNV-SLR-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 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: 20975 lumens
Efficiency: N/A
Efficacy: 84.2 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): 249
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

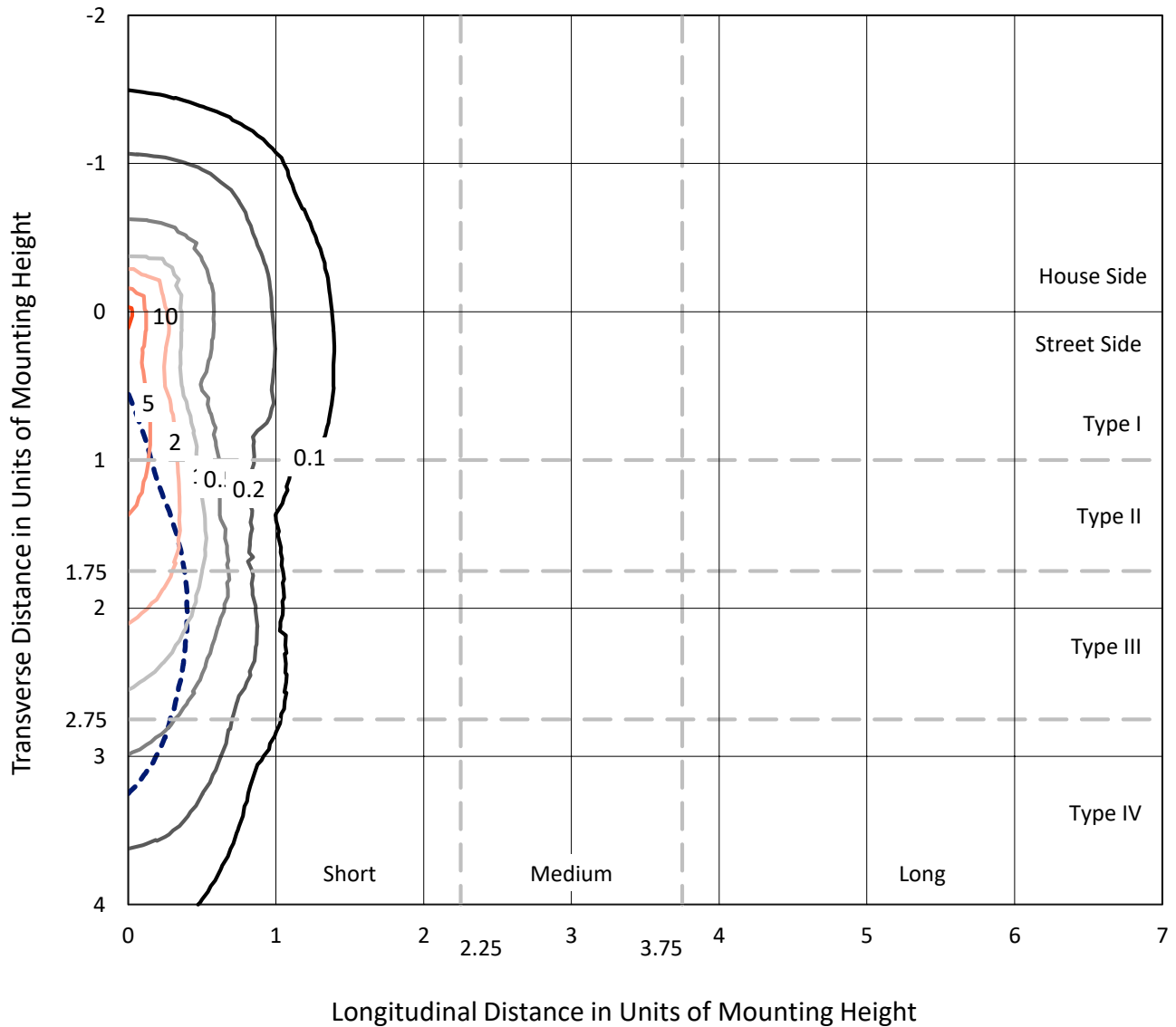


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Iso-Footcandle Lines of Horizontal Illumination

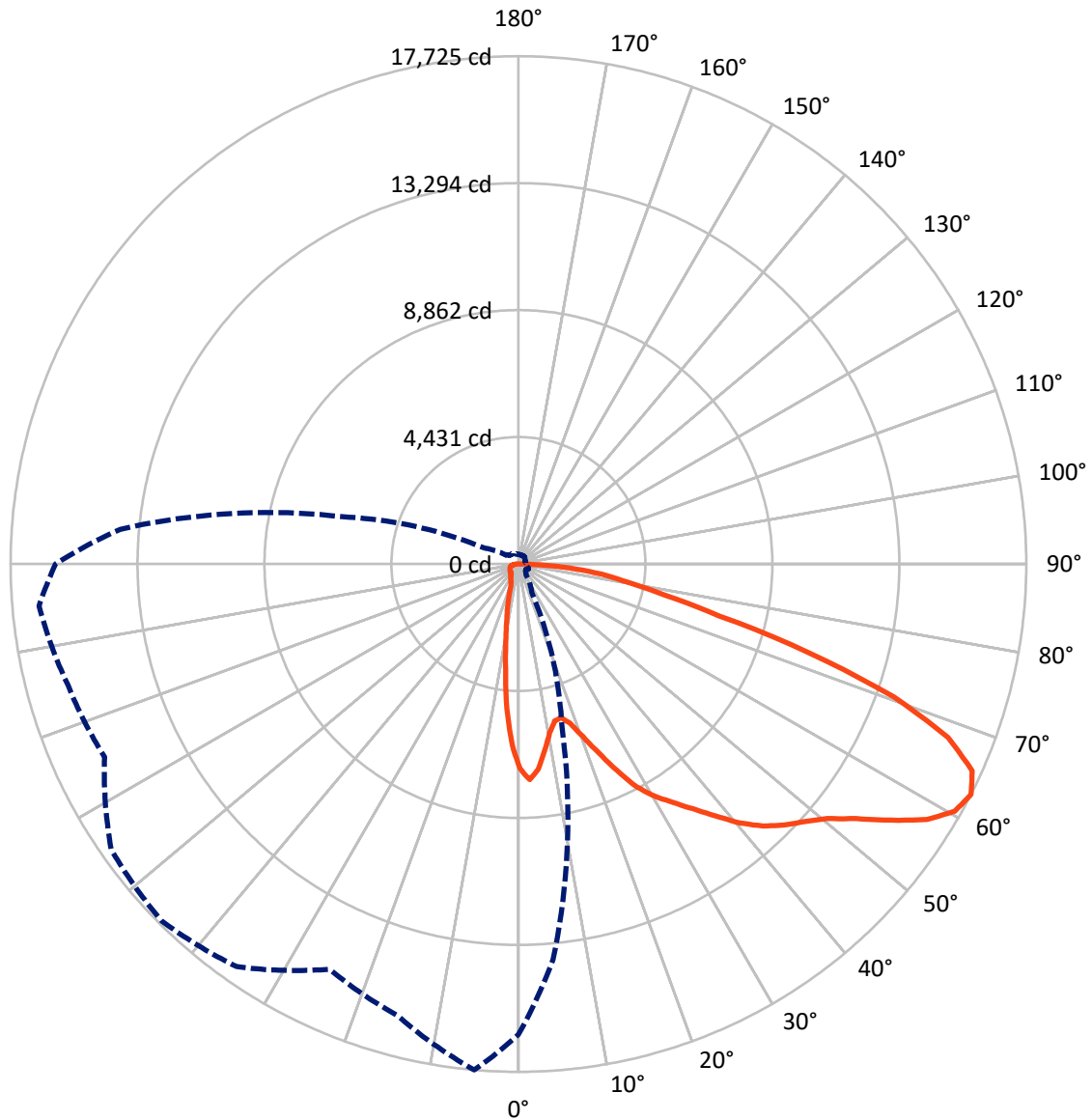
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.4 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	3715.7	0.0	3715.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	17259.2	0.0	17259.2
	% Fixture	82.3	0.0	82.3
Total	Lumens	20975.0	0.0	20975.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	520.0	2.5
10°-20°	949.8	4.5
20°-30°	1366.1	6.5
30°-40°	2092.4	10.0
40°-50°	3059.1	14.6
50°-60°	4451.0	21.2
60°-70°	5157.1	24.6
70°-80°	2688.3	12.8
80°-90°	691.0	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°	20975.0	100.0
0°-180°	20975.0	100.0

Coefficient of Utilization



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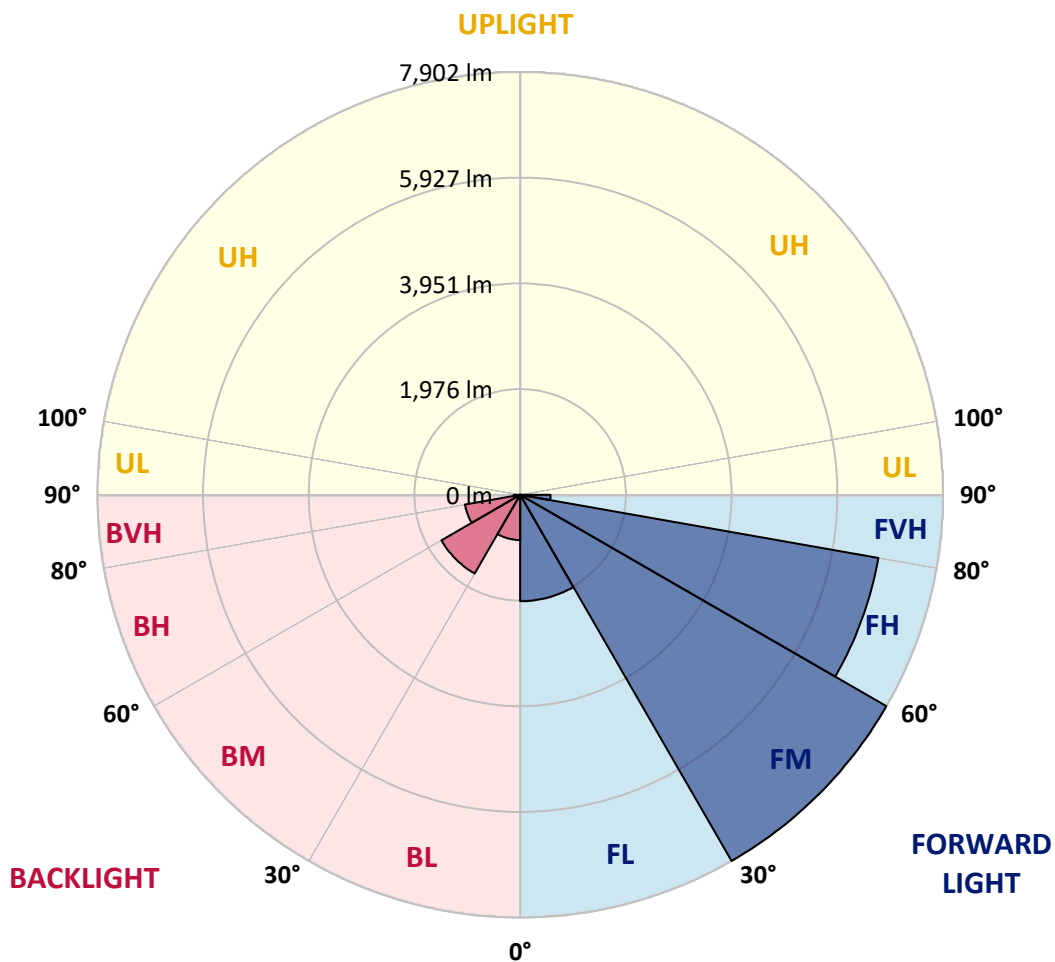
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1990.6	9.5			
FM	(30°-60°)	7902.4	37.7			
FH	(60°-80°)	6797.7	32.4			G3/7500
FVH	(80°-90°)	568.5	2.7			G4/750
BL	(0°-30°)	845.4	4.0	B2/1000		
BM	(30°-60°)	1700.1	8.1	B2/2500		
BH	(60°-80°)	1047.7	5.0	B3/2500		G3/2500
BVH	(80°-90°)	122.5	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°	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8
2.5°	7382.0	7278.5	7039.8	6829.9	6568.3	6372.1	6133.4	6007.2	5914.4	5852.0	5801.8
5°	6895.3	6645.9	6189.7	5789.7	5357.8	5046.0	4681.0	4481.8	4358.6	4291.7	4261.3
7.5°	6172.9	5842.9	5252.8	4716.0	4176.1	3786.8	3510.0	3215.0	3058.3	2956.4	2923.0
10°	5541.8	5169.2	4465.1	3861.3	3444.6	3167.8	2930.6	2659.9	2459.1	2284.2	2218.8
12.5°	5175.3	4741.9	3938.9	3392.9	3043.1	2746.6	2495.6	2203.6	1992.2	1809.8	1739.8
15°	5097.7	4614.1	3718.4	3094.8	2666.0	2308.6	2007.5	1689.6	1482.8	1332.2	1283.6
17.5°	5331.9	4735.8	3625.6	2822.6	2305.5	1869.1	1498.0	1157.3	985.5	903.4	883.6
20°	5814.0	5003.4	3581.5	2577.8	1955.7	1438.7	1035.7	786.3	701.1	676.8	675.2
22.5°	6448.2	5438.4	3630.1	2377.0	1627.3	1061.5	758.9	646.3	611.4	597.7	597.7
25°	7164.5	6026.9	3759.4	2223.4	1338.3	825.8	653.9	593.1	564.2	550.5	552.0
27.5°	8040.5	6743.2	3935.8	2082.0	1131.5	723.9	611.4	559.7	530.8	517.1	518.6
30°	8700.5	7359.1	4087.9	1952.7	1025.0	682.8	588.5	539.9	507.9	488.2	486.7
32.5°	9317.9	7902.1	4211.1	1859.9	964.2	609.8	532.3	495.8	468.4	445.6	441.0
35°	10000.8	8413.1	4268.9	1856.9	924.6	550.5	486.7	442.6	415.2	389.3	384.8
37.5°	10774.9	9038.1	4317.5	1875.1	903.4	512.5	465.4	422.8	400.0	374.1	368.0
40°	11580.9	9649.5	4355.6	1890.4	900.3	486.7	448.6	410.6	387.8	360.4	354.3
42.5°	12272.8	10190.9	4407.3	1884.3	879.0	482.1	438.0	400.0	378.7	351.3	343.7
45°	12826.4	10621.3	4487.9	1882.7	847.1	492.7	434.9	396.9	371.1	342.2	336.1
47.5°	13342.0	11106.4	4658.2	1876.7	812.1	489.7	451.7	393.9	368.0	339.1	334.6
50°	13932.0	11758.8	4948.7	1831.0	763.4	468.4	482.1	390.8	360.4	334.6	330.0
52.5°	14753.3	12713.9	5379.1	1748.9	696.5	445.6	486.7	389.3	348.3	325.5	319.4
55°	15719.0	13737.4	5842.9	1630.3	608.3	406.1	462.3	383.2	336.1	311.8	302.6
57.5°	16465.7	14493.2	6166.8	1460.0	521.6	383.2	412.1	369.6	320.9	296.6	289.0
60°	16675.6	14526.7	6224.6	1256.2	477.5	368.0	354.3	403.0	308.7	282.9	275.3
62.5°	16424.6	13862.1	5847.5	1113.2	462.3	352.8	322.4	384.8	296.6	270.7	263.1
65°	15681.0	12739.7	5003.4	1091.9	477.5	339.1	305.7	307.2	284.4	258.5	250.9
67.5°	13944.2	11088.1	3941.9	1105.6	495.8	325.5	293.5	279.8	270.7	247.9	238.8
70°	11340.6	8927.1	3105.5	1130.0	512.5	307.2	278.3	261.6	254.0	229.6	225.1
72.5°	8735.5	7144.7	2450.0	1113.2	529.2	289.0	257.0	243.3	234.2	211.4	206.8
75°	6203.3	5677.1	1800.6	955.1	485.1	263.1	232.7	220.5	212.9	188.6	187.1
77.5°	4471.1	4252.2	1253.1	717.8	383.2	231.2	205.3	194.7	190.1	162.7	162.7
80°	3566.3	3236.3	749.8	468.4	279.8	191.6	171.9	167.3	162.7	135.4	136.9
82.5°	2562.5	2244.7	479.1	292.0	205.3	146.0	133.8	132.3	124.7	100.4	100.4
85°	1314.0	1146.7	307.2	196.2	144.5	94.3	88.2	85.2	80.6	62.4	62.4
87.5°	255.5	351.3	170.3	95.8	70.0	33.5	33.5	28.9	33.5	22.8	24.3
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8
2.5°	5897.7	5867.2	5846.0	5835.3	5988.9	6052.8	6125.8	6230.7	6302.2	6271.8	6369.1
5°	4404.2	4425.5	4474.2	4550.2	4764.7	4866.6	4932.0	5018.6	5081.0	5018.6	5122.0
7.5°	3011.2	3043.1	3146.5	3303.2	3561.7	3675.8	3698.6	3700.1	3686.4	3584.5	3654.5
10°	2217.3	2153.5	2176.3	2288.8	2520.0	2621.9	2632.5	2605.1	2600.6	2559.5	2638.6
12.5°	1718.5	1630.3	1578.6	1596.8	1770.2	1853.9	1867.5	1882.7	1945.1	1964.9	2062.2
15°	1282.0	1236.4	1198.4	1181.7	1295.7	1361.1	1368.7	1405.2	1470.6	1488.9	1572.5
17.5°	901.8	914.0	933.8	941.4	1023.5	1066.1	1053.9	1053.9	1064.6	1060.0	1107.1
20°	688.9	713.3	751.3	787.8	862.3	886.6	856.2	818.2	793.9	781.7	792.3
22.5°	608.3	625.0	649.4	696.5	758.9	771.0	731.5	701.1	678.3	666.1	667.6
25°	564.2	580.9	600.7	638.7	692.0	698.0	661.5	641.8	623.5	611.4	608.3
27.5°	526.2	536.8	549.0	573.3	628.1	631.1	606.8	594.6	582.5	573.3	570.3
30°	491.2	495.8	500.3	524.7	565.7	570.3	558.1	552.0	547.5	541.4	541.4
32.5°	445.6	451.7	459.3	480.6	520.1	526.2	518.6	514.0	506.4	503.4	498.8
35°	390.8	406.1	422.8	448.6	491.2	494.3	485.1	471.4	453.2	448.6	445.6
37.5°	368.0	371.1	392.4	422.8	466.9	469.9	457.8	434.9	421.3	422.8	425.8
40°	352.8	357.4	369.6	400.0	444.1	448.6	438.0	421.3	407.6	409.1	413.7
42.5°	340.7	346.7	354.3	374.1	418.2	427.3	424.3	409.1	395.4	398.4	404.5
45°	334.6	339.1	339.1	352.8	395.4	409.1	410.6	398.4	387.8	390.8	398.4
47.5°	331.5	331.5	327.0	337.6	380.2	393.9	396.9	390.8	384.8	387.8	395.4
50°	327.0	320.9	316.3	325.5	368.0	380.2	383.2	378.7	381.7	387.8	392.4
52.5°	313.3	307.2	307.2	313.3	355.9	368.0	369.6	366.5	372.6	380.2	387.8
55°	296.6	296.6	298.1	304.2	349.8	358.9	357.4	354.3	360.4	369.6	377.2
57.5°	281.3	279.8	287.4	295.0	342.2	348.3	345.2	345.2	349.8	357.4	365.0
60°	272.2	264.6	270.7	282.9	334.6	340.7	336.1	334.6	342.2	348.3	354.3
62.5°	263.1	255.5	260.1	272.2	323.9	328.5	325.5	325.5	333.1	337.6	343.7
65°	249.4	246.4	249.4	261.6	314.8	316.3	316.3	317.8	323.9	327.0	333.1
67.5°	237.2	237.2	238.8	250.9	307.2	304.2	304.2	311.8	313.3	316.3	322.4
70°	222.0	225.1	225.1	240.3	301.1	290.5	292.0	298.1	301.1	304.2	305.7
72.5°	205.3	206.8	209.9	229.6	292.0	276.8	278.3	282.9	284.4	289.0	290.5
75°	187.1	188.6	193.1	219.0	285.9	263.1	260.1	263.1	266.1	269.2	267.7
77.5°	165.8	168.8	173.4	212.9	266.1	260.1	237.2	240.3	243.3	243.3	241.8
80°	139.9	144.5	152.1	203.8	225.1	250.9	211.4	212.9	214.4	214.4	211.4
82.5°	104.9	114.1	124.7	168.8	176.4	214.4	182.5	185.5	181.0	177.9	176.4
85°	68.4	76.0	91.2	117.1	129.3	168.8	150.6	152.1	143.0	141.4	141.4
87.5°	27.4	28.9	41.1	59.3	77.6	104.9	108.0	111.0	103.4	103.4	106.5
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8
2.5°	6516.6	6668.7	6843.6	7021.5	7167.5	7356.1	7538.6	7733.3	7832.1	7889.9	8052.6
5°	5283.3	5491.6	5739.5	6017.8	6249.0	6644.4	7070.2	7544.7	7772.8	7997.9	8423.7
7.5°	3779.2	3983.0	4271.9	4632.4	4960.8	5482.5	6043.7	6685.4	7001.8	7366.7	8064.8
10°	2805.9	3021.8	3283.4	3589.1	3913.0	4455.9	5085.6	5806.4	6154.7	6566.8	7360.7
12.5°	2275.1	2527.6	2798.3	3072.0	3350.3	3715.3	4375.3	5176.8	5550.9	5966.1	6761.5
15°	1774.8	2045.5	2337.5	2635.5	2912.3	3319.9	3993.6	4941.1	5368.4	5769.9	6420.8
17.5°	1256.2	1511.7	1840.2	2202.1	2603.6	3085.7	3911.5	5044.5	5563.1	5982.8	6419.3
20°	856.2	1032.6	1361.1	1790.0	2285.8	2897.1	3941.9	5408.0	6055.8	6516.6	6682.4
22.5°	684.4	768.0	990.0	1426.5	2012.0	2760.2	4066.6	5906.8	6763.0	7324.2	7161.4
25°	622.0	669.2	784.7	1126.9	1768.7	2669.0	4309.9	6565.3	7555.3	8124.1	7737.8
27.5°	584.0	625.0	699.6	926.2	1558.8	2609.7	4618.7	7340.9	8448.0	8914.9	8338.5
30°	559.7	600.7	669.2	831.9	1400.7	2521.5	4889.4	8049.6	9161.3	9463.9	8662.5
32.5°	512.5	544.4	600.7	745.2	1282.0	2418.1	5123.6	8683.8	9835.0	9935.4	9051.8
35°	463.8	497.3	553.6	675.2	1212.1	2337.5	5246.8	9246.5	10502.6	10406.8	9438.1
37.5°	445.6	473.0	524.7	625.0	1174.1	2284.2	5293.9	9800.0	11218.9	10928.5	9707.3
40°	433.4	457.8	503.4	591.6	1163.4	2234.1	5283.3	10326.2	11913.9	11468.3	9918.6
42.5°	424.3	445.6	488.2	568.8	1134.5	2186.9	5248.3	10780.9	12470.5	11933.7	10120.9
45°	416.7	439.5	482.1	580.9	1081.3	2135.2	5227.0	11196.1	12897.9	12326.1	10391.6
47.5°	413.7	439.5	483.6	577.9	1023.5	2077.4	5303.0	11656.9	13270.5	12656.1	10752.0
50°	409.1	438.0	517.1	550.5	944.4	2005.9	5560.0	12205.9	13661.3	13027.2	11218.9
52.5°	401.5	436.5	552.0	529.2	842.5	1907.1	5976.7	12981.5	14336.6	13749.5	11909.4
55°	392.4	439.5	527.7	495.8	734.5	1779.3	6393.4	14044.6	15431.5	14914.5	12900.9
57.5°	381.7	434.9	498.8	465.4	644.8	1618.1	6709.8	14916.0	16334.9	16115.9	14119.1
60°	374.1	445.6	448.6	447.1	587.0	1464.5	6740.2	14859.7	16595.0	16896.1	15311.4
62.5°	365.0	454.7	409.1	433.4	558.1	1321.6	6364.5	13939.6	16155.4	16795.7	16283.2
65°	352.8	396.9	387.8	421.3	558.1	1245.5	5490.1	12408.2	14940.3	15846.7	16810.9
67.5°	340.7	360.4	372.6	404.5	570.3	1174.1	4411.8	10466.1	13024.1	14315.3	16217.8
70°	323.9	340.7	355.9	389.3	564.2	1123.9	3472.0	8388.7	10718.6	12196.8	14576.9
72.5°	308.7	320.9	336.1	366.5	564.2	1101.1	2789.1	6580.5	8183.4	9429.0	12075.1
75°	285.9	296.6	310.2	343.7	553.6	1006.8	2094.1	5272.6	5987.4	6767.6	9527.8
77.5°	263.1	270.7	281.3	314.8	498.8	841.0	1481.3	4083.3	4436.2	4868.1	7427.6
80°	234.2	240.3	247.9	281.3	413.7	652.4	964.2	3193.7	3316.9	3525.2	4886.3
82.5°	200.7	209.9	211.4	241.8	333.1	473.0	573.3	2188.4	2186.9	2492.6	3447.7
85°	164.2	168.8	171.9	190.1	246.4	314.8	377.2	1195.3	1066.1	1493.4	2994.5
87.5°	123.2	118.6	123.2	127.7	162.7	185.5	202.3	220.5	132.3	270.7	1741.3
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8
2.5°	8139.3	8229.0	8175.8	8111.9	7952.3	7718.1	7538.6	7382.0
5°	8718.7	8884.5	8811.5	8574.3	8160.6	7690.7	7196.4	6895.3
7.5°	8645.7	8974.2	8945.3	8549.9	7956.8	7264.9	6569.9	6172.9
10°	8061.8	8522.6	8601.6	8197.1	7569.0	6794.9	5990.4	5541.8
12.5°	7426.1	7813.9	7975.1	7821.5	7229.9	6443.6	5623.9	5175.3
15°	6893.8	7090.0	7249.6	7348.5	6982.0	6318.9	5560.0	5097.7
17.5°	6499.9	6461.9	6595.7	6832.9	6848.2	6484.7	5849.0	5331.9
20°	6309.8	6011.7	6089.3	6422.3	6811.7	6905.9	6425.4	5814.0
22.5°	6299.1	5833.8	5849.0	6207.9	6916.6	7480.8	7144.7	6448.2
25°	6463.4	5814.0	5827.7	6185.1	7102.1	8060.2	7976.6	7164.5
27.5°	6743.2	5899.2	5890.1	6285.5	7350.0	8543.8	8816.1	8040.5
30°	7045.9	6022.4	5999.6	6446.7	7593.3	8841.9	9412.2	8700.5
32.5°	7423.0	6241.4	6162.3	6682.4	7833.6	9127.8	9921.7	9317.9
35°	7781.9	6562.2	6448.2	7020.0	8090.6	9445.7	10492.0	10000.8
37.5°	8148.4	7041.3	6977.4	7506.7	8454.1	9790.9	11144.4	10774.9
40°	8618.4	7722.6	7692.2	8213.8	8939.3	10168.1	11875.9	11580.9
42.5°	9124.8	8446.5	8420.7	9025.9	9541.5	10546.7	12502.5	12272.8
45°	9640.3	9324.0	9330.1	9892.8	10175.7	10904.1	12995.2	12826.4
47.5°	10248.7	10283.6	10501.1	10791.6	10793.1	11302.6	13431.7	13342.0
50°	11021.2	11442.5	11844.0	11889.6	11416.6	11828.8	13965.5	13932.0
52.5°	11895.7	12779.3	13246.2	13101.7	12025.0	12481.2	14754.8	14753.3
55°	12934.4	14176.9	14616.4	14370.0	12753.4	13331.3	15785.9	15719.0
57.5°	14011.1	15521.3	15875.6	15554.7	13664.4	14321.4	16820.0	16465.7
60°	15174.5	16678.6	17039.0	16556.9	14686.4	15308.4	17504.4	16675.6
62.5°	15936.4	17355.4	17613.9	17151.6	15601.9	16313.6	17724.9	16424.6
65°	15976.0	16905.2	16973.6	16809.4	15991.2	17186.5	17405.5	15681.0
67.5°	14890.1	14944.9	15034.6	15211.0	15159.3	16797.2	16173.7	13944.2
70°	12567.9	11837.9	12132.9	12303.3	12686.5	14940.3	13897.1	11340.6
72.5°	9609.9	8543.8	8878.4	8820.6	9617.5	12254.6	10631.9	8735.5
75°	6916.6	5826.2	5852.0	5855.1	6910.5	9781.8	7249.6	6203.3
77.5°	4700.8	4122.9	4208.0	4154.8	4624.7	7663.3	5219.4	4471.1
80°	3215.0	3199.8	3218.0	3093.3	3084.2	4953.2	3864.3	3566.3
82.5°	2384.6	2203.6	2177.8	2045.5	2363.3	3786.8	2933.6	2562.5
85°	1881.2	1219.7	1060.0	1279.0	2047.0	3484.1	1788.5	1314.0
87.5°	796.9	479.1	290.5	574.9	1137.6	2553.4	495.8	255.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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