

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: P368182

Luminaire Tested: **MSA-SA3D-830-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368182
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-830-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: 16037 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

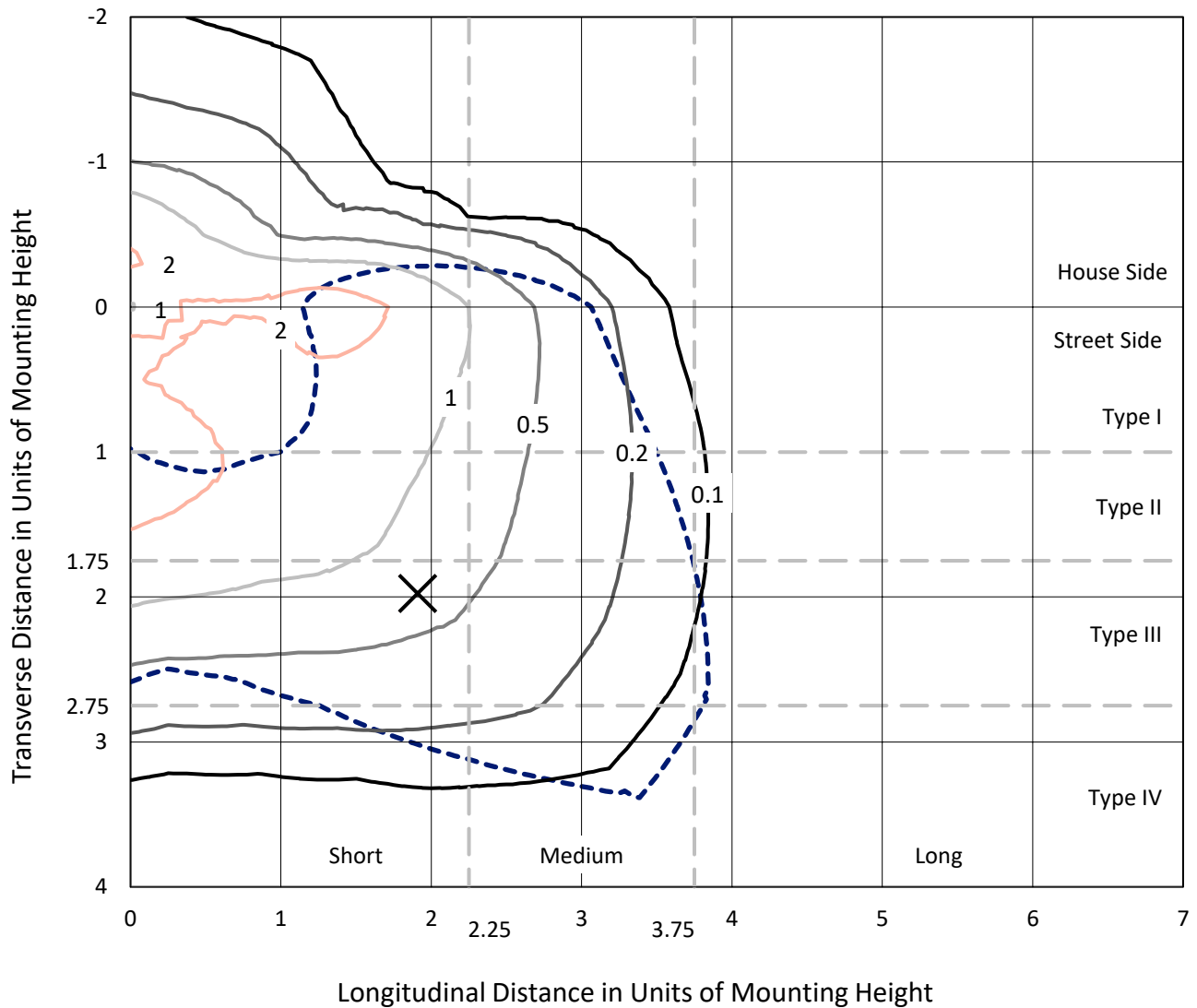
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368182
 CATALOG NUMBER: MSA-SA3D-830-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

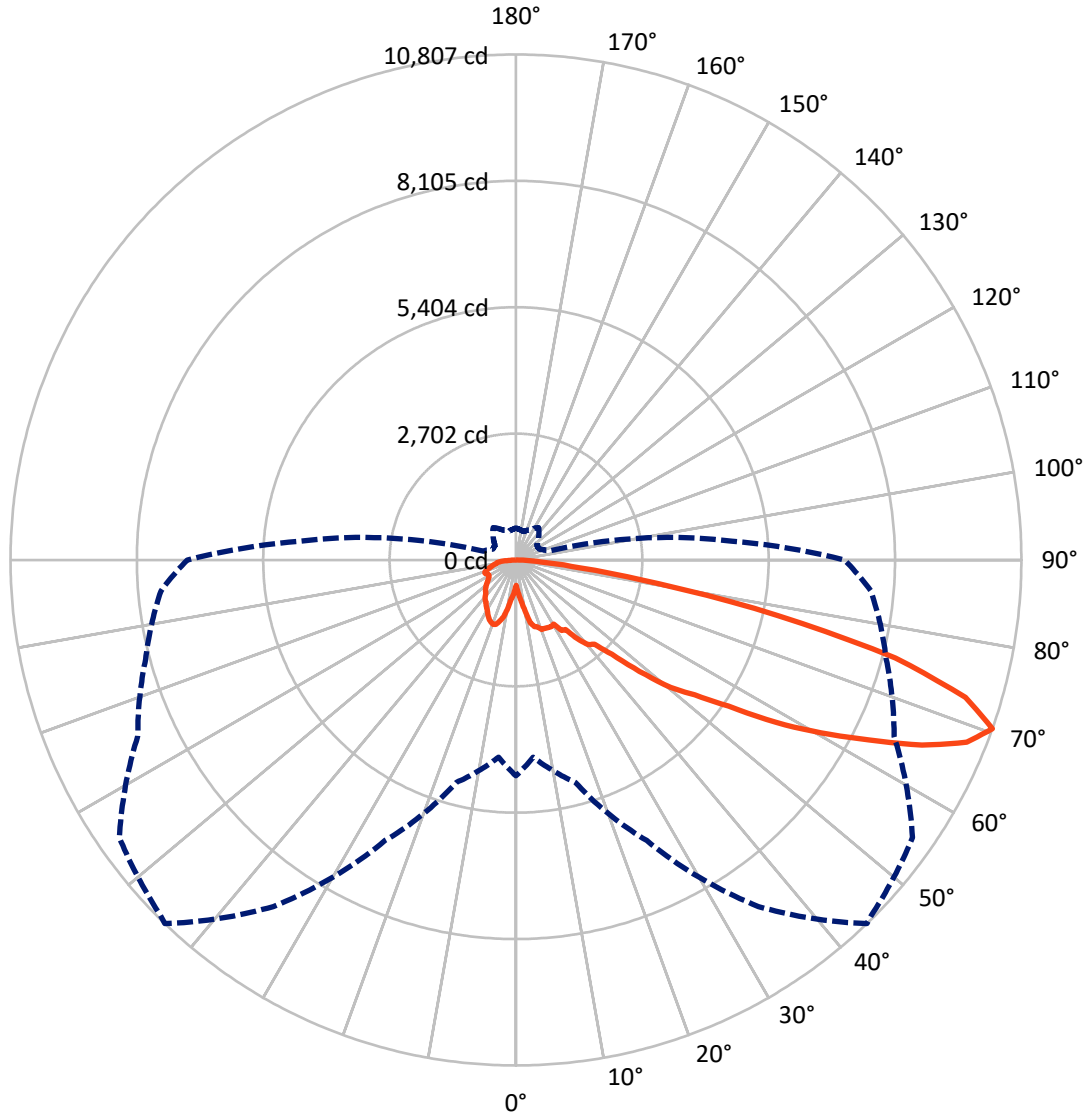
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type IV - Short - N/A

REPORT NUMBER: P368182
CATALOG NUMBER: MSA-SA3D-830-U-T4W

Luminous Intensity Polar Plot



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

REPORT NUMBER: P368182
 CATALOG NUMBER: MSA-SA3D-830-U-T4W

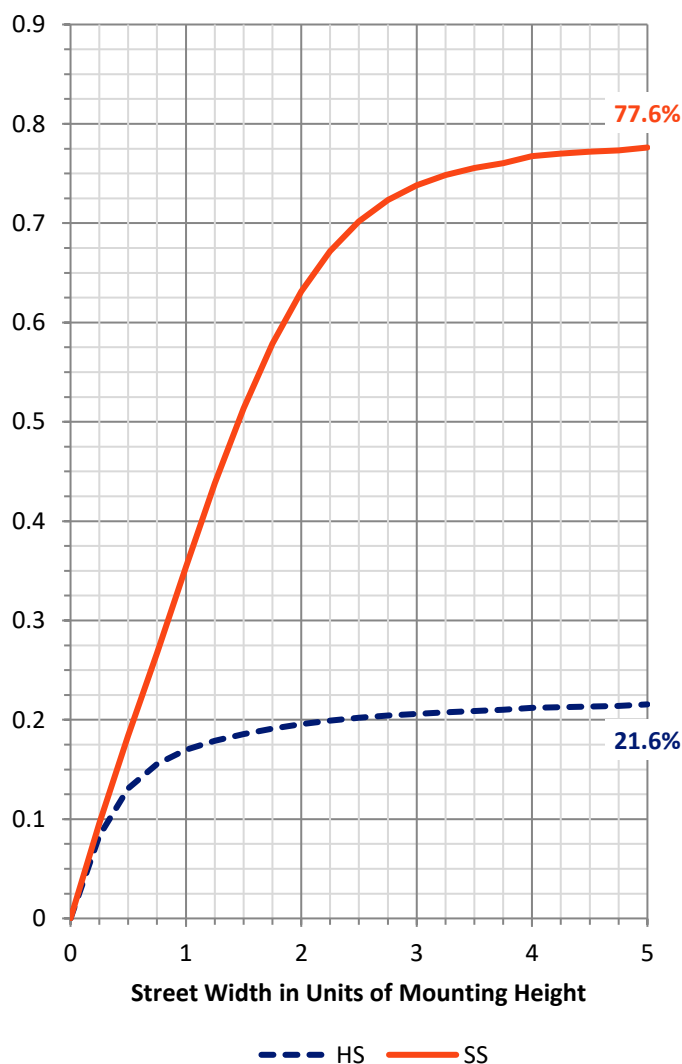
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3538.4	0.0	3538.4
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	12498.6	0.0	12498.6
	% Fixture	77.9	0.0	77.9
Total	Lumens	16037.0	0.0	16037.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.5	0.5
10°-20°	393.6	2.5
20°-30°	735.5	4.6
30°-40°	1180.6	7.4
40°-50°	1992.7	12.4
50°-60°	3551.0	22.1
60°-70°	4857.3	30.3
70°-80°	2856.3	17.8
80°-90°	384.6	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°	16037.0	100.0
0°-180°	16037.0	100.0

Coefficient of Utilization



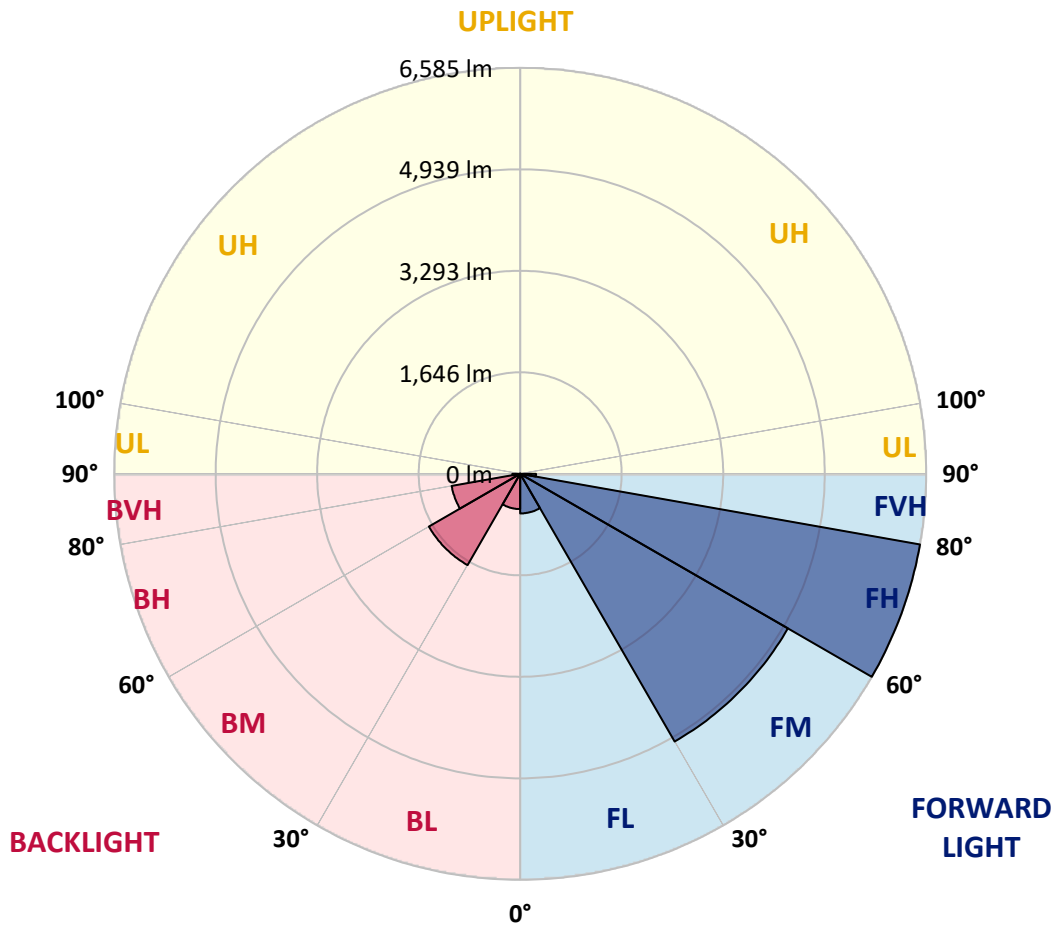
REPORT NUMBER: P368182
 CATALOG NUMBER: MSA-SA3D-830-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	642.7	4.0			
FM (30°-60°)	5014.3	31.3			
FH (60°-80°)	6585.3	41.1			G3/7500
FVH (80°-90°)	256.3	1.6			G3/500
BL (0°-30°)	571.9	3.6	B2/1000		
BM (30°-60°)	1709.9	10.7	B2/2500		
BH (60°-80°)	1128.3	7.0	B3/2500		G3/2500
BVH (80°-90°)	128.3	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





REPORT NUMBER: P368182

CATALOG NUMBER: MSA-SA3D-830-U-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1
2.5°	661.5	648.4	616.8	627.3	640.5	645.7	644.4	643.1	622.7	615.5	651.6
5°	898.9	870.0	846.9	837.7	807.5	783.8	769.3	807.5	801.6	811.4	836.4
7.5°	1122.5	1104.0	1052.1	1033.7	971.9	931.1	926.5	956.8	964.6	948.9	991.6
10°	1266.5	1234.9	1224.4	1180.3	1137.6	1131.0	1127.1	1113.3	1094.2	1092.9	1054.7
12.5°	1378.2	1394.7	1403.2	1352.6	1353.9	1377.6	1365.1	1309.2	1277.0	1220.4	1225.0
15°	1578.8	1602.5	1534.7	1502.5	1440.7	1476.2	1471.6	1424.9	1420.3	1383.5	1340.8
17.5°	1753.7	1764.2	1651.1	1577.5	1556.4	1505.2	1519.0	1520.3	1459.8	1525.5	1487.4
20°	1768.2	1805.7	1675.5	1528.8	1592.0	1585.4	1587.4	1574.2	1494.6	1603.1	1588.7
22.5°	1839.2	1782.0	1664.9	1557.8	1574.2	1584.1	1593.3	1577.5	1572.9	1633.4	1677.4
25°	1826.0	1807.6	1689.3	1598.5	1600.5	1602.5	1607.1	1654.4	1649.2	1731.4	1754.4
27.5°	1949.0	1920.7	1696.5	1674.2	1622.9	1611.7	1580.1	1678.8	1755.7	1753.7	1880.6
30°	2183.1	2154.2	1864.8	1799.7	1707.0	1592.6	1653.1	1784.6	1845.1	1865.5	2026.6
32.5°	2548.7	2596.1	2196.3	1933.9	1818.8	1793.8	1787.3	1774.1	1924.0	2024.6	2171.3
35°	3073.4	3036.0	2586.8	2221.2	1936.5	1829.3	1843.8	1924.0	2102.2	2167.3	2302.8
37.5°	3674.5	3596.9	3087.3	2546.7	2275.8	2141.7	2093.7	2171.3	2210.7	2262.0	2538.8
40°	4285.3	4096.0	3578.5	2974.8	2479.7	2378.4	2336.3	2241.0	2333.7	2437.6	2789.4
42.5°	4875.2	4728.5	4113.0	3485.7	2822.9	2461.9	2438.9	2345.5	2632.9	2742.7	3151.0
45°	5493.3	5153.3	4660.8	4062.4	3324.6	2871.6	2837.4	2669.7	3037.9	3266.8	3661.3
47.5°	5908.9	5593.9	5162.5	4530.6	3744.8	3556.8	3491.7	3205.0	3539.0	3836.2	4449.7
50°	6302.1	5977.9	5524.8	5042.8	4505.6	4289.3	4150.5	3673.1	4163.0	4647.0	5460.4
52.5°	6864.9	6575.0	5945.7	5559.0	5323.0	4791.0	4687.8	4425.4	4892.9	5545.9	6565.1
55°	7466.6	7071.4	6501.3	6286.9	6191.6	5510.4	5426.2	5259.2	5864.8	6465.8	7638.9
57.5°	7732.3	7320.0	7005.7	6877.4	6869.5	6555.9	6459.2	6342.8	6858.4	7254.9	8649.6
60°	7943.3	7500.8	7375.2	7446.9	7707.3	7500.8	7375.2	7272.6	7667.2	8034.7	9474.2
62.5°	7904.6	7460.7	7525.1	7743.4	8408.2	8468.7	8372.1	8123.5	8468.7	8673.9	9946.9
65°	7278.6	6868.2	7243.7	7761.9	9059.9	9543.2	9537.9	8887.6	9007.3	9007.3	9897.0
67.5°	6181.7	5757.0	6371.8	7599.4	9510.3	10394.7	10396.1	9697.7	9056.6	8973.7	9123.7
70°	4616.1	4231.4	4922.5	6618.4	9045.4	10807.0	10747.2	10351.3	8921.1	8197.2	7621.1
72.5°	2757.2	2508.6	3144.5	4818.0	7715.8	10048.9	10208.0	9598.4	8166.9	6816.9	5447.9
75°	1252.0	1144.2	1477.5	2767.7	5508.4	8381.9	8554.9	8100.5	6486.8	4902.8	3148.4
77.5°	535.9	507.0	645.1	1227.7	3037.3	5732.0	6086.4	5789.2	4395.1	2849.2	1392.7
80°	344.6	326.2	396.5	590.5	1410.5	3097.1	3402.2	3291.1	2239.0	1108.0	490.5
82.5°	205.8	199.9	265.0	370.9	769.3	1363.1	1536.1	1576.8	929.8	497.1	280.8
85°	112.4	113.8	145.3	224.9	461.6	530.7	568.1	618.1	437.9	288.0	136.1
87.5°	37.5	43.4	58.5	91.4	164.4	149.9	150.6	174.9	184.8	119.7	43.4
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: P368182

CATALOG NUMBER: MSA-SA3D-830-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1
2.5°	657.6	645.7	615.5	617.5	628.6	631.3	634.5	615.5	611.5	647.7	651.0
5°	840.4	801.6	783.8	777.9	760.8	754.9	786.4	800.9	815.4	843.7	857.5
7.5°	987.0	943.6	911.4	881.8	856.8	842.3	895.6	936.4	961.4	1019.2	1045.5
10°	1054.1	1016.6	1004.8	981.1	1000.2	1043.6	1053.4	1054.7	1110.0	1108.6	1119.8
12.5°	1187.6	1163.2	1124.4	1133.0	1183.0	1227.7	1215.2	1234.2	1254.0	1301.3	1279.6
15°	1309.2	1302.6	1266.5	1272.4	1282.2	1338.1	1345.4	1364.4	1394.7	1432.2	1406.5
17.5°	1459.1	1456.5	1368.4	1360.5	1383.5	1438.1	1421.0	1387.5	1487.4	1527.5	1517.0
20°	1561.1	1541.3	1428.2	1394.7	1453.2	1460.4	1440.7	1387.5	1474.3	1561.7	1585.4
22.5°	1645.9	1622.9	1506.5	1440.7	1428.9	1432.2	1432.2	1422.3	1465.0	1536.7	1536.1
25°	1714.3	1736.0	1588.0	1524.9	1461.8	1382.9	1373.0	1381.5	1405.9	1544.0	1539.4
27.5°	1885.9	1826.0	1615.6	1568.3	1438.7	1314.5	1341.4	1354.6	1362.5	1513.7	1538.7
30°	1997.7	2016.1	1714.3	1593.9	1405.2	1238.2	1247.4	1285.5	1331.6	1510.4	1517.7
32.5°	2148.3	2108.8	1868.1	1551.2	1315.8	1192.2	1175.1	1226.4	1294.7	1457.2	1476.9
35°	2288.3	2335.0	1933.2	1543.3	1253.3	1123.1	1141.5	1159.3	1230.3	1398.0	1421.0
37.5°	2617.1	2510.6	2116.0	1505.2	1201.4	1088.3	1068.5	1095.5	1156.0	1285.5	1338.8
40°	2867.0	2873.5	2155.5	1457.2	1102.1	1038.3	996.2	1023.2	1048.8	1152.0	1175.1
42.5°	3335.8	3192.5	2252.1	1351.9	1039.6	963.3	939.7	951.5	955.4	998.8	1037.0
45°	3932.2	3596.2	2290.3	1210.6	957.4	932.4	884.4	878.5	856.8	862.7	896.3
47.5°	4757.5	4226.2	2262.7	1060.0	884.4	892.3	823.3	796.3	766.1	773.3	804.9
50°	5824.7	5031.0	2260.7	932.4	834.4	839.7	783.2	734.5	704.2	719.4	747.0
52.5°	7022.1	5838.5	2269.9	845.0	779.9	777.2	756.9	697.7	673.3	689.1	720.7
55°	8167.6	6532.9	2338.3	789.7	723.3	727.9	735.8	685.8	658.9	673.3	706.2
57.5°	9164.4	7081.3	2312.6	731.2	670.7	691.8	712.8	669.4	649.0	670.1	702.9
60°	9861.5	7335.8	2110.1	675.3	631.9	660.8	701.6	667.4	664.8	710.2	749.6
62.5°	10115.9	7241.7	1715.6	631.3	608.9	656.9	727.3	710.8	713.5	769.3	823.9
65°	9744.4	6747.2	1279.6	603.0	591.1	676.0	786.4	736.5	700.3	746.3	796.3
67.5°	8687.7	5868.1	935.1	578.7	570.8	706.2	841.0	733.8	666.8	713.5	754.2
70°	7028.7	4631.9	724.0	547.7	543.8	685.8	846.3	714.1	630.6	660.8	683.9
72.5°	4816.0	3171.4	599.7	518.2	497.1	607.6	803.5	670.1	587.2	605.0	624.0
75°	2691.4	1780.0	504.3	481.3	435.3	541.2	753.6	643.8	555.0	560.2	586.5
77.5°	1207.9	770.0	428.1	432.7	379.4	478.7	688.5	601.7	505.7	493.8	520.1
80°	457.0	375.5	347.2	365.6	318.9	414.9	620.7	563.5	453.7	438.6	453.7
82.5°	265.0	227.5	257.8	281.4	253.2	381.4	592.5	528.7	399.8	361.7	374.8
85°	123.0	117.7	154.5	182.8	176.9	297.2	507.0	397.8	284.7	240.7	266.3
87.5°	32.2	36.2	54.6	64.4	65.8	101.9	195.3	148.0	111.1	84.2	80.9
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)