

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: P233689

Luminaire Tested: **VRDN-C016-D-UNV-T2-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233689  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-32)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: VRDN-C016-D-UNV-T2-HSS  
Description: VERDEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 950mA LED AND TYPE II OPTIC WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4413 lumens  
Efficiency: N/A  
Efficacy: 113.2 lumens/watt  
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')  
IES Classification: Type II - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 39  
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

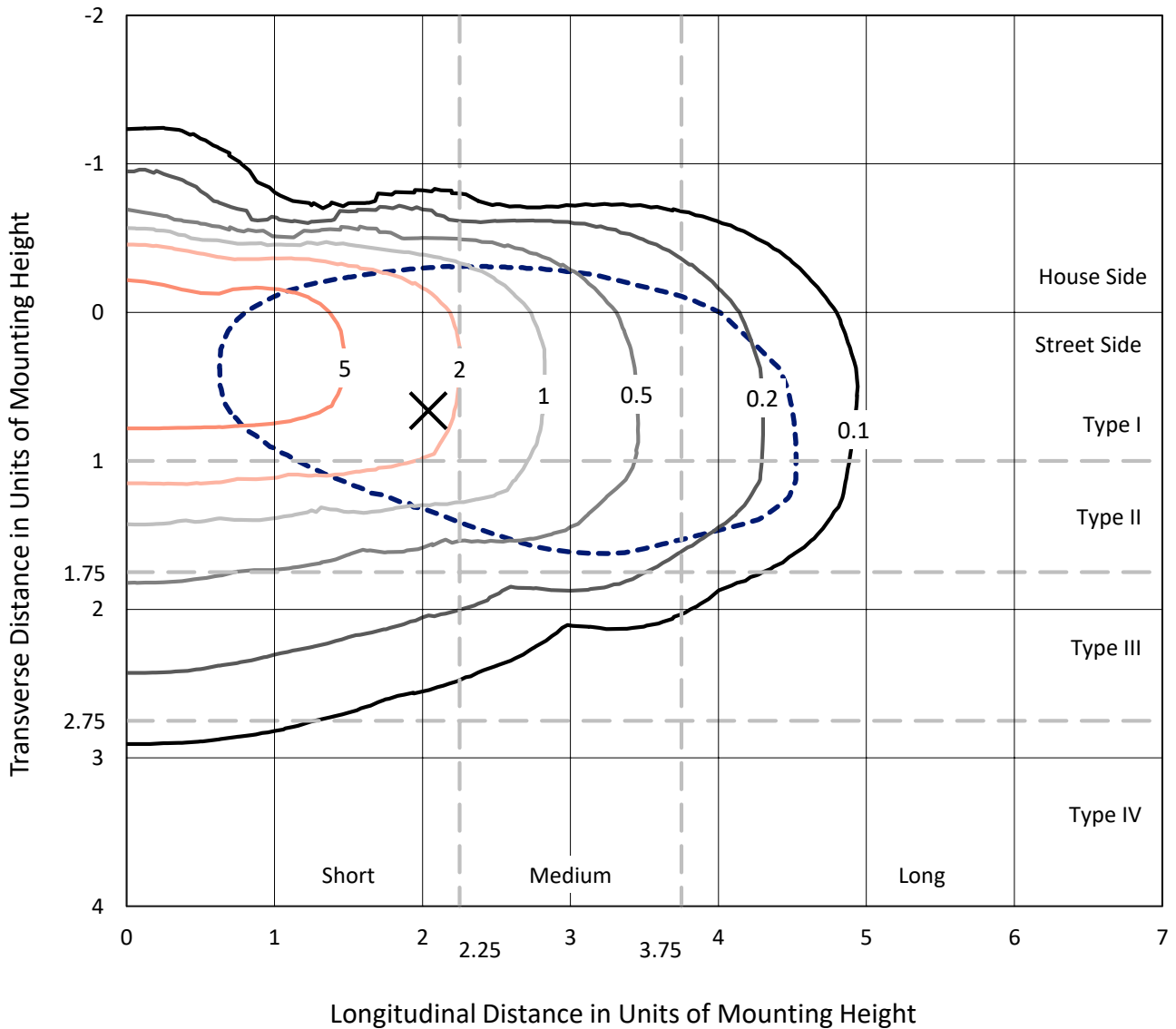


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### Iso-Footcandle Lines of Horizontal Illumination

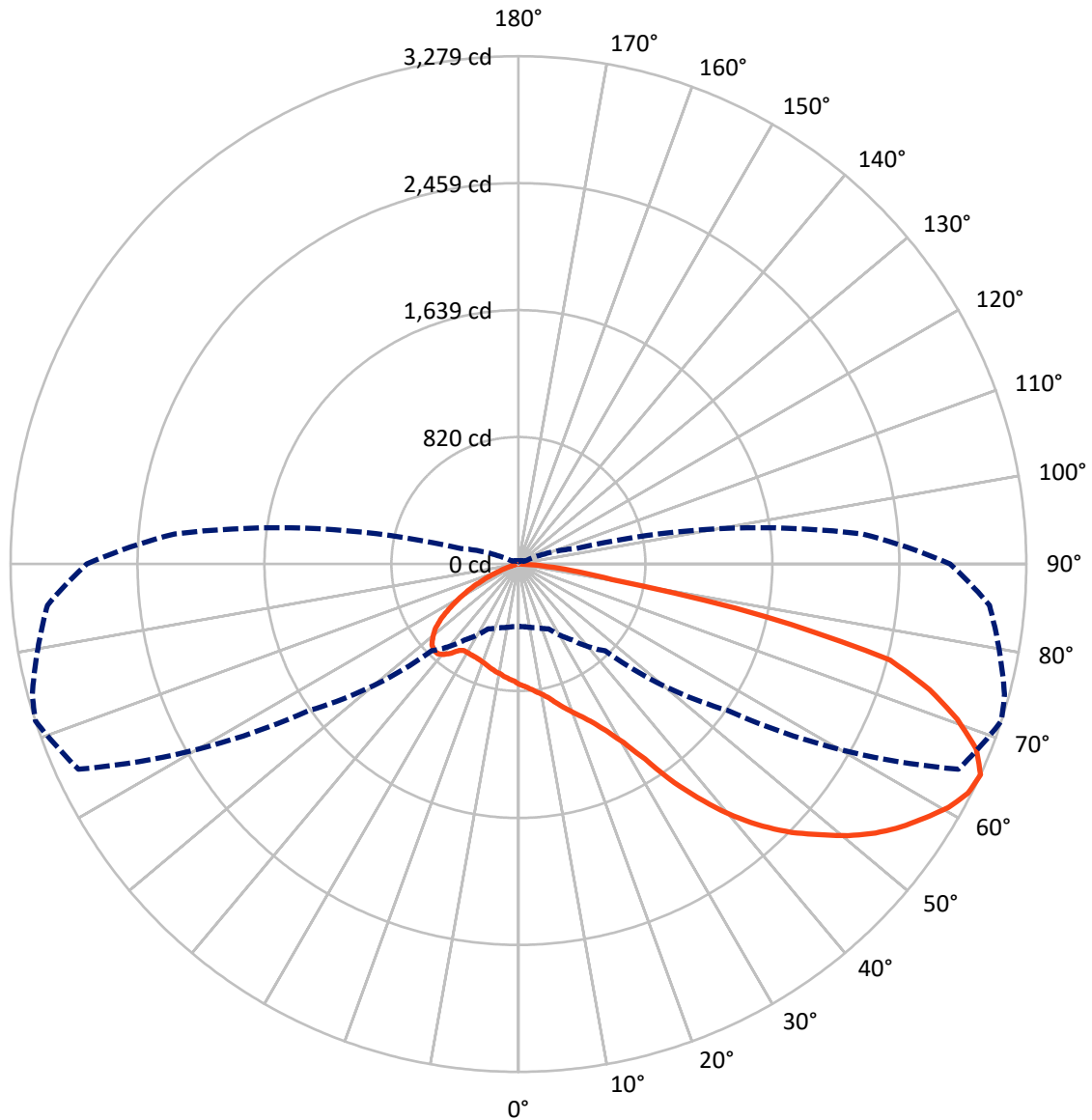
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.7 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 72-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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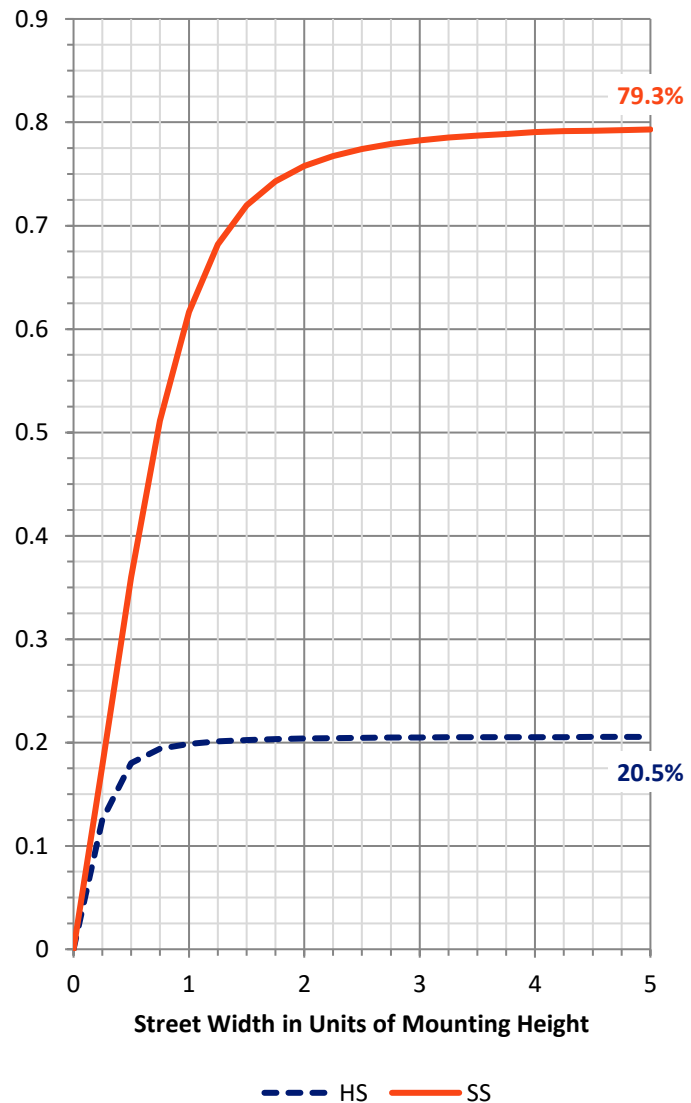
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	917.0	0.0	917.0
	% Fixture	20.8	0.0	20.8
<b>Street Side</b>	Lumens	3496.0	0.0	3496.0
	% Fixture	79.2	0.0	79.2
<b>Total</b>	Lumens	4413.0	0.0	4413.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.5	1.7
10°-20°	226.3	5.1
20°-30°	378.1	8.6
30°-40°	559.3	12.7
40°-50°	773.2	17.5
50°-60°	904.8	20.5
60°-70°	899.4	20.4
70°-80°	538.7	12.2
80°-90°	58.6	1.3
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°	4413.0	100.0
0°-180°	4413.0	100.0



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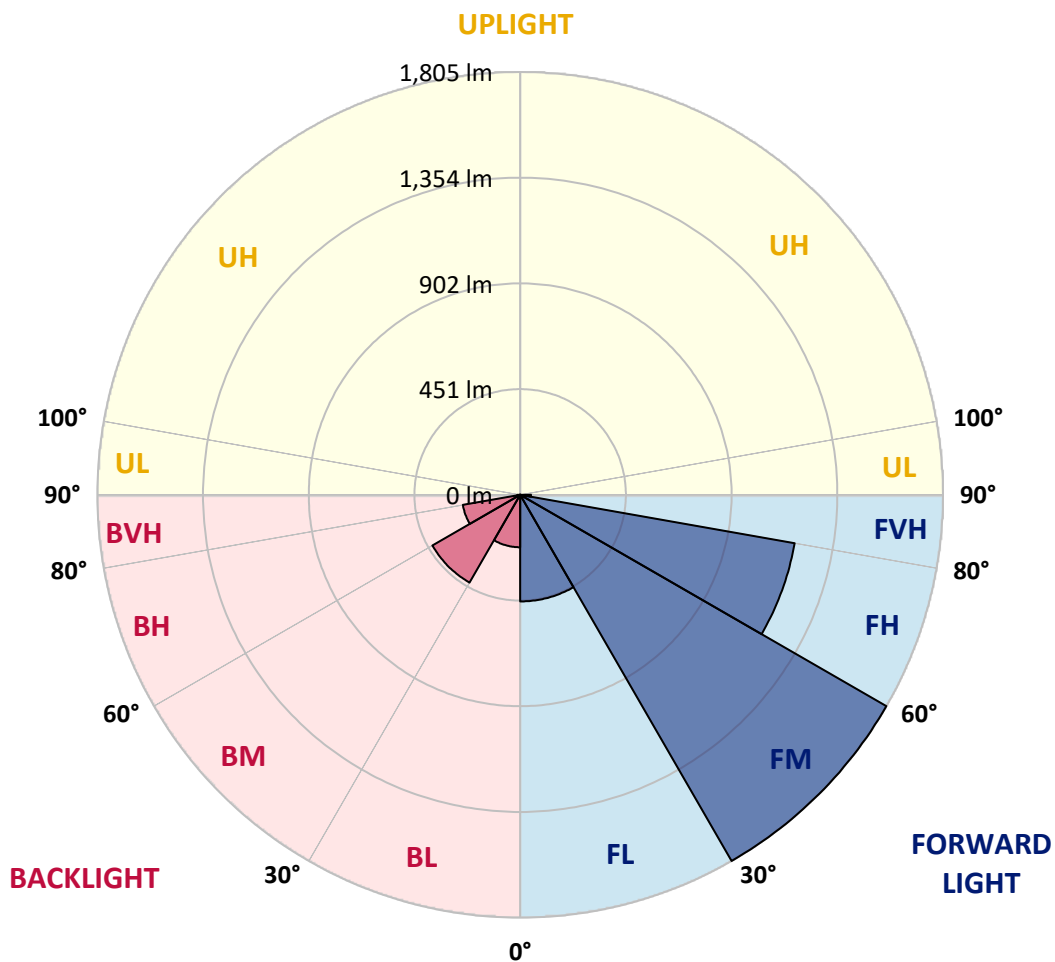
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	455.1	10.3			
FM (30°-60°)	1804.8	40.9			
FH (60°-80°)	1189.8	27.0			G1/1800
FVH (80°-90°)	46.4	1.1			G1/100
BL (0°-30°)	223.9	5.1	B1/500		
BM (30°-60°)	432.6	9.8	B1/1000		
BH (60°-80°)	248.3	5.6	B1/500		G1/500
BVH (80°-90°)	12.3	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	72°	75°	85°
0°	777.7	777.7	777.7	777.7	777.7	777.7	777.7	777.7	777.7	777.7	777.7
2.5°	843.3	844.0	844.4	831.0	823.8	815.6	807.6	799.0	790.0	786.8	774.9
5°	895.1	895.9	893.7	881.4	868.1	855.9	840.8	825.3	810.2	805.8	785.7
7.5°	945.2	944.8	943.0	927.5	911.0	894.8	873.5	852.6	832.8	826.0	796.1
10°	986.6	987.3	988.4	971.8	955.6	936.2	910.3	879.3	856.6	845.8	806.9
12.5°	1032.0	1029.8	1032.7	1016.5	994.2	976.5	953.1	916.7	889.7	876.0	827.8
15°	1083.8	1083.8	1079.8	1066.5	1043.8	1022.2	998.8	965.3	932.9	912.1	855.9
17.5°	1119.5	1117.3	1116.2	1104.7	1085.2	1066.5	1048.5	1014.3	979.0	953.5	882.2
20°	1134.6	1135.3	1140.3	1132.1	1121.6	1110.5	1090.6	1064.0	1025.1	997.8	910.3
22.5°	1163.7	1164.5	1170.6	1164.8	1161.9	1159.1	1140.7	1117.3	1075.9	1049.6	945.5
25°	1165.5	1166.3	1182.8	1192.2	1207.0	1213.8	1201.2	1181.0	1138.9	1113.3	998.1
27.5°	1170.9	1173.1	1190.0	1216.0	1254.8	1268.5	1261.3	1260.6	1225.0	1198.0	1066.5
30°	1166.3	1168.4	1192.9	1228.9	1282.9	1323.3	1331.5	1352.8	1338.4	1318.2	1161.6
32.5°	1133.1	1141.1	1170.2	1227.5	1307.1	1380.1	1406.8	1479.5	1501.1	1503.3	1352.4
35°	1073.0	1077.3	1130.3	1210.9	1323.3	1433.8	1507.2	1641.6	1733.0	1729.1	1563.8
37.5°	1027.3	1028.7	1083.1	1182.8	1332.3	1491.4	1621.8	1836.7	1941.9	1946.5	1754.6
40°	968.6	979.0	1031.2	1149.0	1327.2	1540.0	1735.5	2018.5	2141.0	2135.9	1922.0
42.5°	913.9	920.0	971.8	1096.1	1308.9	1577.1	1847.2	2194.6	2314.9	2298.3	2082.6
45°	857.0	867.4	914.9	1027.6	1272.5	1598.0	1948.3	2361.7	2471.9	2451.4	2224.1
47.5°	800.1	807.6	858.0	965.0	1204.1	1597.3	2047.7	2518.3	2611.2	2596.8	2358.1
50°	608.9	625.4	757.9	899.5	1107.9	1567.0	2128.0	2667.0	2757.4	2735.1	2488.8
52.5°	558.1	563.5	600.6	823.5	1005.3	1495.0	2190.7	2806.7	2886.3	2860.8	2611.9
55°	527.5	534.0	549.1	669.4	921.1	1376.5	2216.6	2937.1	2996.5	2970.6	2721.8
57.5°	486.8	493.3	523.2	576.5	833.2	1196.2	2178.4	3052.7	3094.1	3065.6	2823.7
60°	458.7	461.6	490.4	532.2	737.1	1014.0	2051.0	3146.6	3189.9	3156.0	2924.5
62.5°	432.8	436.0	456.6	498.0	657.5	880.4	1852.6	3169.7	3257.9	3231.6	3016.7
65°	402.9	405.8	424.5	461.2	595.9	793.2	1648.0	3134.4	3278.8	3248.9	3052.3
67.5°	363.3	367.3	382.0	415.2	515.3	694.6	1343.8	3069.2	3187.3	3156.4	2979.2
70°	314.3	316.1	333.8	363.7	435.3	602.8	1053.9	2837.3	3006.2	2972.0	2773.3
72.5°	253.8	257.1	276.2	307.5	357.5	496.5	752.9	2451.7	2776.9	2763.9	2473.3
75°	169.6	182.2	227.6	259.2	295.6	387.8	505.5	1720.8	2479.1	2489.2	2112.9
77.5°	32.4	33.5	95.4	141.9	172.8	236.9	312.9	845.4	1634.0	1810.8	1593.3
80°	21.2	23.0	40.7	99.4	114.5	117.4	160.6	370.5	615.7	778.8	918.9
82.5°	11.2	13.3	24.5	57.6	52.6	29.2	52.6	191.2	341.3	392.1	463.4
85°	4.7	5.4	11.9	19.8	14.8	12.2	12.2	76.3	151.2	175.0	181.8
87.5°	0.7	0.7	2.5	3.6	2.2	1.4	1.1	0.4	0.4	0.4	0.4
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°	777.7	777.7	777.7	777.7	777.7	777.7	777.7	777.7	777.7	777.7	777.7
2.5°	774.9	768.4	759.4	748.9	741.4	737.4	734.2	725.5	722.7	728.4	727.0
5°	778.1	770.5	750.0	733.1	716.2	705.7	694.2	679.1	672.6	676.2	675.1
7.5°	780.3	770.9	740.3	714.0	685.6	665.8	650.6	630.8	621.1	624.7	620.4
10°	783.5	769.5	728.8	693.9	656.8	628.0	605.6	582.6	572.5	575.4	571.8
12.5°	797.2	774.5	723.4	676.6	631.2	595.2	567.1	542.6	528.2	531.1	528.2
15°	819.5	784.6	715.5	654.6	604.2	563.1	530.7	502.7	486.1	490.1	486.5
17.5°	842.9	796.8	708.3	630.1	575.4	529.7	495.8	472.1	445.4	447.9	442.5
20°	863.1	808.4	704.3	607.1	548.4	494.0	453.3	437.1	400.4	391.0	384.9
22.5°	891.2	825.3	701.1	588.4	514.9	458.4	410.1	379.9	340.3	320.5	318.7
25°	931.1	850.5	700.7	573.6	484.7	420.9	353.6	302.8	267.9	244.5	241.2
27.5°	981.9	884.0	704.7	558.8	454.4	373.8	284.1	227.9	196.6	178.6	175.4
30°	1055.0	927.9	709.7	541.9	420.6	312.5	211.7	167.8	141.9	128.9	126.4
32.5°	1211.6	1040.6	717.3	524.3	379.9	235.5	153.7	121.7	101.9	94.0	97.9
35°	1400.3	1193.6	751.1	501.6	326.6	167.8	110.9	86.8	73.1	74.9	77.1
37.5°	1565.2	1339.8	827.1	472.4	255.3	123.1	76.3	64.8	64.8	70.6	75.6
40°	1720.8	1471.6	895.1	432.8	179.0	85.0	59.1	60.1	59.1	62.7	61.6
42.5°	1867.7	1596.5	948.4	385.6	117.0	58.7	53.7	55.8	54.0	54.7	51.5
45°	2006.7	1725.8	977.9	316.1	77.8	51.1	49.3	52.9	52.6	51.8	48.6
47.5°	2135.2	1839.6	992.7	227.9	53.7	46.1	46.4	49.0	50.0	49.3	47.5
50°	2261.2	1953.0	979.4	136.5	48.2	42.1	44.6	44.6	46.8	42.8	41.4
52.5°	2381.9	2066.8	937.3	82.8	44.3	39.2	41.4	40.7	41.8	37.8	37.1
55°	2495.3	2151.4	854.1	65.2	41.8	37.4	37.8	38.5	36.7	32.4	33.8
57.5°	2615.2	2223.4	738.1	59.1	40.7	34.9	35.6	35.3	32.4	28.4	28.4
60°	2713.8	2275.6	621.8	53.7	40.0	34.2	31.7	31.0	26.6	24.5	24.1
62.5°	2781.9	2290.4	508.4	47.9	37.8	31.7	28.4	26.3	22.3	20.2	19.4
65°	2787.3	2227.4	387.1	43.2	35.6	29.5	26.3	21.6	17.6	15.8	15.1
67.5°	2676.8	2052.4	272.9	39.6	32.0	27.4	23.0	17.3	14.0	12.6	12.2
70°	2445.6	1834.9	167.1	34.6	29.2	25.6	23.8	14.0	11.5	9.7	9.7
72.5°	2146.0	1589.3	97.9	29.5	24.5	20.5	15.8	11.9	9.7	7.6	7.6
75°	1839.2	1261.7	60.1	22.3	18.0	16.2	12.2	10.1	7.9	5.8	5.8
77.5°	1324.3	931.5	46.8	14.4	11.2	11.5	9.0	7.9	6.5	4.7	4.7
80°	812.7	567.1	33.5	9.7	6.5	6.5	6.5	6.1	4.7	4.0	3.6
82.5°	411.9	259.2	16.6	5.8	4.0	4.0	4.0	4.3	3.6	2.9	2.9
85°	144.7	72.7	5.0	2.9	2.5	2.5	2.2	2.2	1.8	1.4	1.4
87.5°	0.4	0.7	0.7	1.1	1.4	1.4	1.1	0.7	0.4	0.0	0.0
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)