

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: P196123

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196123  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-01-D-UNV-SL3-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5819.6 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

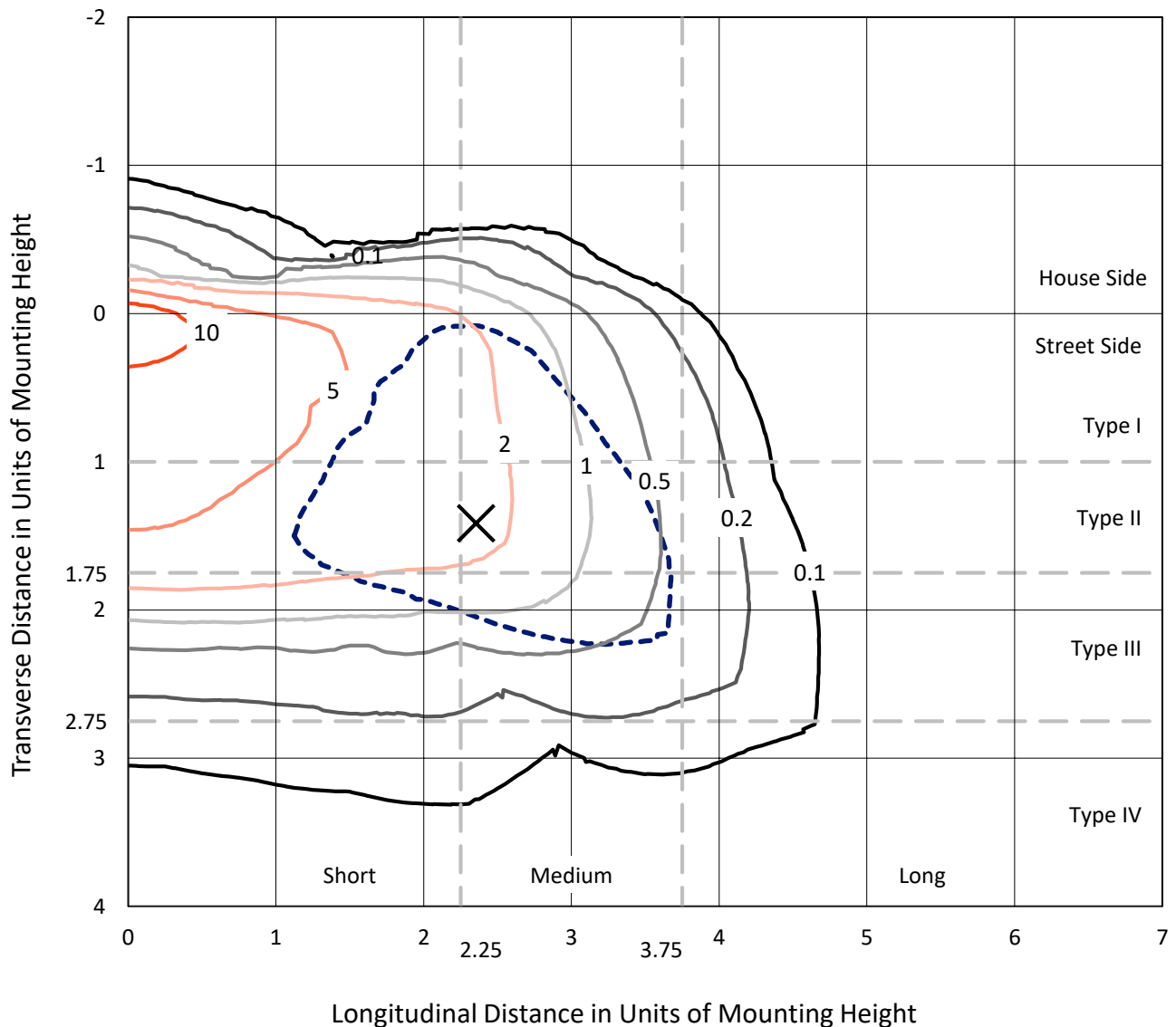
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

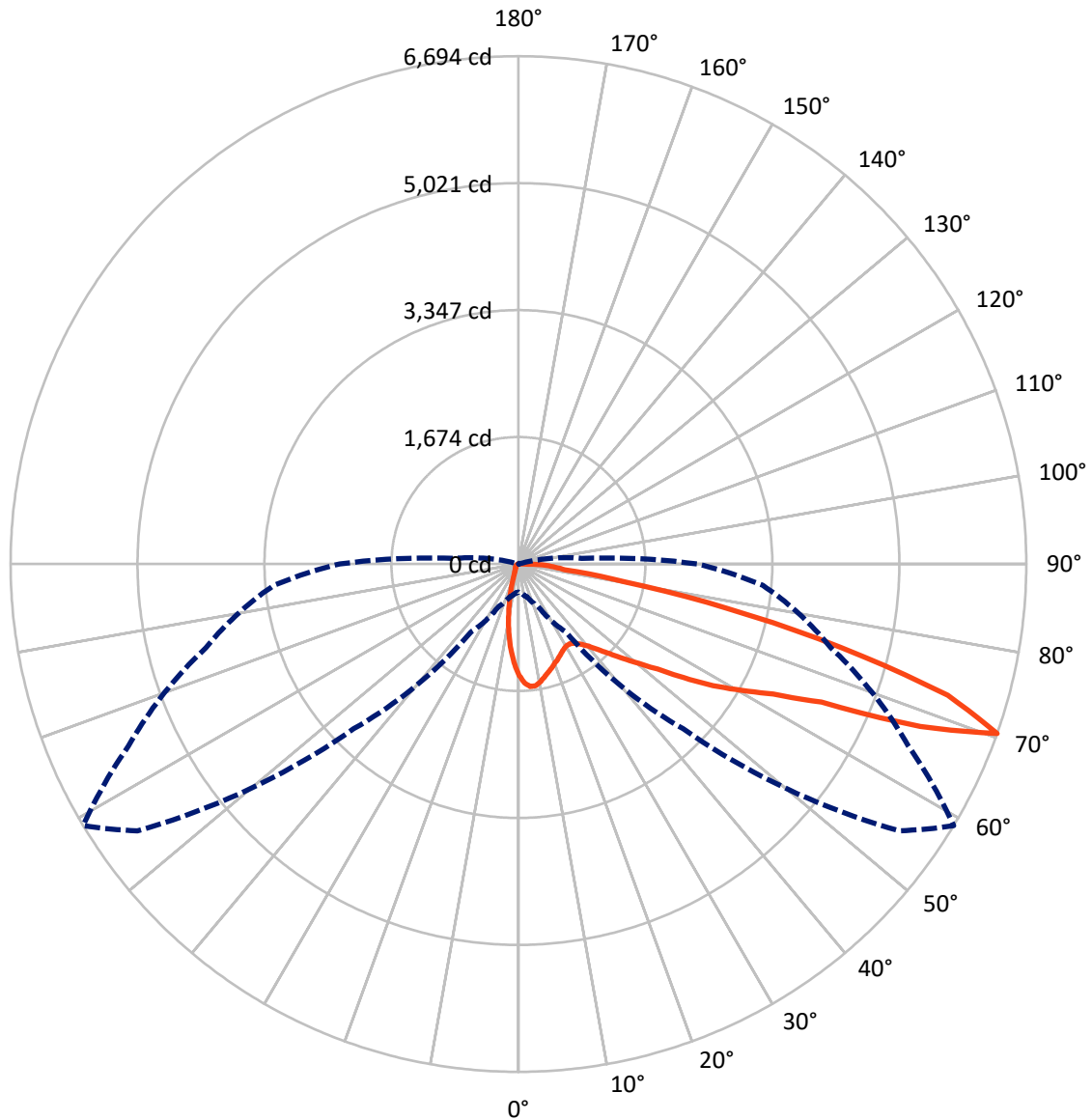
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.7 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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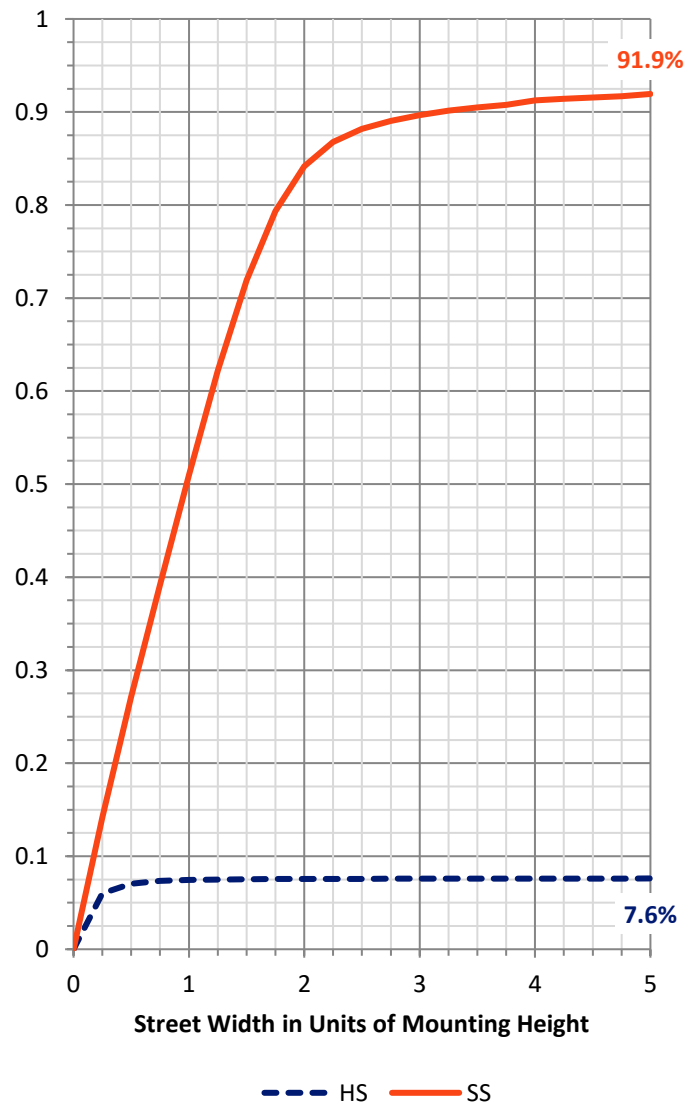
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	447.4	0.0	447.4
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	5372.2	0.0	5372.2
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	5819.6	0.0	5819.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.0	2.1
10°-20°	253.8	4.4
20°-30°	343.6	5.9
30°-40°	495.8	8.5
40°-50°	823.4	14.1
50°-60°	1259.5	21.6
60°-70°	1566.6	26.9
70°-80°	866.0	14.9
80°-90°	89.8	1.5
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°	5819.6	100.0
0°-180°	5819.6	100.0

**Coefficient of Utilization**



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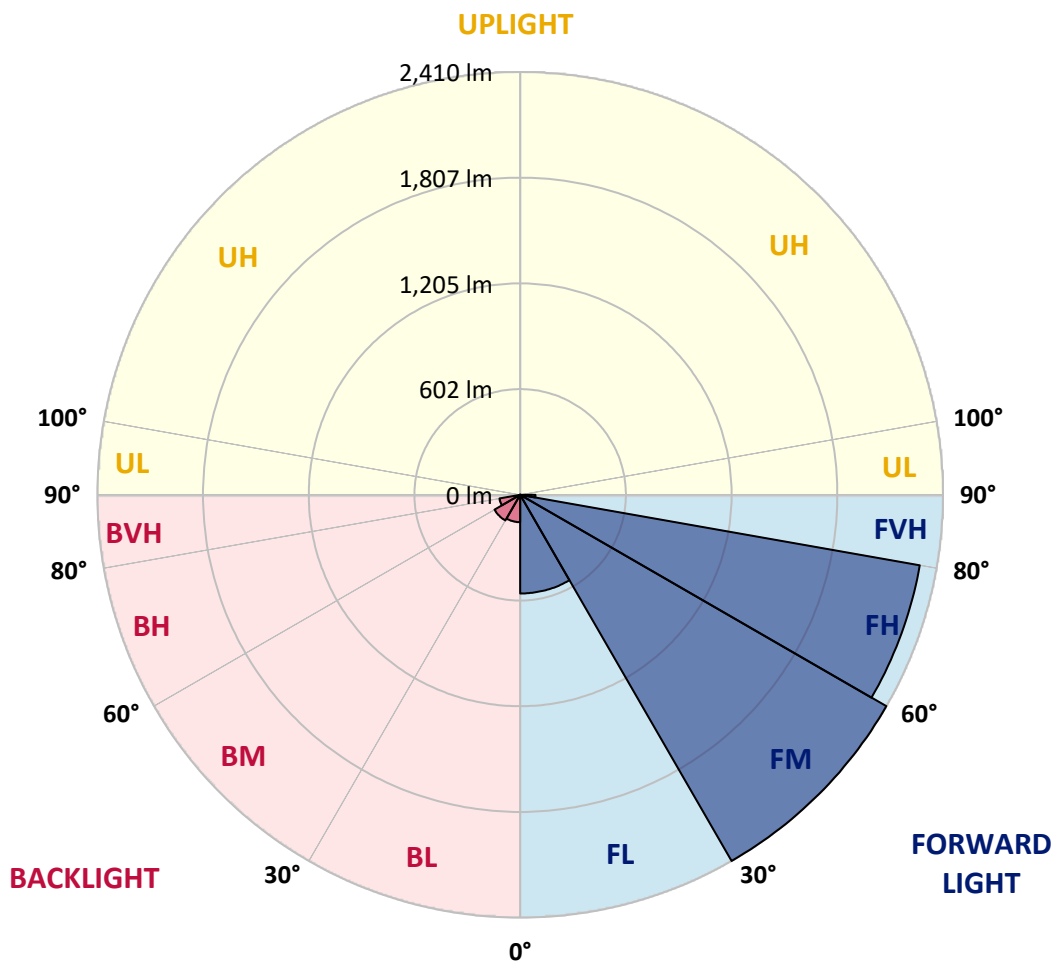
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	562.5	9.7			
FM	(30°-60°)	2409.9	41.4			
FH	(60°-80°)	2312.6	39.7			G2/5000
FVH	(80°-90°)	87.2	1.5			G1/100
BL	(0°-30°)	155.9	2.7	B1/500		
BM	(30°-60°)	168.9	2.9	B0/220		
BH	(60°-80°)	120.0	2.1	B1/500		G1/500
BVH	(80°-90°)	2.6	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5
2.5°	1663.4	1660.8	1649.8	1647.6	1635.3	1610.7	1582.2	1570.7	1547.5	1510.6	1469.8
5°	1691.0	1692.4	1693.3	1688.4	1686.6	1666.5	1634.9	1621.3	1590.1	1529.5	1454.8
7.5°	1587.4	1591.0	1601.9	1606.7	1627.8	1635.7	1629.2	1620.4	1595.8	1524.2	1419.3
10°	1478.2	1484.7	1496.6	1504.5	1530.4	1551.5	1578.2	1580.5	1575.1	1506.7	1379.3
12.5°	1384.2	1390.3	1403.5	1419.3	1445.6	1472.8	1512.8	1526.9	1544.5	1495.2	1350.8
15°	1303.4	1305.2	1317.9	1337.6	1372.4	1409.6	1457.1	1477.8	1511.9	1490.8	1328.9
17.5°	1232.8	1233.2	1241.6	1259.6	1301.7	1350.8	1406.1	1433.4	1476.8	1484.7	1309.6
20°	1186.2	1185.8	1186.2	1195.8	1233.2	1291.6	1358.7	1387.2	1443.0	1477.2	1289.8
22.5°	1170.4	1168.2	1158.1	1154.6	1178.3	1229.7	1310.0	1347.3	1412.7	1475.1	1275.3
25°	1189.7	1188.4	1166.9	1146.7	1148.9	1180.9	1260.4	1306.1	1389.1	1483.0	1271.8
27.5°	1252.1	1249.4	1216.5	1177.0	1151.9	1157.7	1223.6	1271.3	1370.1	1502.3	1276.6
30°	1333.7	1334.1	1299.0	1251.2	1192.4	1159.8	1203.8	1249.0	1357.5	1531.3	1287.2
32.5°	1424.6	1424.2	1399.1	1343.9	1268.8	1200.2	1212.5	1250.8	1359.2	1573.8	1307.3
35°	1518.6	1513.7	1505.4	1456.7	1368.8	1270.9	1252.5	1280.6	1377.6	1630.1	1341.6
37.5°	1627.0	1625.2	1633.6	1582.2	1492.6	1374.9	1322.8	1341.6	1424.2	1713.0	1396.9
40°	1799.5	1789.9	1793.7	1724.0	1632.2	1515.0	1421.1	1425.9	1498.3	1822.8	1484.3
42.5°	2128.4	2089.3	2015.9	1885.1	1785.9	1670.5	1549.7	1541.4	1603.3	1955.8	1599.3
45°	2521.3	2476.5	2291.6	2062.9	1939.5	1837.2	1708.6	1686.2	1732.4	2114.2	1747.7
47.5°	2849.1	2800.8	2555.9	2248.7	2095.8	2009.4	1884.7	1858.3	1886.8	2298.3	1925.9
50°	2961.1	2934.3	2719.2	2403.1	2253.5	2202.5	2105.5	2061.6	2068.6	2496.6	2134.0
52.5°	2909.8	2900.6	2756.5	2508.9	2399.2	2415.9	2347.4	2301.3	2293.4	2713.5	2364.0
55°	2801.4	2797.0	2726.7	2567.8	2527.8	2611.2	2686.8	2646.8	2572.1	2944.0	2554.2
57.5°	2646.4	2663.0	2713.5	2681.1	2685.9	2817.5	3002.0	3022.6	2911.1	3127.5	2695.1
60°	2232.4	2277.2	2508.5	2802.7	3027.8	3160.8	3339.5	3378.2	3198.2	3253.1	2857.9
62.5°	1650.2	1714.4	2044.1	2584.5	3216.2	3813.7	3788.6	3771.5	3472.1	3421.2	3154.3
65°	969.3	1044.4	1323.2	2019.4	2932.2	4233.4	4627.1	4390.1	3889.7	3770.7	3626.3
67.5°	482.9	483.3	609.4	1065.9	2166.9	3940.5	5851.1	5714.1	4777.3	4285.7	3812.3
70°	371.4	381.5	450.8	619.4	1095.8	3069.2	6131.7	6694.0	5669.4	4262.7	3234.6
72.5°	314.8	321.3	401.3	539.1	819.2	1684.9	5308.1	5917.0	5409.9	3601.6	2384.3
75°	226.5	231.8	355.2	489.1	754.2	835.9	3641.2	4388.4	4059.1	2533.5	1312.2
77.5°	56.2	55.8	123.8	396.9	674.7	696.2	2089.3	2814.0	2329.0	1037.4	337.2
80°	25.1	24.1	28.1	83.4	627.8	657.2	918.8	1421.1	893.3	168.2	103.2
82.5°	17.6	16.7	17.6	30.7	209.8	609.8	555.4	615.9	327.0	57.5	43.9
85°	5.7	5.2	9.6	25.9	58.8	351.7	541.8	460.1	243.3	24.6	29.5
87.5°	0.9	0.9	3.5	14.0	17.1	117.2	317.8	318.8	109.4	14.5	13.2
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°	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5	1471.5
2.5°	1449.2	1423.2	1386.8	1350.4	1317.5	1283.7	1256.5	1243.7	1238.0	1230.1	1213.0
5°	1415.8	1368.8	1288.9	1210.4	1137.0	1066.8	1006.7	972.4	935.5	933.7	915.7
7.5°	1362.3	1295.6	1169.5	1047.5	935.5	828.4	736.2	676.5	635.7	610.2	592.7
10°	1302.5	1216.9	1050.2	878.4	726.1	583.0	464.5	387.2	340.2	316.5	302.9
12.5°	1255.2	1147.5	932.4	716.5	525.5	361.3	251.1	194.9	169.9	160.2	155.9
15°	1214.3	1083.9	822.2	571.6	350.8	207.7	145.4	126.8	123.0	123.0	122.4
17.5°	1173.0	1022.4	715.1	429.3	220.9	136.1	114.6	111.9	112.4	113.8	113.8
20°	1133.9	964.0	611.9	306.0	144.8	108.8	104.0	103.2	104.4	106.3	105.8
22.5°	1102.3	912.7	515.4	210.3	111.5	98.8	95.7	94.4	95.2	96.6	96.2
25°	1079.9	868.8	426.7	146.6	97.0	90.0	86.4	84.7	83.9	84.7	84.3
27.5°	1066.3	832.0	343.3	110.2	87.0	81.2	76.8	73.3	71.1	71.1	70.3
30°	1057.5	797.3	269.1	91.3	78.6	72.4	66.3	61.5	57.9	57.1	56.7
32.5°	1057.1	767.4	201.1	80.8	70.7	63.6	56.2	50.0	46.1	45.2	44.8
35°	1068.1	743.3	147.9	72.8	63.6	55.3	47.0	40.4	36.8	36.8	36.4
37.5°	1096.6	729.2	111.9	66.7	57.9	48.3	39.5	33.3	30.3	31.2	31.2
40°	1149.8	726.6	91.3	61.9	53.1	42.1	32.0	27.2	25.9	27.2	27.2
42.5°	1231.0	740.6	81.2	58.4	48.7	36.0	26.8	23.2	22.8	24.1	24.1
45°	1336.8	768.2	75.5	55.3	43.9	29.9	22.4	20.2	19.7	21.5	21.5
47.5°	1465.0	805.6	70.3	51.8	39.1	24.6	18.9	17.1	17.1	18.9	19.3
50°	1616.9	856.1	65.0	48.3	35.1	20.7	15.8	14.5	14.9	16.7	17.1
52.5°	1791.6	918.0	60.1	45.2	30.7	16.7	13.2	12.3	12.7	14.5	14.9
55°	1942.2	972.0	54.4	42.1	25.1	13.6	10.9	10.5	10.9	13.2	13.2
57.5°	2073.4	1023.8	49.2	37.3	19.7	10.9	8.8	8.8	9.6	11.9	12.3
60°	2247.7	1105.4	44.8	31.6	14.9	8.4	7.1	7.5	8.8	10.5	10.9
62.5°	2556.4	1244.1	39.1	26.3	10.9	6.5	5.7	6.1	7.9	10.1	10.5
65°	2942.7	1375.5	32.5	22.0	8.4	4.8	4.4	5.7	7.9	10.1	10.5
67.5°	2903.1	1196.3	25.5	17.6	6.1	4.0	3.5	5.2	7.5	10.1	10.5
70°	2354.4	838.5	18.9	11.9	4.8	3.5	3.5	5.2	7.5	9.6	10.1
72.5°	1633.1	466.7	14.5	7.9	4.4	3.5	3.1	4.8	7.1	9.6	10.1
75°	777.0	143.1	11.5	5.7	4.0	3.1	2.7	4.8	7.1	9.6	10.1
77.5°	149.2	36.4	9.2	4.8	3.5	3.1	2.7	4.4	7.1	9.2	9.6
80°	50.5	16.3	7.5	4.4	3.5	3.1	2.7	4.4	6.5	8.8	9.2
82.5°	27.6	9.2	6.5	4.0	3.5	2.7	2.1	4.0	6.1	8.8	9.2
85°	21.5	6.5	5.2	4.0	3.5	2.7	2.1	4.0	6.1	8.4	8.8
87.5°	10.9	4.8	4.4	4.0	3.5	2.7	2.1	3.5	5.7	7.9	8.8
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)