

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: P597100

Luminaire Tested: **MSA-SA4A-835-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597100
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-835-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12450 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

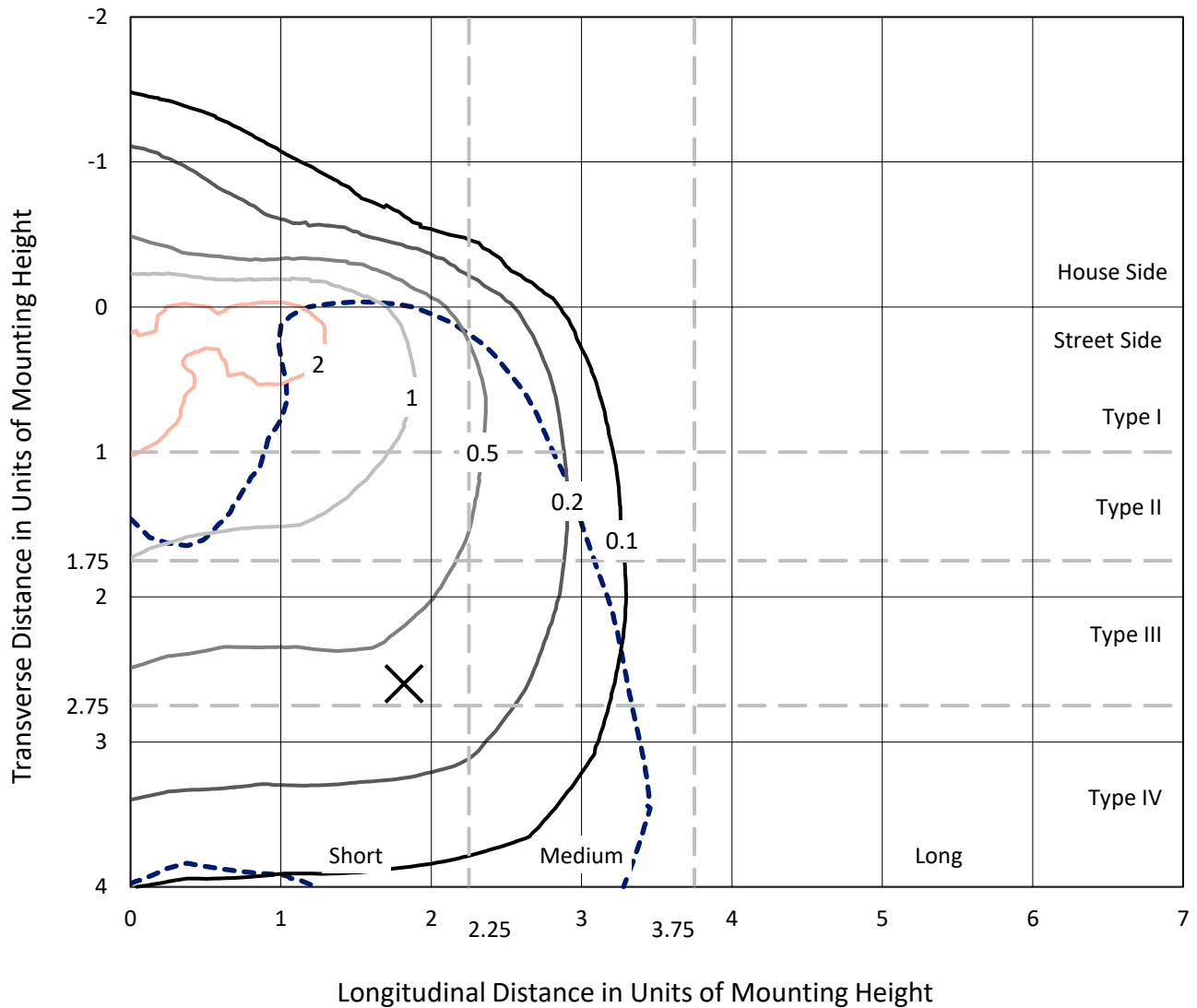
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

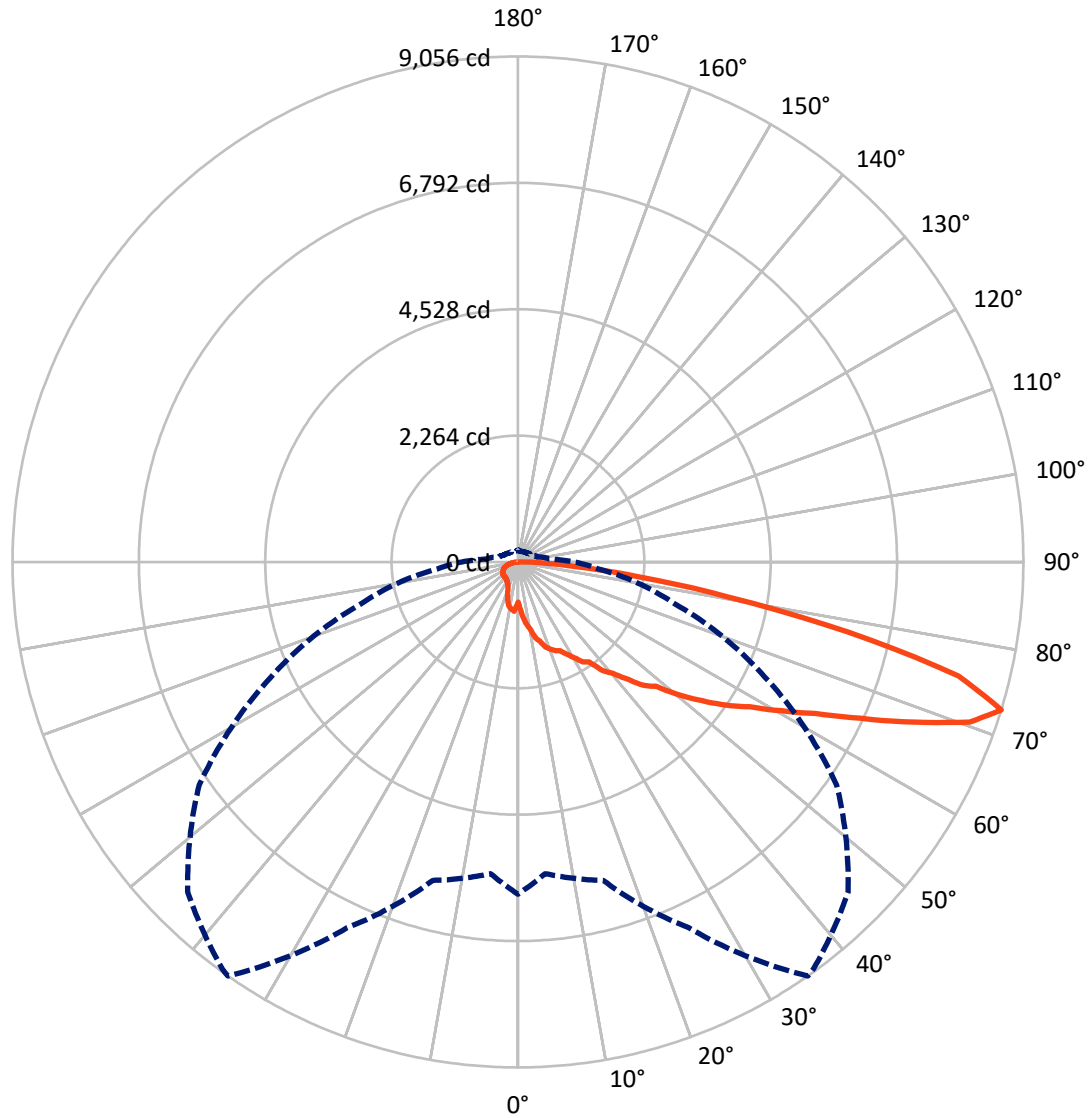
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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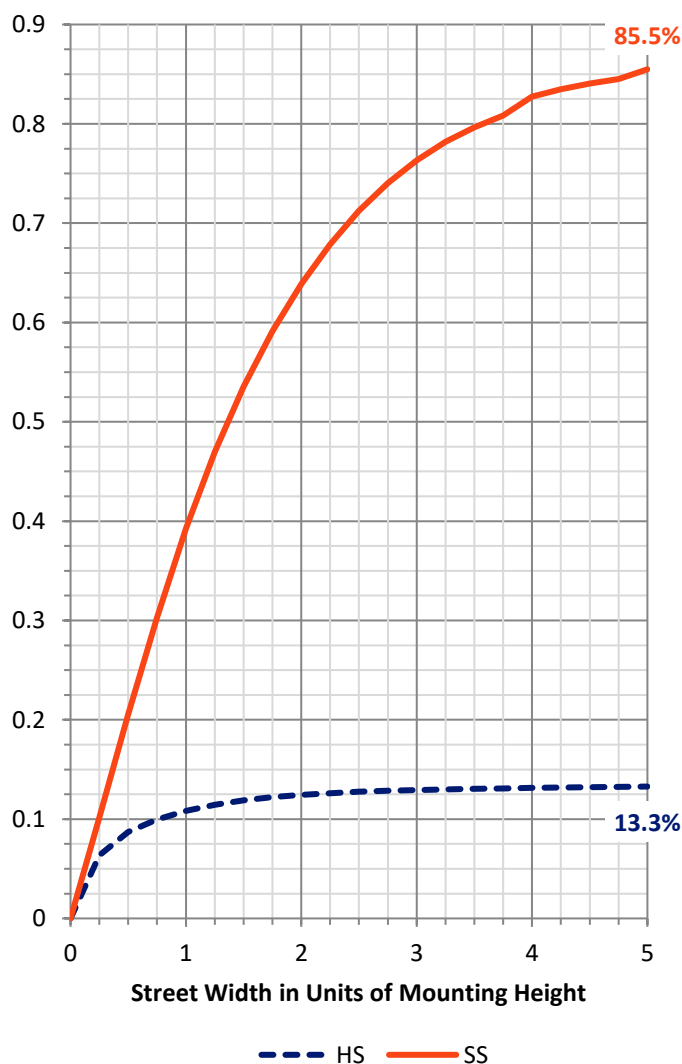
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1670.7	0.0	1670.7
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	10779.2	0.0	10779.2
	% Fixture	86.6	0.0	86.6
Total	Lumens	12450.0	0.0	12450.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.6	0.8
10°-20°	336.8	2.7
20°-30°	585.3	4.7
30°-40°	978.2	7.9
40°-50°	1697.8	13.6
50°-60°	2566.6	20.6
60°-70°	3325.0	26.7
70°-80°	2453.5	19.7
80°-90°	411.2	3.3
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°	12450.0	100.0
0°-180°	12450.0	100.0

Coefficient of Utilization



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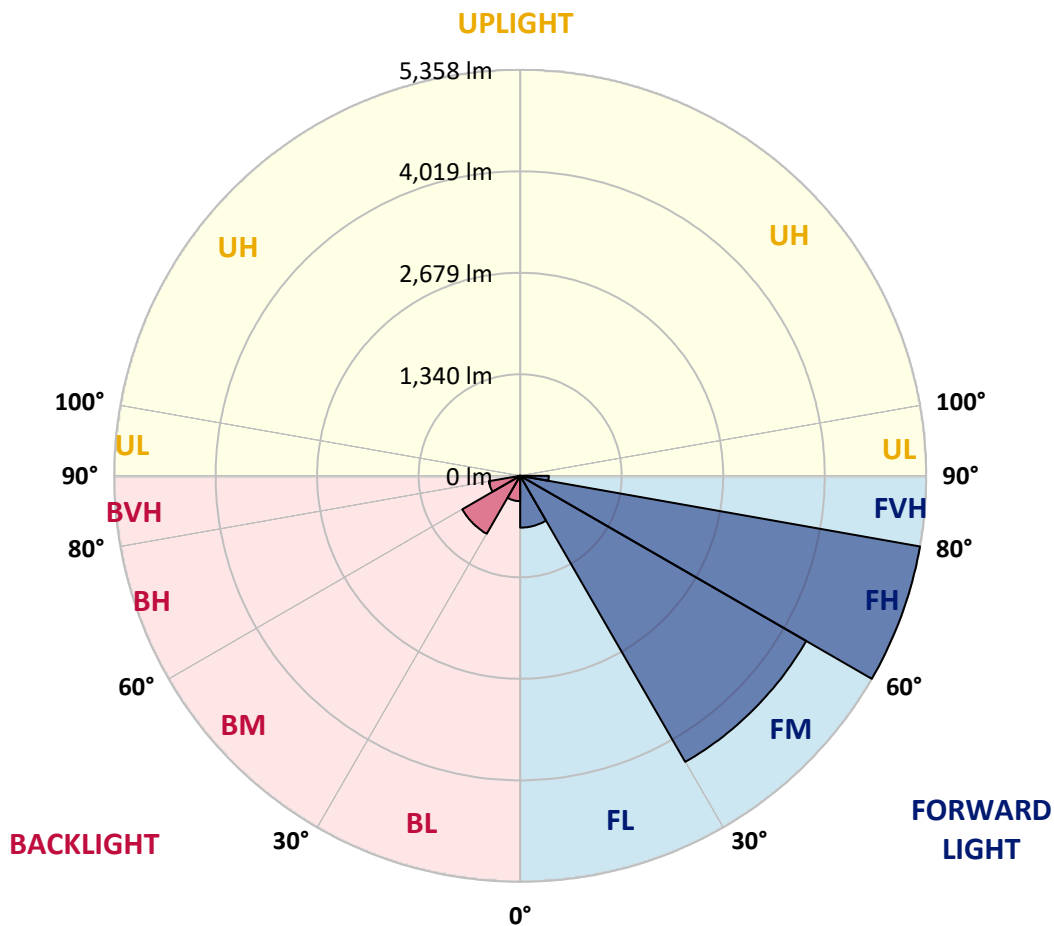
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	683.8	5.5			
FM (30°-60°)	4359.6	35.0			
FH (60°-80°)	5358.4	43.0			G3/7500
FVH (80°-90°)	377.5	3.0			G3/500
BL (0°-30°)	334.0	2.7	B1/500		
BM (30°-60°)	883.0	7.1	B1/1000		
BH (60°-80°)	420.1	3.4	B1/500		G1/500
BVH (80°-90°)	33.7	0.3			G1/100
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°	35°	36°	45°	55°	65°	75°	85°
0°	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5
2.5°	897.5	854.5	817.3	815.7	850.2	863.5	858.2	846.5	832.7	803.4	867.2
5°	1124.4	1062.8	1051.1	1037.3	1005.9	1014.4	963.4	1002.2	1014.4	1042.6	1085.1
7.5°	1258.3	1222.2	1194.0	1182.3	1128.1	1121.7	1084.0	1139.3	1162.7	1158.9	1222.2
10°	1310.9	1278.0	1280.1	1241.8	1224.3	1231.7	1236.0	1237.1	1251.4	1263.1	1231.2
12.5°	1338.0	1350.8	1397.5	1371.5	1393.8	1402.8	1447.5	1401.8	1403.4	1343.3	1376.3
15°	1474.6	1506.5	1479.4	1478.3	1471.4	1486.3	1524.5	1493.7	1517.6	1498.5	1456.0
17.5°	1639.3	1648.9	1596.8	1575.5	1603.2	1598.4	1588.8	1593.6	1534.1	1644.6	1592.6
20°	1689.8	1727.5	1659.0	1575.5	1666.9	1679.2	1677.0	1656.3	1554.3	1713.7	1663.2
22.5°	1836.5	1785.4	1731.2	1678.1	1724.9	1731.8	1720.1	1670.7	1636.7	1697.2	1737.1
25°	1902.9	1890.7	1821.6	1815.2	1763.7	1739.2	1759.4	1745.1	1711.6	1819.5	1775.3
27.5°	2054.9	2040.5	1881.6	1947.0	1872.1	1865.7	1758.9	1806.7	1840.2	1832.2	1898.1
30°	2227.0	2243.5	2011.3	2076.6	1990.0	1978.3	1871.0	1931.6	1954.4	1961.9	2044.2
32.5°	2418.3	2463.5	2232.9	2179.2	2133.0	2140.9	2050.1	1939.5	2028.3	2202.0	2237.6
35°	2625.6	2644.2	2402.4	2321.6	2201.0	2192.5	2194.1	2207.9	2297.7	2495.9	2523.5
37.5°	3008.7	2922.6	2710.6	2506.0	2465.6	2386.4	2440.1	2482.6	2572.4	2876.4	2992.2
40°	3244.6	3180.9	2857.8	2739.3	2627.7	2635.1	2735.6	2735.0	2947.0	3260.6	3437.5
42.5°	3463.0	3393.4	3088.9	2969.9	2864.1	2890.2	2918.9	2969.4	3375.9	3881.2	3962.0
45°	3638.9	3486.4	3267.5	3240.9	3153.8	3119.2	3240.9	3321.7	3888.7	4383.4	4430.1
47.5°	3758.5	3633.1	3418.9	3395.5	3331.2	3415.7	3747.8	3799.9	4286.1	4887.6	4883.9
50°	3940.2	3768.6	3575.1	3562.9	3744.1	3789.3	4194.2	4188.9	4673.0	5306.4	5218.7
52.5°	4149.6	3933.3	3723.4	3854.6	4131.0	4153.3	4504.5	4647.5	5095.4	5710.2	5481.2
55°	4390.3	4148.5	3945.5	4120.9	4532.2	4466.3	4821.8	5170.9	5624.1	6135.9	5670.9
57.5°	4688.4	4395.1	4230.9	4497.6	4898.3	4956.7	5276.1	5715.5	6049.8	6400.5	5809.1
60°	5003.0	4658.6	4508.2	4762.2	5411.1	5478.0	5790.5	6168.3	6527.0	6649.7	5783.0
62.5°	5303.2	4930.7	4794.7	5108.2	5979.6	6145.4	6376.0	6616.8	6923.9	6710.3	5467.9
65°	5637.4	5264.4	5178.8	5649.1	6750.7	6915.4	7216.7	7144.4	7059.9	6495.6	4946.6
67.5°	5991.3	5612.5	5628.4	6276.7	7659.9	7688.0	8150.9	7670.5	6900.0	5927.0	4071.4
70°	6181.6	5793.7	5957.9	6945.7	8585.0	8544.6	8639.2	7811.8	6248.0	4685.2	2806.2
72.5°	5950.9	5605.0	5905.8	7227.3	9055.8	9012.2	8365.0	6972.8	4885.0	2913.6	1454.9
75°	5038.6	4704.9	5165.0	6442.5	8152.5	8192.8	7118.9	5185.2	2796.7	1171.7	604.2
77.5°	3423.7	3251.5	3645.8	4802.1	6055.6	6195.4	5281.9	3032.1	1174.4	485.2	365.6
80°	1809.4	1727.5	2018.7	2766.4	3834.5	3938.6	3105.9	1510.2	601.5	314.0	260.9
82.5°	983.1	948.5	1104.7	1422.5	2178.7	2269.5	1610.6	1003.2	405.4	196.6	159.4
85°	660.5	647.2	750.8	764.1	1030.3	1060.1	843.8	772.6	243.4	96.2	105.2
87.5°	330.5	317.2	395.3	349.1	393.2	393.8	386.8	493.1	61.6	31.9	19.1
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°	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5
2.5°	868.3	849.7	785.4	784.9	794.4	788.0	792.8	766.8	755.6	806.6	804.0
5°	1079.2	1023.4	969.8	951.2	929.4	882.1	884.8	885.3	877.3	907.6	909.7
7.5°	1203.0	1136.1	1086.7	987.8	910.3	849.7	857.7	866.7	857.7	898.0	912.9
10°	1221.1	1168.0	1109.0	999.0	947.5	892.7	837.5	788.6	782.7	764.1	770.0
12.5°	1328.5	1284.3	1161.1	1040.4	980.4	896.4	795.5	739.7	692.9	700.9	686.0
15°	1416.7	1385.3	1237.6	1079.8	936.3	832.1	724.8	648.3	606.3	601.5	586.6
17.5°	1536.2	1491.6	1244.5	1052.7	879.4	754.6	633.4	546.8	528.7	521.3	513.8
20°	1593.6	1513.4	1219.5	967.6	813.0	662.1	543.1	468.7	463.4	476.6	474.0
22.5°	1643.6	1531.4	1197.2	916.1	709.4	568.6	481.4	432.5	426.7	443.7	446.9
25°	1672.8	1583.0	1172.8	863.5	645.1	499.0	435.2	407.6	408.6	431.0	428.3
27.5°	1804.6	1601.1	1111.1	801.3	571.2	447.4	412.9	398.5	392.7	423.5	426.2
30°	1887.5	1719.0	1097.3	735.4	516.5	409.7	392.7	386.8	385.8	423.0	425.6
32.5°	2041.6	1758.3	1103.7	663.7	467.1	398.0	377.8	377.3	387.9	423.5	427.8
35°	2255.2	1924.1	1072.9	622.8	440.0	379.9	366.1	370.4	388.4	427.2	433.1
37.5°	2671.8	2080.4	1082.4	584.5	431.0	374.1	362.9	365.6	394.8	436.8	452.7
40°	3001.8	2363.6	1067.5	565.4	418.7	373.0	356.0	366.7	394.3	442.1	456.5
42.5°	3480.0	2589.4	1069.1	546.3	418.2	368.8	355.0	367.7	393.2	437.3	457.0
45°	3890.2	2791.9	1092.0	535.1	412.9	375.7	353.4	369.3	386.3	420.3	442.1
47.5°	4226.6	3017.7	1115.4	524.5	410.8	382.1	351.8	358.2	374.6	401.2	420.9
50°	4500.8	3176.6	1145.1	522.3	410.8	378.9	347.5	347.0	360.8	382.1	400.7
52.5°	4714.4	3288.7	1165.3	525.0	410.8	366.7	342.2	338.0	346.5	361.9	380.5
55°	4869.1	3323.3	1148.8	531.9	410.2	355.5	332.6	328.9	333.2	343.8	361.3
57.5°	4931.2	3232.4	1050.5	519.7	410.2	347.5	321.0	316.7	321.0	328.9	346.5
60°	4775.5	2940.1	908.7	488.3	402.3	336.9	307.7	305.0	311.4	318.3	335.3
62.5°	4385.0	2551.7	757.2	451.1	385.8	327.9	294.9	295.4	305.5	315.1	332.1
65°	3778.1	2082.0	631.3	413.4	365.1	313.5	281.6	285.4	299.7	312.5	329.5
67.5°	2973.1	1542.6	531.4	376.7	335.8	290.1	266.8	267.8	277.9	290.1	306.6
70°	1987.4	981.5	436.8	333.7	297.6	259.8	243.9	240.2	237.5	248.2	262.5
72.5°	1008.0	579.7	358.7	285.4	256.1	226.9	214.7	205.1	197.7	204.1	215.2
75°	528.2	405.4	289.6	237.0	211.5	192.9	183.9	171.1	165.8	169.5	177.5
77.5°	373.6	317.2	234.3	187.6	172.2	153.0	154.6	141.3	137.1	139.2	147.7
80°	286.9	251.3	180.1	141.9	132.8	114.2	119.6	111.6	106.3	105.2	111.6
82.5°	195.5	189.2	128.1	99.4	93.0	79.7	87.1	84.0	77.1	72.8	76.0
85°	131.8	125.4	78.1	57.4	54.7	41.4	53.1	51.0	45.2	38.8	39.3
87.5°	22.8	42.0	22.3	14.3	13.3	4.8	12.2	11.7	10.6	5.3	4.3
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)