

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: P368155

Luminaire Tested: **MSA-SA3D-760-U-T3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368155  
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-SA3D-760-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 14699 lumens  
Efficiency: N/A  
Efficacy: 76.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G3

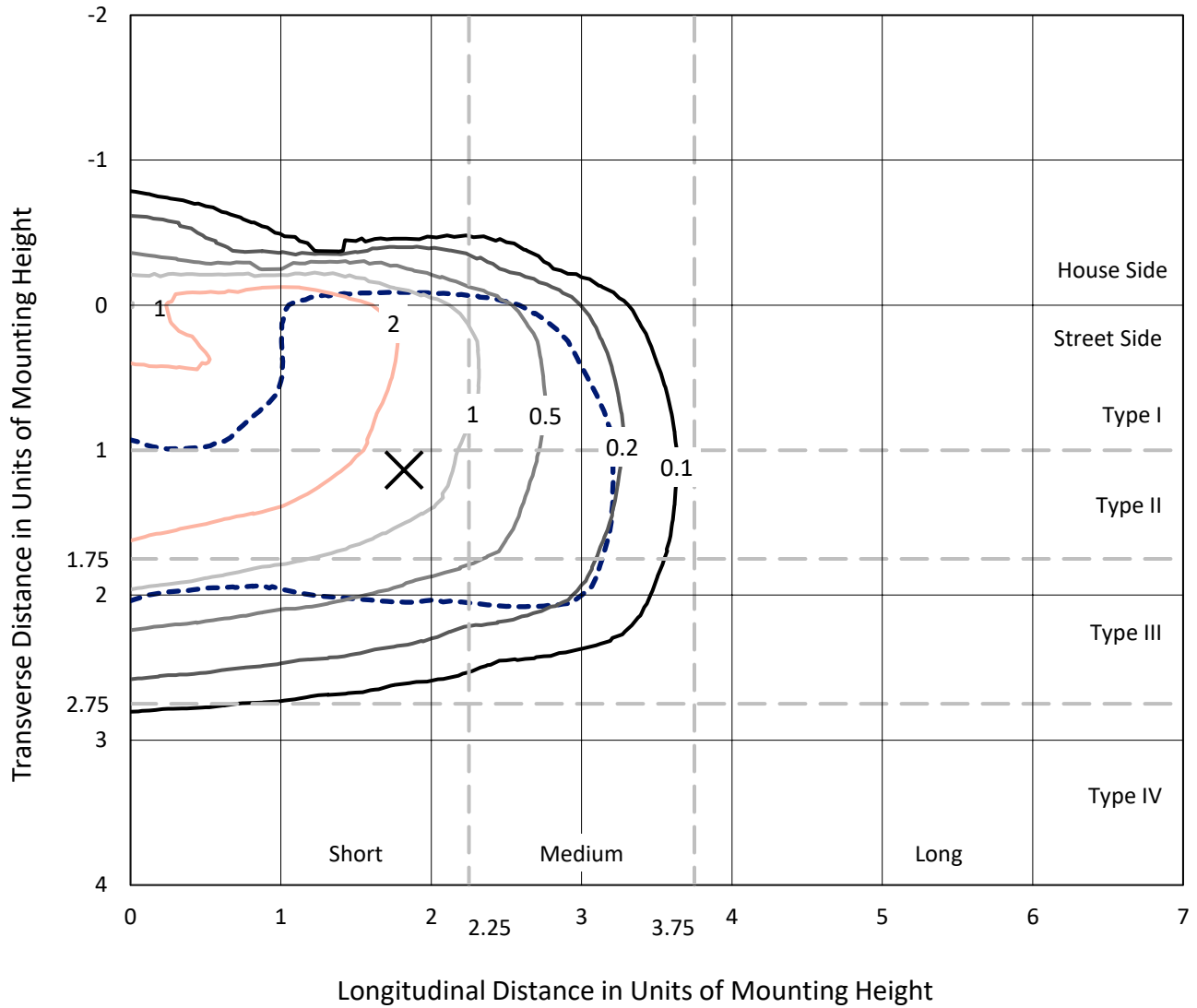
Input Watts (W): 192  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

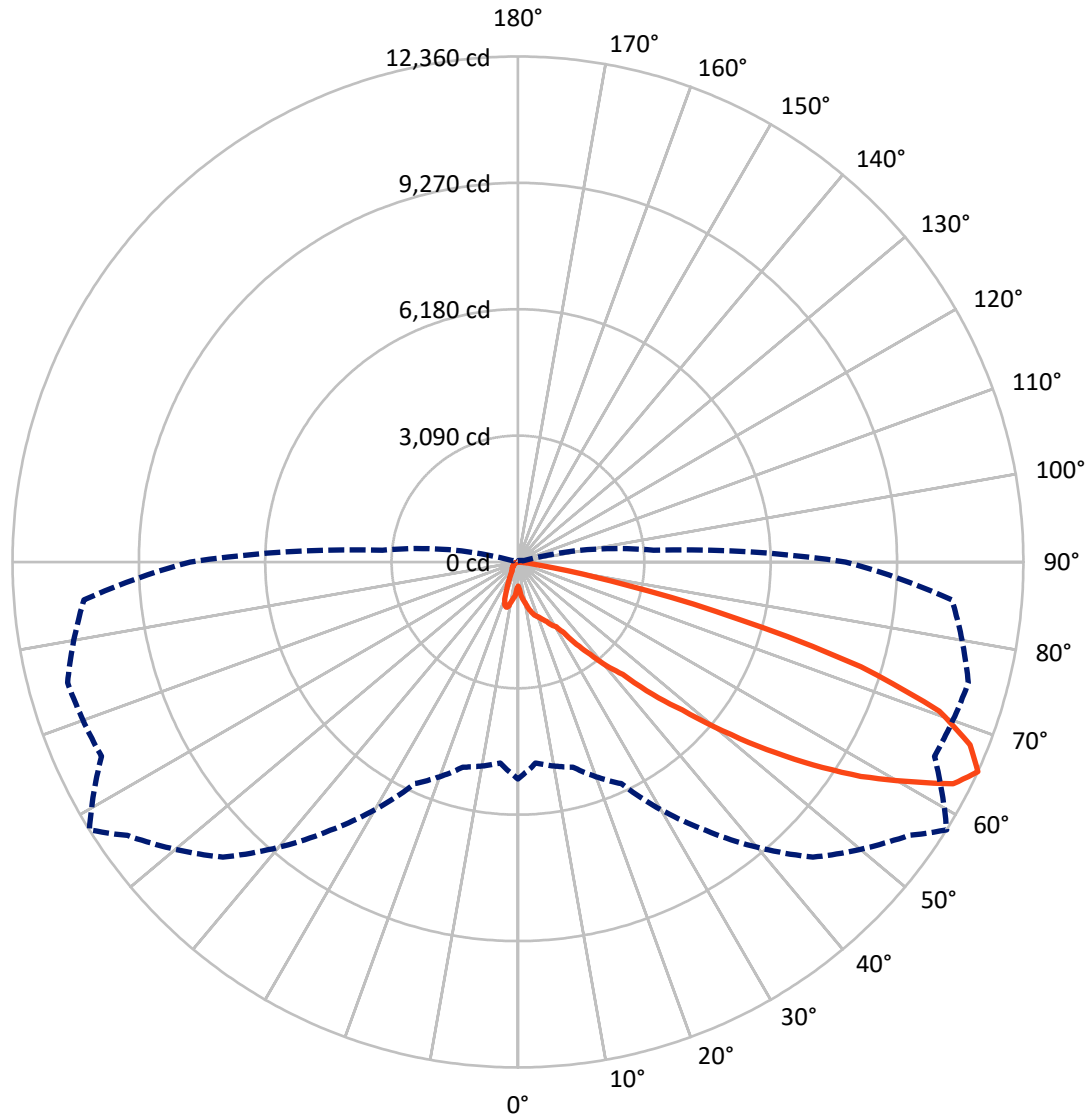
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 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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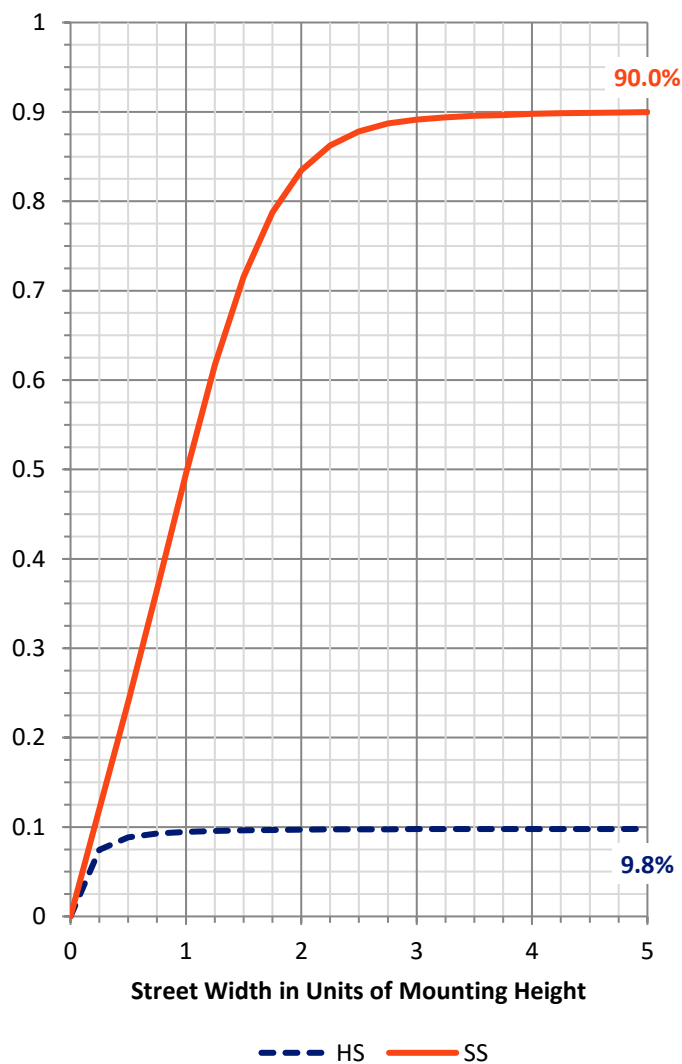
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1450.4	0.0	1450.4
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	13248.6	0.0	13248.6
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	14699.0	0.0	14699.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.7	0.6
10°-20°	301.7	2.1
20°-30°	584.0	4.0
30°-40°	1165.2	7.9
40°-50°	2382.2	16.2
50°-60°	4225.3	28.7
60°-70°	4454.6	30.3
70°-80°	1444.2	9.8
80°-90°	59.0	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°	14699.0	100.0
0°-180°	14699.0	100.0

**Coefficient of Utilization**



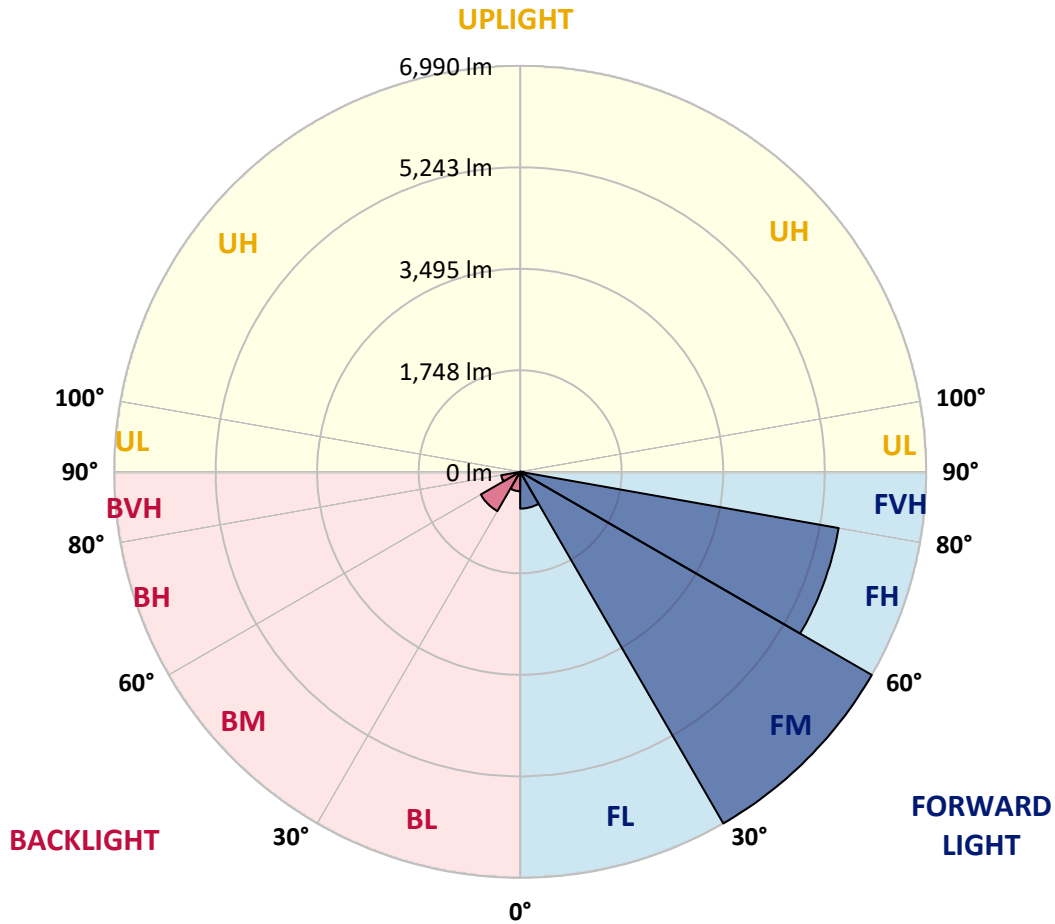
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	634.1	4.3			
FM (30°-60°)	6990.1	47.6			
FH (60°-80°)	5567.8	37.9			G3/7500
FVH (80°-90°)	56.5	0.4			G1/100
BL (0°-30°)	334.3	2.3	B1/500		
BM (30°-60°)	782.6	5.3	B1/1000		
BH (60°-80°)	331.0	2.3	B1/500		G1/500
BVH (80°-90°)	2.5	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-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4
2.5°	718.4	696.8	662.9	668.7	675.3	688.6	677.8	667.9	657.1	643.0	696.8
5°	867.3	831.7	828.4	821.0	815.2	814.4	827.6	823.5	829.3	855.7	883.0
7.5°	921.9	907.0	878.9	890.5	872.3	858.2	917.0	936.0	972.4	984.8	1056.0
10°	916.2	894.6	906.2	912.0	924.4	975.7	1013.0	1033.7	1065.1	1133.0	1118.9
12.5°	942.6	961.7	974.1	974.9	1038.6	1133.0	1159.5	1176.8	1233.1	1259.6	1329.1
15°	1031.2	1062.6	1042.8	1051.1	1071.7	1186.8	1248.8	1286.9	1366.4	1452.4	1469.8
17.5°	1157.8	1177.7	1136.3	1106.5	1163.6	1226.5	1339.1	1378.8	1429.3	1630.4	1667.6
20°	1317.5	1351.5	1262.1	1143.7	1219.1	1293.5	1416.0	1435.1	1488.9	1751.2	1810.0
22.5°	1690.8	1640.3	1503.7	1319.2	1296.8	1330.0	1446.6	1521.1	1612.2	1819.1	1955.6
25°	2059.1	2041.7	1840.6	1634.5	1485.5	1411.1	1565.8	1607.2	1756.2	1980.4	2055.8
27.5°	2468.7	2503.5	2167.5	2042.5	1750.4	1507.1	1640.3	1743.8	1920.0	2039.2	2220.5
30°	3009.2	2953.7	2559.8	2434.8	2101.3	1771.1	1833.1	1839.8	2098.8	2232.9	2405.0
32.5°	3432.9	3468.5	2973.6	2781.6	2515.1	2177.4	1978.0	2064.0	2249.4	2548.2	2711.2
35°	3891.4	3888.1	3405.6	3147.4	2798.9	2509.3	2407.5	2470.4	2702.9	3041.4	3084.5
37.5°	4576.6	4517.9	3948.5	3570.3	3274.0	3026.5	2948.7	2865.2	3105.2	3427.9	3589.3
40°	5223.0	5020.2	4493.9	4045.3	3666.3	3565.3	3283.9	3335.2	3406.4	3832.6	4278.7
42.5°	5876.0	5750.2	5046.7	4671.0	4205.0	3965.0	3781.3	3757.3	4095.8	4600.6	5061.6
45°	6737.5	6352.7	5789.9	5459.7	4920.1	4679.3	4531.1	4619.7	4924.2	5661.6	5968.7
47.5°	7460.8	7106.6	6623.3	6121.8	5555.7	5826.3	5548.2	5408.4	5826.3	6588.5	6996.5
50°	8082.3	7687.6	7198.5	6826.9	6735.0	6994.9	6432.1	6483.4	6754.9	7650.3	7880.4
52.5°	8534.2	8118.8	7691.7	7512.1	7888.7	8019.4	7737.2	7623.9	7870.5	8555.7	8667.5
55°	8874.4	8449.0	8115.4	8362.9	9091.2	9048.2	9147.5	8760.1	8996.0	9500.0	9447.1
57.5°	8895.0	8391.0	8195.7	8593.8	9593.5	10259.8	10550.2	9891.5	10025.5	10238.2	10119.1
60°	8244.6	7743.0	7727.3	8292.6	9739.2	10573.4	11209.0	10887.9	10708.3	10866.4	10640.5
62.5°	6948.5	6597.6	6761.5	7386.3	9197.1	10400.5	11559.9	11946.4	11247.1	11282.7	10961.6
65°	5305.7	4937.5	5194.0	5981.1	8012.0	10206.8	11659.2	12360.2	11237.2	11401.0	10653.7
67.5°	3514.0	3300.5	3591.0	4458.3	6370.0	9010.1	11607.9	11925.7	10880.5	10938.4	9510.8
70°	1814.1	1762.0	1997.0	2681.4	4282.8	6922.0	11103.9	10930.1	10156.3	9423.1	7335.8
72.5°	581.0	583.5	809.4	1224.8	2309.0	4214.1	8535.0	8773.4	8127.0	6893.1	4479.0
75°	257.4	253.2	338.5	513.9	962.5	1889.4	5302.4	5559.8	5059.9	3792.1	1882.8
77.5°	185.4	179.6	216.8	300.4	476.7	640.6	2486.1	2683.1	2294.1	1314.2	431.2
80°	130.8	129.9	157.2	211.0	297.9	284.7	785.4	880.6	705.1	318.6	126.6
82.5°	73.7	76.1	109.2	149.0	181.2	142.3	221.0	243.3	237.5	169.7	55.4
85°	35.6	39.7	71.2	107.6	95.2	55.4	78.6	85.2	99.3	98.5	28.1
87.5°	0.0	0.0	29.0	48.8	25.7	8.3	24.0	27.3	26.5	31.4	6.6
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°	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4
2.5°	707.6	702.6	639.7	644.7	658.8	653.0	657.9	646.4	633.1	686.9	686.1
5°	894.6	857.4	837.5	819.3	822.6	785.4	806.9	816.8	815.2	845.8	854.1
7.5°	1058.5	1008.8	969.1	931.1	873.1	821.0	853.3	873.9	888.0	941.0	961.7
10°	1135.5	1094.9	1079.2	1004.7	963.3	931.1	892.2	864.0	875.6	861.5	875.6
12.5°	1304.3	1277.0	1216.6	1141.3	1091.6	1025.4	880.6	759.7	685.3	686.1	681.1
15°	1458.2	1456.6	1366.4	1241.4	1097.4	908.7	682.8	530.5	460.1	440.3	433.7
17.5°	1659.3	1634.5	1469.8	1285.3	1026.2	703.5	465.1	363.3	356.7	368.3	363.3
20°	1787.6	1751.2	1521.1	1221.5	845.8	475.9	350.9	321.9	341.8	358.4	354.2
22.5°	1915.9	1861.3	1560.0	1143.7	601.7	348.4	317.0	312.0	324.4	345.1	348.4
25°	1986.2	1975.5	1636.2	998.1	412.1	305.4	305.4	303.7	307.9	322.8	320.3
27.5°	2190.7	2045.0	1579.1	778.8	318.6	280.6	284.7	283.0	268.1	283.0	283.9
30°	2318.1	2251.1	1583.2	554.5	280.6	248.3	259.0	245.8	223.5	235.9	233.4
32.5°	2574.7	2407.5	1570.8	374.1	255.7	236.7	220.1	201.1	184.6	189.5	185.4
35°	2873.4	2746.0	1402.8	300.4	238.3	209.4	182.9	163.9	146.5	150.6	149.8
37.5°	3467.6	3062.9	1263.7	270.6	226.8	192.0	161.4	134.9	125.8	128.3	130.8
40°	4018.0	3591.8	1004.7	257.4	206.9	171.3	133.2	114.2	108.4	110.1	112.6
42.5°	4840.6	4012.2	758.9	244.1	187.0	144.8	110.9	98.5	92.7	96.0	97.7
45°	5636.8	4369.7	566.9	232.6	170.5	125.0	93.5	85.2	78.6	81.1	84.4
47.5°	6432.1	4767.0	422.9	214.3	152.3	107.6	80.3	74.5	70.3	71.2	75.3
50°	7143.8	4952.4	332.7	192.0	137.4	93.5	72.8	67.0	65.4	66.2	69.5
52.5°	7666.9	4954.0	280.6	172.1	123.3	82.8	68.7	62.1	61.2	62.9	66.2
55°	8139.4	4821.6	243.3	154.8	110.9	75.3	65.4	59.6	59.6	61.2	64.6
57.5°	8453.1	4578.3	211.0	136.6	100.1	71.2	62.9	57.1	56.3	55.4	57.9
60°	8606.2	4246.4	178.8	120.0	90.2	68.7	61.2	50.5	49.7	48.0	49.7
62.5°	8509.4	3831.0	149.8	103.5	80.3	65.4	53.8	43.9	42.2	38.9	41.4
65°	8014.5	3326.1	126.6	88.6	69.5	55.4	45.5	37.2	33.1	29.0	28.1
67.5°	7002.3	2702.1	105.9	76.1	59.6	45.5	37.2	33.1	25.7	22.3	21.5
70°	5247.8	1844.7	87.7	65.4	49.7	38.9	31.4	29.8	24.0	21.5	19.9
72.5°	3078.7	995.6	73.7	57.1	42.2	32.3	25.7	27.3	24.0	19.9	18.2
75°	1229.8	331.0	58.8	45.5	33.9	23.2	21.5	22.3	21.5	18.2	14.9
77.5°	280.6	104.3	45.5	35.6	26.5	14.9	17.4	19.0	19.0	14.9	10.8
80°	87.7	41.4	26.5	22.3	19.0	8.3	12.4	13.2	9.1	4.1	0.0
82.5°	28.1	11.6	9.1	9.1	8.3	1.7	2.5	1.7	0.0	0.0	0.0
85°	10.8	7.4	5.8	5.8	3.3	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.1	3.3	2.5	3.3	1.7	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)