

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: P196727

Luminaire Tested: **NAV-AF-05-D-UNV-SLR-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196727
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-SLR-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 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: 28176.8 lumens
Efficiency: N/A
Efficacy: 88.1 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

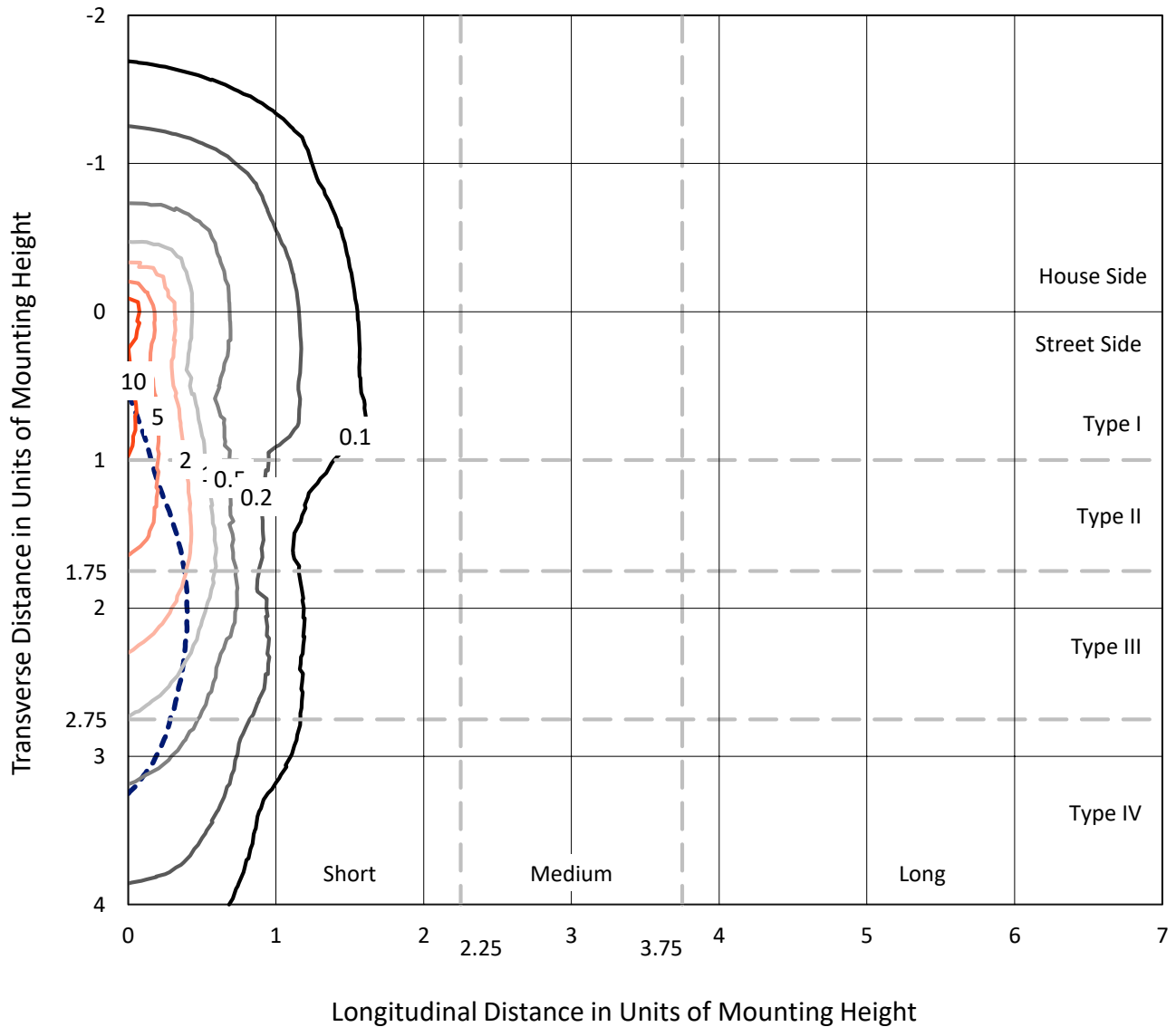
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

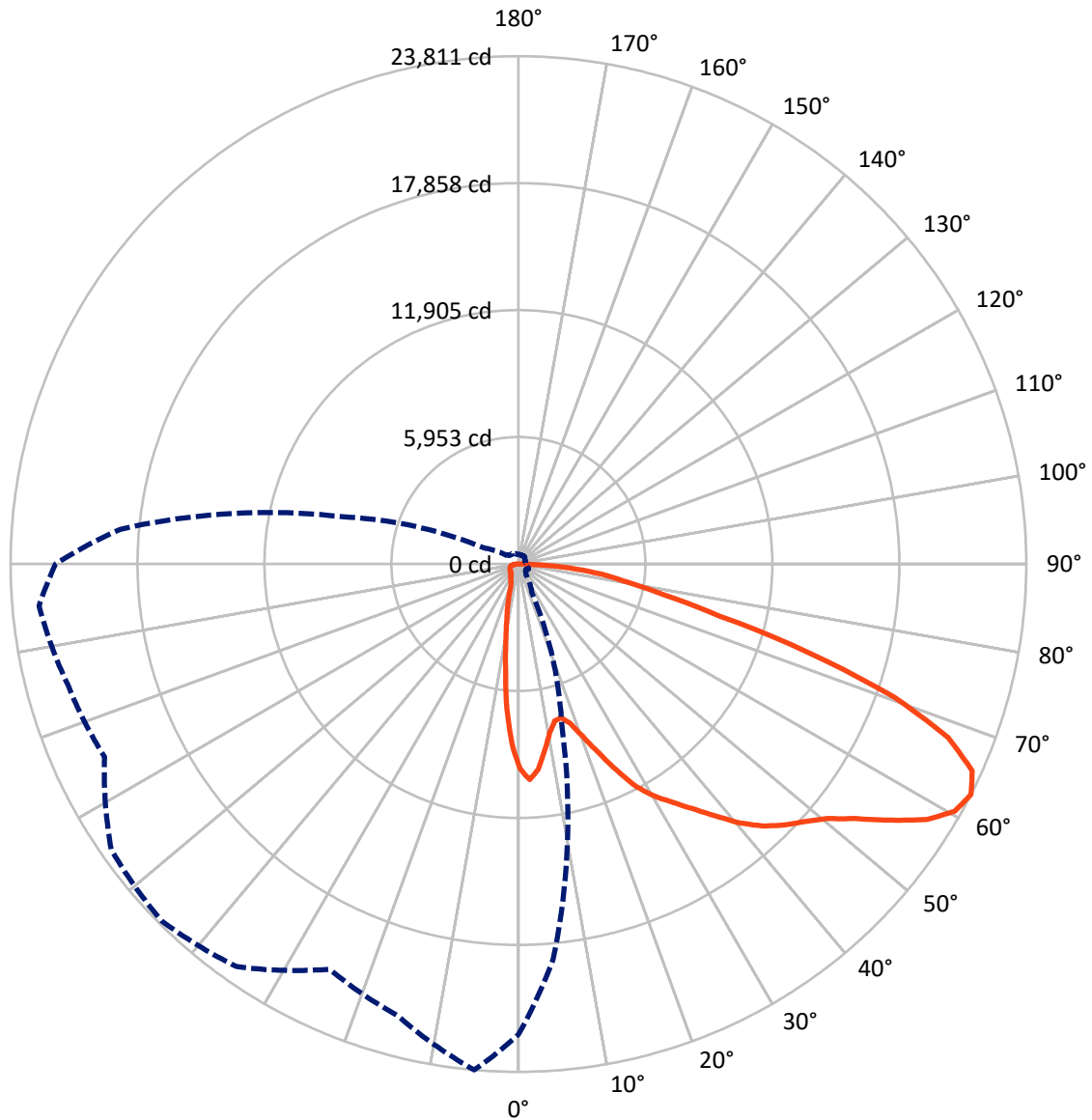
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.4 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	4991.6	0.0	4991.6
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	23185.3	0.0	23185.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	28176.8	0.0	28176.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	698.6	2.5
10°-20°	1276.0	4.5
20°-30°	1835.2	6.5
30°-40°	2810.8	10.0
40°-50°	4109.4	14.6
50°-60°	5979.3	21.2
60°-70°	6927.8	24.6
70°-80°	3611.4	12.8
80°-90°	928.3	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°	28176.8	100.0
0°-180°	28176.8	100.0



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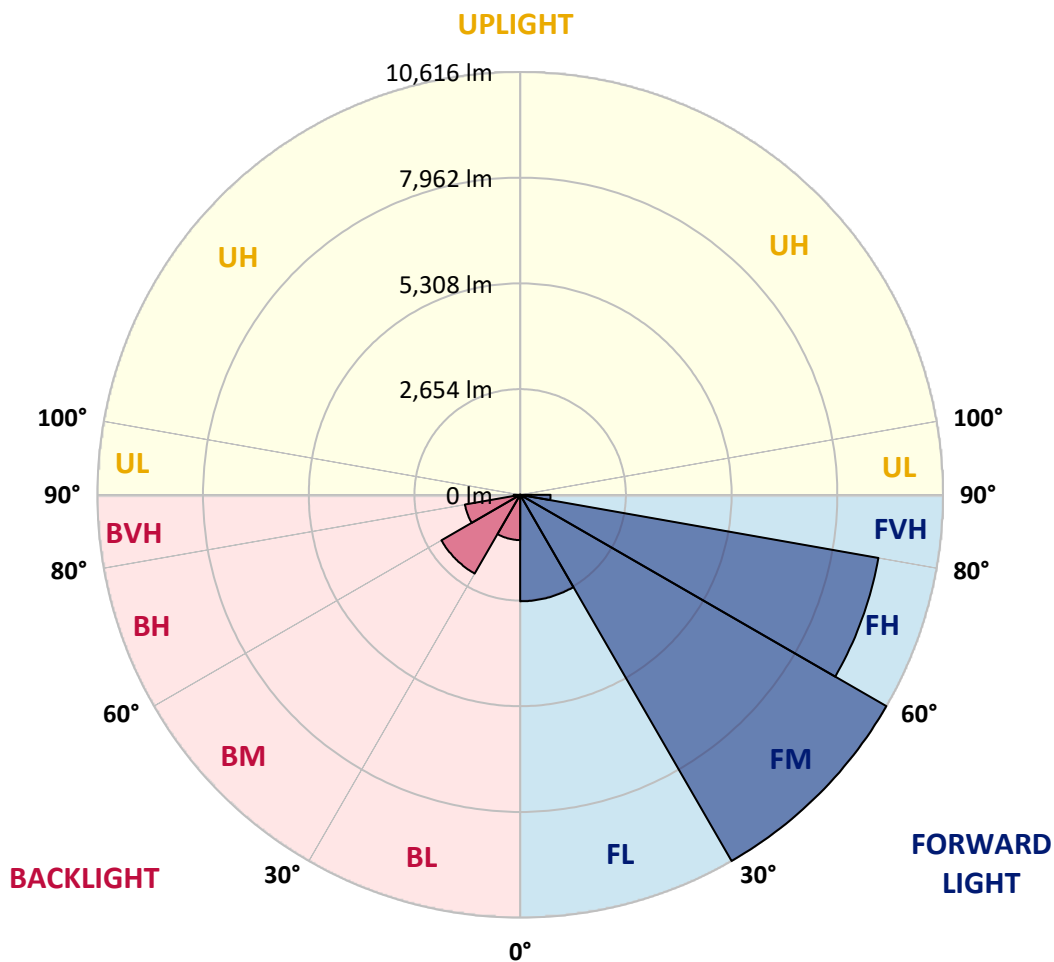
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2674.1	9.5			
FM	(30°-60°)	10615.7	37.7			
FH	(60°-80°)	9131.7	32.4			G4/12000
FVH	(80°-90°)	763.7	2.7			G5
BL	(0°-30°)	1135.7	4.0	B3/2500		
BM	(30°-60°)	2283.8	8.1	B2/2500		
BH	(60°-80°)	1407.5	5.0	B3/2500		G3/2500
BVH	(80°-90°)	164.6	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°	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1
2.5°	9916.6	9777.7	9456.9	9174.9	8823.6	8560.0	8239.3	8069.8	7945.2	7861.3	7793.9
5°	9262.9	8927.8	8314.8	7777.6	7197.4	6778.6	6288.3	6020.6	5855.2	5765.3	5724.4
7.5°	8292.4	7849.0	7056.4	6335.3	5610.0	5087.0	4715.2	4318.8	4108.3	3971.6	3926.6
10°	7444.6	6944.1	5998.2	5187.1	4627.3	4255.5	3936.8	3573.1	3303.5	3068.5	2980.7
12.5°	6952.2	6370.1	5291.3	4557.9	4087.9	3689.5	3352.5	2960.3	2676.3	2431.1	2337.2
15°	6848.1	6198.4	4995.2	4157.5	3581.3	3101.3	2696.7	2269.8	1991.9	1789.6	1724.2
17.5°	7162.7	6361.8	4870.4	3791.8	3097.2	2510.8	2012.3	1554.6	1323.9	1213.6	1187.0
20°	7810.3	6721.4	4811.2	3462.9	2627.2	1932.7	1391.3	1056.2	941.9	909.1	907.1
22.5°	8662.2	7305.6	4876.6	3193.2	2186.0	1426.0	1019.4	868.3	821.3	802.8	802.8
25°	9624.4	8096.3	5050.2	2986.8	1797.9	1109.3	878.5	796.7	757.9	739.5	741.7
27.5°	10801.2	9058.5	5287.2	2796.8	1520.1	972.4	821.3	751.8	713.0	694.6	696.6
30°	11687.8	9886.0	5491.5	2623.2	1377.0	917.3	790.6	725.3	682.4	655.8	653.7
32.5°	12517.3	10615.3	5657.0	2498.5	1295.3	819.2	715.0	666.1	629.3	598.6	592.5
35°	13434.6	11301.8	5734.6	2494.5	1242.2	739.5	653.7	594.5	557.8	523.1	516.9
37.5°	14474.4	12141.4	5800.0	2519.0	1213.6	688.5	625.2	567.9	537.3	502.6	494.4
40°	15557.2	12962.6	5851.1	2539.4	1209.4	653.7	602.7	551.6	520.9	484.2	476.1
42.5°	16486.7	13689.9	5920.5	2531.2	1180.9	647.6	588.4	537.3	508.7	471.9	461.7
45°	17230.4	14268.1	6028.8	2529.3	1137.9	661.9	584.3	533.1	498.4	459.7	451.5
47.5°	17923.0	14919.8	6257.6	2521.0	1091.0	657.8	606.7	529.2	494.4	455.6	449.5
50°	18715.7	15796.2	6647.9	2459.8	1025.6	629.3	647.6	525.0	484.2	449.5	443.4
52.5°	19818.9	17079.3	7226.0	2349.4	935.7	598.6	653.7	523.1	467.8	437.1	429.1
55°	21116.2	18454.2	7849.0	2190.1	817.1	545.4	621.0	514.8	451.5	418.8	406.6
57.5°	22119.2	19469.6	8284.2	1961.2	700.8	514.8	553.6	496.5	431.0	398.4	388.2
60°	22401.2	19514.5	8361.9	1687.5	641.5	494.4	476.1	541.4	414.7	380.0	369.8
62.5°	22064.2	18621.7	7855.2	1495.4	621.0	473.9	433.1	516.9	398.4	363.7	353.5
65°	21065.0	17114.0	6721.4	1466.8	641.5	455.6	410.6	412.7	382.1	347.3	337.1
67.5°	18732.1	14895.4	5295.4	1485.3	666.1	437.1	394.3	376.0	363.7	333.0	320.7
70°	15234.4	11992.3	4171.7	1517.9	688.5	412.7	373.8	351.4	341.2	308.4	302.3
72.5°	11734.9	9597.9	3291.2	1495.4	710.9	388.2	345.3	326.9	314.6	284.0	277.8
75°	8333.3	7626.4	2418.9	1283.0	651.7	353.5	312.6	296.2	286.0	253.4	251.3
77.5°	6006.3	5712.2	1683.3	964.3	514.8	310.6	275.8	261.4	255.3	218.6	218.6
80°	4790.8	4347.4	1007.2	629.3	376.0	257.5	230.9	224.7	218.6	181.8	183.9
82.5°	3442.4	3015.4	643.5	392.2	275.8	196.1	179.7	177.8	167.5	134.8	134.8
85°	1765.1	1540.4	412.7	263.6	194.1	126.6	118.5	114.4	108.2	83.8	83.8
87.5°	343.2	471.9	228.8	128.7	94.0	44.9	44.9	38.8	44.9	30.6	32.7
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°	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1
2.5°	7922.6	7881.8	7853.2	7839.0	8045.2	8131.1	8229.1	8370.1	8466.1	8425.2	8556.0
5°	5916.5	5945.1	6010.5	6112.6	6400.6	6537.5	6625.4	6741.9	6825.5	6741.9	6880.7
7.5°	4045.1	4087.9	4226.9	4437.3	4784.7	4937.9	4968.4	4970.5	4952.1	4815.3	4909.2
10°	2978.6	2892.8	2923.4	3074.7	3385.2	3522.1	3536.4	3499.6	3493.4	3438.3	3544.6
12.5°	2308.5	2190.1	2120.6	2145.1	2378.0	2490.3	2508.8	2529.3	2612.9	2639.4	2770.3
15°	1722.3	1661.0	1609.8	1587.4	1740.6	1828.5	1838.8	1887.7	1975.5	2000.1	2112.4
17.5°	1211.4	1227.8	1254.4	1264.5	1374.9	1432.2	1415.8	1415.8	1430.1	1423.9	1487.2
20°	925.4	958.2	1009.2	1058.2	1158.3	1191.0	1150.2	1099.1	1066.5	1050.1	1064.4
22.5°	817.1	839.6	872.3	935.7	1019.4	1035.8	982.7	941.9	911.1	894.9	896.9
25°	757.9	780.4	807.0	858.0	929.6	937.8	888.8	862.2	837.6	821.3	817.1
27.5°	706.9	721.2	737.5	770.2	843.7	847.9	815.2	798.8	782.4	770.2	766.1
30°	659.9	666.1	672.2	704.8	760.0	766.1	749.7	741.7	735.5	727.3	727.3
32.5°	598.6	606.7	617.0	645.6	698.7	706.9	696.6	690.5	680.3	676.2	670.1
35°	525.0	545.4	567.9	602.7	659.9	664.0	651.7	633.3	608.8	602.7	598.6
37.5°	494.4	498.4	527.0	567.9	627.1	631.3	614.9	584.3	565.9	567.9	572.1
40°	473.9	480.0	496.5	537.3	596.5	602.7	588.4	565.9	547.5	549.6	555.7
42.5°	457.6	465.8	476.1	502.6	561.8	574.0	570.0	549.6	531.2	535.3	543.4
45°	449.5	455.6	455.6	473.9	531.2	549.6	551.6	535.3	520.9	525.0	535.3
47.5°	445.3	445.3	439.2	453.5	510.8	529.2	533.1	525.0	516.9	520.9	531.2
50°	439.2	431.0	424.9	437.1	494.4	510.8	514.8	508.7	512.8	520.9	527.0
52.5°	420.8	412.7	412.7	420.8	478.0	494.4	496.5	492.3	500.5	510.8	520.9
55°	398.4	398.4	400.4	408.6	470.0	482.2	480.0	476.1	484.2	496.5	506.6
57.5°	377.9	376.0	386.1	396.3	459.7	467.8	463.8	463.8	470.0	480.0	490.3
60°	365.7	355.5	363.7	380.0	449.5	457.6	451.5	449.5	459.7	467.8	476.1
62.5°	353.5	343.2	349.3	365.7	435.2	441.3	437.1	437.1	447.4	453.5	461.7
65°	335.1	330.9	335.1	351.4	423.0	424.9	424.9	426.9	435.2	439.2	447.4
67.5°	318.7	318.7	320.7	337.1	412.7	408.6	408.6	418.8	420.8	424.9	433.1
70°	298.3	302.3	302.3	322.8	404.5	390.2	392.2	400.4	404.5	408.6	410.6
72.5°	275.8	277.8	281.9	308.4	392.2	371.8	373.8	380.0	382.1	388.2	390.2
75°	251.3	253.4	259.5	294.2	384.0	353.5	349.3	353.5	357.5	361.6	359.6
77.5°	222.7	226.8	232.9	286.0	357.5	349.3	318.7	322.8	326.9	326.9	324.8
80°	187.9	194.1	204.4	273.8	302.3	337.1	284.0	286.0	288.0	288.0	284.0
82.5°	141.0	153.2	167.5	226.8	237.0	288.0	245.2	249.2	243.1	239.1	237.0
85°	91.9	102.1	122.6	157.4	173.6	226.8	202.2	204.4	192.1	190.0	190.0
87.5°	36.8	38.8	55.1	79.6	104.3	141.0	145.1	149.1	138.9	138.9	143.0
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1
2.5°	8754.2	8958.3	9193.4	9432.4	9628.6	9881.9	10127.0	10388.5	10521.3	10598.9	10817.5
5°	7097.3	7377.1	7710.2	8084.1	8394.6	8925.7	9497.8	10135.2	10441.6	10744.0	11316.0
7.5°	5076.8	5350.5	5738.8	6222.9	6664.2	7364.9	8118.7	8980.9	9405.8	9896.1	10833.9
10°	3769.3	4059.4	4410.8	4821.4	5256.6	5985.9	6831.7	7800.0	8267.8	8821.6	9888.0
12.5°	3056.3	3395.4	3759.1	4126.8	4500.7	4991.0	5877.6	6954.3	7456.8	8014.6	9083.0
15°	2384.1	2747.8	3140.0	3540.4	3912.2	4459.9	5364.8	6637.6	7211.6	7751.1	8625.5
17.5°	1687.5	2030.7	2472.0	2958.2	3497.6	4145.2	5254.5	6776.6	7473.3	8037.0	8623.4
20°	1150.2	1387.1	1828.5	2404.6	3070.6	3891.9	5295.4	7264.7	8135.1	8754.2	8976.8
22.5°	919.3	1031.7	1330.0	1916.3	2702.8	3708.0	5462.9	7935.0	9085.1	9838.9	9620.4
25°	835.7	898.8	1054.2	1513.9	2376.0	3585.5	5789.7	8819.5	10149.5	10913.6	10394.6
27.5°	784.5	839.6	939.7	1244.1	2094.1	3505.7	6204.5	9861.4	11348.8	11975.9	11201.6
30°	751.8	807.0	898.8	1117.5	1881.6	3387.2	6568.1	10813.5	12306.9	12713.4	11636.7
32.5°	688.5	731.4	807.0	1001.1	1722.3	3248.3	6882.8	11665.4	13211.8	13346.8	12159.8
35°	623.1	668.0	743.6	907.1	1628.3	3140.0	7048.2	12421.2	14108.7	13980.0	12678.7
37.5°	598.6	635.4	704.8	839.6	1577.1	3068.5	7111.5	13164.8	15071.0	14680.8	13040.3
40°	582.3	614.9	676.2	794.8	1562.9	3001.2	7097.3	13871.8	16004.7	15406.1	13324.2
42.5°	570.0	598.6	655.8	764.0	1524.0	2937.8	7050.3	14482.7	16752.4	16031.2	13596.0
45°	559.7	590.4	647.6	780.4	1452.6	2868.4	7021.6	15040.4	17326.5	16558.2	13959.6
47.5°	555.7	590.4	649.6	776.3	1374.9	2790.7	7123.8	15659.4	17827.0	17001.7	14443.8
50°	549.6	588.4	694.6	739.5	1268.7	2694.7	7469.1	16396.9	18352.1	17500.0	15071.0
52.5°	539.3	586.2	741.7	710.9	1131.8	2561.9	8028.9	17438.8	19259.1	18470.5	15998.5
55°	527.0	590.4	708.9	666.1	986.7	2390.3	8588.7	18866.9	20730.1	20035.4	17330.4
57.5°	512.8	584.3	670.1	625.2	866.2	2173.7	9013.6	20037.5	21943.5	21649.4	18967.0
60°	502.6	598.6	602.7	600.6	788.7	1967.4	9054.5	19961.8	22292.9	22697.4	20568.6
62.5°	490.3	610.9	549.6	582.3	749.7	1775.4	8549.9	18725.8	21702.5	22562.6	21874.1
65°	473.9	533.1	520.9	565.9	749.7	1673.2	7375.1	16668.6	20070.2	21287.7	22583.1
67.5°	457.6	484.2	500.5	543.4	766.1	1577.1	5926.7	14059.7	17496.0	19230.5	21786.3
70°	435.2	457.6	478.0	523.1	757.9	1509.8	4664.1	11269.0	14398.8	16384.6	19581.9
72.5°	414.7	431.0	451.5	492.3	757.9	1479.2	3746.8	8839.9	10993.2	12666.4	16221.1
75°	384.0	398.4	416.8	461.7	743.6	1352.4	2813.2	7082.9	8043.2	9091.3	12799.1
77.5°	353.5	363.7	377.9	423.0	670.1	1129.7	1989.8	5485.4	5959.3	6539.6	9977.9
80°	314.6	322.8	333.0	377.9	555.7	876.5	1295.3	4290.3	4455.7	4735.7	6564.1
82.5°	269.7	281.9	284.0	324.8	447.4	635.4	770.2	2939.8	2937.8	3348.5	4631.4
85°	220.6	226.8	230.9	255.3	330.9	423.0	506.6	1605.8	1432.2	2006.2	4022.6
87.5°	165.5	159.3	165.5	171.6	218.6	249.2	271.7	296.2	177.8	363.7	2339.2
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1	9606.1
2.5°	10934.0	11054.6	10983.1	10897.2	10682.8	10368.0	10127.0	9916.6
5°	11712.4	11935.1	11836.9	11518.3	10962.6	10331.3	9667.4	9262.9
7.5°	11614.3	12055.5	12016.8	11485.6	10688.9	9759.2	8825.6	8292.4
10°	10829.8	11448.8	11555.0	11011.5	10167.8	9127.9	8047.3	7444.6
12.5°	9975.8	10496.7	10713.3	10507.0	9712.3	8656.1	7554.9	6952.2
15°	9260.9	9524.3	9738.9	9871.7	9379.3	8488.6	7469.1	6848.1
17.5°	8731.7	8680.5	8860.4	9179.1	9199.5	8711.2	7857.3	7162.7
20°	8476.4	8075.9	8180.0	8627.4	9150.5	9277.1	8631.6	7810.3
22.5°	8462.0	7836.8	7857.3	8339.4	9291.4	10049.3	9597.9	8662.2
25°	8682.7	7810.3	7828.7	8308.7	9540.6	10827.7	10715.4	9624.4
27.5°	9058.5	7924.7	7912.4	8443.5	9873.6	11477.4	11843.1	10801.2
30°	9465.1	8090.2	8059.5	8660.1	10200.6	11877.8	12643.9	11687.8
32.5°	9971.8	8384.3	8278.1	8976.8	10523.3	12261.9	13328.3	12517.3
35°	10453.9	8815.5	8662.2	9430.3	10868.6	12689.0	14094.5	13434.6
37.5°	10946.2	9459.0	9373.2	10084.1	11356.9	13152.6	14970.9	14474.4
40°	11577.5	10374.1	10333.3	11034.1	12008.5	13659.3	15953.6	15557.2
42.5°	12257.8	11346.7	11311.9	12125.0	12817.6	14167.9	16795.3	16486.7
45°	12950.4	12525.5	12533.6	13289.5	13669.5	14648.1	17457.2	17230.4
47.5°	13767.5	13814.6	14106.7	14496.9	14498.9	15183.3	18043.5	17923.0
50°	14805.4	15371.3	15910.7	15971.9	15336.6	15890.2	18760.6	18715.7
52.5°	15980.1	17167.2	17794.3	17600.2	16153.8	16766.7	19820.9	19818.9
55°	17375.5	19044.6	19635.0	19304.0	17132.4	17908.6	21206.0	21116.2
57.5°	18821.9	20850.6	21326.7	20895.5	18356.1	19238.7	22595.3	22119.2
60°	20384.8	22405.2	22889.5	22241.8	19729.0	20564.6	23514.6	22401.2
62.5°	21408.3	23314.4	23661.7	23040.6	20958.8	21915.0	23810.9	22064.2
65°	21461.5	22709.6	22801.7	22580.9	21481.9	23087.7	23381.8	21065.0
67.5°	20002.7	20076.3	20196.8	20433.7	20364.4	22564.7	21727.0	18732.1
70°	16883.2	15902.4	16298.9	16527.6	17042.5	20070.2	18668.7	15234.4
72.5°	12909.5	11477.4	11926.8	11849.2	12919.8	16462.3	14282.4	11734.9
75°	9291.4	7826.7	7861.3	7865.5	9283.2	13140.4	9738.9	8333.3
77.5°	6314.8	5538.5	5652.8	5581.4	6212.7	10294.5	7011.5	6006.3
80°	4318.8	4298.4	4323.0	4155.4	4143.1	6654.0	5191.2	4790.8
82.5°	3203.4	2960.3	2925.5	2747.8	3174.7	5087.0	3940.9	3442.4
85°	2527.1	1638.5	1423.9	1718.1	2749.8	4680.4	2402.5	1765.1
87.5°	1070.5	643.5	390.2	772.3	1528.1	3430.2	666.1	343.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)