

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: P233696

Luminaire Tested: **VRDN-C02-D-UNV-T2-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233696
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-CO2-D-UNV-T2-HSS
Description: VERDEON ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1140mA LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9982 lumens
Efficiency: N/A
Efficacy: 110.9 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): 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

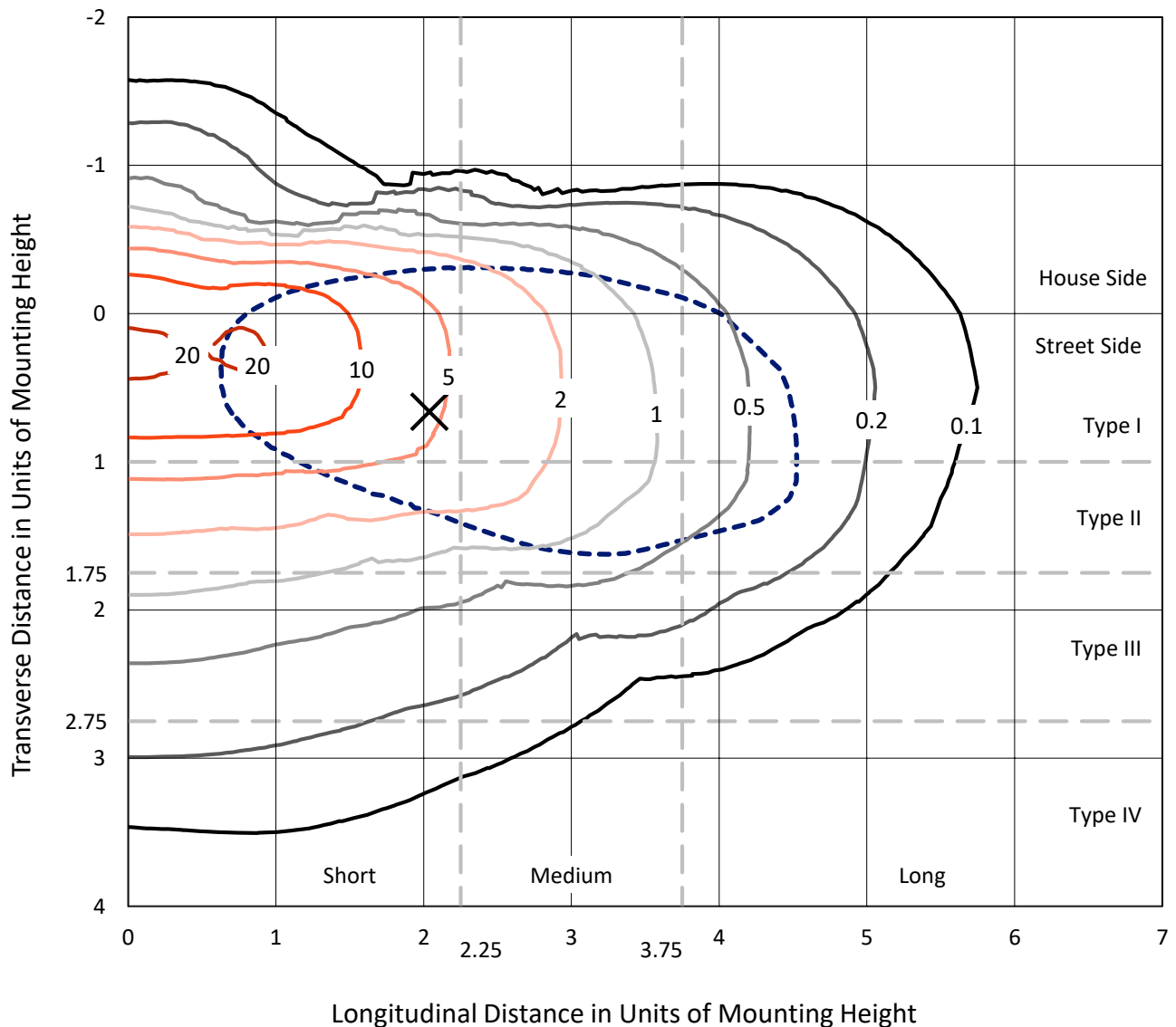


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Iso-Footcandle Lines of Horizontal Illumination

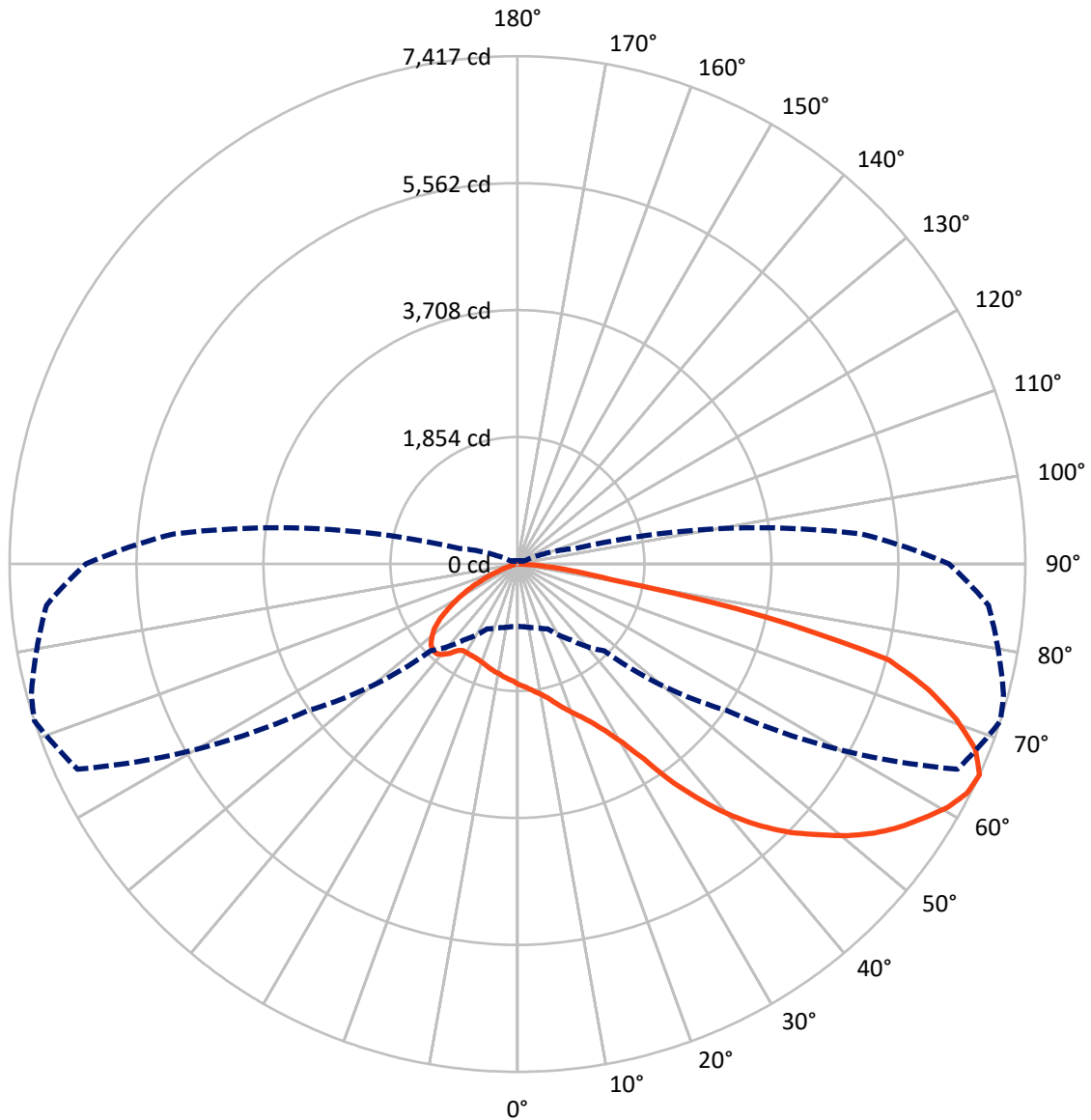
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 22 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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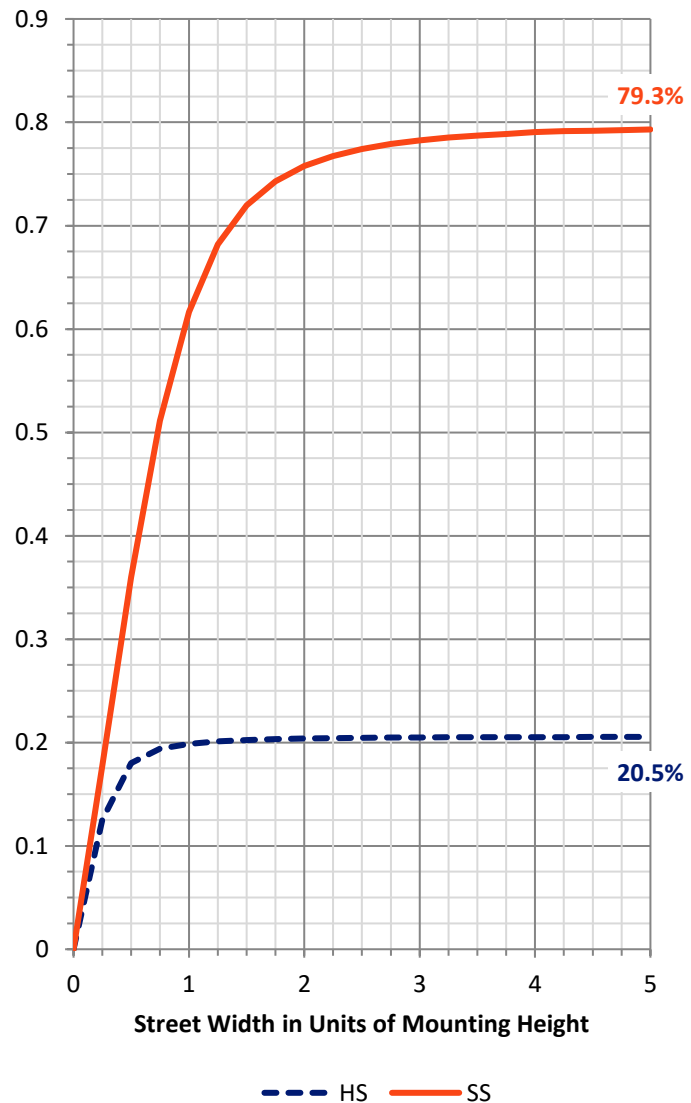
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2074.3	0.0	2074.3
	% Fixture	20.8	0.0	20.8
Street Side	Lumens	7907.7	0.0	7907.7
	% Fixture	79.2	0.0	79.2
Total	Lumens	9982.0	0.0	9982.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.6	1.7
10°-20°	511.8	5.1
20°-30°	855.3	8.6
30°-40°	1265.2	12.7
40°-50°	1749.0	17.5
50°-60°	2046.7	20.5
60°-70°	2034.4	20.4
70°-80°	1218.4	12.2
80°-90°	132.6	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°	9982.0	100.0
0°-180°	9982.0	100.0



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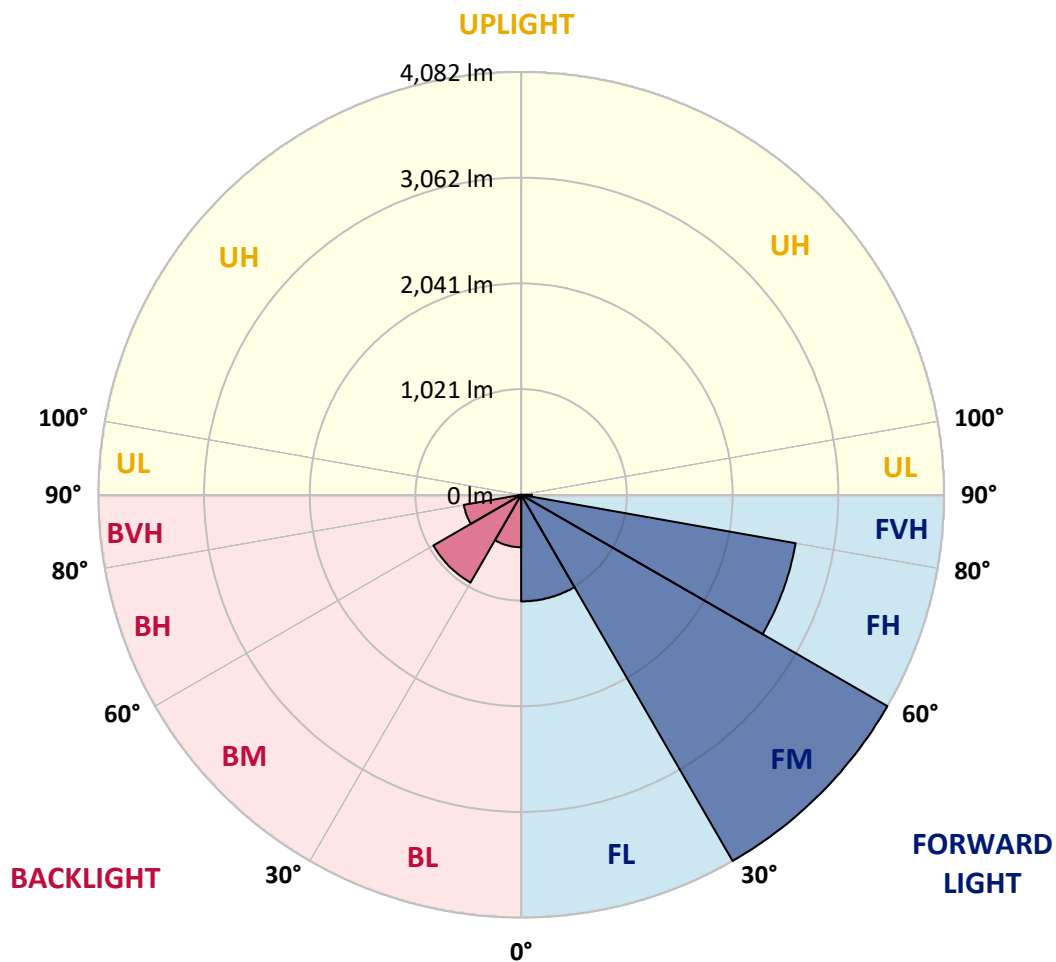
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1029.3	10.3			
FM (30°-60°)	4082.3	40.9			
FH (60°-80°)	2691.2	27.0			G2/5000
FVH (80°-90°)	104.8	1.1			G2/225
BL (0°-30°)	506.4	5.1	B2/1000		
BM (30°-60°)	978.5	9.8	B1/1000		
BH (60°-80°)	561.6	5.6	B2/1000		G2/1000
BVH (80°-90°)	27.8	0.3			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°	72°	75°	85°
0°	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2
2.5°	1907.5	1909.1	1909.9	1879.8	1863.5	1844.8	1826.8	1807.3	1786.9	1779.6	1752.7
5°	2024.7	2026.4	2021.5	1993.8	1963.7	1936.0	1901.8	1866.7	1832.5	1822.8	1777.2
7.5°	2138.0	2137.1	2133.1	2098.0	2060.6	2023.9	1975.9	1928.6	1883.8	1868.4	1800.8
10°	2231.6	2233.2	2235.7	2198.2	2161.6	2117.6	2059.0	1988.9	1937.6	1913.2	1825.2
12.5°	2334.2	2329.4	2335.9	2299.2	2248.7	2208.8	2155.9	2073.6	2012.5	1981.6	1872.4
15°	2451.5	2451.5	2442.6	2412.4	2361.1	2312.3	2259.3	2183.6	2110.3	2063.0	1936.0
17.5°	2532.2	2527.3	2524.8	2498.8	2454.8	2412.4	2371.7	2294.3	2214.5	2156.7	1995.4
20°	2566.4	2568.0	2579.4	2560.7	2537.0	2511.8	2467.0	2406.7	2318.8	2256.9	2059.0
22.5°	2632.3	2634.0	2647.8	2634.8	2628.3	2621.7	2580.2	2527.3	2433.6	2374.2	2138.8
25°	2636.4	2638.0	2675.5	2696.7	2730.1	2745.5	2717.0	2671.4	2576.1	2518.3	2257.7
27.5°	2648.6	2653.5	2691.8	2750.4	2838.4	2869.3	2853.1	2851.4	2770.8	2709.7	2412.4
30°	2638.0	2642.9	2698.3	2779.8	2901.9	2993.1	3011.9	3059.9	3027.3	2981.7	2627.4
32.5°	2563.1	2581.0	2647.0	2776.5	2956.5	3121.8	3182.1	3346.6	3395.5	3400.4	3059.1
35°	2427.1	2436.9	2556.6	2739.0	2993.1	3243.2	3409.3	3713.1	3920.0	3911.0	3537.2
37.5°	2323.7	2326.9	2449.9	2675.5	3013.5	3373.5	3668.3	4154.6	4392.4	4403.0	3968.9
40°	2190.9	2214.5	2332.6	2598.9	3002.1	3483.4	3925.7	4565.9	4842.8	4831.4	4347.6
42.5°	2067.1	2080.9	2198.2	2479.2	2960.6	3567.3	4178.2	4964.1	5236.2	5198.7	4710.8
45°	1938.4	1962.0	2069.5	2324.5	2878.3	3614.6	4407.0	5342.0	5591.3	5544.8	5030.9
47.5°	1809.7	1826.8	1940.9	2182.8	2723.6	3612.9	4631.8	5696.3	5906.5	5873.9	5333.9
50°	1377.3	1414.7	1714.4	2034.5	2506.1	3544.5	4813.5	6032.7	6237.1	6186.6	5629.5
52.5°	1262.4	1274.6	1358.5	1862.7	2274.0	3381.6	4955.2	6348.7	6528.7	6470.9	5908.1
55°	1193.2	1207.8	1242.1	1514.1	2083.4	3113.7	5013.8	6643.5	6777.9	6719.3	6156.5
57.5°	1101.1	1115.8	1183.4	1304.0	1884.7	2705.6	4927.5	6905.0	6998.7	6934.3	6387.0
60°	1037.6	1044.1	1109.3	1203.8	1667.2	2293.5	4639.2	7117.6	7215.3	7138.7	6615.0
62.5°	979.0	986.3	1032.7	1126.4	1487.2	1991.4	4190.4	7169.7	7369.2	7309.8	6823.5
65°	911.4	917.9	960.2	1043.3	1347.9	1794.3	3727.8	7089.9	7416.5	7348.9	6904.2
67.5°	821.8	830.7	864.1	939.1	1165.5	1571.1	3039.6	6942.5	7209.6	7139.6	6738.8
70°	711.0	715.1	755.0	822.6	984.7	1363.4	2383.9	6417.9	6799.9	6722.6	6273.0
72.5°	574.2	581.5	624.7	695.5	808.8	1123.1	1703.0	5545.7	6281.1	6251.8	5594.5
75°	383.6	412.1	514.7	586.4	668.7	877.2	1143.5	3892.3	5607.6	5630.4	4779.3
77.5°	73.3	75.7	215.8	320.9	390.9	535.9	707.8	1912.4	3696.0	4095.9	3604.0
80°	48.1	52.1	92.0	224.8	259.0	265.5	363.2	838.1	1392.7	1761.7	2078.5
82.5°	25.2	30.1	55.4	130.3	118.9	66.0	118.9	432.5	772.1	886.9	1048.2
85°	10.6	12.2	26.9	44.8	33.4	27.7	27.7	172.7	342.1	395.8	411.3
87.5°	1.6	1.6	5.7	8.1	4.9	3.3	2.4	0.8	0.8	0.8	0.8
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°	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2	1759.2
2.5°	1752.7	1738.1	1717.7	1694.1	1677.0	1668.0	1660.7	1641.1	1634.6	1647.7	1644.4
5°	1760.0	1742.9	1696.5	1658.2	1620.0	1596.3	1570.3	1536.1	1521.4	1529.6	1527.1
7.5°	1764.9	1743.8	1674.5	1615.1	1550.7	1505.9	1471.7	1426.9	1404.9	1413.1	1403.3
10°	1772.3	1740.5	1648.5	1569.5	1485.6	1420.4	1369.9	1317.8	1295.0	1301.5	1293.4
12.5°	1803.2	1751.9	1636.2	1530.4	1427.7	1346.3	1282.8	1227.4	1194.8	1201.3	1194.8
15°	1853.7	1774.7	1618.3	1480.7	1366.7	1273.8	1200.5	1137.0	1099.5	1108.5	1100.3
17.5°	1906.7	1802.4	1602.0	1425.3	1301.5	1198.1	1121.5	1067.8	1007.5	1013.2	1001.0
20°	1952.3	1828.5	1593.1	1373.2	1240.4	1117.4	1025.4	988.8	905.7	884.5	870.7
22.5°	2015.8	1866.7	1585.8	1330.8	1164.7	1036.8	927.7	859.3	769.7	724.9	720.8
25°	2106.2	1923.8	1584.9	1297.4	1096.3	952.1	799.8	685.0	606.0	553.0	545.7
27.5°	2221.0	1999.5	1593.9	1264.0	1027.8	845.4	642.6	515.6	444.7	404.0	396.6
30°	2386.4	2098.9	1605.3	1225.8	951.3	707.0	478.9	379.5	320.9	291.6	285.9
32.5°	2740.7	2353.8	1622.4	1185.9	859.3	532.7	347.8	275.3	230.5	212.6	221.5
35°	3167.4	2699.9	1699.0	1134.5	738.7	379.5	250.9	196.3	165.3	169.4	174.3
37.5°	3540.5	3030.6	1870.8	1068.6	577.5	278.5	172.7	146.6	146.6	159.6	171.0
40°	3892.3	3328.7	2024.7	979.0	404.8	192.2	133.6	136.0	133.6	141.7	139.3
42.5°	4224.6	3611.3	2145.3	872.3	264.7	132.8	121.4	126.2	122.2	123.8	116.5
45°	4539.0	3903.7	2212.1	715.1	175.9	115.7	111.6	119.7	118.9	117.3	110.0
47.5°	4829.7	4161.1	2245.5	515.6	121.4	104.3	105.1	110.8	113.2	111.6	107.5
50°	5114.8	4417.6	2215.3	308.7	109.1	95.3	101.0	101.0	105.9	96.9	93.7
52.5°	5387.7	4675.0	2120.0	187.3	100.2	88.8	93.7	92.0	94.5	85.5	83.9
55°	5644.2	4866.4	1931.9	147.4	94.5	84.7	85.5	87.1	83.1	73.3	76.6
57.5°	5915.4	5029.3	1669.6	133.6	92.0	79.0	80.6	79.8	73.3	64.3	64.3
60°	6138.6	5147.4	1406.6	121.4	90.4	77.4	71.7	70.0	60.3	55.4	54.6
62.5°	6292.5	5180.8	1150.0	108.3	85.5	71.7	64.3	59.5	50.5	45.6	44.0
65°	6304.7	5038.2	875.5	97.7	80.6	66.8	59.5	48.9	39.9	35.8	34.2
67.5°	6054.7	4642.4	617.4	89.6	72.5	61.9	52.1	39.1	31.8	28.5	27.7
70°	5531.8	4150.5	377.9	78.2	66.0	57.8	53.8	31.8	26.1	22.0	22.0
72.5°	4854.2	3595.0	221.5	66.8	55.4	46.4	35.8	26.9	22.0	17.1	17.1
75°	4160.3	2853.9	136.0	50.5	40.7	36.7	27.7	22.8	17.9	13.0	13.0
77.5°	2995.6	2107.0	105.9	32.6	25.2	26.1	20.4	17.9	14.7	10.6	10.6
80°	1838.2	1282.8	75.7	22.0	14.7	14.7	14.7	13.8	10.6	9.0	8.1
82.5°	931.7	586.4	37.5	13.0	9.0	9.0	9.0	9.8	8.1	6.5	6.5
85°	327.4	164.5	11.4	6.5	5.7	5.7	4.9	4.9	4.1	3.3	3.3
87.5°	0.8	1.6	1.6	2.4	3.3	3.3	2.4	1.6	0.8	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)