

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: P195250

Luminaire Tested: **NAV-AF-04-D-UNV-SLL-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195250
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-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5700K, 800mA 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: 17410 lumens
Efficiency: N/A
Efficacy: 101.8 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

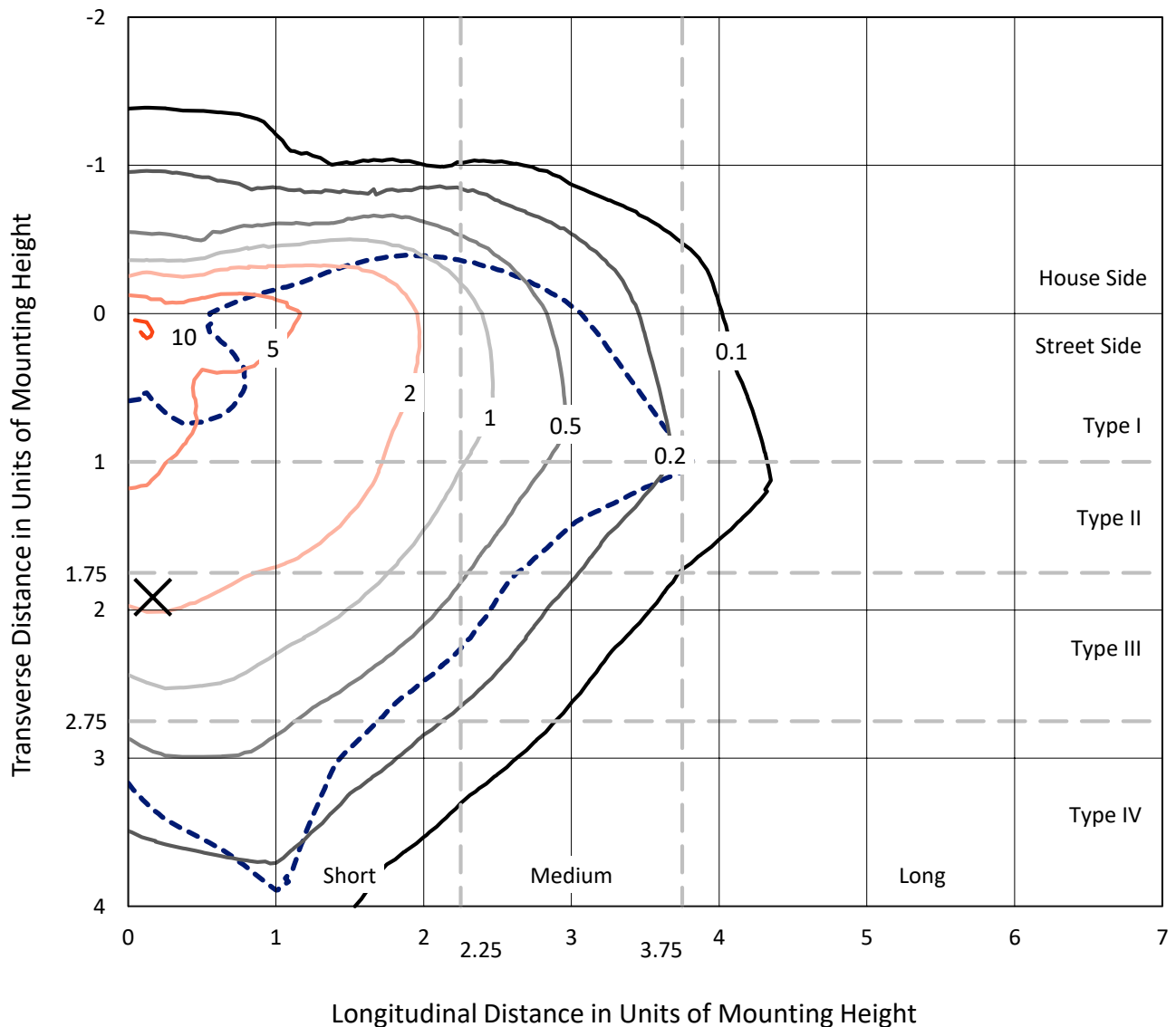
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

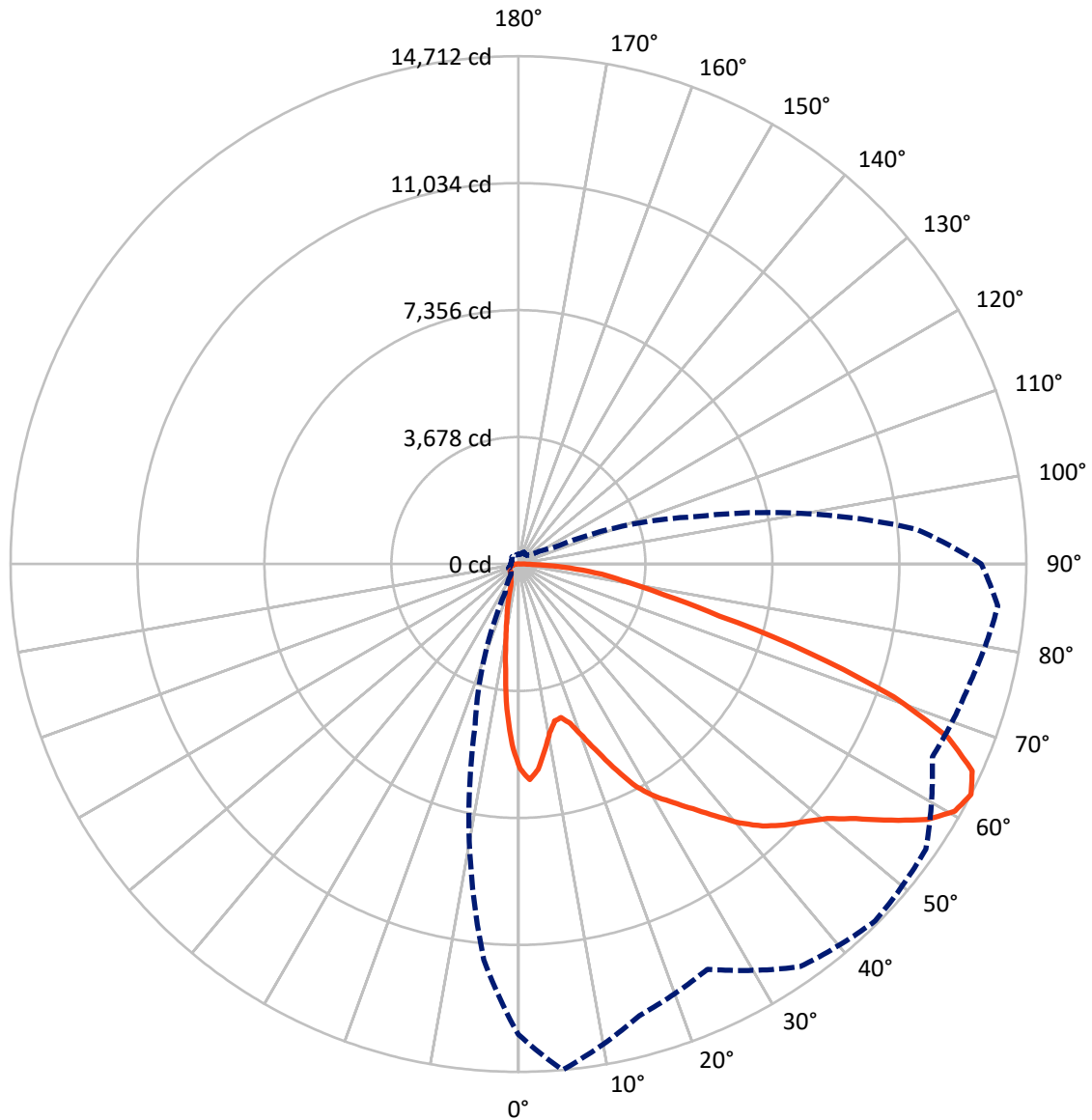
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.9 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	3084.2	0.0	3084.2
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	14325.8	0.0	14325.8
	% Fixture	82.3	0.0	82.3
Total	Lumens	17410.0	0.0	17410.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	431.6	2.5
10°-20°	788.4	4.5
20°-30°	1133.9	6.5
30°-40°	1736.7	10.0
40°-50°	2539.2	14.6
50°-60°	3694.5	21.2
60°-70°	4280.6	24.6
70°-80°	2231.4	12.8
80°-90°	573.6	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°	17410.0	100.0
0°-180°	17410.0	100.0



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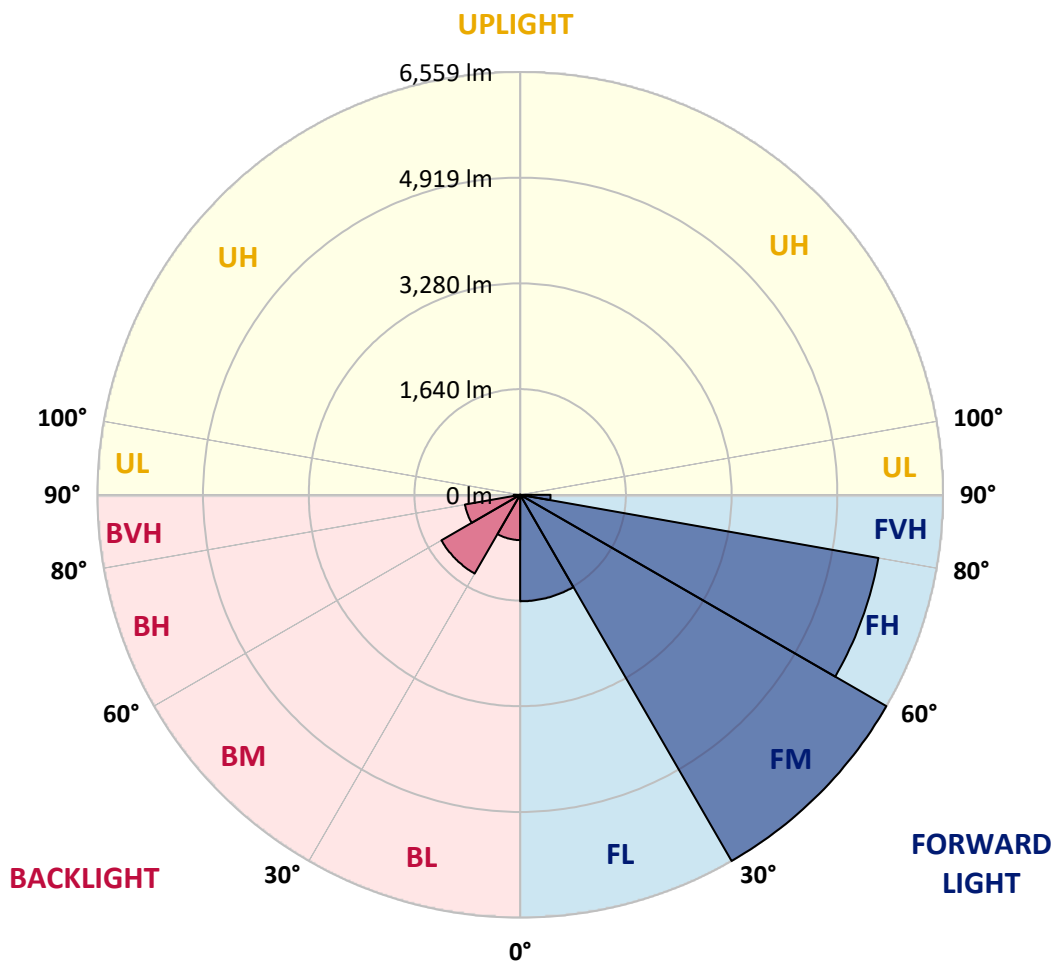
CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7060-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1652.3	9.5			
FM (30°-60°)	6559.3	37.7			
FH (60°-80°)	5642.3	32.4			G3/7500
FVH (80°-90°)	471.9	2.7			G3/500
BL (0°-30°)	701.7	4.0	B2/1000		
BM (30°-60°)	1411.1	8.1	B2/2500		
BH (60°-80°)	869.7	5.0	B2/1000		G2/1000
BVH (80°-90°)	101.7	0.6			G2/225
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°	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4
2.5°	6127.3	6257.3	6406.3	6600.7	6733.2	6786.2	6830.4	6755.9	6684.0	6548.9	6500.9
5°	5723.3	5973.3	6383.5	6773.6	7116.9	7313.9	7374.5	7236.9	6992.0	6638.5	6451.7
7.5°	5123.7	5453.2	6030.1	6604.4	7096.7	7425.0	7448.9	7176.3	6694.1	6114.7	5811.7
10°	4599.9	4972.3	5640.0	6282.6	6803.9	7139.7	7074.0	6691.5	6109.6	5450.7	5108.6
12.5°	4295.7	4668.0	5348.4	6001.1	6492.1	6619.6	6485.8	6163.9	5612.3	4952.1	4607.5
15°	4231.3	4615.0	5244.9	5795.3	6099.5	6017.5	5884.9	5722.1	5329.5	4789.2	4456.0
17.5°	4425.7	4854.9	5382.5	5684.2	5671.6	5474.7	5363.6	5395.1	5328.2	4966.0	4617.6
20°	4825.8	5333.3	5732.2	5653.9	5330.8	5054.3	4989.9	5237.4	5546.6	5409.0	5026.5
22.5°	5352.2	5930.4	6209.3	5741.0	5152.8	4854.9	4842.2	5228.5	5944.3	6079.3	5613.5
25°	5946.8	6620.9	6690.3	5895.0	5133.8	4837.2	4825.8	5364.8	6422.7	6743.3	6271.2
27.5°	6673.9	7317.7	7091.7	6100.8	5217.2	4889.0	4896.5	5597.1	6921.3	7399.7	7012.2
30°	7221.7	7812.5	7339.1	6302.8	5351.0	4979.8	4998.8	5848.3	7190.2	7855.4	7604.2
32.5°	7734.2	8235.4	7576.4	6502.2	5546.6	5114.9	5180.6	6161.4	7513.3	8246.7	8163.4
35°	8301.0	8708.7	7840.3	6715.5	5826.9	5352.2	5446.9	6459.3	7833.9	8638.0	8717.6
37.5°	8943.5	9250.3	8126.8	7017.2	6230.8	5791.5	5844.5	6763.5	8057.4	9071.0	9312.1
40°	9612.5	9857.4	8439.9	7419.9	6817.8	6384.8	6410.0	7153.6	8232.8	9519.1	9889.0
42.5°	10186.9	10377.5	8754.2	7919.8	7491.9	6989.5	7010.9	7573.9	8400.7	9905.4	10351.0
45°	10646.4	10786.5	9050.8	8446.2	8211.4	7744.3	7739.3	8001.8	8625.4	10231.1	10705.7
47.5°	11074.3	11148.8	9381.5	8958.7	8957.4	8716.3	8535.8	8506.8	8924.6	10505.0	11015.0
50°	11564.1	11591.9	9818.3	9476.2	9868.8	9830.9	9497.7	9148.0	9312.1	10813.0	11339.4
52.5°	12245.7	12247.0	10359.8	9981.1	10874.9	10994.8	10607.3	9873.8	9885.2	11412.6	11899.9
55°	13047.3	13102.9	11065.5	10585.8	11927.6	12132.1	11767.3	10736.0	10708.2	12379.5	12808.7
57.5°	13667.1	13961.2	11887.2	11341.9	12911.0	13177.3	12883.2	11629.7	11719.4	13376.8	13558.5
60°	13841.3	14529.3	12706.5	12190.2	13742.8	14143.0	13843.8	12595.4	12709.0	14024.3	13774.4
62.5°	13633.0	14712.3	13540.9	12950.1	14236.4	14620.2	14405.6	13227.8	13515.6	13941.0	13409.6
65°	13015.8	14447.2	14265.4	13273.3	13952.4	14088.7	14031.9	13260.6	13953.7	13153.3	12401.0
67.5°	11574.2	13424.7	13942.3	12582.8	12625.7	12479.3	12404.8	12359.3	13461.4	11882.2	10810.5
70°	9413.1	11535.1	12401.0	10530.3	10212.1	10070.8	9825.9	10431.8	12099.3	10123.8	8896.8
72.5°	7250.8	8824.9	10171.8	7982.9	7321.4	7369.4	7091.7	7976.6	10022.8	7826.4	6792.5
75°	5149.0	6017.5	8119.2	5736.0	4859.9	4857.4	4835.9	5741.0	7908.4	5617.3	4969.7
77.5°	3711.2	4332.3	6360.8	3838.7	3448.7	3492.8	3422.1	3901.8	6165.2	4040.7	3682.2
80°	2960.1	3207.5	4111.4	2560.0	2567.6	2671.1	2655.9	2668.5	4055.8	2926.1	2753.1
82.5°	2127.0	2435.0	3143.2	1961.6	1697.8	1807.6	1829.1	1979.3	2861.7	2068.9	1815.2
85°	1090.6	1484.5	2892.0	1699.1	1061.6	879.8	1012.4	1561.5	2485.5	1239.6	884.9
87.5°	212.1	411.5	2119.4	944.2	477.2	241.1	397.6	661.5	1445.4	224.7	109.8
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4
2.5°	6418.9	6257.3	6105.8	5949.3	5828.1	5680.4	5535.3	5409.0	5286.6	5205.8	5231.0
5°	6262.4	5868.5	5515.1	5186.9	4995.0	4764.0	4558.2	4385.3	4251.5	4165.6	4217.4
7.5°	5549.1	5016.4	4550.7	4117.7	3845.0	3545.8	3306.0	3136.9	3033.3	2975.3	3059.9
10°	4819.5	4221.2	3698.6	3247.9	2979.1	2725.3	2508.2	2329.0	2190.1	2124.5	2158.6
12.5°	4296.9	3631.7	3083.8	2780.9	2549.9	2322.7	2098.0	1888.4	1711.7	1630.9	1614.5
15°	4101.3	3314.8	2755.6	2417.3	2187.6	1940.2	1697.8	1473.1	1305.2	1235.8	1220.7
17.5°	4187.1	3246.7	2561.2	2161.1	1827.8	1527.4	1254.7	1042.7	919.0	879.8	883.6
20°	4488.8	3271.9	2404.7	1897.3	1485.7	1129.8	857.1	710.7	657.7	648.8	658.9
22.5°	4902.8	3375.4	2291.1	1670.0	1184.1	821.8	637.5	568.0	554.2	552.9	563.0
25°	5449.4	3577.4	2215.4	1468.1	935.4	651.4	555.4	516.3	504.9	507.5	517.6
27.5°	6093.2	3833.7	2166.1	1293.9	768.8	580.7	518.8	484.7	473.4	475.9	483.5
30°	6681.4	4058.4	2092.9	1162.6	690.5	555.4	498.6	464.5	449.4	449.4	454.4
32.5°	7207.8	4252.7	2007.1	1064.1	618.5	498.6	451.9	425.4	414.0	417.8	420.4
35°	7674.9	4355.0	1940.2	1006.1	560.5	459.5	412.8	385.0	369.9	372.4	376.2
37.5°	8134.4	4394.1	1896.0	974.5	518.8	435.5	392.6	369.9	353.4	350.9	349.7
40°	8571.1	4385.3	1854.3	965.7	491.0	417.8	380.0	359.8	343.4	339.6	338.3
42.5°	8948.6	4356.3	1815.2	941.7	472.1	405.2	369.9	352.2	335.8	330.7	328.2
45°	9293.2	4338.6	1772.3	897.5	482.2	400.2	364.8	345.9	330.7	324.4	321.9
47.5°	9675.7	4401.7	1724.3	849.5	479.7	401.4	364.8	343.4	328.2	321.9	319.4
50°	10131.4	4615.0	1665.0	783.9	457.0	429.2	363.5	339.6	325.7	321.9	316.8
52.5°	10775.1	4960.9	1582.9	699.3	439.3	458.2	362.3	333.3	321.9	315.6	309.3
55°	11657.5	5306.8	1476.9	609.7	411.5	438.0	364.8	325.7	313.1	306.7	299.2
57.5°	12380.8	5569.3	1343.1	535.2	386.3	414.0	361.0	316.8	303.0	296.6	290.3
60°	12334.1	5594.6	1215.6	487.3	371.1	372.4	369.9	310.5	294.1	289.1	284.0
62.5°	11570.4	5282.8	1097.0	463.3	359.8	339.6	377.4	303.0	285.3	280.2	276.4
65°	10299.2	4557.0	1033.8	463.3	349.7	321.9	329.5	292.9	276.4	271.4	268.9
67.5°	8687.3	3662.0	974.5	473.4	335.8	309.3	299.2	282.8	267.6	262.6	260.0
70°	6962.9	2881.9	932.9	468.3	323.2	295.4	282.8	268.9	253.7	252.5	249.9
72.5°	5462.0	2315.1	913.9	468.3	304.2	279.0	266.3	256.3	241.1	239.8	236.1
75°	4376.5	1738.2	835.7	459.5	285.3	257.5	246.2	237.3	222.2	223.4	220.9
77.5°	3389.3	1229.5	698.1	414.0	261.3	233.5	224.7	218.4	200.7	202.0	202.0
80°	2650.9	800.3	541.5	343.4	233.5	205.8	199.4	194.4	175.5	178.0	178.0
82.5°	1816.5	475.9	392.6	276.4	200.7	175.5	174.2	166.6	146.4	147.7	150.2
85°	992.2	313.1	261.3	204.5	157.8	142.6	140.1	136.3	117.4	117.4	118.7
87.5°	183.0	167.9	154.0	135.1	106.0	102.2	98.5	102.2	88.4	85.8	85.8
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°	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4
2.5°	5171.7	5084.6	5024.0	4971.0	4843.5	4852.3	4870.0	4895.3	4815.7	4857.4	4909.2
5°	4165.6	4093.7	4039.4	3954.8	3776.9	3713.7	3673.3	3655.7	3537.0	3562.3	3617.8
7.5°	3071.2	3070.0	3051.0	2956.3	2741.8	2611.7	2525.9	2499.4	2426.2	2453.9	2538.5
10°	2162.3	2185.1	2176.2	2091.7	1899.8	1806.4	1787.4	1840.5	1841.7	1896.0	2041.2
12.5°	1562.7	1550.1	1538.8	1469.3	1325.4	1310.3	1353.2	1426.4	1444.1	1502.2	1653.6
15°	1166.4	1136.1	1129.8	1075.5	980.8	994.7	1026.3	1064.1	1065.4	1105.8	1230.8
17.5°	874.8	874.8	884.9	849.5	781.4	775.1	758.7	748.6	733.4	749.8	818.0
20°	679.1	710.7	735.9	715.7	653.9	623.6	592.0	571.8	560.5	561.7	581.9
22.5°	581.9	607.2	640.0	629.9	578.1	539.0	518.8	504.9	496.1	496.1	507.5
25°	532.7	549.1	579.4	574.4	530.2	498.6	482.2	468.3	458.2	457.0	468.3
27.5°	493.6	503.7	523.9	521.3	475.9	455.7	445.6	436.8	430.5	429.2	440.5
30°	458.2	463.3	473.4	469.6	435.5	415.3	411.5	407.7	403.9	405.2	421.6
32.5°	426.7	430.5	436.8	431.7	398.9	381.2	374.9	369.9	366.1	369.9	388.8
35°	391.3	402.7	410.3	407.7	372.4	350.9	337.0	324.4	319.4	323.2	344.6
37.5°	361.0	380.0	390.1	387.5	350.9	325.7	308.0	305.5	305.5	310.5	332.0
40°	349.7	363.5	372.4	368.6	332.0	306.7	296.6	292.9	294.1	299.2	321.9
42.5°	339.6	352.2	354.7	347.1	310.5	294.1	287.8	282.8	285.3	291.6	314.3
45°	330.7	340.8	339.6	328.2	292.9	281.5	281.5	277.7	279.0	284.0	308.0
47.5°	324.4	329.5	326.9	315.6	280.2	271.4	275.2	275.2	277.7	281.5	305.5
50°	314.3	318.1	315.6	305.5	270.1	262.6	266.3	271.4	273.9	277.7	299.2
52.5°	304.2	306.7	305.5	295.4	260.0	255.0	255.0	260.0	265.1	270.1	289.1
55°	294.1	296.6	297.9	290.3	252.5	247.4	246.2	246.2	251.2	258.8	279.0
57.5°	286.5	286.5	289.1	284.0	244.9	238.6	232.3	233.5	239.8	246.2	266.3
60°	277.7	279.0	282.8	277.7	234.8	224.7	219.6	226.0	228.5	234.8	256.3
62.5°	270.1	270.1	272.7	268.9	226.0	215.9	212.1	218.4	218.4	224.7	246.2
65°	263.8	262.6	262.6	261.3	217.1	207.0	204.5	207.0	208.3	214.6	236.1
67.5°	258.8	252.5	252.5	255.0	208.3	198.2	196.9	196.9	198.2	205.8	224.7
70°	247.4	242.4	241.1	249.9	199.4	186.8	186.8	184.3	186.8	190.6	210.8
72.5°	234.8	231.0	229.7	242.4	190.6	174.2	171.7	170.4	171.7	175.5	194.4
75°	218.4	215.9	218.4	237.3	181.8	160.3	156.5	155.3	155.3	156.5	176.7
77.5°	199.4	196.9	215.9	220.9	176.7	143.9	140.1	137.6	135.1	135.1	157.8
80°	176.7	175.5	208.3	186.8	169.2	126.2	119.9	116.1	113.6	112.3	135.1
82.5°	154.0	151.5	178.0	146.4	140.1	103.5	94.7	87.1	83.3	83.3	103.5
85°	126.2	125.0	140.1	107.3	97.2	75.7	63.1	56.8	51.8	51.8	66.9
87.5°	92.1	89.6	87.1	64.4	49.2	34.1	24.0	22.7	20.2	18.9	27.8
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4	5935.4
2.5°	4986.2	5090.9	5289.1	5451.9	5669.1	5843.3	6041.5	6127.3
5°	3720.0	3885.4	4188.4	4447.1	4805.6	5137.6	5516.3	5723.3
7.5°	2668.5	2913.4	3143.2	3466.3	3914.4	4360.0	4849.8	5123.7
10°	2207.8	2432.5	2629.4	2859.1	3205.0	3706.2	4290.6	4599.9
12.5°	1829.1	2071.5	2279.7	2525.9	2816.2	3269.4	3935.9	4295.7
15°	1402.4	1666.3	1916.2	2212.8	2568.8	3086.4	3829.9	4231.3
17.5°	960.6	1243.4	1551.4	1913.7	2342.9	3009.4	3930.9	4425.7
20°	652.6	859.6	1194.2	1623.3	2139.6	2972.8	4153.0	4825.8
22.5°	536.5	629.9	881.1	1350.7	1973.0	3013.2	4514.0	5352.2
25°	492.3	542.8	685.4	1110.8	1845.5	3120.4	5002.6	5946.8
27.5°	464.5	507.5	600.9	939.2	1728.1	3266.9	5597.1	6673.9
30°	448.1	488.5	566.8	850.8	1620.8	3393.1	6108.4	7221.7
32.5°	411.5	441.8	506.2	800.3	1543.8	3495.4	6559.0	7734.2
35°	367.3	403.9	457.0	767.5	1541.3	3543.3	6983.1	8301.0
37.5°	350.9	386.3	425.4	749.8	1556.4	3583.7	7502.0	8943.5
40°	340.8	372.4	403.9	747.3	1569.1	3615.3	8009.4	9612.5
42.5°	332.0	363.5	400.2	729.6	1564.0	3658.2	8458.8	10186.9
45°	329.5	361.0	409.0	703.1	1562.7	3725.1	8816.0	10646.4
47.5°	326.9	374.9	406.5	674.1	1557.7	3866.5	9218.7	11074.3
50°	324.4	400.2	388.8	633.7	1519.8	4107.6	9760.2	11564.1
52.5°	323.2	403.9	369.9	578.1	1451.7	4464.8	10553.0	12245.7
55°	318.1	383.7	337.0	504.9	1353.2	4849.8	11402.5	13047.3
57.5°	306.7	342.1	318.1	433.0	1211.8	5118.7	12029.9	13667.1
60°	334.5	294.1	305.5	396.4	1042.7	5166.7	12057.7	13841.3
62.5°	319.4	267.6	292.9	383.7	924.0	4853.6	11506.0	13633.0
65°	255.0	253.7	281.5	396.4	906.3	4153.0	10574.4	13015.8
67.5°	232.3	243.6	270.1	411.5	917.7	3271.9	9203.6	11574.2
70°	217.1	231.0	255.0	425.4	937.9	2577.7	7409.8	9413.1
72.5°	202.0	213.3	239.8	439.3	924.0	2033.6	5930.4	7250.8
75°	183.0	193.1	218.4	402.7	792.7	1494.6	4712.2	5149.0
77.5°	161.6	170.4	191.9	318.1	595.8	1040.1	3529.4	3711.2
80°	138.9	142.6	159.1	232.3	388.8	622.3	2686.2	2960.1
82.5°	109.8	111.1	121.2	170.4	242.4	397.6	1863.2	2127.0
85°	70.7	73.2	78.3	119.9	162.8	255.0	951.8	1090.6
87.5°	24.0	27.8	27.8	58.1	79.5	141.4	291.6	212.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)