

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: P233793

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233793  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-34)  
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-HSS  
Description: VERDEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 950mA LED AND TYPE IV OPTIC WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4963 lumens  
Efficiency: N/A  
Efficacy: 127.3 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

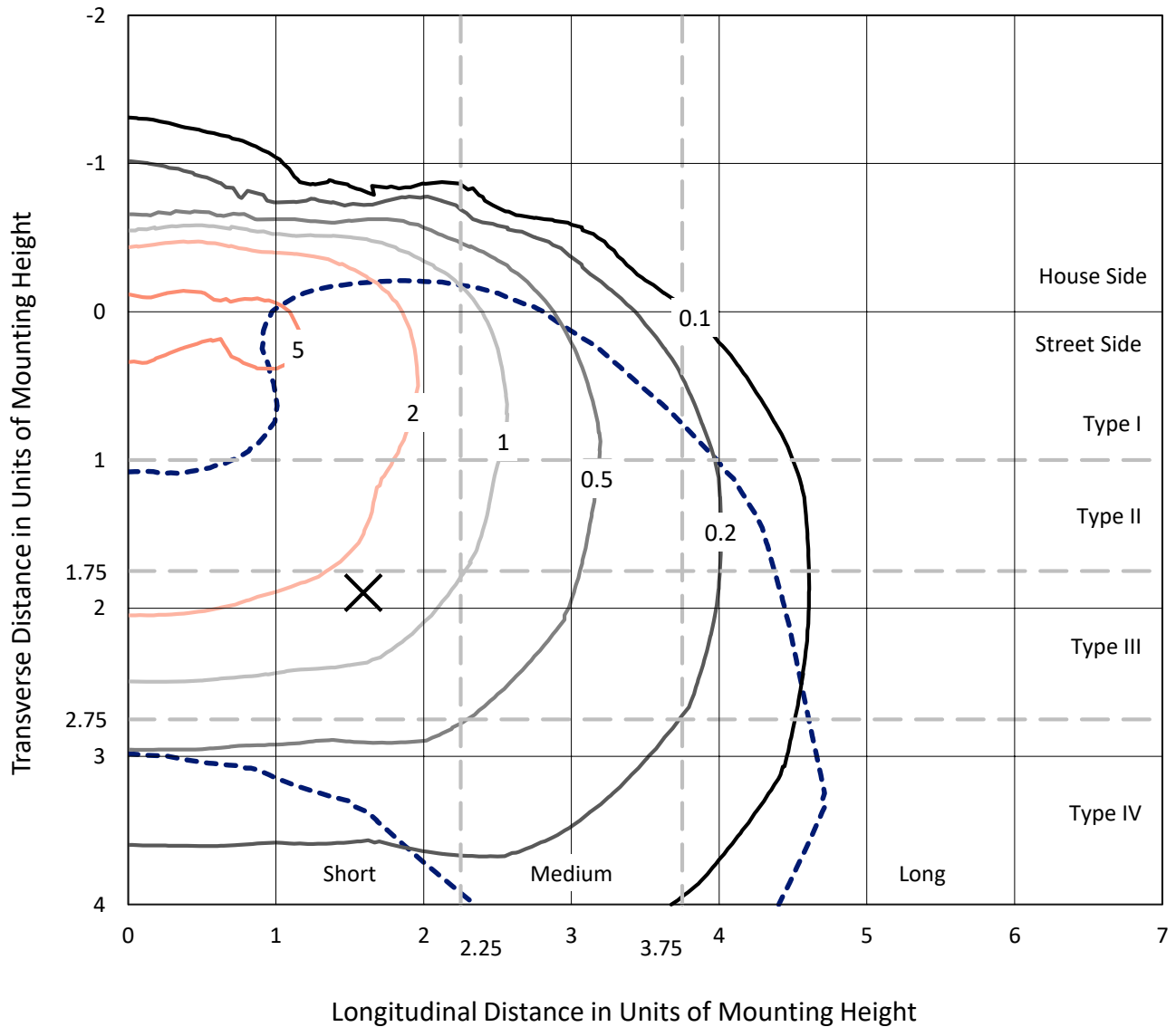
Input Watts (W): 39  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

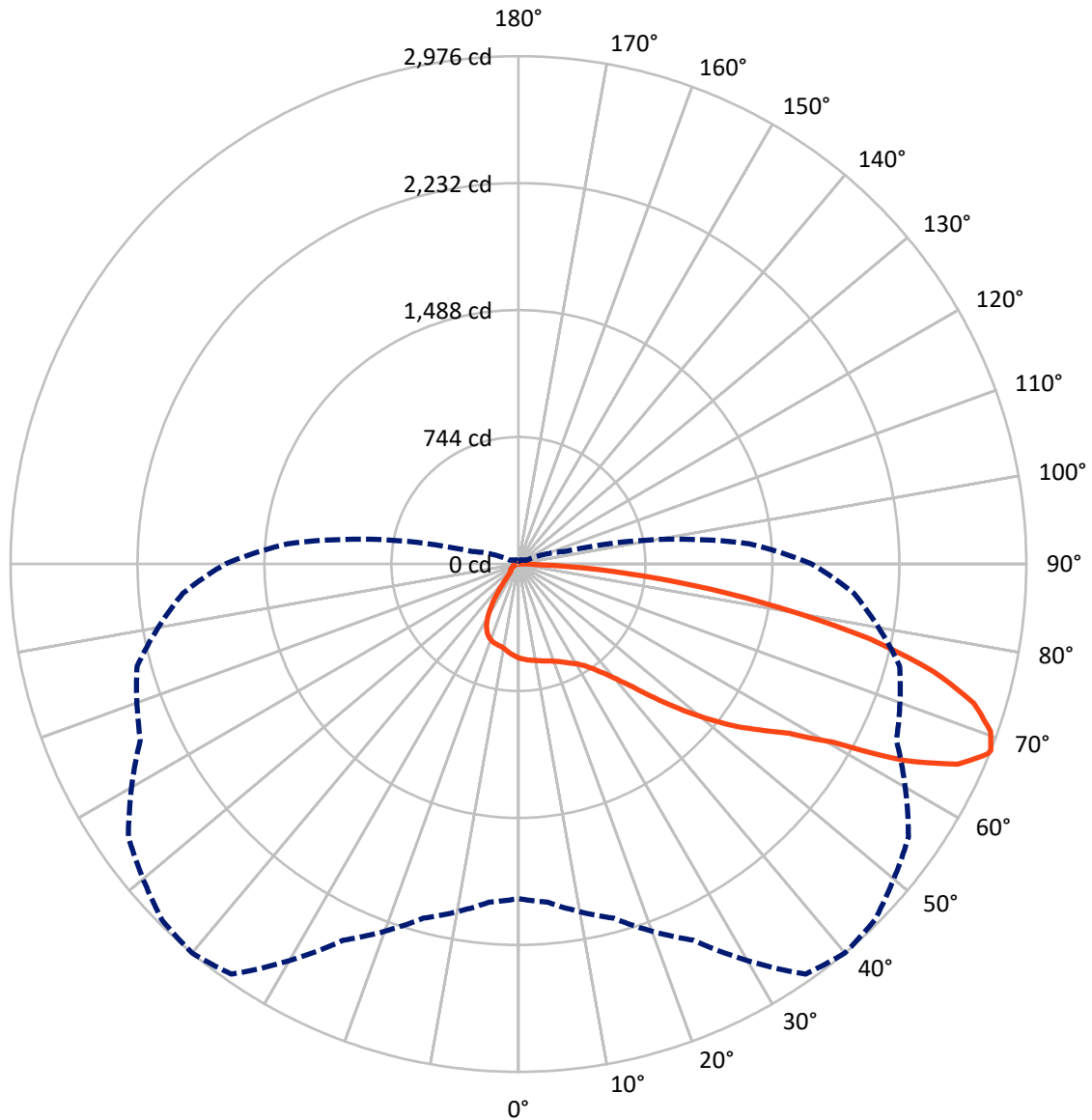
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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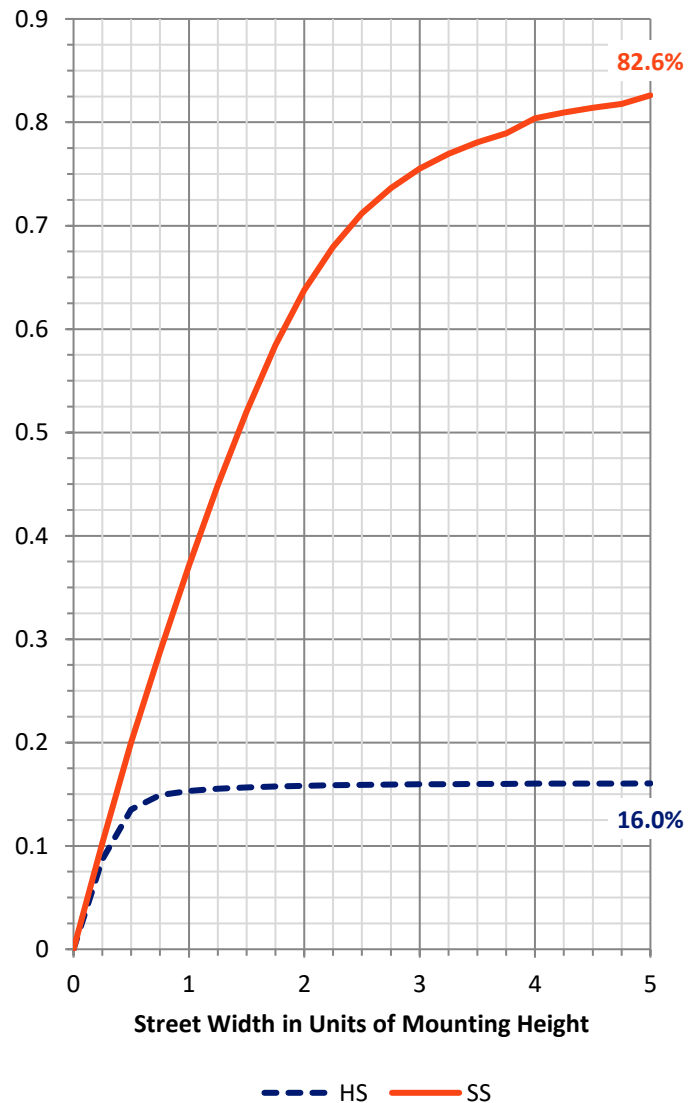
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	805.1	0.0	805.1
	% Fixture	16.2	0.0	16.2
<b>Street Side</b>	Lumens	4157.9	0.0	4157.9
	% Fixture	83.8	0.0	83.8
<b>Total</b>	Lumens	4963.0	0.0	4963.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.3	1.1
10°-20°	156.7	3.2
20°-30°	263.0	5.3
30°-40°	389.5	7.8
40°-50°	658.9	13.3
50°-60°	1005.7	20.3
60°-70°	1316.8	26.5
70°-80°	946.7	19.1
80°-90°	173.3	3.5
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°	4963.0	100.0
0°-180°	4963.0	100.0



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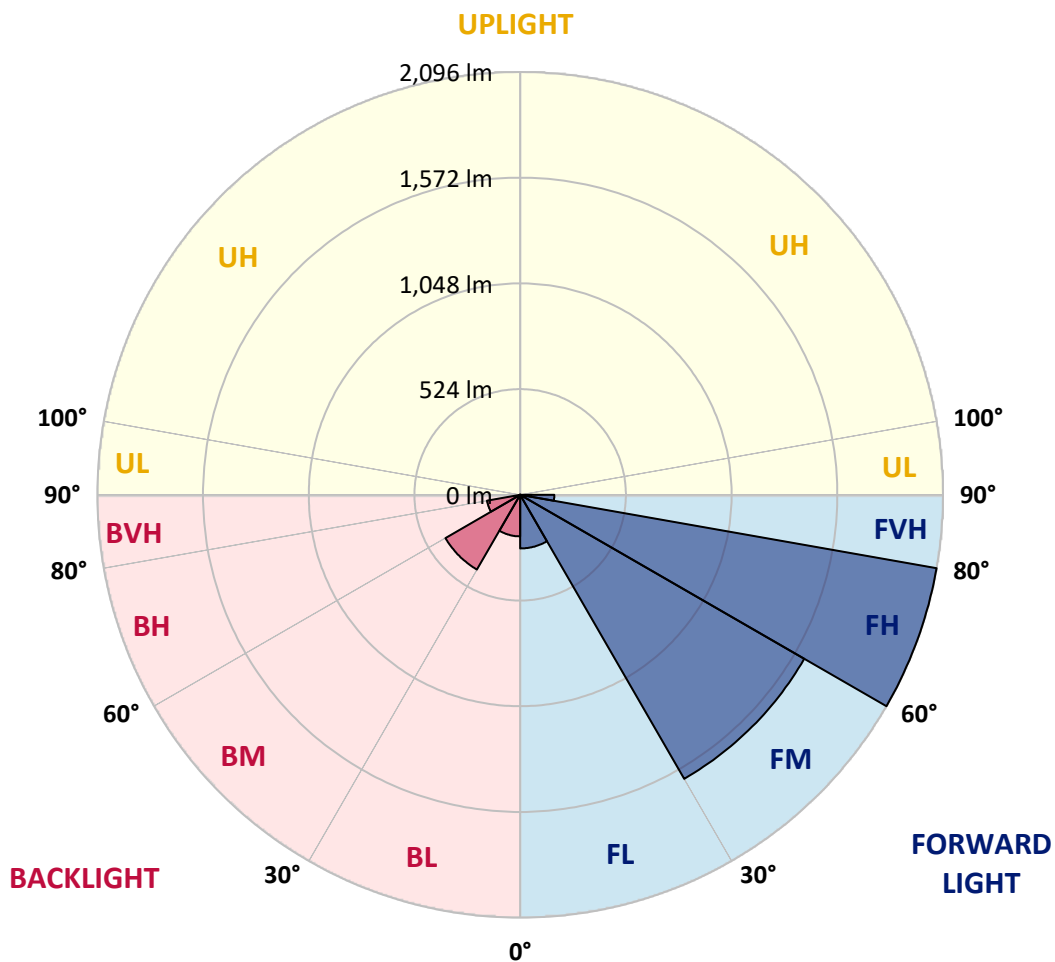
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	266.1	5.4			
FM (30°-60°)	1626.2	32.8			
FH (60°-80°)	2096.4	42.2			G2/5000
FVH (80°-90°)	169.2	3.4			G2/225
BL (0°-30°)	206.0	4.2	B1/500		
BM (30°-60°)	427.9	8.6	B1/1000		
BH (60°-80°)	167.1	3.4	B1/500		G1/500
BVH (80°-90°)	4.1	0.1			G0/10
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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	551.5	551.5	551.5	551.5	551.5	551.5	551.5	551.5	551.5	551.5	551.5
2.5°	568.9	570.2	568.5	564.4	559.8	557.3	556.9	556.5	554.4	551.5	547.3
5°	574.8	575.2	573.5	570.2	566.0	565.2	564.0	564.4	563.1	560.2	555.6
7.5°	577.3	578.1	576.0	572.7	569.4	569.4	568.9	570.2	569.4	568.1	562.7
10°	576.4	577.7	576.4	575.2	573.9	575.2	574.3	577.3	577.7	577.7	571.4
12.5°	575.2	576.8	577.3	578.5	580.6	581.8	583.5	589.7	592.6	594.7	589.7
15°	576.4	577.3	580.6	582.7	586.8	589.7	593.5	603.8	608.8	614.7	612.2
17.5°	581.8	583.9	588.9	591.0	595.1	597.2	601.8	614.7	624.6	635.0	636.7
20°	593.5	594.7	603.0	603.8	605.9	608.0	613.0	627.1	642.1	657.0	661.2
22.5°	606.3	609.3	617.1	615.9	620.1	620.9	625.5	640.8	661.6	679.9	689.0
25°	619.6	622.1	630.0	630.9	635.8	639.2	644.6	659.5	686.1	709.4	725.6
27.5°	630.9	635.8	643.3	644.2	653.7	657.9	665.8	682.8	714.8	743.5	770.1
30°	651.6	652.9	660.0	662.4	675.3	679.1	688.2	709.8	748.9	784.6	826.2
32.5°	677.4	677.0	683.6	687.8	703.6	710.2	721.9	746.8	790.0	834.5	893.5
35°	724.8	720.6	724.8	728.9	747.2	754.3	766.8	804.2	854.9	930.5	1003.2
37.5°	833.7	827.4	818.7	797.9	802.5	811.6	829.9	880.6	955.4	1095.9	1166.1
40°	1022.3	1008.6	972.1	917.2	884.8	885.6	902.7	969.2	1078.9	1285.4	1338.2
42.5°	1193.2	1183.6	1139.5	1064.3	989.5	985.4	991.2	1068.9	1213.5	1461.2	1488.6
45°	1354.0	1358.6	1294.6	1235.5	1146.2	1118.8	1111.7	1175.3	1362.7	1617.9	1620.4
47.5°	1502.8	1510.2	1432.9	1377.3	1289.2	1265.5	1243.4	1287.1	1503.6	1751.3	1730.9
50°	1662.8	1668.6	1561.4	1515.6	1441.7	1419.6	1403.0	1422.1	1647.8	1875.1	1829.4
52.5°	1883.9	1851.4	1716.8	1641.2	1575.5	1573.8	1560.9	1573.0	1812.0	1986.5	1904.2
55°	2144.8	2060.1	1917.1	1796.2	1711.8	1716.4	1701.0	1720.9	1974.5	2082.1	1973.6
57.5°	2237.1	2235.0	2168.5	2052.6	1881.4	1871.0	1844.4	1866.8	2114.9	2171.4	2022.7
60°	2365.1	2376.3	2383.8	2314.0	2215.1	2120.7	2031.8	2029.7	2245.8	2252.9	2046.8
62.5°	2447.8	2458.2	2516.4	2507.2	2568.3	2537.2	2435.8	2210.9	2346.0	2305.7	2055.9
65°	2293.2	2319.0	2465.7	2577.5	2785.7	2829.3	2814.8	2489.4	2414.2	2321.1	2038.9
67.5°	2013.5	2047.2	2208.0	2469.4	2920.3	2969.0	2942.4	2769.9	2443.7	2314.4	1991.9
68°	1961.2	1990.3	2148.2	2433.3	2934.1	2976.4	2952.3	2790.7	2444.9	2313.6	1974.0
70°	1709.3	1733.0	1887.2	2247.9	2895.8	2935.3	2932.0	2810.2	2434.1	2287.8	1853.9
72.5°	1326.1	1349.8	1486.6	1864.3	2719.2	2791.5	2788.6	2732.1	2414.2	2156.5	1554.3
75°	958.8	984.9	1109.6	1432.5	2353.1	2512.2	2544.2	2598.3	2206.8	1814.9	1105.9
77.5°	692.4	711.5	819.1	1082.2	1922.1	2104.1	2169.0	2223.4	1806.1	1322.8	526.1
80°	461.7	475.4	579.3	804.6	1447.9	1555.1	1624.9	1533.9	1027.7	478.3	56.9
82.5°	284.3	293.0	374.9	564.4	1001.6	1035.2	1035.6	818.3	331.2	45.7	30.8
85°	152.5	155.4	203.6	308.0	529.0	554.4	544.4	343.7	66.9	24.5	16.6
87.5°	24.5	26.6	64.0	115.5	163.3	125.9	80.6	25.4	6.6	3.7	2.5
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°	551.5	551.5	551.5	551.5	551.5	551.5	551.5	551.5	551.5	551.5	551.5
2.5°	549.4	548.2	544.8	543.2	539.0	540.3	540.3	536.9	538.6	545.3	544.4
5°	554.4	554.8	546.9	542.8	533.6	531.1	527.4	522.4	522.0	526.5	527.0
7.5°	558.6	560.6	549.4	541.1	528.6	519.9	512.4	503.7	501.6	504.5	504.5
10°	565.2	567.3	553.1	541.5	523.2	509.1	496.2	485.0	480.4	480.4	480.8
12.5°	582.7	581.4	565.2	547.3	525.7	503.3	482.9	468.0	457.1	456.7	455.1
15°	606.8	602.2	586.4	559.4	531.5	502.9	474.6	451.3	432.6	427.6	425.6
17.5°	632.5	626.7	607.6	574.8	540.7	502.4	465.0	432.6	401.5	389.4	385.7
20°	660.4	653.3	633.8	592.6	549.8	499.5	450.9	405.6	363.2	340.4	334.5
22.5°	691.1	685.3	661.6	610.9	556.1	493.3	428.9	371.5	317.5	284.7	282.2
25°	731.0	725.6	690.7	627.1	556.5	481.7	399.8	327.9	260.2	221.5	213.6
27.5°	778.8	769.3	714.0	637.1	549.8	461.3	362.0	269.7	193.2	160.8	160.0
30°	830.8	813.3	732.7	639.6	534.9	428.9	310.0	198.2	137.1	115.1	115.1
32.5°	891.9	859.9	751.8	635.4	510.3	384.0	237.3	137.6	94.3	83.9	83.9
35°	981.2	931.7	776.3	625.0	475.8	322.1	168.7	91.0	74.4	73.1	73.1
37.5°	1122.5	1040.2	809.6	607.6	428.5	245.6	109.7	70.2	71.1	71.1	70.6
40°	1272.9	1165.7	855.3	579.7	369.0	169.6	71.9	66.5	67.7	68.6	68.2
42.5°	1408.8	1285.0	905.2	542.3	298.8	106.8	65.7	64.0	63.2	64.0	64.4
45°	1526.5	1388.5	955.4	493.7	220.7	69.8	64.0	60.3	57.8	58.2	58.6
47.5°	1627.0	1469.9	989.5	442.6	146.3	61.9	61.9	55.3	52.8	52.8	52.8
50°	1715.1	1542.2	1010.3	381.5	87.3	61.1	58.2	50.7	48.2	47.8	48.2
52.5°	1779.1	1592.9	1007.8	307.1	58.6	59.0	53.2	46.5	43.6	44.5	44.9
55°	1829.8	1624.9	985.8	224.8	54.9	55.3	49.5	42.0	39.9	40.3	40.3
57.5°	1861.8	1632.8	940.9	146.3	53.6	49.5	44.5	37.4	34.9	34.9	34.9
60°	1872.2	1628.7	879.8	93.5	53.2	44.5	40.3	33.7	31.2	31.2	31.2
62.5°	1863.5	1604.6	776.3	67.3	49.5	41.6	36.6	29.9	27.4	26.6	26.6
65°	1832.3	1540.2	598.4	55.7	44.5	38.2	33.2	27.0	23.7	22.4	22.0
67.5°	1741.3	1400.5	348.3	52.4	40.3	34.9	30.8	24.5	20.8	18.7	18.3
68°	1717.6	1359.0	286.3	51.9	40.3	34.5	30.3	23.7	19.9	17.9	17.5
70°	1548.1	1096.3	82.3	49.5	39.5	33.2	27.8	21.6	17.9	15.4	15.0
72.5°	1165.7	642.5	51.5	44.1	39.1	29.5	27.0	21.6	15.8	13.3	12.5
75°	650.8	146.3	43.6	32.8	36.6	29.1	26.6	19.5	14.1	10.8	10.4
77.5°	133.8	42.4	37.4	22.9	27.8	25.4	22.4	16.6	12.9	8.3	7.9
80°	37.8	31.6	33.2	16.6	15.8	17.9	16.6	14.5	9.6	6.2	6.2
82.5°	24.5	23.3	29.9	11.2	8.3	8.3	10.8	8.7	8.3	5.0	5.0
85°	15.0	19.5	14.5	5.0	4.2	3.3	3.7	3.7	5.0	3.3	3.3
87.5°	2.1	2.1	2.1	2.1	2.1	1.7	1.2	1.2	1.2	1.7	1.7
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)