

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: P233579

Luminaire Tested: **VRDN-C02-D-UNV-T4-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233579
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-CO2-D-UNV-T4-7030
Description: VERDEON ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 1140mA LEDS AND TYPE IV OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10561 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

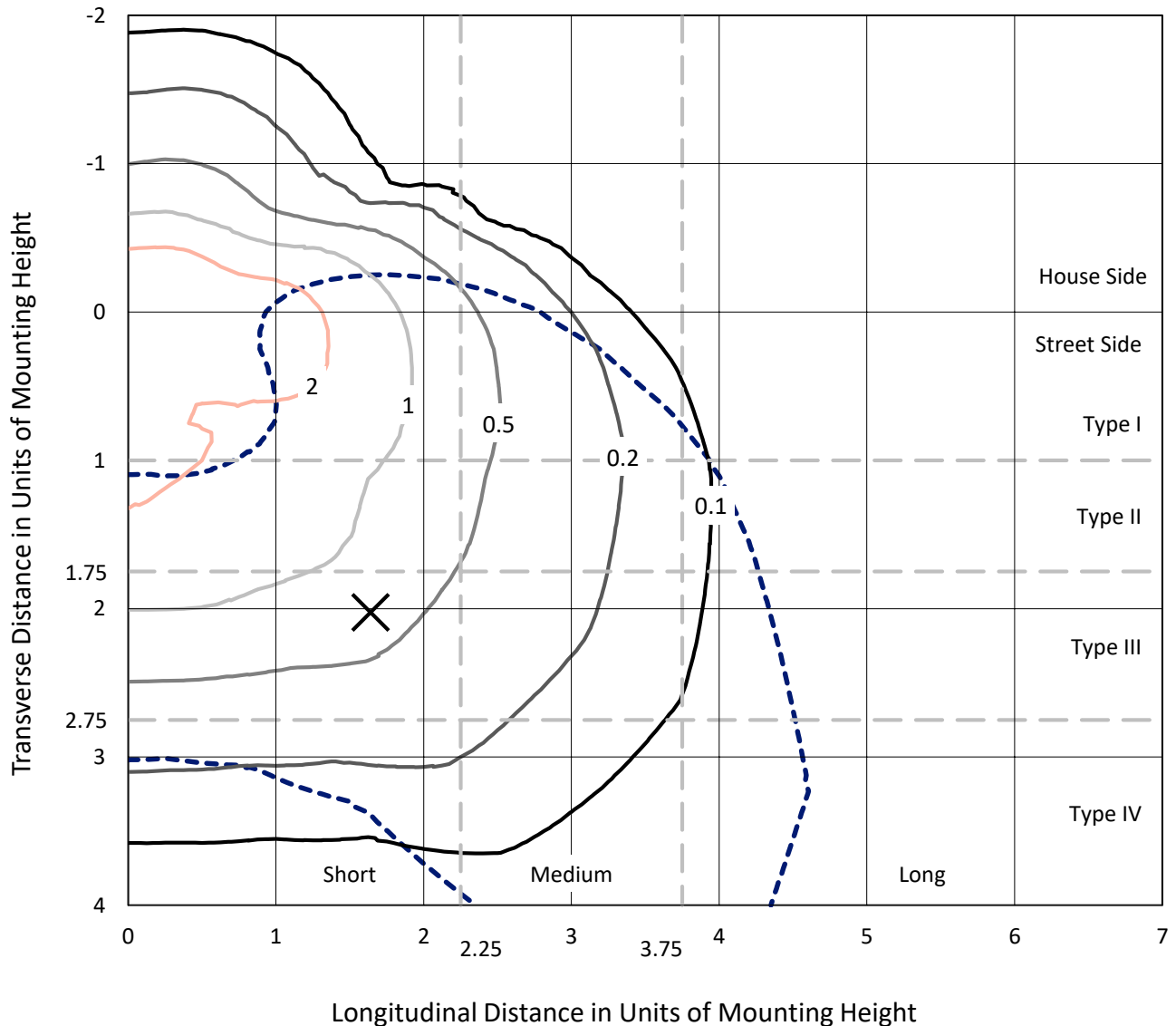
Input Watts (W): 90
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

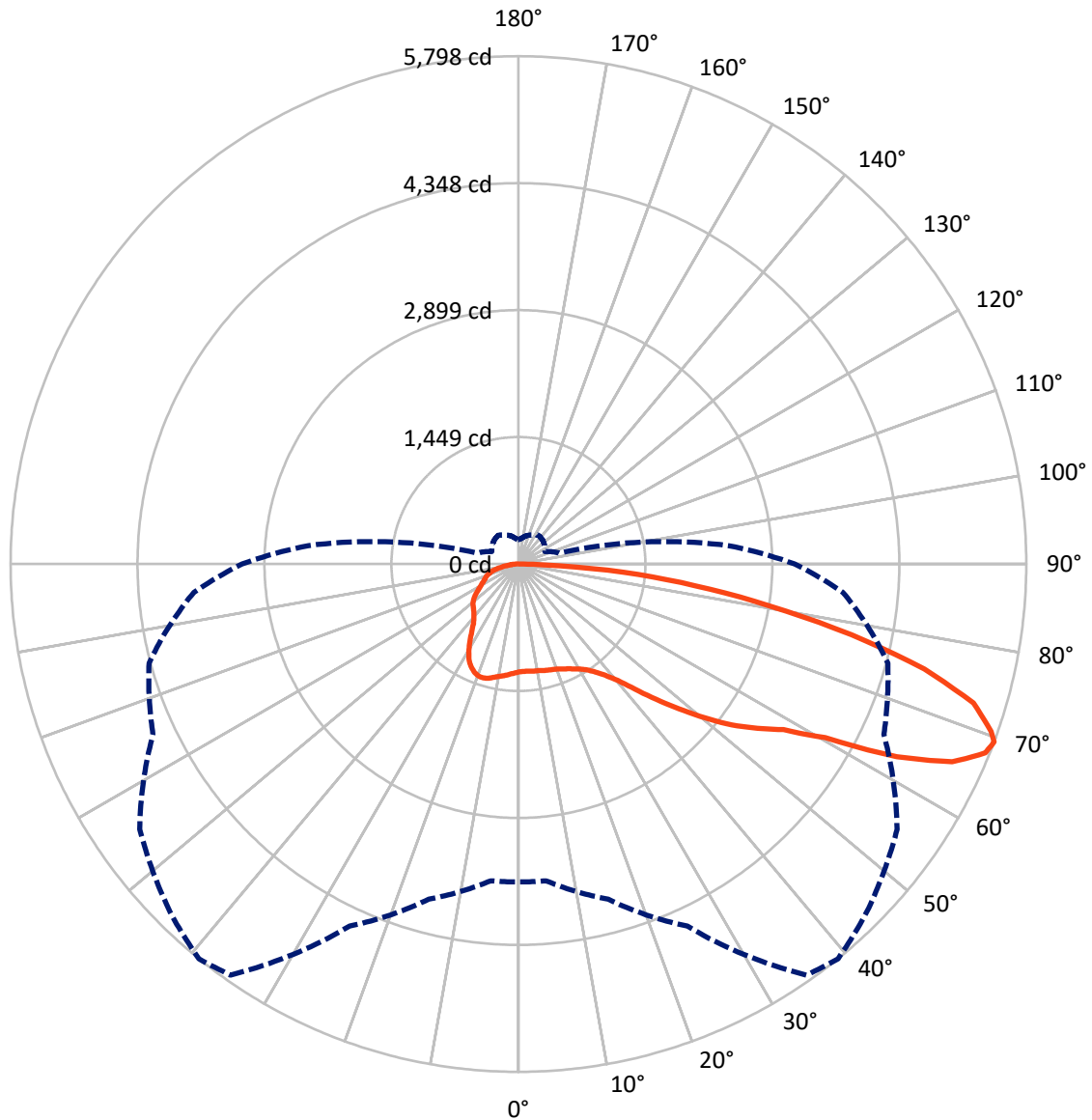
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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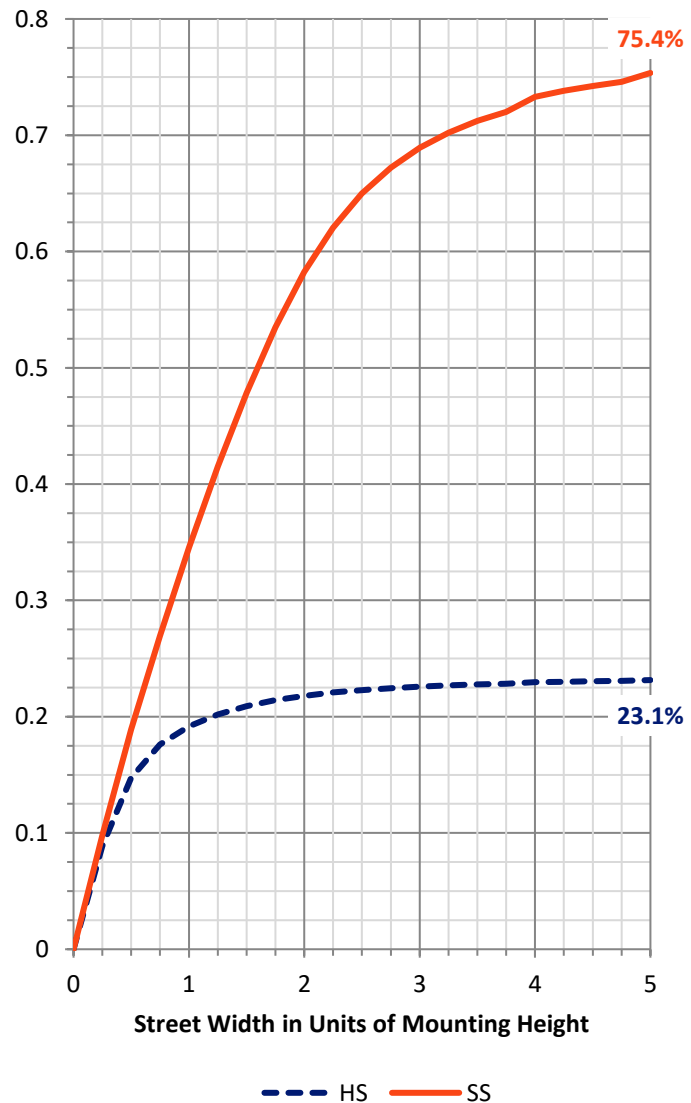
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2475.7	0.0	2475.7
	% Fixture	23.4	0.0	23.4
Street Side	Lumens	8085.3	0.0	8085.3
	% Fixture	76.6	0.0	76.6
Total	Lumens	10561.0	0.0	10561.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.5	1.1
10°-20°	369.5	3.5
20°-30°	622.0	5.9
30°-40°	901.1	8.5
40°-50°	1456.6	13.8
50°-60°	2132.5	20.2
60°-70°	2669.1	25.3
70°-80°	1908.1	18.1
80°-90°	382.6	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°	10561.0	100.0
0°-180°	10561.0	100.0



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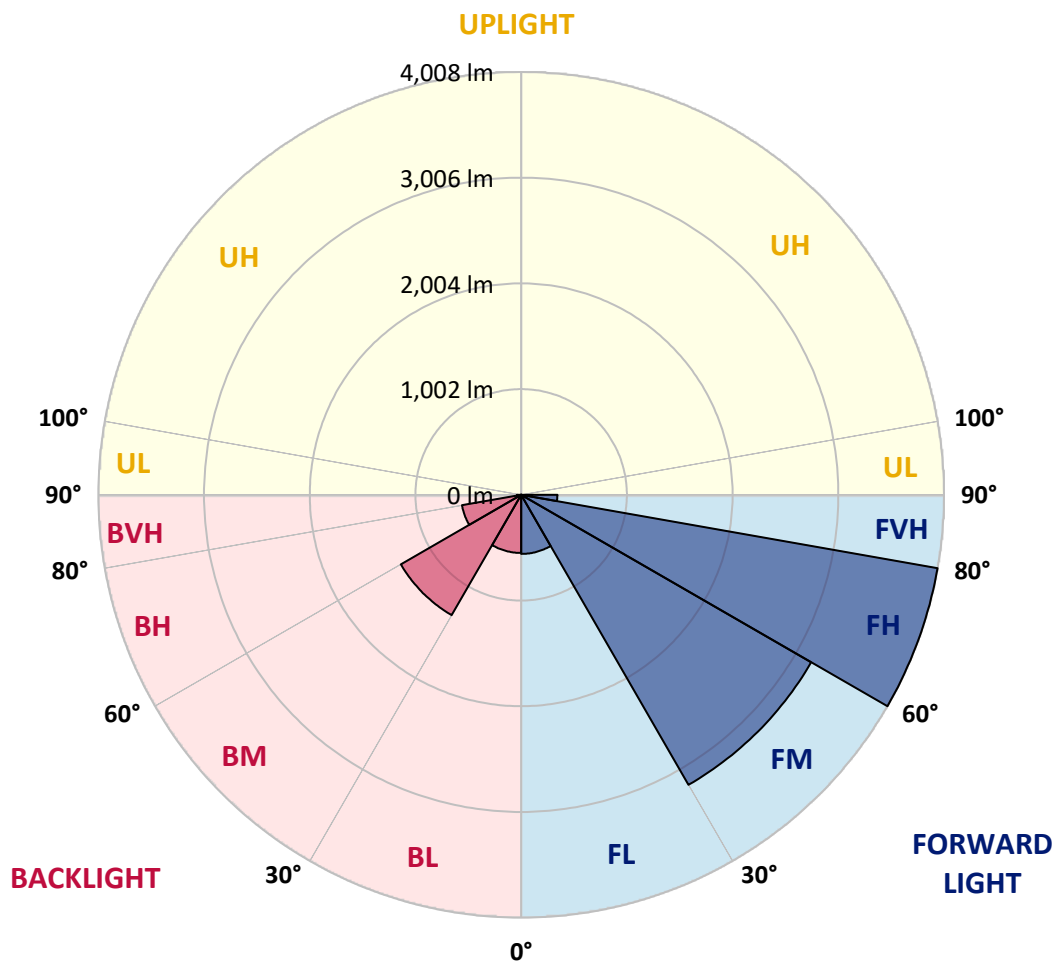
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	560.3	5.3			
FM (30°-60°)	3173.7	30.1			
FH (60°-80°)	4007.8	37.9			G2/5000
FVH (80°-90°)	343.5	3.3			G3/500
BL (0°-30°)	550.7	5.2	B2/1000		
BM (30°-60°)	1316.5	12.5	B2/2500		
BH (60°-80°)	569.3	5.4	B2/1000		G2/1000
BVH (80°-90°)	39.1	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2
2.5°	1251.6	1249.6	1245.7	1230.2	1228.2	1227.2	1229.2	1223.3	1222.4	1224.3	1222.4
5°	1252.5	1250.6	1245.7	1232.1	1230.2	1228.2	1229.2	1224.3	1225.3	1230.2	1230.2
7.5°	1254.5	1252.5	1247.7	1233.1	1237.0	1235.0	1238.9	1232.1	1232.1	1236.0	1237.0
10°	1249.6	1248.6	1245.7	1235.0	1240.9	1237.0	1240.9	1241.8	1245.7	1248.6	1247.7
12.5°	1237.0	1237.0	1237.0	1232.1	1248.6	1247.7	1254.5	1261.3	1271.0	1275.9	1278.8
15°	1229.2	1228.2	1235.0	1234.0	1254.5	1257.4	1269.1	1286.6	1301.2	1313.8	1317.7
17.5°	1237.0	1237.0	1245.7	1243.8	1264.2	1266.2	1278.8	1304.1	1328.4	1352.8	1363.5
20°	1245.7	1246.7	1257.4	1260.3	1279.8	1278.8	1291.5	1322.6	1355.7	1391.7	1410.2
22.5°	1273.0	1272.0	1280.8	1274.9	1297.3	1301.2	1311.9	1339.2	1385.9	1431.6	1461.8
25°	1293.4	1296.3	1305.1	1301.2	1319.7	1324.6	1342.1	1368.3	1423.8	1478.3	1531.8
27.5°	1312.9	1318.7	1325.5	1324.6	1349.9	1355.7	1369.3	1410.2	1474.4	1539.6	1614.6
30°	1342.1	1340.1	1345.0	1353.8	1386.8	1390.7	1407.3	1456.9	1534.8	1619.4	1719.7
32.5°	1381.0	1379.1	1383.9	1391.7	1431.6	1441.3	1463.7	1517.3	1615.5	1717.7	1840.4
35°	1442.3	1447.2	1451.1	1460.8	1499.7	1513.4	1543.5	1611.7	1725.5	1889.0	2064.2
37.5°	1655.4	1644.7	1623.3	1584.4	1595.1	1610.7	1653.5	1750.8	1916.3	2193.6	2354.2
40°	1988.3	1975.6	1908.5	1794.6	1743.0	1746.9	1788.8	1921.1	2146.9	2551.8	2699.7
42.5°	2301.7	2286.1	2206.3	2064.2	1962.0	1950.3	1954.2	2107.0	2400.0	2909.9	2988.8
45°	2597.5	2605.3	2483.7	2374.7	2257.9	2204.3	2187.8	2301.7	2681.2	3220.4	3244.7
47.5°	2880.7	2886.6	2749.3	2644.2	2531.3	2469.1	2436.9	2525.5	2940.1	3471.5	3449.1
50°	3169.8	3185.4	2997.5	2908.0	2803.8	2759.1	2727.9	2786.3	3226.2	3711.9	3642.8
52.5°	3577.6	3512.4	3266.1	3139.6	3065.6	3052.0	3019.9	3067.6	3529.9	3924.0	3780.0
55°	4031.1	3891.9	3633.0	3412.1	3309.9	3309.9	3281.7	3337.2	3843.2	4082.7	3891.9
57.5°	4178.0	4191.7	4102.1	3861.7	3587.3	3565.9	3538.6	3614.5	4111.9	4224.8	3933.8
60°	4435.0	4472.9	4542.0	4341.5	4206.3	4024.3	3858.8	3899.7	4343.5	4341.5	3978.5
62.5°	4562.5	4598.5	4814.5	4706.5	4834.0	4846.6	4537.2	4221.8	4514.8	4399.9	3999.9
65°	4441.8	4467.1	4755.2	4897.2	5267.1	5443.2	5290.4	4654.9	4605.3	4375.6	3920.1
67.5°	4045.7	4093.4	4331.8	4764.9	5653.4	5751.7	5608.7	5249.6	4644.2	4383.4	3855.9
69°	3629.1	3630.1	3961.0	4561.5	5729.4	5797.5	5622.3	5277.8	4603.3	4364.9	3718.7
70°	3394.6	3418.9	3664.2	4385.3	5701.1	5723.5	5589.2	5276.8	4575.1	4359.1	3588.3
72.5°	2649.1	2636.5	2880.7	3667.1	5381.9	5431.5	5283.6	5127.9	4551.8	4108.0	3035.5
75°	1852.0	1891.0	2130.4	2778.5	4637.4	4786.3	4786.3	4926.4	4189.7	3510.4	2194.6
77.5°	1378.1	1383.9	1575.6	2122.6	3731.3	3886.1	4028.2	4145.9	3274.9	2404.8	981.0
80°	933.3	942.1	1117.3	1565.9	2764.9	2907.0	3131.8	2852.5	1948.4	832.1	111.9
82.5°	587.8	599.5	738.7	1099.7	1970.8	2035.0	2104.1	1610.7	649.1	96.3	71.0
85°	349.4	351.3	445.7	702.7	1201.9	1205.8	1131.9	741.6	174.2	57.4	44.8
87.5°	146.0	153.8	194.6	311.4	352.3	278.3	173.2	59.4	26.3	23.4	15.6
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°	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2	1230.2
2.5°	1216.5	1227.2	1225.3	1228.2	1232.1	1239.9	1248.6	1244.7	1249.6	1260.3	1260.3
5°	1227.2	1236.0	1238.9	1244.7	1249.6	1257.4	1263.2	1261.3	1272.0	1287.6	1287.6
7.5°	1236.0	1242.8	1252.5	1259.3	1264.2	1279.8	1285.6	1281.7	1289.5	1308.0	1309.0
10°	1248.6	1255.5	1270.1	1276.9	1286.6	1294.4	1302.2	1301.2	1309.0	1325.5	1328.4
12.5°	1279.8	1284.7	1305.1	1314.8	1314.8	1324.6	1318.7	1309.0	1312.9	1322.6	1324.6
15°	1320.7	1327.5	1353.8	1358.6	1353.8	1355.7	1342.1	1310.9	1295.4	1298.3	1299.3
17.5°	1367.4	1379.1	1409.2	1402.4	1396.6	1382.0	1346.9	1300.2	1253.5	1236.0	1238.9
20°	1417.0	1431.6	1466.6	1452.0	1430.6	1392.7	1336.2	1256.4	1184.4	1142.6	1140.6
22.5°	1474.4	1492.9	1526.0	1500.7	1453.0	1386.8	1300.2	1202.9	1111.4	1046.2	1042.3
25°	1553.3	1573.7	1585.4	1534.8	1456.9	1365.4	1248.6	1129.9	1015.1	937.2	931.4
27.5°	1642.8	1653.5	1630.1	1554.2	1438.4	1319.7	1184.4	1037.5	910.9	846.7	837.9
30°	1742.1	1733.3	1660.3	1544.5	1390.7	1247.7	1084.2	919.7	818.5	766.9	759.1
32.5°	1856.9	1829.7	1683.7	1517.3	1327.5	1153.3	975.2	844.8	764.0	712.4	708.5
35°	2045.7	1967.9	1721.6	1475.4	1243.8	1042.3	874.9	780.5	717.3	653.0	643.3
37.5°	2319.2	2172.2	1777.1	1436.5	1153.3	935.3	799.0	728.9	673.5	601.5	587.8
40°	2603.4	2412.6	1868.6	1393.7	1068.6	856.4	757.2	707.5	653.0	584.9	566.4
42.5°	2863.2	2641.3	1975.6	1340.1	980.0	793.2	736.7	701.7	647.2	583.0	568.4
45°	3098.7	2856.4	2085.6	1278.8	882.7	742.6	720.2	691.0	635.5	574.2	562.5
47.5°	3297.3	3039.4	2196.6	1207.8	789.3	711.4	702.7	671.5	619.9	560.6	550.8
50°	3461.7	3170.8	2259.8	1132.8	712.4	688.1	677.4	638.4	585.9	530.4	524.6
52.5°	3583.4	3252.5	2317.2	1092.9	652.1	650.1	643.3	605.3	554.7	497.3	485.6
55°	3668.1	3319.7	2291.9	1061.8	587.8	602.4	598.5	575.2	532.4	465.2	455.5
57.5°	3672.9	3325.5	2237.4	876.9	524.6	545.0	551.8	555.7	508.0	448.7	437.0
60°	3668.1	3282.7	2136.2	643.3	463.3	487.6	512.9	512.9	479.8	421.4	412.6
62.5°	3645.7	3198.0	1900.7	458.4	414.6	446.7	479.8	465.2	437.0	390.3	381.5
65°	3543.5	3056.9	1487.1	373.7	394.2	423.4	438.9	418.5	382.5	333.8	329.9
67.5°	3357.6	2733.8	860.3	342.6	376.6	402.9	415.6	384.4	350.4	303.6	301.7
69°	3153.2	2406.8	484.7	334.8	365.9	389.3	400.0	365.9	332.8	288.1	279.3
70°	2970.3	2114.8	315.3	328.0	355.2	380.5	388.3	353.3	322.1	276.4	270.6
72.5°	2250.1	1273.9	212.2	299.8	326.0	345.5	357.2	324.1	289.0	243.3	231.6
75°	1229.2	346.5	186.9	256.9	290.0	316.3	319.2	277.4	226.8	180.0	175.2
77.5°	239.4	118.7	160.6	212.2	230.7	261.8	259.9	231.6	196.6	152.8	147.0
80°	90.5	85.6	134.3	151.8	162.5	195.6	207.3	186.9	163.5	104.1	89.5
82.5°	61.3	63.3	100.2	89.5	99.3	115.8	146.0	142.1	129.4	71.0	63.3
85°	42.8	49.6	55.5	38.0	48.7	73.0	96.3	93.4	79.8	49.6	44.8
87.5°	12.7	13.6	15.6	19.5	30.2	54.5	78.8	65.2	43.8	37.0	32.1
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)