

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: P597127

Luminaire Tested: **MSA-SA4B-835-U-T2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597127  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-835-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12080 lumens  
Efficiency: N/A  
Efficacy: 70.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G2

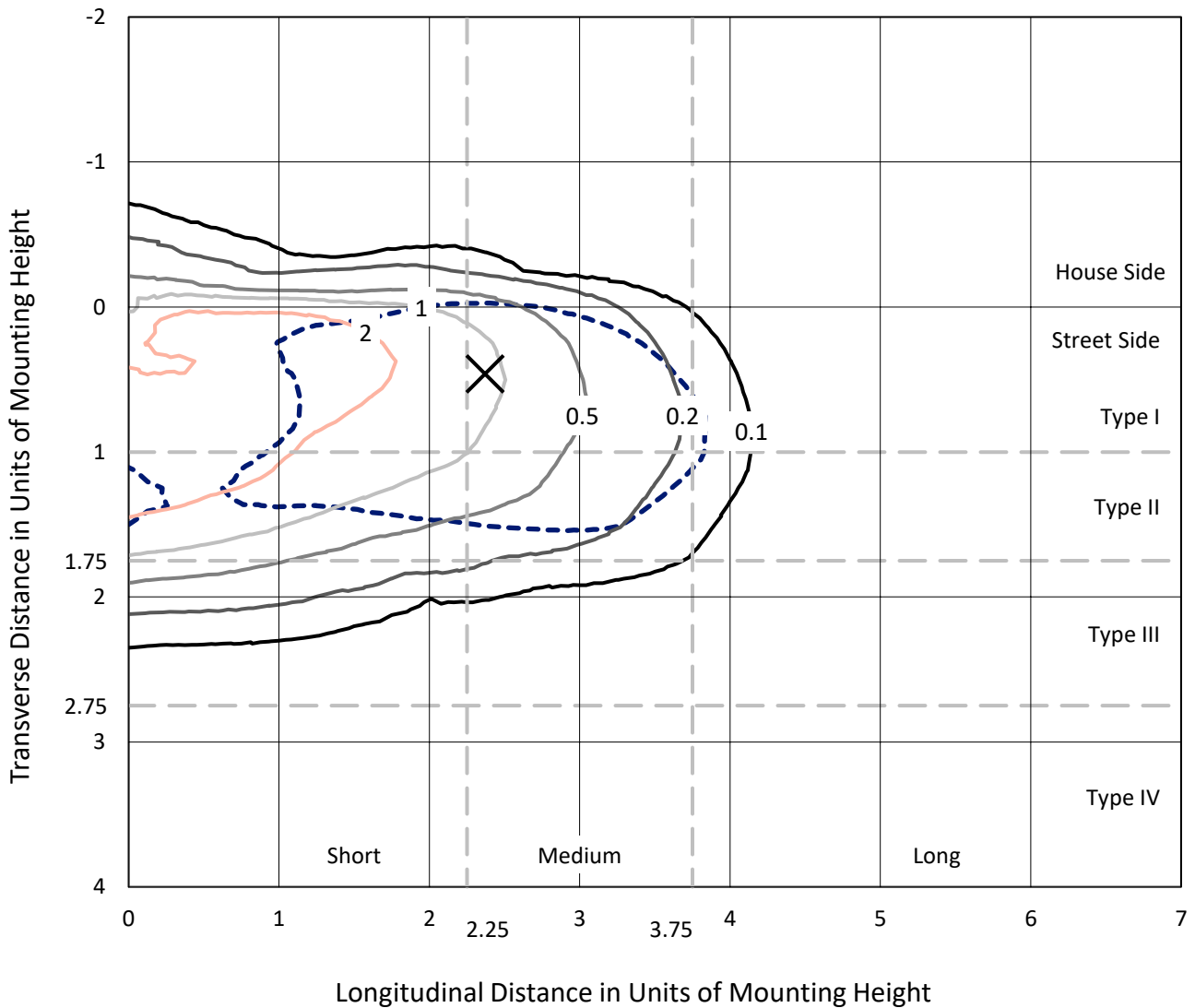
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

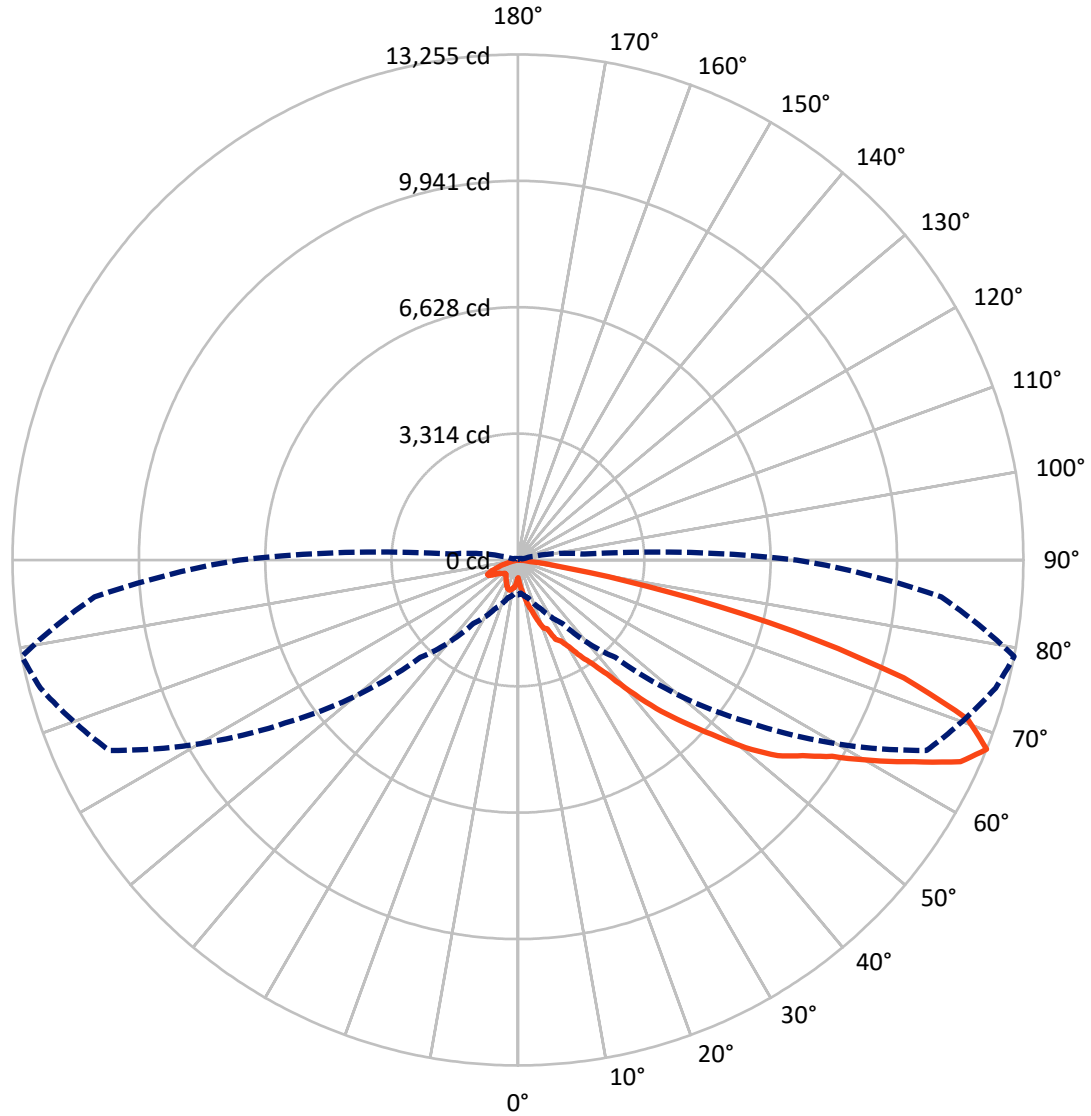
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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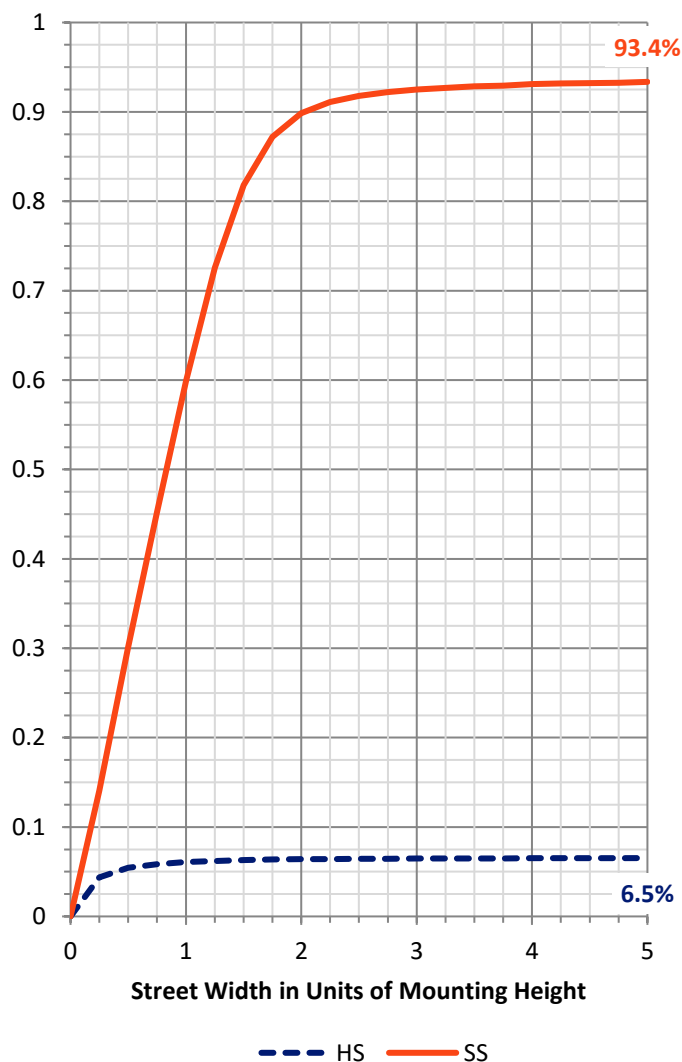
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	793.7	0.0	793.7
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	11286.3	0.0	11286.3
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	12080.0	0.0	12080.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.7	0.6
10°-20°	269.9	2.2
20°-30°	520.7	4.3
30°-40°	1022.9	8.5
40°-50°	2049.2	17.0
50°-60°	3275.3	27.1
60°-70°	3295.5	27.3
70°-80°	1486.7	12.3
80°-90°	92.0	0.8
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°	12080.0	100.0
0°-180°	12080.0	100.0

**Coefficient of Utilization**



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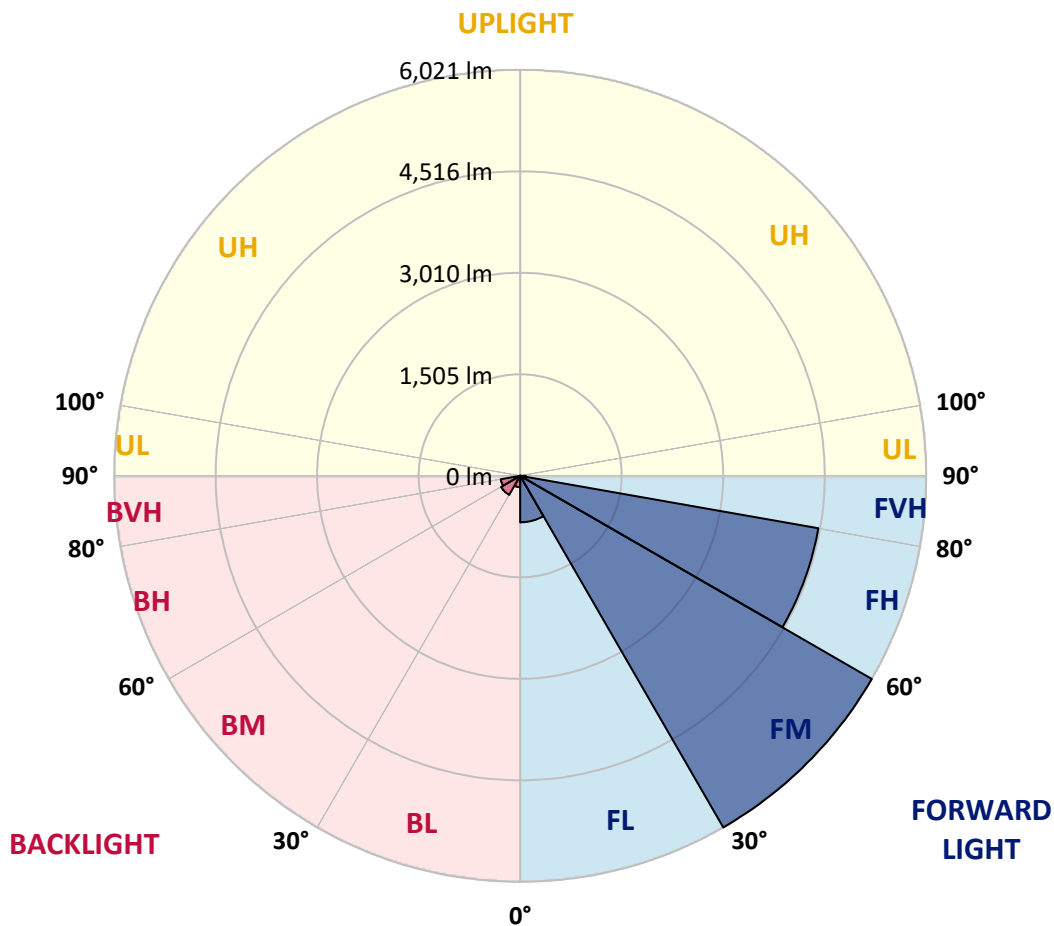
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	689.6	5.7			
FM (30°-60°)	6020.9	49.8			
FH (60°-80°)	4489.6	37.2			G2/5000
FVH (80°-90°)	86.1	0.7			G1/100
BL (0°-30°)	168.7	1.4	B1/500		
BM (30°-60°)	326.6	2.7	B1/1000		
BH (60°-80°)	292.6	2.4	B1/500		G1/500
BVH (80°-90°)	5.9	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5
2.5°	628.6	606.0	569.4	590.0	588.7	599.3	579.3	557.4	522.1	557.4	560.0
5°	905.0	863.0	836.4	831.1	801.8	774.5	768.5	745.8	728.5	697.2	725.2
7.5°	1127.4	1108.1	1060.8	1055.5	983.6	943.6	956.3	946.3	880.3	847.7	875.0
10°	1222.0	1188.7	1195.3	1188.7	1158.0	1169.3	1143.4	1113.4	1060.8	1006.9	938.9
12.5°	1258.6	1253.3	1308.5	1301.9	1373.8	1460.3	1402.4	1352.5	1230.6	1217.3	1124.7
15°	1337.2	1370.5	1362.5	1390.4	1436.4	1583.5	1582.2	1594.2	1465.0	1395.8	1261.9
17.5°	1407.1	1431.7	1391.8	1423.7	1548.9	1638.1	1757.3	1710.7	1725.4	1654.8	1447.7
20°	1377.1	1405.1	1365.1	1345.8	1566.2	1735.4	1894.5	1860.6	1948.5	1904.5	1618.8
22.5°	1564.2	1511.6	1411.1	1348.5	1513.0	1733.4	1943.1	2085.0	2069.7	1961.8	1778.0
25°	1795.3	1763.3	1642.8	1532.3	1546.9	1721.4	2096.3	2304.7	2350.0	2304.1	1929.2
27.5°	2107.0	2099.6	1853.2	1805.3	1662.8	1668.8	2120.3	2581.7	2478.5	2406.6	2105.6
30°	2513.8	2455.9	2163.6	2101.0	1890.5	1787.3	2266.8	2820.8	2744.9	2647.0	2271.4
32.5°	2951.3	2960.0	2587.1	2380.6	2211.5	2089.0	2208.8	2932.7	3074.5	2995.3	2478.5
35°	3448.1	3486.7	3030.6	2788.2	2459.2	2278.8	2457.9	3276.3	3530.7	3322.2	2756.2
37.5°	4213.2	4211.9	3679.2	3196.4	2957.3	2761.5	2872.8	3588.6	4091.4	3798.4	3254.3
40°	4886.5	4740.0	4244.5	3689.8	3316.9	3263.6	3183.1	4016.1	4690.0	4513.6	3697.2
42.5°	5389.2	5286.0	4687.4	4255.9	3793.7	3624.6	3595.9	4642.8	5573.7	5326.6	4329.1
45°	5990.6	5652.3	5211.4	4822.5	4351.7	4302.5	4235.2	5278.7	6601.9	6045.2	4878.5
47.5°	6529.3	6211.0	5794.1	5294.7	4754.0	5160.2	4901.8	5837.4	7349.7	6826.9	5484.5
50°	6982.8	6644.5	6177.7	5797.4	5565.7	5841.4	5410.6	6297.5	8157.4	7733.9	6051.2
52.5°	7213.8	6830.9	6470.0	6235.0	6376.8	6314.9	6100.4	6854.9	8846.0	8529.0	6553.3
55°	7024.1	6649.8	6498.7	6615.2	7046.0	6866.9	6884.2	7718.6	9495.9	9059.1	6990.1
57.5°	6182.3	5840.7	5908.0	6227.0	7052.7	7521.5	7777.9	8557.7	10017.3	9719.7	7664.0
60°	4676.7	4401.7	4650.7	5216.8	6389.4	7391.0	8411.8	9396.7	10762.5	10669.3	8684.2
62.5°	2856.1	2706.9	3059.9	3765.7	5091.6	6751.0	8781.4	10515.4	11559.6	11658.8	9766.3
65°	1457.0	1389.8	1684.1	2304.7	3440.1	5545.7	8514.4	11210.7	12383.3	12749.6	10797.8
67.5°	917.6	874.3	1031.5	1405.7	2029.7	3617.2	7454.9	11818.6	12965.3	13255.0	11142.1
70°	635.9	608.6	744.5	964.9	1280.6	1948.5	5535.1	11251.3	12503.9	12517.2	10309.0
72.5°	403.5	382.2	514.8	714.5	944.9	1006.2	3173.1	8828.7	10703.2	10580.0	8348.6
75°	261.7	251.0	327.0	523.4	725.8	620.6	1568.2	5957.3	7674.7	7481.5	5545.1
77.5°	187.8	181.1	219.1	349.6	516.7	434.2	703.2	3550.7	4400.4	3978.2	2691.6
80°	113.2	112.5	158.5	219.1	367.6	306.3	325.0	1612.2	1706.1	1391.1	822.4
82.5°	56.6	58.6	88.6	141.2	236.4	200.4	148.5	536.7	458.1	337.6	166.5
85°	13.3	16.6	46.6	97.2	118.5	79.9	70.6	140.5	125.9	95.2	48.6
87.5°	0.0	0.0	14.7	23.3	32.0	13.3	24.0	26.6	34.0	26.6	10.0
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°	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5
2.5°	560.7	552.7	504.1	491.4	490.1	476.1	479.5	466.1	466.8	496.8	496.8
5°	714.5	667.9	621.3	580.0	552.0	512.1	497.4	491.4	486.1	498.1	505.4
7.5°	839.1	770.5	686.6	596.7	513.4	456.2	448.2	433.5	428.2	440.2	449.5
10°	894.3	809.1	693.9	562.7	484.8	438.2	399.5	378.9	374.9	374.2	377.6
12.5°	1011.5	905.6	701.9	550.0	465.5	414.2	370.2	335.6	303.7	307.0	303.7
15°	1105.4	980.2	701.9	519.4	418.9	367.6	290.3	273.0	268.4	275.7	269.7
17.5°	1247.3	1054.1	666.6	464.8	378.9	285.7	256.4	255.0	264.4	275.0	268.4
20°	1332.5	1064.1	607.3	402.2	311.0	247.7	237.1	226.4	239.7	248.4	245.1
22.5°	1421.1	1064.8	548.0	368.9	250.4	225.7	208.4	199.8	201.8	209.8	211.1
25°	1459.0	1038.8	492.8	325.0	227.1	201.8	183.8	174.5	171.1	175.1	173.8
27.5°	1562.2	988.9	432.8	277.0	215.8	179.1	162.5	151.2	141.2	147.8	149.2
30°	1576.9	972.9	400.2	246.4	201.1	158.5	143.8	131.9	124.5	133.8	133.8
32.5°	1623.5	885.0	383.6	233.7	185.8	146.5	126.5	117.9	116.5	122.5	123.2
35°	1695.4	846.4	358.9	223.7	171.8	132.5	113.9	109.9	108.5	113.2	113.2
37.5°	1939.1	798.4	331.6	215.1	159.8	125.2	110.5	103.9	104.5	108.5	111.2
40°	2101.0	804.4	291.0	204.4	145.8	118.5	103.9	99.2	98.6	100.6	102.6
42.5°	2401.3	809.1	273.0	193.1	135.2	110.5	97.2	93.9	91.2	93.2	95.2
45°	2736.9	833.7	263.7	183.8	129.2	105.9	91.2	89.2	83.2	84.6	87.2
47.5°	3060.5	923.6	252.4	170.5	123.9	103.2	85.2	80.6	76.6	75.9	78.6
50°	3428.1	1010.9	239.7	155.8	118.5	99.2	79.2	71.9	69.3	69.3	71.3
52.5°	3757.1	1094.1	227.7	145.8	114.5	91.9	73.9	66.6	64.6	64.6	67.3
55°	4103.4	1181.3	217.1	136.5	109.2	84.6	69.3	62.6	61.9	60.6	62.6
57.5°	4714.7	1371.8	203.8	128.5	101.9	78.6	65.3	58.6	57.3	55.3	57.3
60°	5605.0	1664.1	186.5	120.5	93.2	74.6	61.9	53.9	51.9	48.6	49.3
62.5°	6475.3	1900.5	166.5	110.5	85.2	70.6	56.6	48.6	45.3	41.3	42.0
65°	7221.2	1993.7	145.2	98.6	77.2	61.3	49.3	42.6	38.0	32.6	32.0
67.5°	7309.1	1760.7	124.5	87.2	69.3	51.9	42.0	38.0	30.6	26.0	24.6
70°	6577.9	1311.9	103.9	77.2	59.9	44.0	36.0	33.3	28.6	24.6	22.6
72.5°	5238.1	968.2	87.2	68.6	52.6	37.3	30.6	31.3	28.6	24.0	21.3
75°	3464.1	554.0	71.3	57.3	44.0	30.0	28.0	28.0	27.3	22.6	20.0
77.5°	1666.8	239.1	54.6	45.3	35.3	22.6	25.3	25.3	26.0	20.6	16.6
80°	472.8	71.9	34.0	30.6	26.0	15.3	20.0	19.3	17.3	12.0	7.3
82.5°	84.6	28.0	15.3	16.0	14.7	6.0	11.3	10.7	8.7	4.7	0.7
85°	23.3	10.7	8.7	9.3	7.3	2.0	4.7	6.0	4.7	2.7	0.0
87.5°	6.0	4.7	6.0	6.7	5.3	0.7	2.0	0.7	2.0	0.7	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)