

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: P233694

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233694  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-32)  
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-HSS  
Description: VERDEON ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 930mA LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8460 lumens  
Efficiency: N/A  
Efficacy: 115.9 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 - G2

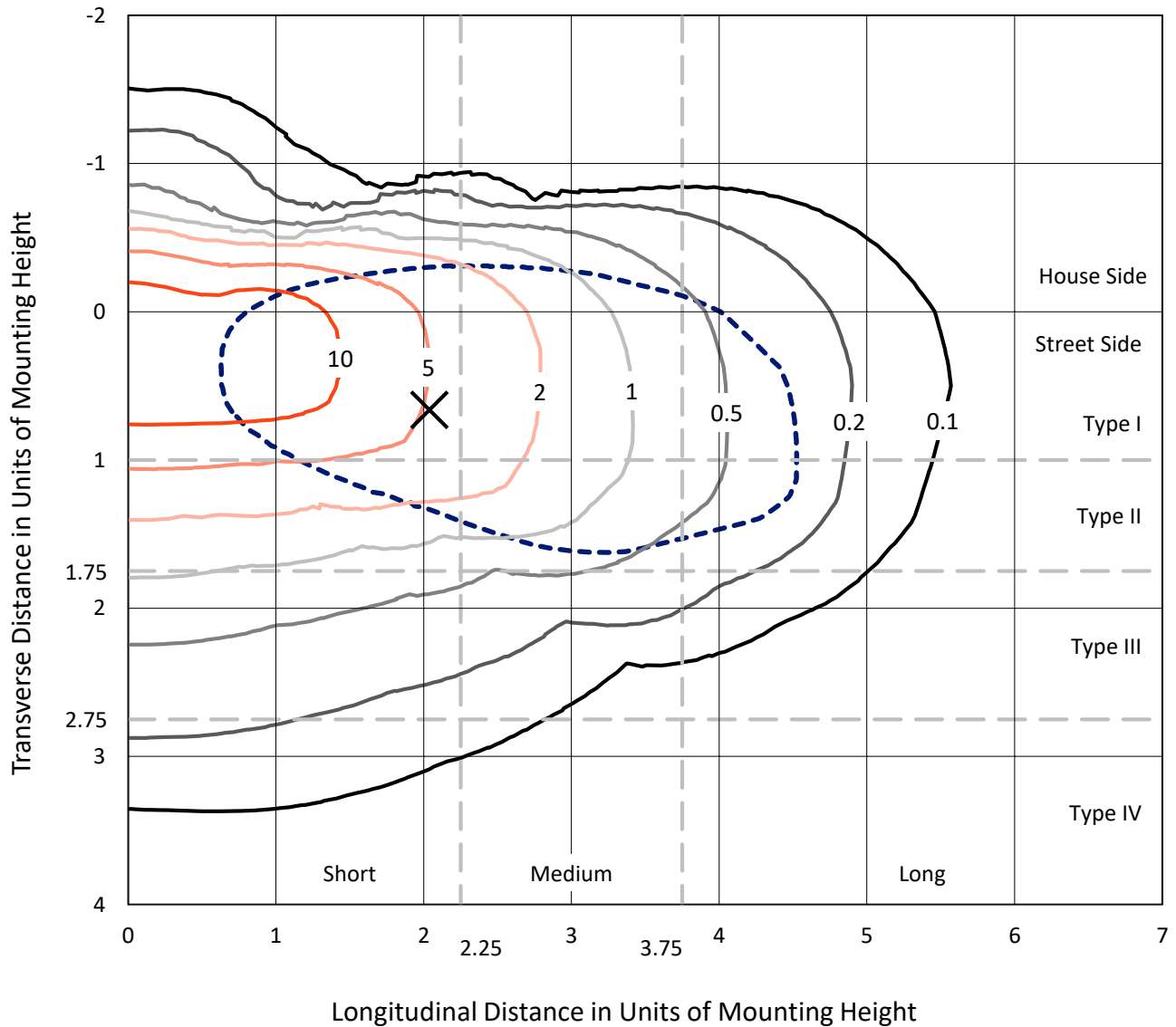
Input Watts (W): 73  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

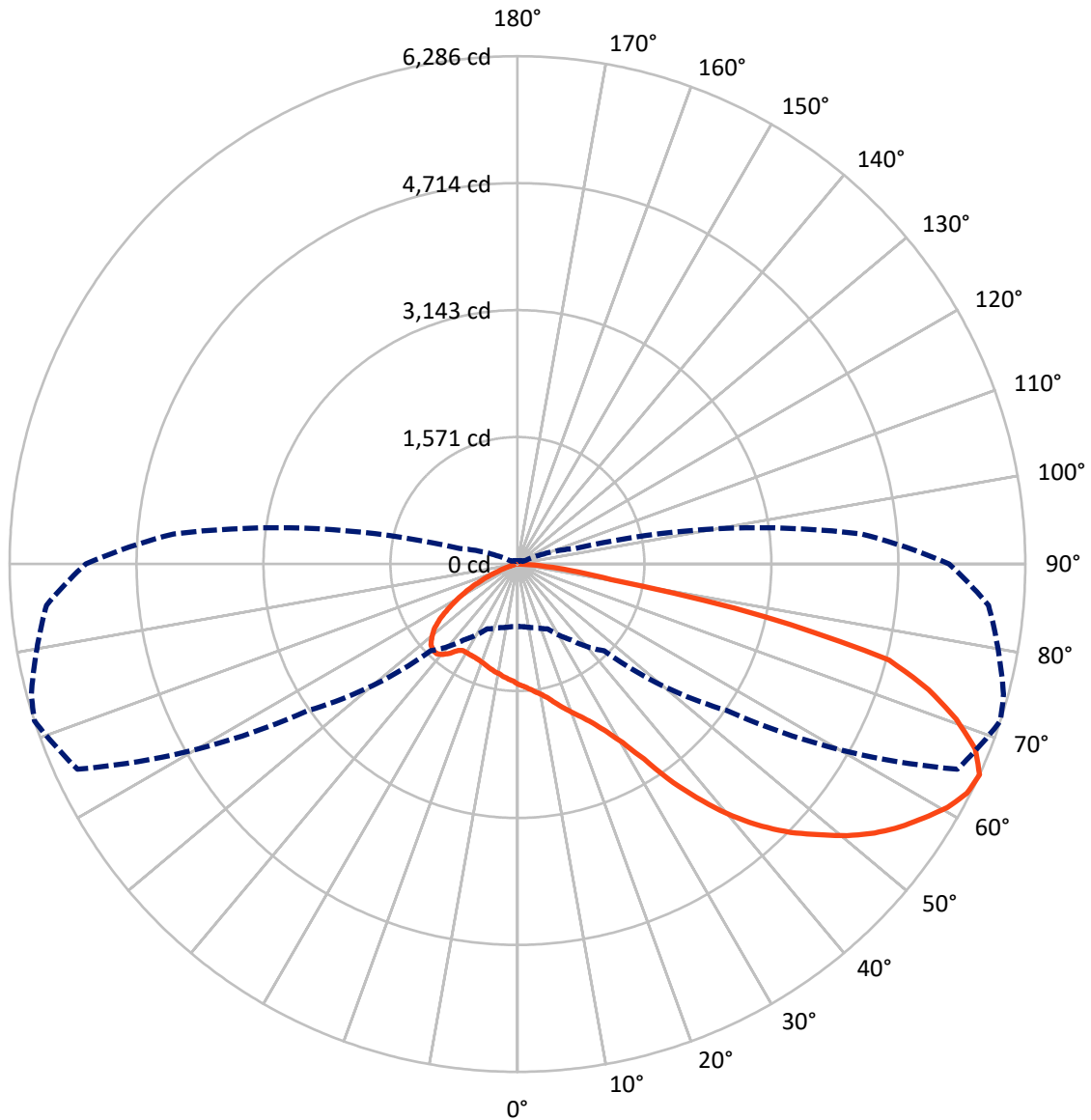
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.6 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 72-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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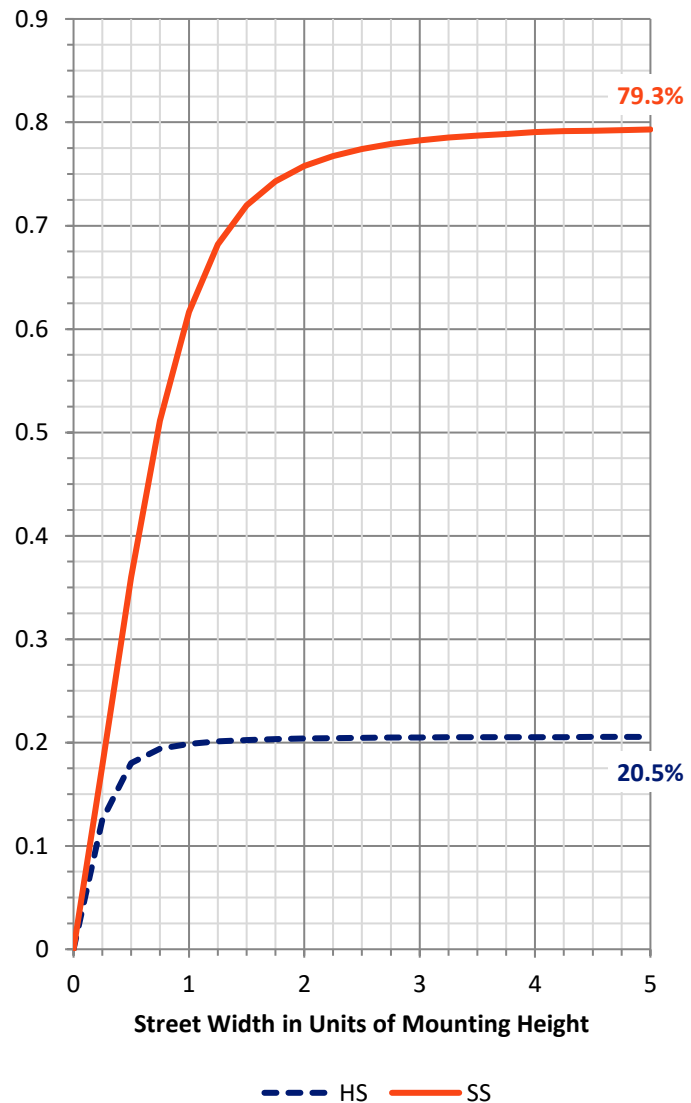
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1758.0	0.0	1758.0
	% Fixture	20.8	0.0	20.8
<b>Street Side</b>	Lumens	6702.0	0.0	6702.0
	% Fixture	79.2	0.0	79.2
<b>Total</b>	Lumens	8460.0	0.0	8460.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.9	1.7
10°-20°	433.8	5.1
20°-30°	724.9	8.6
30°-40°	1072.3	12.7
40°-50°	1482.3	17.5
50°-60°	1734.6	20.5
60°-70°	1724.2	20.4
70°-80°	1032.6	12.2
80°-90°	112.4	1.3
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°	8460.0	100.0
0°-180°	8460.0	100.0



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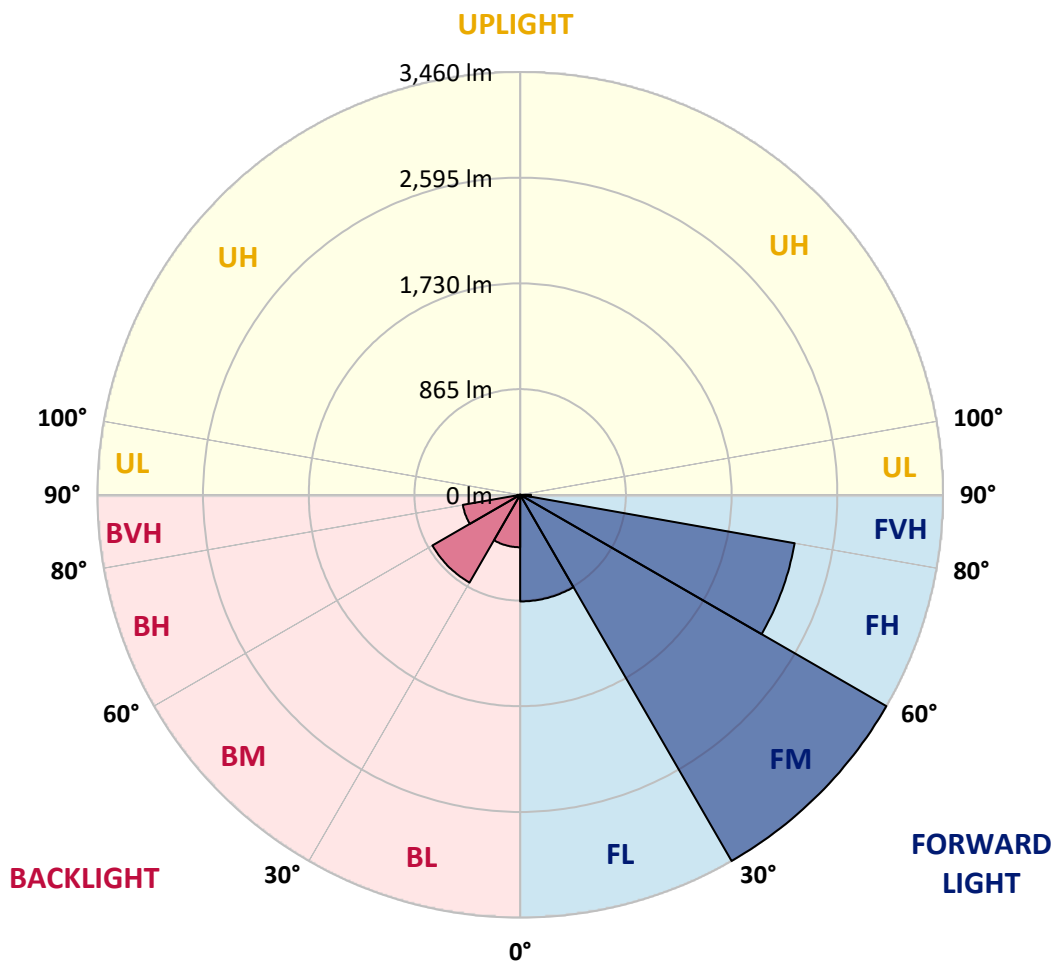
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	872.4	10.3			
FM (30°-60°)	3459.9	40.9			
FH (60°-80°)	2280.8	27.0			G2/5000
FVH (80°-90°)	88.9	1.1			G1/100
BL (0°-30°)	429.2	5.1	B1/500		
BM (30°-60°)	829.3	9.8	B1/1000		
BH (60°-80°)	476.0	5.6	B1/500		G1/500
BVH (80°-90°)	23.5	0.3			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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	72°	75°	85°
0°	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0
2.5°	1616.6	1618.0	1618.7	1593.2	1579.4	1563.5	1548.3	1531.7	1514.5	1508.3	1485.5
5°	1716.0	1717.4	1713.3	1689.8	1664.3	1640.8	1611.8	1582.1	1553.1	1544.8	1506.2
7.5°	1812.0	1811.3	1807.8	1778.1	1746.4	1715.3	1674.6	1634.6	1596.6	1583.5	1526.2
10°	1891.4	1892.7	1894.8	1863.1	1832.0	1794.7	1745.0	1685.7	1642.2	1621.5	1546.9
12.5°	1978.3	1974.2	1979.7	1948.6	1905.9	1872.0	1827.2	1757.4	1705.7	1679.4	1586.9
15°	2077.7	2077.7	2070.1	2044.6	2001.1	1959.7	1914.8	1850.6	1788.5	1748.5	1640.8
17.5°	2146.1	2141.9	2139.9	2117.8	2080.5	2044.6	2010.1	1944.5	1876.9	1827.8	1691.2
20°	2175.1	2176.4	2186.1	2170.2	2150.2	2128.8	2090.8	2039.8	1965.2	1912.8	1745.0
22.5°	2231.0	2232.4	2244.1	2233.0	2227.5	2222.0	2186.8	2141.9	2062.5	2012.2	1812.7
25°	2234.4	2235.8	2267.6	2285.5	2313.8	2326.9	2302.8	2264.1	2183.3	2134.3	1913.4
27.5°	2244.8	2248.9	2281.4	2331.1	2405.6	2431.8	2418.0	2416.7	2348.3	2296.5	2044.6
30°	2235.8	2239.9	2286.9	2355.9	2459.5	2536.8	2552.6	2593.4	2565.8	2527.1	2226.8
32.5°	2172.3	2187.5	2243.4	2353.1	2505.7	2645.8	2696.9	2836.3	2877.8	2881.9	2592.7
35°	2057.0	2065.3	2166.8	2321.4	2536.8	2748.7	2889.5	3147.0	3322.3	3314.7	2997.9
37.5°	1969.4	1972.1	2076.3	2267.6	2554.0	2859.1	3109.0	3521.1	3722.7	3731.6	3363.7
40°	1856.8	1876.9	1976.9	2202.7	2544.4	2952.3	3327.1	3869.7	4104.4	4094.7	3684.7
42.5°	1751.9	1763.7	1863.1	2101.2	2509.2	3023.4	3541.1	4207.2	4437.8	4406.0	3992.6
45°	1642.9	1662.9	1754.0	1970.0	2439.4	3063.4	3735.1	4527.5	4738.7	4699.4	4263.8
47.5°	1533.8	1548.3	1644.9	1849.9	2308.3	3062.1	3925.6	4827.8	5005.9	4978.3	4520.6
50°	1167.3	1199.0	1453.0	1724.3	2124.0	3004.1	4079.5	5112.9	5286.1	5243.3	4771.2
52.5°	1069.9	1080.3	1151.4	1578.7	1927.2	2866.0	4199.6	5380.7	5533.2	5484.2	5007.3
55°	1011.3	1023.7	1052.7	1283.2	1765.7	2638.9	4249.3	5630.6	5744.5	5694.8	5217.8
57.5°	933.3	945.7	1003.0	1105.1	1597.3	2293.1	4176.2	5852.2	5931.5	5877.0	5413.1
60°	879.4	884.9	940.2	1020.2	1413.0	1943.8	3931.8	6032.3	6115.2	6050.3	5606.4
62.5°	829.7	835.9	875.3	954.7	1260.4	1687.7	3551.5	6076.5	6245.6	6195.2	5783.1
65°	772.4	777.9	813.8	884.2	1142.4	1520.7	3159.4	6008.8	6285.6	6228.4	5851.5
67.5°	696.5	704.1	732.4	795.9	987.8	1331.5	2576.1	5883.9	6110.3	6051.0	5711.3
70°	602.6	606.1	639.9	697.2	834.5	1155.5	2020.4	5439.4	5763.1	5697.5	5316.5
72.5°	486.6	492.9	529.4	589.5	685.4	951.9	1443.4	4700.1	5323.4	5298.6	4741.5
75°	325.1	349.3	436.3	497.0	566.7	743.4	969.1	3298.8	4752.5	4771.9	4050.5
77.5°	62.1	64.2	182.9	272.0	331.3	454.2	599.8	1620.8	3132.5	3471.4	3054.5
80°	40.7	44.2	78.0	190.5	219.5	225.0	307.9	710.3	1180.4	1493.1	1761.6
82.5°	21.4	25.5	46.9	110.4	100.8	55.9	100.8	366.5	654.4	751.7	888.4
85°	9.0	10.4	22.8	38.0	28.3	23.5	23.5	146.3	289.9	335.5	348.6
87.5°	1.4	1.4	4.8	6.9	4.1	2.8	2.1	0.7	0.7	0.7	0.7
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°	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0	1491.0
2.5°	1485.5	1473.0	1455.8	1435.8	1421.3	1413.7	1407.5	1390.9	1385.4	1396.4	1393.7
5°	1491.7	1477.2	1437.8	1405.4	1373.0	1352.9	1330.9	1301.9	1289.4	1296.3	1294.3
7.5°	1495.8	1477.9	1419.2	1368.8	1314.3	1276.3	1247.3	1209.4	1190.7	1197.6	1189.3
10°	1502.0	1475.1	1397.1	1330.2	1259.1	1203.8	1161.0	1116.9	1097.5	1103.1	1096.2
12.5°	1528.3	1484.8	1386.8	1297.0	1210.1	1141.0	1087.2	1040.2	1012.6	1018.2	1012.6
15°	1571.1	1504.1	1371.6	1254.9	1158.3	1079.6	1017.5	963.6	931.9	939.5	932.6
17.5°	1615.9	1527.6	1357.8	1208.0	1103.1	1015.4	950.5	905.0	853.9	858.7	848.3
20°	1654.6	1549.7	1350.2	1163.8	1051.3	947.1	869.1	838.0	767.6	749.6	737.9
22.5°	1708.4	1582.1	1344.0	1127.9	987.1	878.7	786.2	728.2	652.3	614.3	610.9
25°	1785.1	1630.4	1343.3	1099.6	929.1	806.9	677.9	580.5	513.6	468.7	462.5
27.5°	1882.4	1694.6	1350.9	1071.3	871.1	716.5	544.6	436.9	376.9	342.4	336.2
30°	2022.5	1778.8	1360.5	1038.9	806.2	599.2	405.9	321.7	272.0	247.1	242.3
32.5°	2322.8	1994.9	1375.0	1005.0	728.2	451.4	294.7	233.3	195.3	180.2	187.8
35°	2684.5	2288.3	1439.9	961.6	626.1	321.7	212.6	166.4	140.1	143.6	147.7
37.5°	3000.6	2568.5	1585.6	905.6	489.4	236.1	146.3	124.2	124.2	135.3	145.0
40°	3298.8	2821.2	1716.0	829.7	343.1	162.9	113.2	115.3	113.2	120.1	118.0
42.5°	3580.5	3060.7	1818.2	739.3	224.3	112.5	102.9	107.0	103.5	104.9	98.7
45°	3846.9	3308.5	1874.8	606.1	149.1	98.0	94.6	101.5	100.8	99.4	93.2
47.5°	4093.3	3526.6	1903.1	436.9	102.9	88.4	89.0	93.9	95.9	94.6	91.1
50°	4334.9	3744.1	1877.5	261.6	92.5	80.8	85.6	85.6	89.7	82.1	79.4
52.5°	4566.2	3962.2	1796.8	158.8	84.9	75.2	79.4	78.0	80.1	72.5	71.1
55°	4783.6	4124.4	1637.3	124.9	80.1	71.8	72.5	73.9	70.4	62.1	64.9
57.5°	5013.5	4262.5	1415.1	113.2	78.0	67.0	68.3	67.6	62.1	54.5	54.5
60°	5202.6	4362.5	1192.1	102.9	76.6	65.6	60.7	59.4	51.1	46.9	46.2
62.5°	5333.1	4390.8	974.7	91.8	72.5	60.7	54.5	50.4	42.8	38.7	37.3
65°	5343.4	4270.0	742.0	82.8	68.3	56.6	50.4	41.4	33.8	30.4	29.0
67.5°	5131.5	3934.6	523.2	75.9	61.4	52.5	44.2	33.1	26.9	24.2	23.5
70°	4688.4	3517.6	320.3	66.3	55.9	49.0	45.6	26.9	22.1	18.6	18.6
72.5°	4114.0	3046.9	187.8	56.6	46.9	39.3	30.4	22.8	18.6	14.5	14.5
75°	3525.9	2418.7	115.3	42.8	34.5	31.1	23.5	19.3	15.2	11.0	11.0
77.5°	2538.8	1785.7	89.7	27.6	21.4	22.1	17.3	15.2	12.4	9.0	9.0
80°	1558.0	1087.2	64.2	18.6	12.4	12.4	12.4	11.7	9.0	7.6	6.9
82.5°	789.7	497.0	31.8	11.0	7.6	7.6	7.6	8.3	6.9	5.5	5.5
85°	277.5	139.4	9.7	5.5	4.8	4.8	4.1	4.1	3.5	2.8	2.8
87.5°	0.7	1.4	1.4	2.1	2.8	2.8	2.1	1.4	0.7	0.0	0.0
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)