

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: P596732

Luminaire Tested: **MSA-SA3D-827-U-T2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596732
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-827-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14594 lumens
Efficiency: N/A
Efficacy: 76.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G3

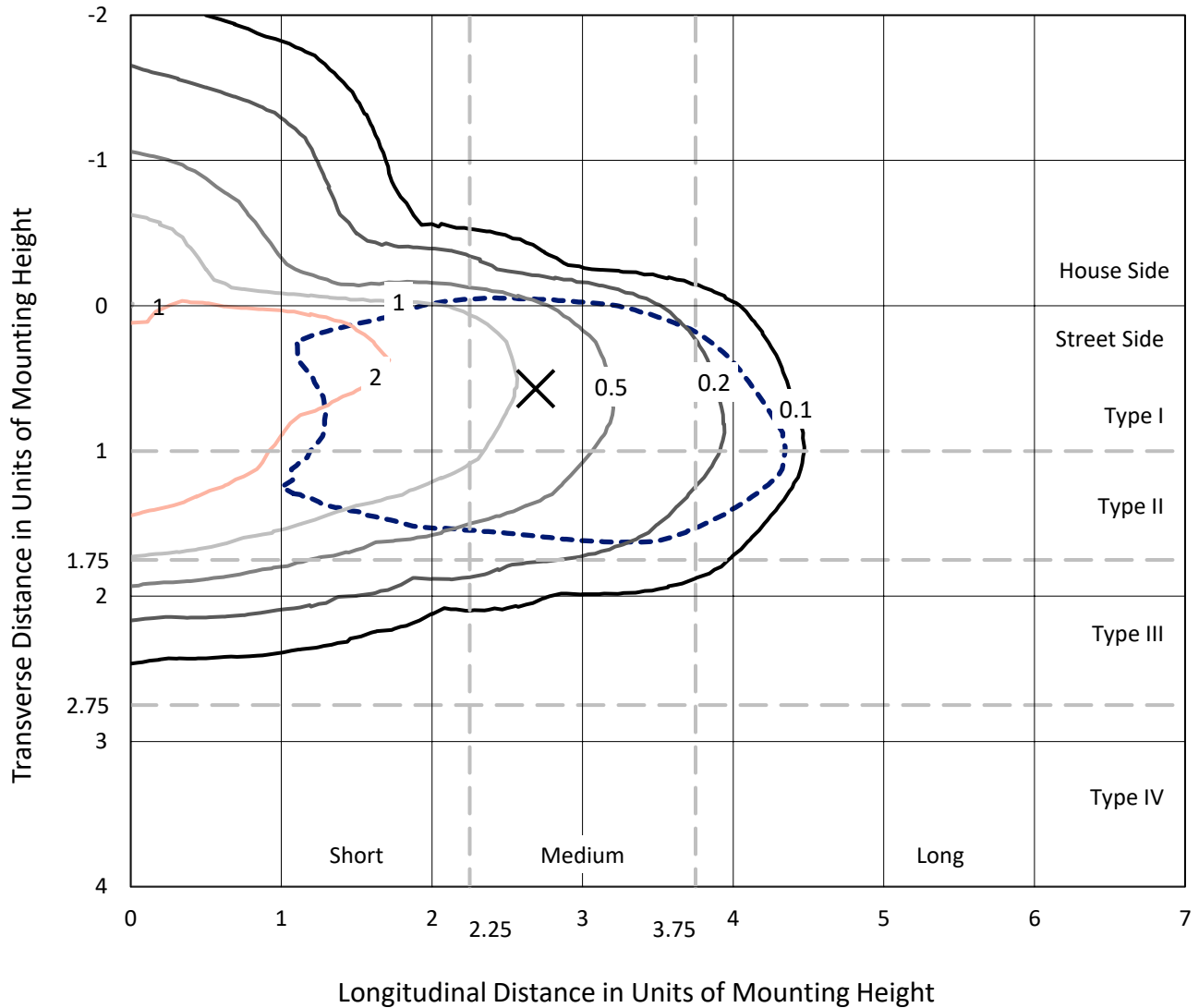
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

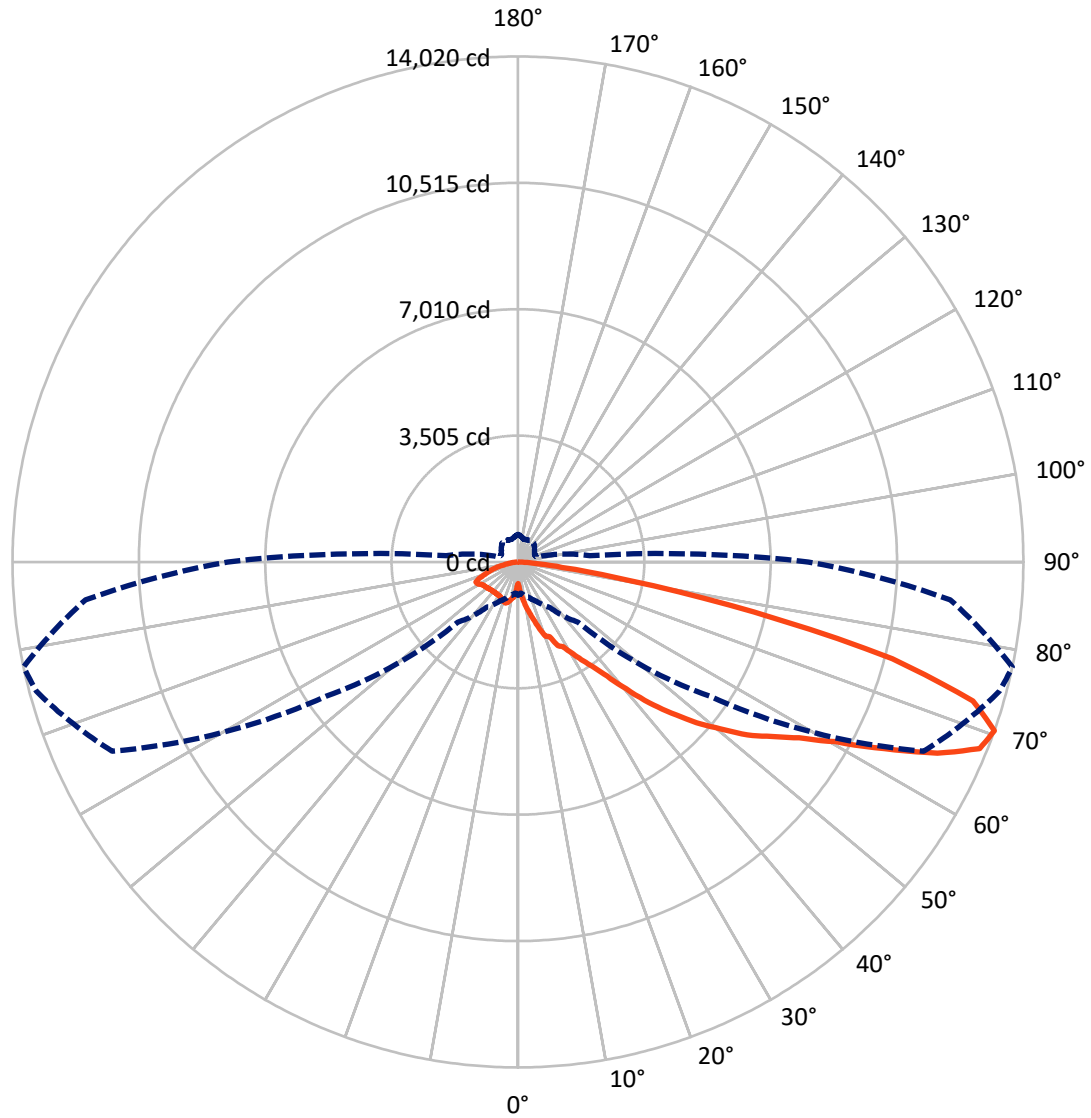
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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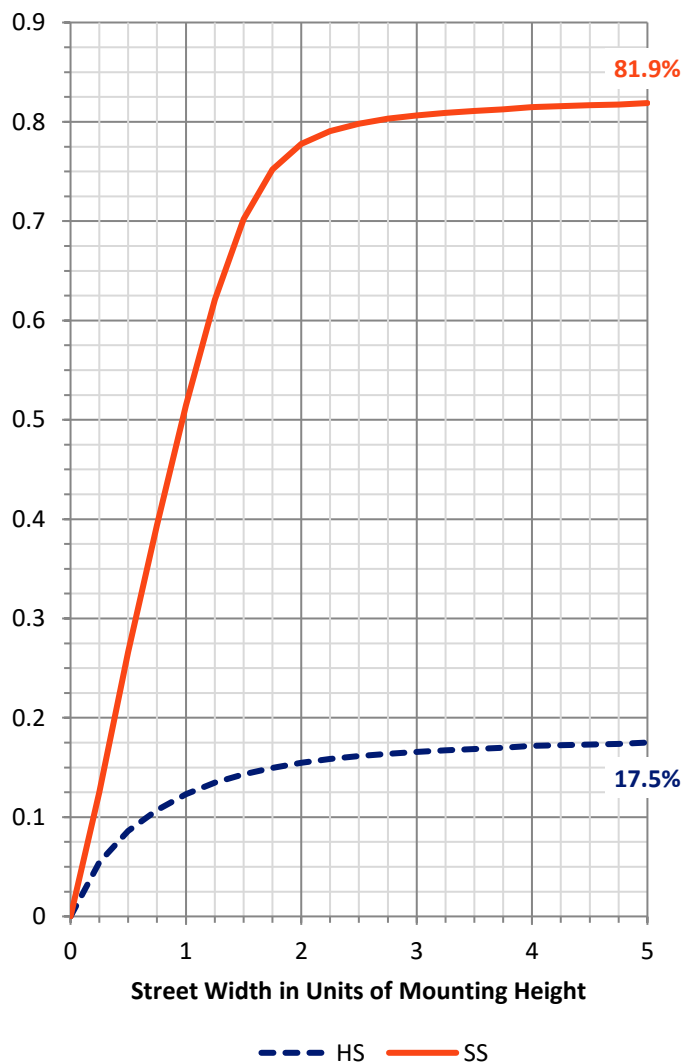
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2604.8	0.0	2604.8
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	11989.2	0.0	11989.2
	% Fixture	82.2	0.0	82.2
Total	Lumens	14594.0	0.0	14594.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	0.6
10°-20°	405.1	2.8
20°-30°	779.8	5.3
30°-40°	1313.5	9.0
40°-50°	2272.7	15.6
50°-60°	3431.5	23.5
60°-70°	3800.8	26.0
70°-80°	2191.3	15.0
80°-90°	307.3	2.1
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°	14594.0	100.0
0°-180°	14594.0	100.0

Coefficient of Utilization



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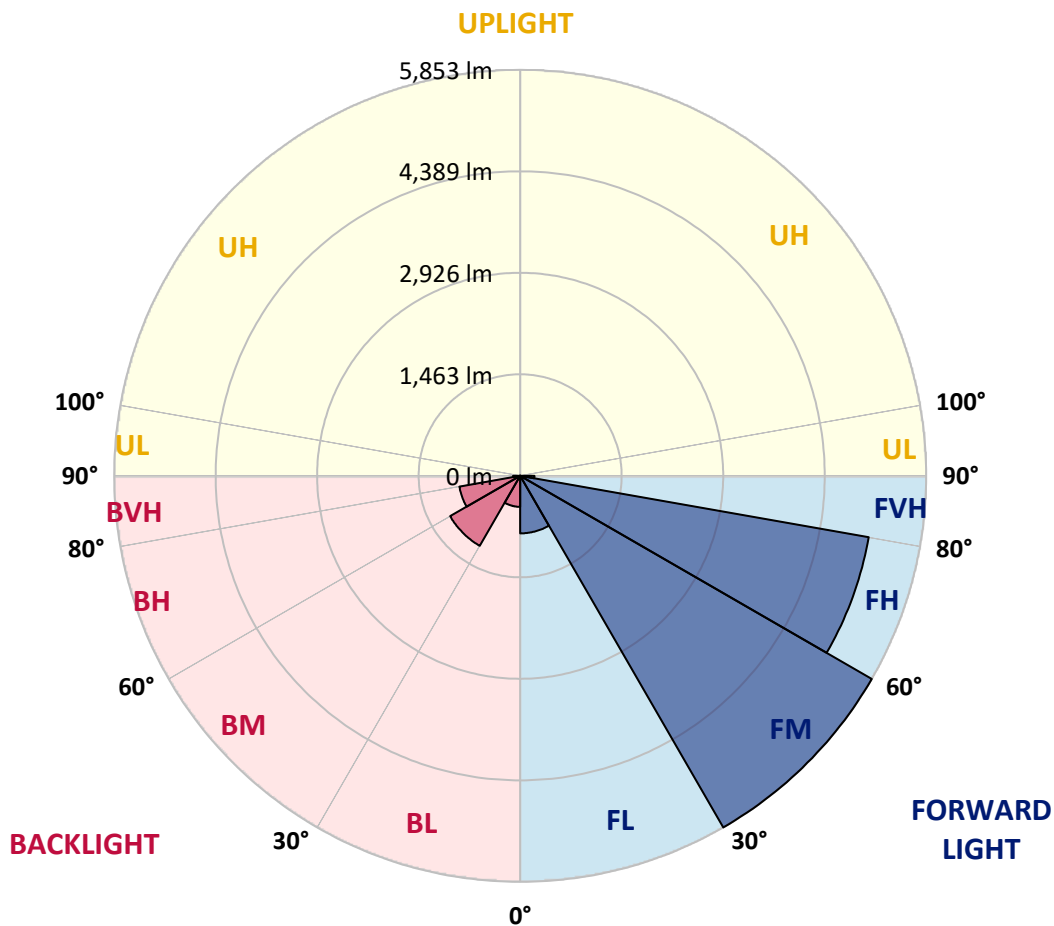
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	829.6	5.7			
FM (30°-60°)	5852.6	40.1			
FH (60°-80°)	5101.9	35.0			G3/7500
FVH (80°-90°)	205.0	1.4			G2/225
BL (0°-30°)	447.3	3.1	B1/500		
BM (30°-60°)	1165.0	8.0	B2/2500		
BH (60°-80°)	890.2	6.1	B2/1000		G2/1000
BVH (80°-90°)	102.3	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-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	595.0	595.0	595.0	595.0	595.0	595.0	595.0	595.0	595.0	595.0	595.0
2.5°	766.0	738.6	697.2	714.2	734.9	737.4	730.7	693.0	680.2	708.8	717.3
5°	1073.2	1027.0	999.0	989.8	958.8	894.3	940.6	916.8	921.7	907.7	935.1
7.5°	1331.8	1300.7	1259.4	1247.8	1176.6	1126.1	1157.8	1147.4	1097.5	1078.1	1109.1
10°	1463.2	1429.1	1430.9	1406.0	1387.1	1392.0	1376.2	1330.5	1293.4	1267.3	1192.4
12.5°	1542.3	1550.8	1596.4	1583.6	1654.8	1713.2	1668.8	1601.3	1483.9	1460.1	1385.9
15°	1730.3	1761.9	1719.3	1738.8	1769.2	1881.1	1862.9	1848.3	1724.2	1677.9	1541.0
17.5°	1923.7	1929.8	1865.3	1855.0	1928.0	1984.6	2055.7	1973.6	1988.8	1956.6	1735.1
20°	1965.1	2007.1	1914.6	1850.7	2001.0	2112.9	2201.1	2114.2	2194.5	2203.0	1895.1
22.5°	2116.6	2066.1	1944.4	1881.7	2013.2	2150.7	2294.2	2342.9	2317.4	2245.6	2049.7
25°	2221.8	2195.1	2071.0	2001.6	2051.5	2178.0	2429.9	2557.1	2579.6	2569.8	2196.9
27.5°	2417.1	2430.5	2175.0	2194.5	2125.1	2136.7	2511.4	2841.2	2700.6	2661.7	2379.4
30°	2725.6	2666.0	2379.4	2395.2	2280.2	2260.8	2683.6	3086.4	2960.4	2913.6	2529.7
32.5°	3047.4	3052.9	2704.9	2569.8	2508.4	2488.9	2649.5	3214.7	3288.9	3228.1	2756.6
35°	3501.3	3469.6	3057.8	2880.1	2658.0	2624.0	2892.3	3587.1	3723.3	3553.0	3026.1
37.5°	4192.4	4096.9	3617.5	3206.8	3042.6	3003.6	3239.1	3921.1	4227.7	4016.0	3466.6
40°	4747.3	4553.2	4117.6	3617.5	3339.4	3387.5	3485.5	4326.3	4750.9	4631.7	3874.2
42.5°	5189.6	5017.4	4471.7	4120.0	3742.2	3682.6	3789.7	4828.2	5462.7	5345.9	4382.8
45°	5613.6	5263.2	4869.5	4553.2	4190.0	4262.4	4246.6	5340.4	6335.8	5976.2	4832.4
47.5°	6032.2	5703.0	5291.2	4865.9	4500.3	4951.1	4782.5	5721.3	6924.7	6658.2	5305.8
50°	6570.0	6208.0	5738.9	5311.2	5092.2	5422.0	5139.1	6043.7	7584.2	7271.5	5752.3
52.5°	6927.1	6574.9	6163.6	5858.2	5838.1	5710.9	5638.5	6452.0	8162.1	7972.3	6225.6
55°	6885.1	6545.7	6359.5	6392.9	6641.2	6212.3	6153.2	7056.1	8765.1	8545.4	6736.7
57.5°	6358.9	5988.4	6027.9	6226.2	6893.0	7092.6	6992.2	7701.6	9302.9	9203.1	7368.8
60°	4953.5	4763.1	5084.9	5447.5	6556.0	7350.6	8056.3	8488.8	9964.8	10124.2	8361.7
62.5°	3217.8	2963.5	3472.1	4087.8	5550.3	7180.2	9139.8	9981.8	11048.9	11410.9	9870.5
65°	1667.0	1626.2	1982.1	2547.9	3863.9	6122.2	9521.9	11547.8	12366.7	12788.3	11311.8
67.5°	1211.9	1136.5	1301.3	1634.1	2358.7	4174.8	8797.9	12745.7	13424.7	13811.0	12149.5
70°	922.9	867.0	992.9	1199.1	1540.4	2358.1	6494.5	12419.0	13832.9	14020.3	12038.2
72.5°	691.1	643.1	753.2	945.4	1187.0	1327.5	3838.9	10211.2	13136.3	13200.2	10804.4
75°	551.8	514.7	562.2	746.5	967.3	903.5	2039.3	7398.0	10673.0	10727.7	8252.8
77.5°	452.6	421.0	440.5	559.7	752.6	679.6	1011.8	4705.9	6776.2	6692.3	4643.2
80°	369.3	341.9	351.0	404.6	573.1	507.4	568.2	2454.8	3232.4	3102.2	1931.0
82.5°	284.1	261.0	279.3	297.5	414.9	364.4	331.6	1117.0	1323.9	1233.2	708.2
85°	190.4	169.1	242.7	223.3	271.3	223.9	181.3	444.7	493.4	459.9	248.8
87.5°	52.3	49.3	81.5	111.3	111.3	84.6	66.3	107.7	137.5	120.5	58.4
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°	595.0	595.0	595.0	595.0	595.0	595.0	595.0	595.0	595.0	595.0	595.0
2.5°	720.9	707.6	672.3	669.2	677.7	679.0	673.5	660.7	654.0	690.5	685.0
5°	928.4	880.9	852.4	826.2	789.7	763.5	770.2	788.5	794.6	821.9	825.0
7.5°	1089.6	1027.0	964.3	880.3	825.0	789.7	816.5	835.9	851.1	890.1	905.9
10°	1159.6	1091.4	1002.6	914.4	899.2	905.3	890.1	894.9	918.7	920.5	928.4
12.5°	1289.8	1212.5	1052.5	972.8	968.6	981.3	975.9	998.4	1014.8	1059.2	1040.3
15°	1414.5	1315.9	1090.2	1008.7	991.1	1016.6	1046.4	1084.1	1119.4	1161.4	1140.1
17.5°	1566.0	1417.5	1092.1	992.3	995.3	1050.1	1081.1	1101.8	1207.0	1264.8	1235.6
20°	1661.5	1427.9	1051.3	951.5	995.3	1044.6	1087.8	1110.3	1228.3	1315.3	1335.4
22.5°	1747.9	1431.5	1019.7	929.6	957.6	1022.7	1087.8	1137.7	1213.1	1296.5	1299.5
25°	1795.4	1428.5	978.9	931.4	957.0	989.2	1047.0	1092.7	1148.6	1264.8	1267.9
27.5°	1917.0	1389.0	938.7	938.7	952.1	953.3	1027.0	1053.7	1061.6	1167.5	1186.4
30°	1952.3	1397.5	933.9	937.5	944.2	932.1	964.3	981.9	993.5	1084.8	1087.8
32.5°	2008.9	1329.3	948.5	926.6	918.1	916.2	924.1	940.0	944.8	1000.8	1011.1
35°	2077.6	1302.0	953.3	923.5	906.5	897.4	921.1	901.6	916.8	982.5	989.8
37.5°	2301.5	1264.2	978.3	923.5	901.6	891.3	879.7	888.9	943.0	1006.3	1045.2
40°	2444.5	1275.8	972.2	932.7	885.2	875.5	856.0	889.5	973.4	1085.4	1114.6
42.5°	2695.2	1282.5	979.5	928.4	890.7	853.0	865.7	902.2	990.5	1054.3	1099.4
45°	2954.3	1303.2	974.6	915.6	878.5	896.2	878.5	911.4	953.3	955.2	989.2
47.5°	3208.6	1386.5	964.3	889.5	875.5	921.7	876.7	882.2	885.2	896.2	936.3
50°	3507.4	1475.3	949.7	853.0	879.7	922.9	883.4	856.6	853.6	889.5	934.5
52.5°	3846.8	1575.7	930.8	817.7	854.8	911.4	906.5	858.4	832.3	867.0	912.0
55°	4246.6	1690.1	908.9	782.4	827.4	912.6	919.3	845.7	832.9	870.6	918.7
57.5°	4777.7	1855.6	866.3	731.3	793.9	893.7	886.4	831.1	818.9	859.0	908.9
60°	5684.2	2173.8	805.5	680.8	758.1	847.5	859.7	804.9	792.7	837.1	889.5
62.5°	6897.9	2556.4	731.9	631.5	714.2	797.6	826.2	767.2	766.0	822.5	877.3
65°	8027.7	2773.6	655.8	586.5	669.2	751.4	788.5	731.9	734.3	805.5	860.3
67.5°	8497.4	2518.1	587.7	546.3	617.5	698.4	757.4	704.5	696.6	782.4	832.9
70°	8056.3	2000.4	528.7	503.7	559.1	641.2	714.2	668.0	649.8	727.6	767.2
72.5°	7128.5	1667.6	473.3	453.9	508.0	581.0	655.8	618.7	595.0	654.6	689.9
75°	5572.2	1368.3	410.1	404.6	449.6	526.3	595.0	569.5	539.0	576.8	612.0
77.5°	3172.7	865.7	344.3	348.0	380.2	461.2	522.0	501.9	470.9	486.7	527.5
80°	1269.7	436.8	276.8	279.3	306.6	379.0	432.6	425.3	393.0	405.8	433.8
82.5°	474.5	239.7	204.4	205.6	233.0	299.9	369.3	365.6	335.2	326.1	341.9
85°	188.6	118.6	125.3	130.8	157.0	216.0	296.3	262.8	226.9	198.9	208.7
87.5°	45.0	37.7	43.8	46.2	51.1	67.5	108.3	87.0	89.4	71.8	53.5
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)