

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: P367916

Luminaire Tested: **MSA-SA3B-830-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367916
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-830-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11709 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

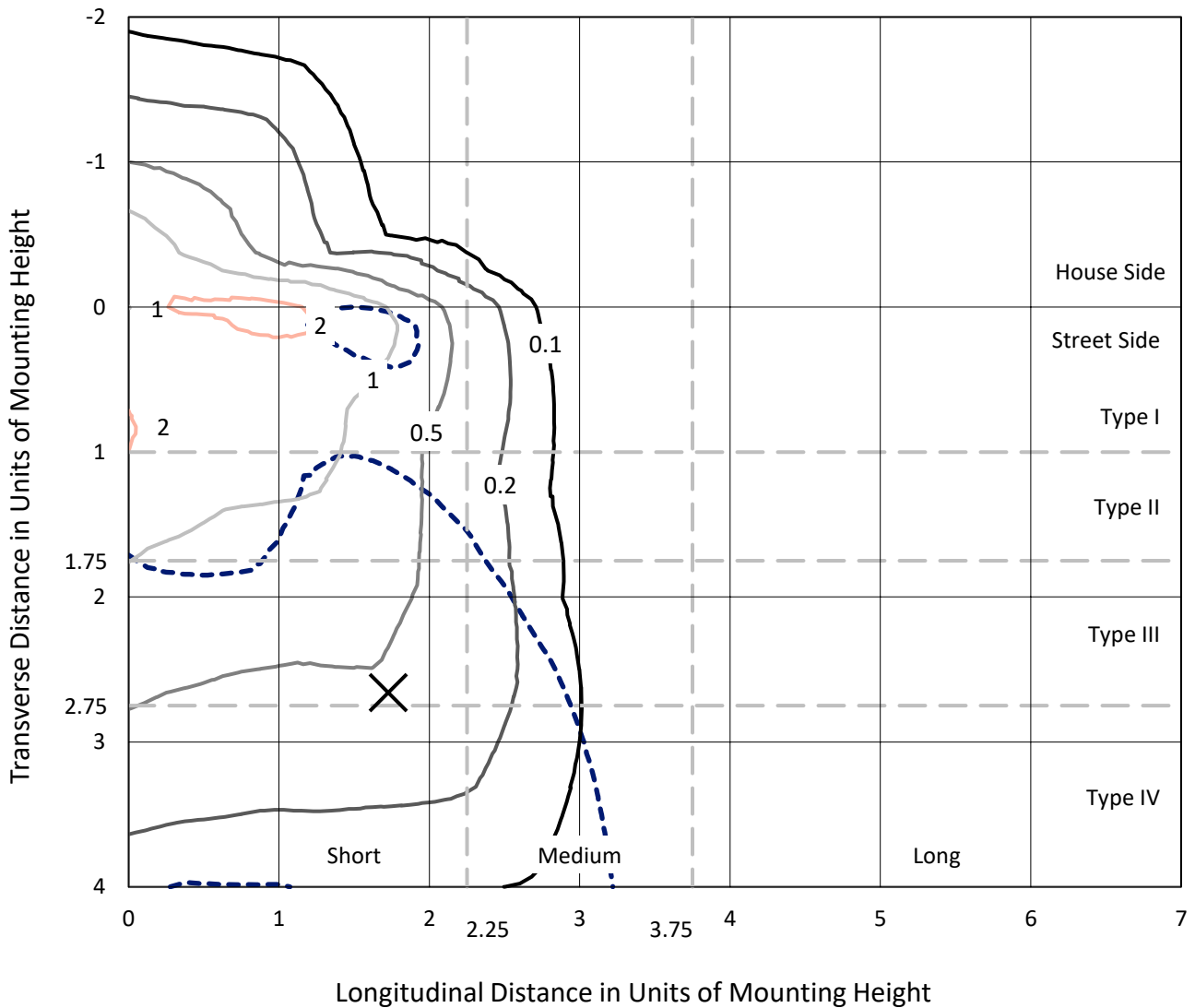
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

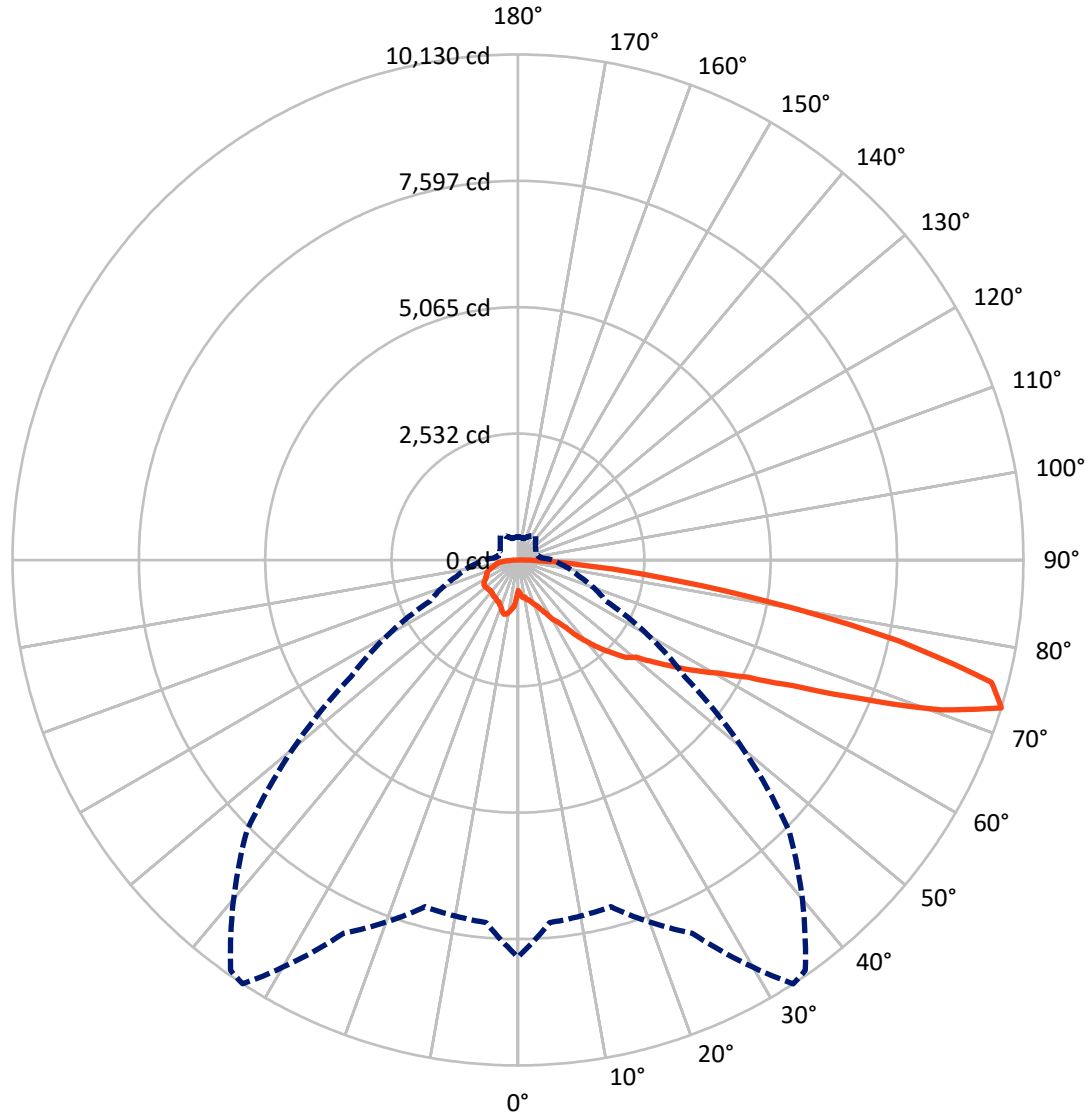
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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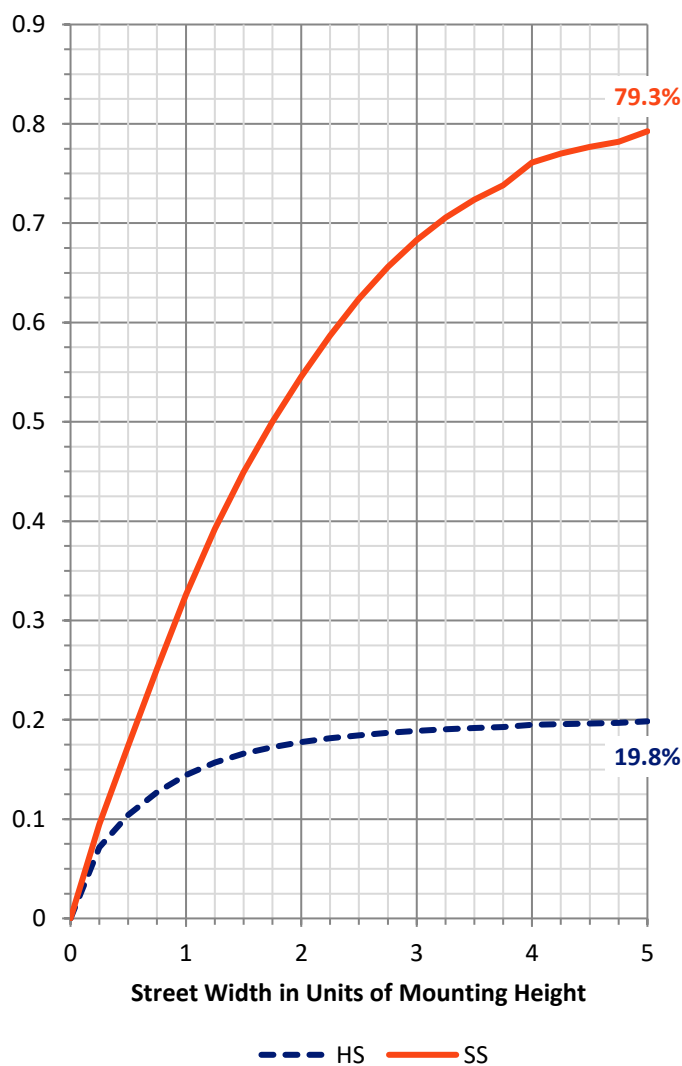
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2368.7	0.0	2368.7
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	9340.3	0.0	9340.3
	% Fixture	79.8	0.0	79.8
Total	Lumens	11709.0	0.0	11709.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.4	0.7
10°-20°	312.0	2.7
20°-30°	568.9	4.9
30°-40°	962.4	8.2
40°-50°	1601.1	13.7
50°-60°	2349.8	20.1
60°-70°	3005.9	25.7
70°-80°	2445.6	20.9
80°-90°	378.8	3.2
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°	11709.0	100.0
0°-180°	11709.0	100.0

Coefficient of Utilization

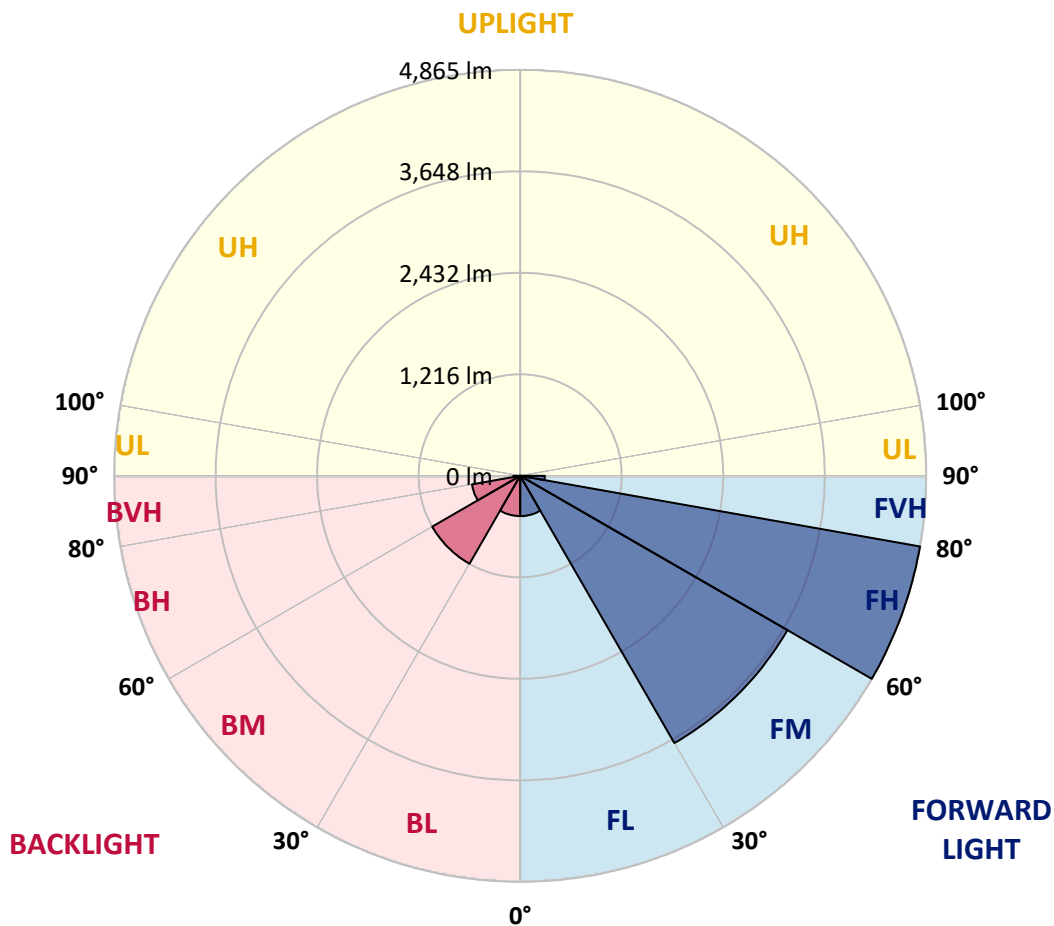


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	483.2	4.1			
FM (30°-60°)	3696.8	31.6			
FH (60°-80°)	4864.6	41.5			G2/5000
FVH (80°-90°)	295.6	2.5			G3/500
BL (0°-30°)	482.1	4.1	B1/500		
BM (30°-60°)	1216.6	10.4	B2/2500		
BH (60°-80°)	586.9	5.0	B2/1000		G2/1000
BVH (80°-90°)	83.1	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0
2.5°	696.1	674.2	638.3	637.3	657.2	661.6	674.7	675.7	680.5	672.7	728.1
5°	768.0	744.6	730.6	735.4	726.2	737.4	737.4	769.4	812.2	861.7	932.1
7.5°	785.0	768.0	751.9	764.1	766.0	755.3	765.5	840.8	918.0	967.6	1080.3
10°	751.0	734.0	746.1	750.0	749.5	773.8	826.7	887.0	972.9	1064.3	1125.0
12.5°	744.6	756.8	762.6	769.4	815.6	822.8	903.0	965.2	1051.6	1131.8	1289.6
15°	838.4	854.4	818.5	816.0	831.1	837.9	921.0	983.6	1109.9	1244.5	1386.3
17.5°	972.0	977.8	913.2	880.2	891.3	896.7	933.1	1011.8	1089.5	1338.2	1515.0
20°	1101.2	1105.1	983.6	909.8	949.1	955.0	989.0	1034.1	1095.3	1390.7	1602.0
22.5°	1236.7	1211.9	1078.8	985.6	1008.4	1009.9	1029.8	1054.5	1141.5	1382.4	1707.9
25°	1384.8	1369.3	1201.7	1112.3	1111.4	1091.5	1092.4	1127.9	1190.5	1470.8	1777.3
27.5°	1581.6	1583.5	1340.2	1292.1	1216.8	1203.7	1138.1	1204.1	1275.6	1471.8	1927.4
30°	1836.6	1789.5	1533.0	1455.3	1381.0	1353.3	1264.4	1320.7	1351.8	1555.8	2090.6
32.5°	2044.0	2030.4	1734.1	1616.5	1495.1	1527.2	1429.0	1379.5	1435.4	1700.6	2337.9
35°	2242.7	2198.0	1946.8	1793.8	1666.1	1646.7	1583.0	1591.3	1625.3	1883.7	2660.9
37.5°	2539.0	2514.7	2248.0	2003.2	1943.4	1864.3	1824.0	1849.7	1823.0	2118.3	3145.2
40°	2870.2	2729.4	2499.6	2281.5	2169.8	2113.9	2128.0	2103.7	2083.3	2381.6	3579.4
42.5°	3187.4	3059.2	2666.7	2568.6	2422.9	2446.2	2369.0	2386.0	2443.8	2755.1	3981.1
45°	3532.8	3255.4	2844.0	2757.5	2653.1	2682.7	2744.4	2726.0	2820.7	3195.7	4359.5
47.5°	3705.2	3441.5	3061.6	2920.7	2919.3	2857.6	3233.1	3273.9	3125.7	3522.1	4743.7
50°	3871.3	3612.0	3223.4	3128.2	3059.2	3191.3	3701.8	3608.1	3401.6	3896.6	5166.3
52.5°	4102.6	3806.7	3408.9	3307.4	3392.9	3515.3	4075.8	4057.4	3672.2	4281.8	5533.5
55°	4278.9	3980.1	3688.2	3594.0	3757.2	3877.2	4456.7	4345.4	3903.9	4564.5	5766.2
57.5°	4587.8	4281.3	4100.6	3891.3	4184.6	4182.7	4823.9	4737.9	4151.6	4796.7	5860.0
60°	5078.9	4719.0	4530.0	4288.6	4602.9	4715.1	5243.6	4995.8	4327.0	4943.4	5690.9
62.5°	5768.2	5340.7	5034.2	4795.2	5178.5	5381.5	5761.8	5183.8	4338.1	4901.6	5246.5
65°	6620.6	6100.9	5699.2	5446.6	6079.0	6369.0	6388.4	5299.9	4235.2	4469.8	4311.9
67.5°	7452.2	6867.9	6448.7	6496.8	7420.2	7557.6	7067.5	5397.0	3681.9	3589.1	2994.1
70°	7999.6	7366.2	7086.9	7597.0	8999.8	8858.9	7617.8	5141.1	2899.4	2326.7	1686.0
72.5°	7958.4	7295.3	7194.8	8250.8	10129.6	10041.7	7684.9	4088.5	1942.0	1272.2	840.8
75°	6483.6	5968.3	6196.6	7810.7	9804.2	9799.8	6672.1	2530.7	996.3	653.3	531.4
77.5°	3584.8	3384.6	4055.4	5913.9	7806.3	7846.1	4508.1	1147.8	537.2	462.9	400.2
80°	1255.6	1237.2	1757.4	3191.3	5135.2	5144.9	2096.5	525.1	390.5	350.2	293.9
82.5°	459.0	455.1	728.6	1482.5	2827.5	2821.2	795.2	326.9	289.5	247.7	193.8
85°	183.1	179.2	333.2	658.2	1298.9	1278.0	308.9	185.6	189.4	147.7	95.2
87.5°	50.5	52.5	113.2	206.0	397.8	368.7	77.7	62.7	76.7	60.2	30.1
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°	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0
2.5°	737.8	742.7	694.6	711.6	733.5	745.1	751.0	726.2	734.4	769.4	768.0
5°	946.7	927.3	908.8	927.8	915.1	897.2	926.3	924.8	943.8	962.7	967.1
7.5°	1102.6	1077.4	1068.6	1025.9	983.1	939.9	977.3	1000.6	1005.5	1052.6	1072.5
10°	1159.0	1149.3	1152.7	1096.3	1091.0	1095.3	1060.9	1023.5	1046.3	1026.9	1041.4
12.5°	1289.2	1313.4	1253.2	1214.8	1211.4	1184.7	1115.7	1091.5	1065.7	1092.4	1078.8
15°	1393.6	1438.8	1374.2	1306.6	1230.4	1189.1	1130.3	1093.4	1076.4	1082.2	1065.7
17.5°	1546.6	1588.9	1424.7	1321.2	1242.5	1181.8	1091.9	1013.3	1055.0	1058.4	1039.5
20°	1648.1	1651.0	1441.7	1285.3	1214.3	1108.9	1021.5	952.5	1000.6	1049.7	1071.1
22.5°	1747.2	1725.3	1462.6	1256.6	1111.9	1009.9	967.1	962.7	998.7	1040.0	1044.8
25°	1821.5	1824.9	1474.7	1245.9	1051.6	912.7	912.7	944.3	975.9	1074.0	1069.1
27.5°	2001.7	1869.1	1427.6	1196.9	968.1	855.9	913.2	955.4	970.5	1076.9	1087.6
30°	2132.9	2046.4	1437.3	1112.8	883.6	829.2	876.3	929.2	971.0	1093.9	1090.0
32.5°	2352.9	2120.3	1460.1	994.8	820.4	819.0	860.7	916.6	966.6	1075.4	1081.3
35°	2596.3	2337.9	1396.5	904.9	805.4	813.1	867.0	889.4	948.2	1068.1	1073.5
37.5°	3046.6	2451.5	1356.2	835.5	795.6	818.0	838.4	872.9	932.1	1031.7	1066.7
40°	3310.8	2685.7	1206.6	795.2	775.2	814.1	824.3	853.4	885.5	988.0	1010.3
42.5°	3658.6	2759.5	1078.8	750.5	765.0	798.1	828.7	836.0	857.3	919.0	959.8
45°	3948.6	2814.9	943.3	714.5	730.6	833.5	835.5	832.1	828.2	851.0	884.5
47.5°	4248.8	2963.5	818.5	674.7	717.4	862.7	838.9	807.8	791.8	794.7	825.8
50°	4580.0	3071.3	730.1	642.1	720.4	862.7	855.4	783.0	751.0	742.7	775.2
52.5°	4871.5	3084.0	663.0	615.9	708.2	833.0	866.6	767.5	713.6	693.6	724.2
55°	5030.3	2924.2	614.5	592.1	677.1	806.3	860.7	758.7	668.4	653.3	680.5
57.5°	5026.9	2658.9	573.2	559.1	641.7	768.9	828.2	711.1	640.7	631.9	658.7
60°	4845.7	2348.1	541.6	531.9	605.2	714.5	769.9	680.0	614.0	609.6	638.7
62.5°	4434.8	2027.0	511.0	503.2	571.2	676.1	742.2	645.5	586.3	585.8	613.5
65°	3631.9	1627.2	482.3	480.4	539.7	638.3	716.0	616.4	557.6	567.3	595.5
67.5°	2502.5	1143.4	451.7	457.6	510.5	601.8	696.1	597.0	527.5	547.4	572.7
70°	1373.2	707.2	417.7	429.4	473.6	559.6	665.0	565.4	488.2	518.8	536.3
72.5°	698.5	471.7	375.5	393.9	428.4	497.4	606.7	519.7	445.9	457.6	466.8
75°	469.2	355.1	328.4	348.8	373.5	438.1	538.2	477.0	405.6	404.1	414.3
77.5°	354.6	277.4	278.8	302.1	318.2	385.2	483.8	441.1	371.6	368.2	383.2
80°	259.4	210.3	224.4	248.7	263.3	345.8	448.3	401.2	325.4	311.8	324.5
82.5°	172.0	149.1	166.1	190.4	202.1	289.0	407.0	340.5	265.2	230.7	232.7
85°	81.1	78.2	99.1	110.7	125.8	179.2	304.6	235.6	169.0	139.9	146.2
87.5°	18.5	24.8	32.5	32.1	37.4	48.1	94.7	66.1	49.1	33.5	22.3
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)