

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: P233748

Luminaire Tested: **VRDN-C02-D-UNV-T3-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233748
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-33)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: VRDN-C02-D-UNV-T3-HSS
Description: VERDEON ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1140mA LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10155 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')
IES Classification: Type III - Medium - Semi-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

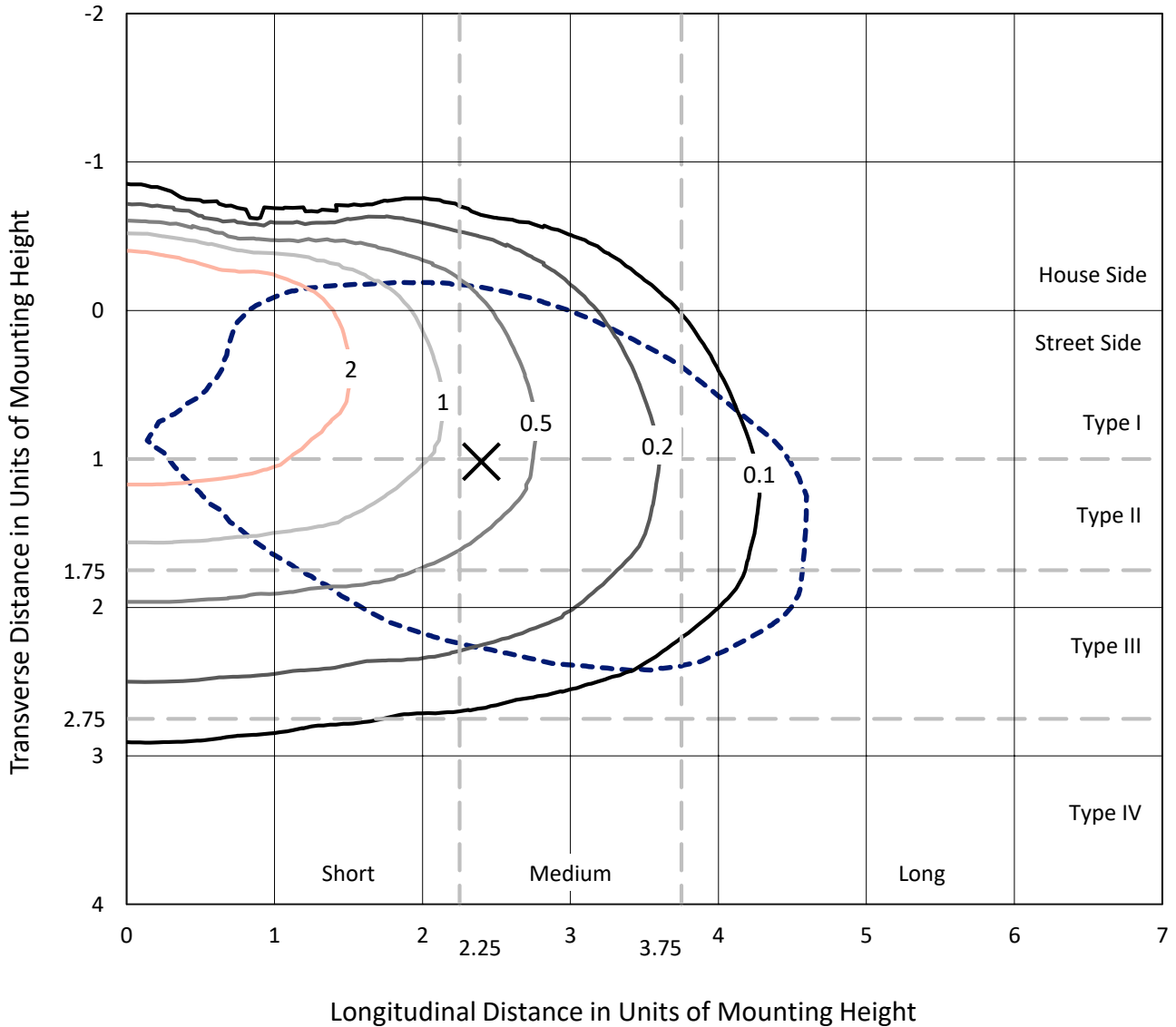


REPORT NUMBER: P233748

CATALOG NUMBER: VRDN-C02-D-UNV-T3-HSS

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

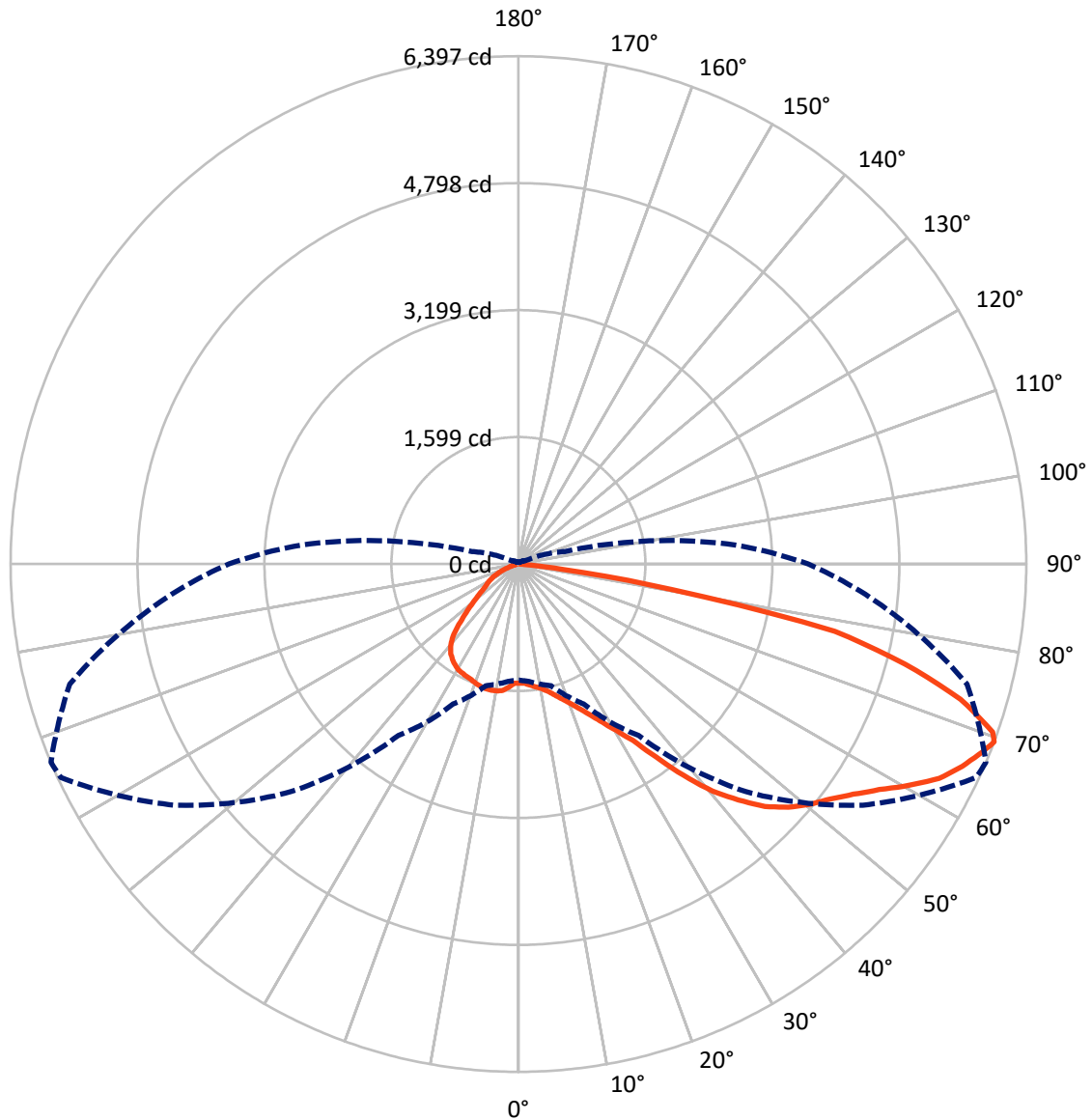


Based on 20 foot mounting height. Maximum calculated value = 4.6 fc
 Type III - Medium - Semi-Cutoff

REPORT NUMBER: P233748

CATALOG NUMBER: VRDN-C02-D-UNV-T3-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P233748

CATALOG NUMBER: VRDN-C02-D-UNV-T3-HSS

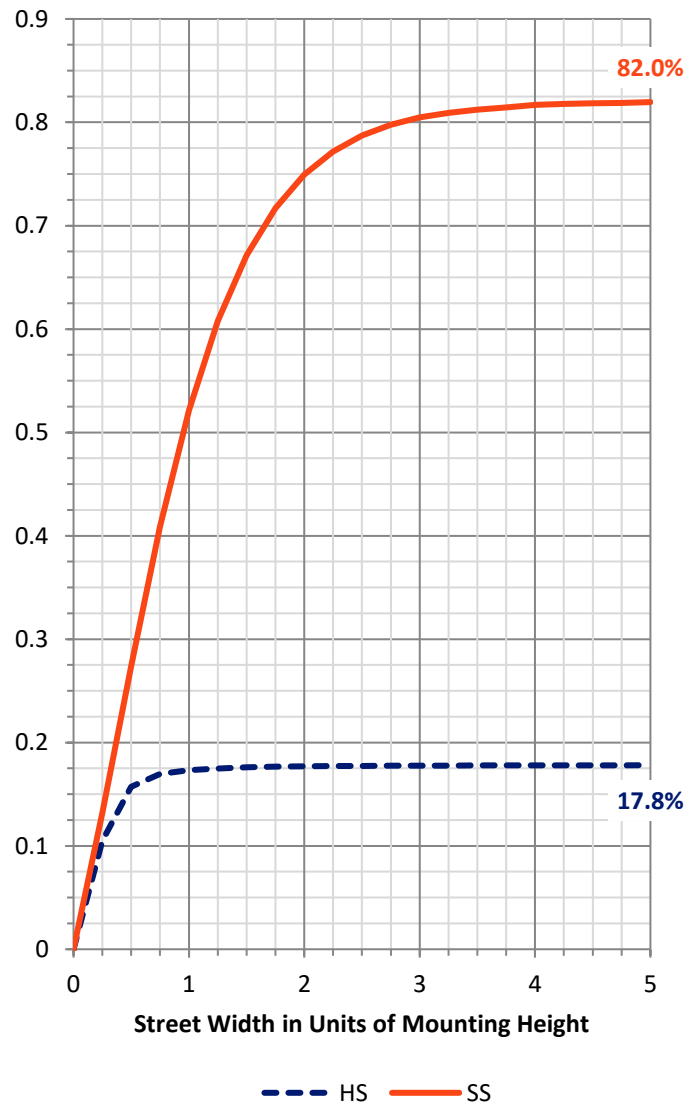
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1830.7	0.0	1830.7
	% Fixture	18.0	0.0	18.0
Street Side	Lumens	8324.3	0.0	8324.3
	% Fixture	82.0	0.0	82.0
Total	Lumens	10155.0	0.0	10155.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.6	1.5
10°-20°	476.7	4.7
20°-30°	813.7	8.0
30°-40°	1230.3	12.1
40°-50°	1738.1	17.1
50°-60°	2100.5	20.7
60°-70°	2216.4	21.8
70°-80°	1334.3	13.1
80°-90°	93.3	0.9
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°	10155.0	100.0
0°-180°	10155.0	100.0



REPORT NUMBER: P233748

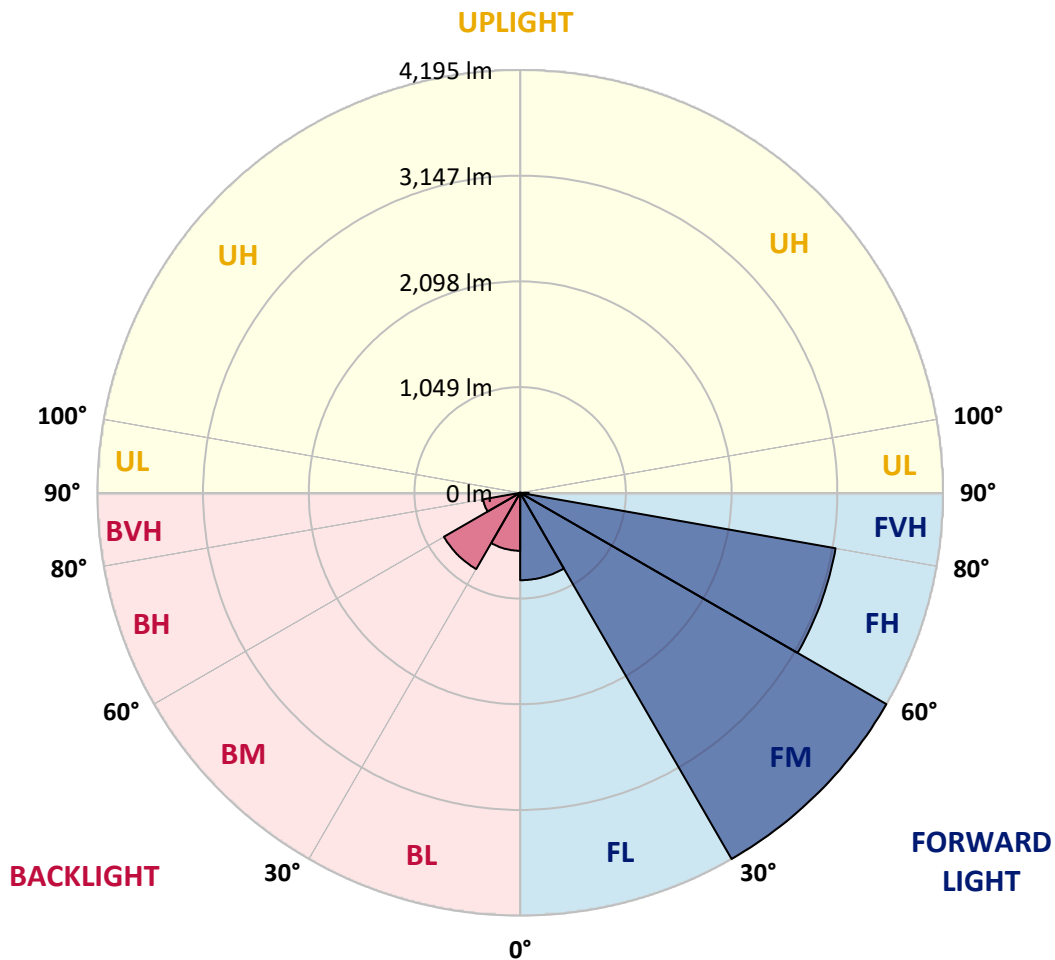
CATALOG NUMBER: VRDN-C02-D-UNV-T3-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	867.1	8.5			
FM	(30°-60°)	4195.5	41.3			
FH	(60°-80°)	3177.5	31.3			G2/5000
FVH	(80°-90°)	84.2	0.8			G1/100
BL	(0°-30°)	574.9	5.7	B2/1000		
BM	(30°-60°)	873.5	8.6	B1/1000		
BH	(60°-80°)	373.2	3.7	B1/500		G1/500
BVH	(80°-90°)	9.1	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Medium





REPORT NUMBER: P233748

CATALOG NUMBER: VRDN-C02-D-UNV-T3-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8
2.5°	1540.6	1538.2	1538.2	1524.4	1511.5	1508.2	1507.4	1503.4	1504.2	1498.5	1492.9
5°	1585.1	1585.1	1583.5	1565.7	1551.9	1543.0	1537.4	1530.1	1530.9	1526.9	1522.0
7.5°	1652.3	1653.1	1649.8	1626.4	1612.6	1590.8	1577.8	1564.1	1563.3	1558.4	1560.0
10°	1734.8	1737.2	1732.4	1702.4	1679.0	1649.0	1621.5	1597.3	1595.6	1590.0	1594.8
12.5°	1827.9	1831.1	1819.0	1788.2	1761.5	1714.6	1681.4	1649.0	1644.2	1643.4	1646.6
15°	1934.7	1936.3	1932.2	1886.9	1854.6	1811.7	1757.5	1716.2	1711.3	1712.1	1708.1
17.5°	2053.6	2057.7	2048.8	2008.3	1965.4	1906.3	1841.6	1790.6	1788.2	1785.8	1768.0
20°	2179.8	2183.9	2178.2	2140.2	2089.2	2014.8	1935.5	1877.2	1876.4	1870.7	1829.5
22.5°	2322.2	2327.9	2324.7	2278.5	2224.3	2143.4	2044.7	1984.0	1982.4	1964.6	1902.3
25°	2476.8	2475.2	2478.4	2429.1	2378.1	2293.1	2170.9	2107.8	2107.8	2086.0	1993.7
27.5°	2626.5	2625.7	2631.3	2596.5	2543.1	2463.0	2315.8	2251.8	2257.5	2226.0	2103.8
30°	2772.1	2772.1	2785.9	2763.2	2723.6	2639.4	2495.4	2428.2	2435.5	2402.3	2242.9
32.5°	2908.1	2914.5	2938.0	2924.2	2894.3	2818.2	2695.3	2633.8	2650.8	2664.5	2501.9
35°	3008.4	3014.9	3069.1	3073.9	3066.7	3015.7	2924.2	2963.9	2984.1	3092.5	2911.3
37.5°	3096.6	3104.7	3169.4	3209.9	3233.3	3201.8	3207.4	3340.1	3378.2	3506.0	3260.9
40°	3161.3	3179.1	3243.0	3298.9	3381.4	3418.6	3510.9	3699.4	3760.9	3811.9	3501.2
42.5°	3116.8	3129.0	3241.4	3391.1	3511.7	3642.8	3792.5	4016.6	4062.7	4046.5	3713.2
45°	3051.3	3065.8	3184.0	3415.4	3615.3	3876.6	4059.5	4302.2	4354.8	4265.0	3896.0
47.5°	2977.7	2997.9	3125.7	3383.0	3701.8	4091.8	4301.4	4547.4	4578.1	4460.0	4049.8
50°	2903.2	2925.9	3070.7	3356.3	3769.0	4271.5	4477.8	4747.2	4756.1	4621.8	4188.1
52.5°	2802.9	2826.3	2984.9	3300.5	3815.9	4389.6	4632.3	4911.5	4917.2	4796.6	4319.2
55°	2675.8	2705.8	2873.3	3218.0	3827.3	4458.4	4730.3	5082.2	5120.3	4985.9	4426.8
57.5°	2526.1	2553.7	2738.1	3099.0	3770.6	4481.8	4867.0	5308.0	5360.6	5177.7	4515.8
60°	2353.8	2385.4	2570.7	2945.3	3656.5	4547.4	5093.6	5626.8	5658.3	5378.4	4594.3
62.5°	2177.4	2200.1	2368.4	2729.2	3478.5	4587.0	5294.2	5926.2	5947.2	5571.8	4641.3
65°	1926.6	1954.9	2119.1	2481.6	3222.0	4511.0	5371.1	6130.9	6143.8	5733.6	4618.6
67.5°	1653.9	1676.5	1796.3	2183.1	2885.4	4269.9	5339.5	6267.6	6308.9	5859.8	4515.8
69°	1460.5	1483.2	1586.7	1944.4	2635.4	4056.2	5295.0	6360.7	6397.1	5850.9	4384.8
70°	1310.0	1332.7	1430.6	1766.4	2439.6	3875.8	5224.6	6313.8	6337.2	5751.4	4256.9
72.5°	937.0	959.6	1039.8	1242.0	1848.1	3185.6	4788.5	5792.7	5824.2	5273.2	3804.6
75°	490.3	544.6	688.6	802.7	1094.8	2242.9	3981.0	4981.9	5028.0	4627.5	3129.0
77.5°	63.1	66.3	194.2	326.1	452.3	945.9	2828.0	4000.4	4073.2	3703.5	2163.7
80°	51.0	51.8	67.2	162.6	224.9	383.5	1003.3	1872.4	1960.6	1645.8	795.4
82.5°	35.6	37.2	52.6	85.8	73.6	140.0	348.7	529.2	545.4	471.7	317.2
85°	20.2	20.2	25.1	33.2	23.5	52.6	72.0	76.9	68.8	68.0	51.0
87.5°	5.7	6.5	7.3	5.7	2.4	2.4	3.2	3.2	3.2	2.4	2.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P233748

CATALOG NUMBER: VRDN-C02-D-UNV-T3-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8	1501.8
2.5°	1501.8	1500.2	1501.0	1504.2	1509.1	1526.9	1539.0	1540.6	1546.3	1567.3	1564.9
5°	1527.7	1537.4	1543.0	1560.0	1571.4	1595.6	1610.2	1611.8	1619.9	1641.8	1642.6
7.5°	1564.1	1580.3	1588.3	1607.8	1611.8	1623.1	1627.2	1623.1	1624.0	1643.4	1645.0
10°	1595.6	1615.9	1615.9	1620.7	1613.4	1614.2	1601.3	1589.2	1582.7	1599.7	1603.7
12.5°	1644.2	1649.8	1636.9	1622.3	1600.5	1581.1	1559.2	1539.8	1524.4	1534.1	1528.5
15°	1694.3	1685.4	1653.9	1615.9	1577.0	1543.8	1498.5	1470.2	1443.5	1449.2	1444.3
17.5°	1744.5	1715.4	1666.0	1602.9	1546.3	1483.2	1420.0	1375.5	1327.0	1323.0	1315.7
20°	1793.1	1751.0	1669.3	1576.2	1496.9	1407.9	1310.0	1233.9	1161.9	1143.3	1131.2
22.5°	1851.3	1790.6	1673.3	1550.3	1443.5	1322.1	1174.1	1055.9	978.3	952.4	940.2
25°	1925.8	1845.7	1684.6	1530.9	1389.3	1216.1	1013.0	877.9	793.8	749.3	745.2
27.5°	2014.0	1912.0	1704.1	1505.8	1312.4	1074.5	846.4	705.6	615.8	570.4	555.9
30°	2129.7	1994.5	1721.9	1486.4	1204.0	920.0	671.6	514.6	407.8	378.7	363.3
32.5°	2348.9	2128.9	1744.5	1441.1	1076.2	750.9	475.8	317.2	244.4	224.9	224.9
35°	2705.8	2424.2	1801.2	1378.8	922.4	547.0	285.6	178.0	145.6	134.3	128.7
37.5°	3027.8	2722.0	1942.8	1282.5	735.5	323.7	163.4	110.0	99.5	101.1	101.1
40°	3255.2	2925.9	2098.9	1152.2	499.2	173.2	103.6	88.2	89.8	90.6	90.6
42.5°	3450.2	3099.8	2184.7	997.7	271.9	112.5	89.0	80.1	82.5	81.7	80.9
45°	3613.6	3241.4	2213.0	784.9	131.9	99.5	80.9	73.6	73.6	72.8	72.8
47.5°	3753.6	3366.8	2160.4	583.4	106.8	91.4	76.9	68.0	67.2	71.2	71.2
50°	3881.5	3463.9	2029.3	441.8	103.6	84.2	72.8	63.1	63.9	69.6	69.6
52.5°	3988.3	3521.4	1835.1	330.9	96.3	77.7	67.2	59.1	59.1	64.7	64.7
55°	4067.6	3521.4	1687.1	247.6	92.2	71.2	62.3	56.6	53.4	55.0	55.8
57.5°	4107.2	3455.0	1568.1	200.7	87.4	64.7	57.4	49.4	43.7	45.3	44.5
60°	4096.7	3417.0	1431.4	178.8	81.7	59.9	51.0	42.1	36.4	34.8	34.8
62.5°	4077.3	3374.1	1260.6	155.4	76.1	55.8	42.1	34.0	30.7	29.1	29.9
65°	4003.6	3235.0	1044.6	129.5	70.4	54.2	35.6	29.9	26.7	25.1	25.1
67.5°	3825.6	2984.1	789.7	109.2	65.5	43.7	30.7	25.9	22.7	21.0	21.0
69°	3649.2	2744.6	606.0	99.5	62.3	39.6	28.3	23.5	21.0	18.6	18.6
70°	3497.1	2559.3	475.0	93.1	59.9	38.0	27.5	22.7	20.2	17.8	17.8
72.5°	2977.7	2030.1	241.1	80.9	50.2	33.2	24.3	20.2	17.0	14.6	14.6
75°	2310.1	1399.0	159.4	63.9	38.8	29.9	21.8	17.8	14.6	12.1	11.3
77.5°	1390.1	547.0	114.1	41.3	25.1	23.5	17.8	14.6	12.1	9.7	9.7
80°	383.5	234.7	76.9	27.5	14.6	15.4	12.9	10.5	8.9	7.3	7.3
82.5°	230.6	152.1	51.0	17.8	9.7	9.7	7.3	7.3	5.7	5.7	5.7
85°	39.6	30.7	12.1	7.3	5.7	5.7	4.0	2.4	2.4	2.4	2.4
87.5°	2.4	2.4	2.4	3.2	3.2	2.4	1.6	0.8	0.0	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)