

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: P367802

Luminaire Tested: **MSA-SA3B-727-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367802
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-727-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: 12262 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

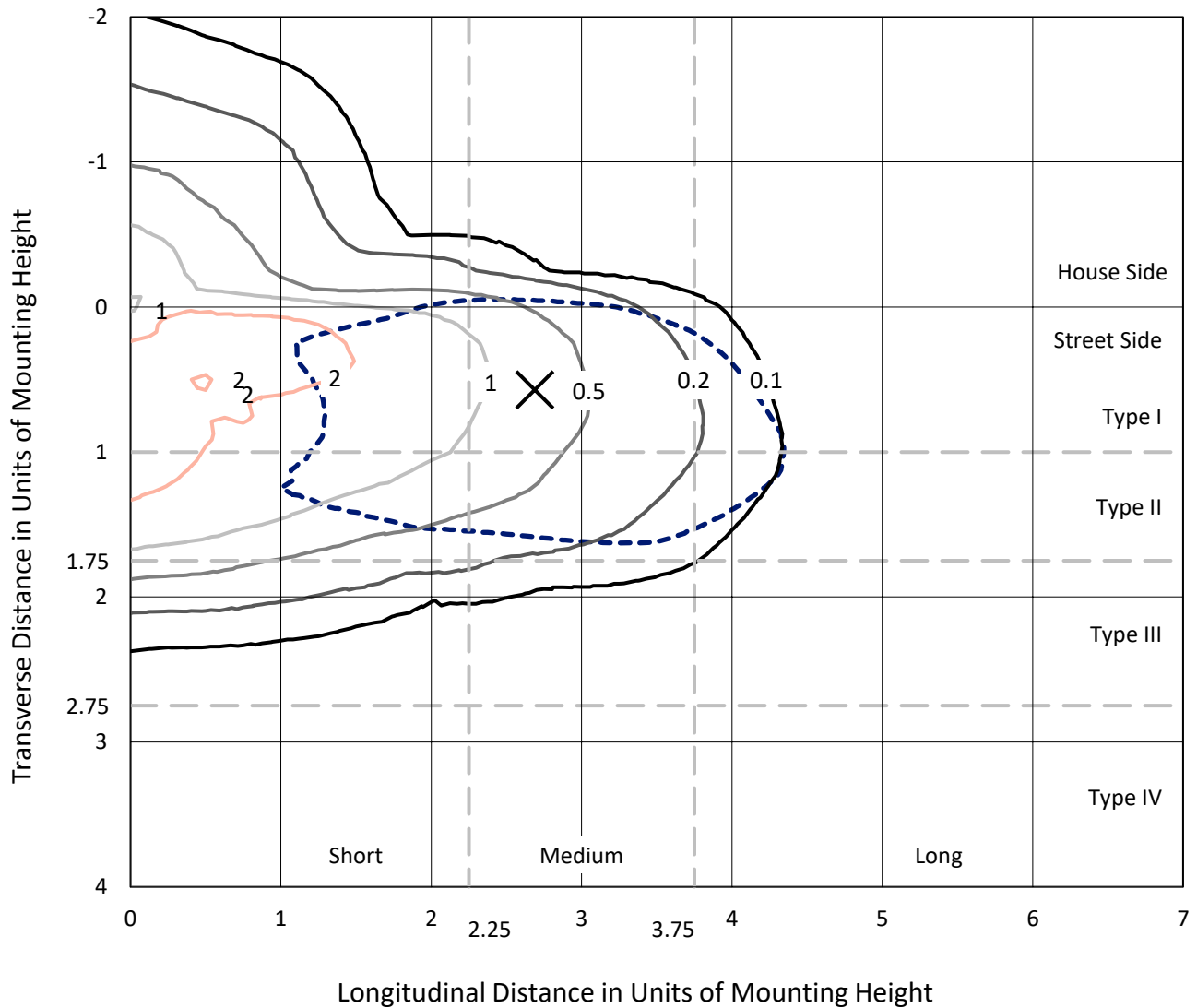
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

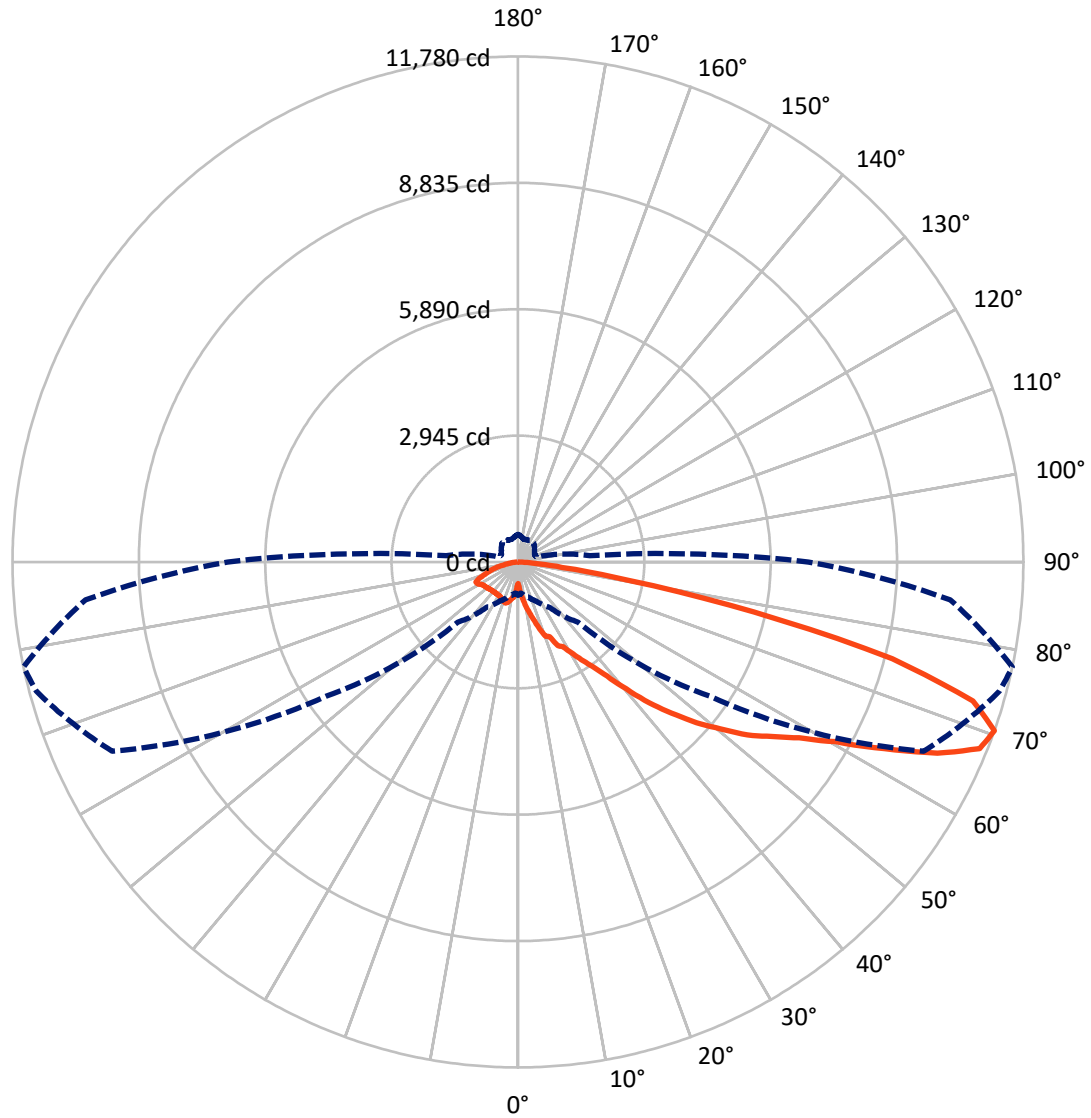
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 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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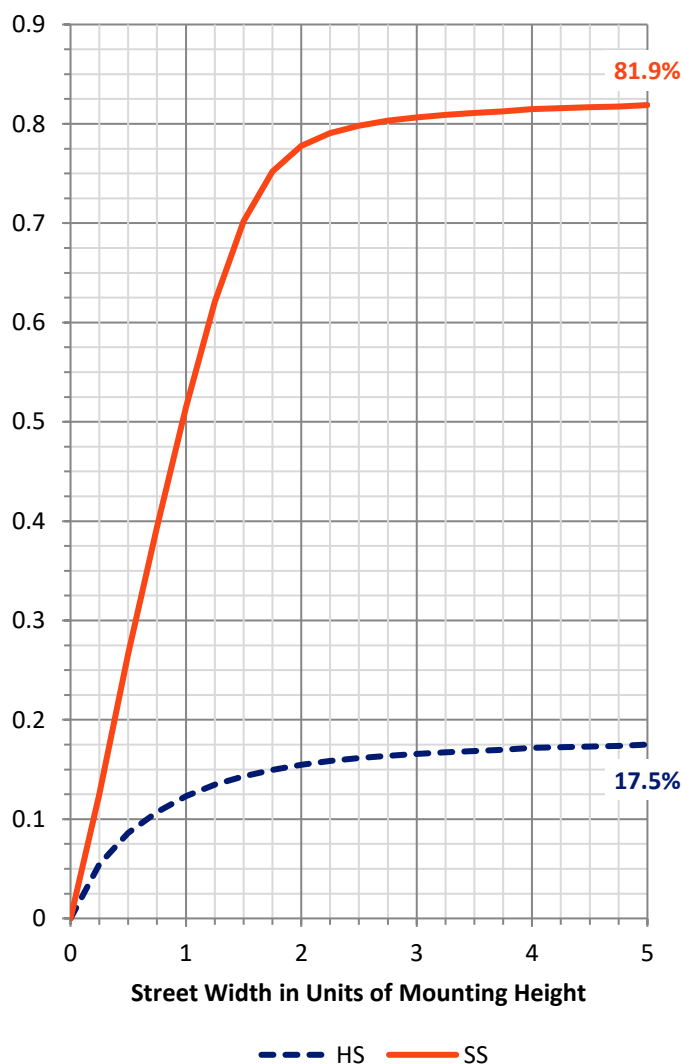
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2188.6	0.0	2188.6
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	10073.4	0.0	10073.4
	% Fixture	82.2	0.0	82.2
Total	Lumens	12262.0	0.0	12262.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.3	0.6
10°-20°	340.4	2.8
20°-30°	655.2	5.3
30°-40°	1103.6	9.0
40°-50°	1909.5	15.6
50°-60°	2883.2	23.5
60°-70°	3193.5	26.0
70°-80°	1841.1	15.0
80°-90°	258.2	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°	12262.0	100.0
0°-180°	12262.0	100.0

Coefficient of Utilization



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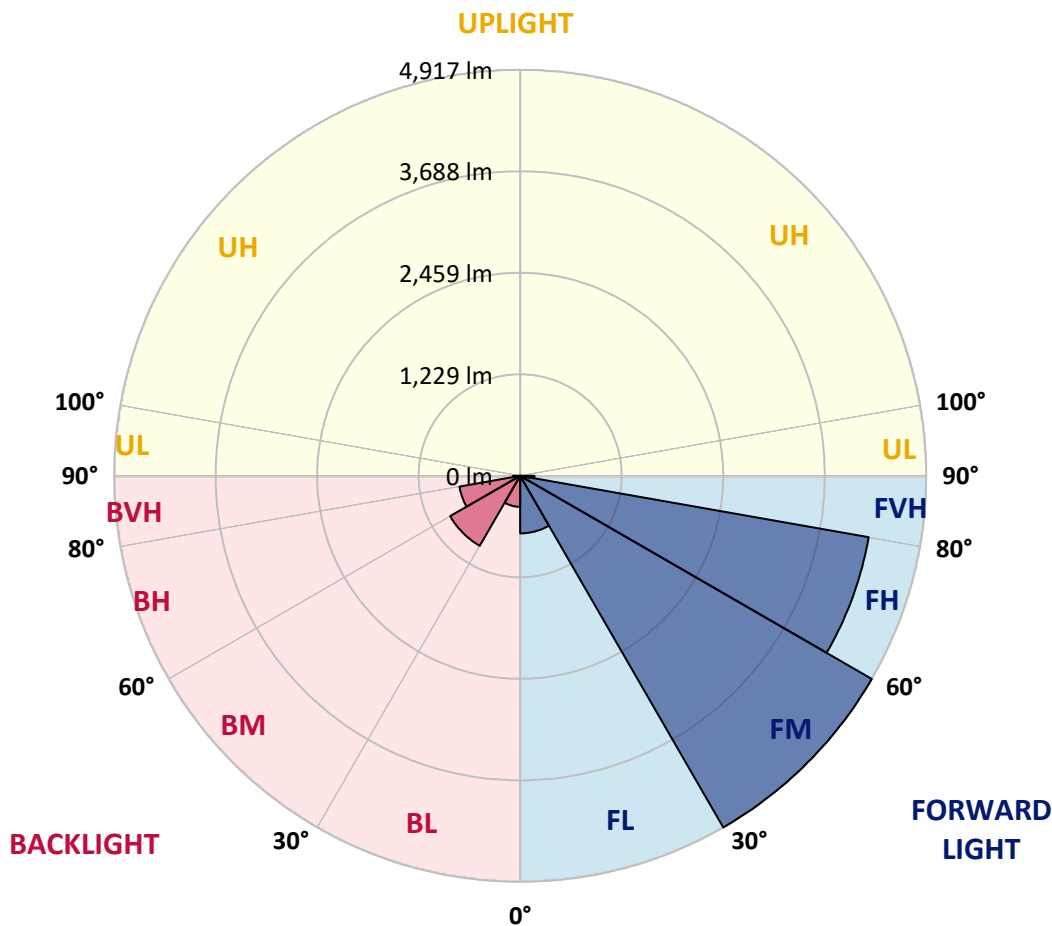
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	697.1	5.7			
FM (30°-60°)	4917.4	40.1			
FH (60°-80°)	4286.7	35.0			G2/5000
FVH (80°-90°)	172.3	1.4			G2/225
BL (0°-30°)	375.8	3.1	B1/500		
BM (30°-60°)	978.9	8.0	B1/1000		
BH (60°-80°)	747.9	6.1	B2/1000		G2/1000
BVH (80°-90°)	86.0	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9
2.5°	643.6	620.6	585.8	600.1	617.5	619.5	613.9	582.2	571.5	595.5	602.7
5°	901.7	862.9	839.3	831.7	805.6	751.4	790.3	770.3	774.4	762.7	785.7
7.5°	1119.0	1092.9	1058.1	1048.4	988.6	946.2	972.8	964.1	922.2	905.8	931.9
10°	1229.4	1200.7	1202.3	1181.3	1165.5	1169.6	1156.3	1117.9	1086.8	1064.8	1001.9
12.5°	1295.8	1303.0	1341.3	1330.6	1390.4	1439.5	1402.1	1345.4	1246.8	1226.8	1164.5
15°	1453.8	1480.4	1444.6	1460.9	1486.5	1580.5	1565.2	1552.9	1448.7	1409.8	1294.8
17.5°	1616.3	1621.4	1567.3	1558.6	1619.9	1667.4	1727.3	1658.2	1671.0	1643.9	1457.9
20°	1651.1	1686.4	1608.7	1555.0	1681.2	1775.3	1849.4	1776.3	1843.8	1851.0	1592.3
22.5°	1778.4	1735.9	1633.7	1581.1	1691.5	1807.0	1927.6	1968.5	1947.1	1886.7	1722.1
25°	1866.8	1844.3	1740.0	1681.8	1723.7	1830.0	2041.6	2148.5	2167.4	2159.2	1845.8
27.5°	2030.9	2042.1	1827.4	1843.8	1785.5	1795.2	2110.1	2387.2	2269.1	2236.4	1999.2
30°	2290.1	2240.0	1999.2	2012.5	1915.9	1899.5	2254.8	2593.2	2487.4	2448.0	2125.5
32.5°	2560.5	2565.1	2272.7	2159.2	2107.6	2091.2	2226.2	2701.0	2763.4	2712.3	2316.1
35°	2941.8	2915.2	2569.2	2419.9	2233.3	2204.7	2430.1	3013.9	3128.4	2985.3	2542.6
37.5°	3522.5	3442.2	3039.4	2694.4	2556.4	2523.7	2721.5	3294.5	3552.1	3374.3	2912.7
40°	3988.7	3825.6	3459.6	3039.4	2805.8	2846.2	2928.5	3635.0	3991.8	3891.6	3255.2
42.5°	4360.3	4215.6	3757.1	3461.7	3144.2	3094.1	3184.1	4056.7	4589.8	4491.7	3682.5
45°	4716.6	4422.2	4091.4	3825.6	3520.4	3581.3	3568.0	4487.1	5323.4	5021.3	4060.2
47.5°	5068.3	4791.7	4445.7	4088.4	3781.1	4159.9	4018.3	4807.1	5818.2	5594.3	4457.9
50°	5520.2	5216.0	4821.9	4462.5	4278.5	4555.6	4317.9	5078.0	6372.3	6109.5	4833.1
52.5°	5820.2	5524.2	5178.7	4922.1	4905.2	4798.4	4737.6	5421.0	6857.9	6698.4	5230.8
55°	5784.9	5499.7	5343.3	5371.4	5580.0	5219.6	5170.0	5928.6	7364.5	7179.9	5660.2
57.5°	5342.8	5031.5	5064.7	5231.3	5791.6	5959.3	5874.9	6470.9	7816.3	7732.5	6191.3
60°	4162.0	4002.0	4272.4	4577.0	5508.4	6176.0	6769.0	7132.4	8372.5	8506.4	7025.6
62.5°	2703.6	2489.9	2917.3	3434.6	4663.4	6032.9	7679.4	8386.8	9283.4	9587.6	8293.3
65°	1400.6	1366.4	1665.4	2140.8	3246.5	5143.9	8000.4	9702.6	10390.6	10744.9	9504.2
67.5°	1018.3	954.9	1093.4	1373.0	1981.8	3507.7	7392.1	10709.1	11279.5	11604.1	10208.1
70°	775.4	728.4	834.2	1007.5	1294.3	1981.3	5456.8	10434.6	11622.5	11780.0	10114.6
72.5°	580.7	540.3	632.8	794.4	997.3	1115.4	3225.5	8579.5	11037.3	11090.9	9077.9
75°	463.6	432.5	472.3	627.2	812.8	759.1	1713.5	6215.9	8967.5	9013.5	6934.1
77.5°	380.3	353.7	370.1	470.3	632.3	571.0	850.1	3953.9	5693.4	5622.9	3901.3
80°	310.3	287.3	294.9	339.9	481.5	426.3	477.4	2062.6	2715.9	2606.5	1622.5
82.5°	238.7	219.3	234.6	250.0	348.6	306.2	278.6	938.5	1112.3	1036.1	595.0
85°	160.0	142.1	204.0	187.6	228.0	188.1	152.3	373.7	414.6	386.4	209.1
87.5°	44.0	41.4	68.5	93.5	93.5	71.1	55.7	90.5	115.5	101.2	49.1
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°	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9	499.9
2.5°	605.7	594.5	564.8	562.3	569.4	570.5	565.9	555.1	549.5	580.2	575.6
5°	780.1	740.2	716.2	694.2	663.5	641.5	647.1	662.5	667.6	690.6	693.2
7.5°	915.5	862.9	810.2	739.7	693.2	663.5	686.0	702.4	715.1	747.8	761.1
10°	974.3	917.0	842.4	768.3	755.5	760.6	747.8	751.9	771.9	773.4	780.1
12.5°	1083.7	1018.8	884.3	817.4	813.8	824.5	819.9	838.8	852.6	890.0	874.1
15°	1188.5	1105.7	916.0	847.5	832.7	854.2	879.2	910.9	940.6	975.8	957.9
17.5°	1315.8	1191.0	917.6	833.7	836.3	882.3	908.4	925.7	1014.2	1062.7	1038.2
20°	1396.0	1199.7	883.3	799.5	836.3	877.7	914.0	932.9	1032.1	1105.2	1122.0
22.5°	1468.6	1202.8	856.7	781.1	804.6	859.3	914.0	955.9	1019.3	1089.3	1091.9
25°	1508.5	1200.2	822.5	782.6	804.1	831.2	879.7	918.1	965.1	1062.7	1065.3
27.5°	1610.7	1167.0	788.7	788.7	800.0	801.0	862.9	885.4	892.0	980.9	996.8
30°	1640.4	1174.2	784.7	787.7	793.3	783.1	810.2	825.0	834.7	911.4	914.0
32.5°	1687.9	1116.9	796.9	778.5	771.4	769.8	776.5	789.8	793.9	840.9	849.6
35°	1745.7	1093.9	801.0	776.0	761.6	754.0	773.9	757.6	770.3	825.5	831.7
37.5°	1933.8	1062.2	822.0	776.0	757.6	748.9	739.2	746.8	792.3	845.5	878.2
40°	2053.9	1071.9	816.9	783.6	743.8	735.6	719.2	747.3	817.9	911.9	936.5
42.5°	2264.5	1077.6	823.0	780.1	748.4	716.7	727.4	758.1	832.2	885.9	923.7
45°	2482.3	1094.9	818.9	769.3	738.1	753.0	738.1	765.7	801.0	802.5	831.2
47.5°	2695.9	1165.0	810.2	747.3	735.6	774.4	736.6	741.2	743.8	753.0	786.7
50°	2946.9	1239.6	797.9	716.7	739.2	775.4	742.2	719.7	717.2	747.3	785.2
52.5°	3232.1	1323.9	782.1	687.0	718.2	765.7	761.6	721.3	699.3	728.4	766.2
55°	3568.0	1420.0	763.7	657.4	695.2	766.8	772.4	710.5	699.8	731.5	771.9
57.5°	4014.2	1559.1	727.9	614.4	667.1	750.9	744.8	698.3	688.0	721.8	763.7
60°	4775.9	1826.4	676.8	572.0	636.9	712.1	722.3	676.3	666.1	703.4	747.3
62.5°	5795.7	2147.9	614.9	530.6	600.1	670.1	694.2	644.6	643.6	691.1	737.1
65°	6744.9	2330.4	551.0	492.8	562.3	631.3	662.5	614.9	617.0	676.8	722.8
67.5°	7139.6	2115.7	493.8	459.0	518.8	586.8	636.4	591.9	585.3	657.4	699.8
70°	6769.0	1680.7	444.2	423.3	469.8	538.8	600.1	561.3	545.9	611.4	644.6
72.5°	5989.4	1401.1	397.7	381.3	426.8	488.2	551.0	519.9	499.9	550.0	579.7
75°	4681.8	1149.6	344.5	339.9	377.8	442.2	499.9	478.5	452.9	484.6	514.2
77.5°	2665.8	727.4	289.3	292.4	319.5	387.5	438.6	421.7	395.6	408.9	443.2
80°	1066.8	367.0	232.6	234.6	257.6	318.5	363.4	357.3	330.2	341.0	364.5
82.5°	398.7	201.4	171.8	172.8	195.8	252.0	310.3	307.2	281.7	274.0	287.3
85°	158.5	99.7	105.3	109.9	131.9	181.5	248.9	220.8	190.7	167.2	175.3
87.5°	37.8	31.7	36.8	38.8	42.9	56.7	91.0	73.1	75.1	60.3	45.0
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)