

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: P368094

Luminaire Tested: **MSA-SA3D-730-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368094
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-730-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: 18380 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

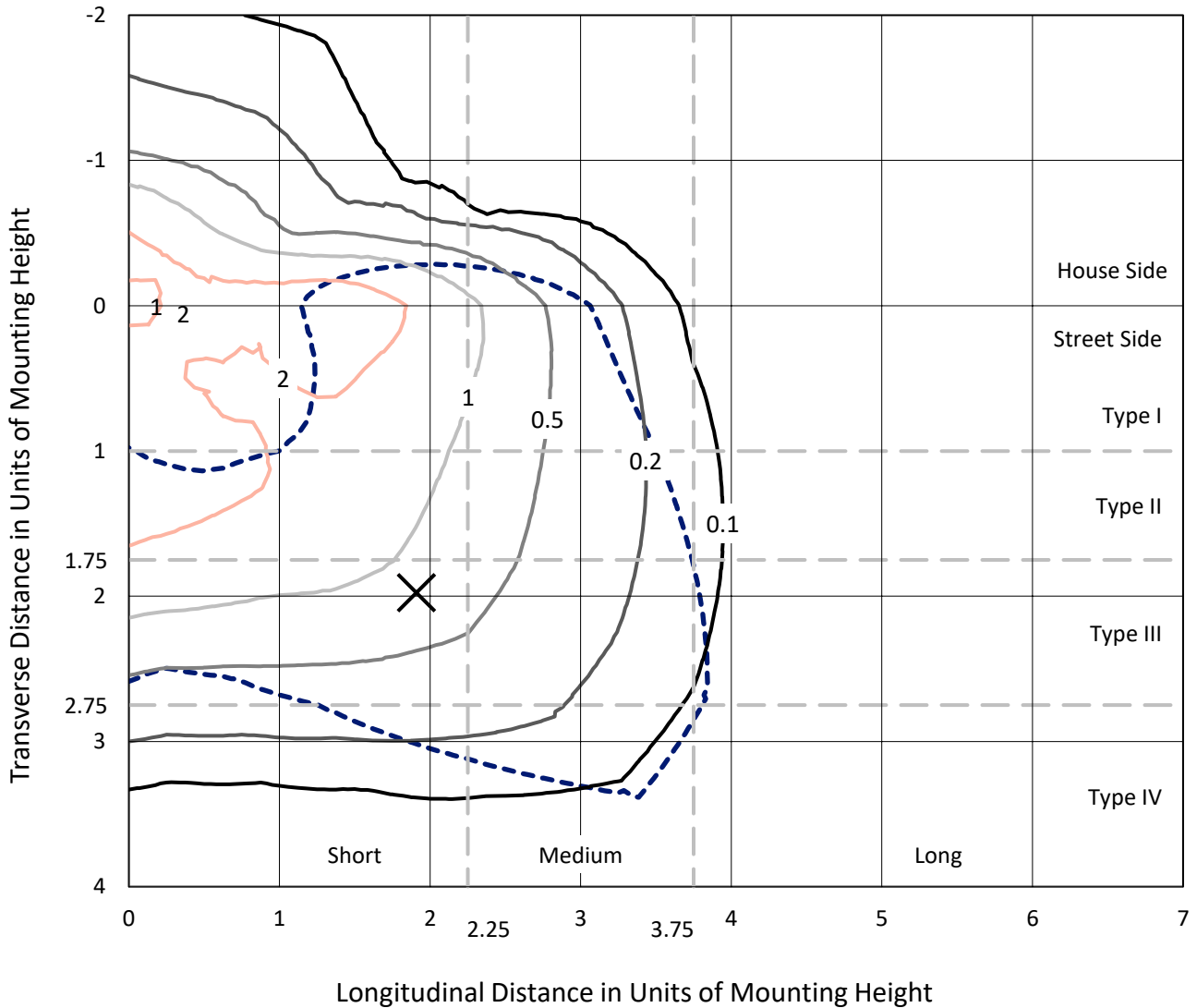
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

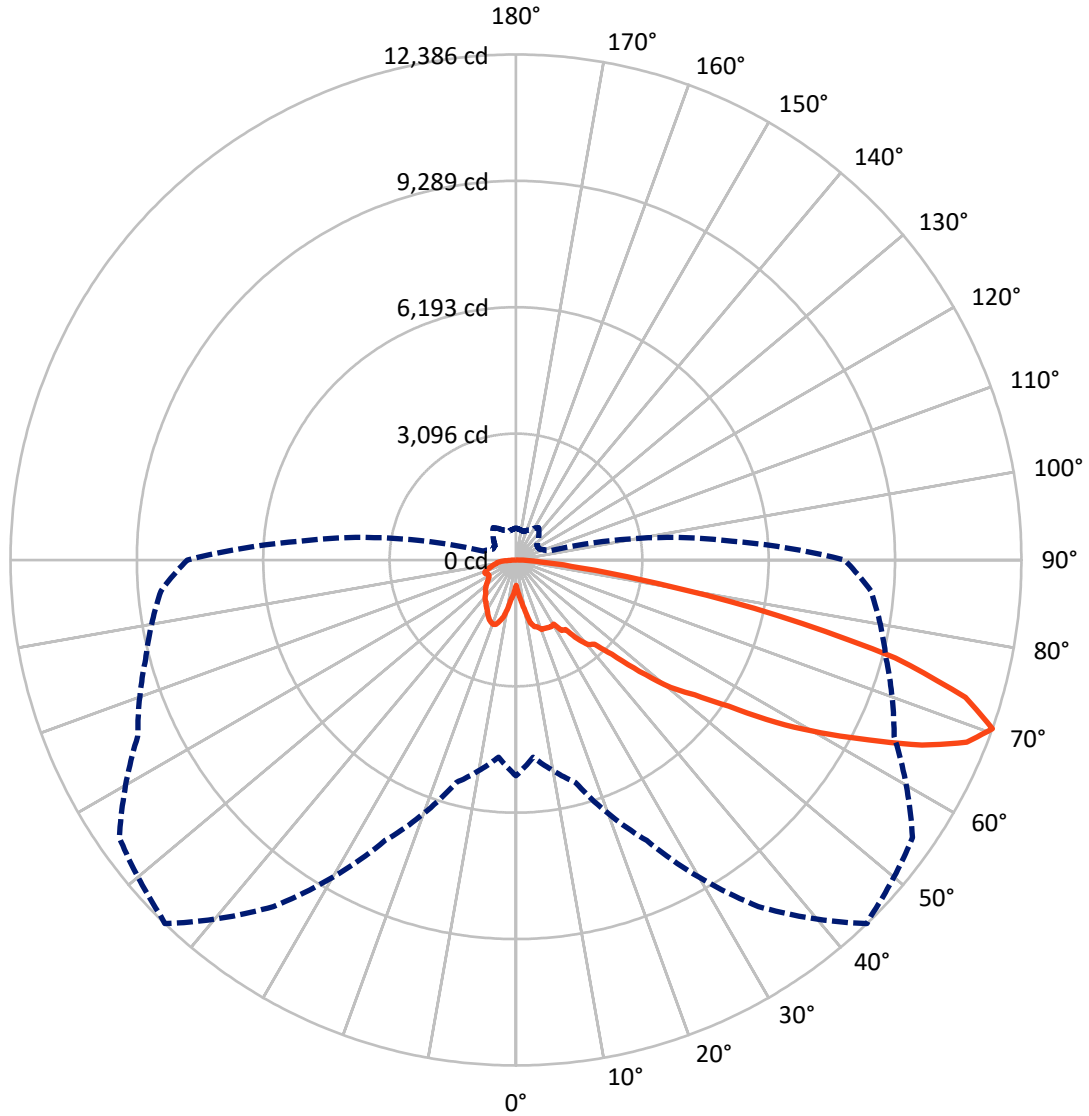
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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

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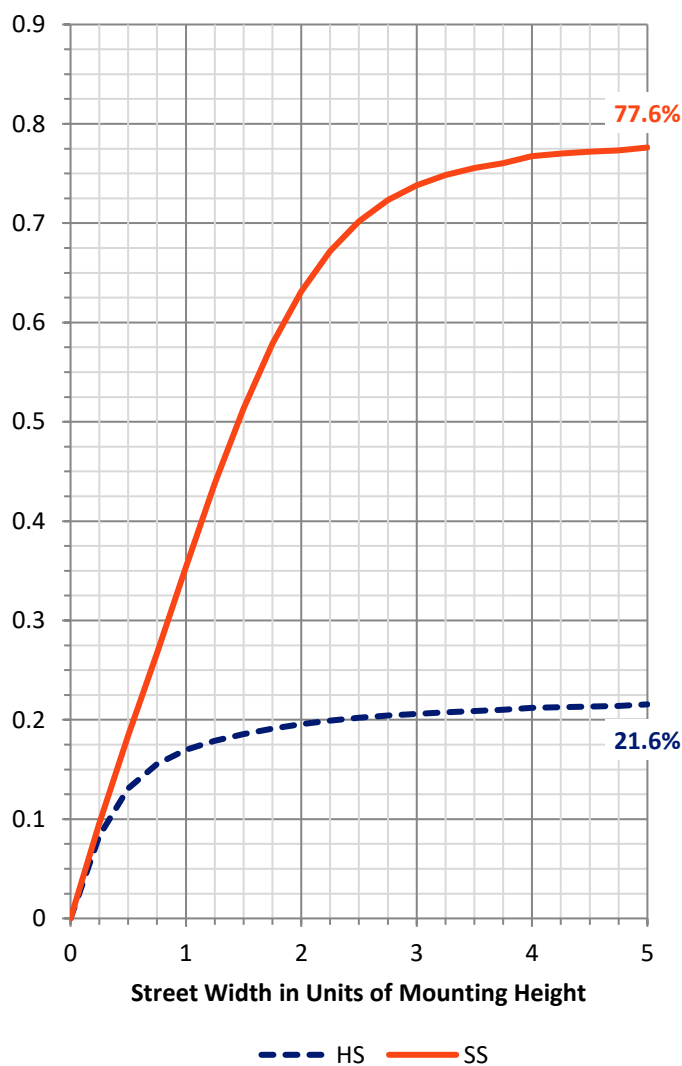
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4055.3	0.0	4055.3
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	14324.6	0.0	14324.6
	% Fixture	77.9	0.0	77.9
Total	Lumens	18380.0	0.0	18380.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.9	0.5
10°-20°	451.1	2.5
20°-30°	842.9	4.6
30°-40°	1353.1	7.4
40°-50°	2283.8	12.4
50°-60°	4069.8	22.1
60°-70°	5566.9	30.3
70°-80°	3273.6	17.8
80°-90°	440.8	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°	18380.0	100.0
0°-180°	18380.0	100.0

Coefficient of Utilization

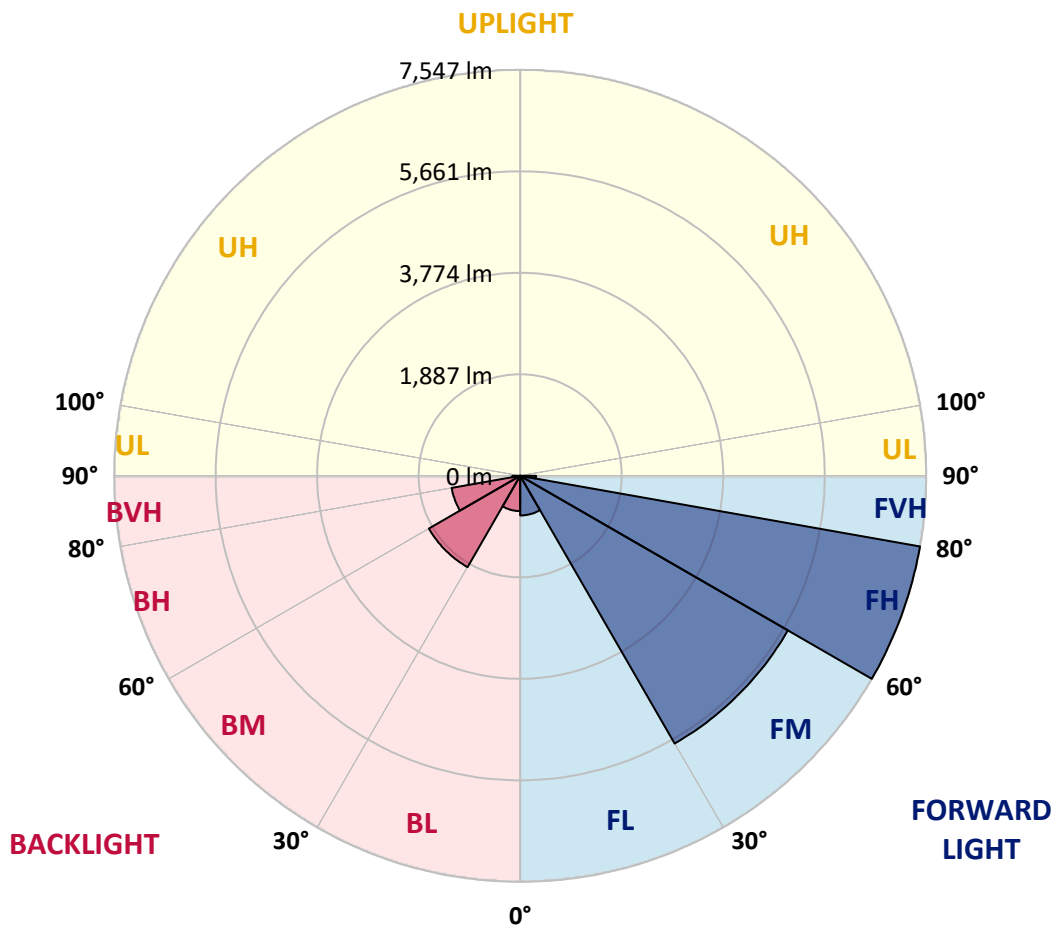


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	736.6	4.0			
FM (30°-60°)	5746.9	31.3			
FH (60°-80°)	7547.4	41.1			G4/12000
FVH (80°-90°)	293.8	1.6			G3/500
BL (0°-30°)	655.4	3.6	B2/1000		
BM (30°-60°)	1959.7	10.7	B2/2500		
BH (60°-80°)	1293.2	7.0	B3/2500		G3/2500
BVH (80°-90°)	147.0	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-G4
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8
2.5°	758.2	743.1	706.9	719.0	734.0	740.1	738.6	737.1	713.7	705.4	746.8
5°	1030.2	997.1	970.7	960.1	925.5	898.3	881.7	925.5	918.7	930.0	958.6
7.5°	1286.4	1265.3	1205.8	1184.7	1113.9	1067.1	1061.9	1096.5	1105.6	1087.5	1136.5
10°	1451.5	1415.3	1403.3	1352.8	1303.8	1296.2	1291.7	1275.9	1254.0	1252.5	1208.8
12.5°	1579.6	1598.5	1608.2	1550.2	1551.7	1578.9	1564.5	1500.5	1463.6	1398.7	1404.0
15°	1809.5	1836.6	1759.0	1722.0	1651.2	1691.9	1686.6	1633.1	1627.8	1585.6	1536.7
17.5°	2009.9	2022.0	1892.4	1808.0	1783.8	1725.1	1740.9	1742.4	1673.1	1748.4	1704.7
20°	2026.5	2069.5	1920.3	1752.2	1824.5	1817.0	1819.3	1804.2	1713.0	1837.4	1820.8
22.5°	2107.9	2042.3	1908.2	1785.4	1804.2	1815.5	1826.0	1808.0	1802.7	1872.0	1922.5
25°	2092.8	2071.7	1936.1	1832.1	1834.3	1836.6	1841.9	1896.1	1890.1	1984.3	2010.7
27.5°	2233.8	2201.4	1944.4	1918.7	1860.0	1847.2	1811.0	1924.0	2012.2	2009.9	2155.4
30°	2502.1	2468.9	2137.3	2062.7	1956.4	1825.3	1894.6	2045.4	2114.7	2138.1	2322.7
32.5°	2921.1	2975.3	2517.1	2216.4	2084.5	2055.9	2048.4	2033.3	2205.1	2320.4	2488.5
35°	3522.5	3479.5	2964.8	2545.8	2219.4	2096.6	2113.2	2205.1	2409.4	2484.0	2639.2
37.5°	4211.3	4122.4	3538.3	2918.8	2608.3	2454.6	2399.6	2488.5	2533.7	2592.5	2909.8
40°	4911.4	4694.4	4101.3	3409.4	2841.9	2725.9	2677.7	2568.4	2674.6	2793.7	3196.9
42.5°	5587.4	5419.4	4714.0	3995.0	3235.3	2821.6	2795.2	2688.2	3017.5	3143.4	3611.4
45°	6295.8	5906.2	5341.7	4655.9	3810.4	3291.1	3251.9	3059.7	3481.8	3744.0	4196.2
47.5°	6772.1	6411.1	5916.8	5192.5	4291.9	4076.4	4001.8	3673.2	4056.0	4396.7	5099.8
50°	7222.8	6851.3	6332.0	5779.6	5163.9	4915.9	4756.9	4209.8	4771.2	5325.9	6258.2
52.5°	7867.9	7535.6	6814.3	6371.2	6100.6	5491.0	5372.6	5071.9	5607.8	6356.1	7524.3
55°	8557.5	8104.6	7451.2	7205.5	7096.2	6315.4	6219.0	6027.5	6721.6	7410.5	8754.9
57.5°	8862.0	8389.4	8029.2	7882.2	7873.2	7513.7	7402.9	7269.5	7860.4	8314.8	9913.3
60°	9103.9	8596.7	8452.7	8534.9	8833.3	8596.7	8452.7	8335.2	8787.3	9208.6	10858.3
62.5°	9059.4	8550.7	8624.6	8874.8	9636.7	9706.0	9595.2	9310.4	9706.0	9941.2	11400.2
65°	8341.9	7871.7	8302.0	8895.9	10383.5	10937.5	10931.4	10186.1	10323.2	10323.2	11342.9
67.5°	7084.9	6598.0	7302.7	8709.7	10899.8	11913.4	11914.9	11114.6	10379.8	10284.8	10456.6
70°	5290.5	4849.6	5641.7	7585.3	10367.0	12385.9	12317.4	11863.7	10224.5	9394.8	8734.6
72.5°	3160.0	2875.1	3603.9	5521.9	8843.1	11517.0	11699.4	11000.8	9360.1	7812.9	6243.8
75°	1434.9	1311.3	1693.4	3172.0	6313.2	9606.5	9804.7	9284.0	7434.6	5619.1	3608.4
77.5°	614.2	581.0	739.3	1407.0	3481.0	6569.4	6975.6	6635.0	5037.3	3265.5	1596.2
80°	394.9	373.8	454.4	676.8	1616.5	3549.6	3899.3	3771.9	2566.1	1269.9	562.2
82.5°	235.9	229.1	303.7	425.0	881.7	1562.3	1760.5	1807.2	1065.6	569.7	321.8
85°	128.9	130.4	166.6	257.7	529.0	608.2	651.1	708.4	501.9	330.1	156.0
87.5°	43.0	49.7	67.1	104.8	188.4	171.8	172.6	200.5	211.8	137.2	49.7
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°	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8
2.5°	753.6	740.1	705.4	707.7	720.5	723.5	727.3	705.4	700.9	742.3	746.1
5°	963.1	918.7	898.3	891.5	872.0	865.2	901.3	917.9	934.5	966.9	982.7
7.5°	1131.2	1081.5	1044.5	1010.6	982.0	965.4	1026.4	1073.2	1101.8	1168.1	1198.3
10°	1208.1	1165.1	1151.5	1124.4	1146.3	1196.0	1207.3	1208.8	1272.1	1270.6	1283.4
12.5°	1361.1	1333.2	1288.7	1298.5	1355.8	1407.0	1392.7	1414.6	1437.2	1491.4	1466.6
15°	1500.5	1492.9	1451.5	1458.3	1469.6	1533.6	1541.9	1563.8	1598.5	1641.4	1612.0
17.5°	1672.3	1669.3	1568.3	1559.3	1585.6	1648.2	1628.6	1590.2	1704.7	1750.7	1738.6
20°	1789.1	1766.5	1636.9	1598.5	1665.5	1673.8	1651.2	1590.2	1689.6	1789.9	1817.0
22.5°	1886.3	1860.0	1726.6	1651.2	1637.6	1641.4	1641.4	1630.1	1679.1	1761.2	1760.5
25°	1964.7	1989.6	1820.0	1747.7	1675.3	1584.9	1573.6	1583.4	1611.3	1769.5	1764.3
27.5°	2161.4	2092.8	1851.7	1797.4	1648.9	1506.5	1537.4	1552.5	1561.5	1734.9	1763.5
30°	2289.5	2310.6	1964.7	1826.8	1610.5	1419.1	1429.6	1473.3	1526.1	1731.1	1739.4
32.5°	2462.1	2416.9	2141.1	1777.8	1508.0	1366.3	1346.7	1405.5	1483.9	1670.0	1692.7
35°	2622.6	2676.1	2215.7	1768.8	1436.4	1287.2	1308.3	1328.7	1410.0	1602.2	1628.6
37.5°	2999.5	2877.4	2425.2	1725.1	1376.9	1247.3	1224.7	1255.5	1324.9	1473.3	1534.4
40°	3285.8	3293.4	2470.4	1670.0	1263.1	1190.0	1141.8	1172.7	1202.0	1320.4	1346.7
42.5°	3823.2	3658.9	2581.2	1549.5	1191.5	1104.1	1076.9	1090.5	1095.0	1144.8	1188.5
45°	4506.7	4121.6	2624.9	1387.4	1097.3	1068.6	1013.6	1006.9	982.0	988.8	1027.2
47.5°	5452.5	4843.6	2593.2	1214.9	1013.6	1022.7	943.5	912.6	878.0	886.3	922.4
50°	6675.7	5766.0	2591.0	1068.6	956.4	962.4	897.6	841.8	807.1	824.5	856.1
52.5°	8048.0	6691.5	2601.5	968.4	893.8	890.8	867.4	799.6	771.7	789.8	826.0
55°	9360.9	7487.3	2679.9	905.1	829.0	834.3	843.3	786.0	755.1	771.7	809.4
57.5°	10503.4	8115.9	2650.5	838.0	768.7	792.8	816.9	767.2	743.8	768.0	805.6
60°	11302.2	8407.5	2418.4	774.0	724.2	757.4	804.1	764.9	761.9	813.9	859.1
62.5°	11593.9	8299.7	1966.2	723.5	697.9	752.9	833.5	814.7	817.7	881.7	944.3
65°	11168.1	7733.0	1466.6	691.1	677.5	774.7	901.3	844.1	802.6	855.4	912.6
67.5°	9957.0	6725.4	1071.7	663.2	654.2	809.4	963.9	841.1	764.2	817.7	864.4
70°	8055.6	5308.6	829.7	627.8	623.3	786.0	969.9	818.4	722.7	757.4	783.8
72.5°	5519.6	3634.8	687.3	593.9	569.7	696.4	920.9	768.0	673.0	693.3	715.2
75°	3084.6	2040.1	578.0	551.7	498.9	620.2	863.7	737.8	636.1	642.1	672.2
77.5°	1384.4	882.5	490.6	495.9	434.8	548.6	789.1	689.6	579.5	566.0	596.1
80°	523.8	430.3	397.9	419.0	365.5	475.5	711.4	645.9	520.0	502.7	520.0
82.5°	303.7	260.8	295.4	322.6	290.1	437.1	679.0	605.9	458.2	414.5	429.6
85°	140.9	134.9	177.1	209.5	202.7	340.6	581.0	455.9	326.3	275.8	305.2
87.5°	36.9	41.4	62.6	73.9	75.4	116.8	223.8	169.6	127.4	96.5	92.7
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)