

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: P196685

Luminaire Tested: **NAV-AF-05-D-UNV-SLL-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196685
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-SLL-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 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: 16923.2 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

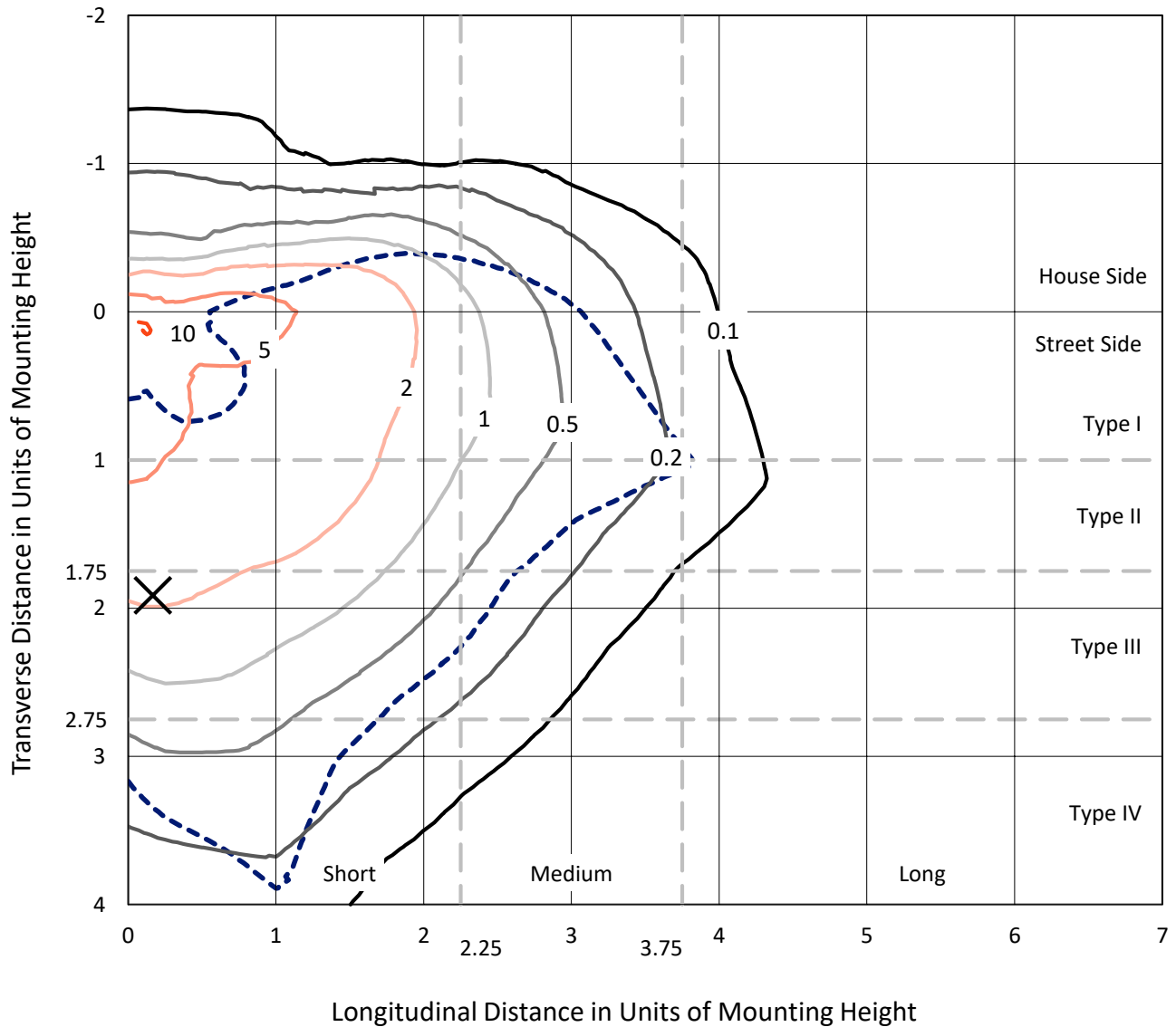
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

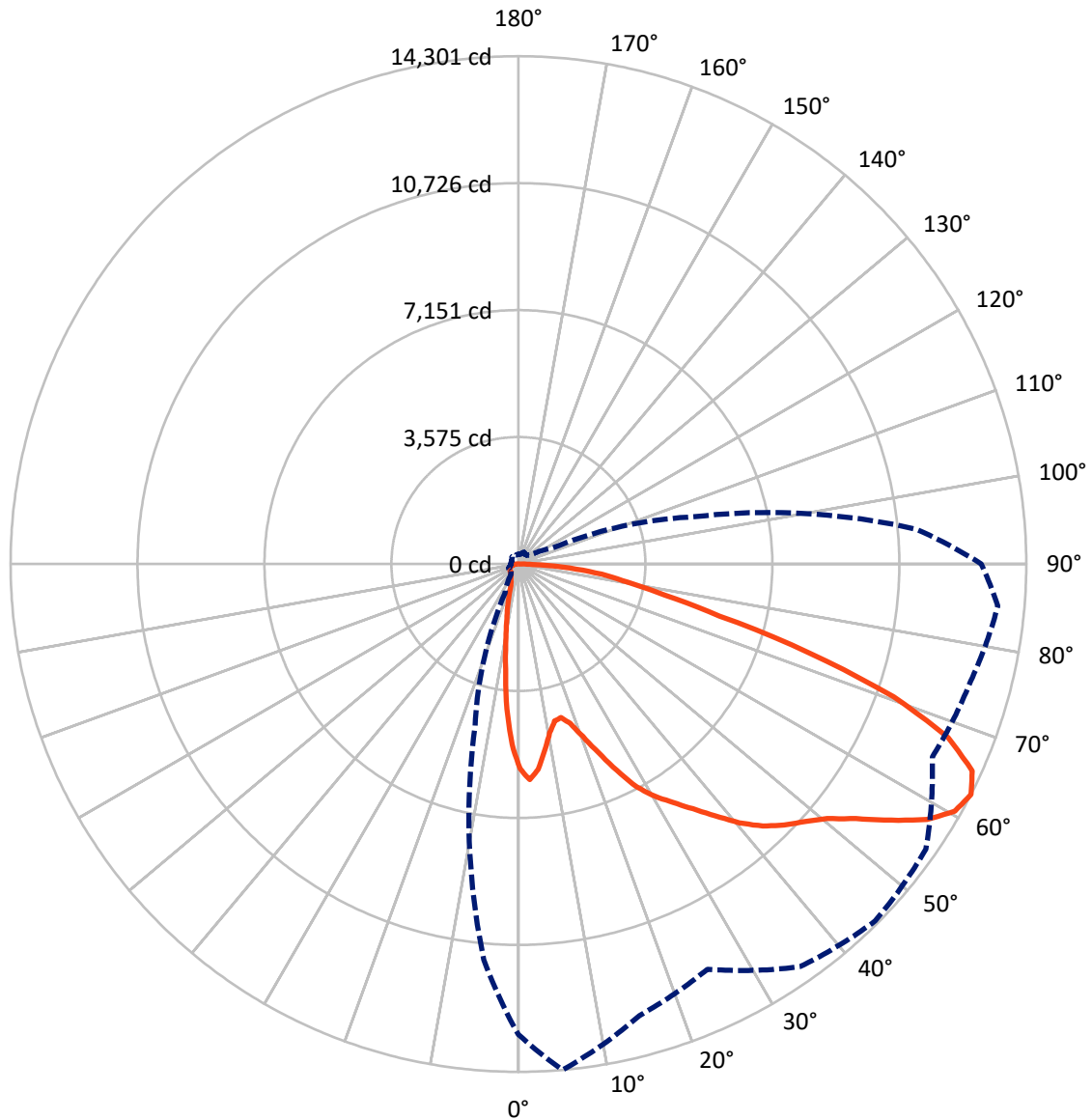
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.6 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	2998.0	0.0	2998.0
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	13925.2	0.0	13925.2
	% Fixture	82.3	0.0	82.3
Total	Lumens	16923.2	0.0	16923.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	419.6	2.5
10°-20°	766.4	4.5
20°-30°	1102.2	6.5
30°-40°	1688.2	10.0
40°-50°	2468.2	14.6
50°-60°	3591.2	21.2
60°-70°	4160.9	24.6
70°-80°	2169.0	12.8
80°-90°	557.6	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°	16923.2	100.0
0°-180°	16923.2	100.0

Coefficient of Utilization



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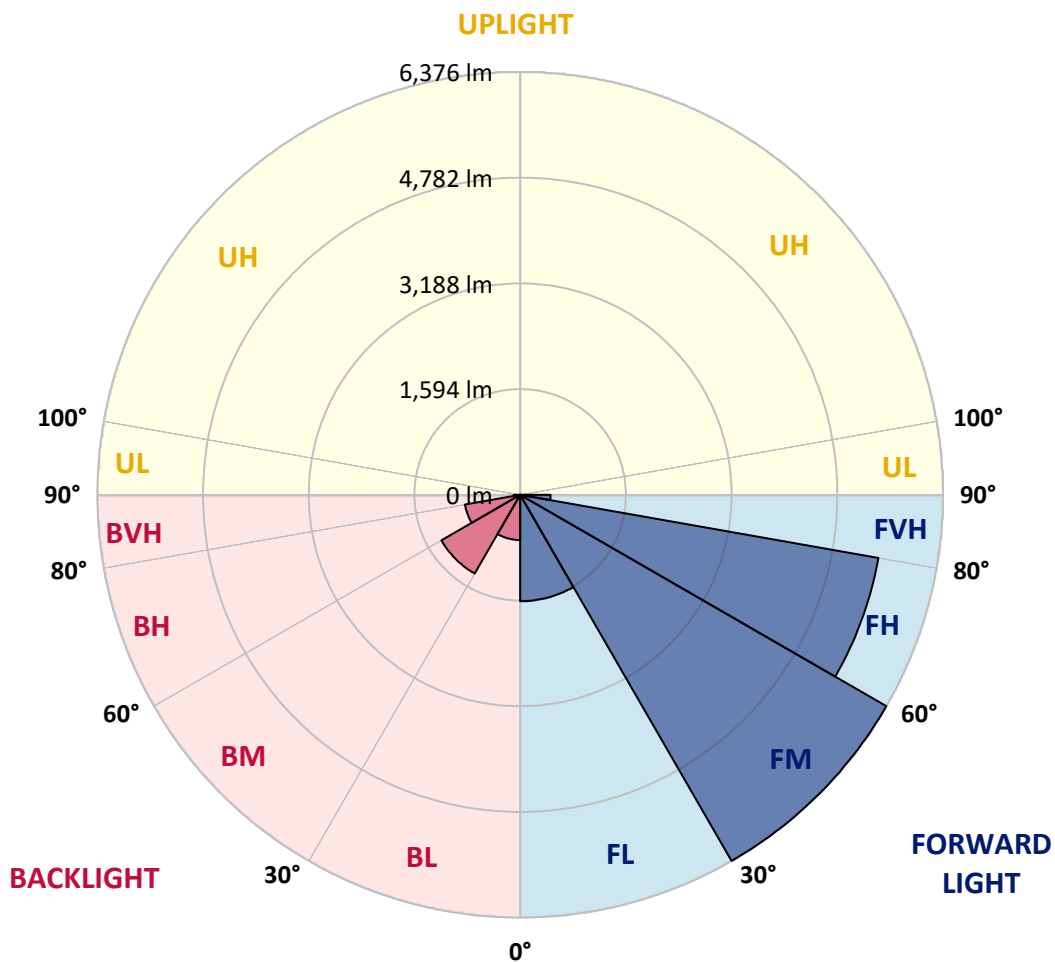
CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1606.1	9.5			
FM	(30°-60°)	6375.9	37.7			
FH	(60°-80°)	5484.6	32.4			G3/7500
FVH	(80°-90°)	458.7	2.7			G3/500
BL	(0°-30°)	682.1	4.0	B2/1000		
BM	(30°-60°)	1371.7	8.1	B2/2500		
BH	(60°-80°)	845.3	5.0	B2/1000		G2/1000
BVH	(80°-90°)	98.9	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°	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4
2.5°	5955.9	6082.4	6227.1	6416.0	6544.9	6596.4	6639.3	6567.0	6497.1	6365.8	6319.1
5°	5563.3	5806.2	6205.1	6584.2	6918.0	7109.4	7168.3	7034.5	6796.5	6452.9	6271.3
7.5°	4980.5	5300.7	5861.4	6419.7	6898.3	7217.3	7240.6	6975.6	6506.9	5943.7	5649.2
10°	4471.2	4833.2	5482.3	6106.8	6613.7	6940.0	6876.2	6504.4	5938.8	5298.3	4965.8
12.5°	4175.6	4537.5	5198.9	5833.3	6310.6	6434.5	6304.5	5991.6	5455.4	4813.6	4478.6
15°	4112.9	4485.9	5098.2	5633.3	5929.0	5849.2	5720.4	5562.1	5180.5	4655.3	4331.4
17.5°	4302.0	4719.1	5232.0	5525.2	5513.0	5321.6	5213.7	5244.2	5179.2	4827.1	4488.5
20°	4690.9	5184.2	5571.9	5495.8	5181.7	4913.0	4850.4	5090.9	5391.5	5257.8	4886.0
22.5°	5202.6	5764.5	6035.7	5580.5	5008.7	4719.1	4706.9	5082.3	5778.0	5909.3	5456.5
25°	5780.5	6435.7	6503.2	5730.2	4990.3	4702.0	4690.9	5214.8	6243.1	6554.8	6095.8
27.5°	6487.3	7113.0	6893.3	5930.1	5071.3	4752.2	4759.7	5440.6	6727.7	7192.7	6816.1
30°	7019.8	7594.1	7133.9	6126.5	5201.3	4840.6	4859.0	5684.8	6989.1	7635.7	7391.6
32.5°	7517.9	8005.1	7364.6	6320.4	5391.5	4971.9	5035.6	5989.0	7303.2	8016.2	7935.2
35°	8068.9	8465.2	7621.1	6527.7	5663.9	5202.6	5294.6	6278.7	7615.0	8396.5	8473.8
37.5°	8693.4	8991.6	7899.6	6820.9	6056.6	5629.6	5681.2	6574.3	7832.0	8817.3	9051.7
40°	9343.8	9581.8	8203.8	7212.4	6627.1	6206.3	6230.8	6953.5	8002.5	9252.9	9612.5
42.5°	9902.0	10087.4	8509.3	7698.3	7282.3	6794.0	6814.8	7362.1	8165.8	9628.5	10061.5
45°	10348.7	10484.8	8797.8	8210.0	7981.7	7527.8	7522.8	7778.0	8384.2	9945.0	10406.4
47.5°	10764.7	10837.0	9119.3	8708.2	8707.0	8472.6	8297.1	8268.8	8675.0	10211.3	10707.0
50°	11240.7	11267.7	9543.8	9211.2	9592.9	9556.1	9232.1	8892.2	9051.7	10510.6	11022.3
52.5°	11903.4	11904.6	10070.1	9702.0	10570.8	10687.3	10310.7	9597.8	9608.8	11093.5	11567.1
55°	12682.5	12736.5	10756.0	10289.8	11594.1	11792.9	11438.3	10435.8	10408.8	12033.4	12450.5
57.5°	13285.0	13570.9	11554.8	11024.8	12549.9	12808.9	12523.0	11304.5	11391.7	13002.7	13179.4
60°	13454.3	14123.0	12351.2	11849.2	13358.6	13747.5	13456.7	12243.1	12353.6	13632.2	13389.2
62.5°	13251.8	14301.0	13162.3	12588.0	13838.3	14211.4	14002.7	12857.9	13137.7	13551.2	13034.6
65°	12651.7	14043.2	13866.5	12902.1	13562.3	13694.8	13639.6	12889.9	13563.5	12785.5	12054.2
67.5°	11250.5	13049.4	13552.4	12230.9	12272.6	12130.3	12058.0	12013.7	13084.9	11549.9	10508.2
70°	9149.9	11212.5	12054.2	10235.9	9926.5	9789.2	9551.1	10140.2	11761.0	9840.7	8648.0
72.5°	7048.0	8578.1	9887.3	7759.7	7116.7	7163.4	6893.3	7753.6	9742.5	7607.5	6602.5
75°	5005.0	5849.2	7892.3	5575.6	4724.1	4721.5	4700.7	5580.5	7687.3	5460.2	4830.8
77.5°	3607.4	4211.2	6183.0	3731.3	3352.2	3395.1	3326.4	3792.7	5992.8	3927.7	3579.3
80°	2877.4	3117.8	3996.3	2488.4	2495.8	2596.3	2581.7	2594.0	3942.4	2844.2	2676.1
82.5°	2067.5	2366.9	3055.3	1906.8	1650.4	1757.1	1777.9	1923.9	2781.6	2011.1	1764.4
85°	1060.2	1443.0	2811.1	1651.6	1032.0	855.3	984.1	1517.8	2416.0	1204.9	860.1
87.5°	206.2	400.0	2060.2	917.8	463.8	234.4	386.6	643.0	1405.0	218.4	106.7
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4
2.5°	6239.4	6082.4	5935.1	5783.0	5665.2	5521.6	5380.5	5257.8	5138.8	5060.3	5084.8
5°	6087.3	5704.4	5360.8	5041.8	4855.3	4630.7	4430.8	4262.6	4132.6	4049.1	4099.5
7.5°	5394.0	4876.1	4423.4	4002.5	3737.5	3446.7	3213.6	3049.1	2948.6	2892.1	2974.2
10°	4684.7	4103.1	3595.1	3157.1	2895.8	2649.1	2438.1	2263.9	2128.9	2065.1	2098.3
12.5°	4176.8	3530.1	2997.6	2703.1	2478.5	2257.8	2039.4	1835.7	1663.8	1585.4	1569.4
15°	3986.6	3222.2	2678.6	2349.7	2126.4	1886.0	1650.4	1432.0	1268.7	1201.3	1186.5
17.5°	4070.0	3155.9	2489.6	2100.6	1776.8	1484.8	1219.7	1013.5	893.3	855.3	858.9
20°	4363.3	3180.4	2337.5	1844.2	1444.2	1098.2	833.1	690.8	639.2	630.7	640.5
22.5°	4765.8	3281.0	2227.0	1623.4	1150.9	798.8	619.6	552.2	538.6	537.4	547.3
25°	5297.0	3477.4	2153.4	1427.0	909.2	633.1	539.8	501.8	490.8	493.3	503.0
27.5°	5922.8	3726.5	2105.5	1257.7	747.3	564.5	504.3	471.1	460.1	462.6	470.0
30°	6494.6	3945.0	2034.4	1130.1	671.2	539.8	484.7	451.6	436.8	436.8	441.7
32.5°	7006.2	4133.9	1951.0	1034.3	601.3	484.7	439.2	413.5	402.5	406.1	408.6
35°	7460.3	4233.2	1886.0	978.0	544.7	446.7	401.2	374.2	359.5	361.9	365.7
37.5°	7906.9	4271.3	1842.9	947.3	504.3	423.3	381.7	359.5	343.5	341.1	339.9
40°	8331.4	4262.6	1802.4	938.6	477.4	406.1	369.3	349.7	333.8	330.1	328.9
42.5°	8698.3	4234.5	1764.4	915.4	458.9	393.9	359.5	342.3	326.3	321.4	319.0
45°	9033.3	4217.3	1722.7	872.4	468.7	389.0	354.6	336.2	321.4	315.3	312.9
47.5°	9405.1	4278.6	1676.1	825.8	466.3	390.2	354.6	333.8	319.0	312.9	310.4
50°	9848.1	4485.9	1618.4	762.0	444.1	417.2	353.4	330.1	316.6	312.9	308.0
52.5°	10473.8	4822.1	1538.7	679.8	426.9	445.4	352.2	324.0	312.9	306.8	300.6
55°	11331.5	5158.3	1435.6	592.6	400.0	425.8	354.6	316.6	304.3	298.2	290.8
57.5°	12034.6	5413.6	1305.5	520.3	375.5	402.5	350.9	308.0	294.5	288.3	282.2
60°	11989.2	5438.2	1181.6	473.6	360.8	361.9	359.5	301.9	285.9	281.1	276.1
62.5°	11246.8	5135.0	1066.3	450.3	349.7	330.1	366.9	294.5	277.3	272.4	268.7
65°	10011.2	4429.6	1004.9	450.3	339.9	312.9	320.2	284.6	268.7	263.9	261.3
67.5°	8444.3	3559.5	947.3	460.1	326.3	300.6	290.8	274.9	260.1	255.2	252.7
70°	6768.3	2801.3	906.8	455.2	314.1	287.2	274.9	261.3	246.6	245.4	243.0
72.5°	5309.4	2250.3	888.4	455.2	295.8	271.2	259.0	249.1	234.4	233.2	229.5
75°	4254.1	1689.5	812.3	446.7	277.3	250.3	239.3	230.6	216.0	217.2	214.7
77.5°	3294.5	1195.1	678.5	402.5	254.0	227.0	218.4	212.3	195.1	196.3	196.3
80°	2576.8	777.9	526.4	333.8	227.0	200.1	193.8	188.9	170.6	172.9	172.9
82.5°	1765.6	462.6	381.7	268.7	195.1	170.6	169.4	161.9	142.4	143.5	146.0
85°	964.4	304.3	254.0	198.8	153.4	138.6	136.2	132.5	114.0	114.0	115.4
87.5°	177.9	163.3	149.6	131.3	103.0	99.4	95.7	99.4	85.9	83.5	83.5
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°	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4
2.5°	5027.1	4942.5	4883.6	4832.0	4708.1	4716.6	4733.8	4758.3	4681.1	4721.5	4771.9
5°	4049.1	3979.2	3926.4	3844.3	3671.2	3609.9	3570.6	3553.4	3438.1	3462.7	3516.6
7.5°	2985.3	2984.1	2965.8	2873.6	2665.1	2538.7	2455.3	2429.5	2358.4	2385.3	2467.5
10°	2101.9	2124.0	2115.4	2033.2	1846.7	1755.9	1737.4	1789.0	1790.2	1842.9	1984.0
12.5°	1519.0	1506.8	1495.8	1428.2	1288.3	1273.6	1315.4	1386.5	1403.8	1460.1	1607.4
15°	1133.8	1104.3	1098.2	1045.4	953.4	967.0	997.5	1034.3	1035.6	1074.9	1196.4
17.5°	850.4	850.4	860.1	825.8	759.6	753.4	737.4	727.6	712.9	728.9	795.1
20°	660.2	690.8	715.3	695.8	635.6	606.2	575.5	555.8	544.7	546.1	565.6
22.5°	565.6	590.2	622.1	612.3	561.9	523.9	504.3	490.8	482.3	482.3	493.3
25°	517.8	533.7	563.2	558.4	515.3	484.7	468.7	455.2	445.4	444.1	455.2
27.5°	479.7	489.6	509.2	506.8	462.6	442.9	433.1	424.6	418.5	417.2	428.2
30°	445.4	450.3	460.1	456.4	423.3	403.7	400.0	396.3	392.7	393.9	409.8
32.5°	414.7	418.5	424.6	419.7	387.8	370.6	364.4	359.5	355.8	359.5	377.9
35°	380.3	391.3	398.8	396.3	361.9	341.1	327.7	315.3	310.4	314.1	335.0
37.5°	350.9	369.3	379.1	376.7	341.1	316.6	299.4	296.9	296.9	301.9	322.8
40°	339.9	353.4	361.9	358.3	322.8	298.2	288.3	284.6	285.9	290.8	312.9
42.5°	330.1	342.3	344.8	337.4	301.9	285.9	279.8	274.9	277.3	283.4	305.5
45°	321.4	331.3	330.1	319.0	284.6	273.5	273.5	270.0	271.2	276.1	299.4
47.5°	315.3	320.2	317.8	306.8	272.4	263.9	267.4	267.4	270.0	273.5	296.9
50°	305.5	309.2	306.8	296.9	262.6	255.2	259.0	263.9	266.3	270.0	290.8
52.5°	295.8	298.2	296.9	287.2	252.7	247.9	247.9	252.7	257.7	262.6	281.1
55°	285.9	288.3	289.5	282.2	245.4	240.5	239.3	239.3	244.2	251.6	271.2
57.5°	278.5	278.5	281.1	276.1	238.0	231.9	225.7	227.0	233.2	239.3	259.0
60°	270.0	271.2	274.9	270.0	228.3	218.4	213.5	219.6	222.2	228.3	249.1
62.5°	262.6	262.6	265.1	261.3	219.6	209.8	206.2	212.3	212.3	218.4	239.3
65°	256.4	255.2	255.2	254.0	211.1	201.2	198.8	201.2	202.4	208.5	229.5
67.5°	251.6	245.4	245.4	247.9	202.4	192.7	191.4	191.4	192.7	200.1	218.4
70°	240.5	235.6	234.4	243.0	193.8	181.6	181.6	179.1	181.6	185.3	204.9
72.5°	228.3	224.5	223.3	235.6	185.3	169.4	166.8	165.6	166.8	170.6	188.9
75°	212.3	209.8	212.3	230.6	176.7	155.8	152.2	150.9	150.9	152.2	171.7
77.5°	193.8	191.4	209.8	214.7	171.7	139.9	136.2	133.8	131.3	131.3	153.4
80°	171.7	170.6	202.4	181.6	164.4	122.7	116.6	112.9	110.5	109.3	131.3
82.5°	149.6	147.3	172.9	142.4	136.2	100.6	92.0	84.6	81.0	81.0	100.6
85°	122.7	121.5	136.2	104.4	94.5	73.6	61.4	55.1	50.3	50.3	65.0
87.5°	89.6	87.1	84.6	62.6	47.8	33.1	23.3	22.1	19.6	18.3	27.0
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4	5769.4
2.5°	4846.7	4948.6	5141.2	5299.5	5510.5	5679.9	5872.4	5955.9
5°	3616.1	3776.8	4071.2	4322.9	4671.3	4994.0	5362.1	5563.3
7.5°	2594.0	2832.0	3055.3	3369.4	3805.0	4238.1	4714.2	4980.5
10°	2146.1	2364.5	2555.9	2779.2	3115.4	3602.5	4170.7	4471.2
12.5°	1777.9	2013.5	2216.0	2455.3	2737.5	3178.1	3825.8	4175.6
15°	1363.2	1619.7	1862.7	2151.0	2497.0	3000.0	3722.8	4112.9
17.5°	933.7	1208.6	1508.0	1860.1	2277.4	2925.2	3820.9	4302.0
20°	634.4	835.7	1160.8	1577.9	2079.8	2889.6	4036.9	4690.9
22.5°	521.5	612.3	856.5	1312.9	1917.8	2928.9	4387.9	5202.6
25°	478.5	527.6	666.3	1079.8	1793.9	3033.1	4862.7	5780.5
27.5°	451.6	493.3	584.1	912.9	1679.8	3175.5	5440.6	6487.3
30°	435.6	474.8	550.8	827.0	1575.5	3298.2	5937.5	7019.8
32.5°	400.0	429.5	492.0	777.9	1500.6	3397.6	6375.6	7517.9
35°	357.1	392.7	444.1	746.0	1498.2	3444.3	6787.8	8068.9
37.5°	341.1	375.5	413.5	728.9	1512.9	3483.5	7292.2	8693.4
40°	331.3	361.9	392.7	726.3	1525.1	3514.3	7785.5	9343.8
42.5°	322.8	353.4	389.0	709.2	1520.3	3556.0	8222.3	9902.0
45°	320.2	350.9	397.6	683.4	1519.0	3621.0	8569.5	10348.7
47.5°	317.8	364.4	395.1	655.2	1514.2	3758.4	8960.9	10764.7
50°	315.3	389.0	377.9	616.0	1477.3	3992.8	9487.3	11240.7
52.5°	314.1	392.7	359.5	561.9	1411.1	4340.0	10258.0	11903.4
55°	309.2	373.0	327.7	490.8	1315.4	4714.2	11083.7	12682.5
57.5°	298.2	332.4	309.2	420.8	1178.0	4975.5	11693.5	13285.0
60°	325.1	285.9	296.9	385.2	1013.5	5022.2	11720.5	13454.3
62.5°	310.4	260.1	284.6	373.0	898.2	4718.0	11184.4	13251.8
65°	247.9	246.6	273.5	385.2	880.9	4036.9	10278.8	12651.7
67.5°	225.7	236.8	262.6	400.0	892.0	3180.4	8946.1	11250.5
70°	211.1	224.5	247.9	413.5	911.7	2505.6	7202.6	9149.9
72.5°	196.3	207.4	233.2	426.9	898.2	1976.7	5764.5	7048.0
75°	177.9	187.7	212.3	391.3	770.6	1452.8	4580.4	5005.0
77.5°	157.0	165.6	186.5	309.2	579.2	1011.0	3430.7	3607.4
80°	134.9	138.6	154.6	225.7	377.9	605.0	2611.1	2877.4
82.5°	106.7	107.9	117.8	165.6	235.6	386.6	1811.1	2067.5
85°	68.8	71.1	76.1	116.6	158.3	247.9	925.2	1060.2
87.5°	23.3	27.0	27.0	56.5	77.3	137.4	283.4	206.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)