

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: P233585

Luminaire Tested: **VRDN-C016-D-UNV-T4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233585  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-15)  
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-T4  
Description: VERDEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 950mA LED AND TYPE IV OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4798 lumens  
Efficiency: N/A  
Efficacy: 123.0 lumens/watt  
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

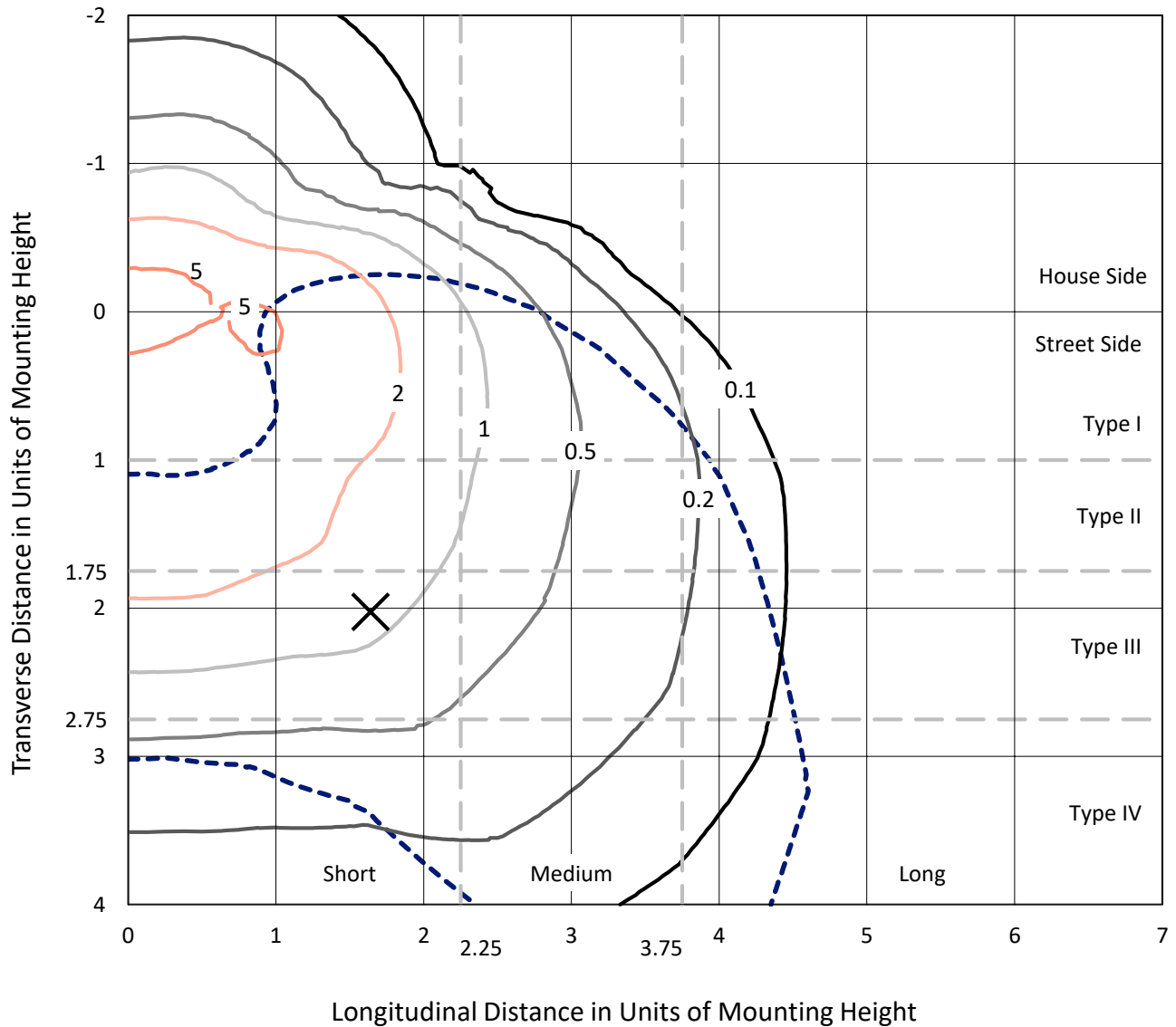
Input Watts (W): 39  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P233585  
 CATALOG NUMBER: VRDN-C016-D-UNV-T4

### Iso-Footcandle Lines of Horizontal Illumination

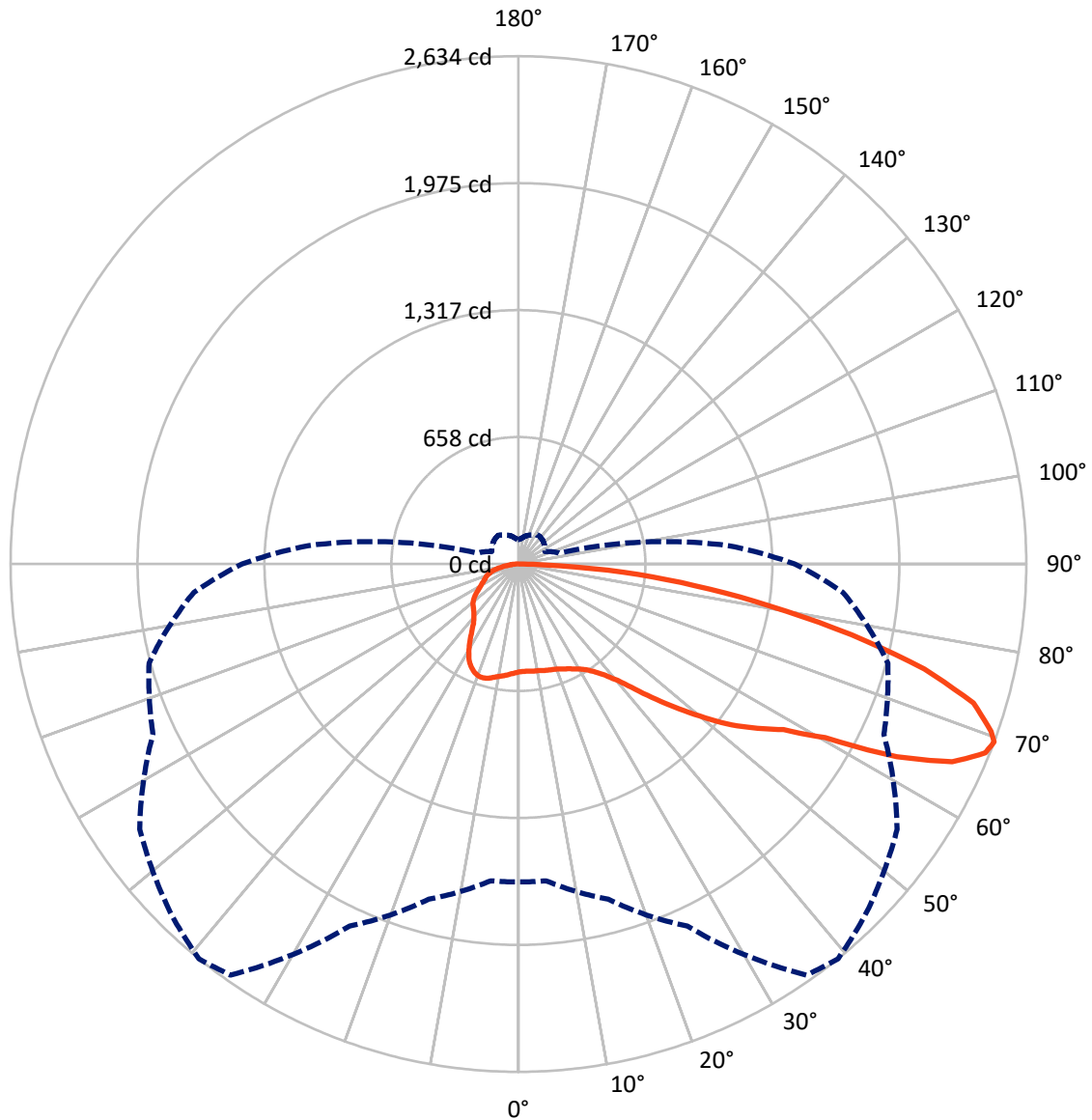
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.8 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P233585  
CATALOG NUMBER: VRDN-C016-D-UNV-T4

### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P233585

CATALOG NUMBER: VRDN-C016-D-UNV-T4

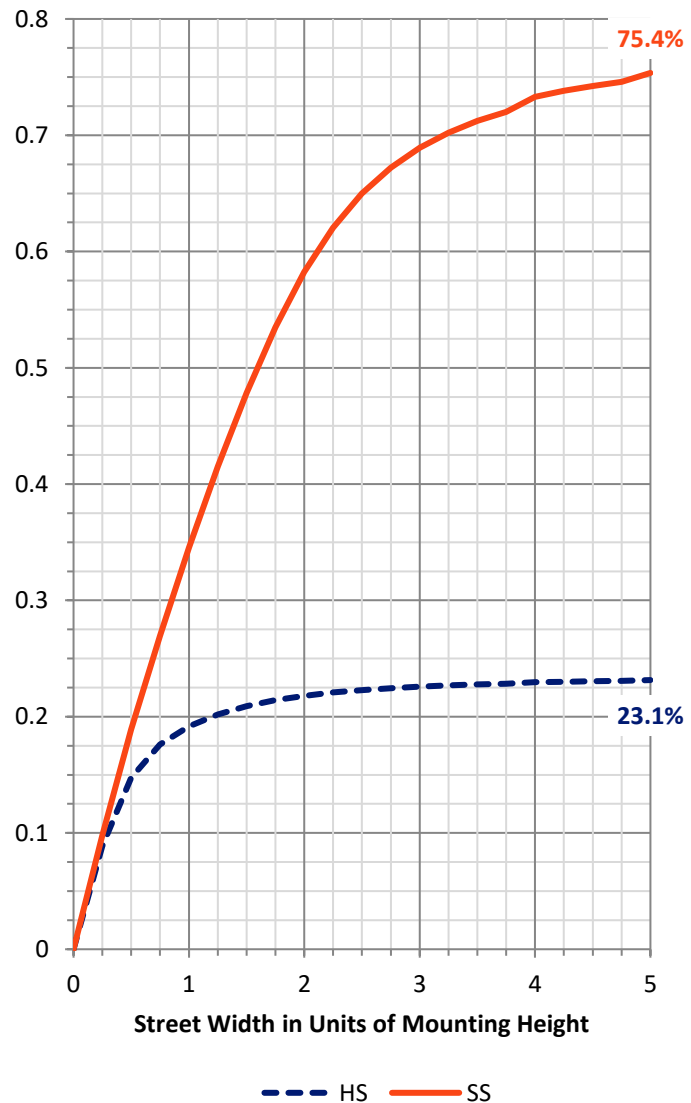
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1124.7	0.0	1124.7
	% Fixture	23.4	0.0	23.4
<b>Street Side</b>	Lumens	3673.2	0.0	3673.2
	% Fixture	76.6	0.0	76.6
<b>Total</b>	Lumens	4798.0	0.0	4798.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.3	1.1
10°-20°	167.9	3.5
20°-30°	282.6	5.9
30°-40°	409.4	8.5
40°-50°	661.8	13.8
50°-60°	968.8	20.2
60°-70°	1212.6	25.3
70°-80°	866.9	18.1
80°-90°	173.8	3.6
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°	4798.0	100.0
0°-180°	4798.0	100.0



REPORT NUMBER: P233585

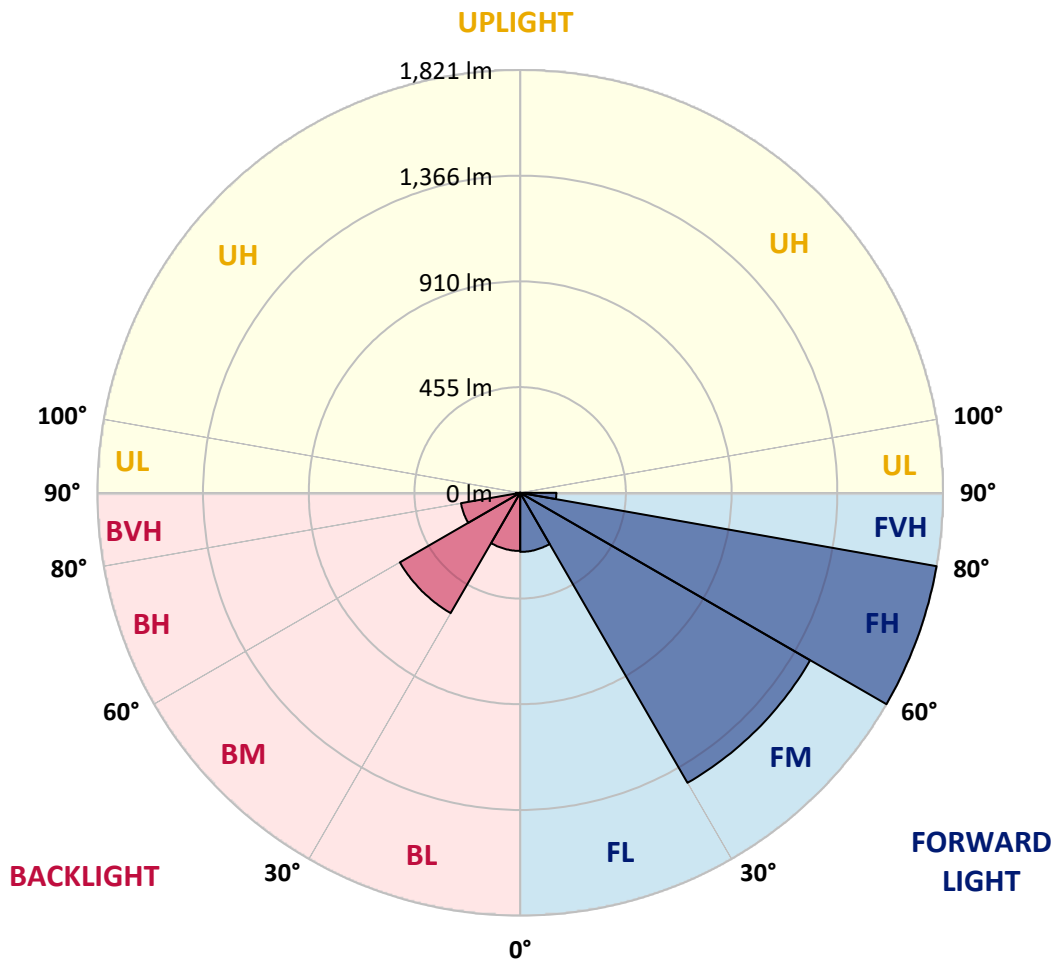
CATALOG NUMBER: VRDN-C016-D-UNV-T4

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	254.5	5.3			
FM (30°-60°)	1441.9	30.1			
FH (60°-80°)	1820.8	37.9			G2/5000
FVH (80°-90°)	156.0	3.3			G2/225
BL (0°-30°)	250.2	5.2	B1/500		
BM (30°-60°)	598.1	12.5	B1/1000		
BH (60°-80°)	258.7	5.4	B1/500		G1/500
BVH (80°-90°)	17.8	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type IV Short





REPORT NUMBER: P233585

CATALOG NUMBER: VRDN-C016-D-UNV-T4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	558.9	558.9	558.9	558.9	558.9	558.9	558.9	558.9	558.9	558.9	558.9
2.5°	568.6	567.7	565.9	558.9	558.0	557.5	558.4	555.8	555.3	556.2	555.3
5°	569.0	568.2	565.9	559.8	558.9	558.0	558.4	556.2	556.7	558.9	558.9
7.5°	569.9	569.0	566.8	560.2	562.0	561.1	562.9	559.8	559.8	561.5	562.0
10°	567.7	567.3	565.9	561.1	563.7	562.0	563.7	564.2	565.9	567.3	566.8
12.5°	562.0	562.0	562.0	559.8	567.3	566.8	569.9	573.0	577.4	579.7	581.0
15°	558.4	558.0	561.1	560.6	569.9	571.3	576.6	584.5	591.2	596.9	598.7
17.5°	562.0	562.0	565.9	565.1	574.3	575.2	581.0	592.5	603.5	614.6	619.4
20°	565.9	566.4	571.3	572.6	581.4	581.0	586.7	600.9	615.9	632.3	640.7
22.5°	578.3	577.9	581.9	579.2	589.4	591.2	596.0	608.4	629.6	650.4	664.1
25°	587.6	588.9	592.9	591.2	599.6	601.8	609.7	621.7	646.9	671.6	695.9
27.5°	596.5	599.1	602.2	601.8	613.3	615.9	622.1	640.7	669.9	699.5	733.5
30°	609.7	608.8	611.0	615.0	630.1	631.8	639.3	661.9	697.3	735.7	781.3
32.5°	627.4	626.5	628.7	632.3	650.4	654.8	665.0	689.3	734.0	780.4	836.1
35°	655.3	657.5	659.2	663.7	681.3	687.5	701.2	732.2	783.9	858.2	937.8
37.5°	752.1	747.2	737.5	719.8	724.7	731.8	751.2	795.4	870.6	996.6	1069.6
40°	903.3	897.6	867.1	815.3	791.9	793.7	812.7	872.8	975.4	1159.3	1226.5
42.5°	1045.7	1038.6	1002.3	937.8	891.4	886.1	887.8	957.2	1090.3	1322.0	1357.8
45°	1180.1	1183.6	1128.4	1078.8	1025.8	1001.5	993.9	1045.7	1218.1	1463.1	1474.1
47.5°	1308.8	1311.4	1249.1	1201.3	1150.0	1121.7	1107.1	1147.4	1335.7	1577.1	1567.0
50°	1440.1	1447.1	1361.8	1321.1	1273.8	1253.5	1239.3	1265.9	1465.7	1686.3	1655.0
52.5°	1625.3	1595.7	1483.8	1426.4	1392.8	1386.6	1372.0	1393.6	1603.7	1782.7	1717.3
55°	1831.4	1768.1	1650.5	1550.2	1503.7	1503.7	1490.9	1516.1	1746.0	1854.8	1768.1
57.5°	1898.1	1904.3	1863.6	1754.4	1629.8	1620.0	1607.6	1642.1	1868.1	1919.4	1787.2
60°	2014.9	2032.1	2063.5	1972.4	1911.0	1828.3	1753.1	1771.7	1973.3	1972.4	1807.5
62.5°	2072.8	2089.1	2187.3	2138.2	2196.1	2201.9	2061.3	1918.0	2051.1	1998.9	1817.2
65°	2018.0	2029.5	2160.3	2224.9	2392.9	2472.9	2403.5	2114.8	2092.2	1987.9	1781.0
67.5°	1838.0	1859.7	1968.0	2164.8	2568.4	2613.1	2548.1	2384.9	2109.9	1991.4	1751.8
69°	1648.8	1649.2	1799.5	2072.3	2602.9	2633.9	2554.3	2397.8	2091.4	1983.0	1689.4
70°	1542.2	1553.3	1664.7	1992.3	2590.1	2600.3	2539.3	2397.3	2078.5	1980.4	1630.2
72.5°	1203.5	1197.8	1308.8	1666.0	2445.1	2467.6	2400.4	2329.7	2067.9	1866.3	1379.1
75°	841.4	859.1	967.9	1262.3	2106.8	2174.5	2174.5	2238.1	1903.4	1594.8	997.0
77.5°	626.1	628.7	715.8	964.3	1695.2	1765.5	1830.0	1883.5	1487.8	1092.5	445.7
80°	424.0	428.0	507.6	711.4	1256.1	1320.7	1422.8	1295.9	885.2	378.0	50.8
82.5°	267.1	272.4	335.6	499.6	895.3	924.5	955.9	731.8	294.9	43.8	32.3
85°	158.7	159.6	202.5	319.2	546.1	547.8	514.2	336.9	79.1	26.1	20.3
87.5°	66.3	69.9	88.4	141.5	160.1	126.5	78.7	27.0	11.9	10.6	7.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P233585

CATALOG NUMBER: VRDN-C016-D-UNV-T4

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	558.9	558.9	558.9	558.9	558.9	558.9	558.9	558.9	558.9	558.9	558.9
2.5°	552.7	557.5	556.7	558.0	559.8	563.3	567.3	565.5	567.7	572.6	572.6
5°	557.5	561.5	562.9	565.5	567.7	571.3	573.9	573.0	577.9	585.0	585.0
7.5°	561.5	564.6	569.0	572.1	574.3	581.4	584.1	582.3	585.8	594.2	594.7
10°	567.3	570.4	577.0	580.1	584.5	588.1	591.6	591.2	594.7	602.2	603.5
12.5°	581.4	583.6	592.9	597.3	597.3	601.8	599.1	594.7	596.5	600.9	601.8
15°	600.0	603.1	615.0	617.2	615.0	615.9	609.7	595.6	588.5	589.8	590.3
17.5°	621.2	626.5	640.2	637.1	634.5	627.8	611.9	590.7	569.5	561.5	562.9
20°	643.8	650.4	666.3	659.7	650.0	632.7	607.1	570.8	538.1	519.1	518.2
22.5°	669.9	678.3	693.3	681.8	660.1	630.1	590.7	546.5	504.9	475.3	473.5
25°	705.7	715.0	720.3	697.3	661.9	620.3	567.3	513.3	461.2	425.8	423.1
27.5°	746.3	751.2	740.6	706.1	653.5	599.6	538.1	471.3	413.8	384.7	380.7
30°	791.4	787.5	754.3	701.7	631.8	566.8	492.6	417.8	371.8	348.4	344.9
32.5°	843.6	831.2	764.9	689.3	603.1	523.9	443.0	383.8	347.1	323.7	321.9
35°	929.4	894.0	782.2	670.3	565.1	473.5	397.5	354.6	325.9	296.7	292.3
37.5°	1053.6	986.9	807.4	652.6	523.9	424.9	363.0	331.2	306.0	273.2	267.1
40°	1182.7	1096.1	848.9	633.2	485.5	389.1	344.0	321.4	296.7	265.7	257.3
42.5°	1300.8	1200.0	897.6	608.8	445.2	360.3	334.7	318.8	294.0	264.8	258.2
45°	1407.8	1297.7	947.5	581.0	401.0	337.4	327.2	313.9	288.7	260.9	255.6
47.5°	1498.0	1380.8	997.9	548.7	358.6	323.2	319.2	305.1	281.6	254.7	250.3
50°	1572.7	1440.5	1026.7	514.7	323.7	312.6	307.7	290.0	266.2	241.0	238.3
52.5°	1628.0	1477.7	1052.8	496.5	296.2	295.4	292.3	275.0	252.0	225.9	220.6
55°	1666.5	1508.2	1041.3	482.4	267.1	273.7	271.9	261.3	241.9	211.3	206.9
57.5°	1668.7	1510.8	1016.5	398.4	238.3	247.6	250.7	252.5	230.8	203.8	198.5
60°	1666.5	1491.4	970.5	292.3	210.5	221.5	233.0	233.0	218.0	191.4	187.5
62.5°	1656.3	1452.9	863.5	208.3	188.4	202.9	218.0	211.3	198.5	177.3	173.3
65°	1609.9	1388.8	675.6	169.8	179.1	192.3	199.4	190.1	173.8	151.7	149.9
67.5°	1525.4	1242.0	390.9	155.6	171.1	183.0	188.8	174.6	159.2	137.9	137.1
69°	1432.6	1093.4	220.2	152.1	166.2	176.9	181.7	166.2	151.2	130.9	126.9
70°	1349.4	960.8	143.3	149.0	161.4	172.9	176.4	160.5	146.4	125.6	122.9
72.5°	1022.2	578.8	96.4	136.2	148.1	157.0	162.3	147.2	131.3	110.5	105.2
75°	558.4	157.4	84.9	116.7	131.8	143.7	145.0	126.0	103.0	81.8	79.6
77.5°	108.8	53.9	73.0	96.4	104.8	118.9	118.1	105.2	89.3	69.4	66.8
80°	41.1	38.9	61.0	69.0	73.8	88.9	94.2	84.9	74.3	47.3	40.7
82.5°	27.9	28.7	45.5	40.7	45.1	52.6	66.3	64.6	58.8	32.3	28.7
85°	19.5	22.5	25.2	17.2	22.1	33.2	43.8	42.4	36.3	22.5	20.3
87.5°	5.7	6.2	7.1	8.8	13.7	24.8	35.8	29.6	19.9	16.8	14.6
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)