

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: P233486

Luminaire Tested: **VRDN-C028-D-UNV-T2**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233486  
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-C028-D-UNV-T2  
Description: VERDEON ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 930mA LEDS AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9335 lumens  
Efficiency: N/A  
Efficacy: 127.9 lumens/watt  
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')  
IES Classification: Type II - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G2

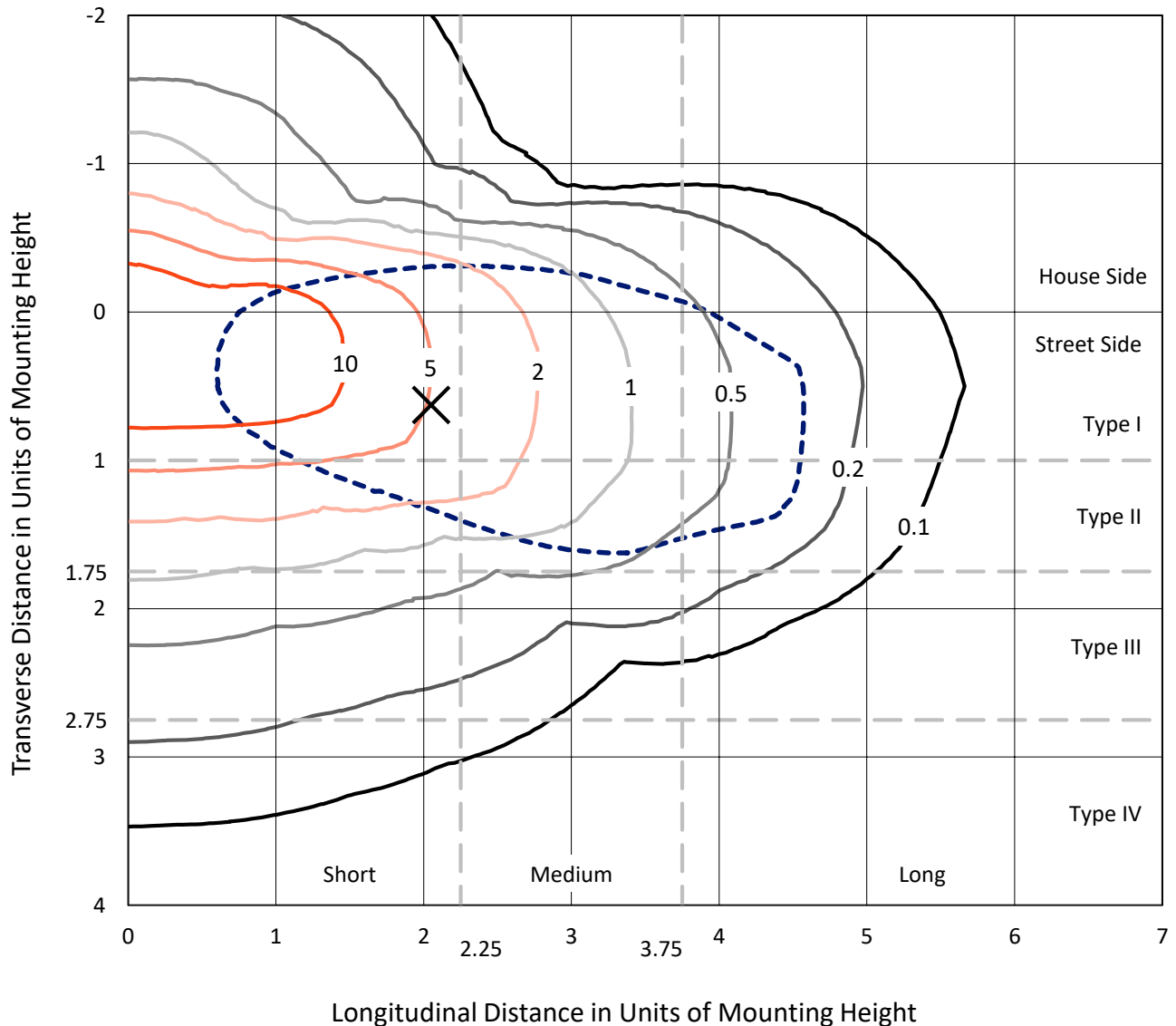
Input Watts (W): 73  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

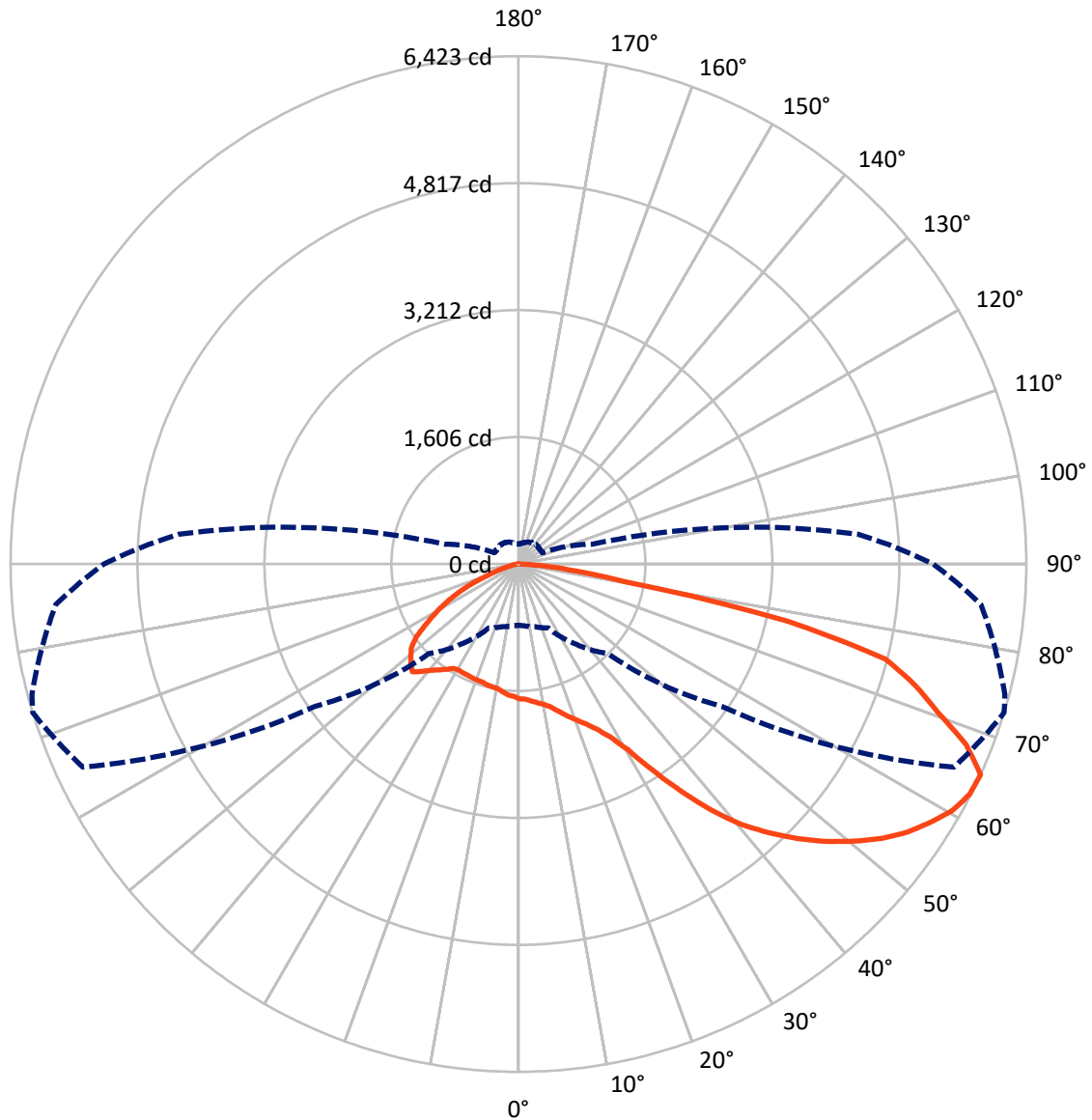


Based on 10 foot mounting height. Maximum calculated value = 19.8 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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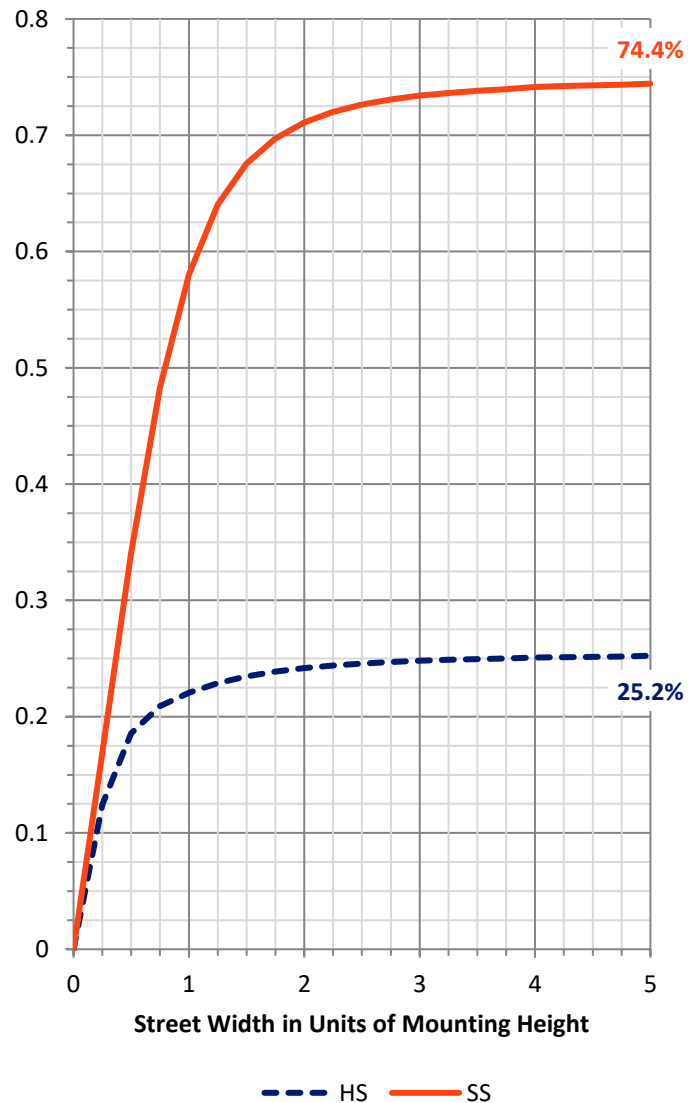
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2393.0	0.0	2393.0
	% Fixture	25.6	0.0	25.6
<b>Street Side</b>	Lumens	6942.0	0.0	6942.0
	% Fixture	74.4	0.0	74.4
<b>Total</b>	Lumens	9335.0	0.0	9335.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.9	1.7
10°-20°	492.5	5.3
20°-30°	826.1	8.8
30°-40°	1211.5	13.0
40°-50°	1637.4	17.5
50°-60°	1896.8	20.3
60°-70°	1852.8	19.8
70°-80°	1112.6	11.9
80°-90°	142.5	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°	9335.0	100.0
0°-180°	9335.0	100.0



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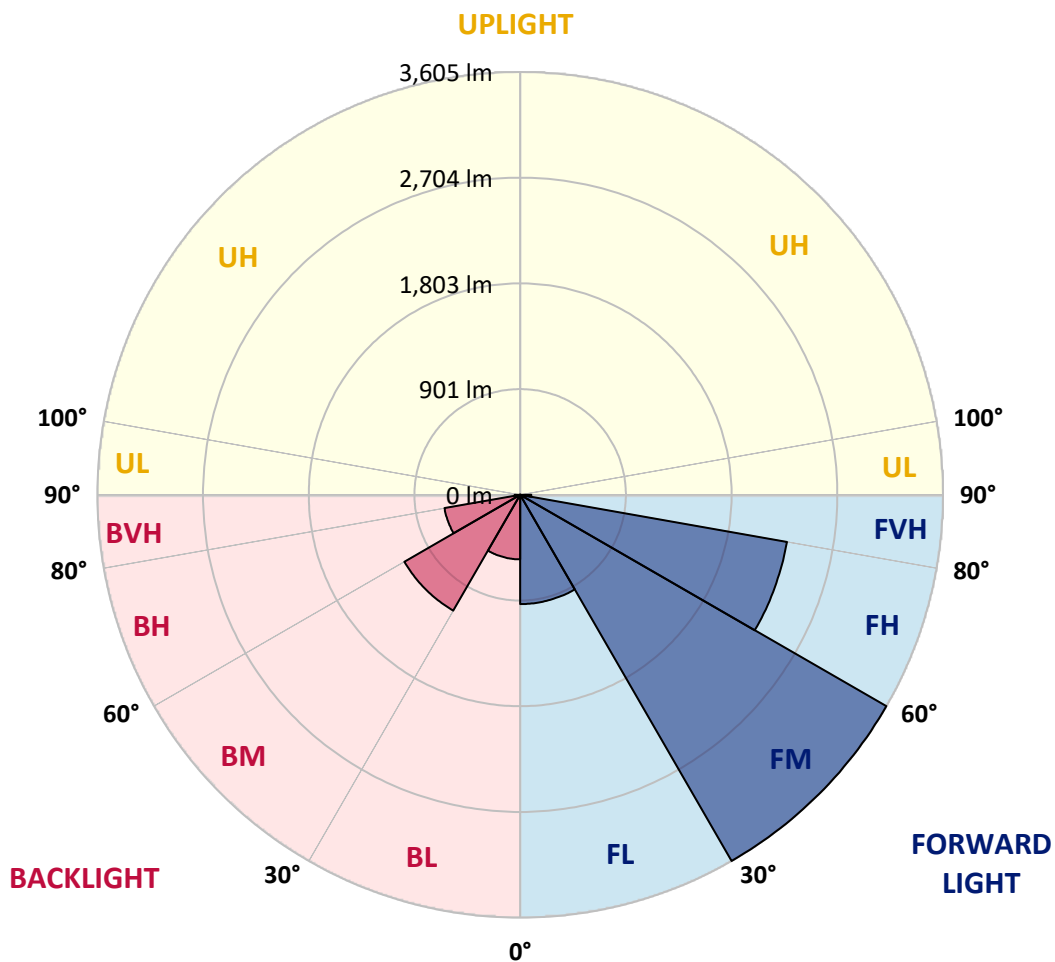
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	931.5	10.0			
FM	(30°-60°)	3605.5	38.6			
FH	(60°-80°)	2310.2	24.7			G2/5000
FVH	(80°-90°)	94.9	1.0			G1/100
BL	(0°-30°)	550.0	5.9	B2/1000		
BM	(30°-60°)	1140.1	12.2	B2/2500		
BH	(60°-80°)	655.2	7.0	B2/1000		G2/1000
BVH	(80°-90°)	47.6	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	73°	75°	85°
0°	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9
2.5°	1812.0	1818.8	1811.1	1789.1	1778.1	1770.5	1747.6	1727.2	1711.1	1709.4	1694.2
5°	1881.5	1891.7	1878.9	1851.0	1840.0	1823.9	1798.4	1770.5	1741.6	1735.7	1705.2
7.5°	1969.6	1971.3	1964.5	1936.6	1913.7	1879.8	1835.7	1806.1	1773.0	1763.7	1715.4
10°	2044.2	2043.4	2034.9	2007.8	1984.9	1955.2	1893.4	1845.0	1806.1	1794.2	1727.2
12.5°	2115.4	2113.7	2105.2	2077.3	2048.4	2023.9	1977.3	1912.0	1859.5	1844.2	1761.1
15°	2203.5	2199.3	2185.7	2148.5	2125.6	2096.8	2062.9	1997.6	1937.4	1916.2	1810.3
17.5°	2271.3	2270.5	2260.3	2229.0	2201.8	2170.5	2139.1	2088.3	2023.0	1999.3	1858.6
20°	2310.3	2306.9	2304.4	2279.8	2273.0	2256.1	2211.2	2172.2	2106.9	2082.3	1912.8
22.5°	2351.9	2352.7	2353.6	2340.8	2360.3	2345.9	2312.9	2265.4	2199.3	2171.3	1989.1
25°	2361.2	2362.9	2379.8	2407.8	2431.5	2457.8	2434.1	2387.5	2316.3	2286.6	2093.4
27.5°	2334.9	2341.7	2392.5	2440.0	2523.9	2557.8	2553.6	2551.0	2478.1	2448.5	2236.6
30°	2358.6	2358.6	2393.4	2474.7	2580.7	2669.7	2689.2	2743.4	2721.4	2700.2	2477.3
32.5°	2287.4	2300.2	2362.0	2475.6	2643.4	2773.1	2861.2	3012.1	3099.4	3081.6	2818.0
35°	2153.5	2170.5	2261.2	2434.9	2674.8	2895.1	3052.8	3343.5	3512.1	3533.3	3228.2
37.5°	2050.1	2064.6	2178.1	2371.4	2686.6	3009.5	3274.0	3716.4	3934.2	3923.2	3575.7
40°	1923.9	1949.3	2063.7	2295.9	2658.7	3107.0	3513.8	4058.8	4326.6	4275.7	3906.2
42.5°	1810.3	1832.3	1928.1	2175.6	2619.7	3162.1	3730.8	4411.3	4646.1	4605.4	4218.9
45°	1689.9	1709.4	1798.4	2031.5	2529.0	3189.2	3934.2	4748.6	4952.9	4907.1	4508.8
47.5°	1551.8	1578.1	1684.0	1895.9	2395.9	3172.3	4082.5	5041.9	5244.4	5210.5	4748.6
50°	1203.5	1230.6	1507.7	1768.8	2211.2	3101.9	4215.5	5335.1	5508.0	5475.8	4960.5
52.5°	1092.4	1104.3	1190.8	1623.0	2018.8	2962.9	4298.6	5576.7	5764.8	5732.6	5160.5
55°	1024.6	1033.1	1081.4	1325.5	1855.2	2739.2	4308.8	5827.5	5980.9	5938.5	5373.3
57.5°	955.2	964.5	1017.9	1143.3	1690.8	2389.1	4201.1	6040.3	6156.4	6110.6	5576.7
60°	896.7	901.8	954.3	1040.8	1505.2	2041.7	3924.0	6185.2	6318.2	6258.9	5775.8
62.5°	843.3	850.1	888.2	967.0	1349.2	1781.5	3537.5	6186.0	6407.2	6370.8	5876.7
65°	773.8	784.0	821.2	892.4	1223.0	1603.5	3137.5	6078.4	6423.3	6369.1	5871.6
67.5°	693.3	706.0	739.9	796.7	1055.2	1413.7	2579.8	5936.9	6108.9	6099.6	5629.2
70°	612.8	612.8	650.9	696.7	875.5	1210.3	2038.3	5432.6	5629.2	5643.6	5194.4
72.5°	517.0	518.7	548.3	588.2	705.1	993.3	1484.8	4644.4	5247.8	5073.2	4685.1
75°	433.9	432.2	462.7	495.8	573.8	782.3	968.7	3412.1	4796.1	4835.1	4123.2
77.5°	230.5	222.0	261.0	287.3	336.5	434.8	537.3	1711.1	3473.1	3549.4	3301.1
80°	65.3	66.1	172.9	193.2	221.2	215.3	249.2	652.6	1373.8	1548.4	1924.7
82.5°	39.0	44.9	98.3	115.3	86.4	55.9	94.9	362.7	711.1	796.7	955.2
85°	20.3	22.0	34.7	43.2	33.1	28.0	28.8	152.6	345.8	351.7	381.4
87.5°	9.3	9.3	12.7	13.6	8.5	5.1	3.4	2.5	2.5	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9
2.5°	1682.3	1690.8	1676.4	1665.4	1656.9	1651.8	1645.9	1631.5	1635.7	1641.6	1640.8
5°	1690.8	1695.0	1669.6	1634.9	1602.7	1579.8	1564.5	1541.6	1541.6	1551.0	1551.0
7.5°	1698.4	1692.5	1640.8	1582.3	1545.9	1527.2	1502.6	1478.1	1473.8	1480.6	1481.5
10°	1702.7	1677.2	1605.2	1551.0	1503.5	1465.4	1434.0	1406.0	1405.2	1414.5	1416.2
12.5°	1721.3	1672.2	1602.7	1528.1	1456.9	1416.2	1378.9	1347.6	1336.5	1337.4	1339.1
15°	1750.1	1692.5	1599.3	1496.7	1419.6	1365.3	1311.1	1271.3	1261.1	1274.7	1279.8
17.5°	1784.9	1725.5	1583.2	1467.9	1373.8	1308.6	1254.3	1218.7	1186.5	1172.1	1169.6
20°	1830.6	1753.5	1591.6	1425.5	1329.8	1242.5	1174.7	1131.4	1104.3	1102.6	1100.9
22.5°	1890.8	1784.9	1593.3	1397.6	1260.3	1169.6	1085.7	1061.1	1012.8	995.0	1002.6
25°	1970.5	1832.3	1589.1	1367.9	1206.9	1084.8	984.0	939.0	921.3	900.9	902.6
27.5°	2073.0	1907.8	1600.1	1328.9	1119.6	981.4	868.7	820.4	793.3	776.3	778.9
30°	2281.5	2022.2	1599.3	1291.6	1039.1	874.6	747.5	715.3	688.2	672.9	680.6
32.5°	2578.1	2270.5	1634.9	1241.6	947.5	731.4	645.8	609.4	586.5	569.5	573.8
35°	2945.1	2540.9	1726.4	1173.8	843.3	622.1	563.6	518.7	490.7	483.9	481.4
37.5°	3285.8	2779.9	1812.8	1128.9	723.8	561.9	488.2	443.3	418.7	427.1	427.1
40°	3590.1	3096.8	1910.3	1056.9	615.3	493.3	404.3	383.9	371.2	385.6	390.7
42.5°	3819.8	3401.1	2042.5	961.9	527.2	411.9	345.8	360.2	365.3	375.4	372.9
45°	4104.5	3574.8	2173.0	873.8	450.0	343.2	333.9	363.6	375.4	384.8	380.5
47.5°	4366.4	3709.6	2146.8	711.1	378.8	332.2	339.9	363.6	383.9	399.2	396.6
50°	4591.8	3878.2	2096.8	552.6	363.6	342.4	345.8	354.3	384.8	394.9	394.9
52.5°	4732.5	4045.2	2034.9	446.6	374.6	355.1	349.2	348.3	368.7	376.3	369.5
55°	4902.0	4218.1	1874.7	414.4	378.8	363.6	358.5	350.9	356.8	350.9	354.3
57.5°	5090.2	4388.4	1628.9	405.1	376.3	361.0	388.2	347.5	344.1	322.9	317.8
60°	5255.5	4455.4	1413.7	383.9	362.7	354.3	361.0	343.2	326.3	298.3	287.3
62.5°	5317.3	4449.5	1195.0	361.9	342.4	344.1	343.2	330.5	315.3	287.3	280.5
65°	5242.7	4313.9	968.7	335.6	326.3	333.1	324.6	306.0	280.5	257.6	251.7
67.5°	4990.2	3968.1	719.5	300.9	300.0	312.7	306.8	281.4	253.4	235.6	235.6
70°	4507.1	3542.6	466.1	250.0	268.7	290.7	290.7	263.6	227.1	211.9	216.1
72.5°	3978.2	3048.5	301.7	185.6	211.9	263.6	261.9	243.2	209.3	189.8	190.7
75°	3446.0	2418.8	194.9	128.0	137.3	224.6	232.2	198.3	162.7	139.0	134.8
77.5°	2619.7	1819.6	123.7	74.6	87.3	137.3	176.3	165.3	166.1	202.6	200.9
80°	1611.1	1096.7	89.8	36.4	43.2	89.8	142.4	157.6	221.2	145.8	133.9
82.5°	806.8	512.7	47.5	22.0	24.6	39.8	84.8	189.0	161.0	96.6	91.5
85°	301.7	138.1	14.4	11.0	13.6	20.3	34.7	172.9	102.5	77.1	75.4
87.5°	1.7	2.5	2.5	3.4	5.1	5.9	12.7	82.2	51.7	37.3	35.6
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)