

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: P596646

Luminaire Tested: **MSA-SA2D-827-U-T3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596646
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-827-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9901 lumens
Efficiency: N/A
Efficacy: 76.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

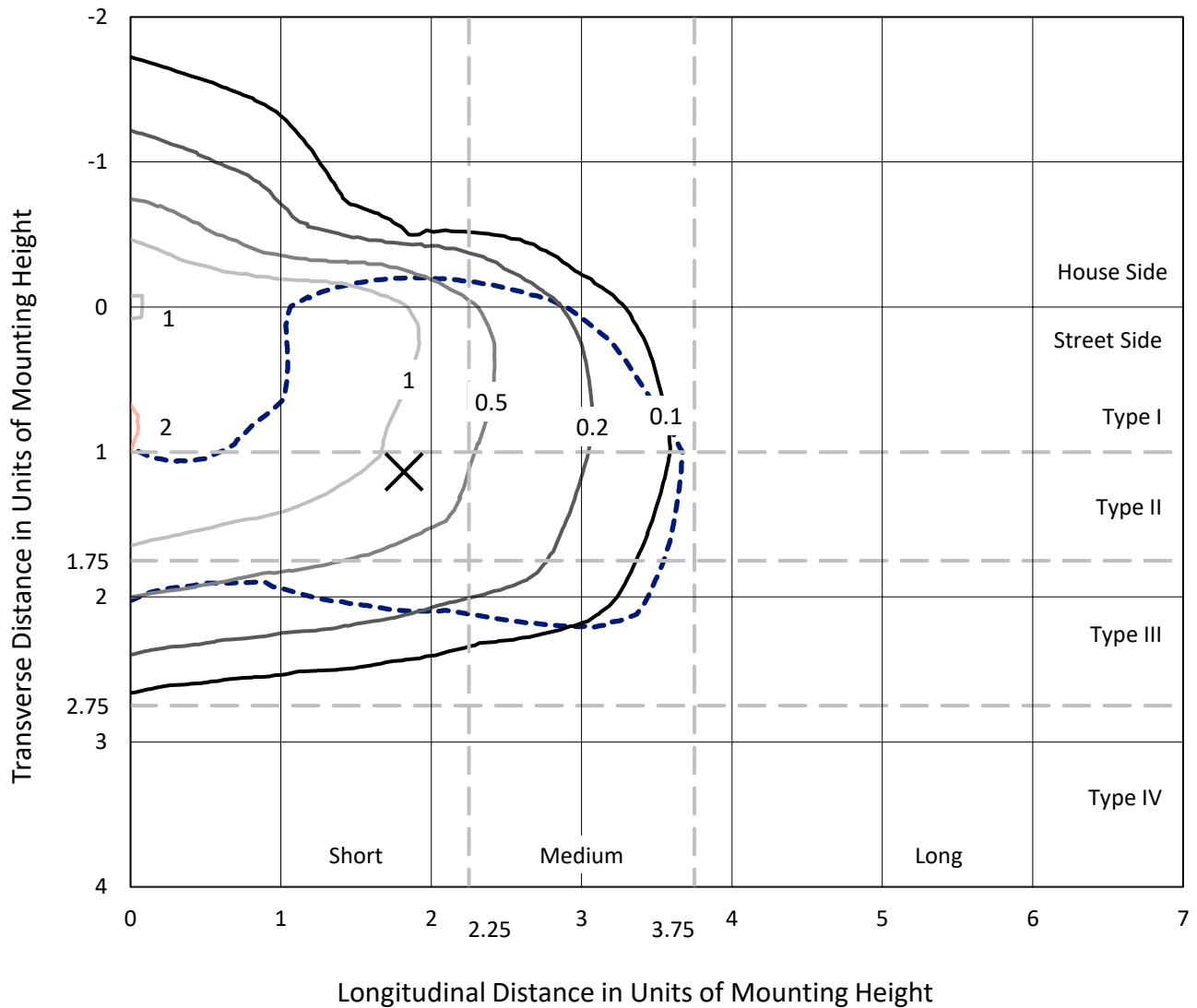
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

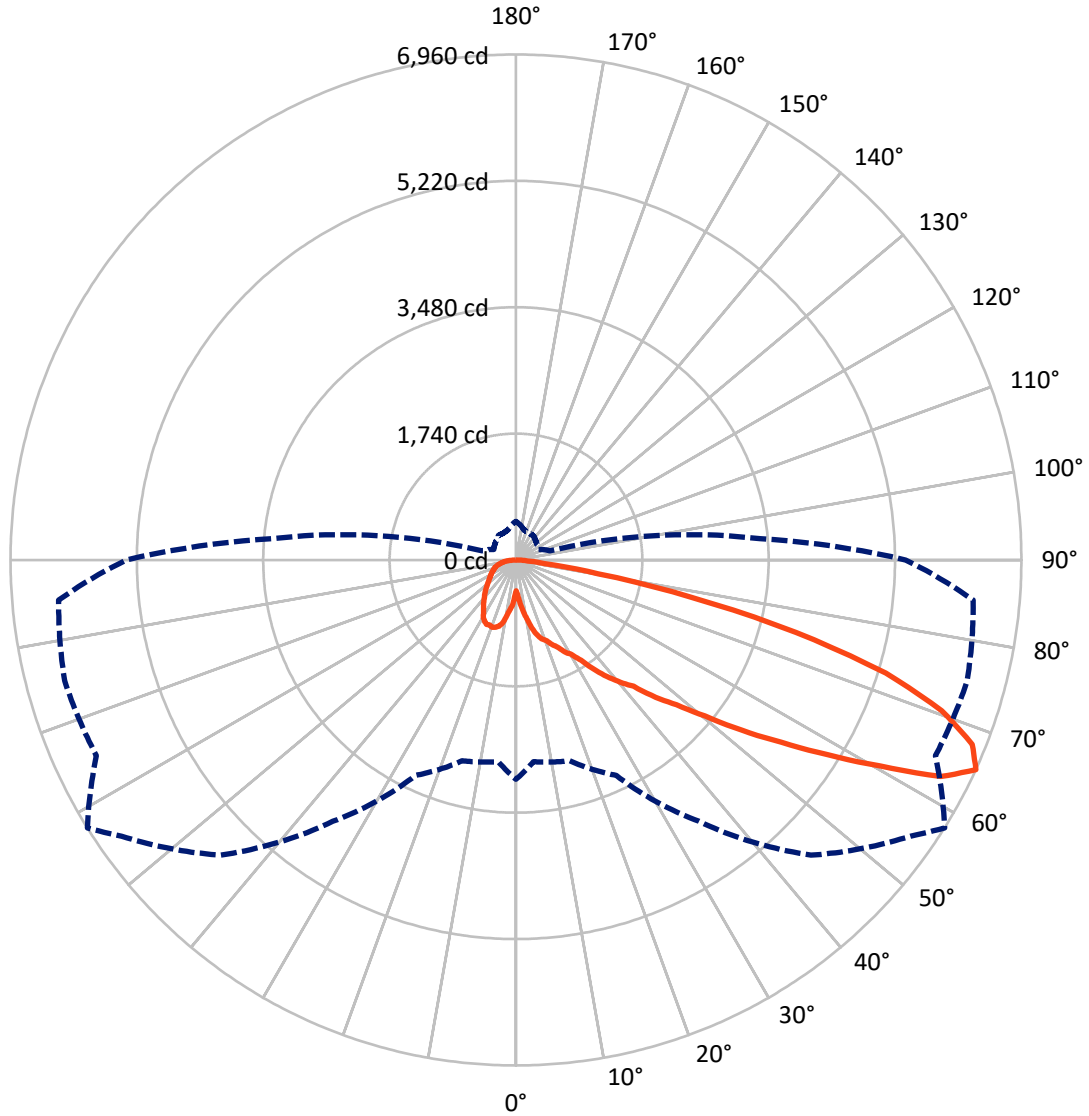
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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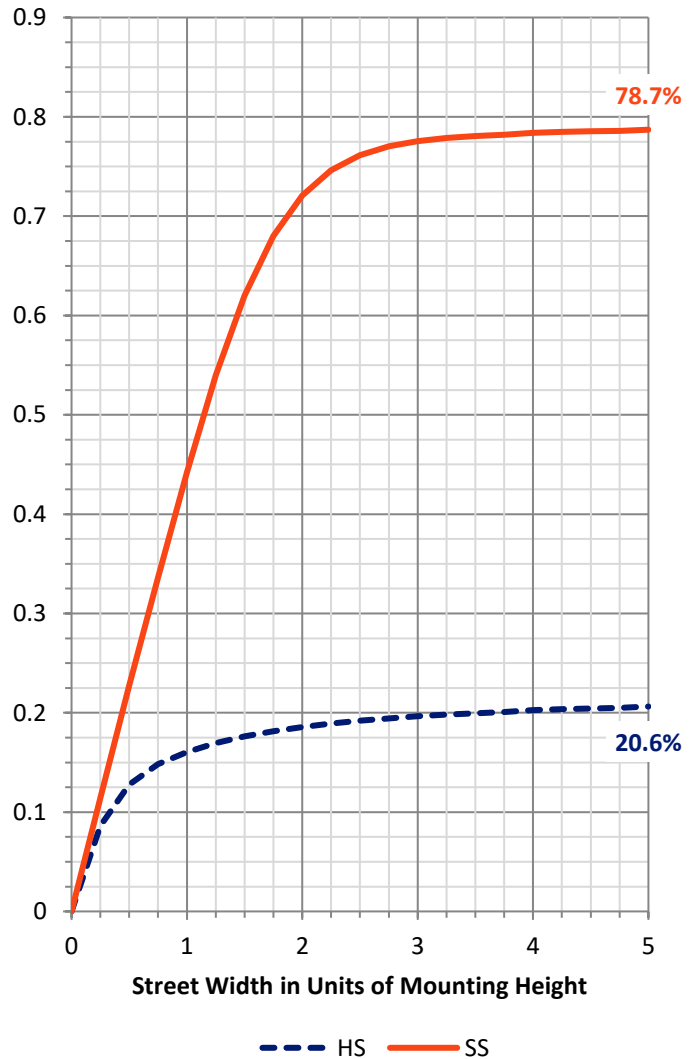
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2085.4	0.0	2085.4
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	7815.6	0.0	7815.6
	% Fixture	78.9	0.0	78.9
Total	Lumens	9901.0	0.0	9901.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.8	0.7
10°-20°	282.6	2.9
20°-30°	542.2	5.5
30°-40°	895.1	9.0
40°-50°	1487.8	15.0
50°-60°	2457.1	24.8
60°-70°	2756.4	27.8
70°-80°	1253.3	12.7
80°-90°	161.6	1.6
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°	9901.0	100.0
0°-180°	9901.0	100.0

Coefficient of Utilization



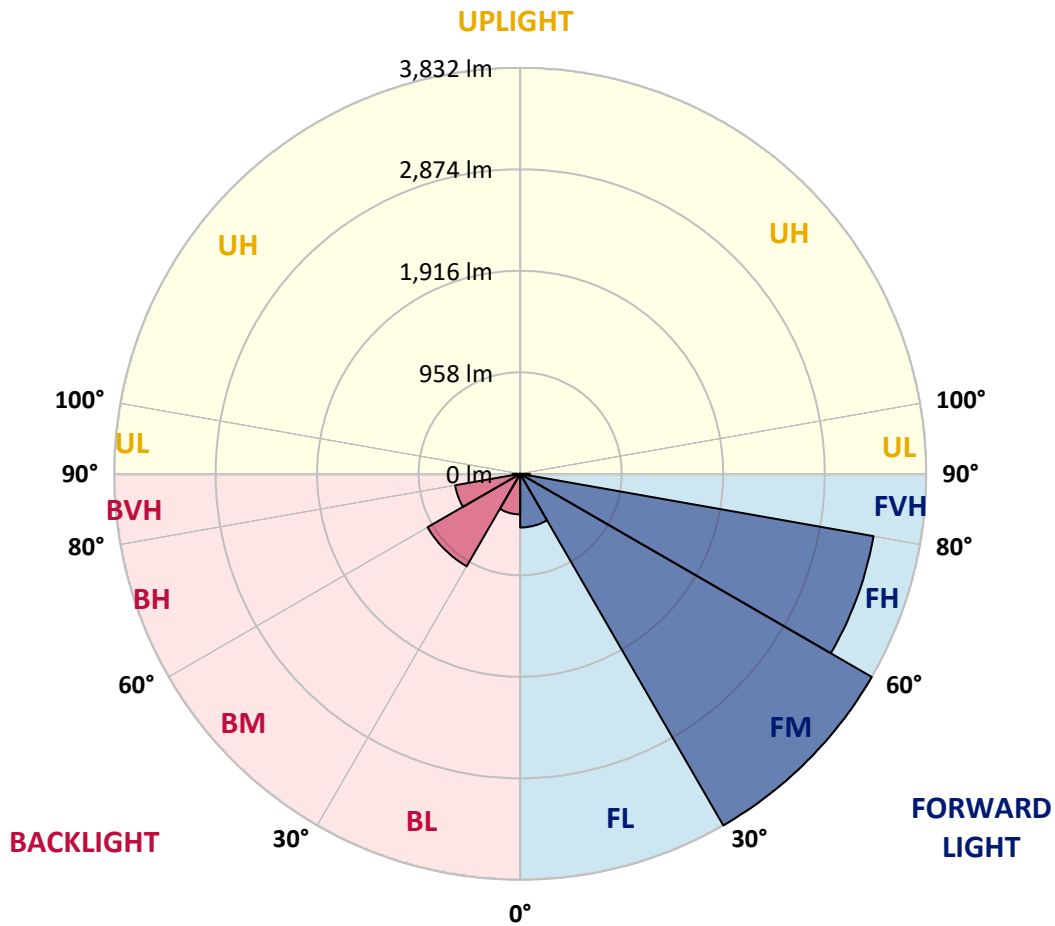
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	506.7	5.1			
FM (30°-60°)	3831.5	38.7			
FH (60°-80°)	3386.3	34.2			G2/5000
FVH (80°-90°)	91.0	0.9			G1/100
BL (0°-30°)	382.9	3.9	B1/500		
BM (30°-60°)	1008.6	10.2	B2/2500		
BH (60°-80°)	623.4	6.3	B2/1000		G2/1000
BVH (80°-90°)	70.6	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	425.1	425.1	425.1	425.1	425.1	425.1	425.1	425.1	425.1	425.1	425.1
2.5°	507.6	492.3	466.7	472.9	487.8	496.0	491.1	484.5	475.8	474.2	512.1
5°	657.2	628.0	616.0	611.1	592.9	582.2	600.8	598.3	608.2	626.3	663.4
7.5°	766.5	745.9	726.1	724.0	689.0	676.6	701.4	714.6	732.3	732.7	783.0
10°	825.1	807.3	806.9	788.4	785.5	809.0	809.4	819.3	821.3	842.4	832.5
12.5°	888.6	887.3	910.0	909.6	936.0	974.7	955.3	955.3	961.1	935.6	966.9
15°	1039.9	1053.1	1010.6	1017.6	1017.6	1055.5	1054.3	1061.7	1079.5	1072.9	1058.8
17.5°	1197.4	1205.6	1158.6	1114.9	1118.2	1110.0	1139.7	1142.5	1125.6	1202.3	1185.4
20°	1298.8	1331.0	1232.0	1177.2	1187.9	1197.4	1198.6	1180.9	1172.2	1290.2	1267.1
22.5°	1424.2	1396.9	1306.2	1245.6	1261.7	1248.9	1246.4	1260.1	1272.0	1316.5	1354.1
25°	1507.9	1505.8	1396.9	1330.6	1312.8	1309.1	1334.3	1328.9	1357.4	1438.2	1414.7
27.5°	1629.5	1667.4	1474.5	1491.0	1413.0	1331.0	1411.8	1436.1	1487.2	1474.1	1526.4
30°	1865.3	1836.9	1635.3	1630.7	1542.5	1473.6	1529.7	1509.1	1601.0	1598.2	1636.9
32.5°	2057.9	2077.7	1824.1	1776.7	1711.1	1628.3	1591.1	1648.5	1697.9	1779.2	1801.0
35°	2261.6	2257.0	2017.5	1921.8	1813.4	1779.2	1824.9	1848.9	1954.0	2028.6	1976.7
37.5°	2578.2	2542.4	2268.2	2087.2	2005.9	1993.6	2071.9	2037.3	2151.1	2168.8	2198.1
40°	2872.6	2764.6	2497.4	2290.0	2161.0	2207.2	2209.6	2214.2	2275.2	2323.4	2468.2
42.5°	3152.6	3076.7	2730.4	2574.5	2384.5	2339.5	2367.6	2377.0	2531.2	2629.8	2830.2
45°	3535.2	3332.0	3065.2	2905.2	2692.5	2635.1	2615.4	2697.0	2845.8	3070.1	3242.1
47.5°	3858.9	3675.4	3421.0	3210.3	2972.4	3136.1	3024.0	2978.2	3178.2	3456.1	3729.9
50°	4127.3	3925.3	3675.8	3554.2	3516.3	3662.2	3371.1	3376.5	3559.6	3951.7	4265.5
52.5°	4335.2	4119.5	3898.5	3836.7	4048.6	4132.7	3922.4	3890.7	4024.3	4487.7	4864.6
55°	4529.4	4300.5	4129.8	4256.0	4613.1	4622.5	4607.7	4431.6	4592.4	5062.1	5484.7
57.5°	4579.2	4332.7	4219.3	4400.3	4883.1	5258.8	5406.4	5060.8	5224.5	5584.5	6015.8
60°	4322.4	4111.3	4065.9	4311.6	5029.1	5578.3	5963.8	5757.2	5695.8	6003.8	6387.7
62.5°	3796.2	3551.3	3588.0	3929.4	4875.3	5704.9	6404.2	6565.4	6193.5	6337.4	6550.1
65°	3021.5	2787.7	2861.9	3272.6	4392.5	5746.9	6629.3	6960.0	6373.3	6431.8	6320.1
67.5°	2130.9	1918.5	2012.1	2543.2	3654.0	5208.4	6668.1	6776.1	6181.9	6162.6	5691.7
70°	1207.3	1074.1	1175.5	1618.4	2579.1	4149.2	6364.2	6221.9	5838.9	5564.3	4762.3
72.5°	553.7	508.0	556.6	823.8	1484.8	2760.9	5195.7	5324.7	5031.2	4687.7	3623.1
75°	294.4	278.3	298.9	411.5	694.8	1502.1	3691.5	3981.8	3825.5	3555.5	2363.4
77.5°	218.9	206.6	216.5	266.8	371.1	587.6	2097.5	2463.6	2523.0	2274.4	1312.4
80°	167.8	157.9	167.8	201.6	256.9	279.1	896.8	1148.3	1307.9	1056.8	521.6
82.5°	124.5	117.9	133.2	151.3	180.6	174.4	318.3	396.2	510.9	349.2	203.3
85°	99.0	90.7	96.5	102.7	115.5	95.7	145.5	162.9	172.4	144.3	75.0
87.5°	38.8	35.9	70.1	55.3	47.0	28.9	43.7	49.5	50.7	48.7	21.9
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°	425.1	425.1	425.1	425.1	425.1	425.1	425.1	425.1	425.1	425.1	425.1
2.5°	516.2	512.1	487.8	495.6	508.4	510.9	516.2	501.4	494.0	521.2	522.4
5°	666.7	644.5	632.9	634.2	625.9	613.1	632.5	645.3	650.2	670.4	677.9
7.5°	783.4	756.6	737.2	715.0	683.6	663.4	697.2	722.0	735.2	777.2	793.7
10°	835.4	813.9	809.8	781.8	780.9	780.5	778.9	770.2	798.7	794.5	806.1
12.5°	942.6	938.0	898.9	887.7	889.0	887.7	853.1	851.4	851.9	889.8	876.2
15°	1042.3	1043.2	1007.3	966.9	930.6	919.5	905.9	899.7	908.8	930.2	917.0
17.5°	1165.6	1169.8	1067.1	1003.2	955.3	954.1	921.5	883.2	938.4	951.6	937.2
20°	1245.2	1227.9	1101.7	994.5	980.9	943.8	903.4	850.6	898.4	930.6	939.7
22.5°	1320.7	1290.6	1133.9	1009.8	944.6	900.5	861.3	827.1	842.4	878.2	872.5
25°	1371.8	1363.5	1178.4	1046.5	943.4	845.3	792.5	770.6	778.5	834.1	828.8
27.5°	1493.8	1404.8	1170.6	1056.0	903.8	769.8	743.4	719.9	712.1	772.3	788.8
30°	1575.5	1538.8	1222.9	1041.1	853.9	708.0	669.2	664.3	666.7	735.2	739.7
32.5°	1714.0	1618.8	1308.7	984.2	781.3	662.2	617.7	619.7	630.9	680.7	691.1
35°	1858.3	1801.4	1320.3	943.4	722.4	613.5	595.4	581.0	587.1	630.9	632.9
37.5°	2126.3	1929.7	1391.2	880.3	679.1	595.0	560.3	547.6	550.9	575.6	593.3
40°	2362.2	2187.4	1358.2	819.3	625.5	570.2	526.9	517.5	507.6	531.9	543.0
42.5°	2740.3	2371.3	1347.1	752.1	600.3	536.8	507.2	482.0	472.5	493.1	513.3
45°	3118.4	2566.3	1286.4	684.0	564.9	534.4	478.3	454.4	456.9	475.4	496.0
47.5°	3539.8	2828.1	1183.8	618.1	526.1	522.4	449.4	439.1	446.5	467.2	487.8
50°	4037.9	3106.0	1098.8	558.7	498.5	486.5	445.7	433.4	440.4	464.7	484.9
52.5°	4582.5	3410.7	1037.0	503.9	467.2	458.1	450.7	438.7	447.0	468.0	489.0
55°	5123.9	3689.0	994.9	466.3	440.4	446.1	461.0	452.3	456.4	472.1	493.1
57.5°	5525.5	3835.8	910.4	426.3	418.5	439.1	462.2	447.8	450.3	472.1	494.8
60°	5758.9	3863.9	771.5	393.8	401.2	425.1	449.4	430.9	429.2	465.1	493.5
62.5°	5733.3	3701.0	611.9	364.1	381.4	404.1	430.1	412.3	416.9	465.9	496.0
65°	5367.2	3368.3	486.5	338.9	357.5	381.0	414.0	407.0	428.8	498.9	531.5
67.5°	4724.0	2882.1	390.9	315.4	335.2	365.3	425.1	443.7	453.1	532.7	566.1
70°	3828.4	2239.3	325.7	294.8	317.5	372.7	457.3	453.6	445.7	516.6	543.0
72.5°	2765.9	1535.1	286.6	274.6	295.6	350.5	458.1	438.3	428.4	471.7	490.7
75°	1730.5	915.8	250.3	249.0	262.2	314.2	437.5	419.7	392.9	414.4	439.1
77.5°	988.3	468.8	210.7	221.8	229.7	272.5	391.7	375.6	351.7	360.8	385.1
80°	377.3	226.8	177.7	197.1	195.0	230.9	331.9	328.2	301.0	303.9	318.7
82.5°	177.7	127.0	147.6	169.5	158.3	183.9	269.7	268.4	244.5	221.4	233.4
85°	66.0	67.6	108.0	129.1	110.1	118.7	195.0	189.7	166.6	140.6	155.4
87.5°	14.8	24.3	53.2	67.2	38.3	36.7	78.8	68.4	66.0	39.2	41.2
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)