

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: P233741

Luminaire Tested: **VRDN-C016-D-UNV-T3-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233741  
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-C016-D-UNV-T3-HSS  
Description: VERDEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 950mA LED AND TYPE III OPTIC WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4490 lumens  
Efficiency: N/A  
Efficacy: 115.1 lumens/watt  
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')  
IES Classification: Type III - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

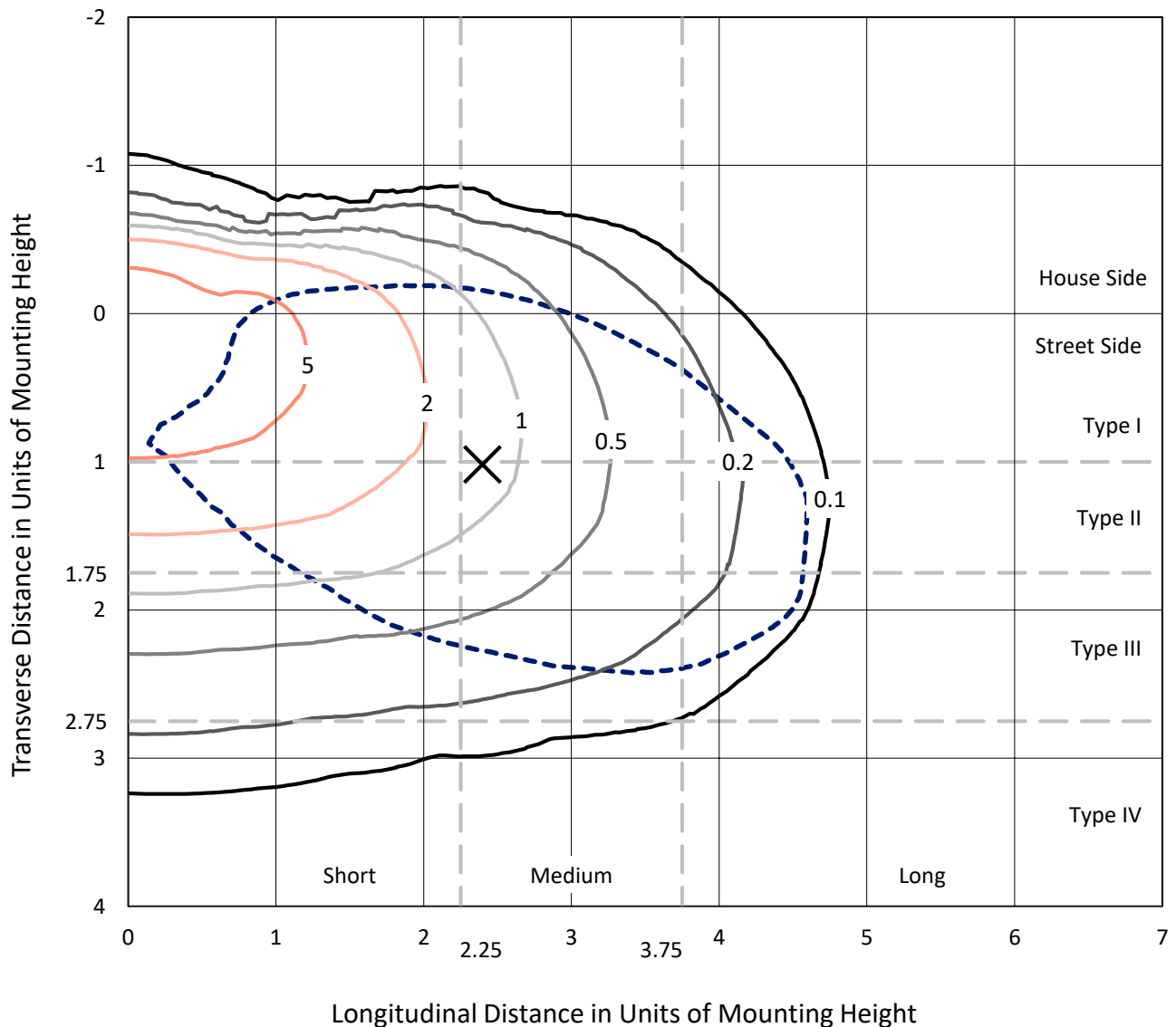
Input Watts (W): 39  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

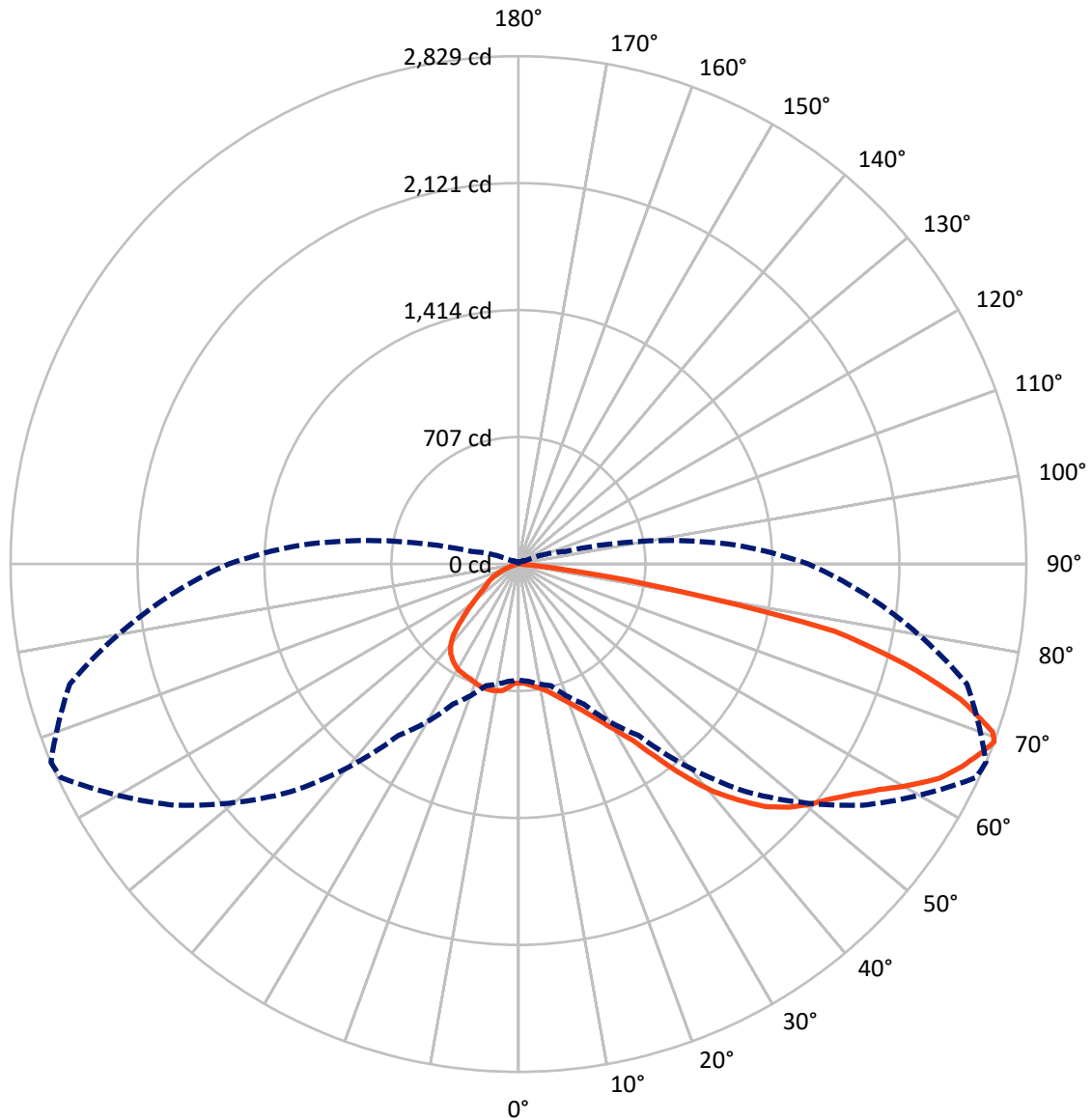
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.1 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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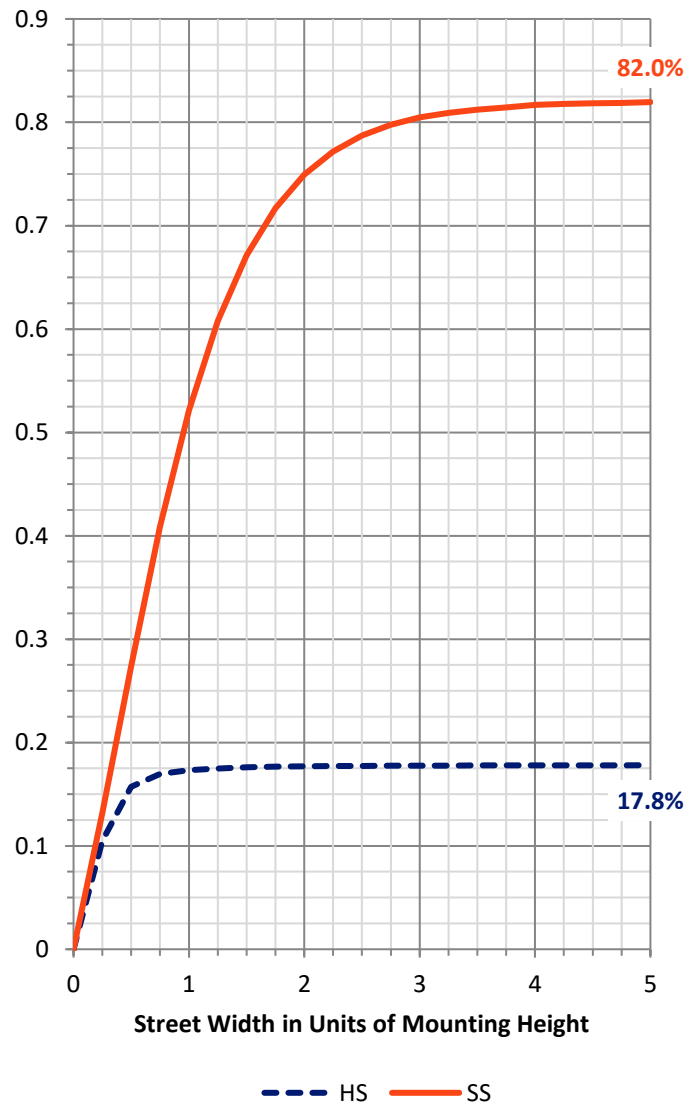
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	809.4	0.0	809.4
	% Fixture	18.0	0.0	18.0
<b>Street Side</b>	Lumens	3680.6	0.0	3680.6
	% Fixture	82.0	0.0	82.0
<b>Total</b>	Lumens	4490.0	0.0	4490.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.0	1.5
10°-20°	210.8	4.7
20°-30°	359.8	8.0
30°-40°	544.0	12.1
40°-50°	768.5	17.1
50°-60°	928.7	20.7
60°-70°	980.0	21.8
70°-80°	590.0	13.1
80°-90°	41.2	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°	4490.0	100.0
0°-180°	4490.0	100.0



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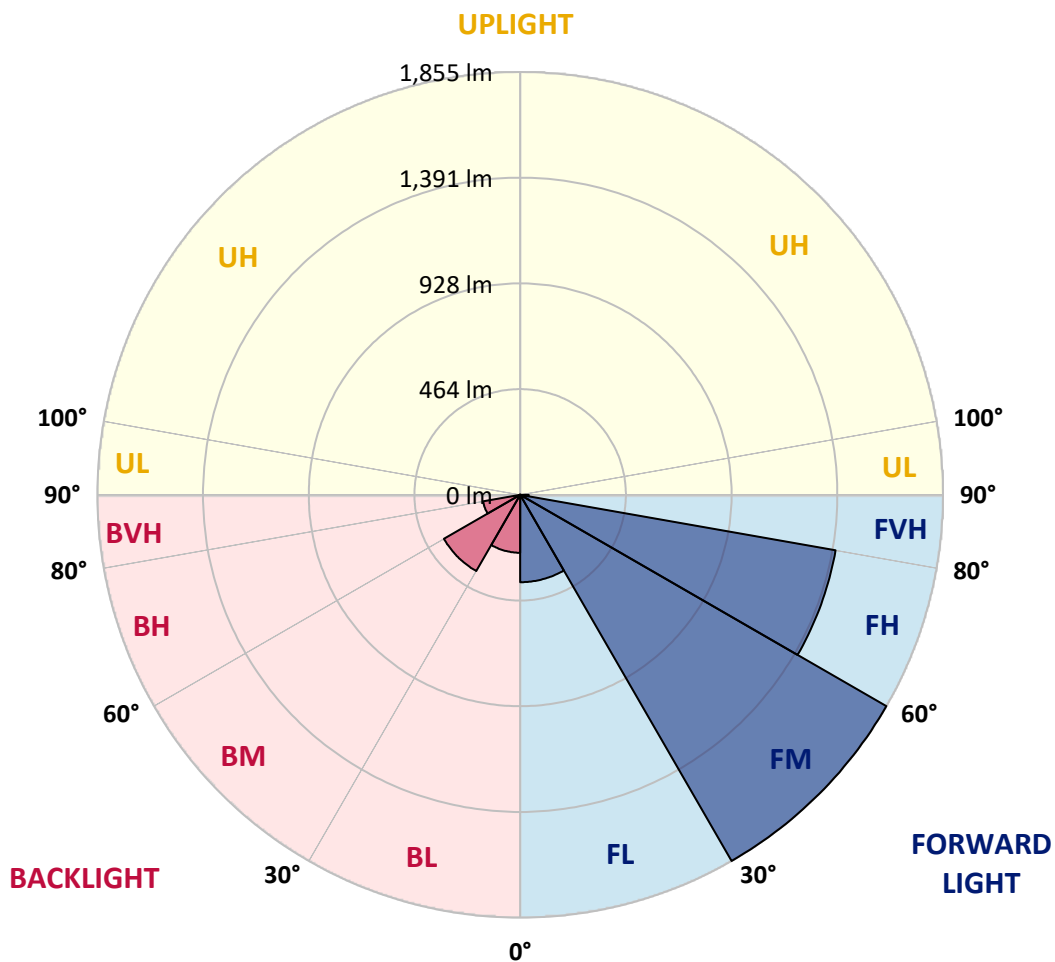
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	383.4	8.5			
FM	(30°-60°)	1855.0	41.3			
FH	(60°-80°)	1404.9	31.3			G1/1800
FVH	(80°-90°)	37.2	0.8			G1/100
BL	(0°-30°)	254.2	5.7	B1/500		
BM	(30°-60°)	386.2	8.6	B1/1000		
BH	(60°-80°)	165.0	3.7	B1/500		G1/500
BVH	(80°-90°)	4.0	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	664.0	664.0	664.0	664.0	664.0	664.0	664.0	664.0	664.0	664.0	664.0
2.5°	681.2	680.1	680.1	674.0	668.3	666.9	666.5	664.7	665.1	662.6	660.1
5°	700.9	700.9	700.1	692.3	686.2	682.2	679.7	676.5	676.9	675.1	672.9
7.5°	730.5	730.9	729.5	719.1	713.0	703.4	697.6	691.6	691.2	689.0	689.8
10°	767.0	768.1	766.0	752.7	742.4	729.1	717.0	706.2	705.5	703.0	705.1
12.5°	808.2	809.6	804.2	790.7	778.8	758.1	743.4	729.1	727.0	726.6	728.0
15°	855.4	856.1	854.3	834.3	820.0	801.0	777.1	758.8	756.7	757.0	755.2
17.5°	908.0	909.8	905.8	888.0	869.0	842.9	814.3	791.7	790.7	789.6	781.7
20°	963.8	965.6	963.1	946.3	923.7	890.8	855.8	830.0	829.6	827.1	808.9
22.5°	1026.8	1029.3	1027.8	1007.5	983.5	947.7	904.1	877.2	876.5	868.6	841.1
25°	1095.1	1094.4	1095.8	1074.0	1051.5	1013.9	959.9	932.0	932.0	922.3	881.5
27.5°	1161.3	1160.9	1163.4	1148.1	1124.4	1089.0	1023.9	995.6	998.2	984.2	930.2
30°	1225.7	1225.7	1231.8	1221.8	1204.2	1167.0	1103.3	1073.6	1076.9	1062.2	991.7
32.5°	1285.8	1288.7	1299.0	1292.9	1279.7	1246.1	1191.7	1164.5	1172.0	1178.1	1106.2
35°	1330.2	1333.0	1357.0	1359.1	1355.9	1333.4	1292.9	1310.5	1319.4	1367.4	1287.2
37.5°	1369.1	1372.7	1401.3	1419.2	1429.6	1415.7	1418.2	1476.8	1493.6	1550.2	1441.8
40°	1397.8	1405.6	1433.9	1458.6	1495.1	1511.5	1552.3	1635.7	1662.9	1685.4	1548.0
42.5°	1378.1	1383.5	1433.2	1499.4	1552.7	1610.6	1676.8	1775.9	1796.3	1789.2	1641.8
45°	1349.1	1355.6	1407.8	1510.1	1598.5	1714.0	1794.9	1902.2	1925.5	1885.8	1722.6
47.5°	1316.6	1325.5	1382.0	1495.8	1636.8	1809.2	1901.9	2010.6	2024.2	1972.0	1790.6
50°	1283.6	1293.7	1357.7	1484.0	1666.4	1888.6	1979.8	2099.0	2102.9	2043.5	1851.8
52.5°	1239.3	1249.7	1319.8	1459.3	1687.2	1940.9	2048.2	2171.6	2174.1	2120.8	1909.7
55°	1183.1	1196.4	1270.4	1422.8	1692.2	1971.3	2091.5	2247.1	2263.9	2204.5	1957.3
57.5°	1116.9	1129.1	1210.7	1370.2	1667.2	1981.6	2151.9	2346.9	2370.2	2289.3	1996.7
60°	1040.7	1054.7	1136.6	1302.2	1616.7	2010.6	2252.1	2487.9	2501.8	2378.0	2031.4
62.5°	962.7	972.8	1047.2	1206.7	1538.0	2028.1	2340.8	2620.2	2629.5	2463.5	2052.1
65°	851.8	864.3	937.0	1097.3	1424.6	1994.5	2374.8	2710.8	2716.5	2535.1	2042.1
67.5°	731.3	741.3	794.2	965.2	1275.8	1887.9	2360.9	2771.2	2789.5	2590.9	1996.7
69°	645.8	655.8	701.6	859.7	1165.2	1793.5	2341.2	2812.4	2828.5	2587.0	1938.7
70°	579.2	589.2	632.5	781.0	1078.6	1713.7	2310.1	2791.6	2802.0	2543.0	1882.2
72.5°	414.3	424.3	459.7	549.2	817.1	1408.5	2117.2	2561.2	2575.2	2331.5	1682.2
75°	216.8	240.8	304.5	354.9	484.0	991.7	1760.2	2202.7	2223.1	2046.0	1383.5
77.5°	27.9	29.3	85.9	144.2	200.0	418.2	1250.4	1768.8	1801.0	1637.5	956.7
80°	22.5	22.9	29.7	71.9	99.5	169.6	443.6	827.9	866.9	727.7	351.7
82.5°	15.7	16.5	23.3	37.9	32.6	61.9	154.2	234.0	241.1	208.6	140.2
85°	8.9	8.9	11.1	14.7	10.4	23.3	31.8	34.0	30.4	30.1	22.5
87.5°	2.5	2.9	3.2	2.5	1.1	1.1	1.4	1.4	1.4	1.1	1.1
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°	664.0	664.0	664.0	664.0	664.0	664.0	664.0	664.0	664.0	664.0	664.0
2.5°	664.0	663.3	663.6	665.1	667.2	675.1	680.5	681.2	683.7	693.0	691.9
5°	675.5	679.7	682.2	689.8	694.8	705.5	711.9	712.7	716.2	725.9	726.3
7.5°	691.6	698.7	702.3	710.9	712.7	717.7	719.5	717.7	718.0	726.6	727.3
10°	705.5	714.4	714.4	716.6	713.4	713.7	708.0	702.6	699.8	707.3	709.1
12.5°	727.0	729.5	723.7	717.3	707.7	699.1	689.4	680.8	674.0	678.3	675.8
15°	749.2	745.2	731.3	714.4	697.3	682.6	662.6	650.1	638.2	640.7	638.6
17.5°	771.3	758.5	736.6	708.7	683.7	655.8	627.9	608.2	586.7	584.9	581.7
20°	792.8	774.2	738.1	696.9	661.9	622.5	579.2	545.6	513.7	505.5	500.1
22.5°	818.6	791.7	739.8	685.5	638.2	584.6	519.1	466.9	432.5	421.1	415.7
25°	851.5	816.1	744.9	676.9	614.3	537.7	447.9	388.2	351.0	331.3	329.5
27.5°	890.5	845.4	753.4	665.8	580.3	475.1	374.2	312.0	272.3	252.2	245.8
30°	941.6	881.9	761.3	657.2	532.3	406.8	296.9	227.5	180.3	167.4	160.6
32.5°	1038.6	941.3	771.3	637.2	475.8	332.0	210.4	140.2	108.0	99.5	99.5
35°	1196.4	1071.9	796.4	609.6	407.8	241.8	126.3	78.7	64.4	59.4	56.9
37.5°	1338.7	1203.5	859.0	567.1	325.2	143.1	72.3	48.7	44.0	44.7	44.7
40°	1439.3	1293.7	928.0	509.5	220.7	76.6	45.8	39.0	39.7	40.1	40.1
42.5°	1525.5	1370.6	966.0	441.1	120.2	49.7	39.4	35.4	36.5	36.1	35.8
45°	1597.8	1433.2	978.5	347.0	58.3	44.0	35.8	32.6	32.6	32.2	32.2
47.5°	1659.7	1488.6	955.2	257.9	47.2	40.4	34.0	30.1	29.7	31.5	31.5
50°	1716.2	1531.6	897.3	195.3	45.8	37.2	32.2	27.9	28.3	30.8	30.8
52.5°	1763.4	1557.0	811.4	146.3	42.6	34.3	29.7	26.1	26.1	28.6	28.6
55°	1798.5	1557.0	745.9	109.5	40.8	31.5	27.5	25.0	23.6	24.3	24.7
57.5°	1816.0	1527.6	693.3	88.7	38.6	28.6	25.4	21.8	19.3	20.0	19.7
60°	1811.3	1510.8	632.9	79.1	36.1	26.5	22.5	18.6	16.1	15.4	15.4
62.5°	1802.8	1491.9	557.4	68.7	33.6	24.7	18.6	15.0	13.6	12.9	13.2
65°	1770.2	1430.3	461.9	57.2	31.1	24.0	15.7	13.2	11.8	11.1	11.1
67.5°	1691.5	1319.4	349.2	48.3	29.0	19.3	13.6	11.4	10.0	9.3	9.3
69°	1613.5	1213.5	268.0	44.0	27.5	17.5	12.5	10.4	9.3	8.2	8.2
70°	1546.2	1131.6	210.0	41.1	26.5	16.8	12.2	10.0	8.9	7.9	7.9
72.5°	1316.6	897.6	106.6	35.8	22.2	14.7	10.7	8.9	7.5	6.4	6.4
75°	1021.4	618.6	70.5	28.3	17.2	13.2	9.7	7.9	6.4	5.4	5.0
77.5°	614.6	241.8	50.4	18.2	11.1	10.4	7.9	6.4	5.4	4.3	4.3
80°	169.6	103.8	34.0	12.2	6.4	6.8	5.7	4.7	3.9	3.2	3.2
82.5°	102.0	67.3	22.5	7.9	4.3	4.3	3.2	3.2	2.5	2.5	2.5
85°	17.5	13.6	5.4	3.2	2.5	2.5	1.8	1.1	1.1	1.1	1.1
87.5°	1.1	1.1	1.1	1.4	1.4	1.1	0.7	0.4	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)