

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: INVUE

Report Number: P368487

Luminaire Tested: **MSA-SA4C-730-U-T4FT-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368487  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4C-730-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16410 lumens  
Efficiency: N/A  
Efficacy: 72.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G4

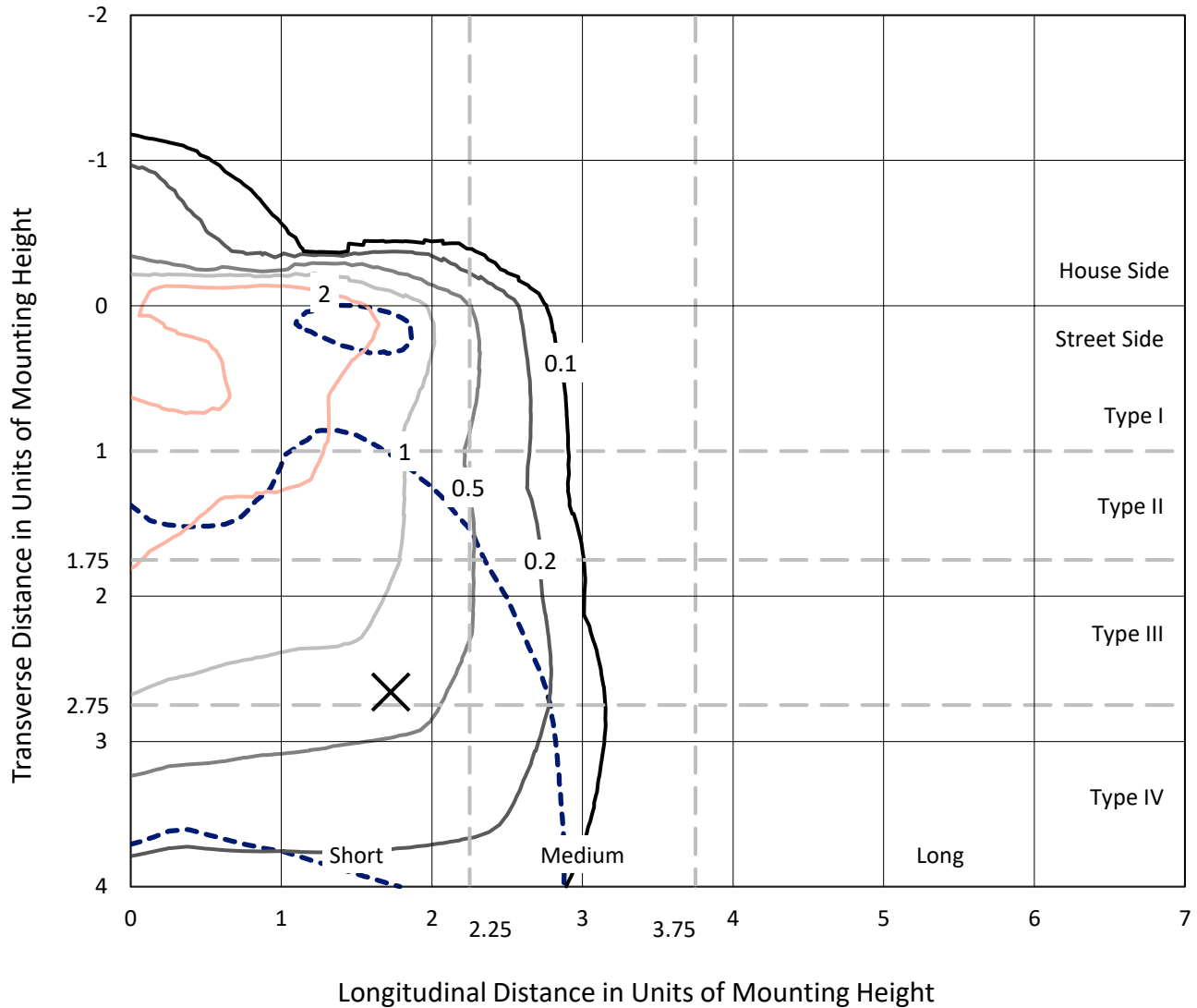
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

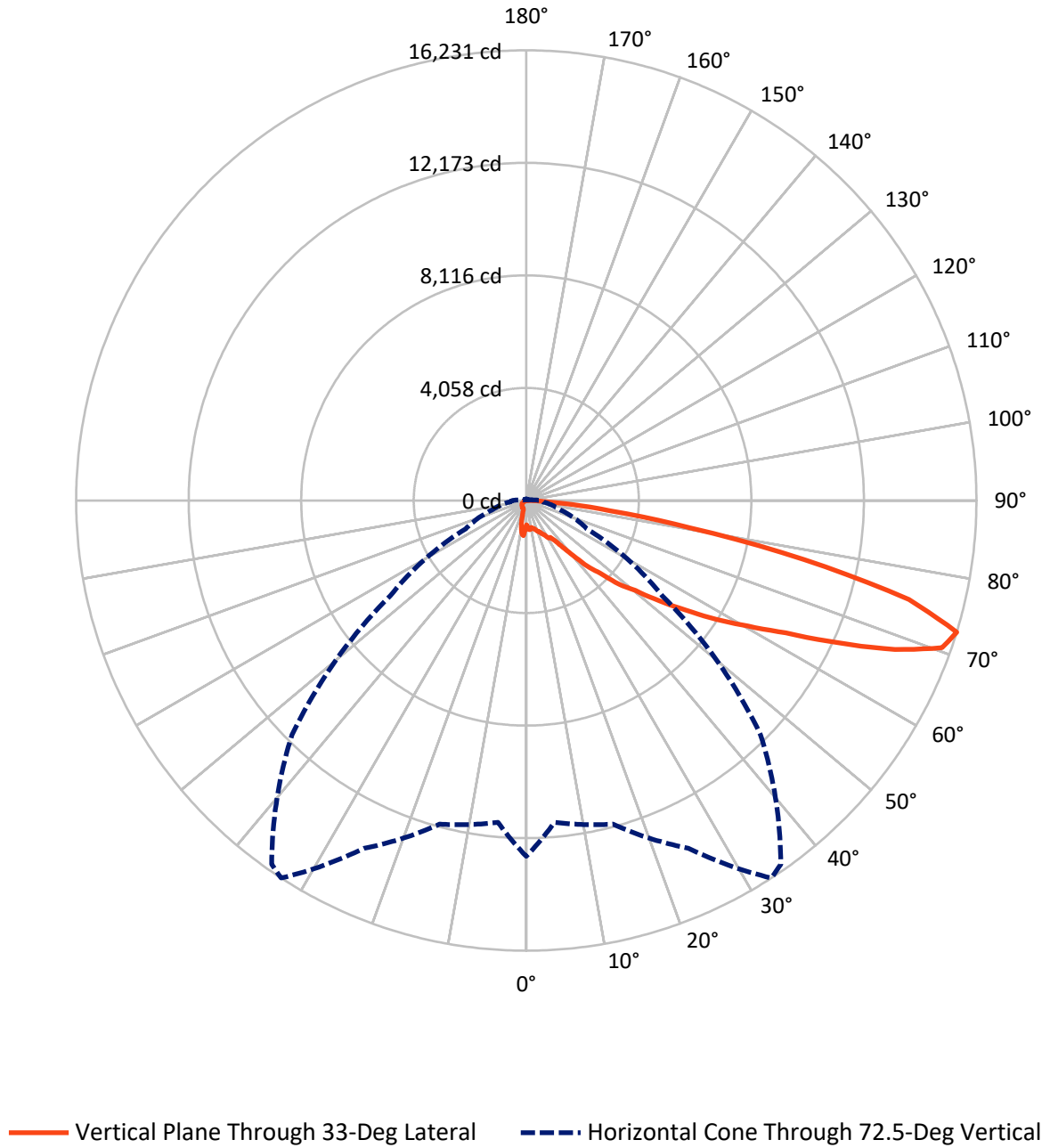
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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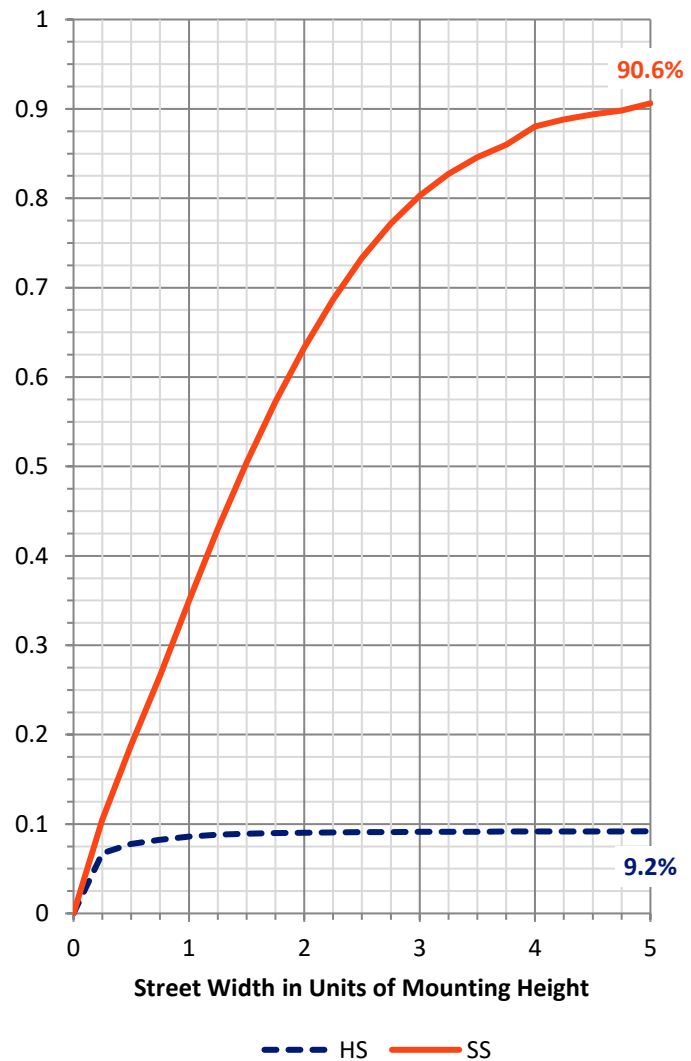
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1517.3	0.0	1517.3
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	14892.7	0.0	14892.7
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	16410.0	0.0	16410.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.0	0.7
10°-20°	336.6	2.1
20°-30°	570.9	3.5
30°-40°	1044.8	6.4
40°-50°	2205.1	13.4
50°-60°	3689.4	22.5
60°-70°	4938.4	30.1
70°-80°	3225.8	19.7
80°-90°	286.0	1.7
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°	16410.0	100.0
0°-180°	16410.0	100.0

**Coefficient of Utilization**

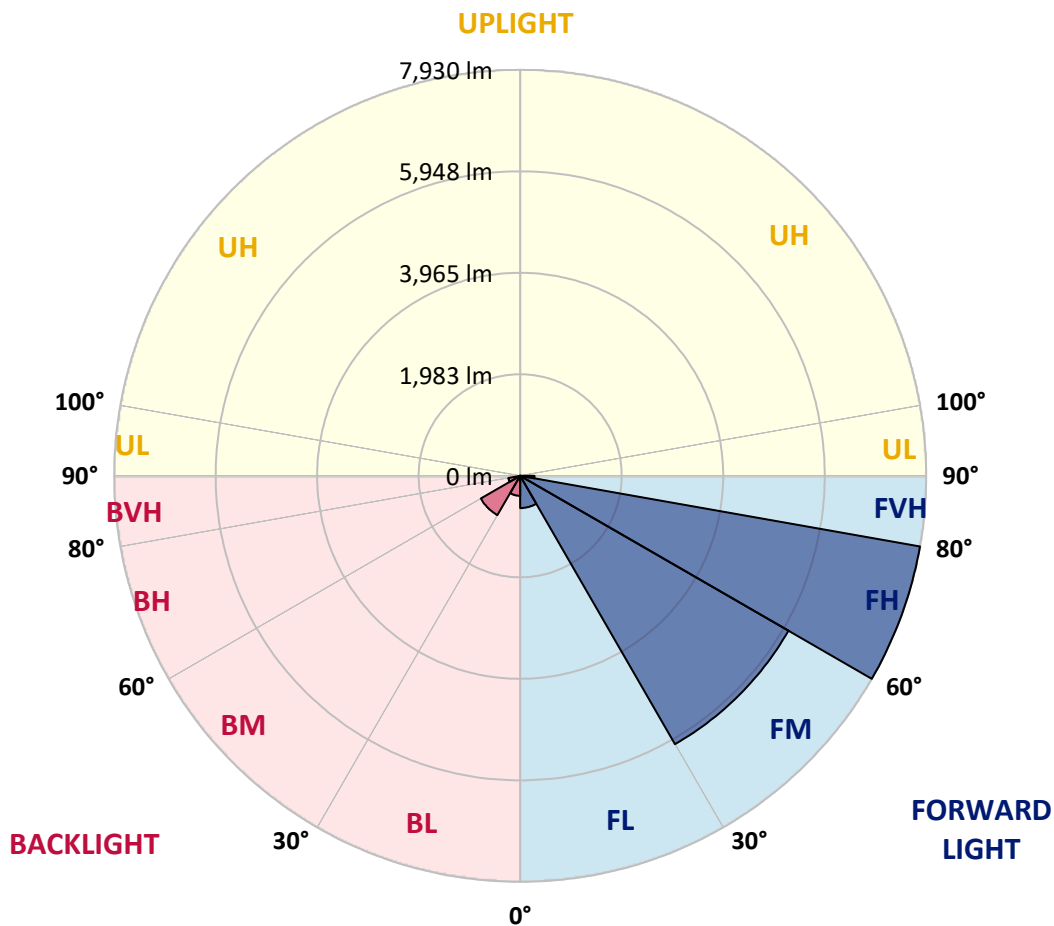


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	629.9	3.8			
FM (30°-60°)	6052.2	36.9			
FH (60°-80°)	7930.0	48.3			G4/12000
FVH (80°-90°)	280.5	1.7			G3/500
BL (0°-30°)	390.5	2.4	B1/500		
BM (30°-60°)	887.1	5.4	B1/1000		
BH (60°-80°)	234.2	1.4	B1/500		G1/500
BVH (80°-90°)	5.5	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-G4**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	872.8	872.8	872.8	872.8	872.8	872.8	872.8	872.8	872.8	872.8	872.8
2.5°	1040.5	1000.4	942.1	945.7	955.7	963.9	985.8	976.7	959.4	958.5	1040.5
5°	1102.4	1057.8	1054.1	1059.6	1056.9	1071.4	1053.2	1112.4	1162.5	1222.7	1319.3
7.5°	1072.3	1051.4	1025.0	1052.3	1051.4	1044.1	1055.9	1176.2	1297.4	1373.9	1533.4
10°	985.8	962.1	982.2	991.3	984.9	1016.8	1096.0	1194.4	1339.3	1499.6	1577.1
12.5°	961.2	975.8	983.1	983.1	1044.1	1060.5	1181.7	1274.6	1446.8	1573.4	1798.5
15°	1056.9	1085.1	1035.0	1024.1	1043.2	1052.3	1187.1	1299.2	1519.7	1751.1	1939.7
17.5°	1209.0	1207.2	1129.7	1086.9	1117.0	1138.9	1213.6	1344.8	1474.1	1890.5	2163.8
20°	1313.8	1315.6	1176.2	1086.9	1186.2	1199.0	1281.9	1386.7	1488.7	1960.7	2310.5
22.5°	1448.6	1400.3	1246.4	1159.8	1227.2	1239.1	1330.2	1413.1	1563.4	1952.5	2498.2
25°	1558.9	1527.9	1333.8	1273.7	1333.8	1317.4	1400.3	1525.2	1643.6	2082.7	2608.4
27.5°	1730.2	1677.3	1395.8	1406.7	1403.1	1414.9	1434.1	1625.4	1784.8	2089.1	2863.5
30°	1889.6	1858.6	1534.3	1534.3	1569.8	1547.0	1560.7	1792.1	1921.5	2236.7	3150.5
32.5°	2054.5	2056.3	1697.4	1610.8	1582.6	1676.4	1768.4	1873.2	2086.4	2490.0	3589.7
35°	2490.9	2454.5	2009.9	1793.9	1771.2	1765.7	1913.3	2196.6	2378.8	2819.8	4181.0
37.5°	3370.1	3243.5	2682.2	2209.4	2123.7	2094.6	2262.2	2552.9	2734.2	3304.5	5158.6
40°	4272.1	4039.8	3416.6	2883.6	2605.7	2480.0	2675.0	2921.9	3244.4	3840.2	6063.3
42.5°	5063.8	4776.8	3969.6	3610.6	3248.9	3194.3	3011.1	3412.9	3973.3	4620.1	6949.8
45°	5835.5	5270.6	4461.6	4177.3	3738.2	3769.2	3707.2	4055.2	4730.4	5474.7	7736.0
47.5°	6366.7	5859.2	5064.7	4695.7	4519.9	4338.6	4830.6	5192.3	5404.6	6017.7	8415.7
50°	6938.8	6425.0	5583.1	5325.3	5093.9	5277.0	5915.7	5964.0	5946.7	6524.3	8878.5
52.5°	7677.7	7071.9	6178.1	5886.5	6017.7	6199.9	6937.0	6946.1	6428.6	6950.7	9212.0
55°	8361.0	7689.6	6970.7	6695.6	6969.8	7123.8	7941.0	7641.3	6709.2	7240.4	9376.0
57.5°	9324.1	8546.9	8024.9	7540.2	8095.9	7948.3	8823.9	8378.4	7024.5	7432.6	9315.9
60°	10541.3	9626.5	9103.6	8590.6	9186.5	9286.7	9685.8	8746.4	7146.6	7495.5	8954.2
62.5°	11779.4	10859.2	10171.4	9823.3	10499.4	10829.2	10483.9	8929.6	6999.9	7372.5	8135.1
65°	13315.5	12137.5	11333.9	11129.8	12382.6	12867.3	11427.8	8974.2	6716.5	6695.6	6540.7
67.5°	14367.8	13220.8	12483.7	12825.4	14338.7	14377.9	12275.1	8987.9	5762.6	5242.4	4293.0
70°	14617.5	13389.3	13059.5	14065.4	15899.4	15406.5	12548.4	8295.4	4273.9	3111.4	1962.5
72.5°	12831.8	11649.2	12078.3	13831.2	16231.0	16005.1	11944.4	5984.9	2406.2	1244.5	602.2
75°	7870.9	7155.7	9060.8	11726.6	14247.6	14101.8	9318.6	3092.2	969.4	497.5	225.0
77.5°	3423.0	3178.8	4728.5	7780.7	10237.9	10107.6	5460.1	1138.9	501.1	349.9	113.9
80°	1132.5	1098.8	1791.2	3684.4	5996.8	5882.0	2300.5	473.8	357.1	280.6	63.8
82.5°	268.8	266.9	625.0	1695.5	3054.9	2959.2	706.1	261.5	258.7	221.4	33.7
85°	67.4	69.2	173.1	693.3	1240.9	1094.2	184.0	130.3	182.2	150.3	17.3
87.5°	0.0	0.0	44.6	99.3	187.7	117.5	20.0	34.6	51.0	53.8	9.1
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°	872.8	872.8	872.8	872.8	872.8	872.8	872.8	872.8	872.8	872.8	872.8
2.5°	1058.7	1048.7	966.7	986.7	1017.7	1015.0	1035.0	1019.5	1005.8	1073.3	1066.9
5°	1346.6	1291.9	1266.4	1301.9	1282.8	1238.2	1275.5	1269.1	1258.2	1281.0	1298.3
7.5°	1562.5	1512.4	1489.6	1414.9	1306.5	1220.9	1234.5	1202.6	1172.6	1208.1	1244.5
10°	1633.6	1606.2	1603.5	1457.7	1355.7	1231.8	1085.1	958.5	924.8	880.1	900.2
12.5°	1826.7	1843.1	1740.2	1569.8	1373.0	1135.2	874.6	695.2	622.3	574.9	577.6
15°	1985.3	2042.7	1893.2	1587.1	1208.1	865.5	582.2	420.9	375.4	363.5	359.9
17.5°	2221.2	2276.8	1940.6	1464.1	974.0	586.7	374.5	328.0	330.7	338.9	337.1
20°	2396.2	2388.0	1899.6	1246.4	717.9	384.5	313.4	307.0	321.6	345.3	339.8
22.5°	2564.7	2508.2	1874.1	1045.0	464.7	308.9	302.5	301.6	315.2	338.0	344.4
25°	2685.0	2694.1	1831.3	818.2	338.0	287.0	292.5	300.7	314.3	338.9	335.3
27.5°	3029.4	2774.3	1652.7	594.0	285.2	275.1	288.8	305.2	309.8	340.7	341.7
30°	3252.6	3076.7	1536.1	400.0	263.3	254.2	281.5	303.4	308.9	348.9	351.7
32.5°	3641.6	3207.0	1401.3	297.0	245.1	247.8	265.1	294.3	319.8	362.6	364.4
35°	4125.4	3625.2	1157.1	266.9	238.7	234.1	242.3	276.1	318.0	364.4	373.5
37.5°	5046.5	3875.8	917.5	258.7	238.7	230.5	238.7	258.7	312.5	382.7	401.8
40°	5663.3	4386.0	661.4	256.9	234.1	226.9	229.6	249.6	297.0	371.7	400.0
42.5°	6423.2	4601.0	487.4	252.4	229.6	218.7	220.5	246.0	281.5	348.9	369.9
45°	7045.4	4757.7	383.6	250.5	218.7	215.0	218.7	243.3	266.9	299.7	318.9
47.5°	7518.3	4939.9	307.9	238.7	215.9	215.0	210.5	227.8	242.3	250.5	263.3
50°	7864.5	4898.9	255.1	220.5	206.8	212.3	204.1	206.8	210.5	205.9	220.5
52.5°	8076.8	4751.3	212.3	198.6	195.9	200.4	190.4	182.2	175.8	172.2	181.3
55°	8154.2	4455.2	180.4	170.4	176.8	178.6	170.4	155.8	144.9	139.4	146.7
57.5°	8007.5	4004.2	156.7	141.2	155.8	155.8	144.9	129.4	116.6	107.5	114.8
60°	7635.8	3505.9	139.4	117.5	133.0	133.9	121.2	104.8	94.8	85.6	90.2
62.5°	6943.4	2962.9	122.1	102.0	114.8	115.7	100.2	84.7	77.4	67.4	71.1
65°	5558.5	2265.9	103.9	90.2	99.3	96.6	82.9	72.0	62.9	53.8	55.6
67.5°	3607.9	1398.5	90.2	82.0	83.8	81.1	70.2	62.9	52.8	45.6	46.5
70°	1615.4	602.2	79.3	73.8	72.9	68.3	59.2	58.3	51.9	45.6	45.6
72.5°	498.4	226.9	68.3	66.5	62.9	57.4	51.9	55.6	51.0	43.7	42.8
75°	196.8	103.9	56.5	56.5	54.7	47.4	46.5	50.1	47.4	40.1	38.3
77.5°	103.0	65.6	46.5	48.3	47.4	36.4	41.9	45.6	43.7	33.7	28.2
80°	61.0	40.1	34.6	39.2	38.3	25.5	31.9	29.2	21.0	10.0	2.7
82.5°	33.7	18.2	15.5	22.8	22.8	9.1	16.4	14.6	8.2	0.0	0.0
85°	16.4	12.8	11.8	12.8	9.1	2.7	8.2	8.2	4.6	0.0	0.0
87.5°	8.2	7.3	5.5	4.6	3.6	0.0	2.7	3.6	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)