

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: P196701

Luminaire Tested: **NAV-AF-03-D-UNV-SLL-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196701
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-03-D-UNV-SLL-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 1200mA 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: 16973.4 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

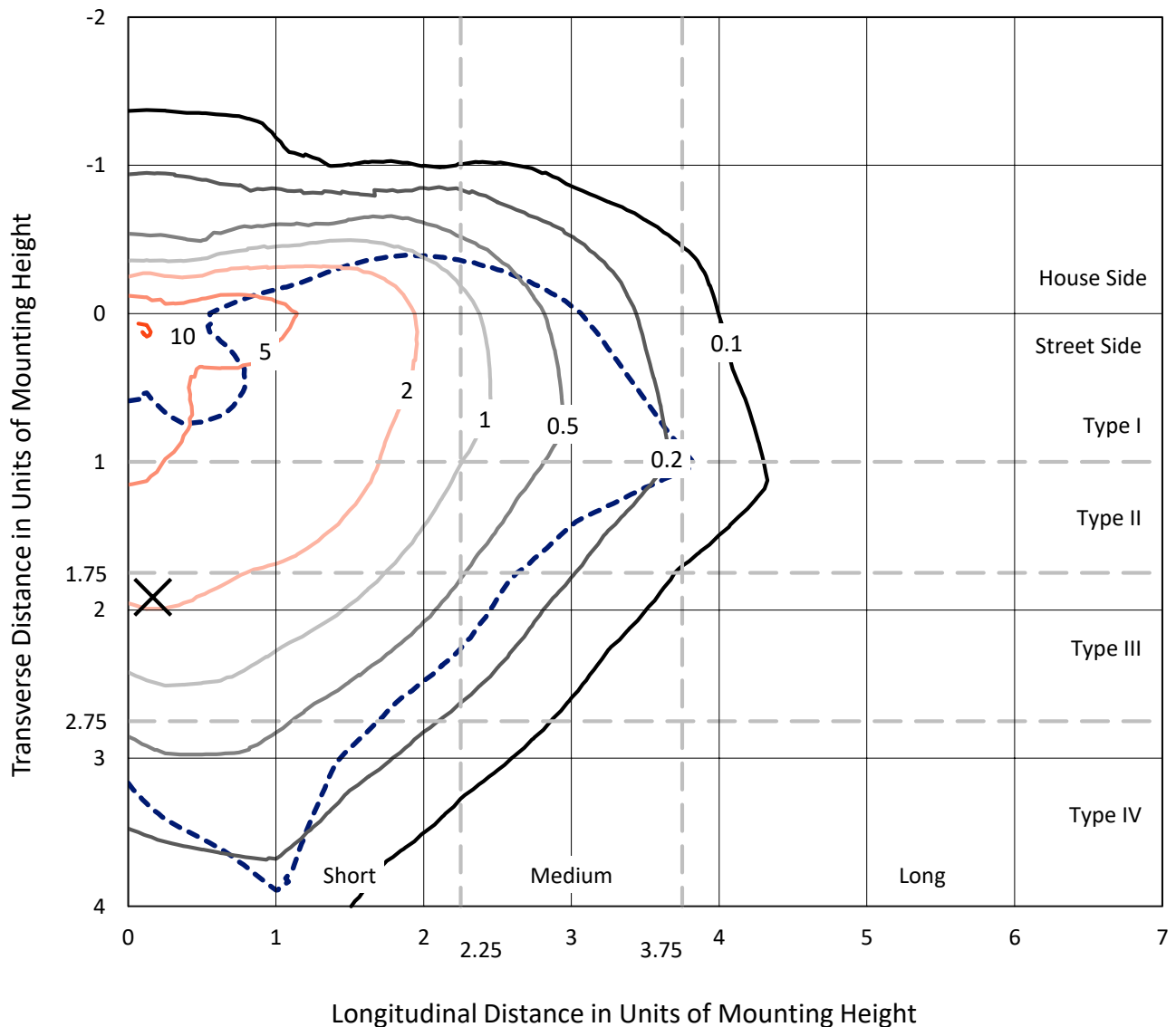
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

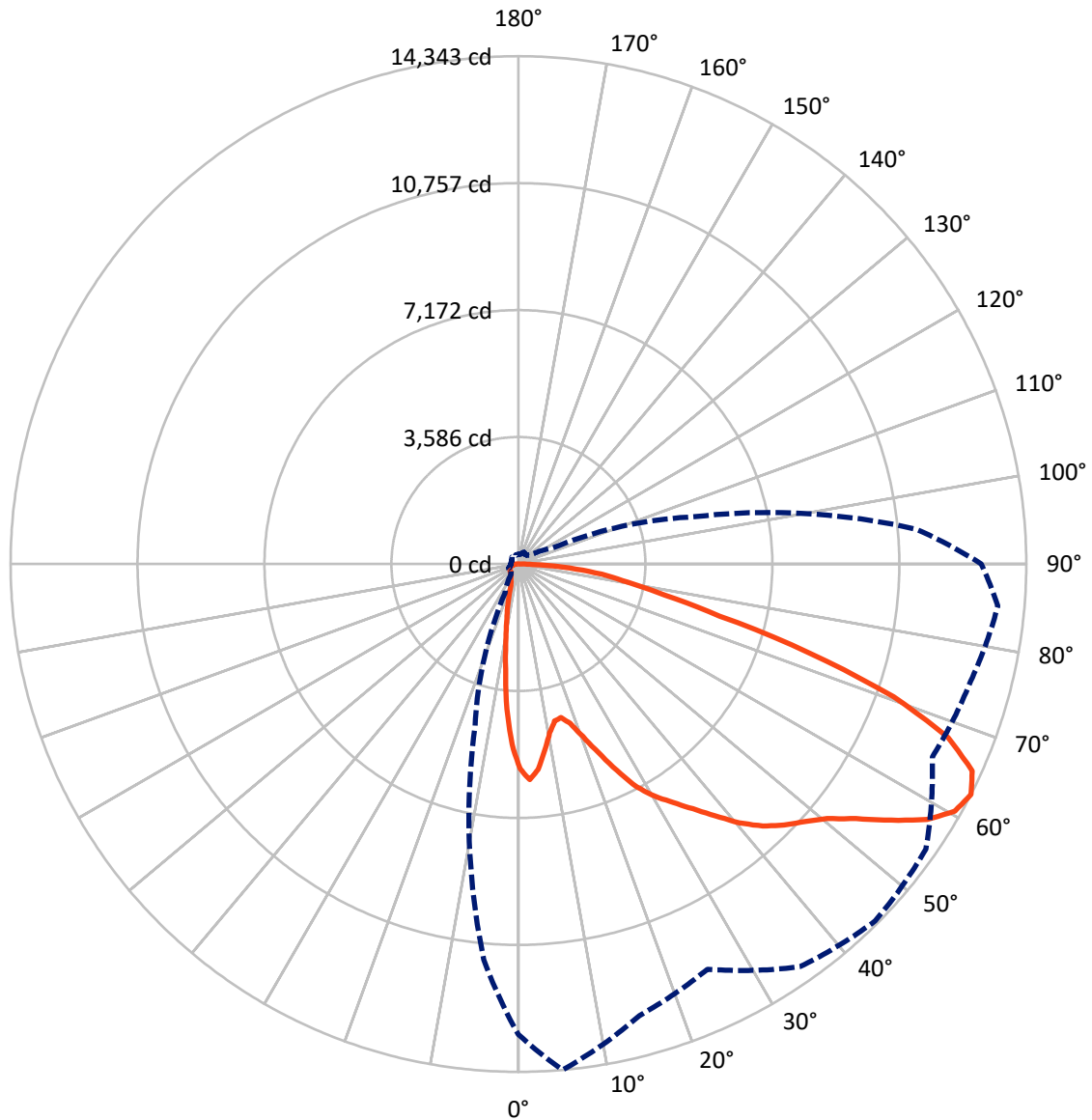
× Max cd
 - - - 1/2 Max cd



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	3006.9	0.0	3006.9
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	13966.5	0.0	13966.5
	% Fixture	82.3	0.0	82.3
Total	Lumens	16973.4	0.0	16973.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	420.8	2.5
10°-20°	768.6	4.5
20°-30°	1105.5	6.5
30°-40°	1693.2	10.0
40°-50°	2475.5	14.6
50°-60°	3601.9	21.2
60°-70°	4173.2	24.6
70°-80°	2175.4	12.8
80°-90°	559.2	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°	16973.4	100.0
0°-180°	16973.4	100.0



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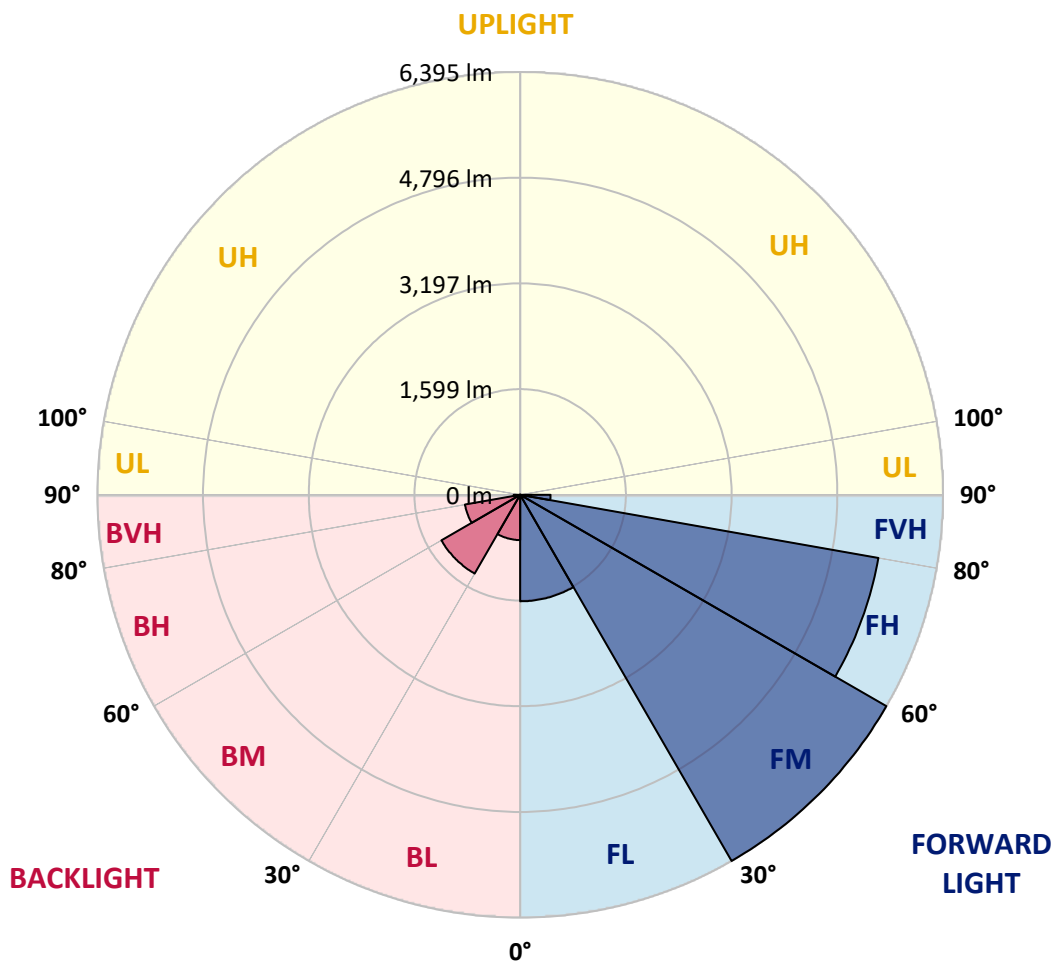
CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-7030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1610.9	9.5			
FM (30°-60°)	6394.8	37.7			
FH (60°-80°)	5500.8	32.4			G3/7500
FVH (80°-90°)	460.0	2.7			G3/500
BL (0°-30°)	684.1	4.0	B2/1000		
BM (30°-60°)	1375.7	8.1	B2/2500		
BH (60°-80°)	847.8	5.0	B2/1000		G2/1000
BVH (80°-90°)	99.2	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°	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6
2.5°	5973.6	6100.4	6245.6	6435.2	6564.4	6616.0	6659.2	6586.4	6516.3	6384.7	6337.9
5°	5579.9	5823.5	6223.5	6603.7	6938.5	7130.5	7189.6	7055.4	6816.6	6472.1	6289.9
7.5°	4995.3	5316.4	5878.9	6438.8	6918.9	7238.8	7262.1	6996.3	6526.2	5961.3	5665.9
10°	4484.5	4847.7	5498.6	6125.0	6633.2	6960.6	6896.7	6523.8	5956.4	5314.1	4980.5
12.5°	4187.9	4550.9	5214.3	5850.7	6329.3	6453.6	6323.2	6009.4	5471.4	4827.8	4491.8
15°	4125.2	4499.3	5113.5	5650.1	5946.6	5866.5	5737.3	5578.6	5195.9	4669.0	4344.2
17.5°	4314.7	4733.1	5247.5	5541.6	5529.4	5337.5	5229.0	5259.8	5194.6	4841.4	4501.8
20°	4704.8	5199.5	5588.4	5512.1	5197.1	4927.6	4864.8	5106.0	5407.6	5273.4	4900.5
22.5°	5218.0	5781.7	6053.6	5597.1	5023.5	4733.1	4720.9	5097.4	5795.2	5926.9	5472.8
25°	5797.7	6454.8	6522.6	5747.1	5005.0	4715.8	4704.8	5230.3	6261.6	6574.2	6113.9
27.5°	6506.5	7134.2	6913.8	5947.7	5086.3	4766.3	4773.7	5456.7	6747.8	7214.2	6836.4
30°	7040.6	7616.6	7155.1	6144.7	5216.8	4854.9	4873.4	5701.7	7009.8	7658.4	7413.6
32.5°	7540.3	8028.8	7386.5	6339.1	5407.6	4986.7	5050.6	6006.8	7325.0	8040.0	7958.7
35°	8092.9	8490.3	7643.7	6547.2	5680.7	5218.0	5310.3	6297.2	7637.6	8421.3	8498.9
37.5°	8719.2	9018.3	7923.1	6841.3	6074.6	5646.3	5698.0	6593.9	7855.3	8843.6	9078.6
40°	9371.5	9610.2	8228.2	7233.8	6646.8	6224.7	6249.3	6974.1	8026.4	9280.5	9641.0
42.5°	9931.4	10117.3	8534.7	7721.2	7304.0	6814.2	6835.2	7384.0	8190.1	9657.0	10091.4
45°	10379.4	10515.9	8823.9	8234.4	8005.4	7550.2	7545.2	7801.2	8409.1	9974.5	10437.2
47.5°	10796.6	10869.2	9146.3	8733.9	8732.8	8497.7	8321.7	8293.5	8700.8	10241.5	10738.8
50°	11274.1	11301.2	9572.1	9238.6	9621.4	9584.4	9259.5	8918.7	9078.6	10541.9	11055.1
52.5°	11938.6	11939.9	10100.0	9730.8	10602.2	10719.1	10341.3	9626.3	9637.3	11126.4	11601.4
55°	12720.2	12774.3	10788.0	10320.3	11628.6	11827.9	11472.2	10466.8	10439.7	12069.1	12487.6
57.5°	13324.3	13611.2	11589.1	11057.5	12587.2	12846.9	12560.1	11338.1	11425.5	13041.3	13218.5
60°	13494.2	14164.9	12387.9	11884.5	13398.3	13788.3	13496.7	12279.5	12390.3	13672.7	13428.9
62.5°	13291.2	14343.3	13201.4	12625.4	13879.4	14253.5	14044.3	12896.1	13176.6	13591.5	13073.3
65°	12689.4	14084.9	13907.7	12940.4	13602.6	13735.4	13680.1	12928.1	13603.8	12823.5	12090.1
67.5°	11284.0	13088.0	13592.7	12267.3	12309.1	12166.3	12093.7	12049.4	13123.7	11584.2	10539.3
70°	9177.0	11245.8	12090.1	10266.2	9956.0	9818.2	9579.6	10170.2	11795.9	9869.9	8673.8
72.5°	7069.0	8603.6	9916.7	7782.7	7137.8	7184.6	6913.8	7776.5	9771.5	7630.1	6622.2
75°	5019.9	5866.5	7915.7	5592.1	4738.0	4735.7	4714.6	5597.1	7710.1	5476.4	4845.1
77.5°	3618.1	4223.6	6201.3	3742.4	3362.1	3405.3	3336.3	3804.0	6010.6	3939.4	3589.8
80°	2885.9	3127.1	4008.2	2495.8	2503.1	2604.0	2589.3	2601.6	3954.1	2852.6	2684.1
82.5°	2073.6	2373.9	3064.4	1912.5	1655.3	1762.4	1783.2	1929.6	2789.9	2017.0	1769.7
85°	1063.3	1447.2	2819.4	1656.5	1035.0	857.8	986.9	1522.3	2423.2	1208.5	862.7
87.5°	206.7	401.2	2066.3	920.5	465.2	235.0	387.7	644.8	1409.1	219.1	107.1
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°	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6
2.5°	6258.0	6100.4	5952.8	5800.1	5681.9	5538.1	5396.5	5273.4	5154.0	5075.2	5099.9
5°	6105.3	5721.4	5376.7	5056.8	4869.6	4644.5	4443.9	4275.4	4144.9	4061.1	4111.7
7.5°	5410.0	4890.7	4436.6	4014.4	3748.5	3457.0	3223.1	3058.1	2957.3	2900.8	2983.1
10°	4698.7	4115.4	3605.9	3166.5	2904.3	2656.9	2445.3	2270.6	2135.3	2071.2	2104.5
12.5°	4189.2	3540.6	3006.5	2711.2	2485.9	2264.4	2045.4	1841.0	1668.8	1590.0	1574.0
15°	3998.5	3231.7	2686.5	2356.7	2132.7	1891.5	1655.3	1436.2	1272.6	1204.8	1190.1
17.5°	4082.2	3165.2	2497.0	2106.8	1782.0	1489.1	1223.2	1016.5	895.9	857.8	861.5
20°	4376.3	3190.0	2344.3	1849.6	1448.4	1101.5	835.7	692.8	641.2	632.6	642.5
22.5°	4779.9	3290.8	2233.7	1628.2	1154.4	801.2	621.4	553.8	540.3	538.9	548.9
25°	5312.7	3487.7	2159.8	1431.3	911.9	635.1	541.5	503.3	492.2	494.7	504.6
27.5°	5940.4	3737.5	2111.9	1261.4	749.5	566.1	505.8	472.5	461.5	464.0	471.4
30°	6513.9	3956.6	2040.4	1133.4	673.1	541.5	486.1	452.9	438.1	438.1	443.0
32.5°	7027.1	4146.1	1956.8	1037.4	603.0	486.1	440.6	414.7	403.6	407.3	409.8
35°	7482.4	4245.9	1891.5	980.8	546.4	448.0	402.4	375.3	360.5	363.1	366.8
37.5°	7930.4	4283.9	1848.4	950.1	505.8	424.6	382.7	360.5	344.6	342.1	340.9
40°	8356.2	4275.4	1807.8	941.5	478.8	407.3	370.4	350.7	334.8	331.0	329.9
42.5°	8724.2	4247.0	1769.7	918.1	460.3	395.1	360.5	343.4	327.3	322.5	320.0
45°	9060.1	4229.8	1727.8	874.9	470.2	390.2	355.6	337.2	322.5	316.3	313.8
47.5°	9433.0	4291.3	1681.1	828.1	467.6	391.3	355.6	334.8	320.0	313.8	311.4
50°	9877.2	4499.3	1623.3	764.3	445.4	418.5	354.4	331.0	317.5	313.8	308.8
52.5°	10504.9	4836.5	1543.3	681.8	428.3	446.8	353.2	324.9	313.8	307.7	301.5
55°	11365.1	5173.8	1439.9	594.4	401.2	427.1	355.6	317.5	305.2	299.1	291.6
57.5°	12070.3	5429.6	1309.5	521.8	376.6	403.6	352.0	308.8	295.3	289.2	283.1
60°	12024.8	5454.3	1185.1	475.1	361.8	363.1	360.5	302.7	286.7	281.8	276.9
62.5°	11280.3	5150.4	1069.4	451.7	350.7	331.0	367.9	295.3	278.2	273.2	269.6
65°	10041.0	4442.7	1007.9	451.7	340.9	313.8	321.2	285.5	269.6	264.6	262.1
67.5°	8469.4	3570.1	950.1	461.5	327.3	301.5	291.6	275.7	260.9	256.0	253.5
70°	6788.4	2809.6	909.5	456.6	315.1	288.0	275.7	262.1	247.4	246.2	243.6
72.5°	5325.1	2257.1	891.0	456.6	296.6	271.9	259.7	249.8	235.0	233.9	230.1
75°	4266.7	1694.6	814.7	448.0	278.2	251.1	240.0	231.4	216.6	217.9	215.3
77.5°	3304.3	1198.7	680.5	403.6	254.8	227.7	219.1	212.9	195.7	196.8	196.8
80°	2584.4	780.2	527.9	334.8	227.7	200.6	194.5	189.6	171.1	173.5	173.5
82.5°	1770.9	464.0	382.7	269.6	195.7	171.1	169.8	162.5	142.8	144.0	146.4
85°	967.3	305.2	254.8	199.4	153.8	139.1	136.6	132.9	114.5	114.5	115.7
87.5°	178.4	163.7	150.1	131.6	103.4	99.7	96.0	99.7	86.1	83.7	83.7
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6
2.5°	5042.0	4957.1	4898.1	4846.3	4722.0	4730.7	4747.9	4772.6	4695.0	4735.7	4786.1
5°	4061.1	3991.0	3938.1	3855.6	3682.1	3620.7	3581.2	3564.0	3448.3	3473.0	3527.1
7.5°	2994.2	2992.9	2974.5	2882.3	2673.0	2546.3	2462.6	2436.7	2365.4	2392.4	2474.8
10°	2108.1	2130.2	2121.7	2039.3	1852.2	1761.0	1742.5	1794.2	1795.5	1848.4	1989.9
12.5°	1523.5	1511.3	1500.1	1432.5	1292.2	1277.5	1319.3	1390.7	1408.0	1464.5	1612.1
15°	1137.2	1107.6	1101.5	1048.6	956.2	969.7	1000.5	1037.4	1038.7	1078.1	1199.8
17.5°	852.9	852.9	862.7	828.1	761.7	755.6	739.5	729.8	715.0	731.1	797.5
20°	662.1	692.8	717.5	697.8	637.5	607.9	577.2	557.4	546.4	547.6	567.4
22.5°	567.4	591.9	624.0	614.1	563.7	525.5	505.8	492.2	483.7	483.7	494.7
25°	519.3	535.4	564.9	560.0	516.9	486.1	470.2	456.6	446.8	445.4	456.6
27.5°	481.2	491.0	510.7	508.3	464.0	444.2	434.5	425.8	419.7	418.5	429.5
30°	446.8	451.7	461.5	457.8	424.6	405.0	401.2	397.4	393.8	395.1	411.1
32.5°	415.9	419.7	425.8	420.8	388.9	371.7	365.5	360.5	356.8	360.5	379.0
35°	381.6	392.6	400.0	397.4	363.1	342.1	328.6	316.3	311.4	315.1	336.0
37.5°	352.0	370.4	380.2	377.8	342.1	317.5	300.3	297.8	297.8	302.7	323.6
40°	340.9	354.4	363.1	359.4	323.6	299.1	289.2	285.5	286.7	291.6	313.8
42.5°	331.0	343.4	345.8	338.4	302.7	286.7	280.6	275.7	278.2	284.3	306.5
45°	322.5	332.2	331.0	320.0	285.5	274.5	274.5	270.8	271.9	276.9	300.3
47.5°	316.3	321.2	318.7	307.7	273.2	264.6	268.2	268.2	270.8	274.5	297.8
50°	306.5	310.1	307.7	297.8	263.4	256.0	259.7	264.6	267.0	270.8	291.6
52.5°	296.6	299.1	297.8	288.0	253.5	248.6	248.6	253.5	258.4	263.4	281.8
55°	286.7	289.2	290.4	283.1	246.2	241.3	240.0	240.0	244.8	252.3	271.9
57.5°	279.3	279.3	281.8	276.9	238.7	232.6	226.5	227.7	233.9	240.0	259.7
60°	270.8	271.9	275.7	270.8	228.9	219.1	214.1	220.2	222.8	228.9	249.8
62.5°	263.4	263.4	265.8	262.1	220.2	210.5	206.7	212.9	212.9	219.1	240.0
65°	257.2	256.0	256.0	254.8	211.6	201.8	199.4	201.8	203.1	209.2	230.1
67.5°	252.3	246.2	246.2	248.6	203.1	193.2	192.0	192.0	193.2	200.6	219.1
70°	241.3	236.3	235.0	243.6	194.5	182.1	182.1	179.6	182.1	185.8	205.5
72.5°	228.9	225.2	224.0	236.3	185.8	169.8	167.3	166.2	167.3	171.1	189.6
75°	212.9	210.5	212.9	231.4	177.2	156.2	152.6	151.4	151.4	152.6	172.3
77.5°	194.5	192.0	210.5	215.3	172.3	140.3	136.6	134.2	131.6	131.6	153.8
80°	172.3	171.1	203.1	182.1	164.9	123.0	116.9	113.2	110.8	109.5	131.6
82.5°	150.1	147.7	173.5	142.8	136.6	100.9	92.4	84.9	81.2	81.2	100.9
85°	123.0	121.9	136.6	104.6	94.7	73.9	61.5	55.4	50.5	50.5	65.2
87.5°	89.8	87.4	84.9	62.8	48.0	33.3	23.4	22.2	19.6	18.5	27.1
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°	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6	5786.6
2.5°	4861.2	4963.2	5156.5	5315.3	5526.9	5696.8	5889.9	5973.6
5°	3626.8	3788.0	4083.3	4335.6	4685.1	5008.8	5378.0	5579.9
7.5°	2601.6	2840.4	3064.4	3379.4	3816.3	4250.7	4728.2	4995.3
10°	2152.4	2371.5	2563.4	2787.4	3124.7	3613.2	4183.0	4484.5
12.5°	1783.2	2019.5	2222.6	2462.6	2745.5	3187.4	3837.1	4187.9
15°	1367.3	1624.4	1868.2	2157.4	2504.4	3009.0	3733.8	4125.2
17.5°	936.6	1212.2	1512.4	1865.7	2284.1	2933.9	3832.3	4314.7
20°	636.2	838.1	1164.1	1582.6	2086.0	2898.2	4048.9	4704.8
22.5°	523.1	614.1	859.0	1316.8	1923.5	2937.6	4400.9	5218.0
25°	479.9	529.2	668.2	1083.0	1799.3	3042.3	4877.2	5797.7
27.5°	452.9	494.7	585.8	915.6	1684.8	3184.9	5456.7	6506.5
30°	436.9	476.3	552.6	829.5	1580.2	3308.1	5955.1	7040.6
32.5°	401.2	430.7	493.6	780.2	1505.1	3407.7	6394.5	7540.3
35°	358.2	393.8	445.4	748.2	1502.7	3454.4	6808.1	8092.9
37.5°	342.1	376.6	414.7	731.1	1517.4	3493.9	7313.9	8719.2
40°	332.2	363.1	393.8	728.5	1529.7	3524.6	7808.5	9371.5
42.5°	323.6	354.4	390.2	711.3	1524.8	3566.4	8246.7	9931.4
45°	321.2	352.0	398.7	685.5	1523.5	3631.7	8595.0	10379.4
47.5°	318.7	365.5	396.3	657.2	1518.6	3769.6	8987.5	10796.6
50°	316.3	390.2	379.0	617.8	1481.7	4004.6	9515.5	11274.1
52.5°	315.1	393.8	360.5	563.7	1415.2	4352.9	10288.4	11938.6
55°	310.1	374.1	328.6	492.2	1319.3	4728.2	11116.6	12720.2
57.5°	299.1	333.5	310.1	422.1	1181.4	4990.3	11728.2	13324.3
60°	326.1	286.7	297.8	386.4	1016.5	5037.1	11755.3	13494.2
62.5°	311.4	260.9	285.5	374.1	900.9	4731.9	11217.5	13291.2
65°	248.6	247.4	274.5	386.4	883.6	4048.9	10309.2	12689.4
67.5°	226.5	237.5	263.4	401.2	894.8	3190.0	8972.8	11284.0
70°	211.6	225.2	248.6	414.7	914.4	2513.0	7224.0	9177.0
72.5°	196.8	208.0	233.9	428.3	900.9	1982.6	5781.7	7069.0
75°	178.4	188.3	212.9	392.6	772.9	1457.1	4594.1	5019.9
77.5°	157.6	166.2	187.1	310.1	580.8	1014.0	3440.9	3618.1
80°	135.4	139.1	155.0	226.5	379.0	606.7	2618.8	2885.9
82.5°	107.1	108.2	118.1	166.2	236.3	387.7	1816.4	2073.6
85°	69.0	71.3	76.3	116.9	158.8	248.6	927.9	1063.3
87.5°	23.4	27.1	27.1	56.6	77.6	137.8	284.3	206.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)