

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: P270696

Luminaire Tested: **NAV-AF-06-D-UNV-SLR-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270696
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-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 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: 30321.9 lumens
Efficiency: N/A
Efficacy: 79.4 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 - G5

Input Watts (W): 382
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

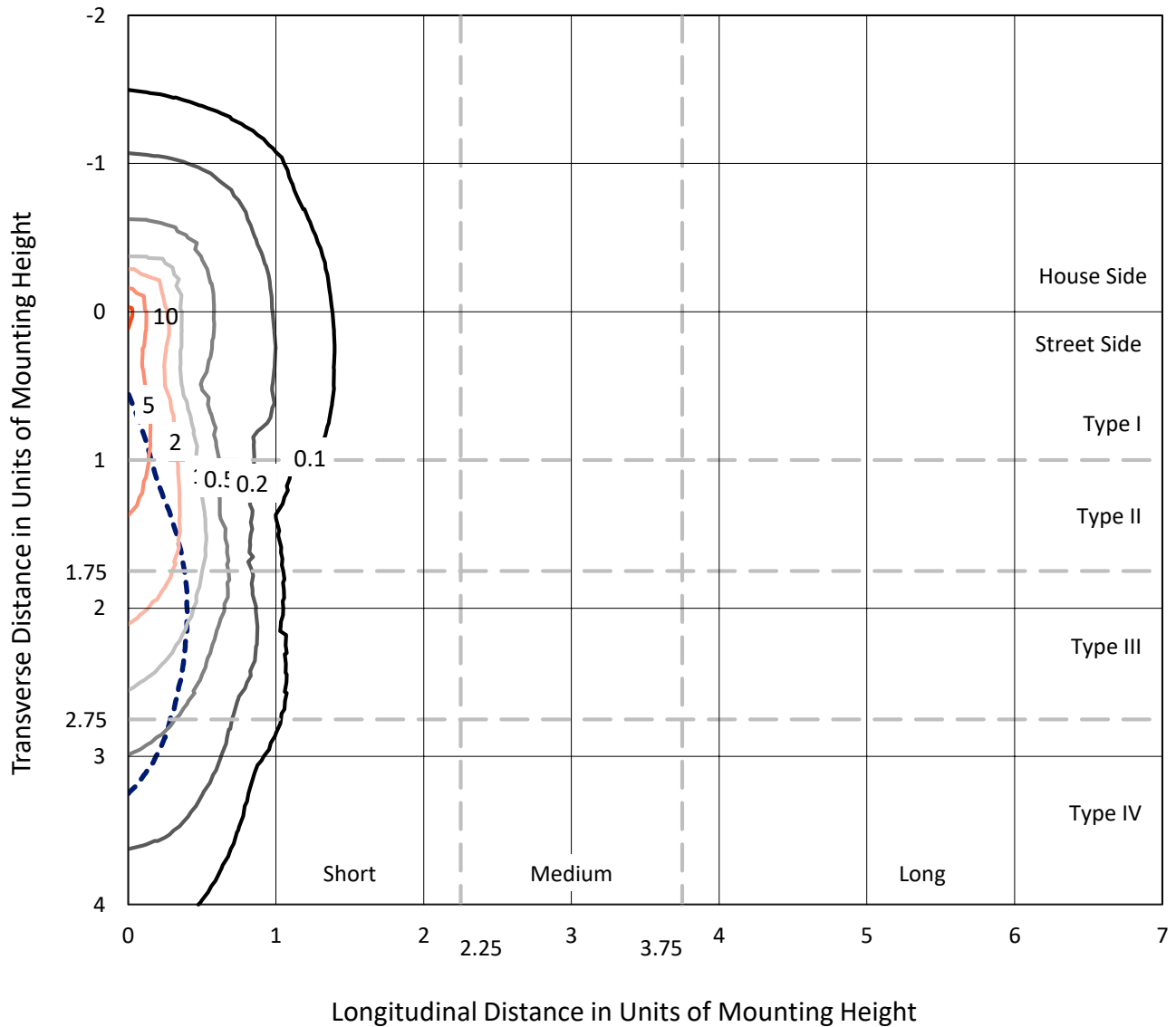


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Iso-Footcandle Lines of Horizontal Illumination

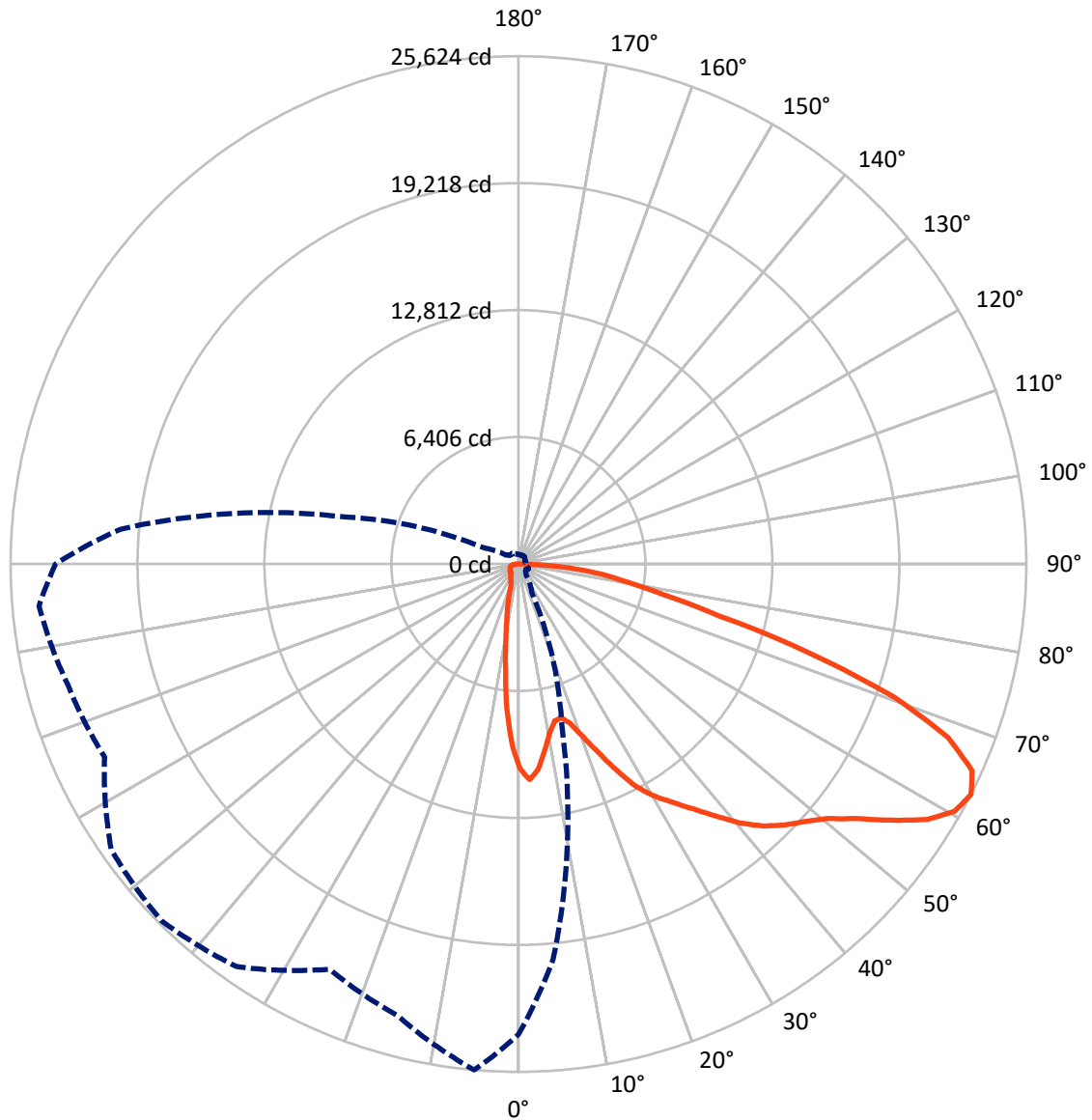
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.5 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	5371.6	0.0	5371.6
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	24950.3	0.0	24950.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	30321.9	0.0	30321.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	751.8	2.5
10°-20°	1373.1	4.5
20°-30°	1974.9	6.5
30°-40°	3024.8	10.0
40°-50°	4422.3	14.6
50°-60°	6434.5	21.2
60°-70°	7455.2	24.6
70°-80°	3886.3	12.8
80°-90°	999.0	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°	30321.9	100.0
0°-180°	30321.9	100.0



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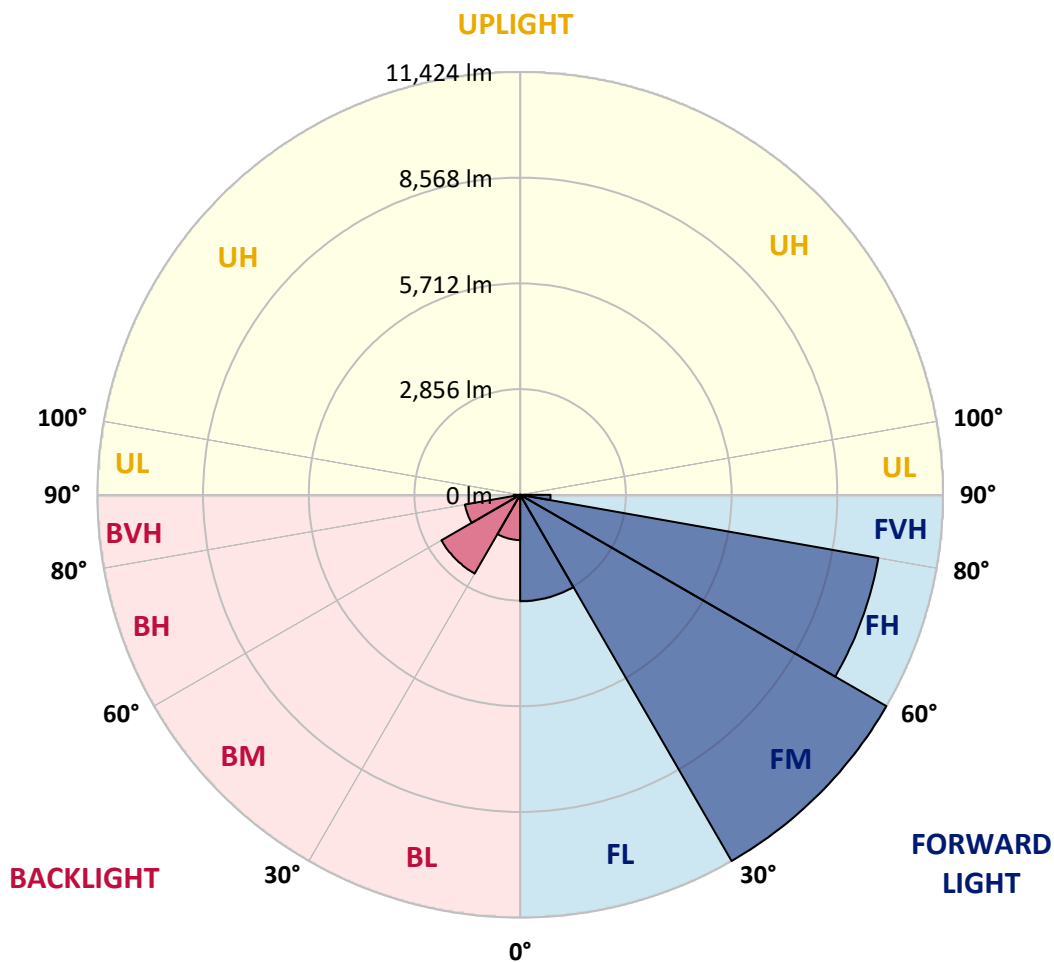
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2877.7	9.5			
FM (30°-60°)	11423.9	37.7			
FH (60°-80°)	9826.9	32.4			G4/12000
FVH (80°-90°)	821.8	2.7			G5
BL (0°-30°)	1222.1	4.0	B3/2500		
BM (30°-60°)	2457.7	8.1	B2/2500		
BH (60°-80°)	1514.6	5.0	B3/2500		G3/2500
BVH (80°-90°)	177.1	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-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3
2.5°	10671.5	10521.9	10176.9	9873.5	9495.4	9211.7	8866.5	8684.0	8550.0	8459.8	8387.3
5°	9968.0	9607.5	8947.8	8369.7	7745.2	7294.5	6767.0	6478.9	6300.9	6204.1	6160.1
7.5°	8923.8	8446.7	7593.6	6817.5	6037.1	5474.2	5074.2	4647.7	4421.2	4273.9	4225.4
10°	8011.4	7472.7	6454.9	5582.0	4979.7	4579.5	4236.4	3845.1	3555.0	3302.1	3207.6
12.5°	7481.4	6855.0	5694.0	4904.8	4399.2	3970.5	3607.8	3185.6	2880.1	2616.3	2515.1
15°	7369.3	6670.3	5375.3	4474.0	3854.0	3337.4	2902.1	2442.5	2143.5	1925.8	1855.4
17.5°	7707.9	6846.2	5241.3	4080.5	3332.9	2701.9	2165.5	1673.1	1424.6	1305.9	1277.3
20°	8404.8	7233.1	5177.4	3726.4	2827.2	2079.8	1497.1	1136.6	1013.5	978.3	976.2
22.5°	9321.6	7861.8	5247.8	3436.2	2352.4	1534.6	1097.0	934.3	883.8	864.0	864.0
25°	10357.1	8712.7	5434.7	3214.1	1934.7	1193.8	945.3	857.4	815.7	795.9	798.1
27.5°	11623.4	9748.1	5689.8	3009.7	1635.6	1046.4	883.8	809.1	767.3	747.5	749.6
30°	12577.6	10638.5	5909.6	2822.8	1481.8	987.1	850.9	780.4	734.4	705.7	703.6
32.5°	13470.2	11423.3	6087.6	2688.7	1393.8	881.5	769.5	716.7	677.1	644.2	637.5
35°	14457.3	12162.2	6171.1	2684.3	1336.7	795.9	703.6	639.8	600.2	562.8	556.2
37.5°	15576.3	13065.7	6241.6	2710.7	1305.9	740.9	672.7	611.1	578.1	540.8	532.1
40°	16741.5	13949.5	6296.5	2732.7	1301.6	703.6	648.5	593.6	560.6	521.0	512.3
42.5°	17741.9	14732.2	6371.3	2723.9	1270.7	696.9	633.1	578.1	547.4	507.8	496.9
45°	18542.2	15354.3	6487.7	2721.8	1224.6	712.4	628.8	573.7	536.5	494.6	485.9
47.5°	19287.4	16055.6	6734.1	2712.9	1173.9	708.0	653.0	569.4	532.1	490.3	483.6
50°	20140.4	16998.7	7153.9	2646.9	1103.7	677.1	696.9	565.0	521.0	483.6	477.1
52.5°	21327.6	18379.4	7776.1	2528.3	1006.9	644.2	703.6	562.8	503.5	470.5	461.6
55°	22723.6	19859.0	8446.7	2356.9	879.4	587.0	668.3	554.1	485.9	450.7	437.6
57.5°	23803.1	20951.7	8914.9	2110.6	754.0	554.1	595.8	534.2	463.9	428.8	417.7
60°	24106.6	21000.0	8998.4	1816.0	690.3	532.1	512.3	582.6	446.3	408.9	397.9
62.5°	23743.8	20039.3	8453.2	1609.4	668.3	510.1	466.1	556.2	428.8	391.3	380.3
65°	22668.6	18416.8	7233.1	1578.5	690.3	490.3	441.8	444.1	411.2	373.8	362.7
67.5°	20158.1	16029.3	5698.5	1598.4	716.7	470.5	424.3	404.5	391.3	358.3	345.2
70°	16394.2	12905.2	4489.3	1633.5	740.9	444.1	402.4	378.1	367.1	332.0	325.4
72.5°	12628.2	10328.5	3541.7	1609.4	765.0	417.7	371.5	351.7	338.7	305.7	299.0
75°	8967.7	8206.9	2603.0	1380.7	701.3	380.3	336.3	318.8	307.8	272.6	270.4
77.5°	6463.6	6147.0	1811.5	1037.7	554.1	334.2	296.8	281.3	274.8	235.3	235.3
80°	5155.6	4678.5	1083.8	677.1	404.5	276.9	248.4	241.9	235.3	195.7	197.8
82.5°	3704.5	3244.9	692.6	422.2	296.8	211.0	193.4	191.2	180.3	145.0	145.0
85°	1899.5	1657.6	444.1	283.7	208.9	136.4	127.5	123.1	116.5	90.1	90.1
87.5°	369.4	507.8	246.2	138.5	101.1	48.4	48.4	41.9	48.4	33.0	35.2
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°	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3
2.5°	8525.8	8481.7	8451.1	8435.7	8657.7	8750.0	8855.5	9007.2	9110.6	9066.7	9207.3
5°	6366.8	6397.5	6467.9	6577.8	6887.9	7035.2	7129.8	7255.0	7345.3	7255.0	7404.5
7.5°	4353.0	4399.2	4548.7	4775.1	5148.8	5313.7	5346.7	5349.0	5329.1	5181.9	5283.0
10°	3205.4	3113.0	3146.0	3308.7	3642.8	3790.2	3805.6	3766.1	3759.4	3700.1	3814.5
12.5°	2484.4	2356.9	2282.1	2308.5	2559.0	2680.0	2699.8	2721.8	2811.9	2840.5	2981.1
15°	1853.4	1787.4	1732.4	1708.2	1873.1	1967.6	1978.6	2031.3	2126.0	2152.2	2273.3
17.5°	1303.7	1321.2	1349.9	1360.8	1479.6	1541.1	1523.5	1523.5	1538.9	1532.4	1600.5
20°	996.0	1031.2	1086.1	1138.8	1246.6	1281.7	1237.8	1182.8	1147.7	1130.0	1145.3
22.5°	879.4	903.5	938.8	1006.9	1097.0	1114.6	1057.5	1013.5	980.5	963.0	965.1
25°	815.7	839.8	868.4	923.4	1000.4	1009.2	956.3	927.8	901.4	883.8	879.4
27.5°	760.7	776.0	793.7	828.9	907.9	912.4	877.3	859.6	842.0	828.9	824.5
30°	710.1	716.7	723.3	758.4	817.8	824.5	806.9	798.1	791.4	782.7	782.7
32.5°	644.2	653.0	663.9	694.7	751.9	760.7	749.6	743.1	732.1	727.6	721.1
35°	565.0	587.0	611.1	648.5	710.1	714.5	701.3	681.5	655.1	648.5	644.2
37.5°	532.1	536.5	567.2	611.1	674.9	679.4	661.7	628.8	609.1	611.1	615.6
40°	510.1	516.6	534.2	578.1	642.0	648.5	633.1	609.1	589.2	591.4	598.0
42.5°	492.5	501.3	512.3	540.8	604.6	617.8	613.5	591.4	571.6	576.1	584.7
45°	483.6	490.3	490.3	510.1	571.6	591.4	593.6	576.1	560.6	565.0	576.1
47.5°	479.2	479.2	472.7	488.0	549.7	569.4	573.7	565.0	556.2	560.6	571.6
50°	472.7	463.9	457.2	470.5	532.1	549.7	554.1	547.4	551.7	560.6	567.2
52.5°	452.8	444.1	444.1	452.8	514.5	532.1	534.2	529.8	538.7	549.7	560.6
55°	428.8	428.8	430.8	439.7	505.7	518.9	516.6	512.3	521.0	534.2	545.2
57.5°	406.8	404.5	415.6	426.5	494.6	503.5	499.1	499.1	505.7	516.6	527.7
60°	393.5	382.6	391.3	408.9	483.6	492.5	485.9	483.6	494.6	503.5	512.3
62.5°	380.3	369.4	375.9	393.5	468.2	474.8	470.5	470.5	481.5	488.0	496.9
65°	360.6	356.2	360.6	378.1	455.1	457.2	457.2	459.6	468.2	472.7	481.5
67.5°	343.0	343.0	345.2	362.7	444.1	439.7	439.7	450.7	452.8	457.2	466.1
70°	321.0	325.4	325.4	347.4	435.3	419.9	422.2	430.8	435.3	439.7	441.8
72.5°	296.8	299.0	303.4	332.0	422.2	400.1	402.4	408.9	411.2	417.7	419.9
75°	270.4	272.6	279.3	316.7	413.3	380.3	375.9	380.3	384.7	389.1	386.9
77.5°	239.7	244.0	250.6	307.8	384.7	375.9	343.0	347.4	351.7	351.7	349.6
80°	202.3	208.9	219.8	294.6	325.4	362.7	305.7	307.8	309.9	309.9	305.7
82.5°	151.8	164.8	180.3	244.0	254.9	309.9	263.8	268.2	261.6	257.3	254.9
85°	99.0	110.0	132.0	169.3	186.8	244.0	217.7	219.8	206.7	204.5	204.5
87.5°	39.5	41.9	59.4	85.8	112.1	151.8	156.0	160.4	149.5	149.5	153.9
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°	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3
2.5°	9420.5	9640.4	9893.3	10150.5	10361.5	10634.1	10898.0	11179.3	11322.2	11405.8	11641.0
5°	7637.6	7938.9	8297.1	8699.5	9033.6	9605.2	10220.8	10906.7	11236.4	11561.8	12177.5
7.5°	5463.2	5757.9	6175.6	6696.7	7171.4	7925.6	8736.8	9664.5	10121.9	10649.5	11658.7
10°	4056.2	4368.4	4746.6	5188.4	5656.7	6441.6	7351.8	8393.9	8897.4	9493.1	10640.8
12.5°	3289.0	3653.9	4045.2	4441.0	4843.3	5371.0	6325.1	7483.7	8024.5	8624.6	9774.5
15°	2565.6	2957.0	3379.1	3810.0	4210.1	4799.4	5773.2	7143.0	7760.6	8341.1	9282.0
17.5°	1816.0	2185.2	2660.2	3183.5	3763.8	4460.8	5654.6	7292.4	8042.0	8648.9	9279.9
20°	1237.8	1492.8	1967.6	2587.7	3304.3	4188.2	5698.5	7817.9	8754.4	9420.5	9660.3
22.5°	989.4	1110.2	1431.2	2062.1	2908.6	3990.4	5878.8	8539.0	9776.8	10588.0	10352.7
25°	899.3	967.4	1134.4	1629.0	2556.8	3858.4	6230.6	9491.0	10922.1	11744.4	11186.0
27.5°	844.2	903.5	1011.3	1338.8	2253.5	3772.6	6676.8	10612.1	12212.6	12887.7	12054.4
30°	809.1	868.4	967.4	1202.7	2024.8	3645.1	7068.1	11636.6	13243.7	13681.2	12522.6
32.5°	740.9	787.0	868.4	1077.2	1853.4	3495.7	7406.7	12553.5	14217.7	14362.8	13085.5
35°	670.6	719.0	800.3	976.2	1752.2	3379.1	7584.7	13366.9	15182.9	15044.4	13643.8
37.5°	644.2	683.7	758.4	903.5	1697.3	3302.1	7653.0	14167.1	16218.3	15798.4	14033.1
40°	626.6	661.7	727.6	855.2	1681.8	3229.5	7637.6	14927.9	17223.1	16578.8	14338.6
42.5°	613.5	644.2	705.7	822.3	1640.0	3161.4	7587.1	15585.1	18027.6	17251.6	14631.1
45°	602.5	635.5	696.9	839.8	1563.1	3086.7	7556.3	16185.3	18645.5	17818.8	15022.4
47.5°	598.0	635.5	699.2	835.5	1479.6	3003.2	7666.1	16851.5	19184.2	18295.9	15543.4
50°	591.4	633.1	747.5	795.9	1365.2	2899.8	8037.8	17645.1	19749.1	18832.3	16218.3
52.5°	580.5	631.0	798.1	765.0	1217.9	2756.9	8640.1	18766.4	20725.2	19876.5	17216.5
55°	567.2	635.5	762.9	716.7	1061.8	2572.2	9242.5	20303.1	22308.1	21560.7	18649.8
57.5°	551.7	628.8	721.1	672.7	932.3	2339.1	9699.8	21562.8	23614.0	23297.5	20410.8
60°	540.8	644.2	648.5	646.4	848.5	2117.1	9743.7	21481.4	23990.0	24425.4	22134.4
62.5°	527.7	657.4	591.4	626.6	806.9	1910.4	9200.7	20151.4	23354.7	24280.2	23539.4
65°	510.1	573.7	560.6	609.1	806.9	1800.6	7936.5	17937.5	21598.0	22908.3	24302.1
67.5°	492.5	521.0	538.7	584.7	824.5	1697.3	6377.8	15130.1	18827.9	20694.4	23444.8
70°	468.2	492.5	514.5	562.8	815.7	1624.7	5019.2	12126.8	15495.0	17631.9	21072.6
72.5°	446.3	463.9	485.9	529.8	815.7	1591.6	4032.0	9513.0	11830.0	13630.7	17456.0
75°	413.3	428.8	448.6	496.9	800.3	1455.4	3027.4	7622.2	8655.4	9783.4	13773.6
77.5°	380.3	391.3	406.8	455.1	721.1	1215.8	2141.3	5902.9	6413.0	7037.4	10737.5
80°	338.7	347.4	358.3	406.8	598.0	943.2	1393.8	4616.8	4795.0	5096.2	7063.8
82.5°	290.2	303.4	305.7	349.6	481.5	683.7	828.9	3163.7	3161.4	3603.3	4983.9
85°	237.4	244.0	248.4	274.8	356.2	455.1	545.2	1728.0	1541.1	2158.9	4328.8
87.5°	178.0	171.4	178.0	184.7	235.3	268.2	292.4	318.8	191.2	391.3	2517.3
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°	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3	10337.3
2.5°	11766.4	11896.1	11819.1	11726.7	11495.9	11157.4	10898.0	10671.5
5°	12603.9	12843.6	12738.1	12395.2	11797.1	11117.9	10403.4	9968.0
7.5°	12498.5	12973.3	12931.6	12360.0	11502.5	10502.3	9497.5	8923.8
10°	11654.3	12320.3	12434.7	11849.9	10942.0	9822.8	8659.9	8011.4
12.5°	10735.3	11295.8	11528.8	11306.8	10451.7	9315.1	8130.0	7481.4
15°	9965.7	10249.4	10480.3	10623.1	10093.3	9134.8	8037.8	7369.3
17.5°	9396.5	9341.5	9534.9	9877.9	9899.9	9374.4	8455.4	7707.9
20°	9121.6	8690.7	8802.9	9284.3	9847.1	9983.4	9288.7	8404.8
22.5°	9106.2	8433.5	8455.4	8974.2	9998.8	10814.4	10328.5	9321.6
25°	9343.6	8404.8	8424.7	8941.3	10267.0	11652.0	11531.2	10357.1
27.5°	9748.1	8528.0	8514.8	9086.4	10625.3	12351.2	12744.8	11623.4
30°	10185.6	8706.1	8673.0	9319.5	10977.1	12782.1	13606.4	12577.6
32.5°	10730.9	9022.7	8908.3	9660.3	11324.5	13195.5	14343.0	13470.2
35°	11249.7	9486.6	9321.6	10148.2	11696.0	13654.9	15167.4	14457.3
37.5°	11779.6	10179.1	10086.7	10851.7	12221.4	14154.0	16110.7	15576.3
40°	12459.0	11164.0	11119.9	11874.1	12922.7	14699.1	17168.0	16741.5
42.5°	13191.0	12210.4	12173.1	13048.2	13793.4	15246.7	18073.9	17741.9
45°	13936.2	13479.0	13487.8	14301.2	14710.1	15763.2	18786.2	18542.2
47.5°	14815.7	14866.2	15180.6	15600.5	15602.8	16339.2	19417.1	19287.4
50°	15932.5	16541.5	17122.0	17187.9	16504.1	17100.0	20188.8	20140.4
52.5°	17196.7	18474.0	19148.9	18940.0	17383.6	18043.0	21329.8	21327.6
55°	18698.2	20494.4	21129.8	20773.7	18436.6	19272.1	22820.5	22723.6
57.5°	20254.8	22437.9	22950.1	22486.3	19753.5	20703.2	24315.4	23803.1
60°	21936.6	24110.9	24632.0	23935.0	21230.9	22130.0	25304.7	24106.6
62.5°	23038.0	25089.2	25462.9	24794.7	22554.4	23583.4	25623.6	23743.8
65°	23095.2	24438.5	24537.5	24300.1	23117.3	24845.2	25161.9	22668.6
67.5°	21525.5	21604.6	21734.3	21989.4	21914.6	24282.4	23381.1	20158.1
70°	18168.4	17113.2	17539.6	17785.8	18339.8	21598.0	20089.9	16394.2
72.5°	13892.3	12351.2	12834.9	12751.4	13903.2	17715.5	15369.7	12628.2
75°	9998.8	8422.5	8459.8	8464.2	9990.1	14140.7	10480.3	8967.7
77.5°	6795.6	5960.2	6083.2	6006.2	6685.6	11078.3	7545.3	6463.6
80°	4647.7	4625.6	4652.1	4471.8	4458.6	7160.5	5586.4	5155.6
82.5°	3447.2	3185.6	3148.2	2957.0	3416.4	5474.2	4240.9	3704.5
85°	2719.6	1763.3	1532.4	1848.9	2959.1	5036.7	2585.4	1899.5
87.5°	1151.9	692.6	419.9	831.0	1644.4	3691.2	716.7	369.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)