

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: P368222

Luminaire Tested: **MSA-SA4A-730-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368222
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-730-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14099 lumens
Efficiency: N/A
Efficacy: 109.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

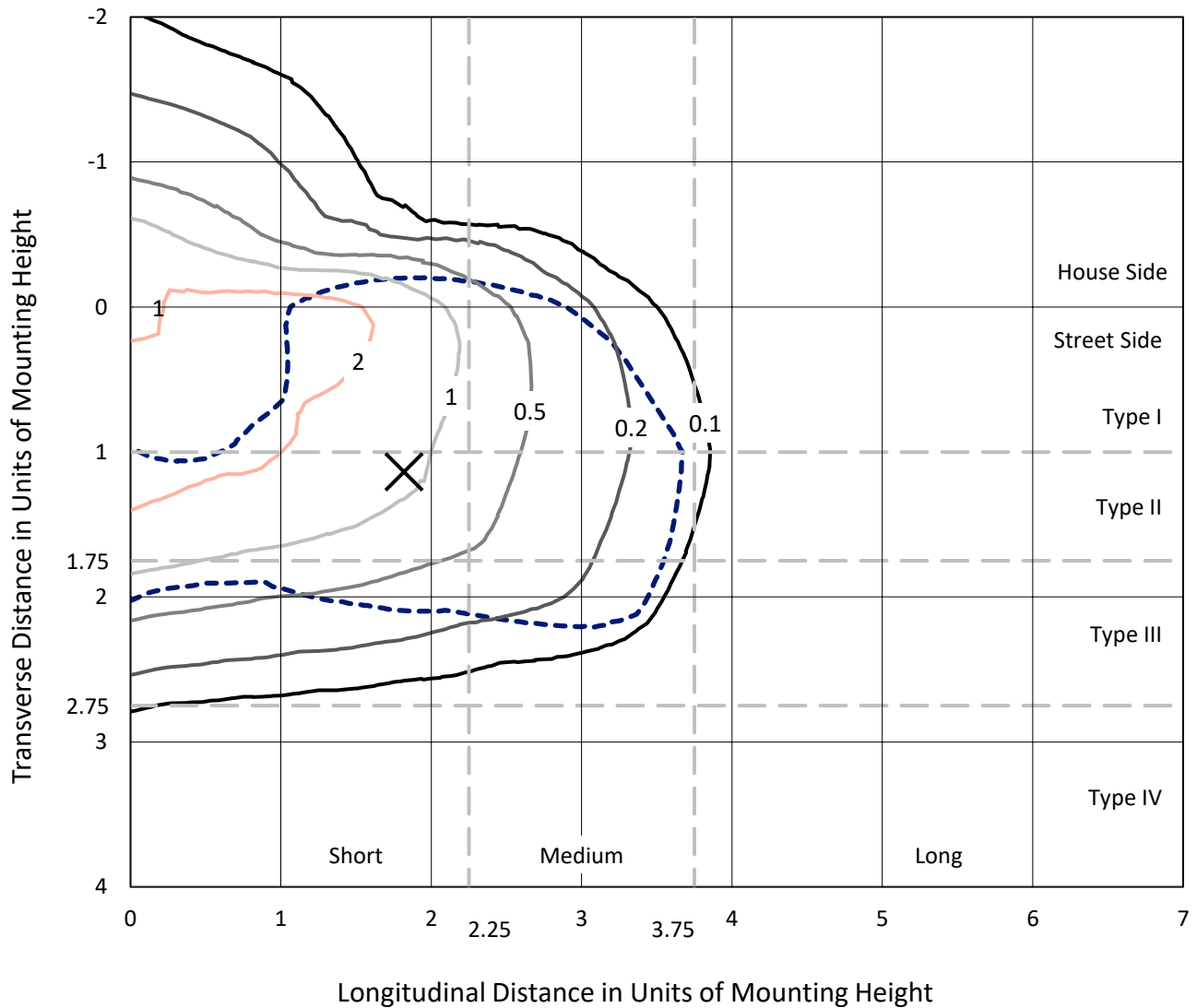
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

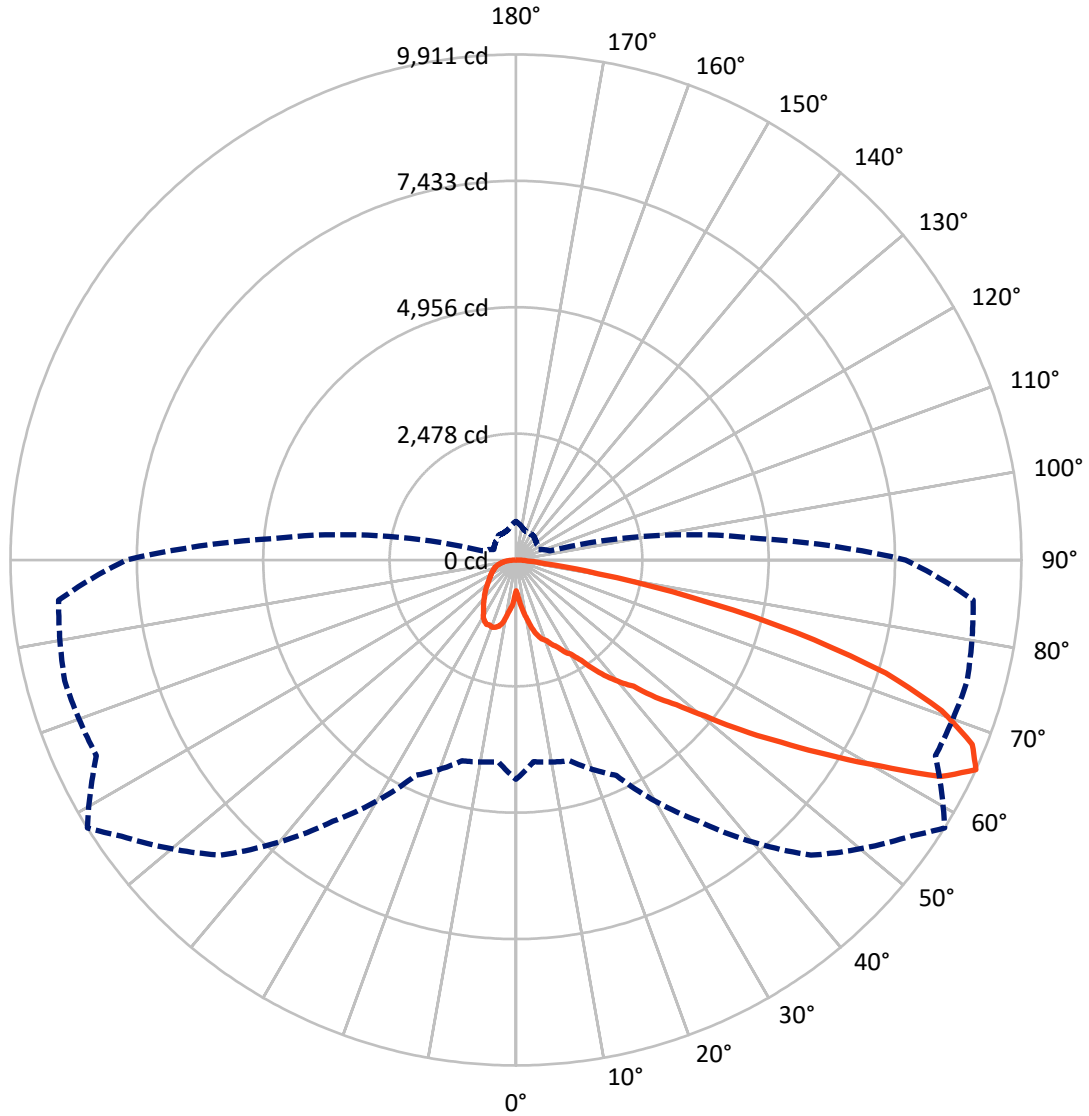
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 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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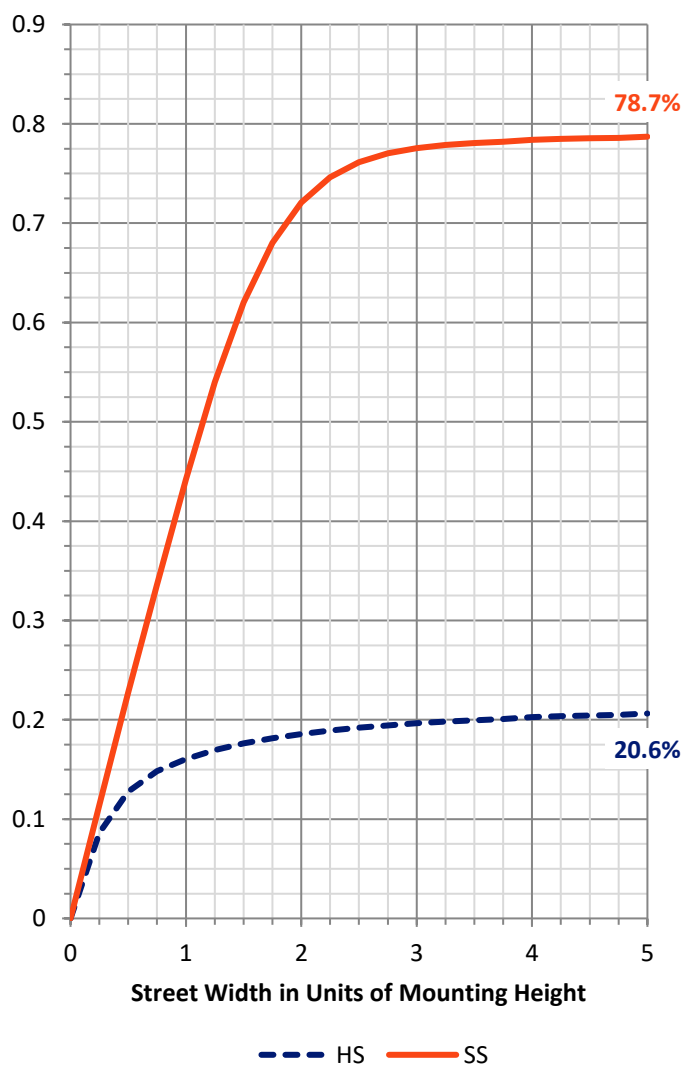
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2969.7	0.0	2969.7
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	11129.3	0.0	11129.3
	% Fixture	78.9	0.0	78.9
Total	Lumens	14099.0	0.0	14099.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.2	0.7
10°-20°	402.4	2.9
20°-30°	772.1	5.5
30°-40°	1274.7	9.0
40°-50°	2118.7	15.0
50°-60°	3499.0	24.8
60°-70°	3925.2	27.8
70°-80°	1784.7	12.7
80°-90°	230.2	1.6
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°	14099.0	100.0
0°-180°	14099.0	100.0

Coefficient of Utilization



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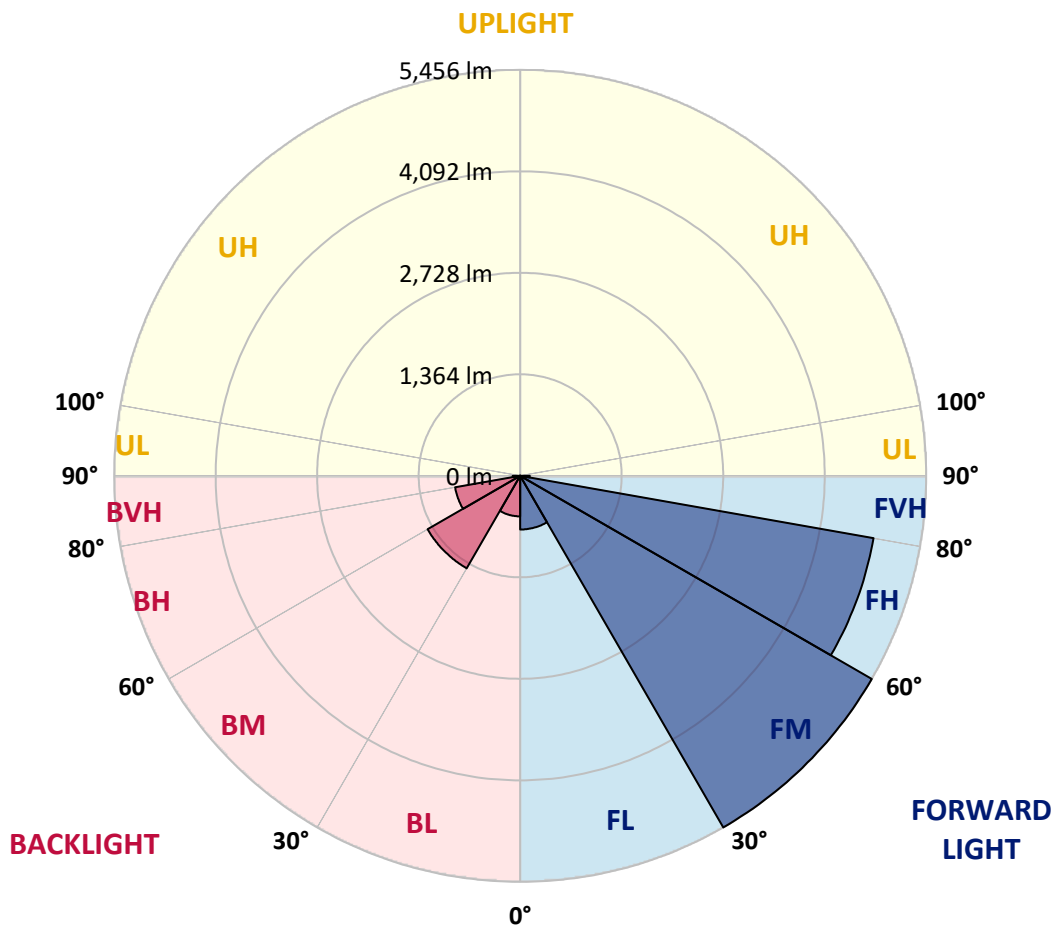
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	721.5	5.1			
FM (30°-60°)	5456.1	38.7			
FH (60°-80°)	4822.2	34.2			G2/5000
FVH (80°-90°)	129.6	0.9			G2/225
BL (0°-30°)	545.2	3.9	B2/1000		
BM (30°-60°)	1436.2	10.2	B2/2500		
BH (60°-80°)	887.7	6.3	B2/1000		G2/1000
BVH (80°-90°)	100.6	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	605.3	605.3	605.3	605.3	605.3	605.3	605.3	605.3	605.3	605.3	605.3
2.5°	722.8	701.1	664.6	673.5	694.6	706.3	699.3	689.9	677.6	675.2	729.2
5°	935.9	894.2	877.2	870.1	844.3	829.0	855.5	851.9	866.0	891.9	944.7
7.5°	1091.5	1062.1	1034.0	1031.0	981.1	963.5	998.7	1017.5	1042.8	1043.4	1115.0
10°	1174.9	1149.6	1149.0	1122.6	1118.5	1152.0	1152.6	1166.7	1169.6	1199.5	1185.4
12.5°	1265.3	1263.5	1295.8	1295.2	1332.8	1388.0	1360.4	1360.4	1368.6	1332.2	1376.9
15°	1480.8	1499.6	1439.1	1449.1	1449.1	1503.1	1501.3	1511.9	1537.1	1527.8	1507.8
17.5°	1705.1	1716.8	1649.9	1587.6	1592.3	1580.6	1622.9	1627.0	1602.9	1712.1	1688.0
20°	1849.5	1895.3	1754.4	1676.3	1691.6	1705.1	1706.8	1681.6	1669.3	1837.2	1804.3
22.5°	2028.0	1989.2	1860.1	1773.8	1796.7	1778.5	1774.9	1794.3	1811.3	1874.8	1928.2
25°	2147.2	2144.3	1989.2	1894.7	1869.5	1864.2	1900.0	1892.4	1932.9	2048.0	2014.5
27.5°	2320.4	2374.4	2099.6	2123.1	2012.1	1895.3	2010.4	2045.0	2117.8	2099.0	2173.6
30°	2656.2	2615.7	2328.6	2322.2	2196.5	2098.5	2178.3	2149.0	2279.9	2275.8	2331.0
32.5°	2930.4	2958.6	2597.5	2530.0	2436.7	2318.6	2265.8	2347.4	2417.9	2533.5	2564.7
35°	3220.5	3214.0	2872.9	2736.7	2582.3	2533.5	2598.7	2632.8	2782.5	2888.8	2814.8
37.5°	3671.4	3620.3	3229.9	2972.1	2856.5	2838.8	2950.4	2901.1	3063.1	3088.4	3130.1
40°	4090.6	3936.8	3556.3	3261.0	3077.2	3143.0	3146.5	3153.0	3239.9	3308.6	3514.7
42.5°	4489.3	4381.3	3888.1	3666.1	3395.5	3331.5	3371.4	3384.9	3604.5	3744.8	4030.2
45°	5034.2	4744.7	4364.8	4137.0	3834.1	3752.4	3724.3	3840.5	4052.5	4371.9	4616.7
47.5°	5495.1	5233.8	4871.5	4571.5	4232.7	4465.8	4306.1	4241.0	4525.7	4921.5	5311.3
50°	5877.3	5589.6	5234.4	5061.2	5007.2	5215.0	4800.5	4808.1	5068.8	5627.2	6074.0
52.5°	6173.2	5866.2	5551.5	5463.4	5765.2	5885.0	5585.5	5540.3	5730.5	6390.5	6927.1
55°	6449.8	6123.9	5880.8	6060.5	6569.0	6582.5	6561.3	6310.6	6539.6	7208.4	7810.2
57.5°	6520.8	6169.7	6008.3	6266.0	6953.6	7488.5	7698.6	7206.6	7439.7	7952.3	8566.4
60°	6155.0	5854.4	5789.8	6139.8	7161.4	7943.5	8492.5	8198.3	8110.8	8549.4	9096.1
62.5°	5405.8	5057.1	5109.3	5595.5	6942.4	8123.7	9119.5	9349.1	8819.5	9024.4	9327.4
65°	4302.6	3969.7	4075.4	4660.2	6254.9	8183.6	9440.1	9911.0	9075.5	9158.9	8999.8
67.5°	3034.4	2732.0	2865.3	3621.5	5203.3	7416.8	9495.3	9649.1	8803.1	8775.5	8105.0
70°	1719.2	1529.5	1674.0	2304.5	3672.6	5908.4	9062.6	8860.0	8314.6	7923.5	6781.5
72.5°	788.5	723.4	792.6	1173.1	2114.3	3931.5	7398.6	7582.4	7164.3	6675.3	5159.2
75°	419.2	396.3	425.7	586.0	989.3	2139.0	5256.7	5670.1	5447.5	5063.0	3365.5
77.5°	311.8	294.2	308.3	379.9	528.4	836.7	2986.8	3508.2	3592.7	3238.7	1868.9
80°	239.0	224.9	239.0	287.1	365.8	397.5	1277.0	1635.2	1862.4	1504.9	742.7
82.5°	177.3	167.9	189.6	215.5	257.2	248.4	453.3	564.2	727.5	497.3	289.5
85°	140.9	129.2	137.4	146.2	164.4	136.2	207.3	231.9	245.4	205.5	106.9
87.5°	55.2	51.1	99.8	78.7	66.9	41.1	62.2	70.5	72.2	69.3	31.1
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°	605.3	605.3	605.3	605.3	605.3	605.3	605.3	605.3	605.3	605.3	605.3
2.5°	735.1	729.2	694.6	705.7	724.0	727.5	735.1	714.0	703.4	742.2	743.9
5°	949.4	917.7	901.3	903.0	891.3	873.1	900.7	918.9	925.9	954.7	965.3
7.5°	1115.6	1077.4	1049.8	1018.1	973.5	944.7	992.9	1028.1	1046.9	1106.8	1130.3
10°	1189.6	1159.0	1153.2	1113.2	1112.1	1111.5	1109.1	1096.8	1137.3	1131.4	1147.9
12.5°	1342.2	1335.8	1280.0	1264.1	1265.9	1264.1	1214.8	1212.5	1213.0	1267.1	1247.7
15°	1484.3	1485.5	1434.4	1376.9	1325.2	1309.3	1290.0	1281.2	1294.1	1324.6	1305.8
17.5°	1659.9	1665.7	1519.5	1428.5	1360.4	1358.7	1312.3	1257.7	1336.3	1355.1	1334.6
20°	1773.2	1748.5	1568.9	1416.2	1396.8	1344.0	1286.4	1211.3	1279.4	1325.2	1338.1
22.5°	1880.6	1837.8	1614.6	1437.9	1345.1	1282.3	1226.5	1177.8	1199.5	1250.6	1242.4
25°	1953.4	1941.7	1678.1	1490.2	1343.4	1203.6	1128.5	1097.4	1108.5	1187.8	1180.2
27.5°	2127.2	2000.4	1666.9	1503.7	1287.0	1096.2	1058.6	1025.2	1014.0	1099.7	1123.2
30°	2243.5	2191.2	1741.5	1482.5	1216.0	1008.1	952.9	945.9	949.4	1046.9	1053.3
32.5°	2440.8	2305.1	1863.6	1401.5	1112.6	943.0	879.5	882.5	898.3	969.4	984.1
35°	2646.3	2565.2	1880.0	1343.4	1028.7	873.7	847.8	827.3	836.1	898.3	901.3
37.5°	3027.9	2747.8	1981.0	1253.6	967.0	847.3	797.9	779.7	784.4	819.7	844.9
40°	3363.8	3114.8	1934.1	1166.7	890.7	812.0	750.4	736.9	722.8	757.4	773.3
42.5°	3902.2	3376.7	1918.2	1071.0	854.9	764.5	722.2	686.4	672.9	702.2	731.0
45°	4440.6	3654.4	1831.9	974.1	804.4	760.9	681.1	647.0	650.6	677.0	706.3
47.5°	5040.6	4027.2	1685.7	880.1	749.2	743.9	640.0	625.3	635.9	665.2	694.6
50°	5749.9	4423.0	1564.7	795.6	709.9	692.8	634.7	617.1	627.1	661.7	690.5
52.5°	6525.5	4856.9	1476.7	717.5	665.2	652.3	641.7	624.7	636.5	666.4	696.4
55°	7296.5	5253.2	1416.8	664.1	627.1	635.3	656.4	644.1	650.0	672.3	702.2
57.5°	7868.3	5462.2	1296.4	607.1	596.0	625.3	658.2	637.6	641.2	672.3	704.6
60°	8200.7	5502.1	1098.5	560.7	571.3	605.3	640.0	613.6	611.2	662.3	702.8
62.5°	8164.3	5270.2	871.3	518.4	543.1	575.4	612.4	587.1	593.6	663.5	706.3
65°	7642.9	4796.4	692.8	482.6	509.1	542.5	589.5	579.5	610.6	710.4	756.8
67.5°	6726.9	4104.1	556.6	449.2	477.3	520.2	605.3	631.8	645.3	758.6	806.2
70°	5451.6	3188.8	463.8	419.8	452.1	530.8	651.1	645.9	634.7	735.7	773.3
72.5°	3938.6	2185.9	408.1	391.0	421.0	499.1	652.3	624.1	610.0	671.7	698.7
75°	2464.2	1304.0	356.4	354.6	373.4	447.4	623.0	597.7	559.5	590.1	625.3
77.5°	1407.4	667.6	300.0	315.9	327.0	388.1	557.8	534.9	500.8	513.8	548.4
80°	537.2	322.9	253.1	280.7	277.7	328.8	472.7	467.4	428.6	432.7	453.9
82.5°	253.1	180.8	210.2	241.3	225.5	261.9	384.0	382.2	348.2	315.3	332.3
85°	93.9	96.3	153.8	183.8	156.8	169.1	277.7	270.1	237.2	200.2	221.4
87.5°	21.1	34.6	75.7	95.7	54.6	52.3	112.1	97.5	93.9	55.8	58.7
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)