

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: P367543

Luminaire Tested: **MSA-SA2D-727-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367543
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-727-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8504 lumens
Efficiency: N/A
Efficacy: 65.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

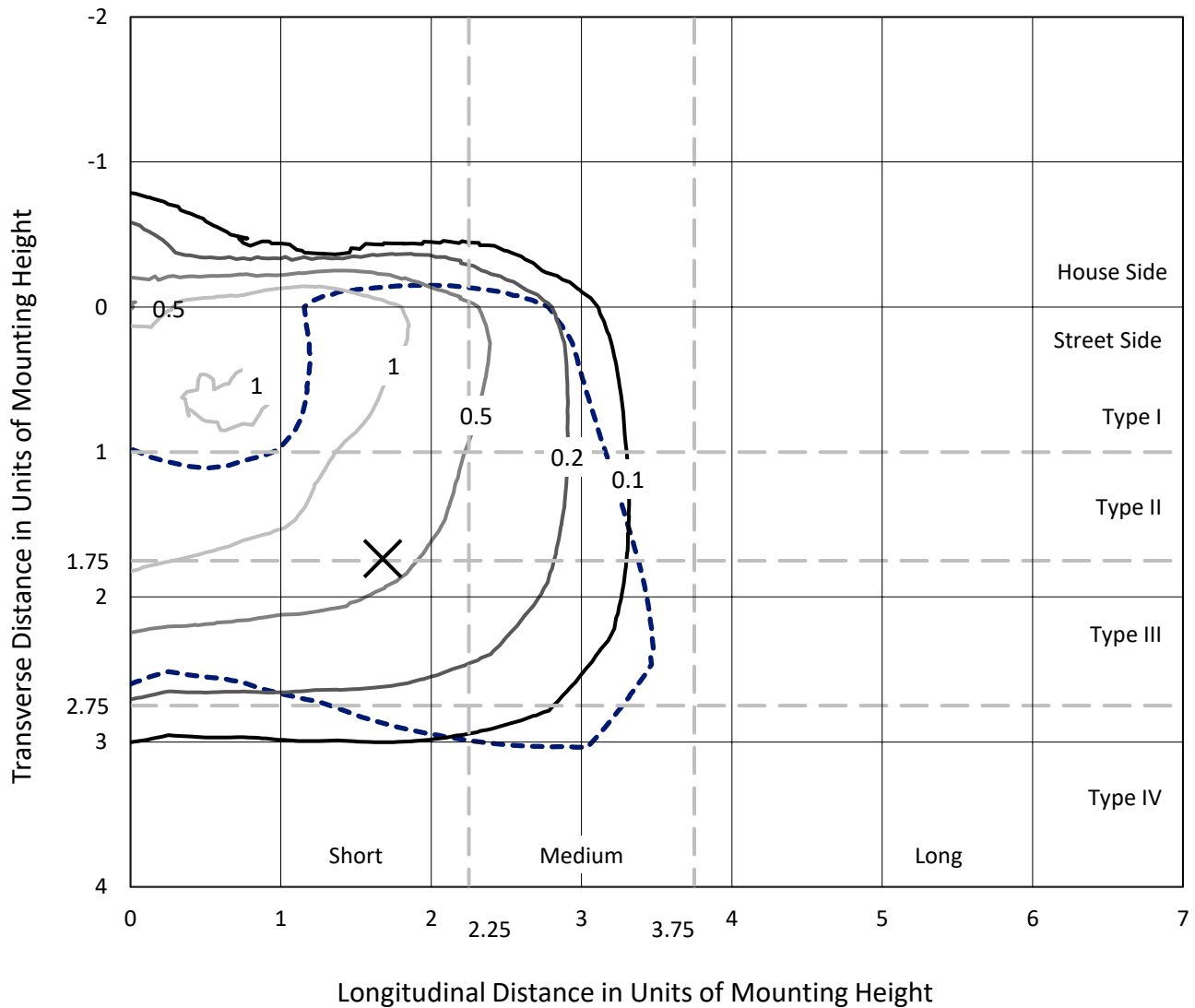
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

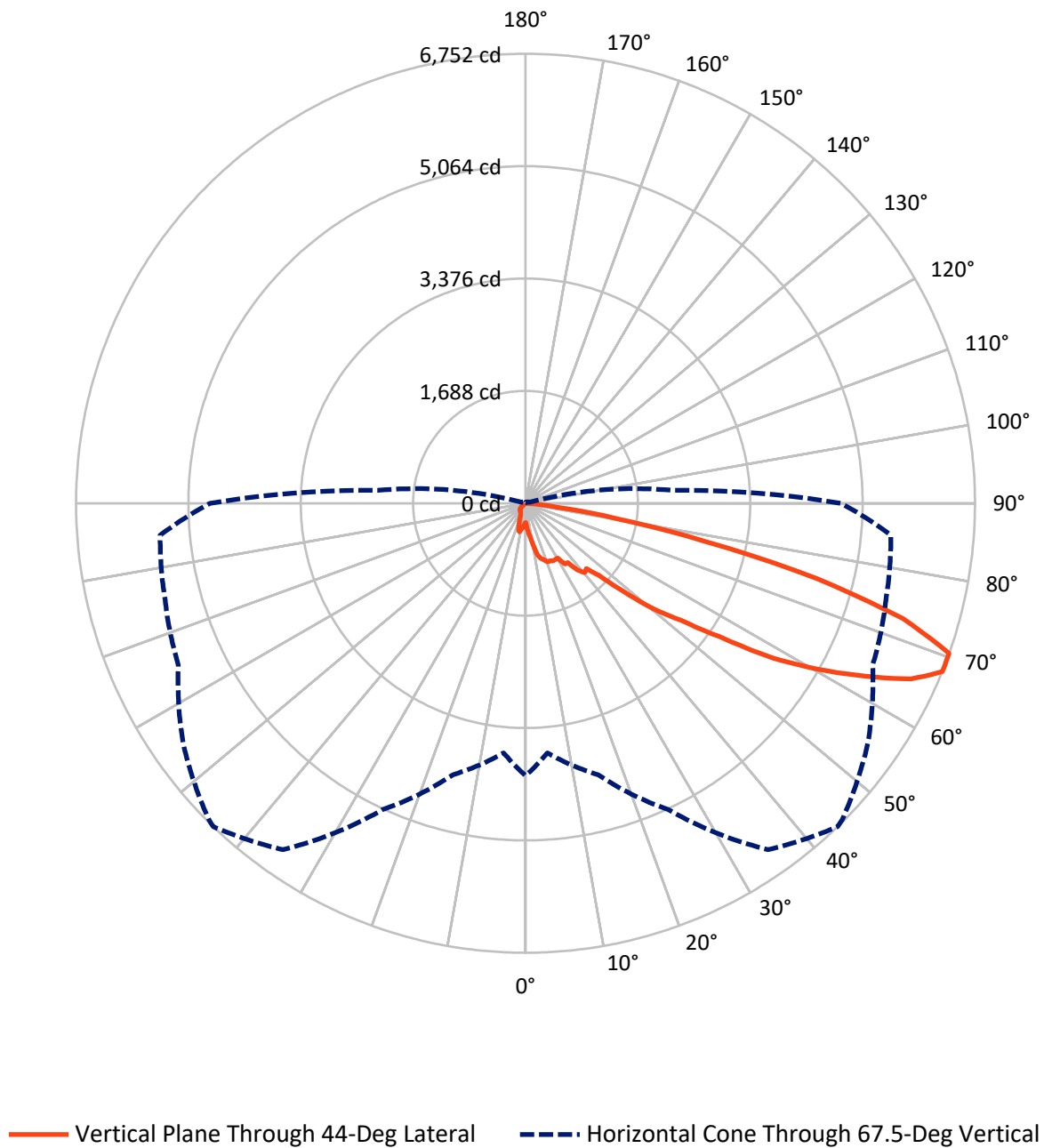
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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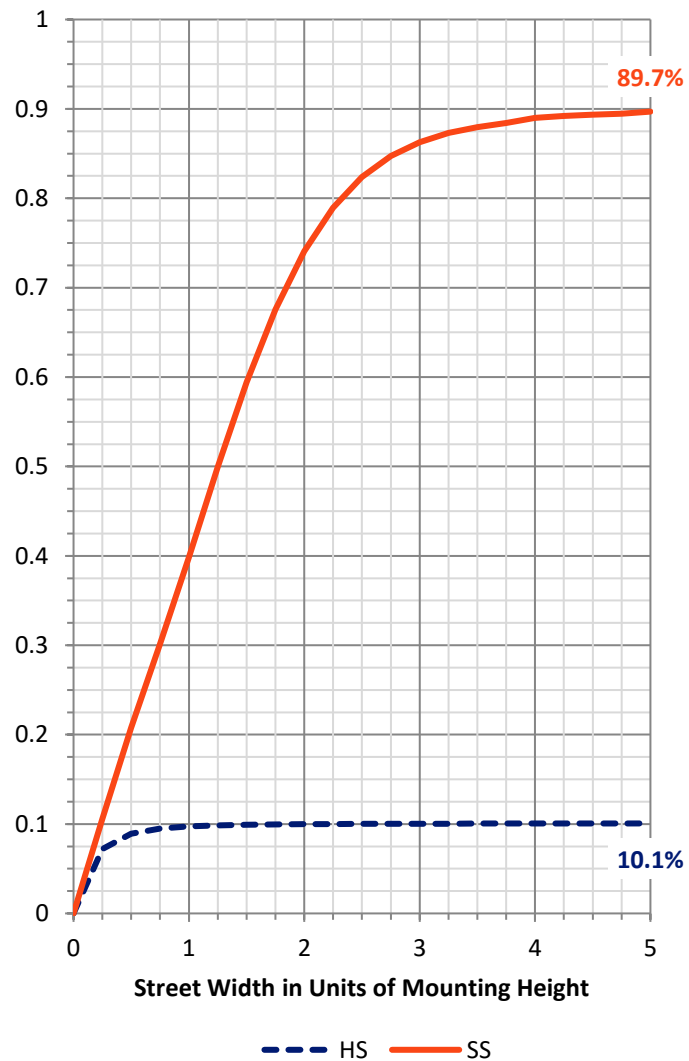
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	863.8	0.0	863.8
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	7640.2	0.0	7640.2
	% Fixture	89.8	0.0	89.8
Total	Lumens	8504.0	0.0	8504.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.5	0.5
10°-20°	177.8	2.1
20°-30°	315.0	3.7
30°-40°	511.9	6.0
40°-50°	1024.4	12.0
50°-60°	2101.6	24.7
60°-70°	2887.0	33.9
70°-80°	1356.9	16.0
80°-90°	86.9	1.0
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°	8504.0	100.0
0°-180°	8504.0	100.0

Coefficient of Utilization



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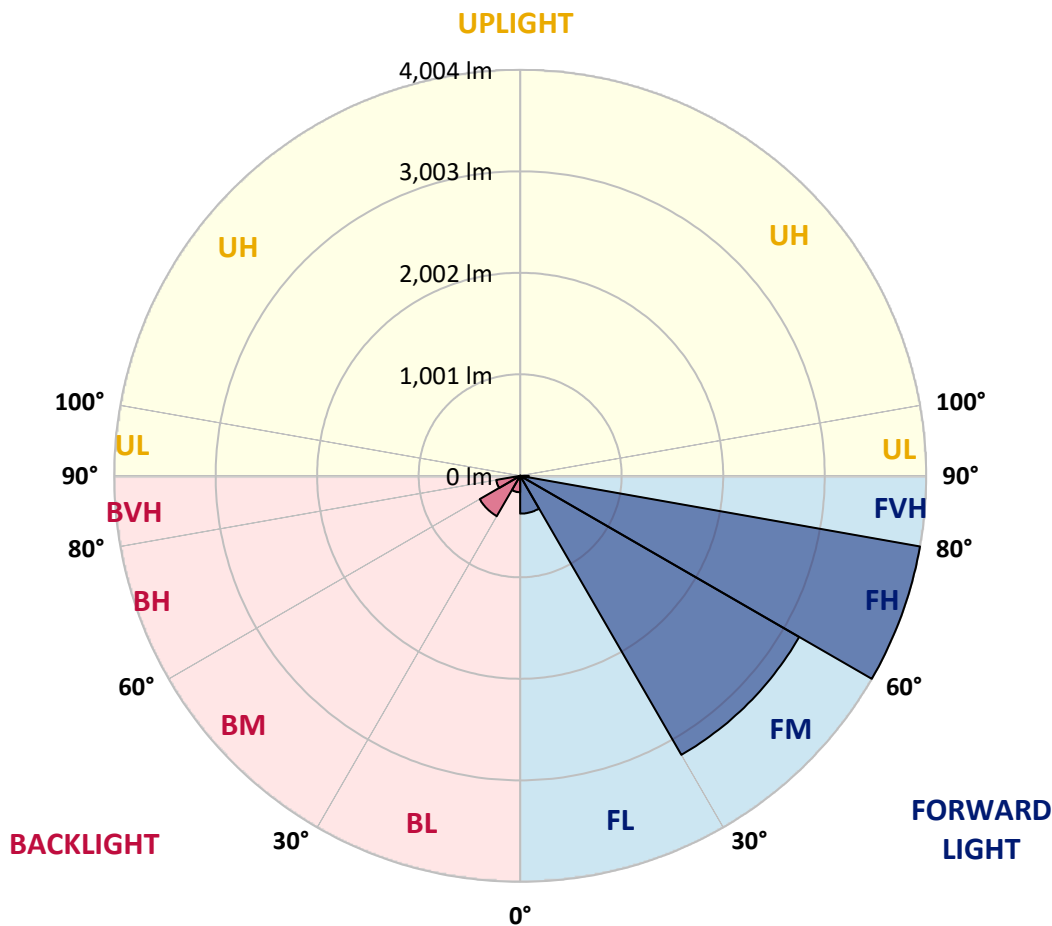
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	373.0	4.4			
FM	(30°-60°)	3177.8	37.4			
FH	(60°-80°)	4004.2	47.1			G2/5000
FVH	(80°-90°)	85.1	1.0			G1/100
BL	(0°-30°)	162.2	1.9	B1/500		
BM	(30°-60°)	460.2	5.4	B1/1000		
BH	(60°-80°)	239.7	2.8	B1/500		G1/500
BVH	(80°-90°)	1.8	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 IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5
2.5°	364.4	352.6	335.8	339.5	341.4	346.5	347.0	340.4	321.7	316.5	339.5
5°	510.7	482.1	476.9	466.1	444.5	432.8	430.0	441.7	426.7	422.0	428.1
7.5°	652.3	627.9	601.2	586.6	541.6	513.9	512.5	517.2	520.0	503.6	512.1
10°	746.5	719.8	714.2	679.9	641.0	634.5	631.6	613.8	599.3	587.1	546.3
12.5°	831.9	831.4	841.7	792.5	786.4	793.0	790.6	726.8	712.3	661.2	649.5
15°	945.4	973.5	929.0	887.7	835.2	857.7	851.6	810.8	800.9	766.2	716.1
17.5°	1063.1	1070.6	996.0	932.7	919.1	889.6	895.7	881.1	831.4	859.1	809.4
20°	1065.9	1082.3	1002.6	898.0	939.7	938.3	938.8	924.7	859.1	923.8	878.3
22.5°	1105.3	1064.9	990.9	924.3	931.8	938.8	946.3	929.0	914.9	930.8	939.3
25°	1089.3	1073.4	1002.1	958.0	951.0	956.6	958.5	980.5	971.6	1010.1	989.0
27.5°	1130.6	1107.6	980.1	988.0	963.2	956.6	945.4	1019.0	1045.2	1014.8	1071.0
30°	1201.4	1198.1	1018.0	1029.8	1010.5	952.9	982.9	1079.0	1111.8	1093.1	1161.5
32.5°	1312.1	1323.3	1129.2	1053.2	1063.1	1088.9	1077.6	1079.0	1162.0	1203.7	1258.1
35°	1469.2	1463.1	1237.5	1142.3	1090.7	1095.0	1110.9	1187.3	1294.7	1291.9	1349.6
37.5°	1777.7	1711.1	1429.3	1233.3	1248.8	1269.9	1258.1	1360.8	1371.2	1374.9	1512.8
40°	2232.6	2143.9	1731.8	1425.1	1276.0	1369.3	1363.6	1389.0	1457.9	1483.7	1684.9
42.5°	2831.9	2712.8	2264.0	1777.7	1407.3	1343.0	1377.7	1425.5	1657.2	1730.8	1951.2
45°	3494.0	3253.0	2794.8	2280.4	1736.4	1537.2	1563.4	1652.5	1973.7	2095.7	2339.0
47.5°	3923.1	3711.1	3320.5	2725.9	2079.7	1975.1	1977.5	1996.7	2345.6	2571.6	2898.0
50°	4295.9	4070.3	3707.8	3191.5	2687.0	2489.1	2444.1	2355.4	2819.2	3128.2	3490.2
52.5°	4822.0	4558.5	4095.2	3737.8	3379.6	2913.5	2897.5	2927.5	3377.7	3702.7	4097.5
55°	5296.6	4976.3	4534.1	4309.0	4169.3	3537.1	3550.7	3600.9	4094.7	4266.8	4637.7
57.5°	5506.2	5159.2	4931.7	4830.5	4755.9	4389.2	4343.2	4313.2	4660.2	4725.9	5203.7
60°	5643.6	5313.5	5210.3	5233.7	5459.8	5070.5	5028.8	4854.4	5128.2	5182.2	5711.1
62.5°	5556.8	5255.8	5277.8	5473.4	5975.1	5719.1	5598.6	5306.9	5510.9	5554.5	6075.5
65°	5010.5	4696.8	4980.0	5453.2	6368.1	6362.0	6306.2	5724.7	5722.8	5778.6	6103.6
67.5°	4092.8	3763.6	4221.8	5075.2	6351.7	6751.7	6725.4	6279.0	5753.3	5604.2	5508.1
70°	2845.5	2559.9	3079.5	4191.3	5785.7	6748.8	6706.6	6651.3	5512.3	4823.9	4270.5
72.5°	1478.5	1321.4	1805.4	2888.1	4611.9	5929.6	6068.9	5977.9	4706.7	3504.8	2514.9
75°	502.2	450.6	744.7	1532.9	3065.9	4528.0	4691.2	4598.8	3196.7	1880.4	994.6
77.5°	194.6	181.0	266.8	622.3	1538.1	2759.2	2936.4	2842.2	1714.4	688.9	234.0
80°	110.7	106.9	147.2	280.4	678.1	1372.6	1497.3	1358.0	618.1	232.1	61.0
82.5°	46.9	48.3	82.1	151.5	340.9	484.4	540.2	492.8	258.8	159.0	22.5
85°	10.3	12.7	38.9	84.4	143.0	138.3	144.9	160.8	159.0	116.8	9.8
87.5°	0.0	0.0	12.2	23.0	34.2	22.5	17.8	31.4	48.8	46.9	4.2
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°	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5
2.5°	343.7	339.0	309.5	307.6	309.5	304.3	303.9	293.1	294.0	318.4	320.3
5°	428.1	404.7	379.4	371.4	363.9	347.0	356.4	356.4	356.4	371.9	376.6
7.5°	504.6	473.2	437.5	407.5	378.4	357.3	371.9	382.2	388.3	408.4	417.8
10°	539.3	508.3	476.4	433.8	411.3	403.3	386.4	377.5	388.3	384.1	389.2
12.5°	613.4	585.2	530.4	486.3	469.4	442.2	392.5	357.8	334.8	331.1	330.1
15°	685.6	668.2	594.6	535.5	476.9	414.1	329.2	283.2	258.8	254.6	255.1
17.5°	777.0	752.2	643.8	559.0	459.6	346.5	254.2	214.8	212.9	223.2	224.1
20°	838.0	797.2	668.7	539.7	402.3	262.1	198.8	189.4	204.5	223.2	221.3
22.5°	896.1	852.0	701.5	522.9	311.8	198.8	182.9	183.8	196.5	216.6	221.8
25°	934.6	918.6	741.8	483.5	237.7	172.1	174.9	181.9	192.7	212.0	212.0
27.5°	1050.4	975.8	737.2	407.0	182.9	160.4	166.9	175.8	181.5	204.5	206.8
30°	1120.7	1096.4	761.5	329.2	160.4	145.4	158.0	166.0	169.8	196.0	197.0
32.5°	1207.0	1153.1	791.1	242.9	149.1	144.4	141.6	147.7	158.5	181.5	182.9
35°	1312.1	1296.1	748.9	190.9	145.4	135.1	129.4	132.7	139.7	155.2	158.5
37.5°	1526.4	1431.6	723.6	163.7	145.4	131.8	125.7	117.2	118.2	129.0	135.1
40°	1706.9	1677.8	652.8	159.0	138.8	127.1	112.1	101.8	94.7	98.0	100.4
42.5°	2038.4	1903.9	561.3	156.6	132.7	114.9	95.2	84.4	73.6	74.6	78.3
45°	2440.8	2150.5	479.7	154.3	128.5	102.7	80.2	67.5	56.3	56.7	60.5
47.5°	2978.2	2510.2	380.8	147.2	121.0	91.4	64.7	51.6	45.0	46.4	49.7
50°	3588.7	2825.8	301.1	136.5	112.1	80.7	52.5	41.7	39.4	40.8	44.5
52.5°	4134.1	3058.4	248.5	126.6	99.4	65.7	44.1	37.0	36.1	37.0	39.9
55°	4619.0	3193.4	207.7	115.4	85.3	53.0	39.9	34.2	33.8	33.3	35.2
57.5°	5073.8	3232.3	162.2	97.5	69.4	46.0	37.0	31.9	30.9	29.5	30.9
60°	5405.4	3165.7	119.1	78.3	56.7	41.7	34.7	28.6	27.2	24.9	25.8
62.5°	5565.3	2983.3	90.0	62.8	48.3	38.0	30.9	24.9	23.0	20.2	20.6
65°	5413.3	2682.8	70.8	53.0	41.3	31.9	26.3	21.1	18.8	15.9	15.9
67.5°	4740.4	2225.5	60.0	46.0	34.7	27.2	21.6	19.2	15.5	13.1	12.7
70°	3479.5	1600.9	51.6	40.3	30.0	23.4	18.3	17.4	15.0	12.7	11.7
72.5°	1963.9	906.0	44.1	35.6	25.3	19.7	15.5	15.9	14.5	11.7	10.8
75°	749.4	305.3	36.6	29.5	20.6	15.0	13.1	13.1	13.1	9.8	8.4
77.5°	185.7	77.8	29.1	23.9	16.4	9.8	10.8	11.3	11.3	8.4	6.1
80°	51.1	26.3	17.4	17.4	11.7	5.6	7.5	7.5	6.1	2.8	0.0
82.5°	18.8	9.8	6.1	7.5	5.2	1.9	2.8	1.9	1.4	0.0	0.0
85°	8.0	5.2	3.8	4.2	2.3	0.0	0.5	0.9	0.0	0.0	0.0
87.5°	3.3	2.3	1.9	1.9	0.9	0.0	0.0	0.0	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)