

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: P367912

Luminaire Tested: **MSA-SA3B-830-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367912
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-830-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: 11651 lumens
Efficiency: N/A
Efficacy: 92.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

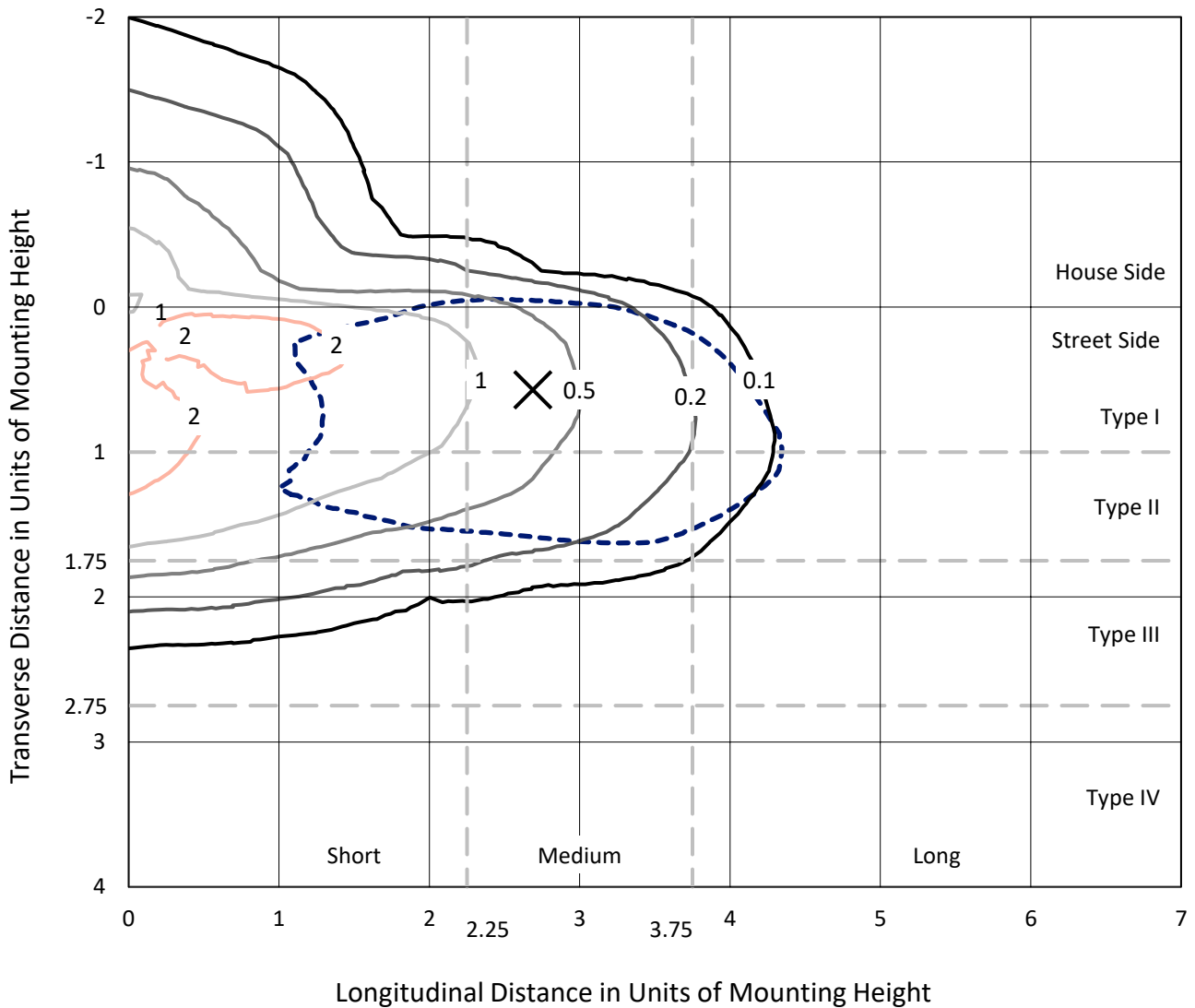
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

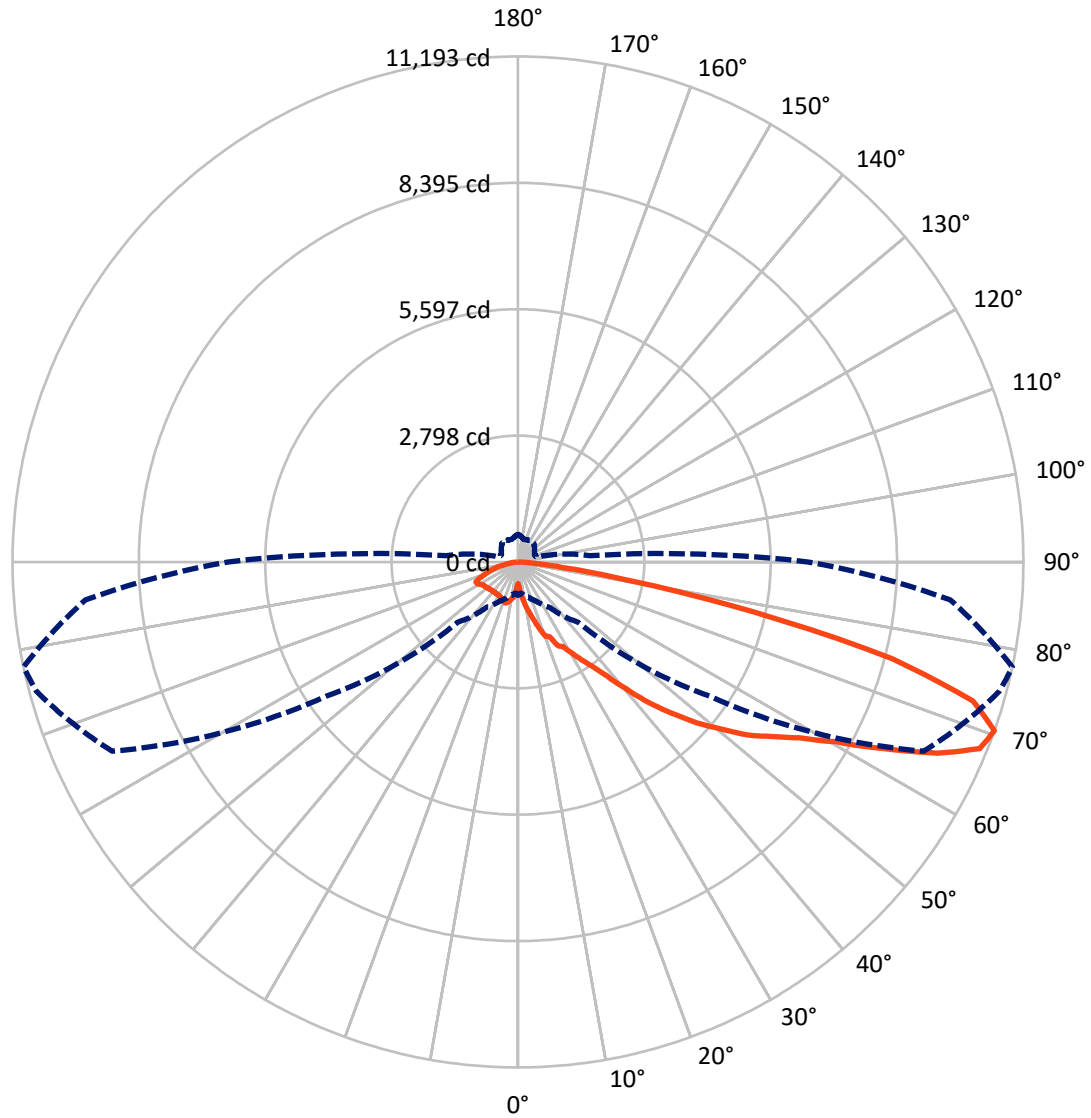
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 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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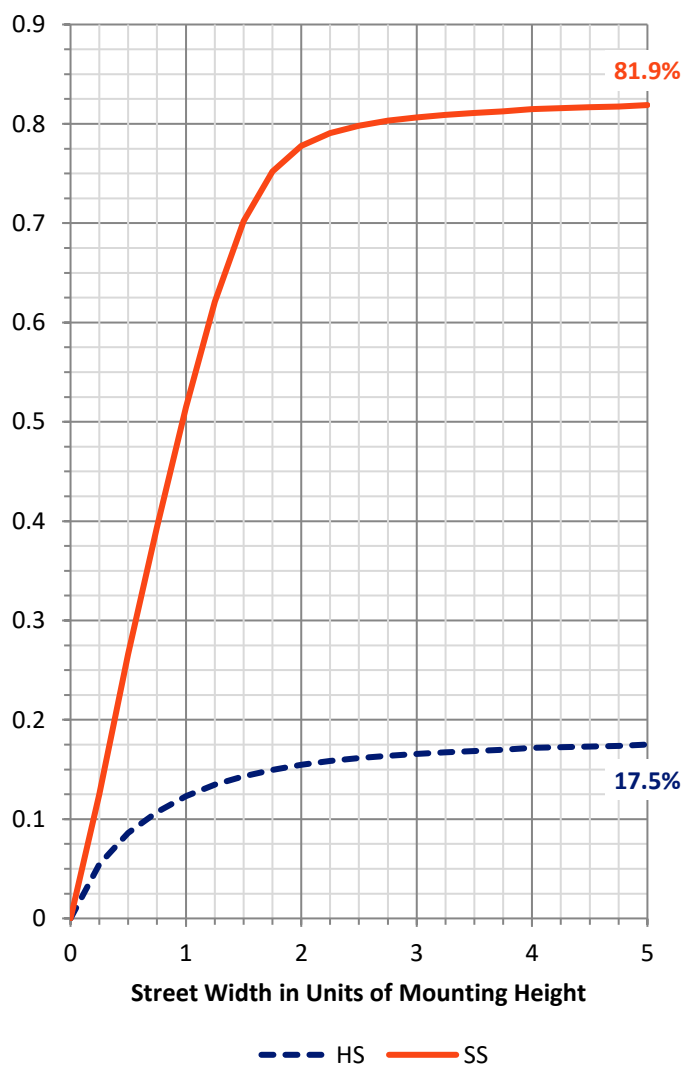
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2079.5	0.0	2079.5
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	9571.5	0.0	9571.5
	% Fixture	82.2	0.0	82.2
Total	Lumens	11651.0	0.0	11651.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.4	0.6
10°-20°	323.4	2.8
20°-30°	622.6	5.3
30°-40°	1048.6	9.0
40°-50°	1814.4	15.6
50°-60°	2739.5	23.5
60°-70°	3034.3	26.0
70°-80°	1749.4	15.0
80°-90°	245.4	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°	11651.0	100.0
0°-180°	11651.0	100.0

Coefficient of Utilization



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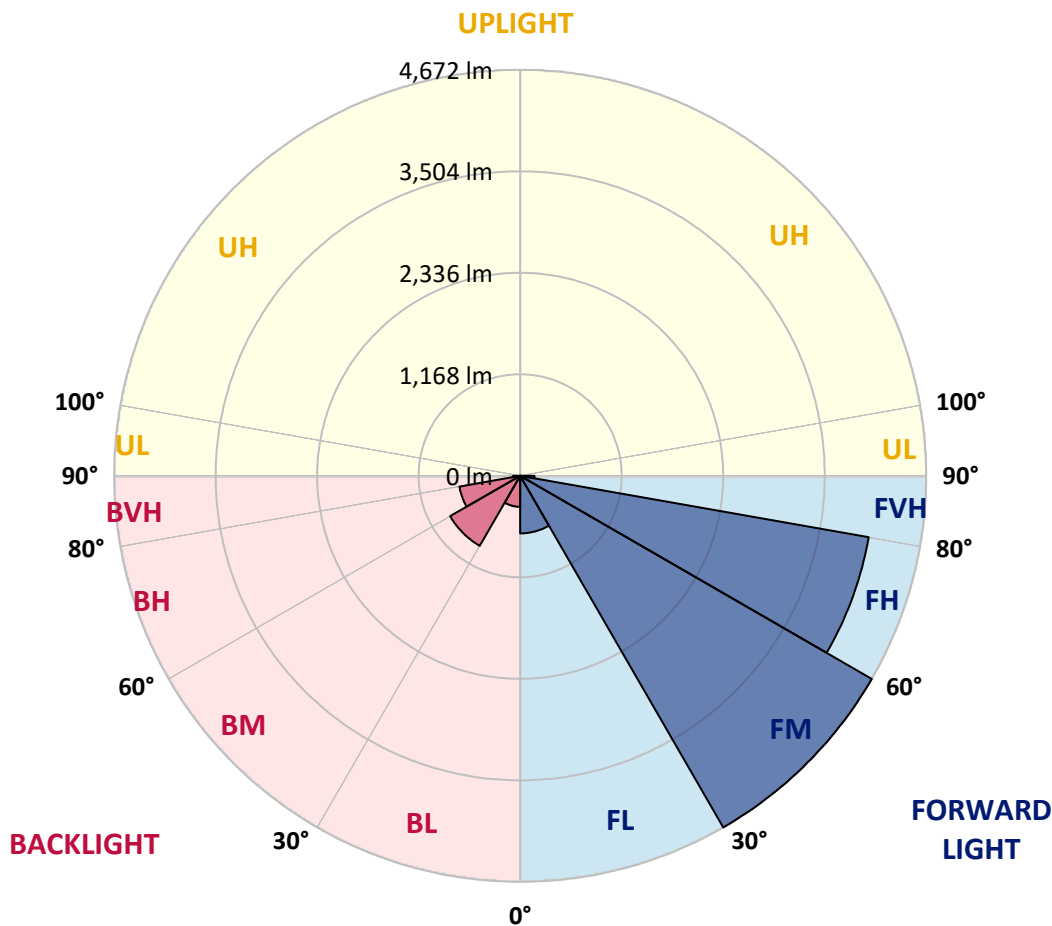
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	662.3	5.7			
FM (30°-60°)	4672.4	40.1			
FH (60°-80°)	4073.1	35.0			G2/5000
FVH (80°-90°)	163.7	1.4			G2/225
BL (0°-30°)	357.1	3.1	B1/500		
BM (30°-60°)	930.1	8.0	B1/1000		
BH (60°-80°)	710.7	6.1	B2/1000		G2/1000
BVH (80°-90°)	81.7	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°	475.0	475.0	475.0	475.0	475.0	475.0	475.0	475.0	475.0	475.0	475.0
2.5°	611.5	589.6	556.6	570.2	586.7	588.7	583.3	553.2	543.0	565.8	572.6
5°	856.8	819.9	797.5	790.2	765.5	714.0	750.9	732.0	735.8	724.7	746.5
7.5°	1063.2	1038.4	1005.4	996.2	939.3	899.0	924.3	916.0	876.2	860.7	885.4
10°	1168.1	1140.9	1142.4	1122.5	1107.4	1111.3	1098.7	1062.2	1032.6	1011.7	952.0
12.5°	1231.3	1238.1	1274.5	1264.3	1321.1	1367.7	1332.3	1278.4	1184.6	1165.7	1106.4
15°	1381.3	1406.6	1372.6	1388.1	1412.4	1501.8	1487.2	1475.6	1376.5	1339.6	1230.3
17.5°	1535.8	1540.6	1489.2	1480.9	1539.2	1584.4	1641.2	1575.6	1587.8	1562.0	1385.2
20°	1568.8	1602.3	1528.5	1477.5	1597.5	1686.8	1757.3	1687.8	1751.9	1758.7	1513.0
22.5°	1689.8	1649.4	1552.3	1502.3	1607.2	1717.0	1831.6	1870.4	1850.0	1792.7	1636.3
25°	1773.8	1752.4	1653.3	1598.0	1637.8	1738.8	1939.9	2041.4	2059.4	2051.6	1753.9
27.5°	1929.7	1940.4	1736.4	1751.9	1696.6	1705.8	2005.0	2268.2	2156.0	2124.9	1899.6
30°	2175.9	2128.3	1899.6	1912.2	1820.4	1804.9	2142.4	2464.0	2363.4	2326.0	2019.5
32.5°	2432.9	2437.3	2159.4	2051.6	2002.5	1987.0	2115.2	2566.4	2625.7	2577.1	2200.7
35°	2795.2	2770.0	2441.1	2299.3	2122.0	2094.8	2309.0	2863.7	2972.5	2836.5	2415.9
37.5°	3347.0	3270.7	2888.0	2560.1	2429.0	2397.9	2585.9	3130.3	3375.1	3206.1	2767.5
40°	3789.9	3635.0	3287.2	2888.0	2666.0	2704.4	2782.6	3453.8	3792.8	3697.6	3093.0
42.5°	4143.0	4005.6	3569.9	3289.2	2987.6	2940.0	3025.4	3854.5	4361.1	4267.9	3499.0
45°	4481.6	4201.8	3887.6	3635.0	3345.0	3402.8	3390.2	4263.5	5058.1	4771.1	3857.9
47.5°	4815.7	4553.0	4224.2	3884.6	3592.7	3952.6	3818.1	4567.5	5528.3	5315.5	4235.8
50°	5245.1	4956.1	4581.6	4240.2	4065.3	4328.6	4102.7	4825.0	6054.8	5805.1	4592.3
52.5°	5530.2	5249.0	4920.6	4676.8	4660.8	4559.3	4501.5	5150.9	6516.2	6364.6	4970.2
55°	5496.7	5225.7	5077.0	5103.8	5301.9	4959.5	4912.4	5633.2	6997.5	6822.2	5378.2
57.5°	5076.6	4780.8	4812.3	4970.7	5503.0	5662.3	5582.2	6148.5	7426.9	7347.2	5882.8
60°	3954.6	3802.6	4059.5	4349.0	5233.9	5868.3	6431.7	6777.0	7955.3	8082.6	6675.5
62.5°	2568.9	2365.9	2771.9	3263.4	4431.1	5732.3	7296.7	7968.9	8820.8	9109.8	7880.0
65°	1330.8	1298.3	1582.4	2034.1	3084.7	4887.6	7601.7	9219.1	9872.9	10209.5	9030.7
67.5°	967.5	907.3	1038.9	1304.6	1883.1	3332.9	7023.7	10175.5	10717.5	11025.9	9699.5
70°	736.8	692.1	792.7	957.3	1229.8	1882.6	5184.9	9914.6	11043.4	11193.0	9610.6
72.5°	551.8	513.4	601.3	754.8	947.6	1059.8	3064.8	8152.0	10487.3	10538.3	8625.6
75°	440.5	410.9	448.8	596.0	772.3	721.3	1628.1	5906.1	8520.7	8564.4	6588.5
77.5°	361.4	336.1	351.6	446.8	600.8	542.5	807.7	3756.9	5409.7	5342.7	3706.9
80°	294.8	273.0	280.3	323.0	457.5	405.1	453.6	1959.8	2580.5	2476.6	1541.6
82.5°	226.8	208.4	222.9	237.5	331.2	290.9	264.7	891.7	1056.9	984.5	565.4
85°	152.0	135.0	193.8	178.3	216.6	178.7	144.7	355.0	393.9	367.2	198.7
87.5°	41.8	39.3	65.1	88.9	88.9	67.5	52.9	86.0	109.8	96.2	46.6
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°	475.0	475.0	475.0	475.0	475.0	475.0	475.0	475.0	475.0	475.0	475.0
2.5°	575.6	564.9	536.7	534.3	541.1	542.0	537.7	527.5	522.1	551.3	546.9
5°	741.2	703.3	680.5	659.6	630.4	609.6	614.9	629.5	634.3	656.2	658.6
7.5°	869.9	819.9	769.8	702.8	658.6	630.4	651.8	667.4	679.5	710.6	723.2
10°	925.7	871.3	800.4	730.0	717.9	722.7	710.6	714.5	733.4	734.9	741.2
12.5°	1029.7	968.0	840.3	776.6	773.2	783.4	779.1	797.0	810.2	845.6	830.6
15°	1129.3	1050.6	870.4	805.3	791.2	811.6	835.4	865.5	893.7	927.2	910.2
17.5°	1250.2	1131.7	871.8	792.2	794.6	838.3	863.1	879.6	963.6	1009.8	986.5
20°	1326.5	1139.9	839.3	759.6	794.6	834.0	868.4	886.4	980.6	1050.1	1066.1
22.5°	1395.4	1142.9	814.0	742.2	764.5	816.5	868.4	908.3	968.5	1035.0	1037.5
25°	1433.3	1140.4	781.5	743.6	764.0	789.8	835.9	872.3	917.0	1009.8	1012.2
27.5°	1530.4	1108.9	749.4	749.4	760.1	761.1	819.9	841.2	847.6	932.1	947.1
30°	1558.6	1115.7	745.6	748.5	753.8	744.1	769.8	783.9	793.2	866.0	868.4
32.5°	1603.8	1061.3	757.2	739.7	732.9	731.5	737.8	750.4	754.3	799.0	807.2
35°	1658.7	1039.4	761.1	737.3	723.7	716.4	735.4	719.8	732.0	784.4	790.2
37.5°	1837.4	1009.3	781.0	737.3	719.8	711.6	702.3	709.6	752.8	803.4	834.4
40°	1951.6	1018.5	776.2	744.6	706.7	698.9	683.4	710.1	777.1	866.5	889.8
42.5°	2151.7	1023.9	782.0	741.2	711.1	681.0	691.2	720.3	790.7	841.7	877.7
45°	2358.6	1040.4	778.1	731.0	701.4	715.4	701.4	727.6	761.1	762.6	789.8
47.5°	2561.6	1106.9	769.8	710.1	698.9	735.8	699.9	704.3	706.7	715.4	747.5
50°	2800.1	1177.8	758.2	681.0	702.3	736.8	705.2	683.9	681.4	710.1	746.0
52.5°	3071.1	1258.0	743.1	652.8	682.4	727.6	723.7	685.3	664.4	692.1	728.1
55°	3390.2	1349.3	725.6	624.6	660.6	728.6	733.9	675.1	664.9	695.0	733.4
57.5°	3814.2	1481.4	691.6	583.8	633.8	713.5	707.7	663.5	653.8	685.8	725.6
60°	4537.9	1735.4	643.1	543.5	605.2	676.6	686.3	642.6	632.9	668.3	710.1
62.5°	5506.9	2040.9	584.3	504.2	570.2	636.8	659.6	612.5	611.5	656.7	700.4
65°	6408.8	2214.3	523.6	468.2	534.3	599.8	629.5	584.3	586.2	643.1	686.8
67.5°	6783.8	2010.3	469.2	436.2	493.0	557.6	604.7	562.4	556.1	624.6	664.9
70°	6431.7	1597.0	422.1	402.2	446.4	511.9	570.2	533.3	518.7	580.9	612.5
72.5°	5691.0	1331.3	377.9	362.3	405.6	463.8	523.6	494.0	475.0	522.6	550.8
75°	4448.5	1092.3	327.4	323.0	358.9	420.1	475.0	454.6	430.3	460.4	488.6
77.5°	2532.9	691.2	274.9	277.8	303.6	368.2	416.7	400.7	375.9	388.6	421.1
80°	1013.7	348.7	221.0	222.9	244.8	302.6	345.3	339.5	313.8	324.0	346.3
82.5°	378.8	191.4	163.2	164.2	186.0	239.5	294.8	291.9	267.6	260.3	273.0
85°	150.6	94.7	100.1	104.4	125.3	172.4	236.5	209.8	181.2	158.8	166.6
87.5°	35.9	30.1	35.0	36.9	40.8	53.9	86.5	69.5	71.4	57.3	42.7
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)