

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: P368353

Luminaire Tested: **MSA-SA4B-730-U-T3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368353  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-730-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: 13067 lumens  
Efficiency: N/A  
Efficacy: 76.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

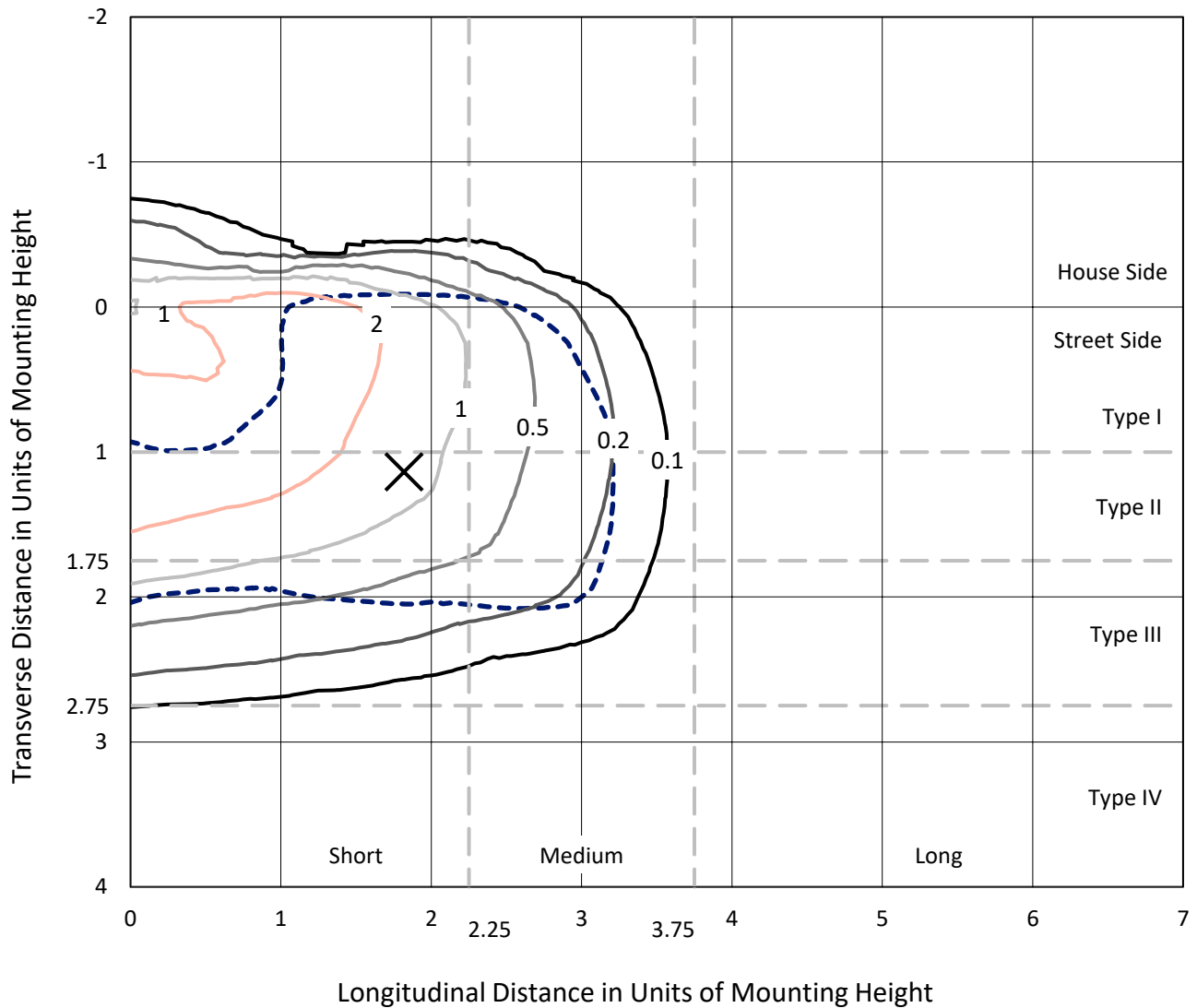
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

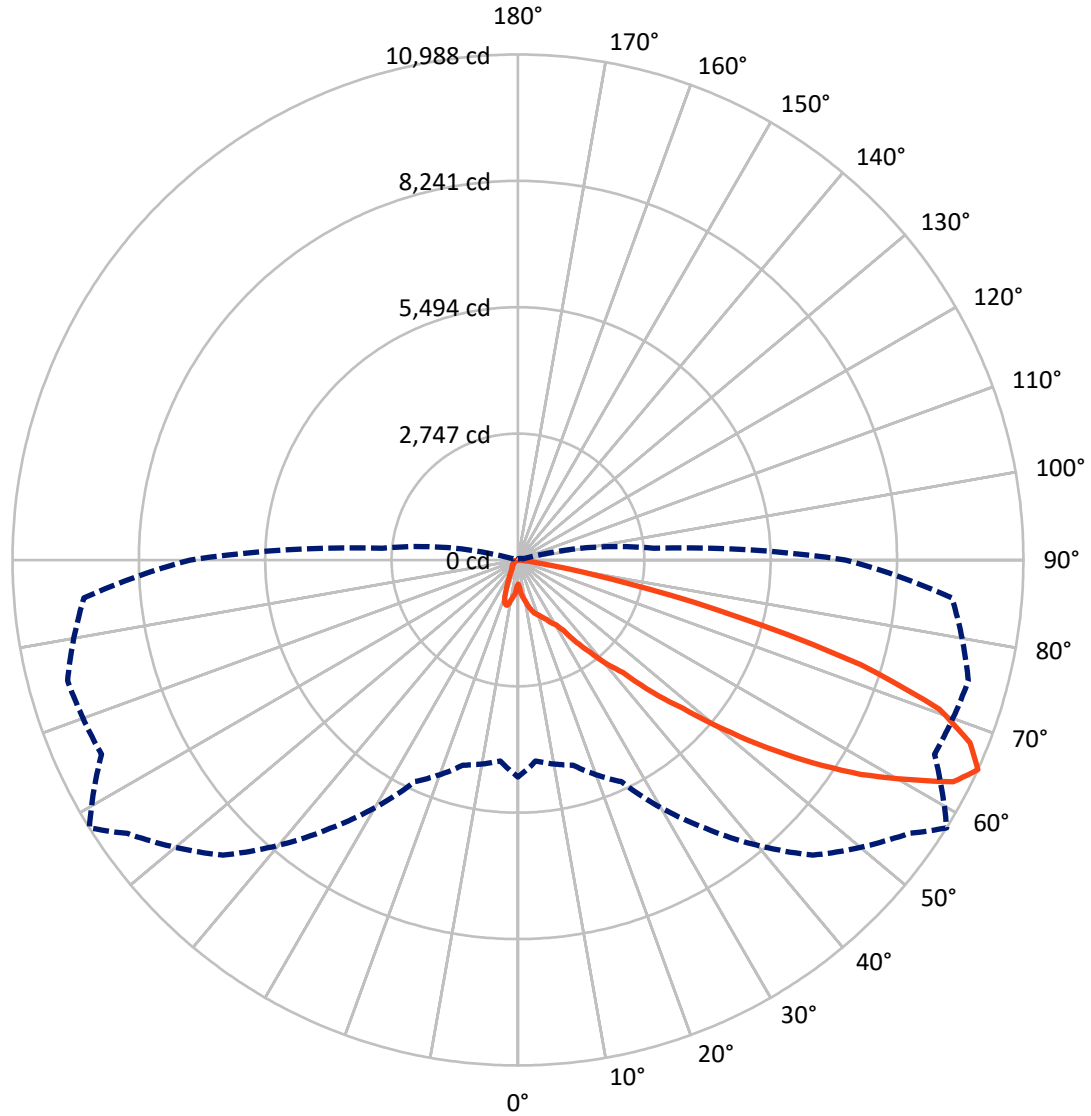
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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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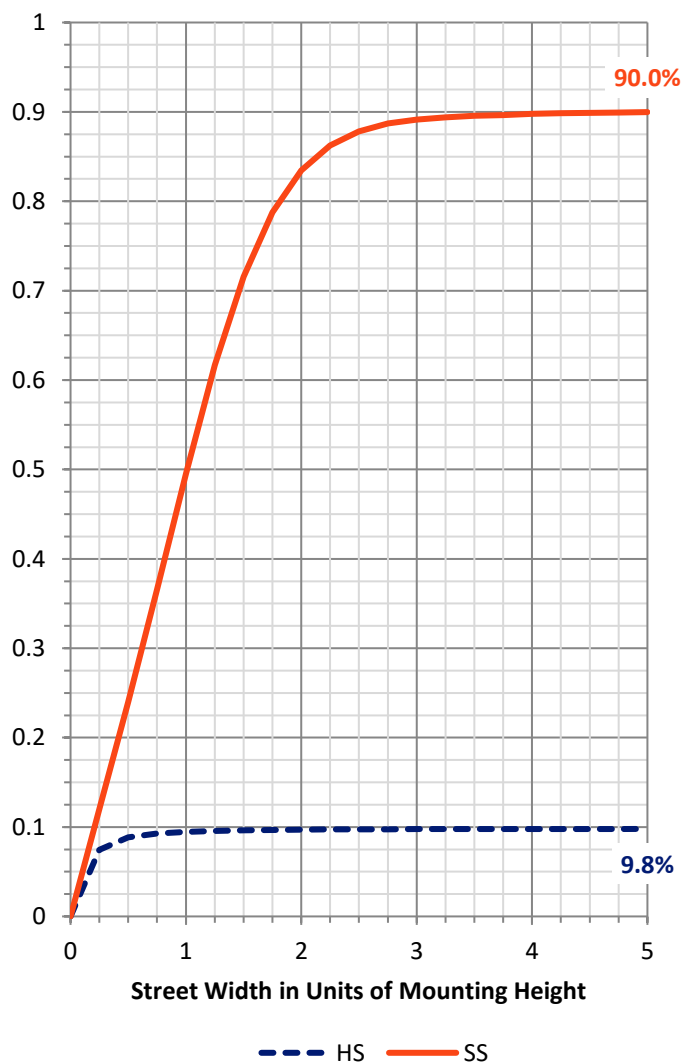
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1289.4	0.0	1289.4
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	11777.6	0.0	11777.6
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	13067.0	0.0	13067.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.5	0.6
10°-20°	268.2	2.1
20°-30°	519.2	4.0
30°-40°	1035.9	7.9
40°-50°	2117.7	16.2
50°-60°	3756.1	28.7
60°-70°	3960.0	30.3
70°-80°	1283.9	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°	13067.0	100.0
0°-180°	13067.0	100.0

**Coefficient of Utilization**



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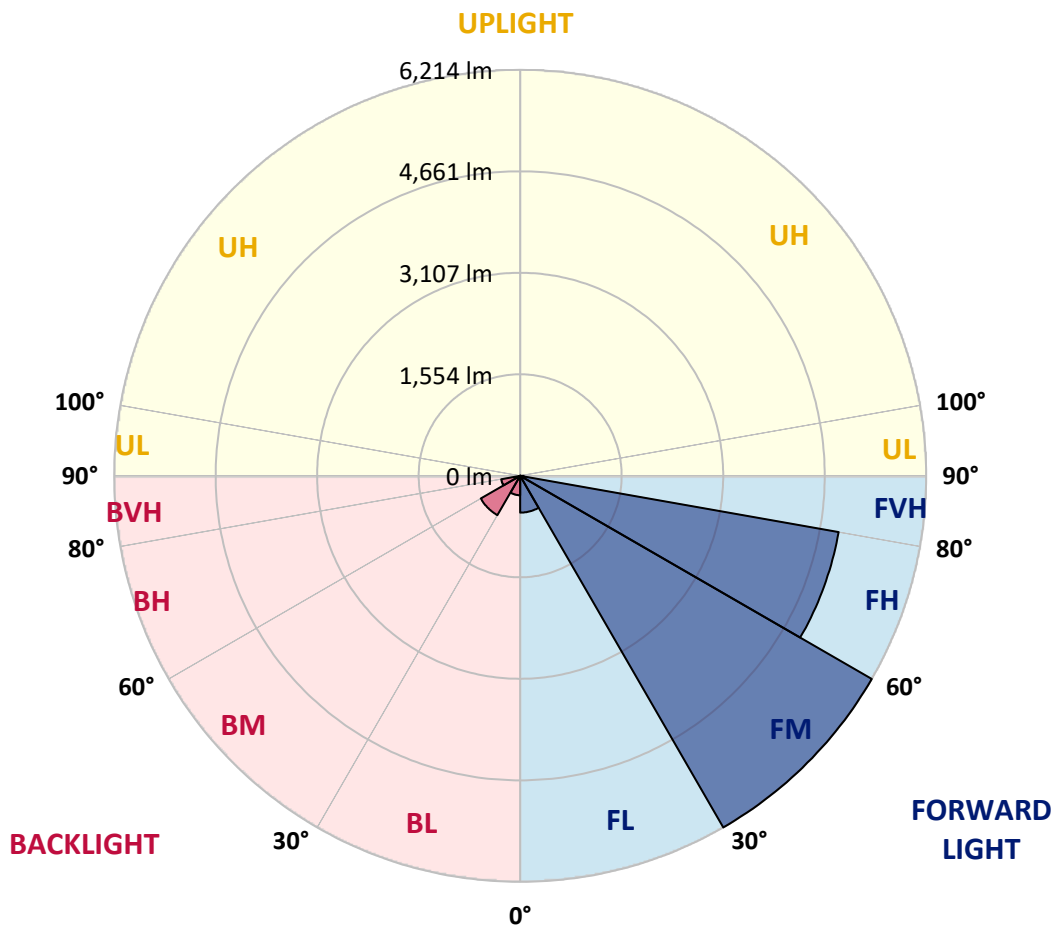
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	563.7	4.3			
FM (30°-60°)	6214.0	47.6			
FH (60°-80°)	4949.6	37.9			G2/5000
FVH (80°-90°)	50.3	0.4			G1/100
BL (0°-30°)	297.2	2.3	B1/500		
BM (30°-60°)	695.7	5.3	B1/1000		
BH (60°-80°)	294.3	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°	523.1	523.1	523.1	523.1	523.1	523.1	523.1	523.1	523.1	523.1	523.1
2.5°	638.6	619.5	589.3	594.5	600.3	612.1	602.5	593.7	584.2	571.6	619.5
5°	771.0	739.4	736.4	729.8	724.7	723.9	735.7	732.0	737.2	760.7	785.0
7.5°	819.6	806.3	781.3	791.6	775.4	762.9	815.2	832.1	864.5	875.5	938.8
10°	814.4	795.3	805.6	810.8	821.8	867.4	900.5	918.9	946.9	1007.2	994.7
12.5°	838.0	854.9	865.9	866.7	923.3	1007.2	1030.7	1046.2	1096.2	1119.8	1181.6
15°	916.7	944.7	927.0	934.4	952.7	1055.0	1110.2	1144.0	1214.7	1291.2	1306.6
17.5°	1029.3	1046.9	1010.1	983.6	1034.4	1090.3	1190.4	1225.7	1270.6	1449.4	1482.5
20°	1171.3	1201.4	1122.0	1016.8	1083.7	1149.9	1258.8	1275.7	1323.5	1556.8	1609.0
22.5°	1503.1	1458.2	1336.8	1172.7	1152.9	1182.3	1286.0	1352.2	1433.2	1617.1	1738.5
25°	1830.5	1815.0	1636.2	1453.0	1320.6	1254.4	1392.0	1428.8	1561.2	1760.6	1827.5
27.5°	2194.6	2225.5	1926.8	1815.7	1556.0	1339.7	1458.2	1550.1	1706.9	1812.8	1973.9
30°	2675.1	2625.8	2275.6	2164.5	1868.0	1574.4	1629.6	1635.5	1865.8	1985.0	2138.0
32.5°	3051.7	3083.4	2643.4	2472.7	2235.8	1935.7	1758.4	1834.9	1999.7	2265.3	2410.2
35°	3459.3	3456.4	3027.5	2797.9	2488.2	2230.7	2140.2	2196.1	2402.8	2703.7	2742.0
37.5°	4068.5	4016.3	3510.1	3173.9	2910.5	2690.5	2621.3	2547.0	2760.4	3047.3	3190.8
40°	4643.1	4462.8	3994.9	3596.2	3259.2	3169.5	2919.3	2964.9	3028.2	3407.1	3803.6
42.5°	5223.6	5111.7	4486.4	4152.4	3738.2	3524.8	3361.5	3340.1	3641.0	4089.8	4499.6
45°	5989.4	5647.3	5147.1	4853.5	4373.8	4159.7	4028.0	4106.8	4377.5	5033.0	5306.0
47.5°	6632.5	6317.6	5887.9	5442.1	4938.8	5179.4	4932.2	4807.9	5179.4	5857.0	6219.7
50°	7185.0	6834.0	6399.2	6068.9	5987.2	6218.2	5718.0	5763.6	6004.9	6800.9	7005.5
52.5°	7586.7	7217.3	6837.7	6678.1	7012.8	7129.1	6878.2	6777.4	6996.6	7605.8	7705.1
55°	7889.1	7510.9	7214.4	7434.4	8081.8	8043.6	8131.8	7787.5	7997.2	8445.3	8398.2
57.5°	7907.4	7459.4	7285.8	7639.6	8528.4	9120.6	9378.9	8793.2	8912.4	9101.5	8995.6
60°	7329.2	6883.3	6869.4	7371.8	8657.9	9399.5	9964.5	9679.0	9519.4	9659.9	9459.1
62.5°	6177.1	5865.1	6010.8	6566.2	8176.0	9245.7	10276.4	10620.0	9998.3	10030.0	9744.5
65°	4716.7	4389.3	4617.3	5317.0	7122.4	9073.6	10364.7	10987.9	9989.5	10135.2	9470.8
67.5°	3123.8	2934.0	3192.3	3963.3	5662.8	8009.7	10319.1	10601.6	9672.4	9723.9	8454.8
70°	1612.7	1566.3	1775.3	2383.7	3807.3	6153.5	9871.1	9716.6	9028.7	8376.8	6521.4
72.5°	516.5	518.7	719.5	1088.9	2052.6	3746.3	7587.4	7799.3	7224.7	6127.8	3981.7
75°	228.8	225.1	300.9	456.9	855.6	1679.6	4713.7	4942.5	4498.2	3371.0	1673.7
77.5°	164.8	159.6	192.8	267.1	423.8	569.4	2210.1	2385.2	2039.4	1168.3	383.3
80°	116.2	115.5	139.8	187.6	264.9	253.1	698.2	782.8	626.8	283.2	112.6
82.5°	65.5	67.7	97.1	132.4	161.1	126.5	196.4	216.3	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	28.0	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°	523.1	523.1	523.1	523.1	523.1	523.1	523.1	523.1	523.1	523.1	523.1
2.5°	629.0	624.6	568.7	573.1	585.6	580.5	584.9	574.6	562.8	610.6	609.9
5°	795.3	762.2	744.5	728.4	731.3	698.2	717.3	726.1	724.7	751.9	759.3
7.5°	941.0	896.8	861.5	827.7	776.2	729.8	758.5	776.9	789.4	836.5	854.9
10°	1009.4	973.3	959.4	893.2	856.4	827.7	793.1	768.1	778.4	765.9	778.4
12.5°	1159.5	1135.2	1081.5	1014.5	970.4	911.5	782.8	675.4	609.2	609.9	605.5
15°	1296.3	1294.9	1214.7	1103.6	975.6	807.8	607.0	471.6	409.1	391.4	385.5
17.5°	1475.1	1453.0	1306.6	1142.6	912.3	625.4	413.5	323.0	317.1	327.4	323.0
20°	1589.1	1556.8	1352.2	1085.9	751.9	423.0	311.9	286.2	303.8	318.6	314.9
22.5°	1703.2	1654.6	1386.8	1016.8	534.9	309.7	281.8	277.4	288.4	306.8	309.7
25°	1765.7	1756.1	1454.5	887.3	366.4	271.5	271.5	270.0	273.7	286.9	284.7
27.5°	1947.4	1817.9	1403.7	692.3	283.2	249.4	253.1	251.6	238.4	251.6	252.3
30°	2060.7	2001.1	1407.4	492.9	249.4	220.7	230.3	218.5	198.6	209.7	207.5
32.5°	2288.8	2140.2	1396.4	332.5	227.3	210.4	195.7	178.8	164.1	168.5	164.8
35°	2554.4	2441.1	1247.0	267.1	211.9	186.1	162.6	145.7	130.2	133.9	133.2
37.5°	3082.6	2722.9	1123.4	240.6	201.6	170.7	143.5	119.9	111.8	114.0	116.2
40°	3571.9	3193.0	893.2	228.8	183.9	152.3	118.4	101.5	96.4	97.8	100.1
42.5°	4303.2	3566.7	674.6	217.0	166.3	128.7	98.6	87.5	82.4	85.3	86.8
45°	5010.9	3884.6	504.0	206.7	151.6	111.1	83.1	75.8	69.9	72.1	75.0
47.5°	5718.0	4237.7	375.9	190.5	135.4	95.6	71.4	66.2	62.5	63.3	66.9
50°	6350.7	4402.5	295.8	170.7	122.1	83.1	64.7	59.6	58.1	58.9	61.8
52.5°	6815.6	4404.0	249.4	153.0	109.6	73.6	61.1	55.2	54.4	55.9	58.9
55°	7235.7	4286.3	216.3	137.6	98.6	66.9	58.1	53.0	53.0	54.4	57.4
57.5°	7514.6	4070.0	187.6	121.4	89.0	63.3	55.9	50.8	50.0	49.3	51.5
60°	7650.7	3774.9	158.9	106.7	80.2	61.1	54.4	44.9	44.1	42.7	44.1
62.5°	7564.6	3405.6	133.2	92.0	71.4	58.1	47.8	39.0	37.5	34.6	36.8
65°	7124.6	2956.8	112.6	78.7	61.8	49.3	40.5	33.1	29.4	25.7	25.0
67.5°	6224.9	2402.1	94.2	67.7	53.0	40.5	33.1	29.4	22.8	19.9	19.1
70°	4665.2	1639.9	78.0	58.1	44.1	34.6	28.0	26.5	21.3	19.1	17.7
72.5°	2736.9	885.1	65.5	50.8	37.5	28.7	22.8	24.3	21.3	17.7	16.2
75°	1093.3	294.3	52.2	40.5	30.2	20.6	19.1	19.9	19.1	16.2	13.2
77.5°	249.4	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)