

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: P367361

Luminaire Tested: **MSA-SA2B-760-U-T2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367361  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-760-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 7513 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G2

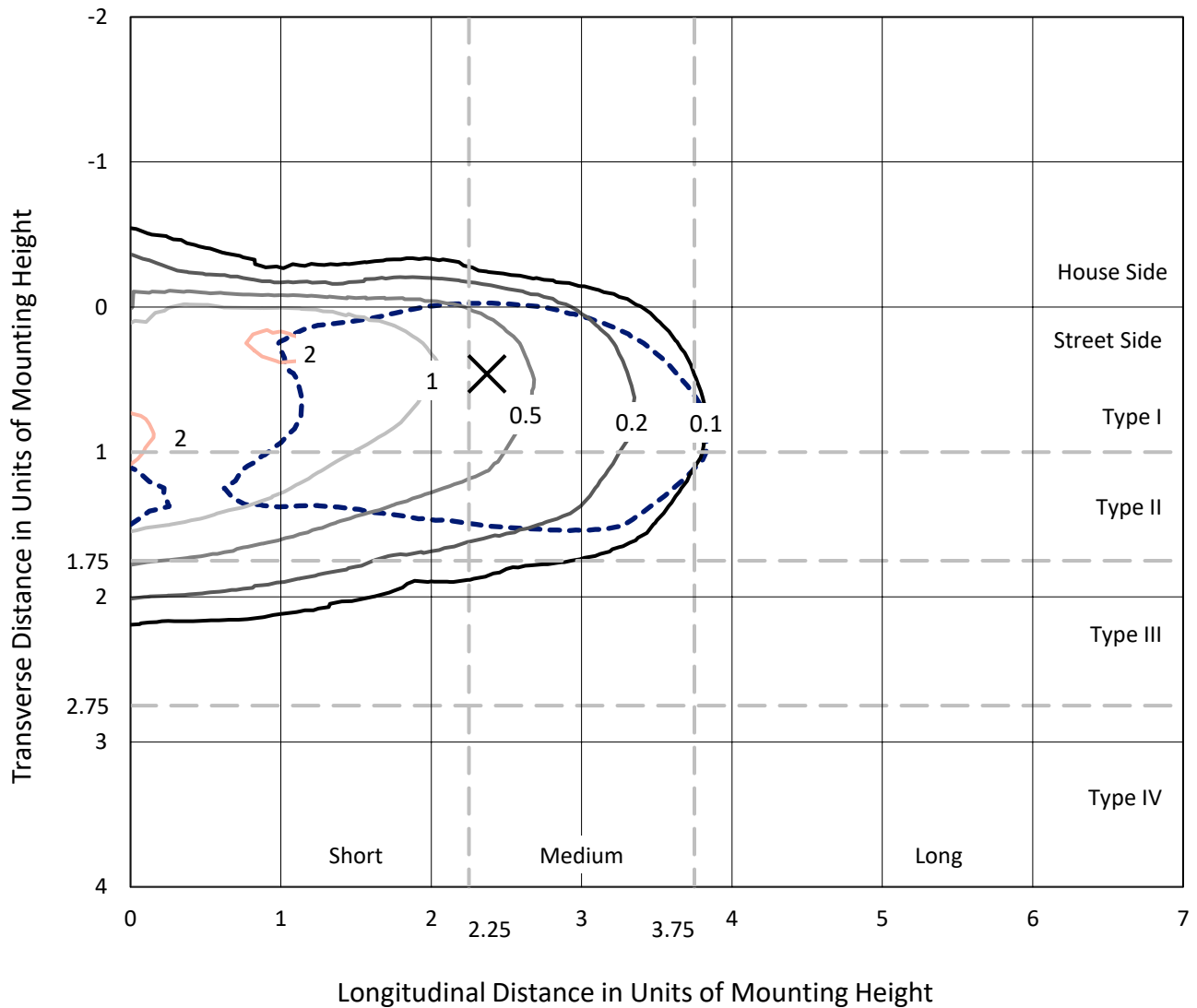
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

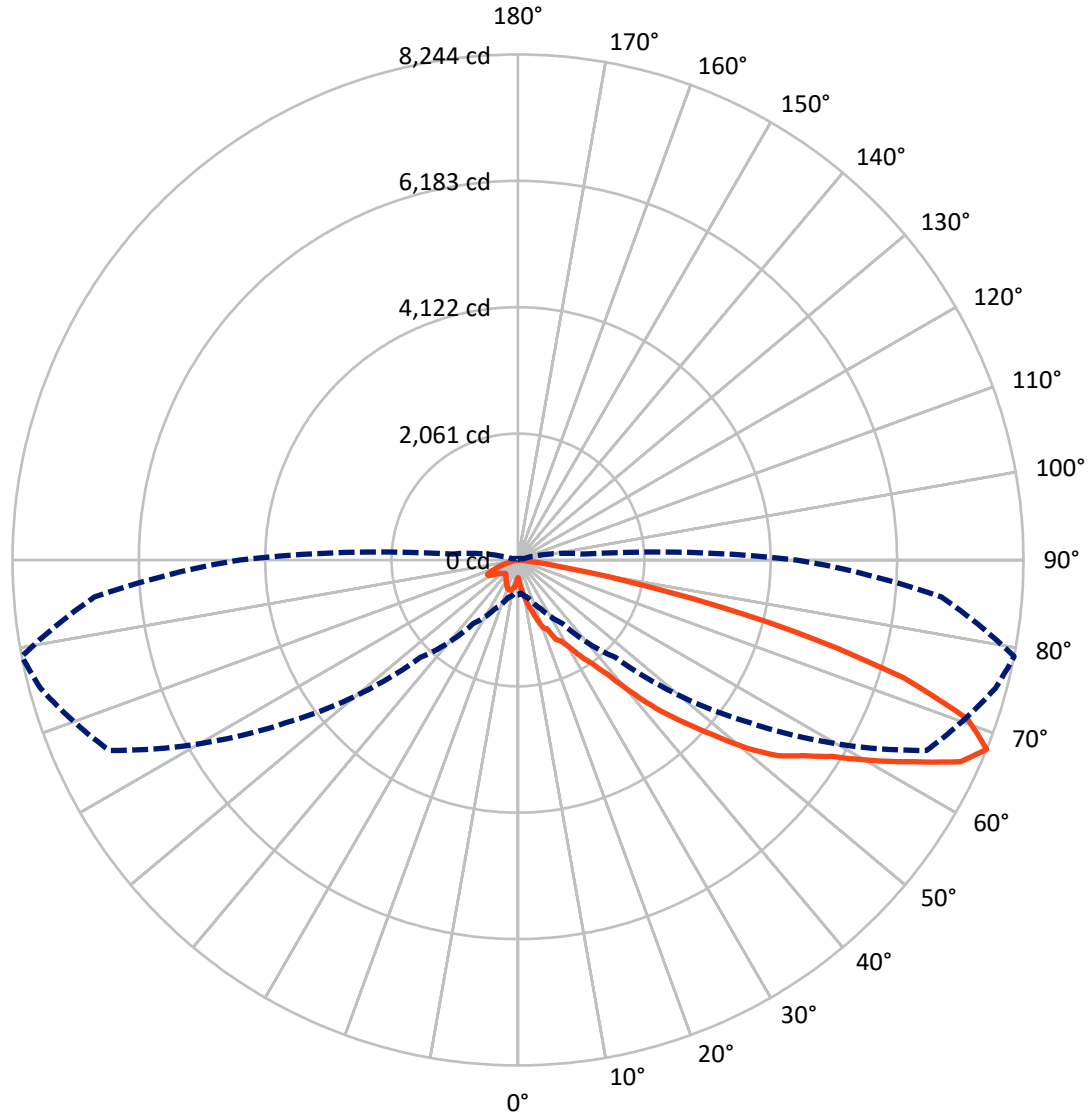
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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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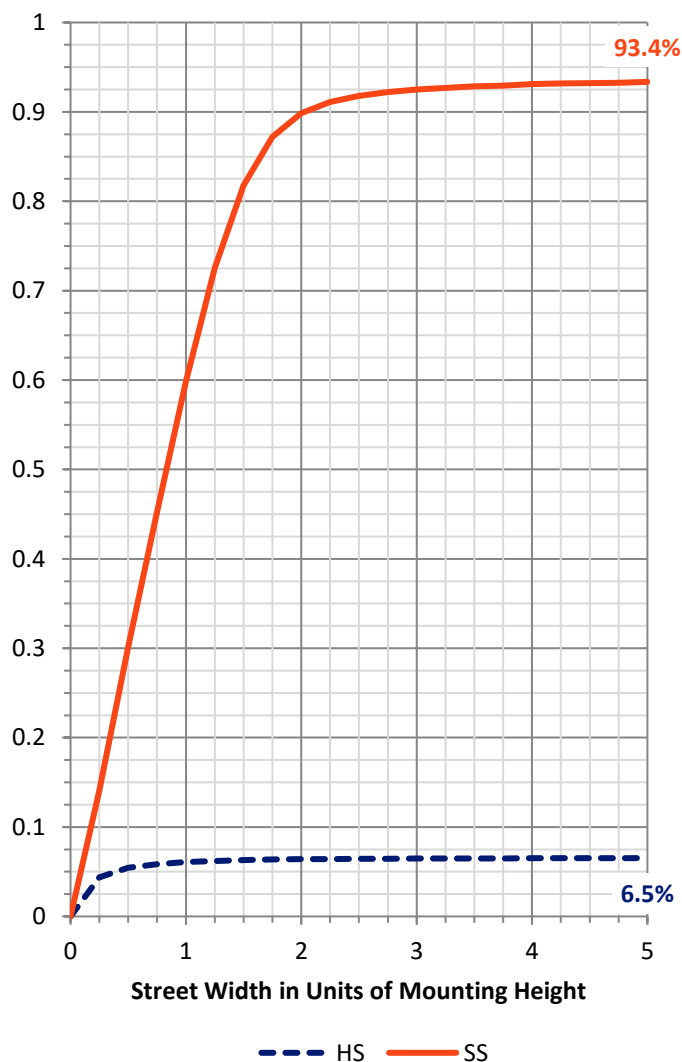
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	493.7	0.0	493.7
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	7019.3	0.0	7019.3
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	7513.0	0.0	7513.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.1	0.6
10°-20°	167.9	2.2
20°-30°	323.9	4.3
30°-40°	636.2	8.5
40°-50°	1274.5	17.0
50°-60°	2037.0	27.1
60°-70°	2049.6	27.3
70°-80°	924.6	12.3
80°-90°	57.2	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°	7513.0	100.0
0°-180°	7513.0	100.0

**Coefficient of Utilization**



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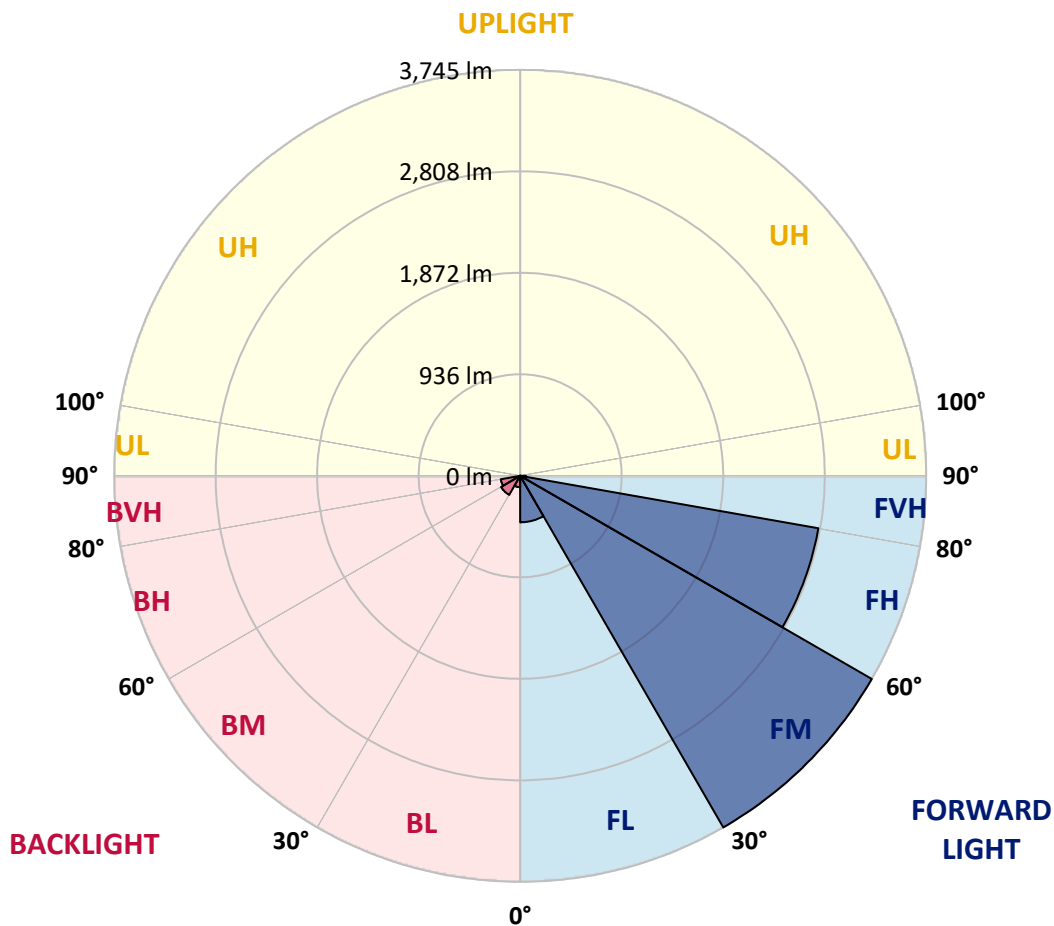
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	428.9	5.7			
FM (30°-60°)	3744.6	49.8			
FH (60°-80°)	2792.3	37.2			G2/5000
FVH (80°-90°)	53.6	0.7			G1/100
BL (0°-30°)	104.9	1.4	B0/110		
BM (30°-60°)	203.1	2.7	B0/220		
BH (60°-80°)	182.0	2.4	B1/500		G1/500
BVH (80°-90°)	3.6	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°	289.5	289.5	289.5	289.5	289.5	289.5	289.5	289.5	289.5	289.5	289.5
2.5°	391.0	376.9	354.1	366.9	366.1	372.7	360.3	346.6	324.7	346.6	348.3
5°	562.8	536.7	520.2	516.9	498.6	481.7	477.9	463.9	453.1	433.6	451.0
7.5°	701.2	689.2	659.8	656.4	611.7	586.9	594.7	588.5	547.5	527.2	544.2
10°	760.0	739.3	743.4	739.3	720.2	727.3	711.1	692.5	659.8	626.2	584.0
12.5°	782.8	779.4	813.8	809.7	854.4	908.2	872.2	841.2	765.4	757.1	699.5
15°	831.6	852.3	847.4	864.8	893.3	984.9	984.0	991.5	911.1	868.1	784.8
17.5°	875.1	890.4	865.6	885.5	963.3	1018.8	1093.0	1064.0	1073.1	1029.2	900.4
20°	856.5	873.9	849.0	837.0	974.1	1079.3	1178.3	1157.2	1211.8	1184.5	1006.8
22.5°	972.9	940.1	877.6	838.7	941.0	1078.0	1208.5	1296.7	1287.2	1220.1	1105.8
25°	1116.6	1096.7	1021.7	953.0	962.1	1070.6	1303.8	1433.4	1461.6	1433.0	1199.8
27.5°	1310.4	1305.8	1152.6	1122.8	1034.1	1037.9	1318.7	1605.7	1541.5	1496.8	1309.6
30°	1563.4	1527.4	1345.6	1306.7	1175.8	1111.6	1409.8	1754.4	1707.2	1646.3	1412.7
32.5°	1835.5	1840.9	1609.0	1480.6	1375.4	1299.2	1373.8	1823.9	1912.2	1862.9	1541.5
35°	2144.5	2168.5	1884.8	1734.1	1529.5	1417.2	1528.7	2037.7	2195.9	2066.2	1714.2
37.5°	2620.4	2619.5	2288.2	1988.0	1839.3	1717.5	1786.7	2231.9	2544.6	2362.3	2024.0
40°	3039.1	2948.0	2639.8	2294.8	2062.9	2029.8	1979.7	2497.8	2916.9	2807.2	2299.4
42.5°	3351.8	3287.6	2915.2	2646.9	2359.5	2254.3	2236.4	2887.5	3466.5	3312.8	2692.4
45°	3725.8	3515.4	3241.2	2999.3	2706.5	2675.9	2634.0	3283.0	4105.9	3759.7	3034.1
47.5°	4060.8	3862.8	3603.6	3293.0	2956.7	3209.3	3048.6	3630.5	4571.0	4245.9	3411.0
50°	4342.8	4132.5	3842.1	3605.6	3461.5	3633.0	3365.0	3916.7	5073.4	4810.0	3763.4
52.5°	4486.6	4248.4	4023.9	3877.7	3966.0	3927.4	3794.1	4263.3	5501.7	5304.5	4075.7
55°	4368.5	4135.8	4041.8	4114.2	4382.2	4270.8	4281.6	4800.5	5905.9	5634.2	4347.4
57.5°	3845.0	3632.6	3674.4	3872.8	4386.3	4677.9	4837.3	5322.3	6230.2	6045.0	4766.5
60°	2908.6	2737.6	2892.5	3244.5	3973.8	4596.7	5231.6	5844.2	6693.6	6635.6	5401.0
62.5°	1776.3	1683.5	1903.0	2342.1	3166.6	4198.7	5461.5	6539.9	7189.3	7251.1	6074.0
65°	906.2	864.3	1047.4	1433.4	2139.5	3449.1	5295.4	6972.3	7701.7	7929.4	6715.5
67.5°	570.7	543.8	641.5	874.3	1262.3	2249.7	4636.5	7350.5	8063.6	8243.8	6929.7
70°	395.5	378.5	463.0	600.1	796.4	1211.8	3442.5	6997.6	7776.6	7784.9	6411.6
72.5°	251.0	237.7	320.1	444.4	587.7	625.8	1973.5	5490.9	6656.7	6580.1	5192.3
75°	162.8	156.1	203.4	325.5	451.4	386.0	975.3	3705.0	4773.2	4653.0	3448.7
77.5°	116.8	112.7	136.3	217.4	321.4	270.0	437.3	2208.3	2736.7	2474.2	1674.0
80°	70.4	70.0	98.6	136.3	228.6	190.5	202.1	1002.7	1061.1	865.2	511.5
82.5°	35.2	36.4	55.1	87.8	147.0	124.7	92.4	333.8	284.9	210.0	103.5
85°	8.3	10.4	29.0	60.5	73.7	49.7	43.9	87.4	78.3	59.2	30.2
87.5°	0.0	0.0	9.1	14.5	19.9	8.3	14.9	16.6	21.1	16.6	6.2
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°	289.5	289.5	289.5	289.5	289.5	289.5	289.5	289.5	289.5	289.5	289.5
2.5°	348.7	343.7	313.5	305.6	304.8	296.1	298.2	289.9	290.3	309.0	309.0
5°	444.4	415.4	386.4	360.7	343.3	318.5	309.4	305.6	302.3	309.8	314.3
7.5°	521.8	479.2	427.0	371.1	319.3	283.7	278.7	269.6	266.3	273.8	279.6
10°	556.2	503.2	431.6	350.0	301.5	272.5	248.5	235.7	233.2	232.8	234.8
12.5°	629.1	563.3	436.5	342.1	289.5	257.6	230.3	208.7	188.9	190.9	188.9
15°	687.5	609.6	436.5	323.0	260.5	228.6	180.6	169.8	166.9	171.5	167.7
17.5°	775.7	655.6	414.6	289.1	235.7	177.7	159.5	158.6	164.4	171.0	166.9
20°	828.7	661.8	377.7	250.2	193.4	154.1	147.4	140.8	149.1	154.5	152.4
22.5°	883.8	662.2	340.9	229.4	155.7	140.4	129.6	124.2	125.5	130.5	131.3
25°	907.4	646.1	306.5	202.1	141.2	125.5	114.3	108.5	106.4	108.9	108.1
27.5°	971.6	615.0	269.2	172.3	134.2	111.4	101.1	94.0	87.8	91.9	92.8
30°	980.7	605.1	248.9	153.2	125.1	98.6	89.5	82.0	77.4	83.2	83.2
32.5°	1009.7	550.4	238.6	145.4	115.5	91.1	78.7	73.3	72.5	76.2	76.6
35°	1054.4	526.4	223.2	139.2	106.9	82.4	70.8	68.3	67.5	70.4	70.4
37.5°	1206.0	496.6	206.2	133.8	99.4	77.9	68.7	64.6	65.0	67.5	69.2
40°	1306.7	500.3	181.0	127.1	90.7	73.7	64.6	61.7	61.3	62.5	63.8
42.5°	1493.4	503.2	169.8	120.1	84.1	68.7	60.5	58.4	56.7	58.0	59.2
45°	1702.2	518.5	164.0	114.3	80.3	65.9	56.7	55.5	51.8	52.6	54.3
47.5°	1903.5	574.4	157.0	106.0	77.0	64.2	53.0	50.1	47.6	47.2	48.9
50°	2132.1	628.7	149.1	96.9	73.7	61.7	49.3	44.7	43.1	43.1	44.3
52.5°	2336.7	680.5	141.6	90.7	71.2	57.2	46.0	41.4	40.2	40.2	41.8
55°	2552.0	734.7	135.0	84.9	67.9	52.6	43.1	38.9	38.5	37.7	38.9
57.5°	2932.2	853.2	126.7	79.9	63.4	48.9	40.6	36.4	35.6	34.4	35.6
60°	3486.0	1035.0	116.0	75.0	58.0	46.4	38.5	33.5	32.3	30.2	30.6
62.5°	4027.3	1182.0	103.5	68.7	53.0	43.9	35.2	30.2	28.2	25.7	26.1
65°	4491.1	1240.0	90.3	61.3	48.0	38.1	30.6	26.5	23.6	20.3	19.9
67.5°	4545.8	1095.0	77.4	54.3	43.1	32.3	26.1	23.6	19.1	16.2	15.3
70°	4091.0	815.9	64.6	48.0	37.3	27.3	22.4	20.7	17.8	15.3	14.1
72.5°	3257.8	602.2	54.3	42.7	32.7	23.2	19.1	19.5	17.8	14.9	13.3
75°	2154.4	344.6	44.3	35.6	27.3	18.6	17.4	17.4	17.0	14.1	12.4
77.5°	1036.6	148.7	34.0	28.2	22.0	14.1	15.7	15.7	16.2	12.8	10.4
80°	294.1	44.7	21.1	19.1	16.2	9.5	12.4	12.0	10.8	7.5	4.6
82.5°	52.6	17.4	9.5	9.9	9.1	3.7	7.0	6.6	5.4	2.9	0.4
85°	14.5	6.6	5.4	5.8	4.6	1.2	2.9	3.7	2.9	1.7	0.0
87.5°	3.7	2.9	3.7	4.1	3.3	0.4	1.2	0.4	1.2	0.4	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)