

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: P368355

Luminaire Tested: **MSA-SA4B-730-U-T4FT-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368355  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-730-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13250 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

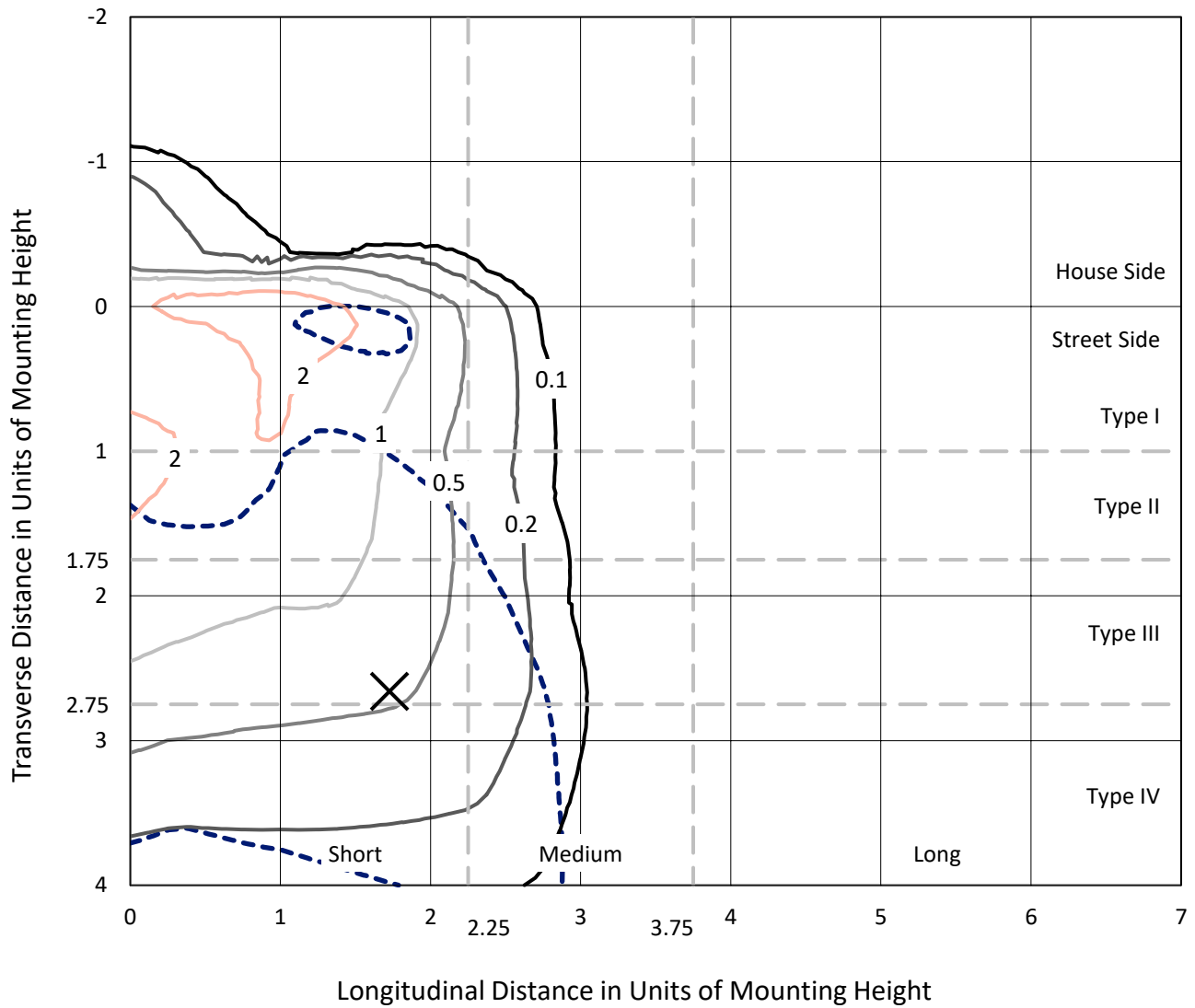
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

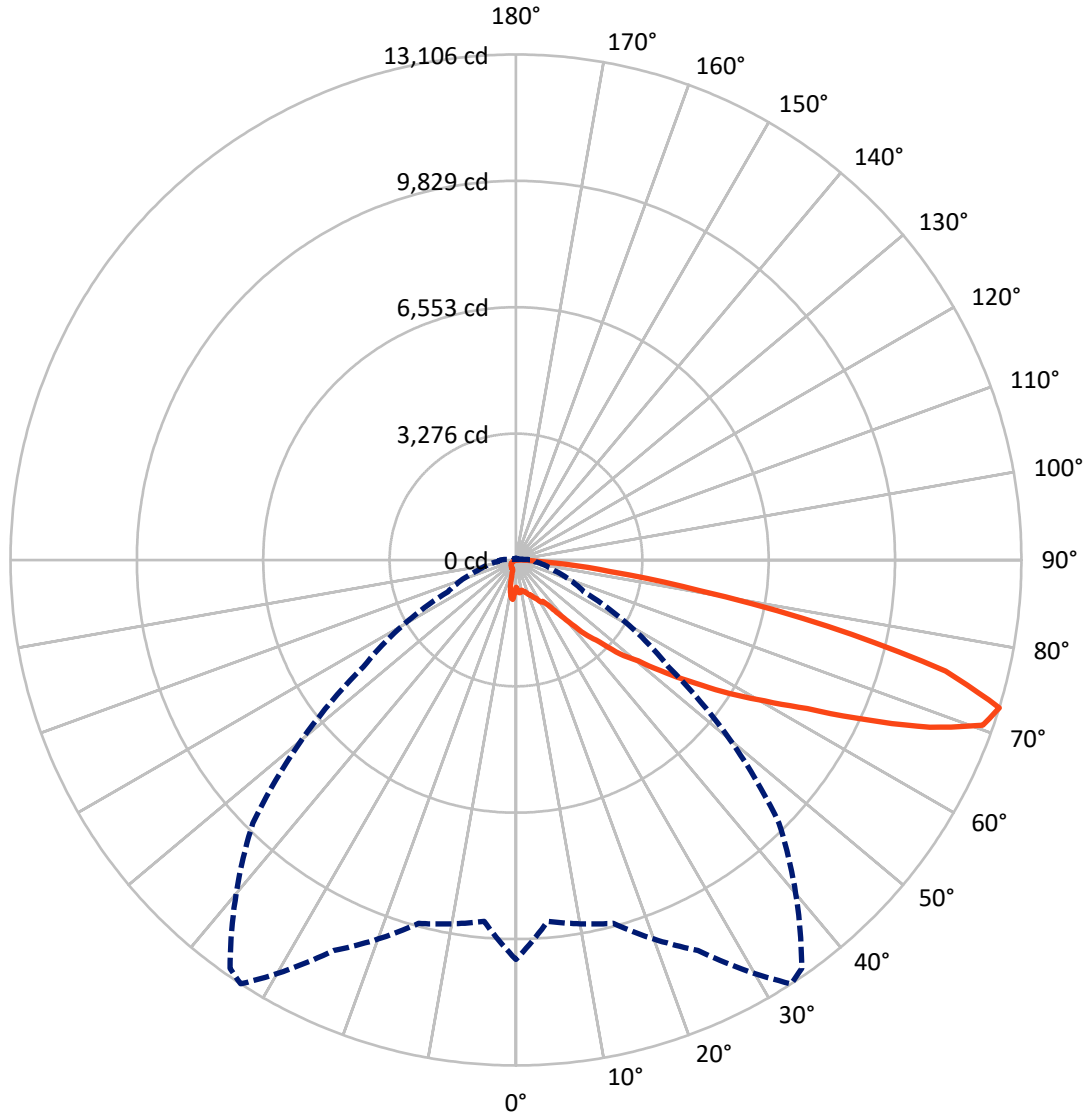
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral      - - - Horizontal Cone Through 72.5-Deg Vertical

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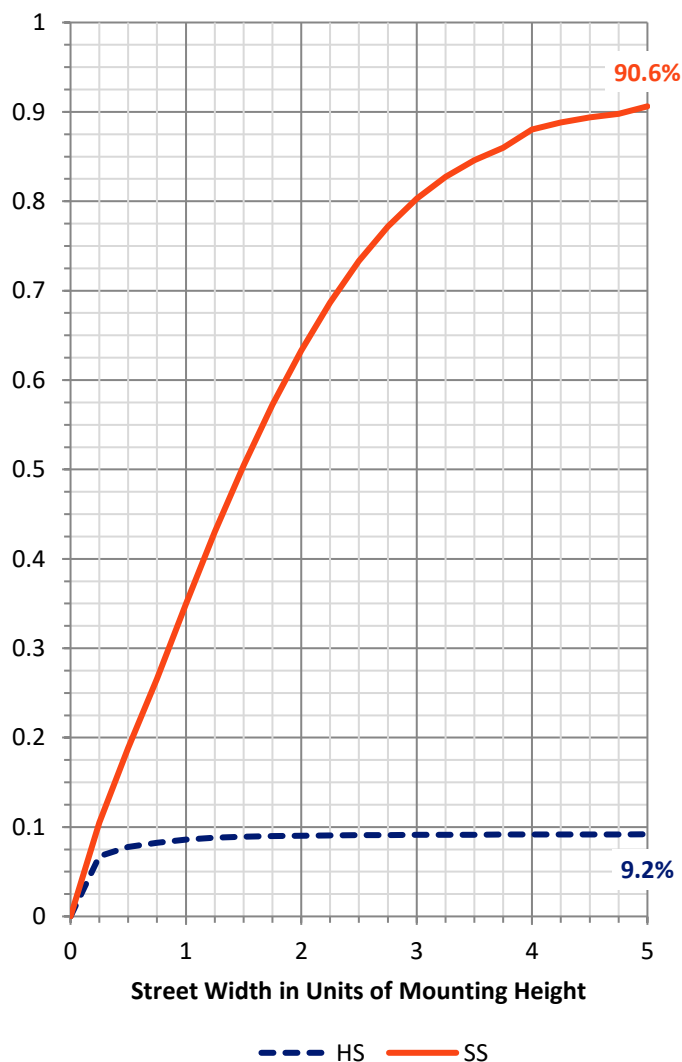
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1225.2	0.0	1225.2
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	12024.8	0.0	12024.8
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	13250.0	0.0	13250.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.2	0.7
10°-20°	271.8	2.1
20°-30°	461.0	3.5
30°-40°	843.6	6.4
40°-50°	1780.5	13.4
50°-60°	2978.9	22.5
60°-70°	3987.4	30.1
70°-80°	2604.6	19.7
80°-90°	230.9	1.7
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°	13250.0	100.0
0°-180°	13250.0	100.0

**Coefficient of Utilization**

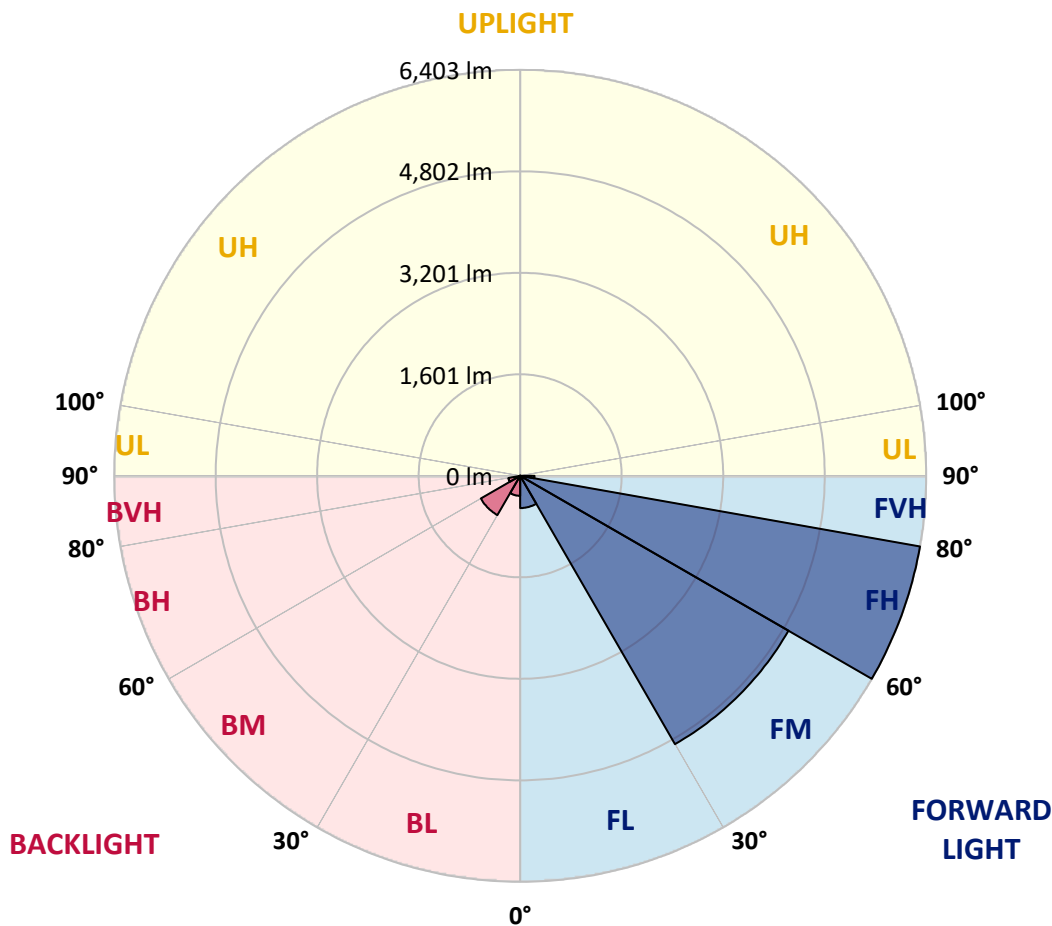


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	508.6	3.8			
FM (30°-60°)	4886.8	36.9			
FH (60°-80°)	6403.0	48.3			G3/7500
FVH (80°-90°)	226.5	1.7			G3/500
BL (0°-30°)	315.3	2.4	B1/500		
BM (30°-60°)	716.2	5.4	B1/1000		
BH (60°-80°)	189.1	1.4	B1/500		G1/500
BVH (80°-90°)	4.5	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	704.7	704.7	704.7	704.7	704.7	704.7	704.7	704.7	704.7	704.7	704.7
2.5°	840.1	807.7	760.7	763.6	771.7	778.3	796.0	788.6	774.6	773.9	840.1
5°	890.1	854.1	851.1	855.6	853.3	865.1	850.4	898.2	938.7	987.2	1065.2
7.5°	865.9	848.9	827.6	849.7	848.9	843.0	852.6	949.7	1047.6	1109.3	1238.1
10°	796.0	776.8	793.0	800.4	795.2	821.0	885.0	964.4	1081.4	1210.9	1273.4
12.5°	776.1	787.9	793.8	793.8	843.0	856.3	954.1	1029.2	1168.2	1270.5	1452.2
15°	853.3	876.2	835.7	826.9	842.3	849.7	958.5	1049.0	1227.1	1413.9	1566.2
17.5°	976.2	974.7	912.2	877.6	901.9	919.6	979.9	1085.8	1190.3	1526.5	1747.2
20°	1060.8	1062.3	949.7	877.6	957.8	968.1	1035.0	1119.6	1202.0	1583.1	1865.6
22.5°	1169.7	1130.7	1006.4	936.5	990.9	1000.5	1074.0	1141.0	1262.4	1576.5	2017.1
25°	1258.7	1233.7	1077.0	1028.4	1077.0	1063.7	1130.7	1231.5	1327.1	1681.7	2106.1
27.5°	1397.0	1354.3	1127.0	1135.8	1132.9	1142.5	1157.9	1312.4	1441.1	1686.8	2312.1
30°	1525.7	1500.7	1238.8	1238.8	1267.5	1249.1	1260.2	1447.0	1551.5	1806.0	2543.9
32.5°	1658.9	1660.3	1370.5	1300.6	1277.8	1353.6	1427.9	1512.5	1684.6	2010.5	2898.4
35°	2011.2	1981.8	1622.8	1448.5	1430.1	1425.7	1544.9	1773.6	1920.8	2276.8	3375.9
37.5°	2721.1	2618.9	2165.7	1783.9	1714.8	1691.2	1826.6	2061.3	2207.7	2668.2	4165.2
40°	3449.4	3261.8	2758.7	2328.3	2103.9	2002.4	2159.8	2359.2	2619.6	3100.7	4895.7
42.5°	4088.7	3857.0	3205.2	2915.4	2623.3	2579.2	2431.3	2755.7	3208.1	3730.4	5611.5
45°	4711.8	4255.7	3602.4	3372.9	3018.3	3043.4	2993.3	3274.3	3819.5	4420.5	6246.3
47.5°	5140.7	4730.9	4089.4	3791.5	3649.5	3503.1	3900.4	4192.4	4363.8	4858.9	6795.1
50°	5602.7	5187.8	4508.0	4299.8	4113.0	4260.8	4776.5	4815.5	4801.5	5267.9	7168.8
52.5°	6199.3	5710.1	4988.4	4753.0	4858.9	5006.1	5601.2	5608.5	5190.7	5612.2	7438.1
55°	6751.0	6208.8	5628.4	5406.2	5627.7	5752.0	6411.9	6169.8	5417.3	5846.2	7570.5
57.5°	7528.6	6901.1	6479.5	6088.2	6536.9	6417.8	7124.7	6765.0	5671.8	6001.4	7522.0
60°	8511.4	7772.8	7350.5	6936.4	7417.5	7498.4	7820.6	7062.2	5770.4	6052.1	7229.9
62.5°	9511.1	8768.1	8212.7	7931.7	8477.6	8743.9	8465.0	7210.0	5651.9	5952.8	6568.6
65°	10751.4	9800.2	9151.4	8986.6	9998.1	10389.5	9227.2	7246.1	5423.2	5406.2	5281.2
67.5°	11601.1	10674.9	10079.8	10355.6	11577.6	11609.2	9911.3	7257.1	4652.9	4232.9	3466.4
70°	11802.7	10811.0	10544.7	11356.9	12837.7	12439.7	10132.0	6698.0	3450.9	2512.2	1584.6
72.5°	10360.8	9405.9	9752.4	11167.8	13105.5	12923.0	9644.3	4832.4	1942.8	1004.9	486.3
75°	6355.2	5777.7	7316.0	9468.5	11504.0	11386.3	7524.2	2496.8	782.7	401.7	181.7
77.5°	2763.8	2566.7	3818.0	6282.4	8266.4	8161.2	4408.7	919.6	404.6	282.5	92.0
80°	914.4	887.2	1446.3	2974.9	4842.0	4749.3	1857.5	382.5	288.4	226.6	51.5
82.5°	217.0	215.5	504.7	1369.0	2466.6	2389.4	570.1	211.1	208.9	178.8	27.2
85°	54.4	55.9	139.8	559.8	1001.9	883.5	148.6	105.2	147.1	121.4	14.0
87.5°	0.0	0.0	36.0	80.2	151.5	94.9	16.2	28.0	41.2	43.4	7.4
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°	704.7	704.7	704.7	704.7	704.7	704.7	704.7	704.7	704.7	704.7	704.7
2.5°	854.8	846.7	780.5	796.7	821.7	819.5	835.7	823.2	812.2	866.6	861.4
5°	1087.3	1043.1	1022.5	1051.2	1035.8	999.7	1029.9	1024.8	1015.9	1034.3	1048.3
7.5°	1261.6	1221.2	1202.8	1142.5	1054.9	985.8	996.8	971.0	946.8	975.5	1004.9
10°	1319.0	1296.9	1294.7	1177.0	1094.6	994.6	876.2	773.9	746.7	710.6	726.8
12.5°	1475.0	1488.2	1405.1	1267.5	1108.6	916.6	706.2	561.3	502.4	464.2	466.4
15°	1603.0	1649.3	1528.7	1281.5	975.5	698.9	470.1	339.9	303.1	293.5	290.6
17.5°	1793.5	1838.4	1566.9	1182.2	786.4	473.8	302.3	264.8	267.0	273.7	272.2
20°	1934.7	1928.1	1533.8	1006.4	579.7	310.4	253.1	247.9	259.7	278.8	274.4
22.5°	2070.8	2025.2	1513.2	843.8	375.2	249.4	244.2	243.5	254.5	272.9	278.1
25°	2167.9	2175.3	1478.6	660.6	272.9	231.7	236.1	242.8	253.8	273.7	270.7
27.5°	2446.0	2240.0	1334.5	479.6	230.3	222.2	233.2	246.4	250.1	275.1	275.9
30°	2626.2	2484.3	1240.3	322.9	212.6	205.2	227.3	245.0	249.4	281.8	284.0
32.5°	2940.4	2589.5	1131.4	239.8	197.9	200.1	214.1	237.6	258.2	292.8	294.3
35°	3331.0	2927.1	934.3	215.5	192.7	189.1	195.7	222.9	256.7	294.3	301.6
37.5°	4074.7	3129.4	740.8	208.9	192.7	186.1	192.7	208.9	252.3	309.0	324.4
40°	4572.8	3541.4	534.1	207.5	189.1	183.2	185.4	201.6	239.8	300.1	322.9
42.5°	5186.3	3715.0	393.6	203.8	185.4	176.6	178.0	198.6	227.3	281.8	298.7
45°	5688.7	3841.5	309.7	202.3	176.6	173.6	176.6	196.4	215.5	242.0	257.5
47.5°	6070.5	3988.7	248.6	192.7	174.3	173.6	169.9	183.9	195.7	202.3	212.6
50°	6350.1	3955.6	206.0	178.0	167.0	171.4	164.8	167.0	169.9	166.3	178.0
52.5°	6521.5	3836.4	171.4	160.4	158.2	161.8	153.7	147.1	142.0	139.0	146.4
55°	6584.0	3597.3	145.7	137.6	142.7	144.2	137.6	125.8	117.0	112.6	118.4
57.5°	6465.6	3233.2	126.5	114.0	125.8	125.8	117.0	104.5	94.2	86.8	92.7
60°	6165.4	2830.8	112.6	94.9	107.4	108.1	97.8	84.6	76.5	69.2	72.8
62.5°	5606.3	2392.3	98.6	82.4	92.7	93.4	80.9	68.4	62.5	54.4	57.4
65°	4488.2	1829.5	83.9	72.8	80.2	78.0	66.9	58.1	50.8	43.4	44.9
67.5°	2913.1	1129.2	72.8	66.2	67.7	65.5	56.6	50.8	42.7	36.8	37.5
70°	1304.3	486.3	64.0	59.6	58.9	55.2	47.8	47.1	41.9	36.8	36.8
72.5°	402.4	183.2	55.2	53.7	50.8	46.3	41.9	44.9	41.2	35.3	34.6
75°	158.9	83.9	45.6	45.6	44.1	38.3	37.5	40.5	38.3	32.4	30.9
77.5°	83.1	53.0	37.5	39.0	38.3	29.4	33.8	36.8	35.3	27.2	22.8
80°	49.3	32.4	28.0	31.6	30.9	20.6	25.7	23.5	16.9	8.1	2.2
82.5°	27.2	14.7	12.5	18.4	18.4	7.4	13.2	11.8	6.6	0.0	0.0
85°	13.2	10.3	9.6	10.3	7.4	2.2	6.6	6.6	3.7	0.0	0.0
87.5°	6.6	5.9	4.4	3.7	2.9	0.0	2.2	2.9	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)