

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: P196591

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-7030-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196591  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-01-D-UNV-SL3-7030-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4052.4 lumens  
Efficiency: N/A  
Efficacy: 92.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B0 - U0 - G1

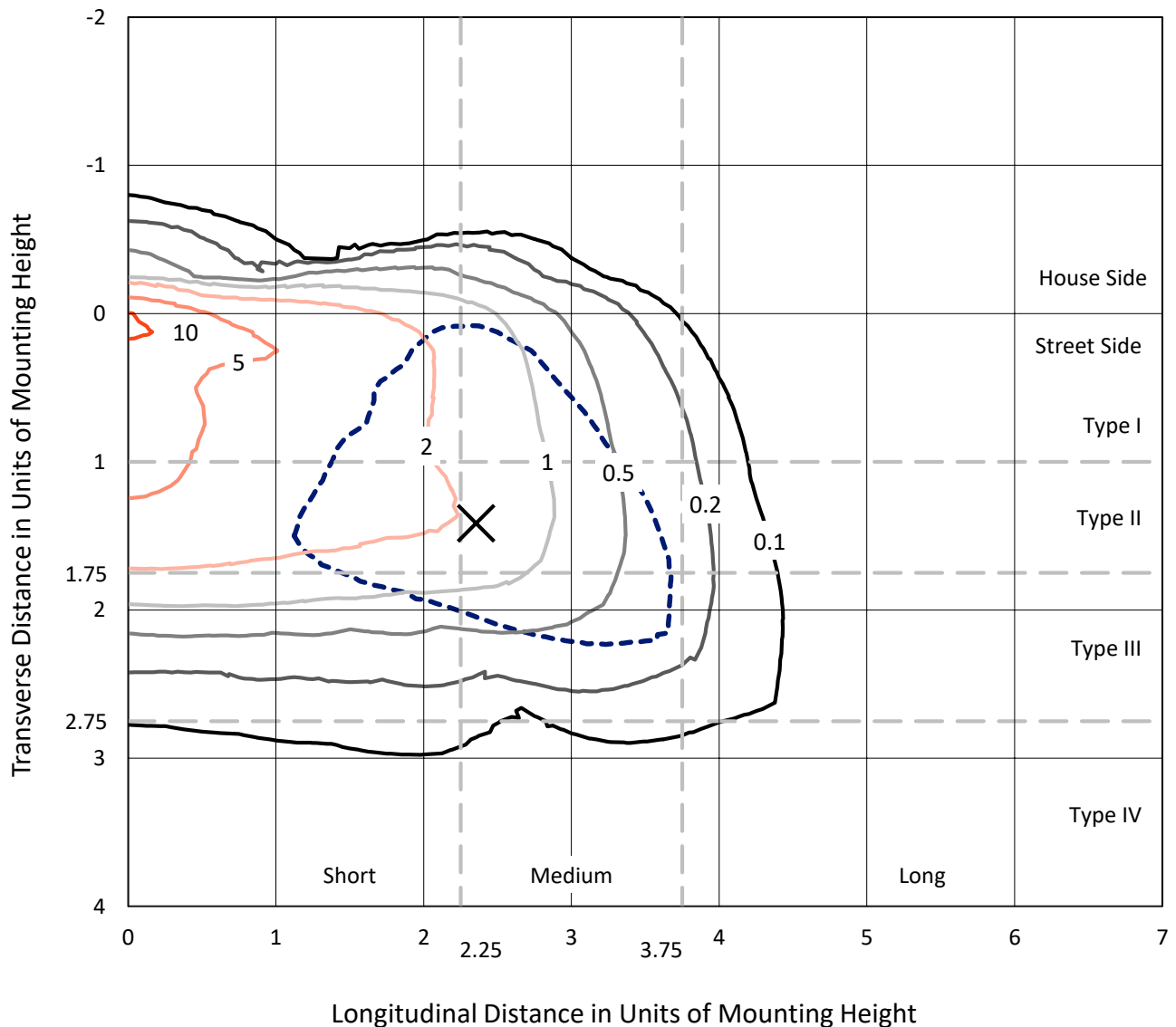
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

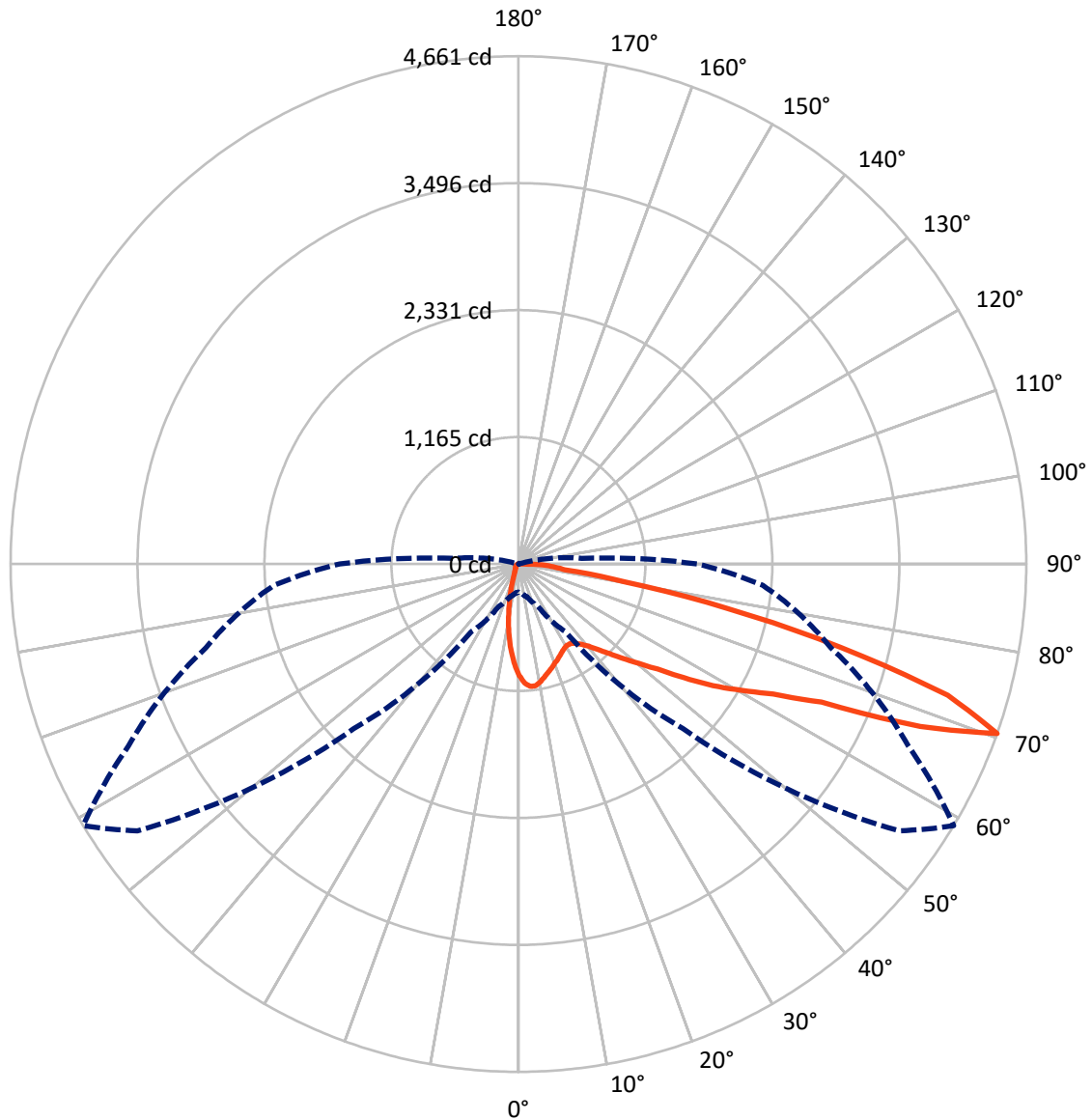
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.9 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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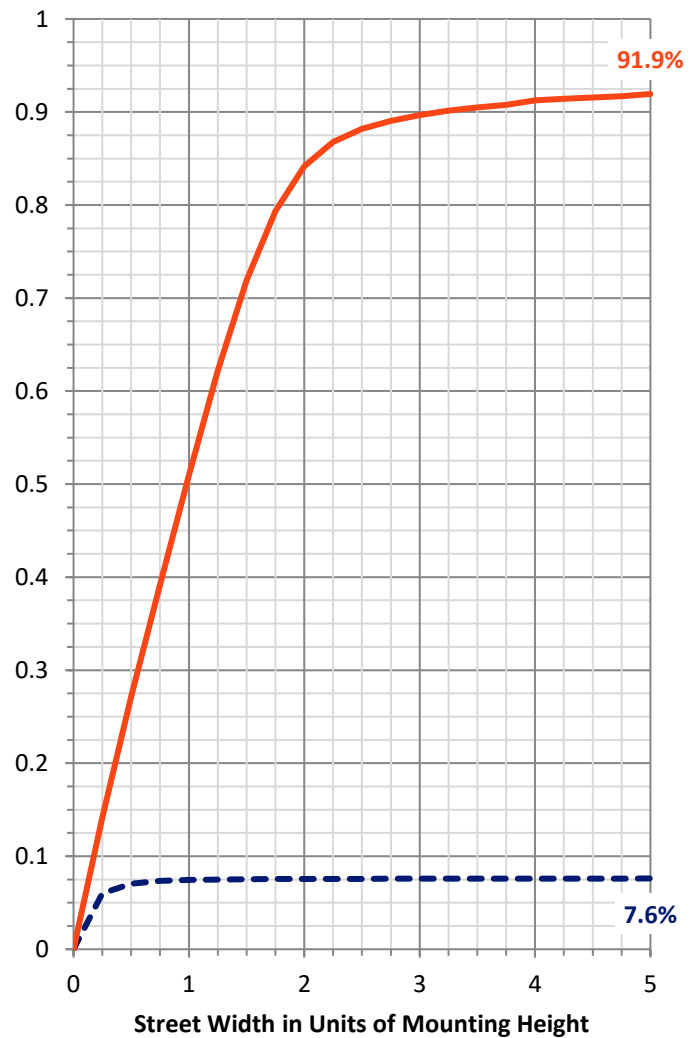
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	311.5	0.0	311.5
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	3740.9	0.0	3740.9
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	4052.4	0.0	4052.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.3	2.1
10°-20°	176.7	4.4
20°-30°	239.2	5.9
30°-40°	345.3	8.5
40°-50°	573.4	14.1
50°-60°	877.1	21.6
60°-70°	1090.9	26.9
70°-80°	603.0	14.9
80°-90°	62.5	1.5
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°	4052.4	100.0
0°-180°	4052.4	100.0



--- HS    — SS

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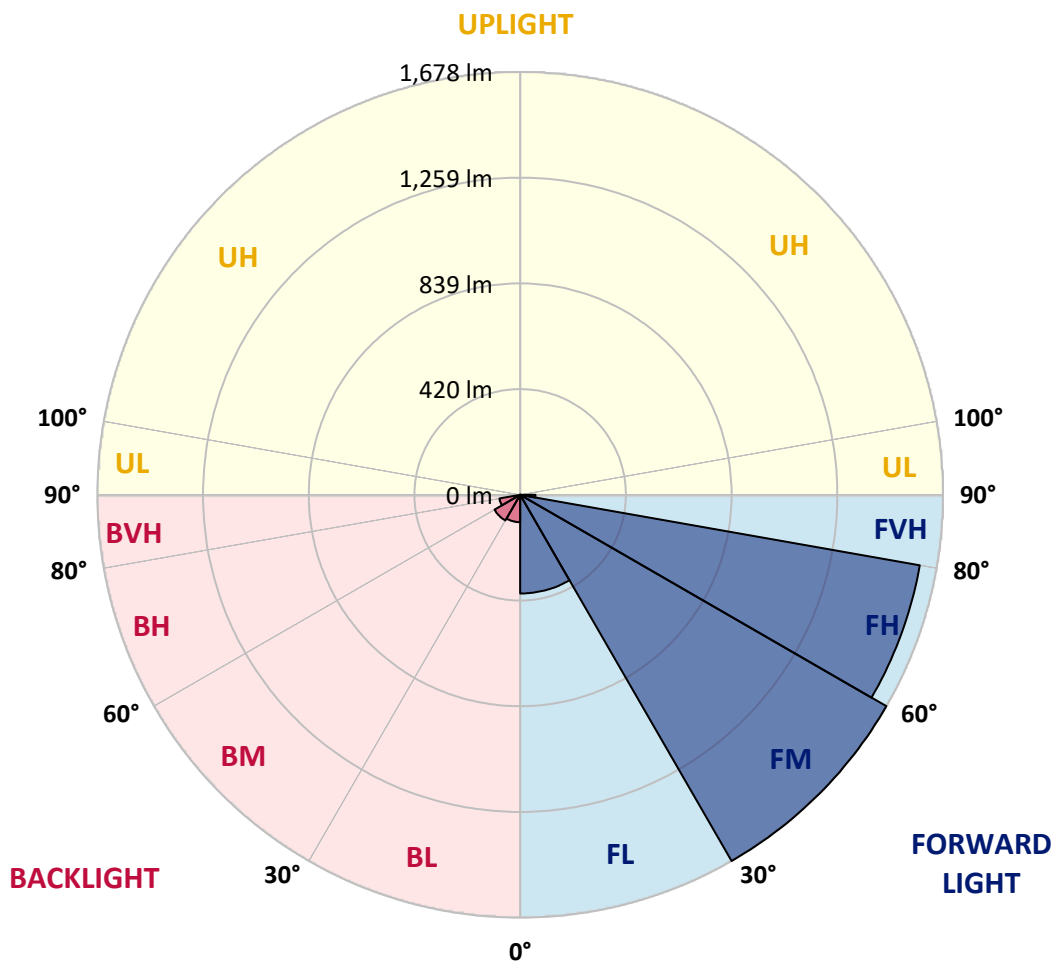
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	391.7	9.7			
FM	(30°-60°)	1678.1	41.4			
FH	(60°-80°)	1610.3	39.7			G1/1800
FVH	(80°-90°)	60.7	1.5			G1/100
BL	(0°-30°)	108.6	2.7	B0/110		
BM	(30°-60°)	117.6	2.9	B0/220		
BH	(60°-80°)	83.6	2.1	B0/110		G0/110
BVH	(80°-90°)	1.8	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8
2.5°	1158.2	1156.5	1148.9	1147.3	1138.7	1121.6	1101.8	1093.8	1077.7	1051.9	1023.5
5°	1177.6	1178.5	1179.1	1175.7	1174.5	1160.5	1138.5	1128.9	1107.3	1065.1	1013.1
7.5°	1105.3	1107.9	1115.5	1118.9	1133.6	1139.0	1134.4	1128.3	1111.2	1061.4	988.4
10°	1029.3	1033.9	1042.2	1047.7	1065.8	1080.3	1099.0	1100.6	1096.9	1049.2	960.5
12.5°	963.8	968.1	977.4	988.4	1006.8	1025.6	1053.5	1063.2	1075.4	1041.2	940.6
15°	907.6	908.8	917.7	931.4	955.6	981.5	1014.6	1029.0	1052.8	1038.2	925.3
17.5°	858.4	858.7	864.6	877.1	906.5	940.6	979.2	998.1	1028.3	1033.9	911.9
20°	826.0	825.7	826.0	832.8	858.7	899.4	946.1	966.1	1004.8	1028.6	898.1
22.5°	815.0	813.4	806.5	804.0	820.5	856.3	912.2	938.2	983.8	1027.1	888.1
25°	828.4	827.5	812.6	798.4	800.0	822.2	877.7	909.5	967.3	1032.6	885.6
27.5°	871.9	870.0	847.1	819.6	802.2	806.2	852.0	885.3	954.1	1046.1	889.0
30°	928.7	929.0	904.5	871.3	830.3	807.7	838.2	869.7	945.2	1066.3	896.4
32.5°	992.0	991.7	974.3	935.8	883.5	835.9	844.3	870.9	946.4	1096.0	910.3
35°	1057.4	1054.1	1048.3	1014.4	953.2	885.0	872.2	891.8	959.3	1135.1	934.2
37.5°	1132.9	1131.7	1137.5	1101.8	1039.4	957.4	921.0	934.2	991.7	1192.9	972.7
40°	1253.1	1246.3	1249.1	1200.5	1136.7	1055.0	989.6	992.9	1043.3	1269.3	1033.6
42.5°	1482.0	1454.8	1403.8	1312.6	1243.6	1163.2	1079.2	1073.4	1116.4	1361.9	1113.7
45°	1755.7	1724.4	1595.7	1436.5	1350.6	1279.3	1189.9	1174.2	1206.3	1472.3	1217.0
47.5°	1984.0	1950.4	1779.9	1565.8	1459.3	1399.2	1312.4	1294.0	1314.0	1600.3	1341.1
50°	2061.9	2043.2	1893.5	1673.5	1569.2	1533.7	1466.1	1435.5	1440.5	1738.6	1486.0
52.5°	2026.2	2019.7	1919.4	1747.0	1670.7	1682.3	1634.6	1602.5	1597.0	1889.5	1646.2
55°	1950.8	1947.6	1898.7	1788.0	1760.2	1818.3	1870.8	1843.1	1791.1	2050.0	1778.5
57.5°	1842.7	1854.3	1889.5	1866.9	1870.3	1962.0	2090.3	2104.8	2027.1	2177.9	1876.7
60°	1554.5	1585.7	1746.7	1951.6	2108.3	2201.0	2325.5	2352.4	2227.0	2265.3	1990.1
62.5°	1149.1	1193.7	1423.3	1799.7	2239.6	2655.6	2638.2	2626.3	2417.8	2382.3	2196.4
65°	675.0	727.2	921.4	1406.2	2041.8	2948.0	3222.0	3057.0	2708.5	2625.7	2525.1
67.5°	336.3	336.6	424.4	742.2	1509.0	2743.9	4074.4	3979.0	3326.6	2984.3	2654.7
70°	258.6	265.6	313.9	431.3	763.0	2137.1	4269.8	4661.3	3947.9	2968.3	2252.4
72.5°	219.2	223.8	279.3	375.5	570.5	1173.3	3696.2	4120.2	3767.2	2507.9	1660.3
75°	157.8	161.3	247.4	340.6	525.2	582.1	2535.5	3055.8	2826.5	1764.2	913.7
77.5°	39.2	38.8	86.2	276.3	469.9	484.9	1454.8	1959.6	1621.7	722.4	234.8
80°	17.4	16.8	19.5	58.1	437.1	457.7	639.8	989.6	622.1	117.1	71.9
82.5°	12.2	11.6	12.2	21.5	146.1	424.6	386.7	429.0	227.7	40.1	30.6
85°	4.0	3.8	6.8	18.0	41.0	244.8	377.3	320.3	169.4	17.2	20.4
87.5°	0.6	0.6	2.4	9.9	11.9	81.6	221.4	221.9	76.2	10.1	9.2
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8
2.5°	1009.1	991.1	965.8	940.2	917.4	893.8	874.9	866.1	862.0	856.6	844.7
5°	985.8	953.2	897.6	842.8	791.8	742.9	701.0	677.1	651.4	650.2	637.7
7.5°	948.6	902.2	814.4	729.5	651.4	576.9	512.7	471.1	442.6	424.9	412.7
10°	907.1	847.5	731.3	611.8	505.7	406.0	323.4	269.7	236.9	220.3	211.0
12.5°	874.0	799.1	649.3	498.9	365.9	251.7	174.9	135.7	118.3	111.6	108.5
15°	845.5	754.8	572.6	398.0	244.3	144.5	101.2	88.4	85.5	85.5	85.3
17.5°	816.8	712.0	498.0	299.0	153.7	94.7	79.8	77.9	78.2	79.2	79.2
20°	789.6	671.3	426.1	213.0	100.8	75.8	72.4	71.9	72.7	74.0	73.6
22.5°	767.6	635.6	358.9	146.4	77.7	68.9	66.6	65.8	66.3	67.3	66.9
25°	752.0	605.0	297.1	102.1	67.5	62.8	60.2	59.0	58.4	59.0	58.7
27.5°	742.5	579.3	239.1	76.7	60.5	56.6	53.5	51.1	49.5	49.5	48.9
30°	736.4	555.1	187.4	63.6	54.7	50.5	46.1	42.8	40.3	39.8	39.5
32.5°	736.1	534.4	140.0	56.3	49.1	44.4	39.2	34.9	32.1	31.4	31.1
35°	743.7	517.6	103.0	50.7	44.4	38.6	32.7	28.1	25.6	25.6	25.3
37.5°	763.6	507.7	77.9	46.4	40.3	33.7	27.6	23.3	21.1	21.8	21.8
40°	800.7	506.0	63.6	43.1	37.0	29.4	22.3	18.9	18.0	18.9	18.9
42.5°	857.1	515.7	56.6	40.7	34.0	25.0	18.7	16.2	15.9	16.8	16.8
45°	930.9	535.0	52.6	38.6	30.6	20.8	15.7	14.1	13.7	15.0	15.0
47.5°	1020.2	560.9	48.9	36.0	27.2	17.2	13.1	11.9	11.9	13.1	13.4
50°	1125.9	596.1	45.3	33.7	24.5	14.4	11.0	10.1	10.4	11.6	11.9
52.5°	1247.5	639.2	41.8	31.4	21.5	11.6	9.2	8.5	8.8	10.1	10.4
55°	1352.4	676.9	37.9	29.4	17.4	9.5	7.6	7.3	7.6	9.2	9.2
57.5°	1443.9	712.9	34.2	26.0	13.7	7.6	6.1	6.1	6.8	8.3	8.5
60°	1565.2	769.7	31.1	22.0	10.4	5.8	4.9	5.3	6.1	7.3	7.6
62.5°	1780.1	866.3	27.2	18.3	7.6	4.6	4.0	4.3	5.5	7.0	7.3
65°	2049.1	957.7	22.6	15.3	5.8	3.4	3.1	4.0	5.5	7.0	7.3
67.5°	2021.7	833.0	17.7	12.2	4.3	2.7	2.4	3.8	5.3	7.0	7.3
70°	1639.4	583.9	13.1	8.3	3.4	2.4	2.4	3.8	5.3	6.8	7.0
72.5°	1137.2	324.9	10.1	5.5	3.1	2.4	2.1	3.4	4.9	6.8	7.0
75°	541.1	99.7	7.9	4.0	2.7	2.1	1.8	3.4	4.9	6.8	7.0
77.5°	103.9	25.3	6.4	3.4	2.4	2.1	1.8	3.1	4.9	6.4	6.8
80°	35.2	11.4	5.3	3.1	2.4	2.1	1.8	3.1	4.6	6.1	6.4
82.5°	19.2	6.4	4.6	2.7	2.4	1.8	1.5	2.7	4.3	6.1	6.4
85°	15.0	4.6	3.8	2.7	2.4	1.8	1.5	2.7	4.3	5.8	6.1
87.5°	7.6	3.4	3.1	2.7	2.4	1.8	1.5	2.4	4.0	5.5	6.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)