

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: P233481

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233481  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-10)  
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  
Description: VERDEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 950mA LED AND TYPE II OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4870 lumens  
Efficiency: N/A  
Efficacy: 124.9 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

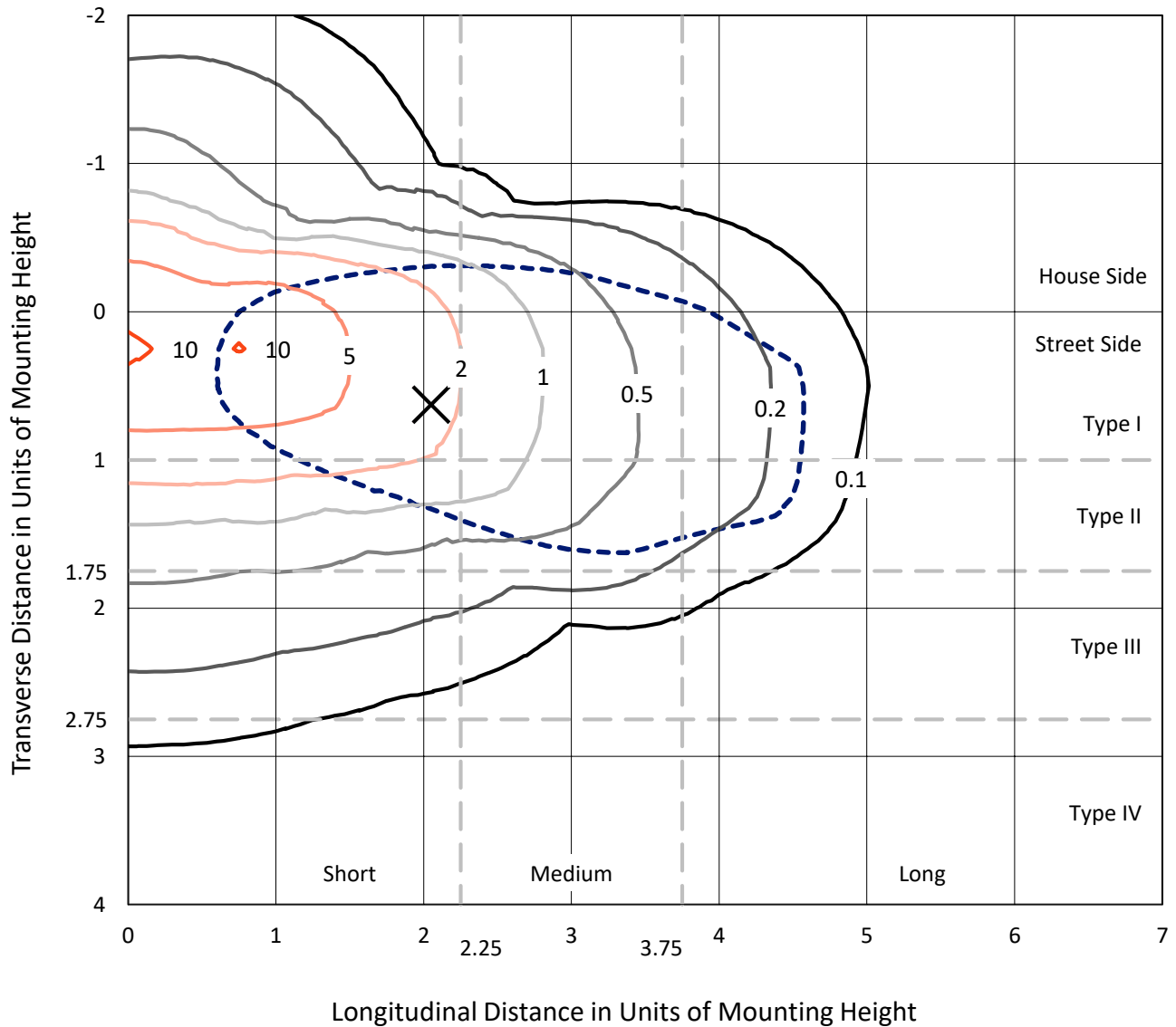


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### Iso-Footcandle Lines of Horizontal Illumination

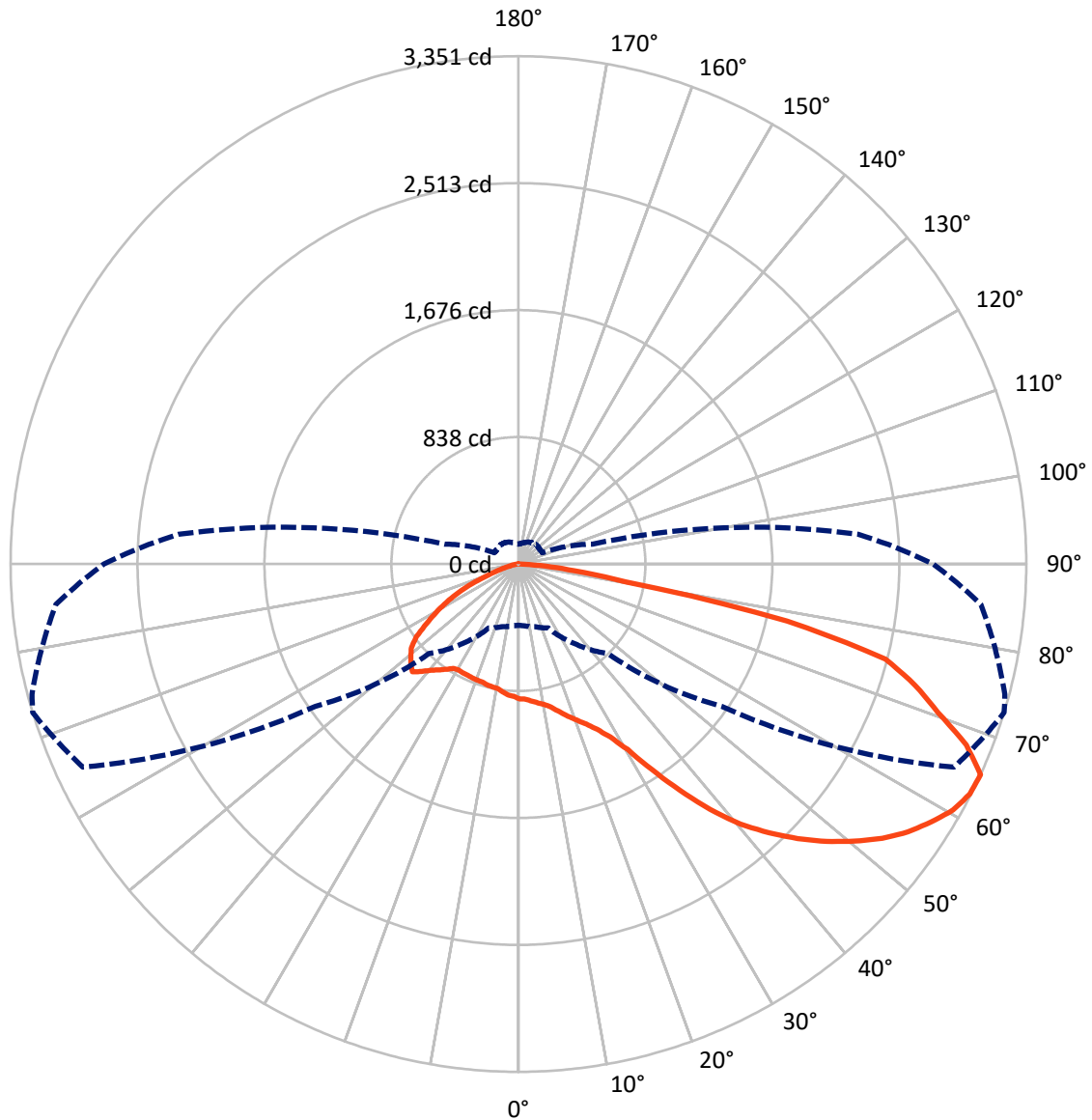
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.3 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 73-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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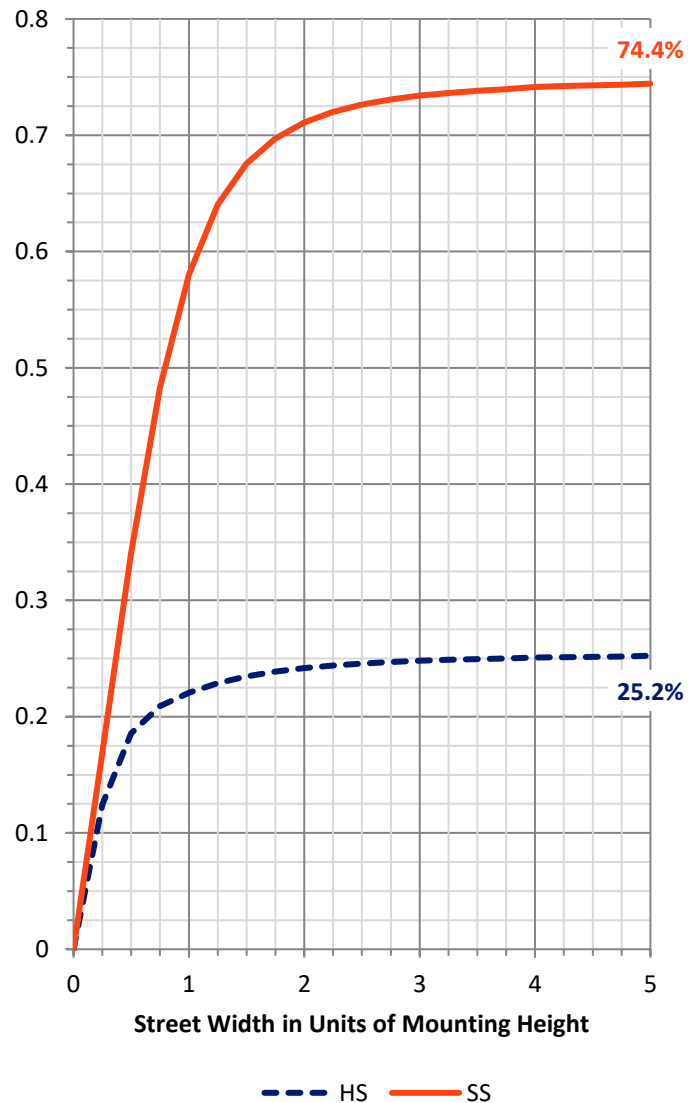
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1248.4	0.0	1248.4
	% Fixture	25.6	0.0	25.6
<b>Street Side</b>	Lumens	3621.6	0.0	3621.6
	% Fixture	74.4	0.0	74.4
<b>Total</b>	Lumens	4870.0	0.0	4870.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.0	1.7
10°-20°	256.9	5.3
20°-30°	431.0	8.8
30°-40°	632.0	13.0
40°-50°	854.2	17.5
50°-60°	989.5	20.3
60°-70°	966.6	19.8
70°-80°	580.4	11.9
80°-90°	74.3	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°	4870.0	100.0
0°-180°	4870.0	100.0



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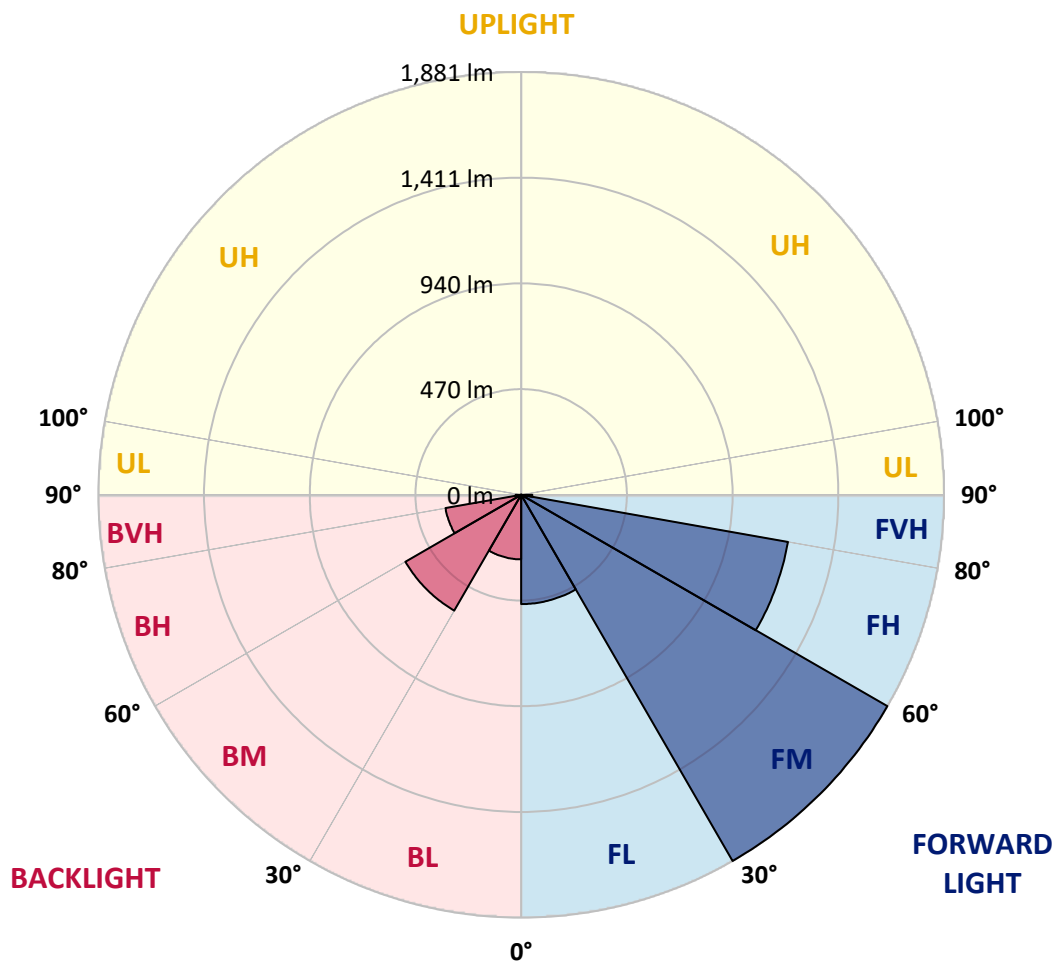
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	485.9	10.0			
FM (30°-60°)	1881.0	38.6			
FH (60°-80°)	1205.2	24.7			G1/1800
FVH (80°-90°)	49.5	1.0			G1/100
BL (0°-30°)	286.9	5.9	B1/500		
BM (30°-60°)	594.8	12.2	B1/1000		
BH (60°-80°)	341.8	7.0	B1/500		G1/500
BVH (80°-90°)	24.8	0.5			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°	73°	75°	85°
0°	890.5	890.5	890.5	890.5	890.5	890.5	890.5	890.5	890.5	890.5	890.5
2.5°	945.3	948.8	944.9	933.4	927.6	923.6	911.7	901.1	892.7	891.8	883.8
5°	981.6	986.9	980.2	965.6	959.9	951.5	938.2	923.6	908.6	905.5	889.6
7.5°	1027.5	1028.4	1024.9	1010.3	998.4	980.7	957.7	942.2	925.0	920.1	894.9
10°	1066.4	1066.0	1061.6	1047.4	1035.5	1020.0	987.7	962.5	942.2	936.0	901.1
12.5°	1103.6	1102.7	1098.3	1083.7	1068.7	1055.8	1031.5	997.5	970.1	962.1	918.8
15°	1149.6	1147.4	1140.3	1120.8	1108.9	1093.9	1076.2	1042.1	1010.7	999.7	944.4
17.5°	1184.9	1184.5	1179.2	1162.8	1148.7	1132.3	1116.0	1089.4	1055.4	1043.0	969.6
20°	1205.3	1203.5	1202.2	1189.4	1185.8	1177.0	1153.6	1133.2	1099.2	1086.3	997.9
22.5°	1226.9	1227.4	1227.8	1221.2	1231.4	1223.9	1206.6	1181.8	1147.4	1132.8	1037.7
25°	1231.8	1232.7	1241.5	1256.1	1268.5	1282.2	1269.8	1245.5	1208.4	1192.9	1092.1
27.5°	1218.1	1221.6	1248.2	1272.9	1316.7	1334.4	1332.2	1330.9	1292.8	1277.4	1166.8
30°	1230.5	1230.5	1248.6	1291.1	1346.3	1392.8	1402.9	1431.2	1419.7	1408.7	1292.4
32.5°	1193.3	1200.0	1232.3	1291.5	1379.0	1446.7	1492.7	1571.4	1616.9	1607.6	1470.1
35°	1123.5	1132.3	1179.6	1270.3	1395.4	1510.4	1592.6	1744.3	1832.2	1843.3	1684.1
37.5°	1069.5	1077.1	1136.3	1237.1	1401.6	1570.1	1708.0	1938.8	2052.4	2046.7	1865.4
40°	1003.7	1016.9	1076.6	1197.8	1387.0	1620.9	1833.1	2117.4	2257.1	2230.6	2037.8
42.5°	944.4	955.9	1005.9	1135.0	1366.7	1649.6	1946.3	2301.4	2423.8	2402.6	2201.0
45°	881.6	891.8	938.2	1059.8	1319.4	1663.8	2052.4	2477.3	2583.9	2560.0	2352.2
47.5°	809.6	823.3	878.5	989.1	1249.9	1654.9	2129.8	2630.3	2736.0	2718.3	2477.3
50°	627.8	642.0	786.6	922.8	1153.6	1618.2	2199.2	2783.3	2873.5	2856.7	2587.9
52.5°	569.9	576.1	621.2	846.7	1053.2	1545.7	2242.5	2909.3	3007.5	2990.7	2692.2
55°	534.6	539.0	564.2	691.5	967.9	1429.0	2247.9	3040.2	3120.2	3098.1	2803.2
57.5°	498.3	503.2	531.0	596.5	882.1	1246.4	2191.7	3151.2	3211.7	3187.9	2909.3
60°	467.8	470.4	497.9	543.0	785.2	1065.1	2047.1	3226.8	3296.2	3265.2	3013.2
62.5°	439.9	443.5	463.4	504.5	703.9	929.4	1845.5	3227.2	3342.6	3323.6	3065.8
65°	403.7	409.0	428.4	465.6	638.0	836.5	1636.8	3171.1	3351.0	3322.7	3063.2
67.5°	361.7	368.3	386.0	415.6	550.5	737.5	1345.9	3097.2	3187.0	3182.1	2936.7
70°	319.7	319.7	339.6	363.4	456.7	631.4	1063.4	2834.1	2936.7	2944.2	2709.9
72.5°	269.7	270.6	286.1	306.8	367.9	518.2	774.6	2422.9	2737.8	2646.7	2444.2
75°	226.4	225.5	241.4	258.7	299.3	408.1	505.4	1780.1	2502.1	2522.4	2151.0
77.5°	120.3	115.8	136.2	149.9	175.5	226.8	280.3	892.7	1811.9	1851.7	1722.1
80°	34.0	34.5	90.2	100.8	115.4	112.3	130.0	340.5	716.7	807.8	1004.1
82.5°	20.3	23.4	51.3	60.1	45.1	29.2	49.5	189.2	371.0	415.6	498.3
85°	10.6	11.5	18.1	22.5	17.2	14.6	15.0	79.6	180.4	183.5	199.0
87.5°	4.9	4.9	6.6	7.1	4.4	2.7	1.8	1.3	1.3	0.9	0.9
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°	890.5	890.5	890.5	890.5	890.5	890.5	890.5	890.5	890.5	890.5	890.5
2.5°	877.7	882.1	874.6	868.8	864.4	861.7	858.6	851.1	853.3	856.4	856.0
5°	882.1	884.3	871.0	852.9	836.1	824.2	816.2	804.3	804.3	809.1	809.1
7.5°	886.1	883.0	856.0	825.5	806.5	796.7	783.9	771.1	768.9	772.4	772.9
10°	888.3	875.0	837.4	809.1	784.4	764.5	748.1	733.5	733.1	737.9	738.8
12.5°	898.0	872.3	836.1	797.2	760.0	738.8	719.4	703.0	697.3	697.7	698.6
15°	913.0	883.0	834.3	780.8	740.6	712.3	684.0	663.2	657.9	665.0	667.6
17.5°	931.2	900.2	825.9	765.8	716.7	682.7	654.4	635.8	619.0	611.5	610.2
20°	955.0	914.8	830.3	743.7	693.7	648.2	612.8	590.3	576.1	575.2	574.3
22.5°	986.4	931.2	831.2	729.1	657.5	610.2	566.4	553.6	528.4	519.1	523.1
25°	1028.0	955.9	829.0	713.6	629.6	565.9	513.3	489.9	480.6	470.0	470.9
27.5°	1081.5	995.3	834.8	693.3	584.1	512.0	453.2	428.0	413.8	405.0	406.3
30°	1190.2	1055.0	834.3	673.8	542.1	456.3	390.0	373.2	359.0	351.1	355.0
32.5°	1345.0	1184.5	852.9	647.7	494.3	381.6	336.9	317.9	306.0	297.1	299.3
35°	1536.4	1325.5	900.6	612.4	439.9	324.5	294.0	270.6	256.0	252.5	251.1
37.5°	1714.2	1450.2	945.7	588.9	377.6	293.1	254.7	231.2	218.4	222.8	222.8
40°	1872.9	1615.6	996.6	551.4	321.0	257.3	210.9	200.3	193.7	201.2	203.8
42.5°	1992.7	1774.3	1065.6	501.8	275.0	214.9	180.4	187.9	190.6	195.9	194.5
45°	2141.3	1865.0	1133.7	455.8	234.8	179.1	174.2	189.7	195.9	200.7	198.5
47.5°	2277.9	1935.3	1119.9	371.0	197.6	173.3	177.3	189.7	200.3	208.2	206.9
50°	2395.5	2023.2	1093.9	288.3	189.7	178.6	180.4	184.8	200.7	206.0	206.0
52.5°	2468.9	2110.3	1061.6	233.0	195.4	185.3	182.2	181.7	192.3	196.3	192.8
55°	2557.4	2200.5	978.0	216.2	197.6	189.7	187.0	183.0	186.1	183.0	184.8
57.5°	2655.5	2289.4	849.8	211.3	196.3	188.4	202.5	181.3	179.5	168.5	165.8
60°	2741.7	2324.3	737.5	200.3	189.2	184.8	188.4	179.1	170.2	155.6	149.9
62.5°	2774.0	2321.3	623.4	188.8	178.6	179.5	179.1	172.4	164.5	149.9	146.3
65°	2735.1	2250.5	505.4	175.1	170.2	173.8	169.3	159.6	146.3	134.4	131.3
67.5°	2603.3	2070.1	375.4	157.0	156.5	163.2	160.1	146.8	132.2	122.9	122.9
70°	2351.3	1848.2	243.2	130.4	140.2	151.7	151.7	137.5	118.5	110.5	112.7
72.5°	2075.4	1590.4	157.4	96.8	110.5	137.5	136.6	126.9	109.2	99.0	99.5
75°	1797.8	1261.9	101.7	66.8	71.6	117.2	121.1	103.5	84.9	72.5	70.3
77.5°	1366.7	949.3	64.6	38.9	45.5	71.6	92.0	86.2	86.7	105.7	104.8
80°	840.5	572.1	46.9	19.0	22.5	46.9	74.3	82.2	115.4	76.0	69.9
82.5°	420.9	267.5	24.8	11.5	12.8	20.8	44.2	98.6	84.0	50.4	47.8
85°	157.4	72.1	7.5	5.7	7.1	10.6	18.1	90.2	53.5	40.2	39.4
87.5°	0.9	1.3	1.3	1.8	2.7	3.1	6.6	42.9	27.0	19.5	18.6
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)