

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: P367824

Luminaire Tested: **MSA-SA3B-730-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367824
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-730-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: 13353 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

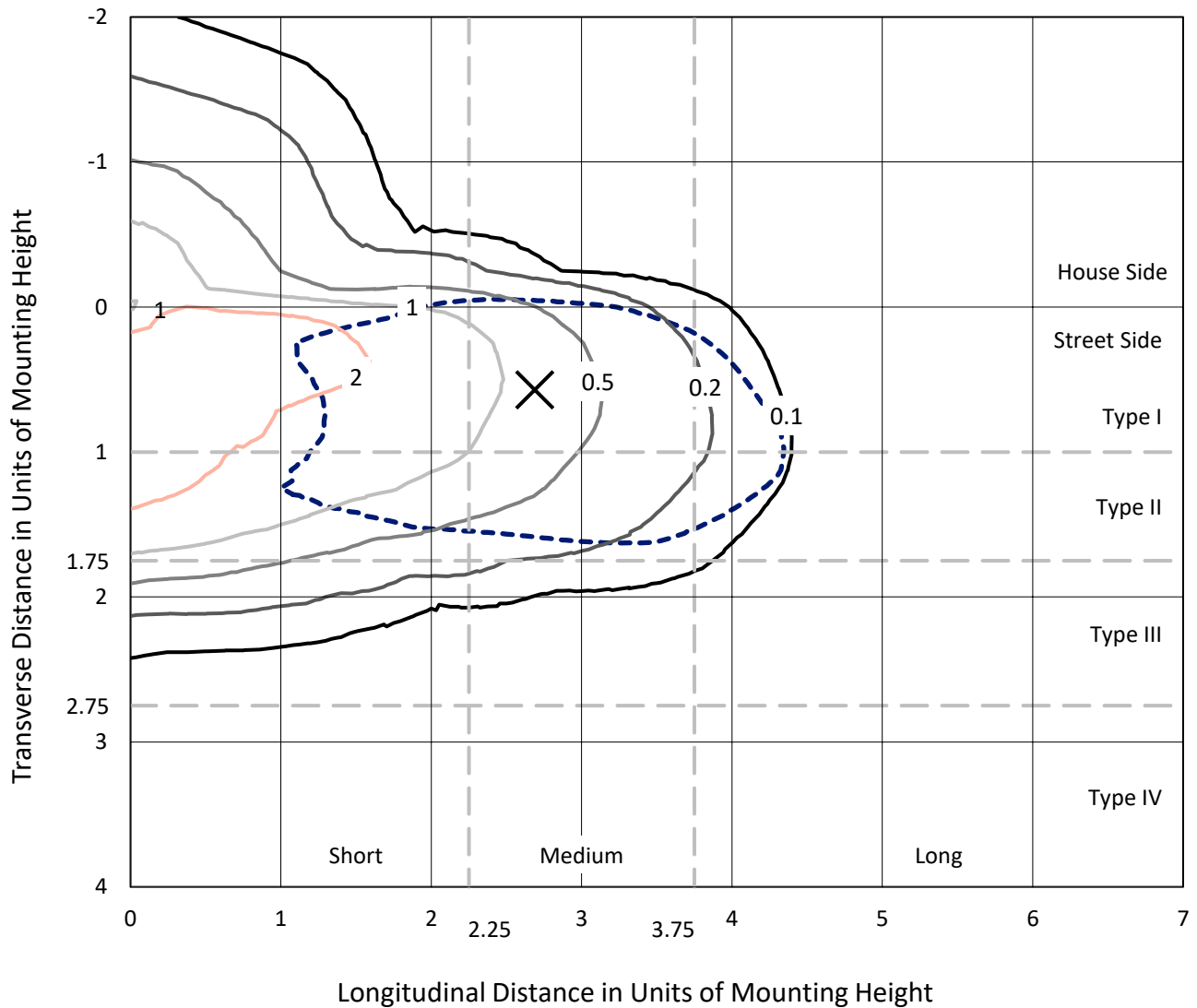
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

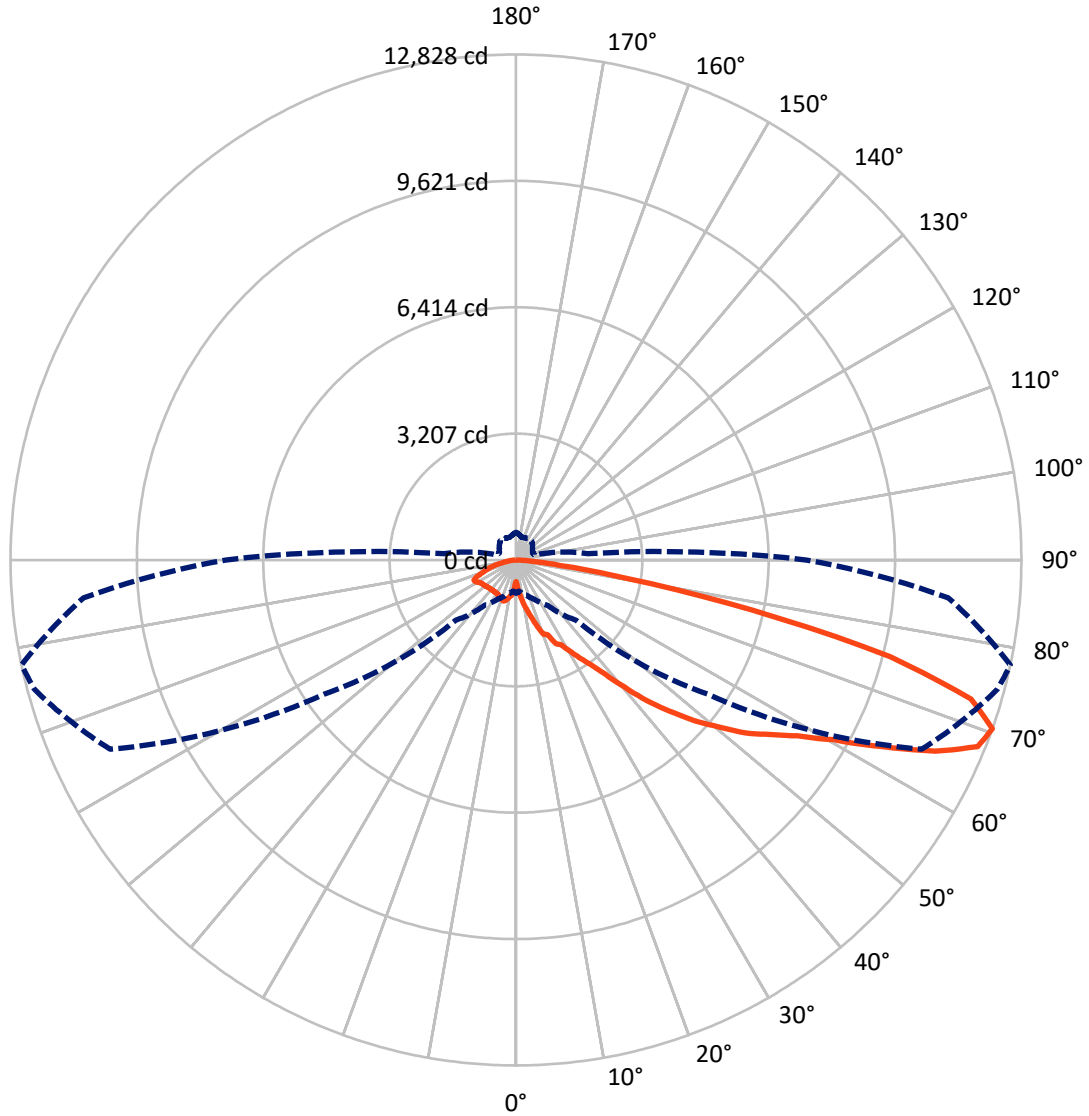
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 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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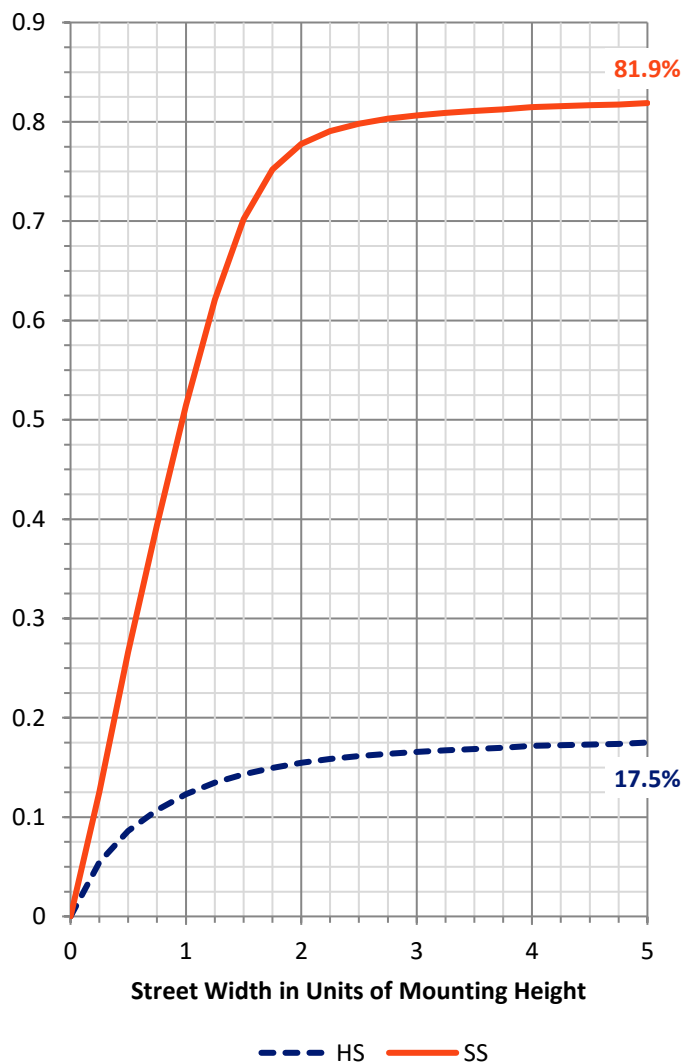
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2383.3	0.0	2383.3
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	10969.7	0.0	10969.7
	% Fixture	82.2	0.0	82.2
Total	Lumens	13353.0	0.0	13353.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.1	0.6
10°-20°	370.7	2.8
20°-30°	713.5	5.3
30°-40°	1201.8	9.0
40°-50°	2079.4	15.6
50°-60°	3139.7	23.5
60°-70°	3477.6	26.0
70°-80°	2005.0	15.0
80°-90°	281.2	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°	13353.0	100.0
0°-180°	13353.0	100.0

Coefficient of Utilization



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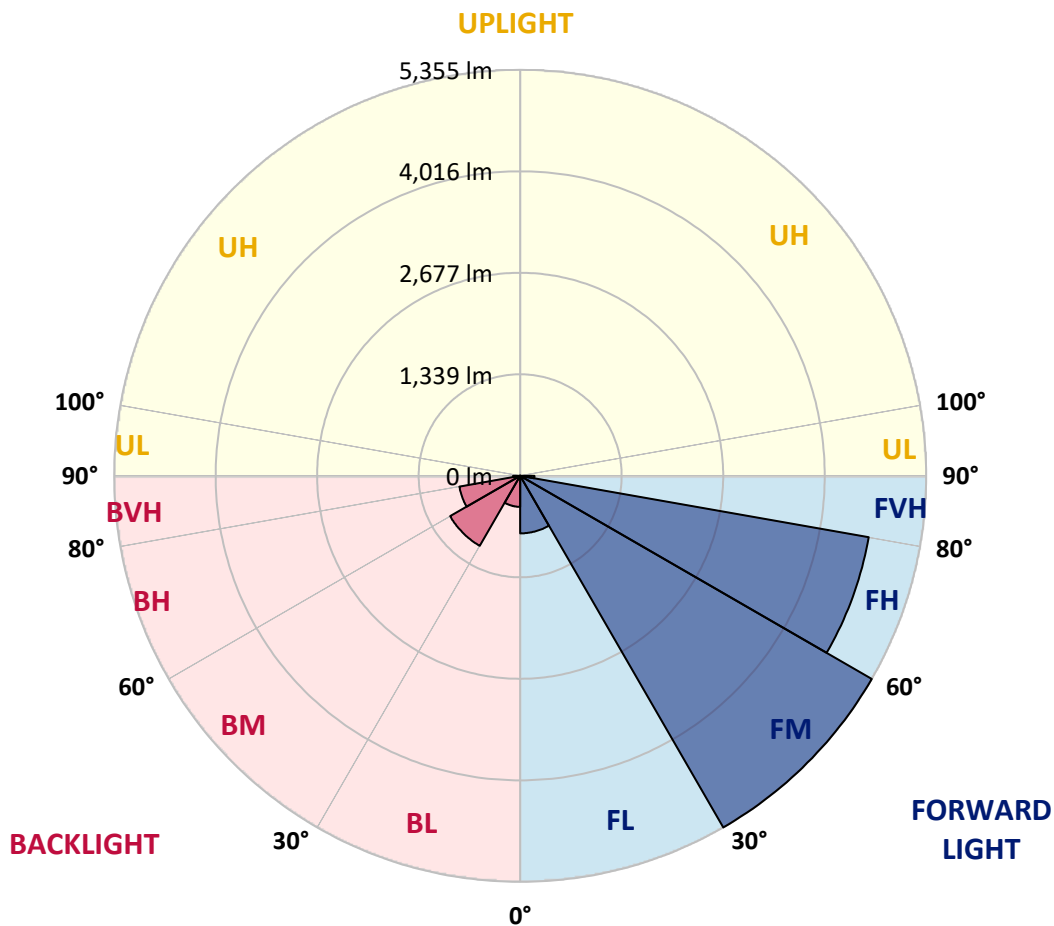
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	759.1	5.7			
FM (30°-60°)	5354.9	40.1			
FH (60°-80°)	4668.1	35.0			G2/5000
FVH (80°-90°)	187.6	1.4			G2/225
BL (0°-30°)	409.2	3.1	B1/500		
BM (30°-60°)	1066.0	8.0	B2/2500		
BH (60°-80°)	814.5	6.1	B2/1000		G2/1000
BVH (80°-90°)	93.6	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°	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4
2.5°	700.8	675.8	637.9	653.5	672.4	674.7	668.5	634.0	622.3	648.5	656.3
5°	981.9	939.6	914.0	905.7	877.3	818.3	860.6	838.9	843.3	830.5	855.6
7.5°	1218.5	1190.1	1152.3	1141.7	1076.6	1030.4	1059.3	1049.9	1004.2	986.4	1014.8
10°	1338.8	1307.6	1309.3	1286.4	1269.2	1273.6	1259.2	1217.4	1183.4	1159.5	1091.0
12.5°	1411.1	1418.9	1460.7	1449.0	1514.1	1567.5	1526.9	1465.1	1357.7	1336.0	1268.1
15°	1583.1	1612.1	1573.1	1590.9	1618.8	1721.2	1704.5	1691.1	1577.6	1535.3	1410.0
17.5°	1760.1	1765.7	1706.7	1697.2	1764.0	1815.8	1880.9	1805.8	1819.7	1790.2	1587.6
20°	1798.0	1836.4	1751.8	1693.3	1830.8	1933.3	2014.0	1934.4	2007.9	2015.6	1734.0
22.5°	1936.6	1890.4	1779.1	1721.7	1842.0	1967.8	2099.1	2143.7	2120.3	2054.6	1875.4
25°	2032.9	2008.4	1894.9	1831.4	1877.0	1992.8	2223.3	2339.6	2360.2	2351.3	2010.1
27.5°	2211.6	2223.8	1990.0	2007.9	1944.4	1955.0	2297.9	2599.6	2471.0	2435.4	2177.1
30°	2493.8	2439.3	2177.1	2191.5	2086.3	2068.5	2455.4	2823.9	2708.7	2665.8	2314.6
32.5°	2788.3	2793.3	2474.9	2351.3	2295.1	2277.3	2424.2	2941.4	3009.3	2953.6	2522.2
35°	3203.5	3174.6	2797.7	2635.2	2432.0	2400.8	2646.3	3282.0	3406.7	3250.9	2768.8
37.5°	3835.9	3748.5	3309.9	2934.1	2783.8	2748.2	2963.6	3587.6	3868.2	3674.5	3171.8
40°	4343.6	4166.0	3767.4	3309.9	3055.5	3099.5	3189.1	3958.4	4346.9	4237.8	3544.8
42.5°	4748.3	4590.7	4091.4	3769.7	3424.0	3369.4	3467.4	4417.6	4998.2	4891.3	4010.1
45°	5136.2	4815.6	4455.5	4166.0	3833.7	3899.9	3885.4	4886.3	5797.0	5468.0	4421.5
47.5°	5519.2	5218.1	4841.2	4452.1	4117.6	4530.1	4375.9	5234.8	6335.8	6092.0	4854.6
50°	6011.3	5680.1	5250.9	4859.6	4659.2	4960.9	4702.1	5529.8	6939.3	6653.1	5263.2
52.5°	6338.1	6015.8	5639.5	5360.0	5341.7	5225.3	5159.1	5903.3	7468.1	7294.4	5696.2
55°	6299.7	5989.0	5818.7	5849.3	6076.4	5684.0	5630.0	6456.1	8019.7	7818.8	6163.8
57.5°	5818.2	5479.1	5515.3	5696.8	6306.9	6489.5	6397.6	7046.7	8511.8	8420.5	6742.2
60°	4532.3	4358.0	4652.5	4984.3	5998.5	6725.5	7371.2	7767.0	9117.4	9263.3	7650.7
62.5°	2944.1	2711.5	3176.8	3740.2	5078.4	6569.6	8362.6	9133.0	10109.4	10440.6	9031.2
65°	1525.2	1487.9	1813.6	2331.3	3535.3	5601.6	8712.2	10565.9	11315.1	11700.9	10349.9
67.5°	1108.9	1039.8	1190.7	1495.2	2158.1	3819.8	8049.8	11661.9	12283.1	12636.6	11116.4
70°	844.4	793.2	908.5	1097.2	1409.4	2157.6	5942.3	11363.0	12656.6	12828.1	11014.5
72.5°	632.4	588.4	689.1	865.0	1086.0	1214.6	3512.5	9342.9	12019.3	12077.7	9885.6
75°	504.9	470.9	514.3	683.0	885.1	826.6	1865.9	6768.9	9765.4	9815.5	7551.0
77.5°	414.2	385.2	403.0	512.1	688.6	621.8	925.7	4305.7	6200.0	6123.2	4248.4
80°	337.9	312.8	321.2	370.2	524.4	464.2	519.9	2246.1	2957.5	2838.4	1766.8
82.5°	260.0	238.8	255.5	272.2	379.6	333.4	303.4	1022.0	1211.3	1128.3	647.9
85°	174.2	154.7	222.1	204.3	248.3	204.8	165.9	406.9	451.4	420.8	227.7
87.5°	47.9	45.1	74.6	101.9	101.9	77.4	60.7	98.5	125.8	110.2	53.4
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°	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4
2.5°	659.6	647.4	615.1	612.3	620.1	621.2	616.2	604.5	598.4	631.8	626.8
5°	849.5	806.0	779.9	755.9	722.5	698.6	704.7	721.4	727.0	752.0	754.8
7.5°	997.0	939.6	882.3	805.5	754.8	722.5	747.0	764.8	778.8	814.4	828.9
10°	1061.0	998.6	917.4	836.7	822.7	828.3	814.4	818.8	840.5	842.2	849.5
12.5°	1180.1	1109.4	963.0	890.1	886.2	897.9	892.9	913.5	928.5	969.1	951.9
15°	1294.2	1204.0	997.5	922.9	906.8	930.2	957.4	992.0	1024.2	1062.7	1043.2
17.5°	1432.8	1297.0	999.2	907.9	910.7	960.8	989.2	1008.1	1104.4	1157.3	1130.6
20°	1520.2	1306.5	961.9	870.6	910.7	955.8	995.3	1015.9	1123.9	1203.5	1221.9
22.5°	1599.3	1309.8	933.0	850.6	876.2	935.7	995.3	1040.9	1110.0	1186.2	1189.0
25°	1642.7	1307.0	895.7	852.2	875.6	905.1	958.0	999.8	1051.0	1157.3	1160.1
27.5°	1754.0	1270.8	858.9	858.9	871.2	872.3	939.6	964.1	971.4	1068.2	1085.5
30°	1786.3	1278.6	854.5	857.8	863.9	852.8	882.3	898.4	909.0	992.5	995.3
32.5°	1838.1	1216.3	867.8	847.8	840.0	838.3	845.6	860.0	864.5	915.7	925.2
35°	1901.0	1191.2	872.3	845.0	829.4	821.1	842.8	825.0	838.9	899.0	905.7
37.5°	2105.8	1156.7	895.1	845.0	825.0	815.5	804.9	813.3	862.8	920.7	956.3
40°	2236.6	1167.3	889.5	853.4	809.9	801.0	783.2	813.8	890.6	993.1	1019.8
42.5°	2466.0	1173.4	896.2	849.5	814.9	780.4	792.1	825.5	906.2	964.7	1005.9
45°	2703.1	1192.4	891.8	837.8	803.8	820.0	803.8	833.9	872.3	873.9	905.1
47.5°	2935.8	1268.6	882.3	813.8	801.0	843.3	802.1	807.1	809.9	820.0	856.7
50°	3209.1	1349.9	868.9	780.4	804.9	844.4	808.3	783.8	781.0	813.8	855.0
52.5°	3519.7	1441.7	851.7	748.1	782.1	833.9	829.4	785.4	761.5	793.2	834.4
55°	3885.4	1546.4	831.6	715.9	757.0	835.0	841.1	773.7	762.1	796.6	840.5
57.5°	4371.4	1697.8	792.7	669.1	726.4	817.7	811.0	760.4	749.3	786.0	831.6
60°	5200.8	1988.9	737.0	622.9	693.6	775.4	786.6	736.5	725.3	766.0	813.8
62.5°	6311.3	2339.1	669.7	577.8	653.5	729.8	755.9	701.9	700.8	752.6	802.7
65°	7345.1	2537.8	600.1	536.6	612.3	687.5	721.4	669.7	671.9	737.0	787.1
67.5°	7774.8	2304.0	537.7	499.9	565.0	639.0	693.0	644.6	637.4	715.9	762.1
70°	7371.2	1830.3	483.7	460.9	511.6	586.7	653.5	611.2	594.5	665.8	701.9
72.5°	6522.3	1525.8	433.1	415.3	464.8	531.6	600.1	566.1	544.4	599.0	631.2
75°	5098.4	1251.9	375.2	370.2	411.4	481.5	544.4	521.0	493.2	527.7	560.0
77.5°	2903.0	792.1	315.1	318.4	347.9	421.9	477.6	459.2	430.9	445.3	482.6
80°	1161.7	399.7	253.3	255.5	280.6	346.8	395.8	389.1	359.6	371.3	396.9
82.5°	434.2	219.3	187.0	188.1	213.2	274.4	337.9	334.5	306.7	298.4	312.8
85°	172.6	108.5	114.7	119.7	143.6	197.6	271.1	240.5	207.6	182.0	190.9
87.5°	41.2	34.5	40.1	42.3	46.8	61.8	99.1	79.6	81.8	65.7	49.0
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)