

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: P596799

Luminaire Tested: **MSA-SA4C-827-U-T3-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596799  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4C-827-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13063 lumens  
Efficiency: N/A  
Efficacy: 58.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

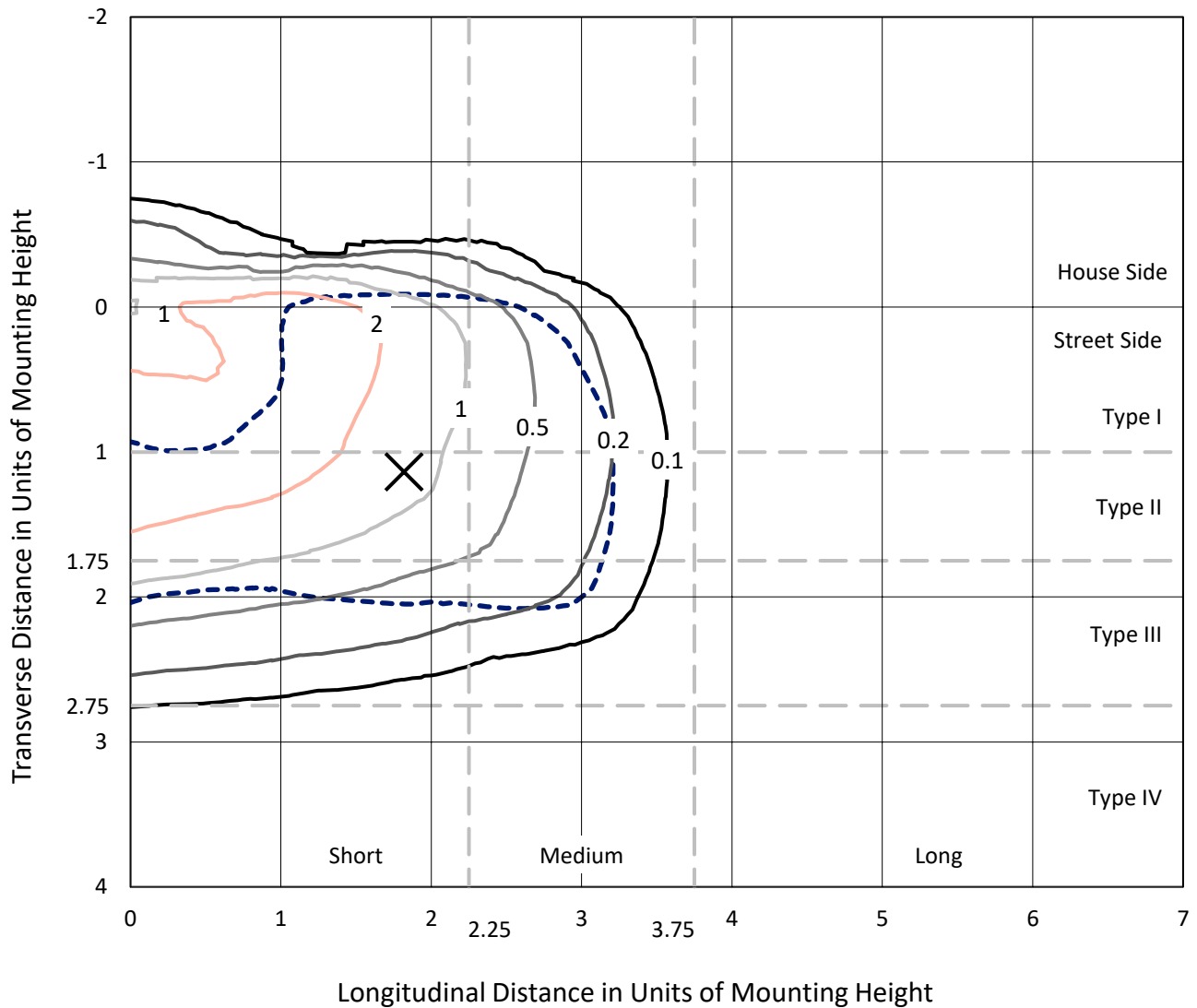
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

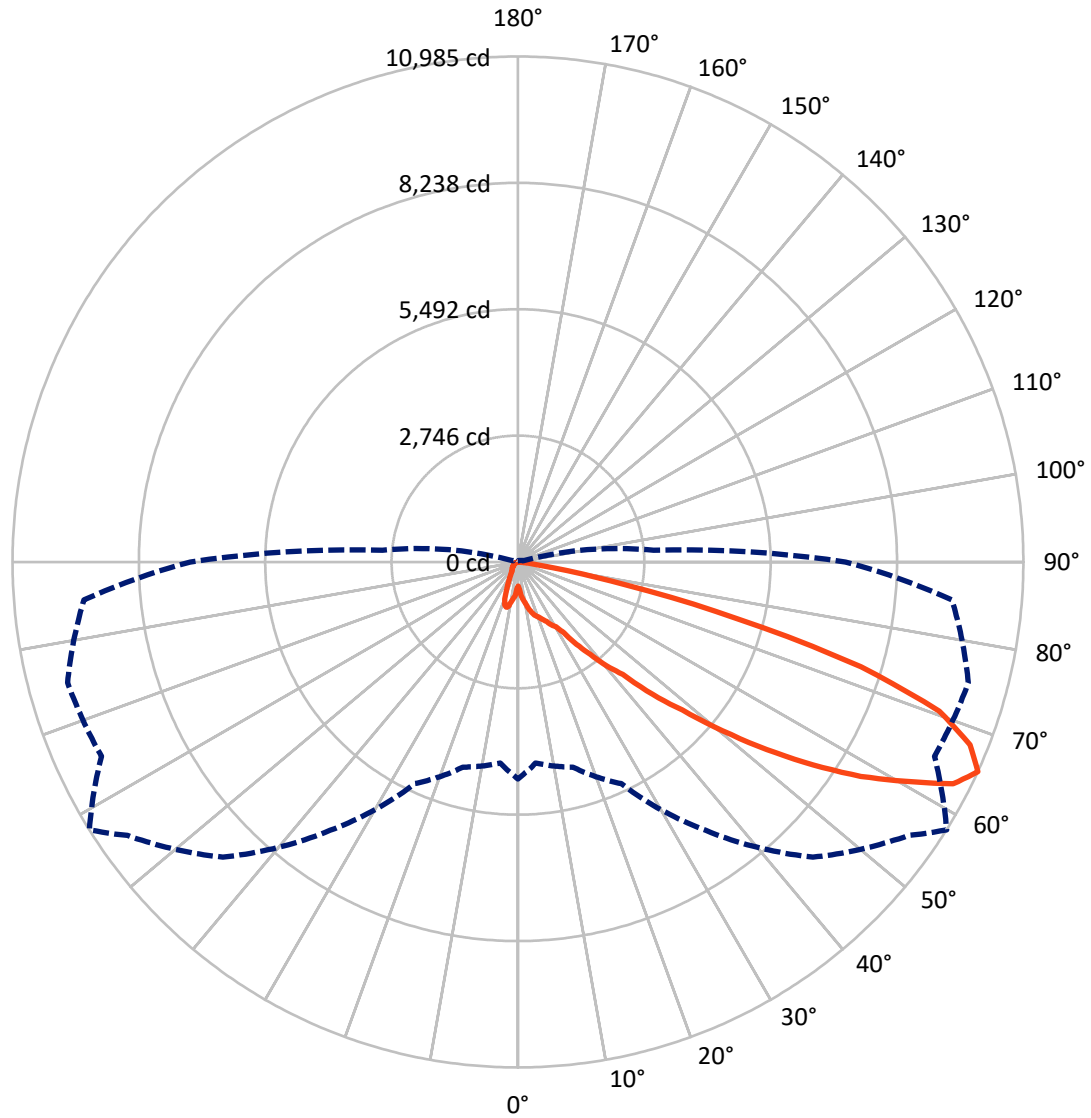
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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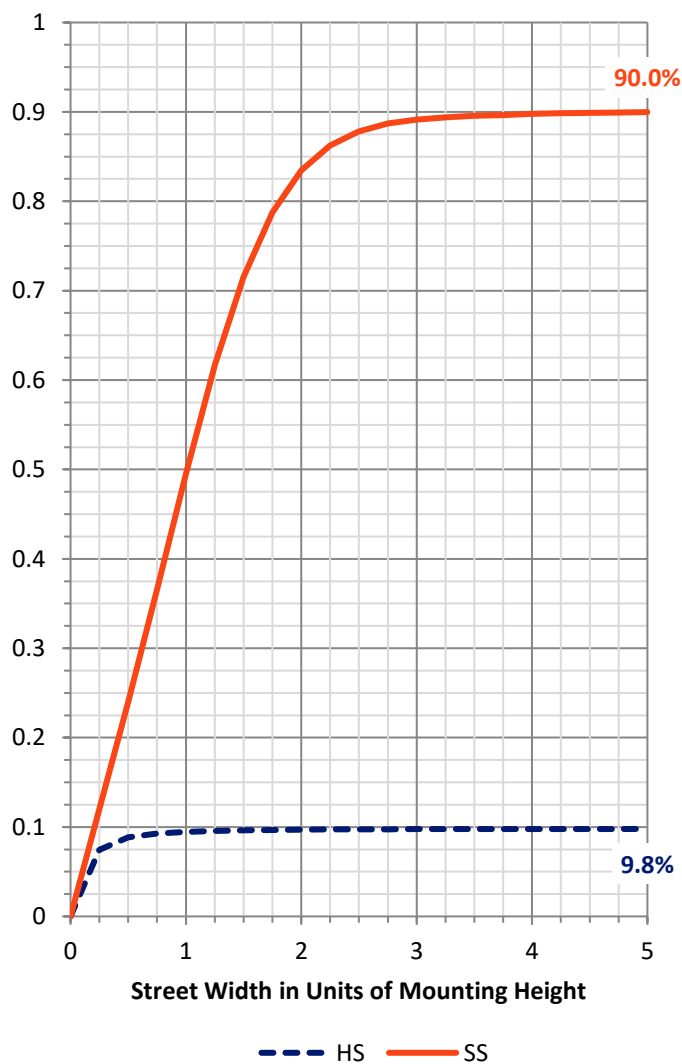
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1289.0	0.0	1289.0
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	11774.0	0.0	11774.0
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	13063.0	0.0	13063.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.5	0.6
10°-20°	268.1	2.1
20°-30°	519.0	4.0
30°-40°	1035.5	7.9
40°-50°	2117.0	16.2
50°-60°	3755.0	28.7
60°-70°	3958.8	30.3
70°-80°	1283.5	9.8
80°-90°	52.5	0.4
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°	13063.0	100.0
0°-180°	13063.0	100.0

**Coefficient of Utilization**



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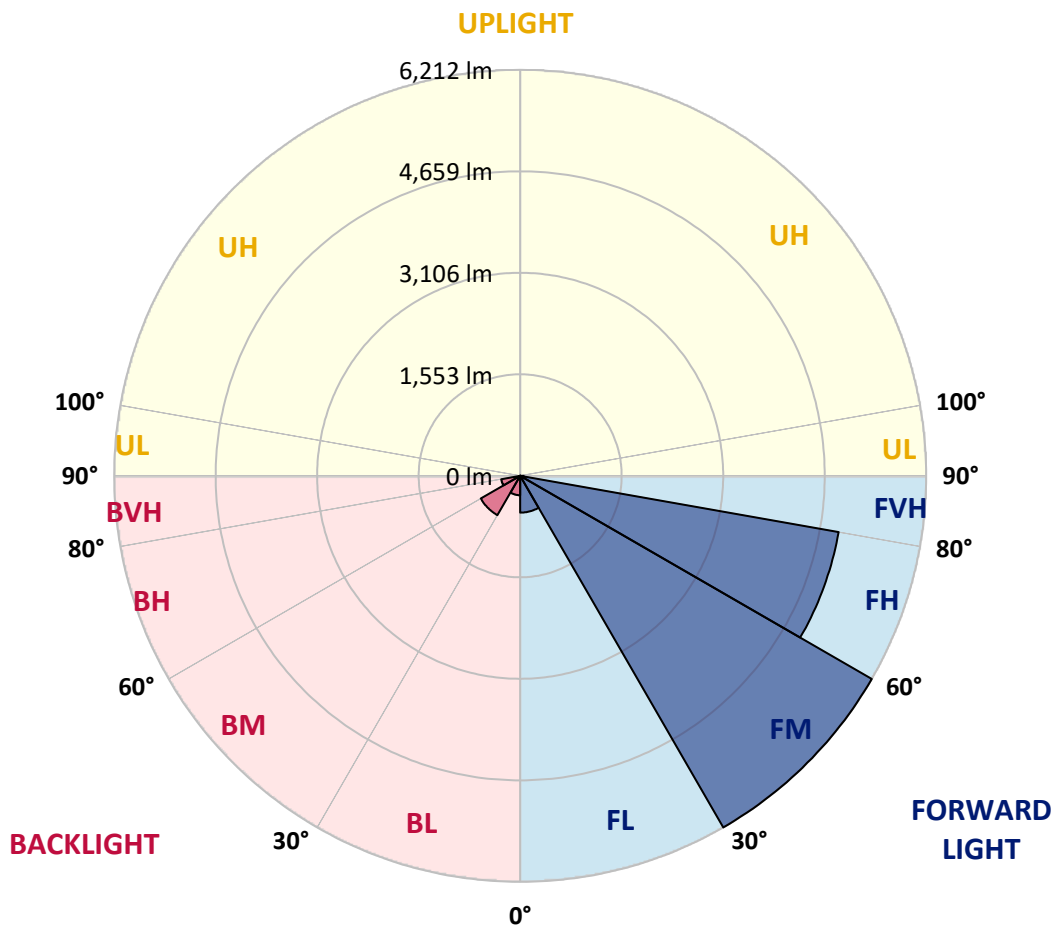
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	563.6	4.3			
FM (30°-60°)	6212.1	47.6			
FH (60°-80°)	4948.1	37.9			G2/5000
FVH (80°-90°)	50.3	0.4			G1/100
BL (0°-30°)	297.1	2.3	B1/500		
BM (30°-60°)	695.5	5.3	B1/1000		
BH (60°-80°)	294.2	2.3	B1/500		G1/500
BVH (80°-90°)	2.2	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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	522.9	522.9	522.9	522.9	522.9	522.9	522.9	522.9	522.9	522.9	522.9
2.5°	638.4	619.3	589.1	594.3	600.2	611.9	602.4	593.5	584.0	571.5	619.3
5°	770.8	739.2	736.2	729.6	724.5	723.7	735.5	731.8	737.0	760.5	784.8
7.5°	819.3	806.1	781.1	791.4	775.2	762.7	814.9	831.8	864.2	875.2	938.5
10°	814.2	795.1	805.4	810.5	821.5	867.1	900.2	918.6	946.6	1006.9	994.4
12.5°	837.7	854.6	865.7	866.4	923.0	1006.9	1030.4	1045.9	1095.9	1119.4	1181.2
15°	916.4	944.4	926.7	934.1	952.5	1054.7	1109.9	1143.7	1214.3	1290.8	1306.2
17.5°	1028.9	1046.6	1009.8	983.3	1034.1	1090.0	1190.0	1225.3	1270.2	1448.9	1482.0
20°	1170.9	1201.1	1121.6	1016.4	1083.4	1149.6	1258.4	1275.3	1323.1	1556.3	1608.5
22.5°	1502.6	1457.7	1336.4	1172.4	1152.5	1181.9	1285.6	1351.8	1432.7	1616.6	1738.0
25°	1829.9	1814.4	1635.7	1452.6	1320.2	1254.0	1391.5	1428.3	1560.7	1760.0	1827.0
27.5°	2194.0	2224.9	1926.2	1815.2	1555.6	1339.3	1457.7	1549.7	1706.3	1812.2	1973.3
30°	2674.2	2625.0	2274.9	2163.8	1867.4	1573.9	1629.1	1635.0	1865.2	1984.3	2137.3
32.5°	3050.8	3082.4	2642.6	2472.0	2235.1	1935.1	1757.8	1834.3	1999.1	2264.6	2409.5
35°	3458.3	3455.3	3026.5	2797.1	2487.4	2230.0	2139.5	2195.4	2402.1	2702.9	2741.2
37.5°	4067.2	4015.0	3509.0	3172.9	2909.6	2689.7	2620.5	2546.3	2759.6	3046.4	3189.8
40°	4641.7	4461.5	3993.7	3595.1	3258.2	3168.5	2918.4	2964.0	3027.3	3406.0	3802.5
42.5°	5222.0	5110.2	4485.0	4151.1	3737.0	3523.7	3360.4	3339.1	3639.9	4088.6	4498.2
45°	5987.6	5645.6	5145.5	4852.0	4372.5	4158.5	4026.8	4105.5	4376.2	5031.5	5304.3
47.5°	6630.4	6315.6	5886.1	5440.4	4937.3	5177.8	4930.7	4806.4	5177.8	5855.2	6217.8
50°	7182.8	6832.0	6397.3	6067.0	5985.4	6216.3	5716.2	5761.8	6003.1	6798.9	7003.3
52.5°	7584.4	7215.1	6835.6	6676.0	7010.7	7126.9	6876.1	6775.3	6994.5	7603.5	7702.8
55°	7886.6	7508.6	7212.2	7432.1	8079.3	8041.1	8129.4	7785.1	7994.8	8442.7	8395.6
57.5°	7905.0	7457.1	7283.5	7637.3	8525.8	9117.8	9376.0	8790.6	8909.7	9098.7	8992.8
60°	7326.9	6881.2	6867.3	7369.6	8655.2	9396.6	9961.5	9676.1	9516.5	9657.0	9456.2
62.5°	6175.2	5863.3	6008.9	6564.2	8173.5	9242.9	10273.3	10616.8	9995.3	10026.9	9741.5
65°	4715.2	4387.9	4615.9	5315.4	7120.3	9070.8	10361.6	10984.5	9986.5	10132.1	9467.9
67.5°	3122.9	2933.1	3191.3	3962.1	5661.1	8007.3	10316.0	10598.4	9669.5	9720.9	8452.2
70°	1612.2	1565.9	1774.7	2383.0	3806.2	6151.6	9868.0	9713.6	9025.9	8374.3	6519.4
72.5°	516.3	518.5	719.3	1088.5	2052.0	3745.1	7585.1	7796.9	7222.5	6125.9	3980.5
75°	228.7	225.1	300.8	456.7	855.4	1679.1	4712.3	4941.0	4496.8	3370.0	1673.2
77.5°	164.7	159.6	192.7	267.0	423.6	569.3	2209.4	2384.5	2038.8	1168.0	383.2
80°	116.2	115.5	139.7	187.5	264.8	253.0	698.0	782.6	626.6	283.2	112.5
82.5°	65.5	67.7	97.1	132.4	161.1	126.5	196.4	216.2	211.1	150.8	49.3
85°	31.6	35.3	63.3	95.6	84.6	49.3	69.9	75.8	88.3	87.5	25.0
87.5°	0.0	0.0	25.7	43.4	22.8	7.4	21.3	24.3	23.5	27.9	5.9
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°	522.9	522.9	522.9	522.9	522.9	522.9	522.9	522.9	522.9	522.9	522.9
2.5°	628.8	624.4	568.5	572.9	585.4	580.3	584.7	574.4	562.6	610.5	609.7
5°	795.1	762.0	744.3	728.1	731.1	698.0	717.1	725.9	724.5	751.7	759.0
7.5°	940.7	896.6	861.3	827.4	775.9	729.6	758.3	776.7	789.2	836.3	854.6
10°	1009.1	973.1	959.1	892.9	856.1	827.4	792.9	767.8	778.1	765.6	778.1
12.5°	1159.1	1134.9	1081.2	1014.2	970.1	911.3	782.6	675.2	609.0	609.7	605.3
15°	1295.9	1294.5	1214.3	1103.2	975.3	807.6	606.8	471.4	408.9	391.3	385.4
17.5°	1474.7	1452.6	1306.2	1142.2	912.0	625.2	413.3	322.9	317.0	327.3	322.9
20°	1588.7	1556.3	1351.8	1085.6	751.7	422.9	311.8	286.1	303.8	318.5	314.8
22.5°	1702.7	1654.1	1386.4	1016.4	534.7	309.6	281.7	277.3	288.3	306.7	309.6
25°	1765.2	1755.6	1454.1	887.0	366.3	271.4	271.4	269.9	273.6	286.8	284.6
27.5°	1946.8	1817.4	1403.3	692.1	283.2	249.3	253.0	251.5	238.3	251.5	252.3
30°	2060.1	2000.5	1407.0	492.8	249.3	220.6	230.2	218.4	198.6	209.6	207.4
32.5°	2288.1	2139.5	1396.0	332.4	227.3	210.3	195.6	178.7	164.0	168.4	164.7
35°	2553.6	2440.3	1246.7	267.0	211.8	186.1	162.5	145.6	130.2	133.9	133.1
37.5°	3081.7	2722.0	1123.1	240.5	201.5	170.6	143.4	119.9	111.8	114.0	116.2
40°	3570.8	3192.0	892.9	228.7	183.9	152.2	118.4	101.5	96.3	97.8	100.0
42.5°	4301.9	3565.6	674.4	217.0	166.2	128.7	98.6	87.5	82.4	85.3	86.8
45°	5009.4	3883.4	503.8	206.7	151.5	111.1	83.1	75.8	69.9	72.1	75.0
47.5°	5716.2	4236.4	375.8	190.5	135.3	95.6	71.3	66.2	62.5	63.3	66.9
50°	6348.7	4401.2	295.7	170.6	122.1	83.1	64.7	59.6	58.1	58.8	61.8
52.5°	6813.6	4402.6	249.3	153.0	109.6	73.5	61.0	55.2	54.4	55.9	58.8
55°	7233.5	4285.0	216.2	137.5	98.6	66.9	58.1	53.0	53.0	54.4	57.4
57.5°	7512.3	4068.7	187.5	121.4	89.0	63.3	55.9	50.7	50.0	49.3	51.5
60°	7648.3	3773.8	158.9	106.6	80.2	61.0	54.4	44.9	44.1	42.7	44.1
62.5°	7562.3	3404.6	133.1	91.9	71.3	58.1	47.8	39.0	37.5	34.6	36.8
65°	7122.5	2955.9	112.5	78.7	61.8	49.3	40.5	33.1	29.4	25.7	25.0
67.5°	6223.0	2401.4	94.1	67.7	53.0	40.5	33.1	29.4	22.8	19.9	19.1
70°	4663.7	1639.4	78.0	58.1	44.1	34.6	27.9	26.5	21.3	19.1	17.7
72.5°	2736.0	884.8	65.5	50.7	37.5	28.7	22.8	24.3	21.3	17.7	16.2
75°	1092.9	294.2	52.2	40.5	30.2	20.6	19.1	19.9	19.1	16.2	13.2
77.5°	249.3	92.7	40.5	31.6	23.5	13.2	15.4	16.9	16.9	13.2	9.6
80°	78.0	36.8	23.5	19.9	16.9	7.4	11.0	11.8	8.1	3.7	0.0
82.5°	25.0	10.3	8.1	8.1	7.4	1.5	2.2	1.5	0.0	0.0	0.0
85°	9.6	6.6	5.1	5.1	2.9	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.7	2.9	2.2	2.9	1.5	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)