

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: P367318

Luminaire Tested: **MSA-SA2B-740-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367318
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-SA2B-740-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9935 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

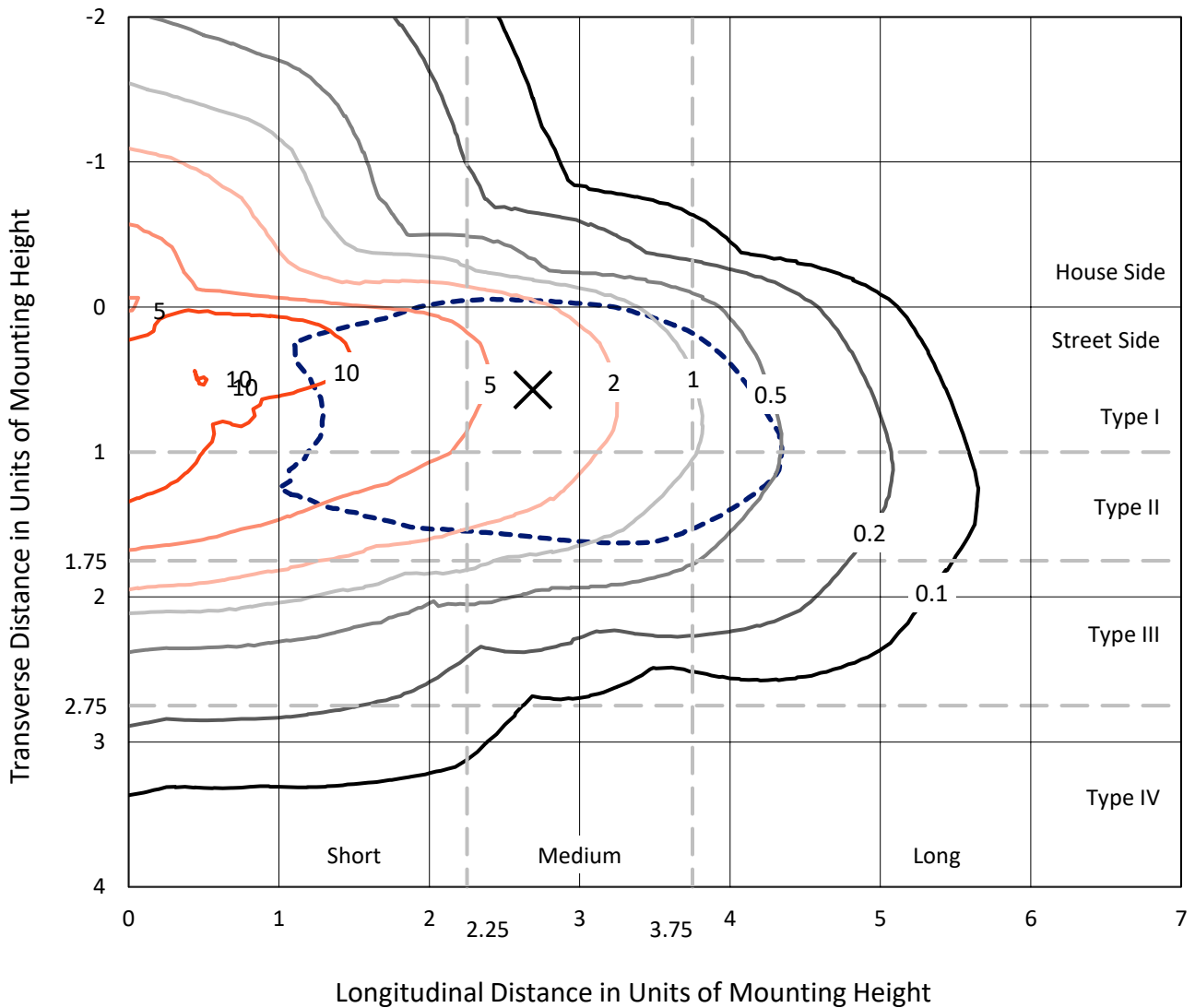
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

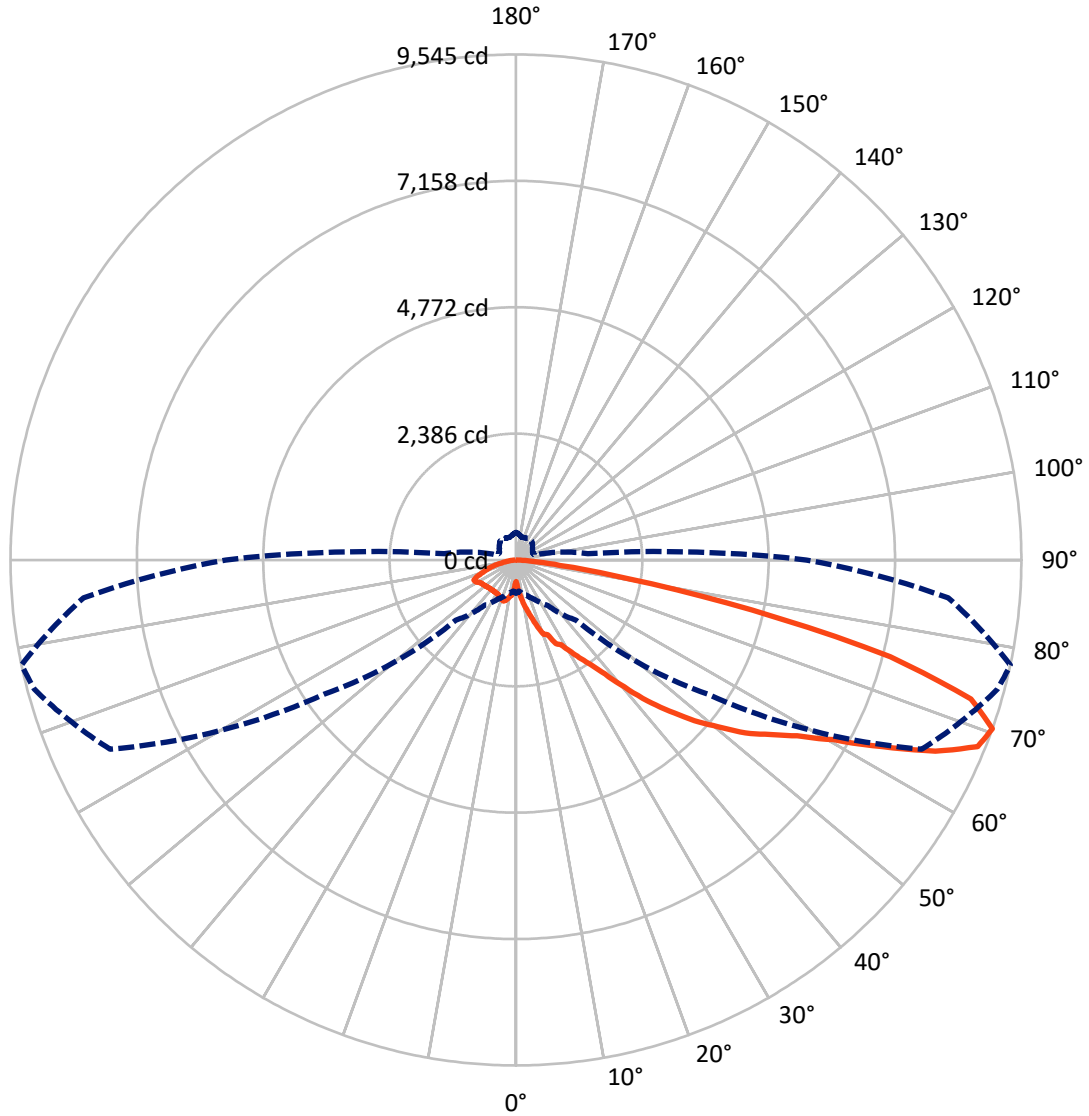
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.8 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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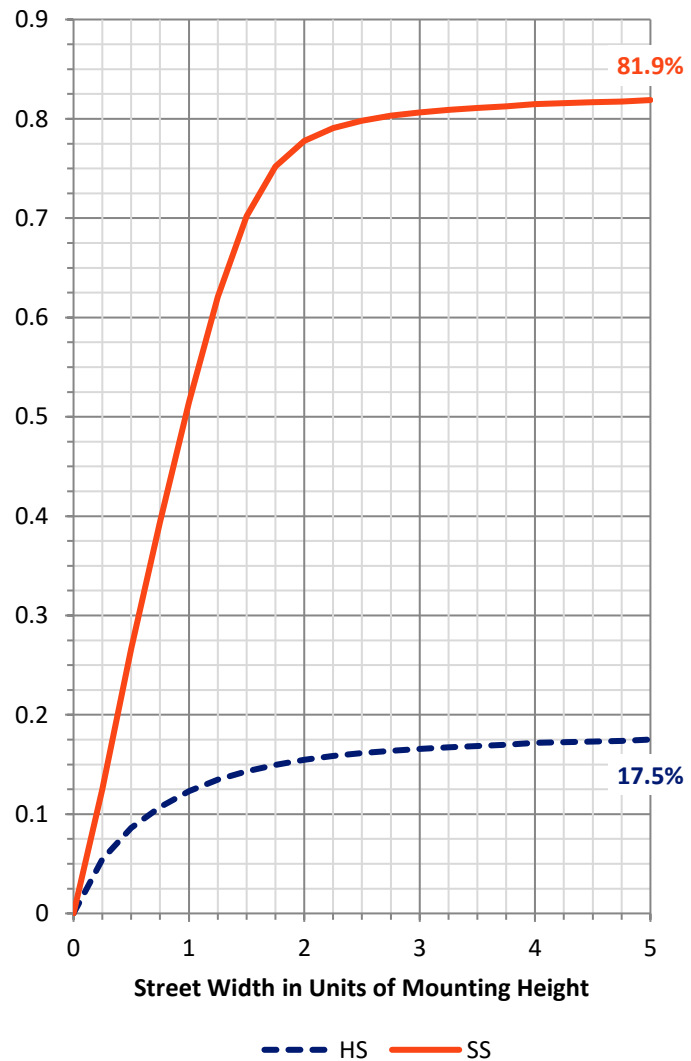
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1773.3	0.0	1773.3
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	8161.7	0.0	8161.7
	% Fixture	82.2	0.0	82.2
Total	Lumens	9935.0	0.0	9935.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.6	0.6
10°-20°	275.8	2.8
20°-30°	530.9	5.3
30°-40°	894.2	9.0
40°-50°	1547.2	15.6
50°-60°	2336.0	23.5
60°-70°	2587.4	26.0
70°-80°	1491.8	15.0
80°-90°	209.2	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°	9935.0	100.0
0°-180°	9935.0	100.0



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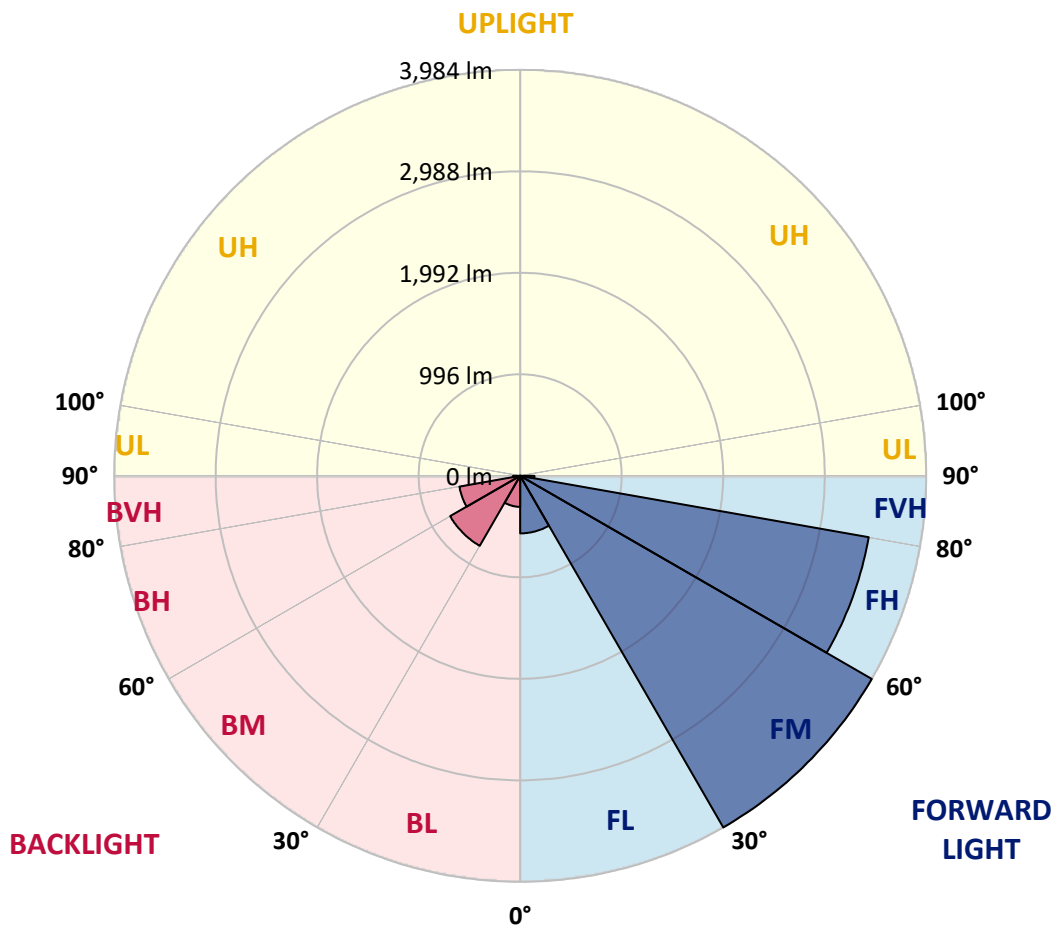
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	564.8	5.7			
FM (30°-60°)	3984.2	40.1			
FH (60°-80°)	3473.2	35.0			G2/5000
FVH (80°-90°)	139.6	1.4			G2/225
BL (0°-30°)	304.5	3.1	B1/500		
BM (30°-60°)	793.1	8.0	B1/1000		
BH (60°-80°)	606.0	6.1	B2/1000		G2/1000
BVH (80°-90°)	69.6	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1
2.5°	521.4	502.8	474.6	486.2	500.3	502.0	497.4	471.7	463.0	482.5	488.3
5°	730.6	699.1	680.1	673.8	652.7	608.8	640.3	624.1	627.5	617.9	636.6
7.5°	906.6	885.5	857.3	849.5	801.0	766.6	788.2	781.1	747.2	733.9	755.0
10°	996.1	972.9	974.1	957.1	944.3	947.6	936.8	905.8	880.5	862.7	811.8
12.5°	1049.9	1055.7	1086.8	1078.1	1126.5	1166.3	1136.1	1090.1	1010.2	994.0	943.5
15°	1177.9	1199.4	1170.4	1183.7	1204.4	1280.6	1268.2	1258.2	1173.7	1142.3	1049.1
17.5°	1309.6	1313.7	1269.8	1262.8	1312.5	1351.0	1399.5	1343.6	1353.9	1332.0	1181.2
20°	1337.8	1366.3	1303.4	1259.9	1362.2	1438.4	1498.5	1439.2	1493.9	1499.7	1290.1
22.5°	1440.9	1406.5	1323.7	1281.0	1370.5	1464.1	1561.8	1595.0	1577.6	1528.7	1395.3
25°	1512.5	1494.3	1409.8	1362.6	1396.6	1482.7	1654.2	1740.7	1756.1	1749.4	1495.6
27.5°	1645.5	1654.6	1480.6	1493.9	1446.7	1454.6	1709.7	1934.2	1838.5	1812.0	1619.8
30°	1855.5	1814.9	1619.8	1630.6	1552.3	1539.0	1826.9	2101.1	2015.3	1983.4	1722.1
32.5°	2074.6	2078.3	1841.4	1749.4	1707.6	1694.4	1803.7	2188.5	2239.0	2197.6	1876.6
35°	2383.5	2362.0	2081.6	1960.7	1809.5	1786.3	1968.9	2441.9	2534.7	2418.7	2060.1
37.5°	2854.0	2789.0	2462.6	2183.1	2071.2	2044.7	2205.0	2669.3	2878.0	2733.9	2359.9
40°	3231.7	3099.6	2803.1	2462.6	2273.4	2306.1	2372.8	2945.1	3234.2	3153.0	2637.4
42.5°	3532.8	3415.6	3044.1	2804.7	2547.5	2506.9	2579.8	3286.8	3718.8	3639.3	2983.7
45°	3821.5	3583.0	3315.0	3099.6	2852.4	2901.6	2890.9	3635.6	4313.1	4068.4	3289.7
47.5°	4106.5	3882.4	3602.0	3312.5	3063.6	3370.5	3255.8	3894.8	4714.0	4532.6	3611.9
50°	4472.6	4226.2	3906.8	3615.7	3466.6	3691.0	3498.5	4114.3	5163.0	4950.1	3915.9
52.5°	4715.7	4475.9	4195.9	3988.0	3974.3	3887.8	3838.5	4392.2	5556.5	5427.2	4238.2
55°	4687.1	4456.0	4329.3	4352.1	4521.0	4229.1	4188.9	4803.5	5966.9	5817.4	4586.1
57.5°	4328.9	4076.6	4103.6	4238.6	4692.5	4828.3	4760.0	5242.9	6333.0	6265.1	5016.4
60°	3372.1	3242.5	3461.6	3708.4	4463.1	5004.0	5484.4	5778.9	6783.6	6892.1	5692.3
62.5°	2190.5	2017.4	2363.6	2782.8	3778.4	4888.0	6222.0	6795.2	7521.7	7768.1	6719.4
65°	1134.8	1107.1	1349.4	1734.5	2630.4	4167.8	6482.1	7861.3	8418.8	8705.8	7700.6
67.5°	825.0	773.7	885.9	1112.5	1605.7	2842.0	5989.3	8676.8	9139.0	9402.0	8270.9
70°	628.3	590.2	675.9	816.3	1048.7	1605.3	4421.2	8454.4	9416.9	9544.5	8195.1
72.5°	470.5	437.8	512.7	643.6	808.0	903.7	2613.4	6951.4	8942.7	8986.2	7355.2
75°	375.6	350.4	382.7	508.2	658.5	615.0	1388.3	5036.3	7265.7	7303.0	5618.2
77.5°	308.1	286.6	299.9	381.0	512.3	462.6	688.8	3203.6	4613.0	4555.8	3160.9
80°	251.4	232.8	239.0	275.4	390.1	345.4	386.8	1671.2	2200.5	2111.8	1314.6
82.5°	193.4	177.7	190.1	202.5	282.5	248.1	225.7	760.4	901.2	839.5	482.1
85°	129.6	115.1	165.3	152.0	184.7	152.4	123.4	302.8	335.9	313.1	169.4
87.5°	35.6	33.5	55.5	75.8	75.8	57.6	45.1	73.3	93.6	82.0	39.8
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°	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1
2.5°	490.8	481.7	457.7	455.6	461.4	462.2	458.5	449.8	445.2	470.1	466.4
5°	632.0	599.7	580.2	562.4	537.6	519.8	524.3	536.8	540.9	559.5	561.6
7.5°	741.8	699.1	656.5	599.3	561.6	537.6	555.8	569.1	579.4	605.9	616.7
10°	789.4	743.0	682.5	622.5	612.1	616.3	605.9	609.2	625.4	626.6	632.0
12.5°	878.0	825.4	716.5	662.3	659.4	668.0	664.3	679.6	690.8	721.1	708.2
15°	962.9	895.8	742.2	686.7	674.7	692.1	712.4	738.0	762.1	790.6	776.1
17.5°	1066.1	965.0	743.4	675.5	677.6	714.9	736.0	750.1	821.7	861.1	841.2
20°	1131.1	972.0	715.7	647.8	677.6	711.1	740.5	755.9	836.2	895.4	909.1
22.5°	1189.9	974.5	694.1	632.8	651.9	696.2	740.5	774.5	825.8	882.6	884.7
25°	1222.2	972.5	666.4	634.1	651.5	673.4	712.8	743.8	781.9	861.1	863.1
27.5°	1305.0	945.5	639.1	639.1	648.2	649.0	699.1	717.3	722.7	794.8	807.6
30°	1329.1	951.3	635.7	638.2	642.8	634.5	656.5	668.5	676.3	738.5	740.5
32.5°	1367.6	905.0	645.7	630.8	625.0	623.7	629.1	639.9	643.2	681.3	688.3
35°	1414.4	886.3	649.0	628.7	617.1	610.9	627.0	613.8	624.1	668.9	673.8
37.5°	1566.8	860.6	666.0	628.7	613.8	606.8	598.9	605.1	642.0	685.0	711.5
40°	1664.1	868.5	661.8	634.9	602.6	596.0	582.7	605.5	662.7	738.9	758.8
42.5°	1834.8	873.1	666.8	632.0	606.3	580.7	589.4	614.2	674.3	717.7	748.4
45°	2011.2	887.1	663.5	623.3	598.1	610.1	598.1	620.4	649.0	650.2	673.4
47.5°	2184.3	943.9	656.5	605.5	596.0	627.5	596.8	600.5	602.6	610.1	637.4
50°	2387.7	1004.4	646.5	580.7	598.9	628.3	601.4	583.1	581.1	605.5	636.2
52.5°	2618.8	1072.7	633.7	556.6	581.9	620.4	617.1	584.4	566.6	590.2	620.8
55°	2890.9	1150.6	618.8	532.6	563.3	621.2	625.8	575.7	567.0	592.7	625.4
57.5°	3252.4	1263.2	589.8	497.8	540.5	608.4	603.4	565.8	557.5	584.8	618.8
60°	3869.6	1479.8	548.4	463.5	516.1	576.9	585.2	547.9	539.7	569.9	605.5
62.5°	4695.8	1740.3	498.2	429.9	486.2	543.0	562.4	522.3	521.4	560.0	597.2
65°	5464.9	1888.2	446.5	399.3	455.6	511.5	536.8	498.2	499.9	548.4	585.6
67.5°	5784.7	1714.2	400.1	371.9	420.4	475.5	515.6	479.6	474.2	532.6	567.0
70°	5484.4	1361.8	359.9	342.9	380.6	436.5	486.2	454.8	442.3	495.3	522.3
72.5°	4852.8	1135.2	322.2	309.0	345.8	395.5	446.5	421.2	405.1	445.6	469.7
75°	3793.3	931.5	279.1	275.4	306.1	358.3	405.1	387.7	367.0	392.6	416.7
77.5°	2159.9	589.4	234.4	236.9	258.9	313.9	355.4	341.7	320.6	331.3	359.1
80°	864.4	297.4	188.4	190.1	208.7	258.0	294.5	289.5	267.6	276.2	295.3
82.5°	323.0	163.2	139.2	140.0	158.6	204.2	251.4	248.9	228.2	222.0	232.8
85°	128.4	80.8	85.3	89.0	106.9	147.0	201.7	178.9	154.5	135.4	142.1
87.5°	30.6	25.7	29.8	31.5	34.8	46.0	73.7	59.2	60.9	48.9	36.4
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)