

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: P368451

Luminaire Tested: **MSA-SA4C-727-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368451
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-727-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16493 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G3

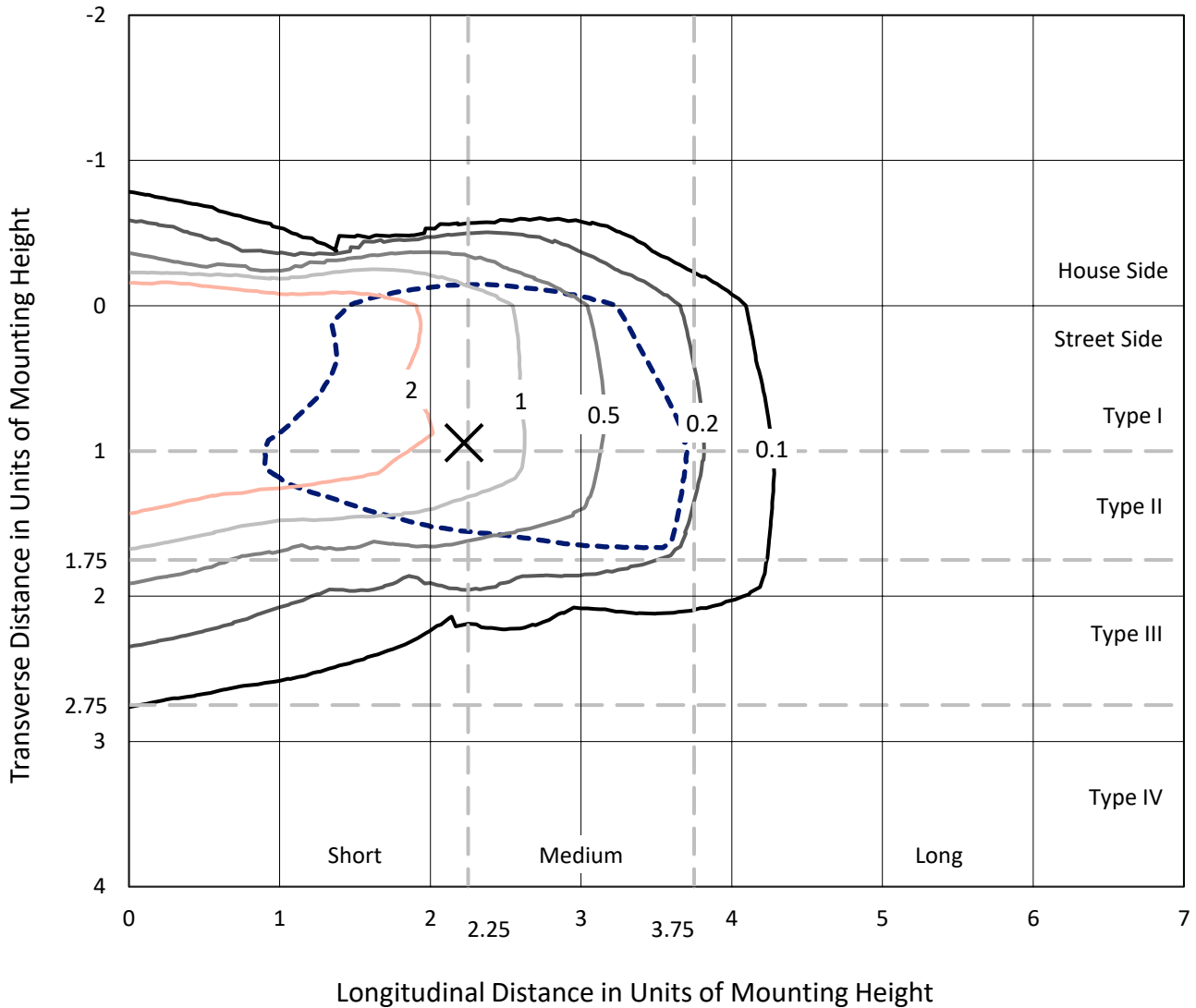
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368451
 CATALOG NUMBER: MSA-SA4C-727-U-SL2-HSS

Iso-Footcandle Lines of Horizontal Illumination

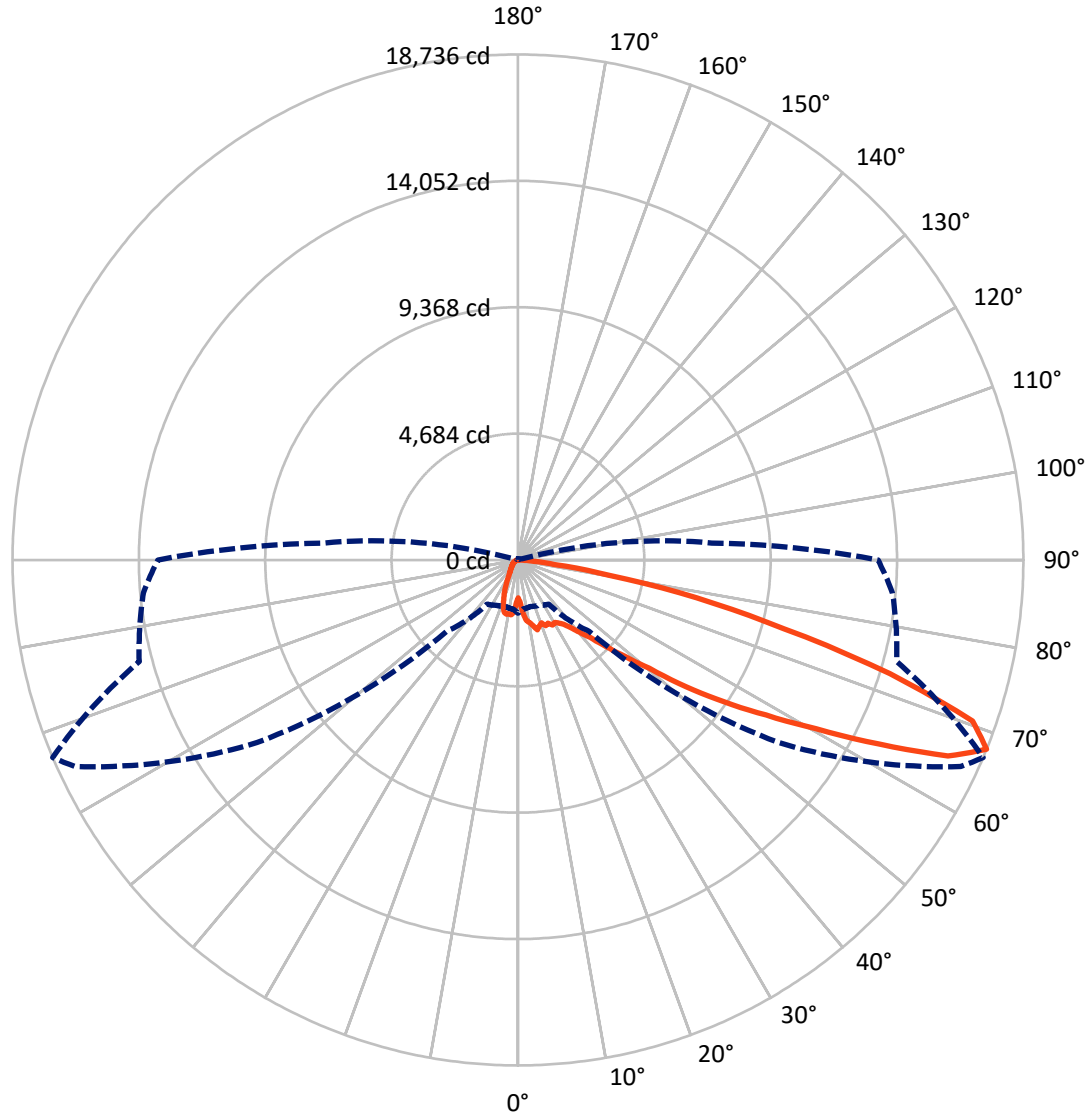
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.4 fc
 Type II - Short - N/A

REPORT NUMBER: P368451
CATALOG NUMBER: MSA-SA4C-727-U-SL2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P368451
 CATALOG NUMBER: MSA-SA4C-727-U-SL2-HSS

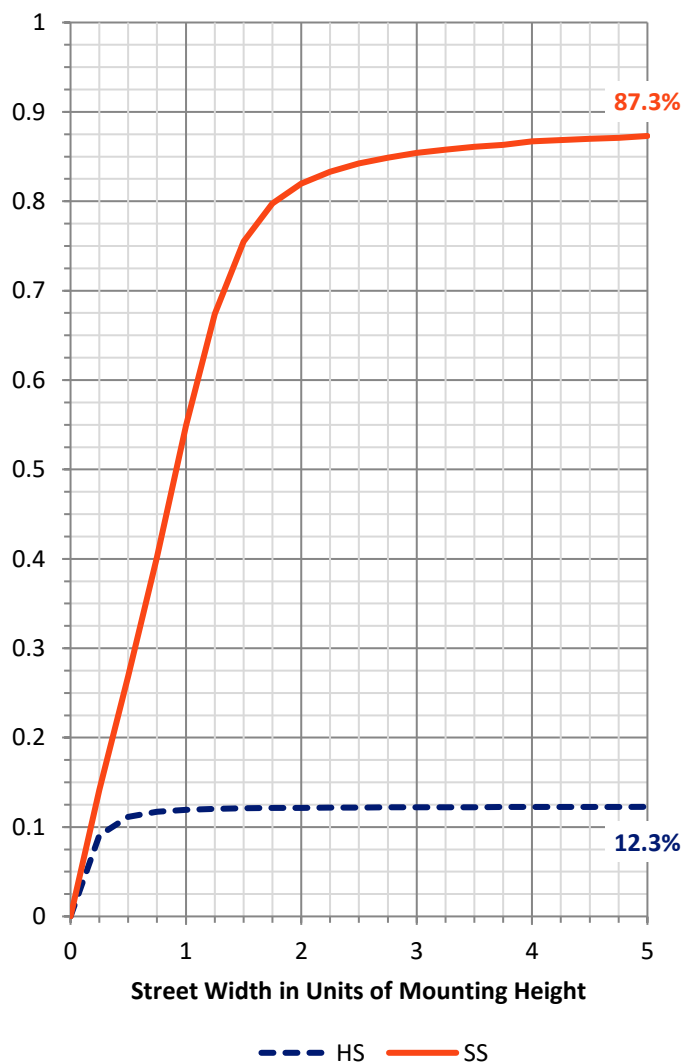
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2039.7	0.0	2039.7
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	14453.3	0.0	14453.3
	% Fixture	87.6	0.0	87.6
Total	Lumens	16493.0	0.0	16493.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.3	1.1
10°-20°	521.7	3.2
20°-30°	817.7	5.0
30°-40°	1318.4	8.0
40°-50°	2422.6	14.7
50°-60°	4091.4	24.8
60°-70°	4523.2	27.4
70°-80°	2367.4	14.4
80°-90°	254.2	1.5
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°	16493.0	100.0
0°-180°	16493.0	100.0

Coefficient of Utilization

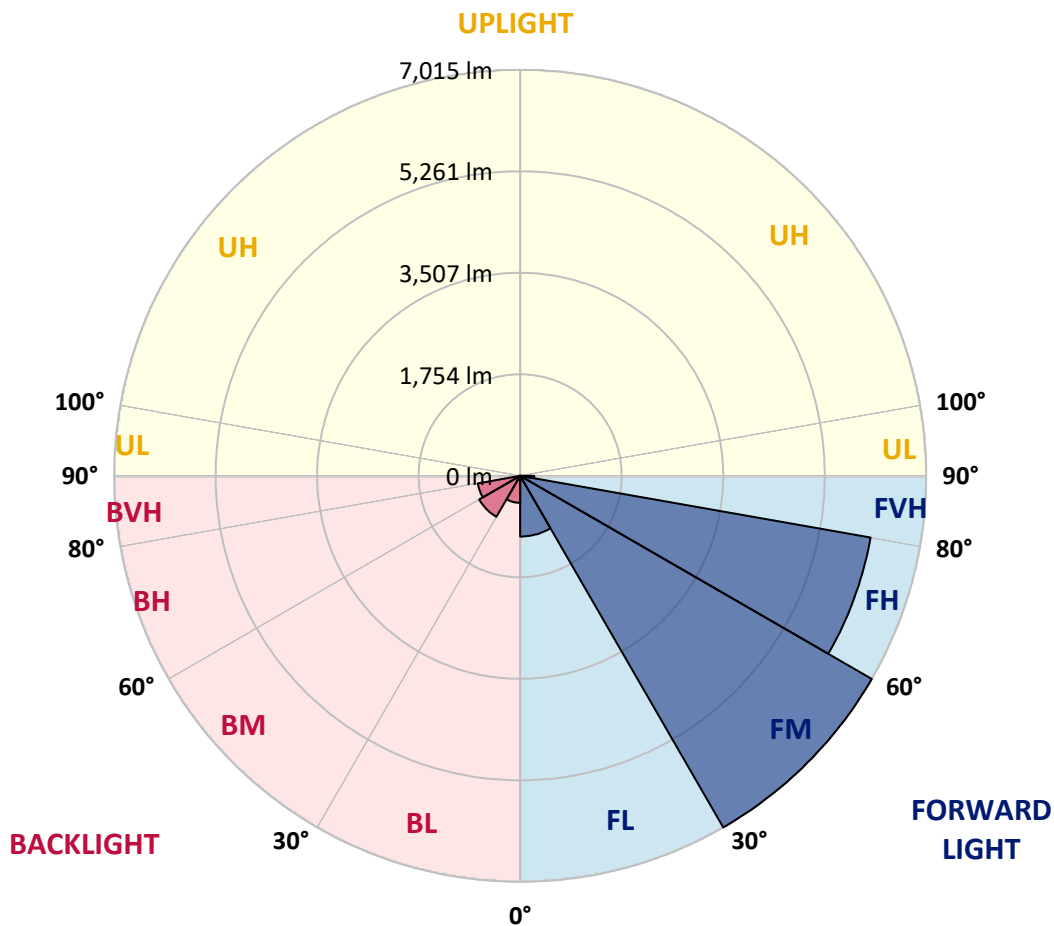


REPORT NUMBER: P368451
 CATALOG NUMBER: MSA-SA4C-727-U-SL2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1048.7	6.4			
FM (30°-60°)	7014.5	42.5			
FH (60°-80°)	6146.7	37.3			G3/7500
FVH (80°-90°)	243.4	1.5			G3/500
BL (0°-30°)	467.0	2.8	B1/500		
BM (30°-60°)	817.9	5.0	B1/1000		
BH (60°-80°)	744.0	4.5	B2/1000		G2/1000
BVH (80°-90°)	10.8	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3
 Type II Short





REPORT NUMBER: P368451

CATALOG NUMBER: MSA-SA4C-727-U-SL2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7
2.5°	1658.2	1602.2	1506.8	1534.4	1589.6	1635.7	1613.9	1571.2	1572.1	1528.6	1685.0
5°	1929.3	1854.0	1798.8	1818.0	1815.5	1813.9	1916.8	1956.1	1972.8	2044.8	2151.0
7.5°	2007.1	1980.4	1922.6	1940.2	1882.5	1886.7	2067.4	2238.0	2264.8	2309.2	2498.2
10°	1977.0	1925.1	1946.1	1946.1	1946.9	2040.6	2161.9	2325.1	2357.7	2528.4	2548.4
12.5°	1944.4	1946.9	2029.7	2014.7	2128.4	2296.6	2337.6	2520.8	2504.9	2653.0	2873.1
15°	2065.7	2129.3	2075.7	2096.7	2107.5	2305.0	2371.1	2614.5	2684.8	2872.2	3015.3
17.5°	2274.0	2282.4	2171.1	2141.0	2219.6	2275.7	2408.7	2525.9	2572.7	3064.7	3267.1
20°	2311.7	2365.2	2252.3	2078.2	2244.7	2321.7	2414.6	2470.6	2490.7	3124.1	3409.4
22.5°	2538.4	2479.0	2298.3	2166.1	2213.8	2297.4	2355.2	2524.2	2644.7	3012.0	3545.7
25°	2654.7	2638.8	2466.5	2353.5	2305.0	2298.3	2430.5	2558.5	2597.0	3128.2	3579.2
27.5°	2933.3	2897.3	2563.5	2549.3	2389.5	2248.9	2433.0	2663.1	2735.0	3018.6	3704.7
30°	3312.3	3298.9	2854.7	2845.5	2591.1	2338.4	2568.5	2727.5	2684.0	3074.7	3788.4
32.5°	3693.8	3802.6	3348.3	3088.9	2898.2	2667.3	2530.0	2707.4	2785.2	3211.1	3942.3
35°	4154.8	4233.5	3770.8	3582.5	3158.4	2821.2	2785.2	2899.0	2932.5	3373.4	4117.2
37.5°	4961.4	4842.5	4448.5	4128.0	3905.5	3370.9	3193.5	3103.1	3181.0	3593.4	4474.4
40°	5557.1	5481.8	4996.5	4804.9	4292.9	3980.0	3516.5	3432.0	3519.0	3819.3	4722.9
42.5°	6275.7	6119.3	5662.5	5532.8	5005.7	4402.5	3932.3	3961.6	3907.2	4265.3	5158.8
45°	6925.8	6572.7	6318.4	6347.7	6066.6	5251.7	4625.9	4611.6	4566.5	4911.2	5617.3
47.5°	7363.4	7054.7	6807.0	6725.9	6692.4	6745.1	5628.2	5375.5	5342.0	5589.7	6339.3
50°	7598.5	7260.5	6954.3	6971.0	7650.4	8161.6	6662.3	6303.3	6315.9	6574.4	7326.6
52.5°	7440.4	7058.0	6735.1	7048.8	8393.3	9106.1	8374.1	7515.7	7806.8	7740.7	8651.0
55°	6710.0	6377.8	6148.6	6710.0	8474.5	10122.7	10481.6	9340.4	9275.1	9124.5	10001.4
57.5°	5480.9	5194.8	5053.4	5645.7	7586.8	10941.8	12598.3	11402.7	10846.4	10215.5	11122.5
60°	4083.7	3872.9	3725.6	4038.5	5977.9	10146.1	13984.7	13346.3	12702.1	11267.2	12129.8
62.5°	3024.5	2853.0	2696.5	2725.0	4116.3	8726.3	14516.8	15405.3	15035.5	12377.4	13080.2
65°	2413.7	2257.3	2147.7	2084.9	2549.3	6565.2	13776.3	17092.8	17519.5	13423.3	13766.3
67.5°	1971.2	1839.0	1784.6	1856.5	1999.6	3742.4	11798.5	18116.9	18736.0	14532.7	13935.3
70°	1603.9	1495.1	1489.2	1683.3	1841.5	2281.6	8678.6	17409.9	17875.9	14721.8	12922.1
72.5°	1117.8	1070.1	1146.2	1421.5	1824.7	1900.0	4983.9	14407.2	14423.9	13002.4	10628.8
75°	632.5	625.0	745.5	1133.7	1777.1	1880.8	2778.5	10181.2	10188.8	9834.0	7363.4
77.5°	348.0	325.5	434.2	766.4	1526.1	1837.3	1792.1	6951.8	6773.5	5472.5	3363.3
80°	160.6	151.4	235.1	491.1	1116.1	1737.7	1436.5	3821.0	3445.3	1782.9	820.8
82.5°	66.1	62.7	107.9	315.4	705.3	1399.7	1210.6	1695.1	1360.4	338.8	253.5
85°	11.7	12.5	44.3	190.8	394.9	645.1	981.4	804.9	591.5	93.7	138.9
87.5°	0.0	0.0	9.2	46.0	95.4	176.5	398.2	225.1	154.8	27.6	41.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P368451
 CATALOG NUMBER: MSA-SA4C-727-U-SL2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7
2.5°	1716.0	1701.8	1557.8	1564.5	1574.6	1565.4	1563.7	1523.5	1486.7	1608.0	1606.4
5°	2170.3	2069.0	1969.5	1931.0	1848.2	1739.4	1740.2	1705.9	1670.8	1720.2	1720.2
7.5°	2494.1	2354.3	2228.0	2002.9	1783.7	1585.5	1567.9	1521.0	1467.5	1531.9	1544.5
10°	2569.4	2448.0	2284.9	1954.4	1746.9	1553.7	1341.2	1166.3	1085.1	1047.5	1040.8
12.5°	2801.1	2710.8	2346.0	1980.4	1681.7	1354.5	1006.5	799.0	657.6	646.7	631.7
15°	2955.9	2892.3	2406.2	1915.9	1405.6	973.9	632.5	485.3	428.4	423.3	415.8
17.5°	3196.0	3085.6	2348.5	1711.0	1099.4	642.5	425.0	383.2	389.9	404.9	393.2
20°	3293.9	3078.0	2223.0	1413.9	772.2	430.9	369.0	346.4	363.9	378.2	371.5
22.5°	3394.3	3099.8	2111.7	1165.5	504.5	356.4	328.8	317.1	318.8	333.0	333.8
25°	3393.5	3160.0	1982.9	907.8	375.7	317.1	297.0	282.0	276.1	286.1	283.6
27.5°	3558.3	3090.6	1747.8	673.5	330.5	283.6	264.4	246.0	225.1	235.1	235.1
30°	3559.1	3203.5	1583.8	483.6	302.9	252.7	235.9	207.5	183.2	191.6	192.4
32.5°	3653.7	3105.7	1432.4	369.8	281.1	234.3	197.5	171.5	157.3	162.3	162.3
35°	3761.6	3189.3	1199.8	326.3	259.4	208.3	169.0	148.1	137.2	141.4	141.4
37.5°	4118.0	3171.8	1038.3	303.7	245.1	188.2	153.9	130.5	125.5	128.0	131.4
40°	4246.9	3296.4	819.1	290.3	221.7	169.8	135.5	118.0	111.3	112.9	113.8
42.5°	4574.8	3324.0	654.3	279.4	200.8	147.3	120.5	107.9	99.6	99.6	102.1
45°	4937.1	3393.5	520.4	270.2	183.2	132.2	108.8	98.7	86.2	84.5	87.8
47.5°	5461.7	3659.5	424.2	251.8	162.3	123.0	100.4	85.3	75.3	72.0	75.3
50°	6339.3	4111.3	374.8	229.2	147.3	115.5	88.7	72.8	65.3	61.1	63.6
52.5°	7577.6	4891.9	348.9	208.3	133.9	103.7	79.5	63.6	56.1	52.7	54.4
55°	8953.0	5787.1	336.3	187.4	122.2	91.2	69.4	56.1	49.4	45.2	46.0
57.5°	10224.7	6628.8	323.8	167.3	110.4	81.2	61.1	49.4	42.7	38.5	39.3
60°	11478.0	7300.6	293.7	143.9	99.6	72.8	53.5	42.7	38.5	33.5	33.5
62.5°	12586.6	7702.2	250.2	124.7	89.5	64.4	47.7	38.5	35.1	30.1	30.1
65°	13341.3	7720.6	201.6	107.1	78.6	55.2	41.8	36.0	32.6	26.8	25.9
67.5°	13352.2	7218.6	161.5	95.4	69.4	48.5	37.6	34.3	30.1	25.1	23.4
70°	11950.8	5963.7	134.7	83.7	60.2	42.7	32.6	32.6	29.3	24.3	21.8
72.5°	9559.6	4557.3	112.9	72.8	53.5	36.8	30.1	31.0	28.4	24.3	21.8
75°	6425.5	2613.7	93.7	61.9	46.9	31.0	29.3	30.1	29.3	24.3	20.9
77.5°	2959.2	832.5	72.8	51.0	40.2	25.9	28.4	28.4	26.8	21.8	18.4
80°	666.8	205.0	52.7	37.6	32.6	19.2	25.9	23.4	20.9	15.1	10.9
82.5°	242.6	62.7	31.8	23.4	20.1	7.5	16.7	16.7	15.1	10.9	6.7
85°	138.9	32.6	17.6	15.1	10.9	3.3	9.2	10.0	8.4	7.5	3.3
87.5°	45.2	7.5	8.4	9.2	8.4	1.7	3.3	3.3	2.5	1.7	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)