

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: P270530

Luminaire Tested: **NAV-AF-04-D-UNV-SLL-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270530
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-04-D-UNV-SLL-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12334.3 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

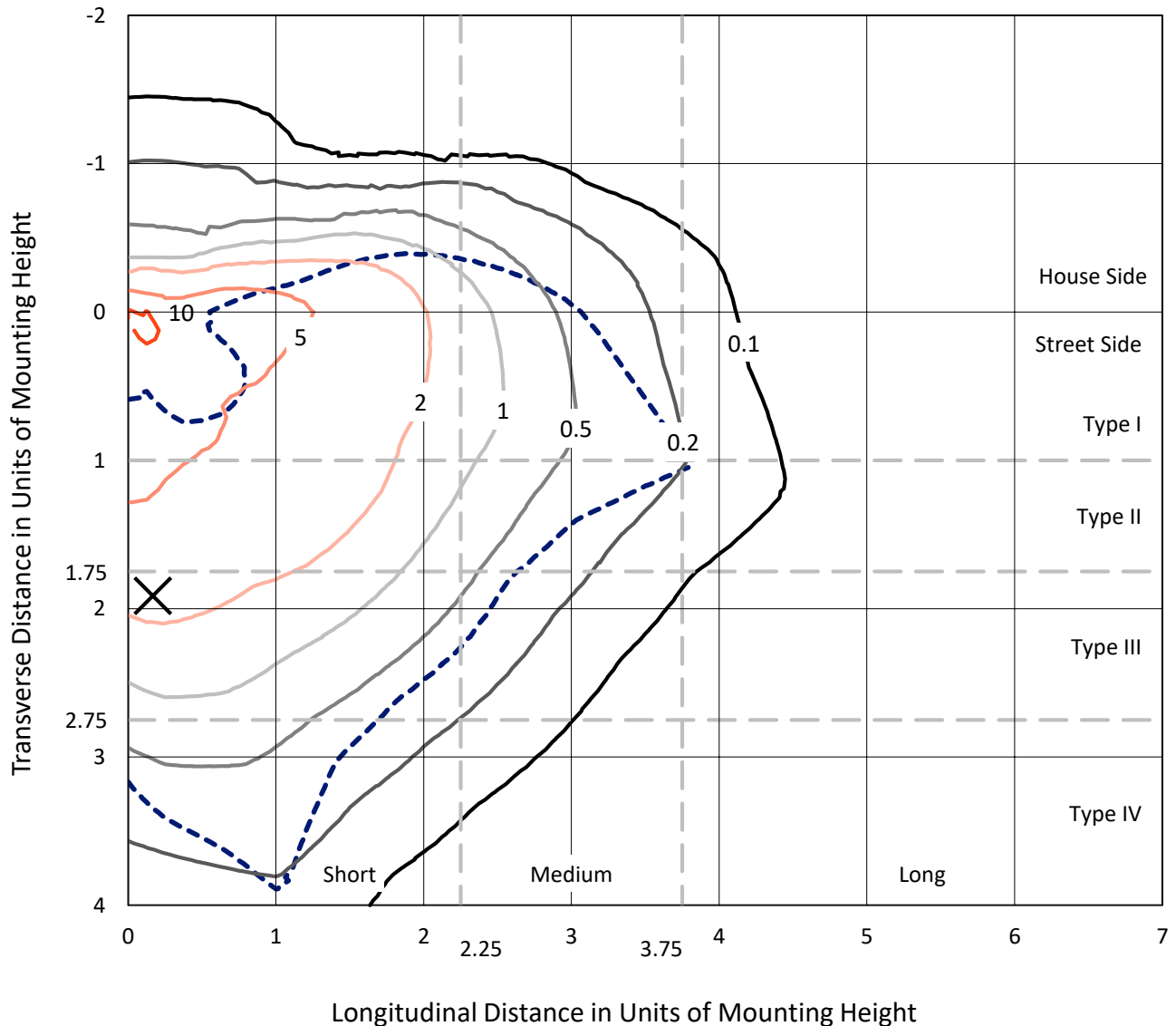
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

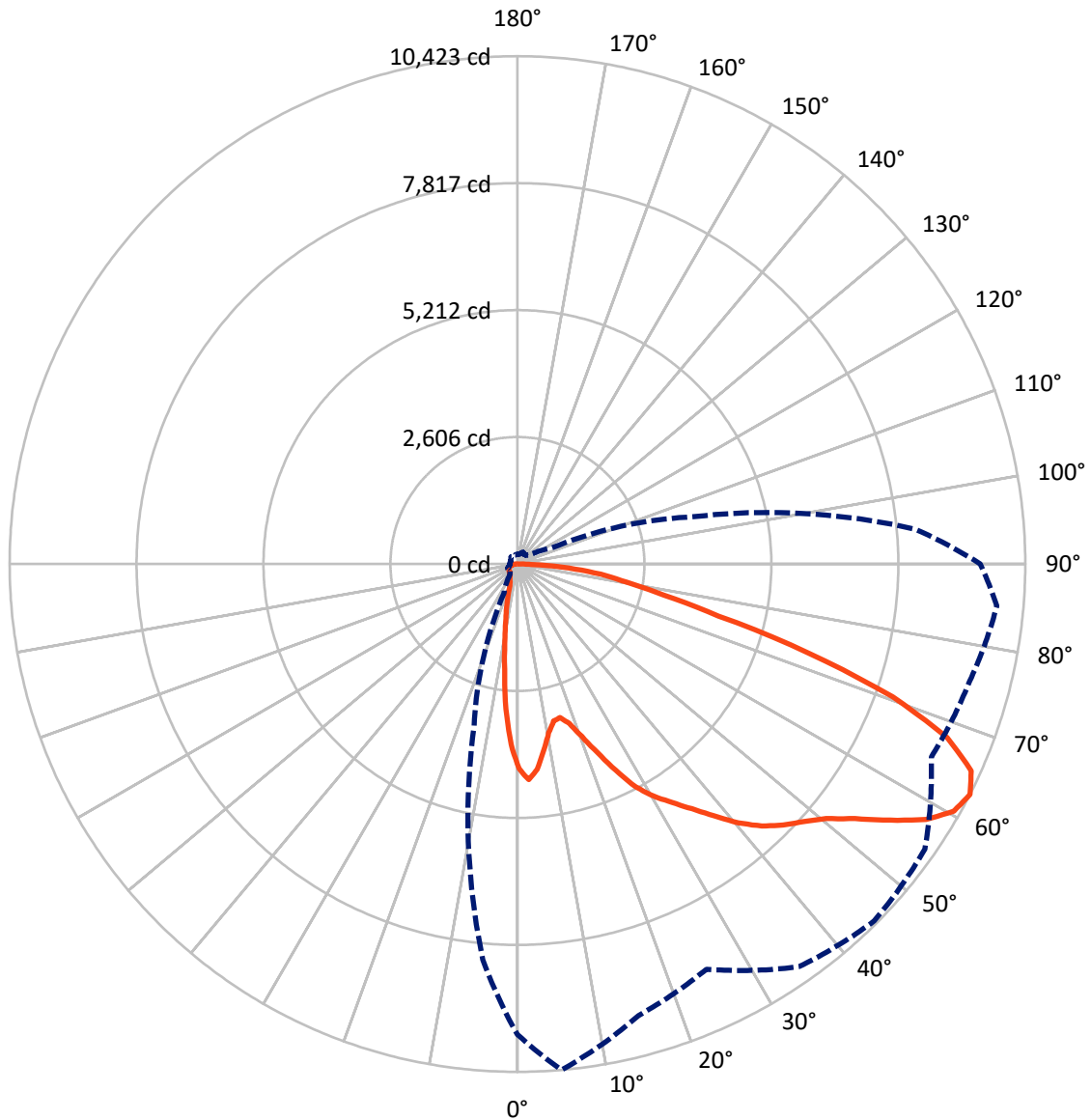
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 12.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2185.0	0.0	2185.0
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	10149.2	0.0	10149.2
	% Fixture	82.3	0.0	82.3
Total	Lumens	12334.3	0.0	12334.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.8	2.5
10°-20°	558.6	4.5
20°-30°	803.4	6.5
30°-40°	1230.4	10.0
40°-50°	1798.9	14.6
50°-60°	2617.4	21.2
60°-70°	3032.6	24.6
70°-80°	1580.9	12.8
80°-90°	406.4	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°	12334.3	100.0
0°-180°	12334.3	100.0



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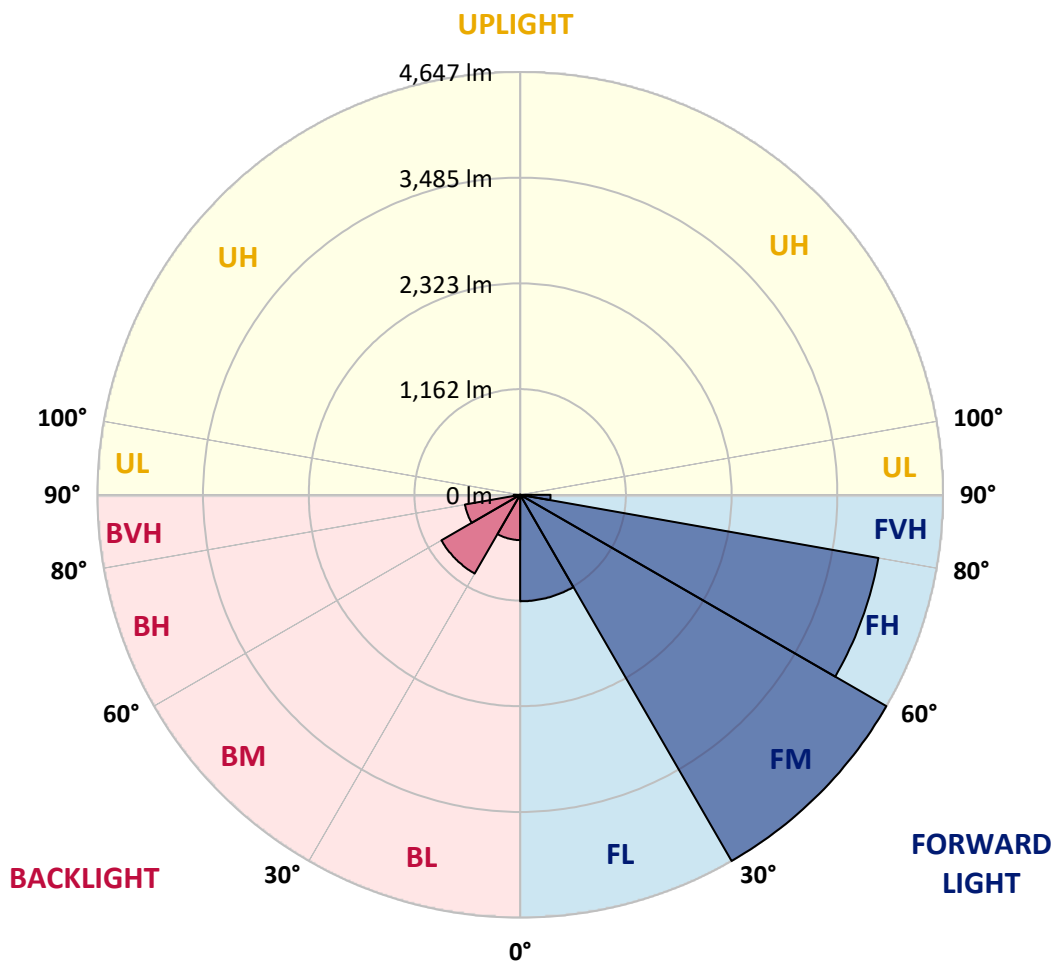
CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7027-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1170.6	9.5			
FM	(30°-60°)	4647.0	37.7			
FH	(60°-80°)	3997.4	32.4			G2/5000
FVH	(80°-90°)	334.3	2.7			G3/500
BL	(0°-30°)	497.1	4.0	B1/500		
BM	(30°-60°)	999.7	8.1	B1/1000		
BH	(60°-80°)	616.1	5.0	B2/1000		G2/1000
BVH	(80°-90°)	72.1	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°	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0
2.5°	4340.9	4433.0	4538.5	4676.2	4770.2	4807.8	4839.1	4786.3	4735.3	4639.7	4605.6
5°	4054.8	4231.8	4522.4	4798.8	5042.0	5181.6	5224.5	5127.0	4953.6	4703.2	4570.8
7.5°	3630.1	3863.4	4272.1	4679.0	5027.8	5260.3	5277.3	5084.0	4742.5	4331.9	4117.3
10°	3258.8	3522.7	3995.8	4450.9	4820.2	5058.1	5011.6	4740.6	4328.5	3861.5	3619.2
12.5°	3043.3	3307.1	3789.1	4251.5	4599.4	4689.7	4594.9	4366.9	3976.1	3508.3	3264.3
15°	2997.7	3269.7	3715.7	4105.8	4321.2	4263.1	4169.3	4054.0	3775.8	3393.0	3156.9
17.5°	3135.4	3439.5	3813.2	4027.0	4018.1	3878.6	3799.9	3822.3	3774.9	3518.2	3271.4
20°	3418.9	3778.5	4061.0	4005.5	3776.7	3580.7	3535.2	3710.4	3929.5	3832.1	3561.2
22.5°	3791.8	4201.5	4399.1	4067.3	3650.5	3439.5	3430.5	3704.3	4211.3	4307.0	3976.9
25°	4213.1	4690.6	4739.7	4176.4	3637.1	3426.9	3418.9	3800.8	4550.3	4777.4	4442.8
27.5°	4728.1	5184.3	5024.2	4322.1	3696.2	3463.7	3469.0	3965.3	4903.5	5242.4	4967.8
30°	5116.2	5534.8	5199.5	4465.3	3790.9	3528.1	3541.4	4143.3	5093.8	5565.2	5387.2
32.5°	5479.4	5834.4	5367.6	4606.6	3929.5	3623.8	3670.2	4365.0	5322.8	5842.4	5783.5
35°	5880.9	6169.7	5554.5	4757.7	4128.2	3791.8	3858.8	4576.1	5550.0	6119.8	6176.0
37.5°	6336.1	6553.5	5757.4	4971.4	4414.4	4103.1	4140.6	4791.6	5708.3	6426.5	6597.2
40°	6810.1	6983.7	5979.3	5256.7	4830.1	4523.3	4541.2	5068.0	5832.6	6743.9	7005.9
42.5°	7217.1	7352.1	6202.0	5610.9	5307.6	4951.7	4967.0	5365.8	5951.6	7017.6	7333.3
45°	7542.4	7641.8	6412.1	5983.8	5817.5	5486.6	5483.0	5668.9	6110.8	7248.3	7584.6
47.5°	7845.6	7898.4	6646.4	6346.9	6345.9	6175.2	6047.3	6026.6	6322.7	7442.4	7803.7
50°	8192.7	8212.3	6955.8	6713.6	6991.7	6964.7	6728.8	6481.0	6597.2	7660.6	8033.5
52.5°	8675.7	8676.5	7339.5	7071.3	7704.5	7789.4	7514.9	6995.2	7003.2	8085.4	8430.6
55°	9243.5	9282.8	7839.5	7499.6	8450.3	8595.2	8336.7	7605.9	7586.4	8770.4	9074.5
57.5°	9682.7	9891.0	8421.6	8035.2	9146.9	9335.5	9127.1	8239.2	8302.7	9476.8	9605.7
60°	9806.0	10293.4	9002.0	8636.2	9736.3	10019.8	9807.8	8923.4	9003.8	9935.7	9758.6
62.5°	9658.4	10423.0	9593.2	9174.6	10085.9	10357.7	10205.7	9371.4	9575.3	9876.7	9500.1
65°	9221.1	10235.3	10106.6	9403.5	9884.7	9981.2	9941.1	9394.7	9885.6	9318.6	8785.7
67.5°	8199.9	9510.9	9877.6	8914.4	8944.9	8841.1	8788.3	8756.0	9536.9	8418.0	7658.8
70°	6668.7	8172.2	8785.7	7460.2	7234.9	7134.7	6961.2	7390.4	8571.8	7172.2	6303.0
72.5°	5136.9	6252.1	7206.3	5655.5	5187.0	5220.9	5024.2	5651.1	7100.7	5544.7	4812.2
75°	3647.8	4263.1	5752.1	4063.8	3443.1	3441.2	3426.0	4067.3	5602.8	3979.6	3520.8
77.5°	2629.2	3069.1	4506.3	2719.6	2443.2	2474.6	2424.4	2764.3	4367.7	2862.7	2608.7
80°	2097.2	2272.4	2912.8	1813.7	1819.0	1892.3	1881.6	1890.6	2873.4	2073.0	1950.5
82.5°	1506.8	1725.1	2226.8	1389.8	1202.8	1280.7	1295.8	1402.3	2027.4	1465.8	1286.1
85°	772.7	1051.6	2048.9	1203.6	752.2	623.3	717.2	1106.3	1760.9	878.3	626.8
87.5°	150.2	291.5	1501.5	669.0	338.0	170.8	281.7	468.6	1024.0	159.2	77.9
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0
2.5°	4547.5	4433.0	4325.7	4214.8	4129.0	4024.3	3921.6	3832.1	3745.4	3688.1	3706.0
5°	4436.5	4157.5	3907.2	3674.6	3538.8	3375.1	3229.2	3106.8	3011.9	2951.2	2987.9
7.5°	3931.3	3554.0	3223.9	2917.2	2724.0	2512.1	2342.2	2222.3	2149.0	2107.9	2167.8
10°	3414.5	2990.5	2620.3	2301.1	2110.6	1930.7	1776.9	1649.9	1551.6	1505.1	1529.3
12.5°	3044.1	2572.8	2184.8	1970.2	1806.5	1645.5	1486.3	1337.8	1212.7	1155.4	1143.8
15°	2905.6	2348.3	1952.2	1712.6	1549.8	1374.5	1202.8	1043.7	924.7	875.5	864.8
17.5°	2966.5	2300.1	1814.5	1531.0	1294.9	1082.1	889.0	738.6	651.0	623.3	625.9
20°	3180.1	2318.0	1703.6	1344.1	1052.6	800.4	607.3	503.5	466.0	459.7	466.8
22.5°	3473.4	2391.4	1623.1	1183.2	838.8	582.2	451.6	402.4	392.6	391.8	398.8
25°	3860.6	2534.5	1569.5	1040.1	662.7	461.5	393.5	365.8	357.7	359.5	366.7
27.5°	4316.7	2715.9	1534.7	916.7	544.6	411.3	367.5	343.4	335.3	337.1	342.6
30°	4733.4	2875.1	1482.7	823.7	489.1	393.5	353.3	329.0	318.4	318.4	322.0
32.5°	5106.4	3012.8	1421.9	753.9	438.3	353.3	320.2	301.4	293.3	296.0	297.8
35°	5437.4	3085.4	1374.5	712.7	397.1	325.5	292.5	272.7	262.0	263.8	266.4
37.5°	5762.8	3113.0	1343.2	690.3	367.5	308.6	278.1	262.0	250.4	248.7	247.8
40°	6072.4	3106.8	1313.7	684.1	347.9	296.0	269.2	254.8	243.3	240.6	239.7
42.5°	6339.7	3086.2	1286.1	667.1	334.4	287.1	262.0	249.5	238.0	234.3	232.5
45°	6583.9	3073.7	1255.7	635.8	341.6	283.4	258.4	245.1	234.3	229.8	228.0
47.5°	6854.7	3118.5	1221.7	601.9	339.7	284.5	258.4	243.3	232.5	228.0	226.3
50°	7177.6	3269.7	1179.6	555.3	323.7	304.0	257.5	240.6	230.8	228.0	224.4
52.5°	7633.7	3514.6	1121.4	495.4	311.3	324.6	256.6	236.1	228.0	223.6	219.0
55°	8258.8	3759.6	1046.3	431.9	291.5	310.4	258.4	230.8	221.8	217.3	211.9
57.5°	8771.3	3945.6	951.6	379.2	273.7	293.3	255.7	224.4	214.7	210.2	205.7
60°	8738.3	3963.5	861.2	345.2	262.9	263.8	262.0	219.9	208.3	204.9	201.2
62.5°	8197.2	3742.7	777.2	328.2	254.8	240.6	267.3	214.7	202.1	198.5	195.8
65°	7296.7	3228.4	732.5	328.2	247.8	228.0	233.4	207.5	195.8	192.2	190.5
67.5°	6154.6	2594.3	690.3	335.3	238.0	219.0	211.9	200.3	189.6	185.9	184.2
70°	4933.0	2041.7	661.0	331.7	229.0	209.2	200.3	190.5	179.8	178.9	177.1
72.5°	3869.7	1640.1	647.5	331.7	215.6	197.6	188.7	181.5	170.8	169.9	167.3
75°	3100.5	1231.4	592.1	325.5	202.1	182.4	174.5	168.2	157.5	158.3	156.6
77.5°	2401.2	871.0	494.5	293.3	185.1	165.5	159.2	154.7	142.2	143.1	143.1
80°	1878.0	567.0	383.7	243.3	165.5	145.7	141.4	137.7	124.3	126.1	126.1
82.5°	1286.9	337.1	278.1	195.8	142.2	124.3	123.3	118.0	103.8	104.7	106.4
85°	703.0	221.8	185.1	144.8	111.7	101.1	99.3	96.6	83.2	83.2	84.1
87.5°	129.6	118.9	109.1	95.7	75.1	72.5	69.8	72.5	62.6	60.8	60.8
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°	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0
2.5°	3663.9	3602.3	3559.4	3521.7	3431.4	3437.8	3450.2	3468.0	3411.8	3441.2	3478.0
5°	2951.2	2900.2	2861.8	2801.9	2675.7	2631.0	2602.4	2590.0	2505.8	2523.7	2563.0
7.5°	2175.9	2174.9	2161.5	2094.5	1942.4	1850.2	1789.6	1770.6	1718.8	1738.5	1798.4
10°	1531.9	1548.0	1541.9	1481.8	1345.9	1279.7	1266.3	1303.9	1304.8	1343.2	1446.1
12.5°	1107.2	1098.2	1090.2	1041.0	939.0	928.3	958.8	1010.6	1023.1	1064.2	1171.5
15°	826.4	804.9	800.4	761.9	694.8	704.7	727.1	753.9	754.8	783.4	872.0
17.5°	619.7	619.7	626.8	601.9	553.5	549.1	537.5	530.3	519.6	531.2	579.4
20°	481.1	503.5	521.3	507.1	463.3	441.7	419.4	405.1	397.1	397.9	412.3
22.5°	412.3	430.2	453.5	446.3	409.5	381.9	367.5	357.7	351.4	351.4	359.5
25°	377.4	389.1	410.4	406.9	375.6	353.3	341.6	331.7	324.6	323.7	331.7
27.5°	349.7	356.8	371.1	369.4	337.1	322.9	315.7	309.5	305.0	304.0	312.2
30°	324.6	328.2	335.3	332.7	308.6	294.3	291.5	288.9	286.2	287.1	298.6
32.5°	302.3	305.0	309.5	305.9	282.5	270.1	265.5	262.0	259.3	262.0	275.4
35°	277.2	285.3	290.6	288.9	263.8	248.7	238.8	229.8	226.3	229.0	244.2
37.5°	255.7	269.2	276.4	274.5	248.7	230.8	218.2	216.4	216.4	219.9	235.1
40°	247.8	257.5	263.8	261.1	235.1	217.3	210.2	207.5	208.3	211.9	228.0
42.5°	240.6	249.5	251.3	246.0	219.9	208.3	203.8	200.3	202.1	206.6	222.7
45°	234.3	241.5	240.6	232.5	207.5	199.5	199.5	196.8	197.6	201.2	218.2
47.5°	229.8	233.4	231.7	223.6	198.5	192.2	194.9	194.9	196.8	199.5	216.4
50°	222.7	225.4	223.6	216.4	191.3	185.9	188.7	192.2	194.0	196.8	211.9
52.5°	215.6	217.3	216.4	209.2	184.2	180.6	180.6	184.2	187.7	191.3	204.9
55°	208.3	210.2	211.0	205.7	178.9	175.3	174.5	174.5	178.0	183.3	197.6
57.5°	202.9	202.9	204.9	201.2	173.6	169.1	164.6	165.5	169.9	174.5	188.7
60°	196.8	197.6	200.3	196.8	166.4	159.2	155.5	160.1	161.9	166.4	181.5
62.5°	191.3	191.3	193.1	190.5	160.1	152.9	150.2	154.7	154.7	159.2	174.5
65°	186.8	185.9	185.9	185.1	153.8	146.7	144.8	146.7	147.5	152.1	167.3
67.5°	183.3	178.9	178.9	180.6	147.5	140.4	139.4	139.4	140.4	145.7	159.2
70°	175.3	171.7	170.8	177.1	141.4	132.4	132.4	130.6	132.4	135.0	149.4
72.5°	166.4	163.6	162.8	171.7	135.0	123.3	121.6	120.7	121.6	124.3	137.7
75°	154.7	152.9	154.7	168.2	128.7	113.5	110.9	110.0	110.0	110.9	125.3
77.5°	141.4	139.4	152.9	156.6	125.3	102.0	99.3	97.5	95.7	95.7	111.7
80°	125.3	124.3	147.5	132.4	119.8	89.4	85.0	82.3	80.5	79.6	95.7
82.5°	109.1	107.3	126.1	103.8	99.3	73.3	67.1	61.8	59.0	59.0	73.3
85°	89.4	88.6	99.3	75.9	68.9	53.7	44.7	40.2	36.7	36.7	47.4
87.5°	65.2	63.5	61.8	45.6	34.9	24.2	17.0	16.1	14.4	13.5	19.7
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°	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0	4205.0
2.5°	3532.4	3606.8	3747.1	3862.5	4016.3	4139.7	4280.2	4340.9
5°	2635.4	2752.6	2967.3	3150.6	3404.5	3639.8	3908.0	4054.8
7.5°	1890.6	2064.0	2226.8	2455.7	2773.2	3088.9	3435.8	3630.1
10°	1564.0	1723.3	1862.8	2025.6	2270.6	2625.7	3039.8	3258.8
12.5°	1295.8	1467.6	1615.2	1789.6	1995.1	2316.2	2788.3	3043.3
15°	993.5	1180.5	1357.6	1567.7	1819.8	2186.6	2713.3	2997.7
17.5°	680.6	880.9	1099.0	1355.7	1659.8	2131.9	2784.8	3135.4
20°	462.4	609.1	846.1	1150.1	1515.8	2106.0	2942.3	3418.9
22.5°	380.1	446.3	624.2	957.0	1397.9	2134.7	3198.1	3791.8
25°	348.8	384.6	485.7	786.9	1307.5	2210.6	3544.2	4213.1
27.5°	329.0	359.5	425.6	665.4	1224.3	2314.5	3965.3	4728.1
30°	317.6	346.0	401.5	602.8	1148.3	2403.9	4327.6	5116.2
32.5°	291.5	313.0	358.7	567.0	1093.7	2476.3	4646.8	5479.4
35°	260.2	286.2	323.7	543.7	1091.9	2510.4	4947.2	5880.9
37.5°	248.7	273.7	301.4	531.2	1102.7	2538.9	5314.8	6336.1
40°	241.5	263.8	286.2	529.5	1111.7	2561.2	5674.4	6810.1
42.5°	235.1	257.5	283.4	517.0	1108.0	2591.7	5992.8	7217.1
45°	233.4	255.7	289.8	498.1	1107.2	2639.1	6245.7	7542.4
47.5°	231.7	265.5	287.9	477.5	1103.6	2739.2	6531.0	7845.6
50°	229.8	283.4	275.4	449.0	1076.8	2910.1	6914.8	8192.7
52.5°	229.0	286.2	262.0	409.5	1028.5	3163.1	7476.4	8675.7
55°	225.4	271.8	238.8	357.7	958.8	3435.8	8078.2	9243.5
57.5°	217.3	242.4	225.4	306.7	858.5	3626.4	8522.7	9682.7
60°	237.1	208.3	216.4	280.8	738.6	3660.4	8542.3	9806.0
62.5°	226.3	189.6	207.5	271.8	654.7	3438.6	8151.6	9658.4
65°	180.6	179.8	199.5	280.8	642.1	2942.3	7491.5	9221.1
67.5°	164.6	172.7	191.3	291.5	650.2	2318.0	6520.3	8199.9
70°	153.8	163.6	180.6	301.4	664.4	1826.2	5249.5	6668.7
72.5°	143.1	151.2	169.9	311.3	654.7	1440.7	4201.5	5136.9
75°	129.6	136.8	154.7	285.3	561.6	1058.8	3338.5	3647.8
77.5°	114.4	120.7	136.0	225.4	422.2	736.9	2500.4	2629.2
80°	98.4	101.1	112.6	164.6	275.4	440.9	1903.1	2097.2
82.5°	77.9	78.7	85.9	120.7	171.7	281.7	1320.0	1506.8
85°	50.0	51.8	55.4	85.0	115.3	180.6	674.3	772.7
87.5°	17.0	19.7	19.7	41.1	56.4	100.3	206.6	150.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)