

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: P233538

Luminaire Tested: **VRDN-C028-D-UNV-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233538  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-14)  
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-T3  
Description: VERDEON ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 930mA LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9321 lumens  
Efficiency: N/A  
Efficacy: 127.7 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

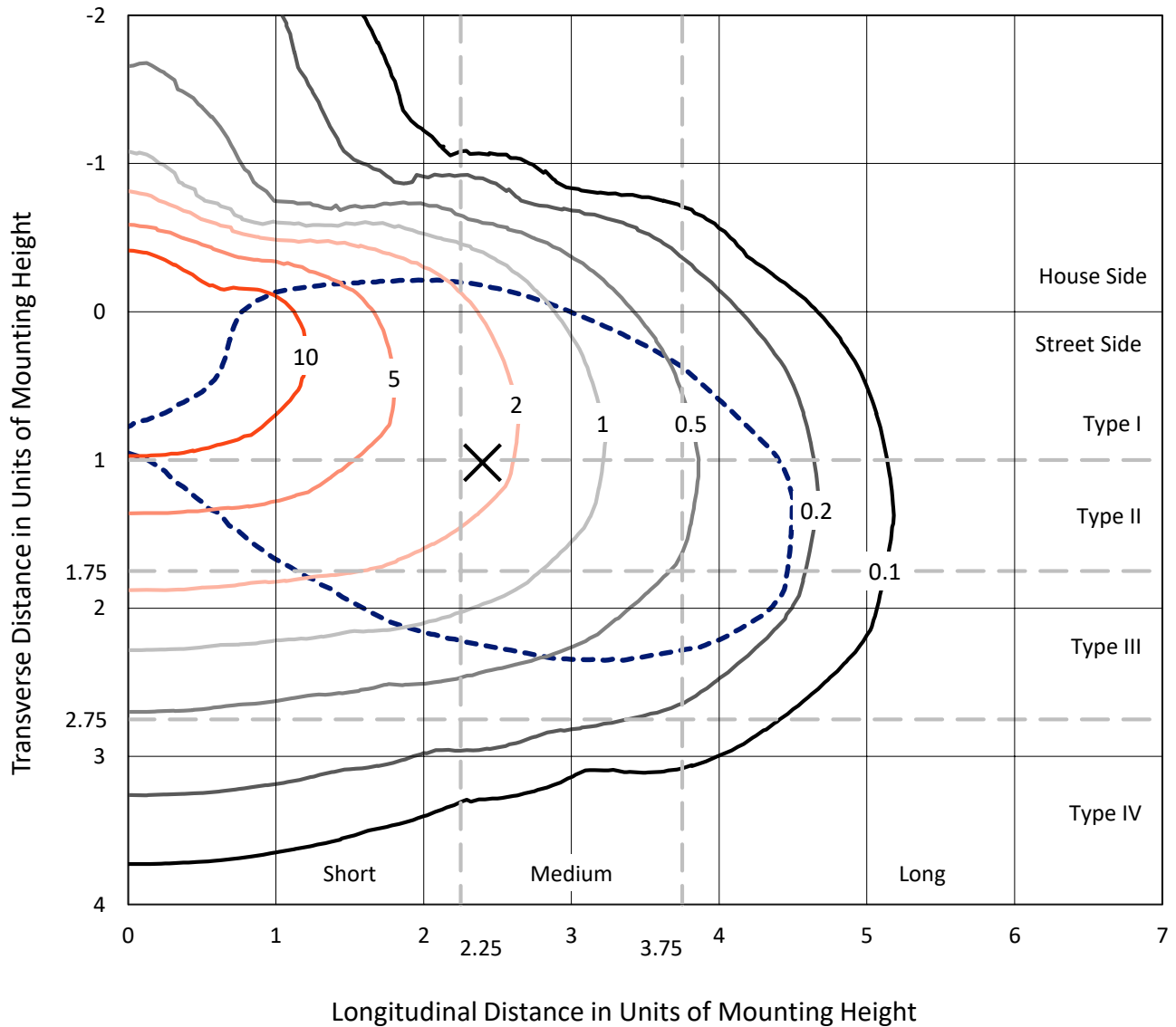
Input Watts (W): 73  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

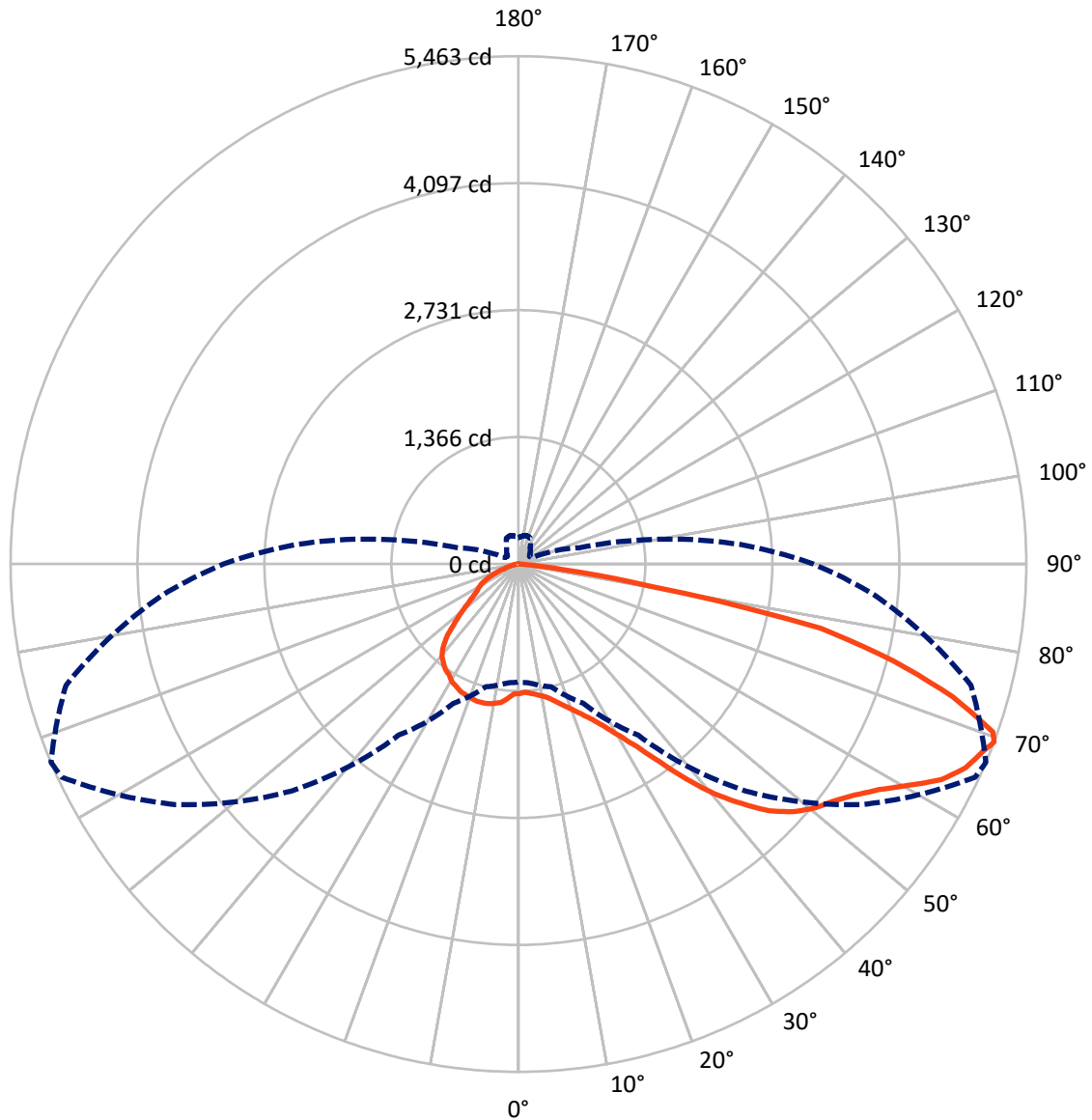


Based on 10 foot mounting height. Maximum calculated value = 16.2 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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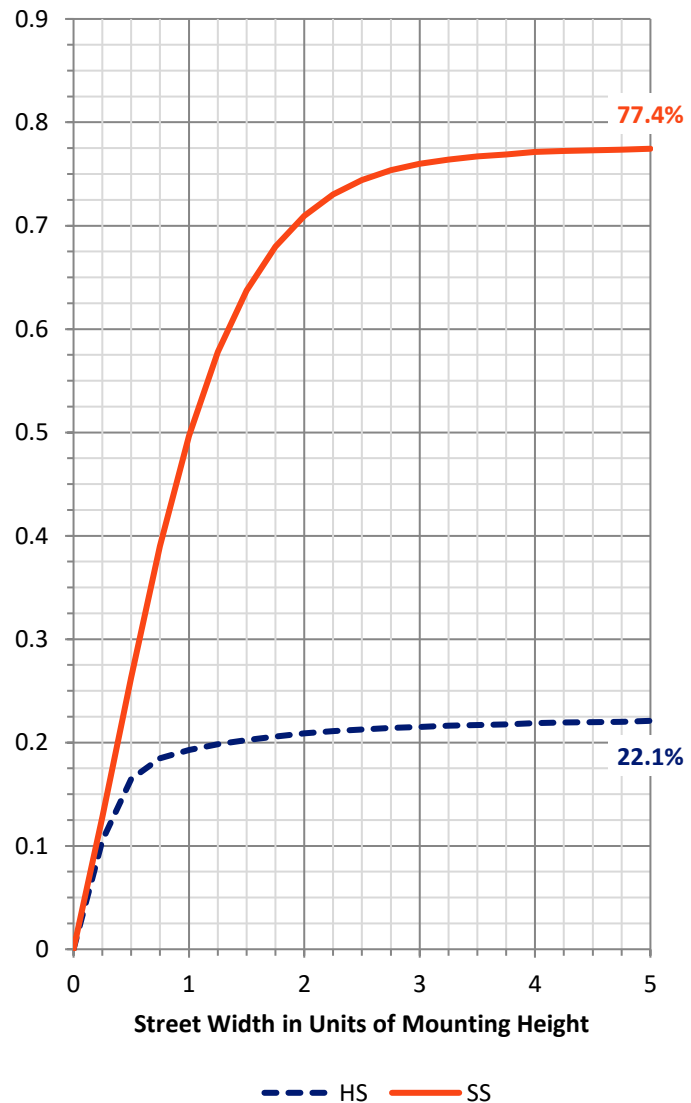
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2099.0	0.0	2099.0
	% Fixture	22.5	0.0	22.5
<b>Street Side</b>	Lumens	7222.0	0.0	7222.0
	% Fixture	77.5	0.0	77.5
<b>Total</b>	Lumens	9321.0	0.0	9321.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.2	1.5
10°-20°	450.0	4.8
20°-30°	775.3	8.3
30°-40°	1153.2	12.4
40°-50°	1588.2	17.0
50°-60°	1898.5	20.4
60°-70°	2003.5	21.5
70°-80°	1200.6	12.9
80°-90°	110.4	1.2
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°	9321.0	100.0
0°-180°	9321.0	100.0



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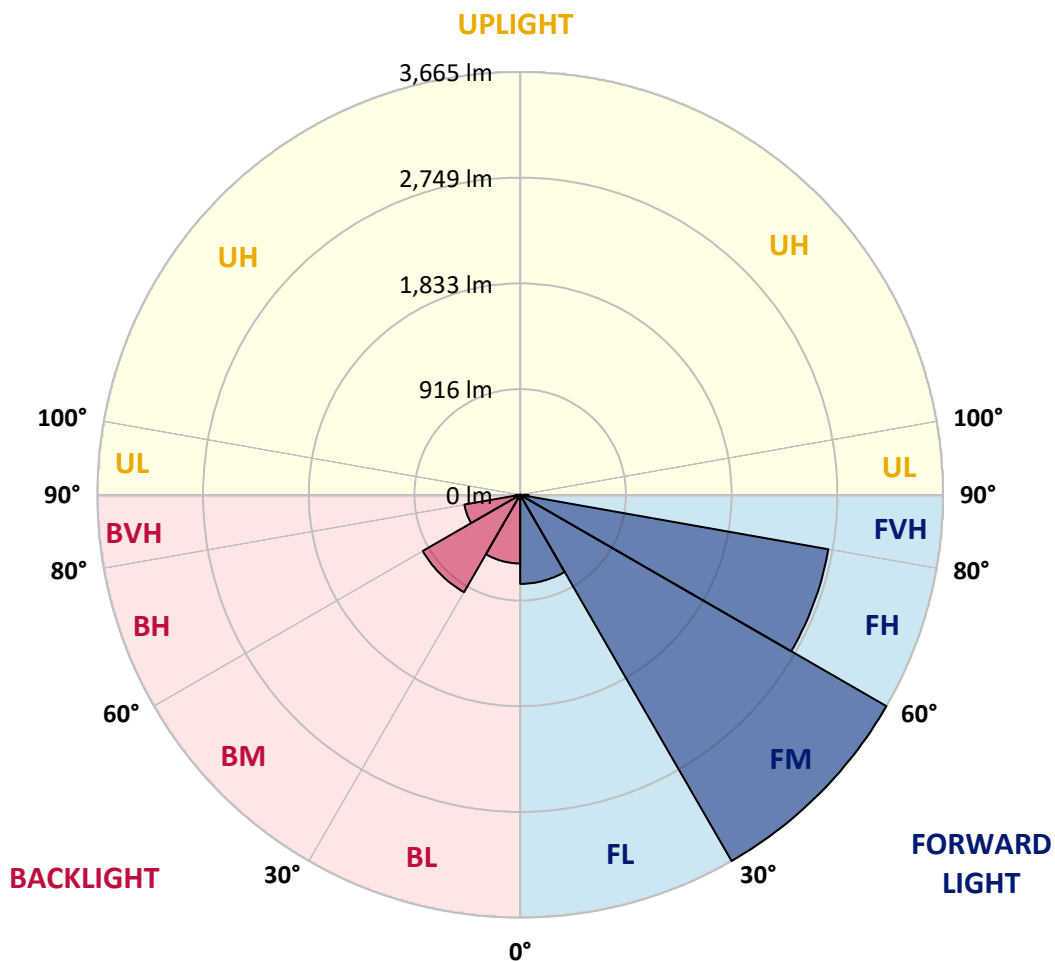
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	771.8	8.3			
FM (30°-60°)	3665.4	39.3			
FH (60°-80°)	2713.3	29.1			G2/5000
FVH (80°-90°)	71.4	0.8			G1/100
BL (0°-30°)	594.8	6.4	B2/1000		
BM (30°-60°)	974.4	10.5	B1/1000		
BH (60°-80°)	490.8	5.3	B1/500		G1/500
BVH (80°-90°)	39.0	0.4			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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2
2.5°	1417.1	1416.3	1412.0	1396.8	1395.1	1393.4	1383.2	1384.1	1381.5	1384.1	1384.9
5°	1456.1	1452.7	1448.5	1432.4	1426.4	1418.8	1403.6	1402.7	1396.8	1398.5	1400.2
7.5°	1504.4	1501.0	1497.6	1479.0	1473.1	1459.5	1435.8	1423.9	1418.8	1420.5	1423.0
10°	1569.7	1563.7	1558.7	1531.5	1522.2	1499.3	1470.5	1450.2	1443.4	1445.9	1452.7
12.5°	1644.3	1636.6	1628.2	1600.2	1587.5	1551.9	1518.0	1491.7	1481.5	1487.5	1492.5
15°	1721.4	1717.1	1713.8	1680.7	1662.9	1623.9	1581.5	1548.5	1539.2	1544.2	1546.8
17.5°	1823.1	1820.6	1814.6	1780.7	1746.8	1701.9	1646.8	1612.1	1602.7	1605.3	1599.3
20°	1934.1	1927.3	1924.0	1885.8	1850.2	1788.3	1724.8	1675.6	1673.1	1673.9	1655.3
22.5°	2058.7	2051.1	2044.3	2009.6	1965.5	1893.4	1810.4	1755.3	1757.0	1758.7	1717.1
25°	2185.8	2179.9	2174.0	2140.9	2096.9	2018.0	1918.0	1856.1	1855.3	1856.1	1798.5
27.5°	2318.9	2312.1	2311.3	2284.2	2240.1	2159.6	2044.3	1981.6	1981.6	1978.2	1890.9
30°	2437.6	2444.4	2444.4	2429.1	2387.6	2307.0	2198.6	2135.8	2144.3	2137.5	2026.5
32.5°	2567.2	2565.6	2577.4	2565.6	2531.6	2457.1	2366.4	2326.5	2340.9	2363.0	2252.0
35°	2642.7	2654.5	2684.2	2701.2	2685.1	2624.0	2557.9	2588.4	2607.9	2707.1	2574.0
37.5°	2730.0	2740.1	2780.8	2822.4	2829.1	2796.1	2796.1	2896.1	2934.2	3063.9	2908.8
40°	2790.2	2800.3	2844.4	2892.7	2958.8	2981.7	3041.0	3196.1	3250.4	3337.7	3158.0
42.5°	2754.6	2759.6	2854.6	2972.4	3069.8	3180.0	3274.1	3470.7	3522.4	3583.5	3363.1
45°	2691.8	2701.2	2806.3	2996.1	3163.9	3382.6	3501.3	3729.2	3788.6	3782.6	3520.7
47.5°	2622.3	2636.7	2753.7	2965.6	3244.4	3558.0	3708.9	3946.2	3980.1	3937.7	3630.1
50°	2545.2	2569.8	2694.4	2935.1	3302.9	3711.4	3863.2	4109.0	4126.7	4040.3	3725.9
52.5°	2457.1	2473.2	2611.3	2876.6	3343.6	3813.2	3986.1	4230.2	4237.8	4167.4	3826.7
55°	2335.0	2349.4	2502.8	2798.6	3349.5	3873.3	4064.9	4359.8	4385.3	4316.6	3918.3
57.5°	2203.6	2221.4	2379.1	2685.9	3295.3	3897.9	4159.8	4526.8	4576.0	4477.6	3992.0
60°	2051.1	2074.0	2233.3	2548.6	3188.5	3936.0	4336.9	4770.0	4831.1	4659.9	4062.3
62.5°	1892.6	1905.3	2051.9	2358.7	3022.4	3955.5	4498.0	5048.0	5106.5	4831.9	4095.4
65°	1669.7	1690.0	1820.6	2130.8	2788.5	3871.6	4573.4	5242.1	5284.5	4971.8	4063.2
67.5°	1433.2	1433.2	1544.2	1857.8	2476.6	3649.6	4542.9	5335.4	5386.2	5070.1	3961.5
69°	1269.6	1282.4	1367.1	1652.7	2247.7	3452.1	4509.8	5421.0	5462.5	5038.7	3844.5
70°	1144.2	1155.2	1240.8	1503.6	2077.4	3296.1	4438.7	5382.8	5413.3	4942.1	3721.6
72.5°	841.6	850.9	910.3	1047.6	1562.0	2659.6	4002.2	4866.7	4885.3	4444.6	3283.4
75°	573.8	578.9	623.8	707.7	911.1	1859.5	3269.9	4110.6	4165.7	3854.7	2688.4
77.5°	198.3	213.6	240.7	325.5	389.9	730.6	2216.4	3239.4	3321.6	2985.1	1880.7
80°	67.8	67.0	128.8	167.0	205.1	335.6	700.9	1357.8	1434.9	1230.7	677.2
82.5°	50.9	52.5	85.6	92.4	62.7	123.7	272.9	415.3	455.1	397.5	280.5
85°	32.2	31.4	38.1	39.8	28.8	52.5	66.1	67.0	69.5	60.2	61.0
87.5°	17.8	17.8	17.0	14.4	7.6	6.8	5.9	5.9	5.1	5.1	5.1
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°	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2	1394.2
2.5°	1380.7	1392.5	1395.1	1398.5	1406.9	1418.0	1433.2	1433.2	1439.1	1456.9	1462.9
5°	1400.2	1414.6	1433.2	1452.7	1475.6	1500.2	1524.8	1533.2	1545.1	1568.8	1573.9
7.5°	1429.8	1445.9	1478.1	1504.4	1523.9	1548.5	1568.8	1572.2	1587.5	1609.5	1613.7
10°	1460.3	1474.7	1507.0	1520.5	1546.8	1573.9	1584.1	1589.2	1601.9	1618.8	1616.3
12.5°	1501.9	1506.1	1529.0	1538.3	1551.0	1568.0	1573.1	1573.1	1580.7	1607.8	1608.7
15°	1542.6	1542.6	1545.9	1540.9	1542.6	1551.0	1551.9	1540.9	1549.3	1562.9	1557.8
17.5°	1585.8	1573.9	1558.7	1536.6	1517.1	1516.3	1498.5	1472.2	1464.6	1484.1	1483.2
20°	1626.5	1606.1	1569.7	1519.7	1492.5	1456.1	1411.2	1395.9	1395.1	1398.5	1395.9
22.5°	1679.9	1638.3	1572.2	1503.6	1429.0	1371.3	1334.1	1282.4	1280.7	1273.0	1261.2
25°	1743.4	1684.1	1583.2	1485.8	1377.3	1302.7	1212.9	1157.8	1126.4	1133.2	1112.8
27.5°	1825.6	1753.6	1587.5	1446.8	1306.1	1179.8	1071.3	1000.1	973.0	961.1	947.6
30°	1938.4	1827.3	1618.0	1413.7	1217.9	1051.0	917.9	814.5	775.5	785.7	787.4
32.5°	2118.9	1967.2	1634.1	1348.5	1116.2	910.3	737.4	625.5	602.6	631.4	639.1
35°	2433.3	2184.2	1672.2	1309.5	1000.1	745.8	548.4	502.6	507.7	532.3	534.0
37.5°	2742.7	2458.8	1790.0	1224.7	861.1	552.6	425.5	400.9	425.5	456.8	461.1
40°	2959.7	2673.2	1894.3	1140.8	666.2	400.0	324.6	294.9	330.5	380.6	389.9
42.5°	3152.1	2843.6	1968.0	1024.7	456.0	285.6	233.1	240.7	293.3	329.7	338.2
45°	3290.2	2960.5	2018.9	873.8	290.7	216.1	208.5	233.1	283.1	311.9	314.4
47.5°	3377.5	3029.2	1981.6	688.2	218.7	204.3	205.1	236.5	286.5	318.7	317.8
50°	3456.3	3065.6	1860.4	545.8	207.7	195.8	209.3	245.8	297.5	327.2	325.5
52.5°	3540.2	3101.2	1712.9	428.0	199.2	191.5	214.4	251.7	297.5	316.1	313.6
55°	3612.3	3132.6	1601.9	344.1	193.2	190.7	219.5	261.0	295.8	303.4	298.3
57.5°	3649.6	3079.2	1481.5	289.0	187.3	190.7	222.9	259.4	306.0	330.5	325.5
60°	3629.2	3029.2	1384.1	268.7	178.8	189.9	224.6	278.0	375.5	398.4	396.7
62.5°	3591.9	2974.1	1247.6	241.6	169.5	191.5	223.8	294.9	432.3	424.6	403.4
65°	3515.7	2863.9	1061.1	210.2	160.2	194.9	223.8	332.2	377.2	368.7	359.4
67.5°	3352.9	2625.7	849.3	180.5	150.0	184.8	220.4	316.1	324.6	302.6	291.6
69°	3170.7	2398.6	672.1	164.4	144.1	179.7	219.5	305.1	319.5	295.8	283.1
70°	3028.3	2221.4	543.3	152.6	138.2	178.0	218.7	297.5	317.0	290.7	277.2
72.5°	2522.3	1795.1	284.8	122.9	117.8	161.9	211.0	290.7	317.8	278.8	259.4
75°	1981.6	1277.3	189.0	94.1	90.7	141.5	193.2	279.7	299.2	250.9	221.2
77.5°	1222.2	559.4	130.5	65.3	66.1	110.2	166.1	250.0	301.7	253.4	215.3
80°	355.1	216.1	83.1	44.1	40.7	65.3	130.5	215.3	286.5	260.2	234.8
82.5°	205.1	140.7	55.9	28.0	24.6	29.7	82.2	167.0	252.6	238.2	243.2
85°	46.6	39.0	20.3	13.6	13.6	17.0	28.0	96.6	174.6	204.3	230.5
87.5°	5.1	5.1	5.1	5.1	5.1	4.2	5.1	26.3	76.3	108.5	126.3
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)