

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: P368072

Luminaire Tested: **MSA-SA3D-727-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368072
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-727-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16878 lumens
Efficiency: N/A
Efficacy: 87.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

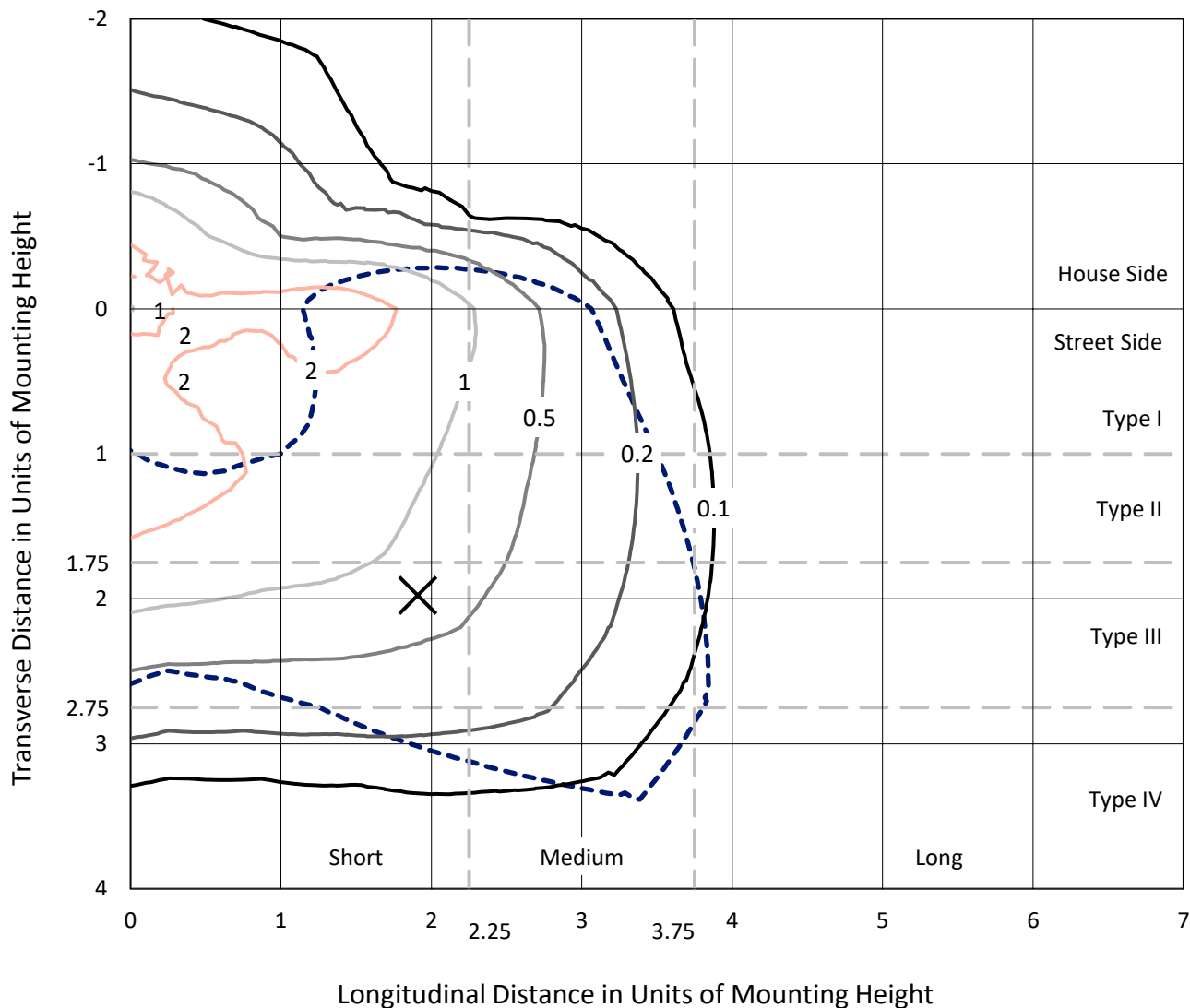
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368072
 CATALOG NUMBER: MSA-SA3D-727-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

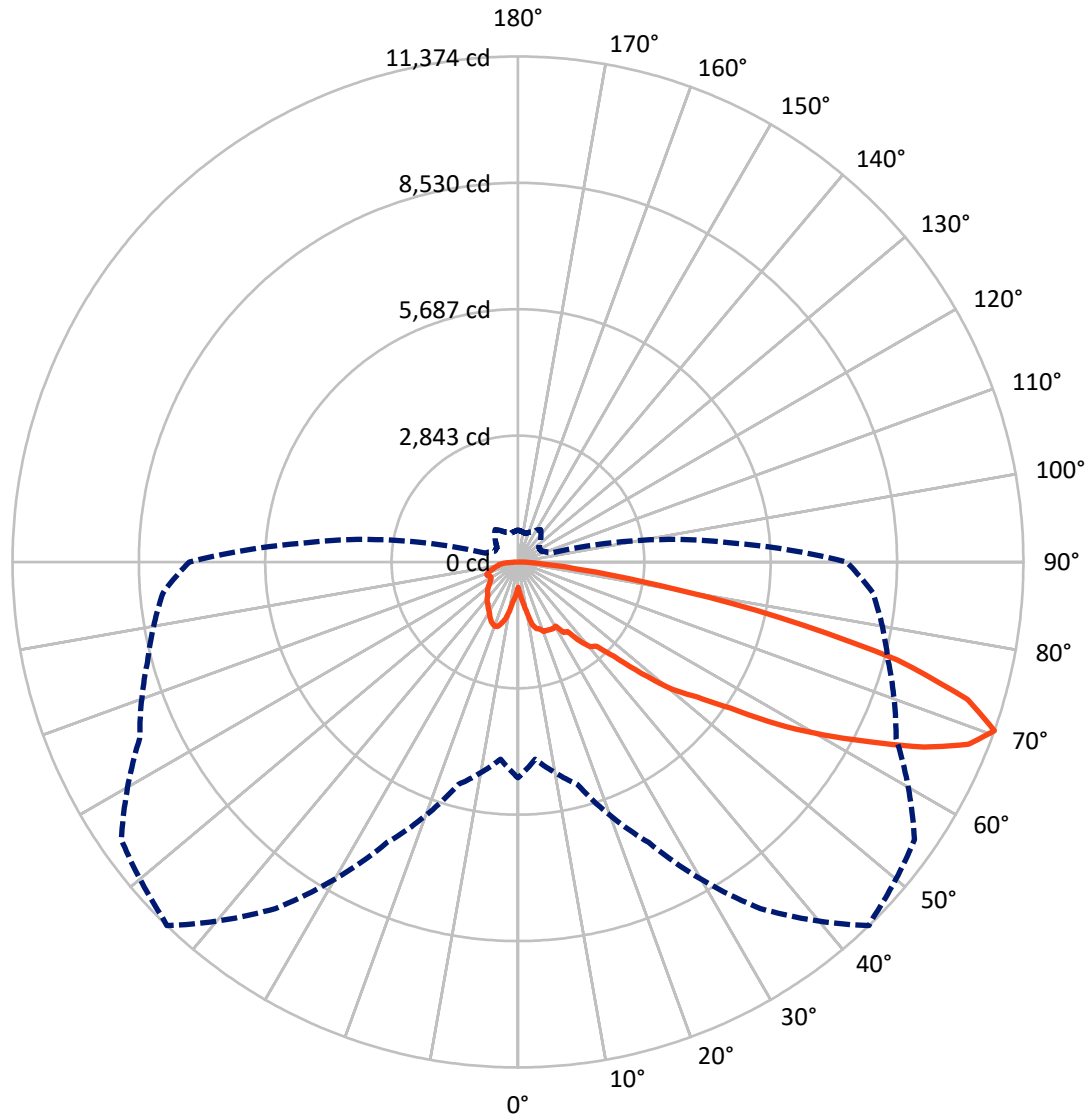
✕ Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P368072
CATALOG NUMBER: MSA-SA3D-727-U-T4W

Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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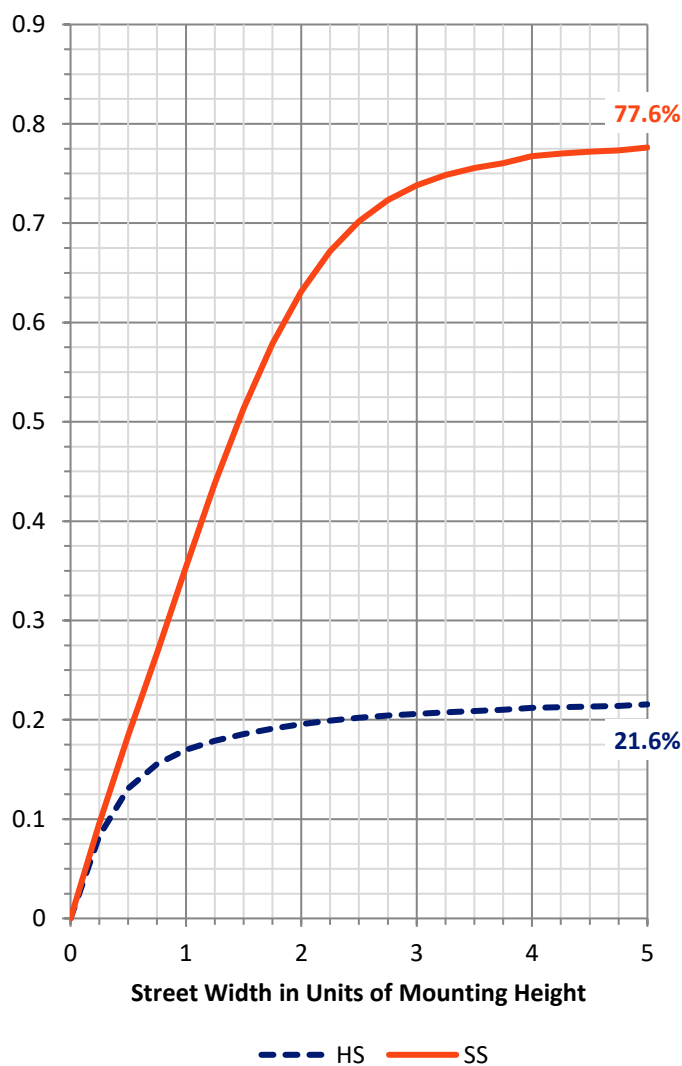
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3723.9	0.0	3723.9
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	13154.1	0.0	13154.1
	% Fixture	77.9	0.0	77.9
Total	Lumens	16878.0	0.0	16878.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	0.5
10°-20°	414.2	2.5
20°-30°	774.1	4.6
30°-40°	1242.5	7.4
40°-50°	2097.2	12.4
50°-60°	3737.2	22.1
60°-70°	5112.0	30.3
70°-80°	3006.1	17.8
80°-90°	404.8	2.4
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°	16878.0	100.0
0°-180°	16878.0	100.0

Coefficient of Utilization

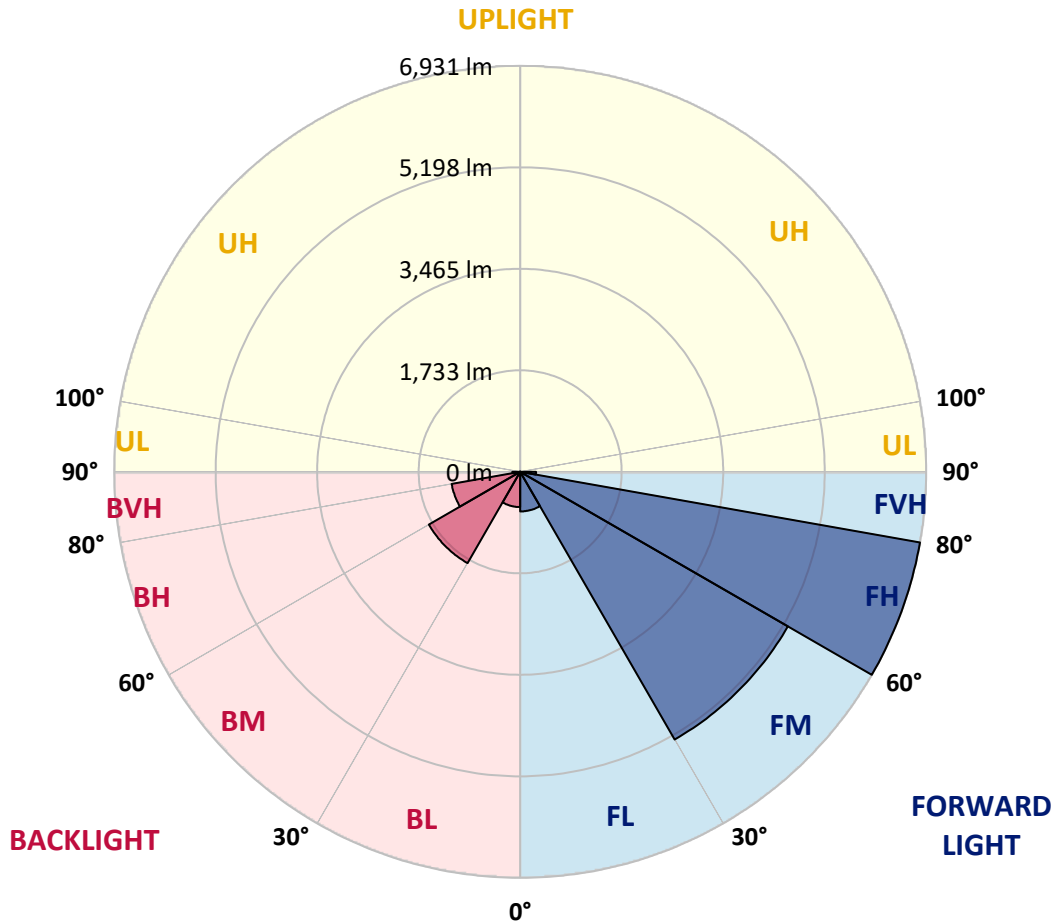


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 CATALOG NUMBER: MSA-SA3D-727-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	676.4	4.0			
FM (30°-60°)	5277.3	31.3			
FH (60°-80°)	6930.6	41.1			G3/7500
FVH (80°-90°)	269.8	1.6			G3/500
BL (0°-30°)	601.9	3.6	B2/1000		
BM (30°-60°)	1799.6	10.7	B2/2500		
BH (60°-80°)	1187.5	7.0	B3/2500		G3/2500
BVH (80°-90°)	135.0	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7
2.5°	696.2	682.4	649.1	660.2	674.1	679.6	678.2	676.8	655.4	647.8	685.8
5°	946.0	915.6	891.4	881.7	849.8	824.9	809.7	849.8	843.6	854.0	880.3
7.5°	1181.3	1161.9	1107.3	1087.9	1022.8	979.9	975.1	1006.9	1015.2	998.6	1043.6
10°	1332.9	1299.7	1288.6	1242.2	1197.2	1190.3	1186.2	1171.6	1151.6	1150.2	1110.0
12.5°	1450.5	1467.8	1476.8	1423.5	1424.9	1449.8	1436.7	1377.9	1344.0	1284.4	1289.3
15°	1661.6	1686.5	1615.2	1581.3	1516.3	1553.6	1548.8	1499.7	1494.8	1456.1	1411.1
17.5°	1845.7	1856.8	1737.7	1660.2	1638.1	1584.1	1598.6	1600.0	1536.3	1605.5	1565.4
20°	1860.9	1900.4	1763.3	1609.0	1675.4	1668.5	1670.6	1656.8	1573.0	1687.2	1672.0
22.5°	1935.7	1875.4	1752.3	1639.5	1656.8	1667.1	1676.8	1660.2	1655.4	1719.0	1765.4
25°	1921.8	1902.4	1777.9	1682.4	1684.4	1686.5	1691.4	1741.2	1735.6	1822.2	1846.4
27.5°	2051.2	2021.5	1785.5	1761.9	1708.0	1696.2	1663.0	1766.8	1847.8	1845.7	1979.2
30°	2297.6	2267.1	1962.6	1894.1	1796.5	1676.1	1739.8	1878.2	1941.9	1963.3	2132.9
32.5°	2682.4	2732.2	2311.4	2035.3	1914.2	1887.9	1881.0	1867.1	2024.9	2130.8	2285.1
35°	3234.6	3195.2	2722.5	2337.7	2038.1	1925.3	1940.5	2024.9	2212.5	2281.0	2423.5
37.5°	3867.1	3785.5	3249.2	2680.3	2395.2	2254.0	2203.5	2285.1	2326.7	2380.6	2672.0
40°	4510.1	4310.7	3766.1	3130.8	2609.7	2503.1	2458.8	2358.5	2456.1	2565.4	2935.7
42.5°	5130.8	4976.5	4328.7	3668.5	2971.0	2591.0	2566.8	2468.5	2770.9	2886.5	3316.3
45°	5781.3	5423.6	4905.2	4275.5	3499.0	3022.2	2986.2	2809.7	3197.2	3438.1	3853.3
47.5°	6218.7	5887.2	5433.2	4768.2	3941.2	3743.3	3674.8	3373.0	3724.6	4037.4	4683.1
50°	6632.6	6291.4	5814.6	5307.3	4741.9	4514.2	4368.2	3865.8	4381.3	4890.7	5746.7
52.5°	7225.0	6919.8	6257.5	5850.6	5602.1	5042.2	4933.6	4657.5	5149.5	5836.7	6909.4
55°	7858.2	7442.3	6842.3	6616.6	6516.3	5799.3	5710.8	5535.0	6172.4	6804.9	8039.5
57.5°	8137.8	7703.8	7373.0	7238.1	7229.8	6899.7	6798.0	6675.5	7218.0	7635.3	9103.2
60°	8359.9	7894.2	7762.0	7837.4	8111.5	7894.2	7762.0	7654.0	8069.2	8456.1	9971.0
62.5°	8319.1	7851.9	7919.8	8149.5	8849.2	8912.9	8811.1	8549.5	8912.9	9128.8	10468.6
65°	7660.2	7228.4	7623.6	8168.9	9535.0	10043.7	10038.1	9353.7	9479.6	9479.6	10416.0
67.5°	6505.9	6058.9	6705.9	7998.0	10009.0	10939.9	10941.2	10206.3	9531.5	9444.3	9602.1
70°	4858.2	4453.3	5180.7	6965.4	9519.8	11373.8	11310.8	10894.2	9389.0	8627.0	8020.8
72.5°	2901.7	2640.2	3309.4	5070.6	8120.5	10575.8	10743.3	10101.8	8595.2	7174.4	5733.6
75°	1317.7	1204.2	1555.0	2912.8	5797.3	8821.5	9003.5	8525.3	6827.0	5159.9	3313.5
77.5°	564.0	533.6	678.9	1292.0	3196.6	6032.6	6405.6	6092.8	4625.6	2998.6	1465.8
80°	362.6	343.3	417.3	621.5	1484.4	3259.5	3580.6	3463.7	2356.4	1166.1	516.3
82.5°	216.6	210.4	278.9	390.3	809.7	1434.6	1616.6	1659.5	978.6	523.2	295.5
85°	118.3	119.7	152.9	236.7	485.8	558.5	597.9	650.5	460.9	303.1	143.3
87.5°	39.4	45.7	61.6	96.2	173.0	157.8	158.5	184.1	194.5	126.0	45.7
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: P368072
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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7
2.5°	692.0	679.6	647.8	649.8	661.6	664.4	667.8	647.8	643.6	681.7	685.1
5°	884.4	843.6	824.9	818.7	800.7	794.5	827.7	842.9	858.1	887.9	902.4
7.5°	1038.8	993.1	959.2	928.0	901.7	886.5	942.6	985.5	1011.8	1072.7	1100.4
10°	1109.3	1069.9	1057.4	1032.5	1052.6	1098.3	1108.7	1110.0	1168.2	1166.8	1178.6
12.5°	1249.8	1224.2	1183.4	1192.4	1245.0	1292.0	1278.9	1299.0	1319.7	1369.6	1346.7
15°	1377.9	1370.9	1332.9	1339.1	1349.5	1408.3	1415.9	1436.0	1467.8	1507.3	1480.3
17.5°	1535.6	1532.9	1440.1	1431.8	1456.1	1513.5	1495.5	1460.2	1565.4	1607.6	1596.5
20°	1642.9	1622.2	1503.1	1467.8	1529.4	1537.0	1516.3	1460.2	1551.6	1643.6	1668.5
22.5°	1732.2	1708.0	1585.5	1516.3	1503.8	1507.3	1507.3	1496.9	1541.9	1617.3	1616.6
25°	1804.2	1827.0	1671.3	1604.9	1538.4	1455.4	1445.0	1454.0	1479.6	1624.9	1620.1
27.5°	1984.8	1921.8	1700.4	1650.5	1514.2	1383.4	1411.8	1425.6	1433.9	1593.1	1619.4
30°	2102.4	2121.8	1804.2	1677.5	1478.9	1303.1	1312.8	1352.9	1401.4	1589.6	1597.2
32.5°	2260.9	2219.4	1966.1	1632.5	1384.8	1254.7	1236.7	1290.7	1362.6	1533.6	1554.3
35°	2408.3	2457.5	2034.6	1624.2	1319.0	1182.0	1201.4	1220.1	1294.8	1471.3	1495.5
37.5°	2754.3	2642.2	2227.0	1584.1	1264.4	1145.3	1124.6	1152.9	1216.6	1352.9	1409.0
40°	3017.3	3024.2	2268.5	1533.6	1159.9	1092.7	1048.4	1076.8	1103.8	1212.5	1236.7
42.5°	3510.7	3359.9	2370.3	1422.8	1094.1	1013.8	988.9	1001.4	1005.5	1051.2	1091.4
45°	4138.4	3784.8	2410.4	1274.1	1007.6	981.3	930.8	924.6	901.7	908.0	943.3
47.5°	5006.9	4447.8	2381.3	1115.6	930.8	939.1	866.4	838.1	806.2	813.8	847.1
50°	6130.1	5294.8	2379.3	981.3	878.2	883.7	824.2	773.0	741.2	757.1	786.2
52.5°	7390.4	6144.7	2388.9	889.3	820.8	818.0	796.5	734.3	708.7	725.3	758.5
55°	8595.9	6875.5	2460.9	831.1	761.2	766.1	774.4	721.8	693.4	708.7	743.3
57.5°	9645.0	7452.6	2433.9	769.6	705.9	728.0	750.2	704.5	683.0	705.2	739.8
60°	10378.6	7720.5	2220.8	710.7	665.1	695.5	738.4	702.4	699.7	747.4	788.9
62.5°	10646.4	7621.5	1805.5	664.4	640.8	691.4	765.4	748.1	750.9	809.7	867.1
65°	10255.4	7101.1	1346.7	634.6	622.1	711.4	827.7	775.1	737.0	785.5	838.1
67.5°	9143.3	6175.8	984.1	609.0	600.7	743.3	885.1	772.3	701.7	750.9	793.8
70°	7397.3	4874.8	761.9	576.5	572.3	721.8	890.7	751.6	663.7	695.5	719.7
72.5°	5068.5	3337.7	631.1	545.3	523.2	639.4	845.7	705.2	618.0	636.7	656.8
75°	2832.5	1873.4	530.8	506.6	458.1	569.6	793.1	677.5	584.1	589.6	617.3
77.5°	1271.3	810.4	450.5	455.4	399.3	503.8	724.6	633.2	532.2	519.7	547.4
80°	481.0	395.2	365.4	384.8	335.6	436.7	653.3	593.1	477.5	461.6	477.5
82.5°	278.9	239.4	271.3	296.2	266.4	401.4	623.5	556.4	420.8	380.6	394.5
85°	129.4	123.9	162.6	192.4	186.2	312.8	533.6	418.7	299.7	253.3	280.3
87.5°	33.9	38.1	57.4	67.8	69.2	107.3	205.5	155.7	117.0	88.6	85.1
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)