

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: P367812

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

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367812
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-730-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13749 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

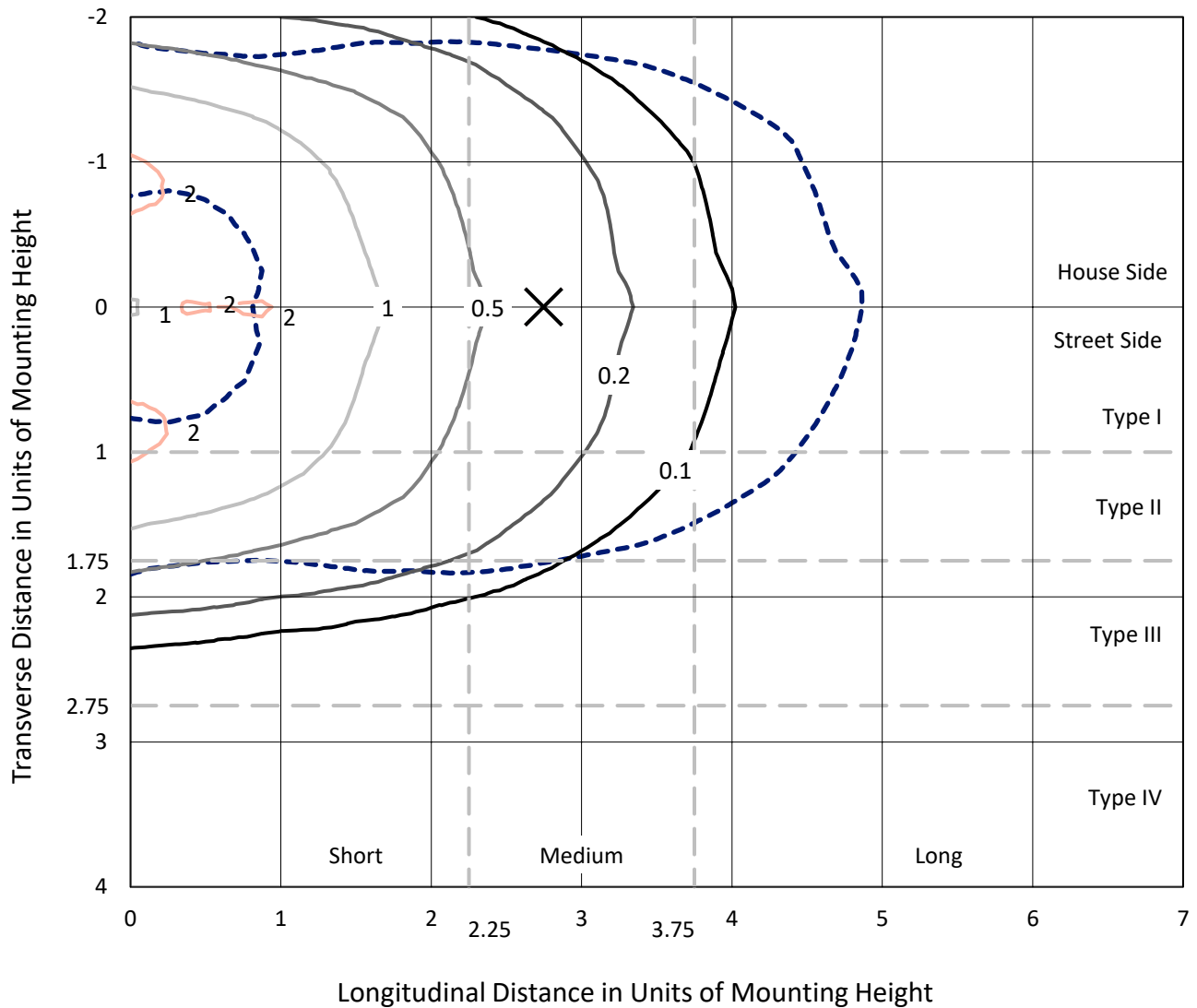
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

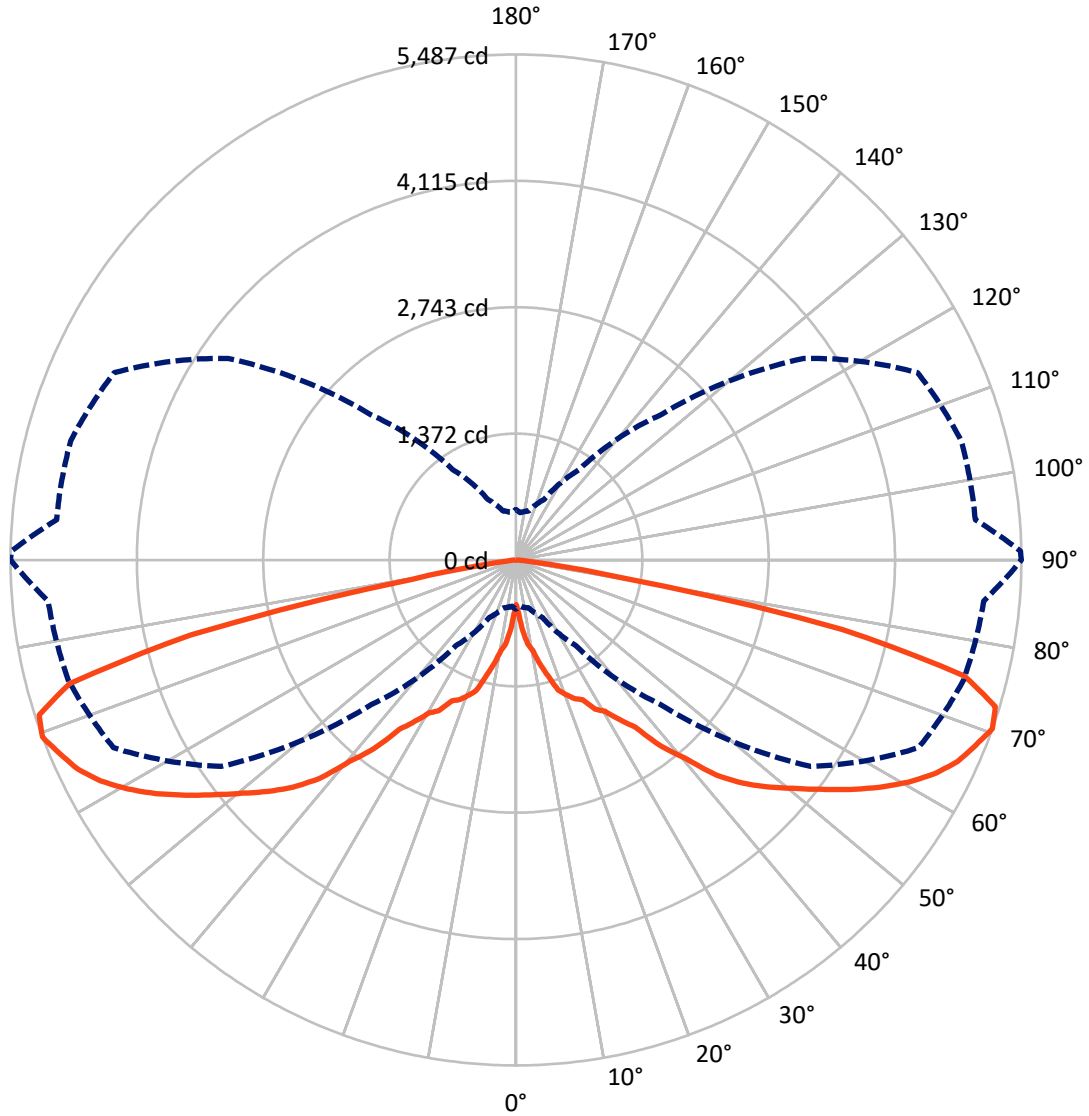
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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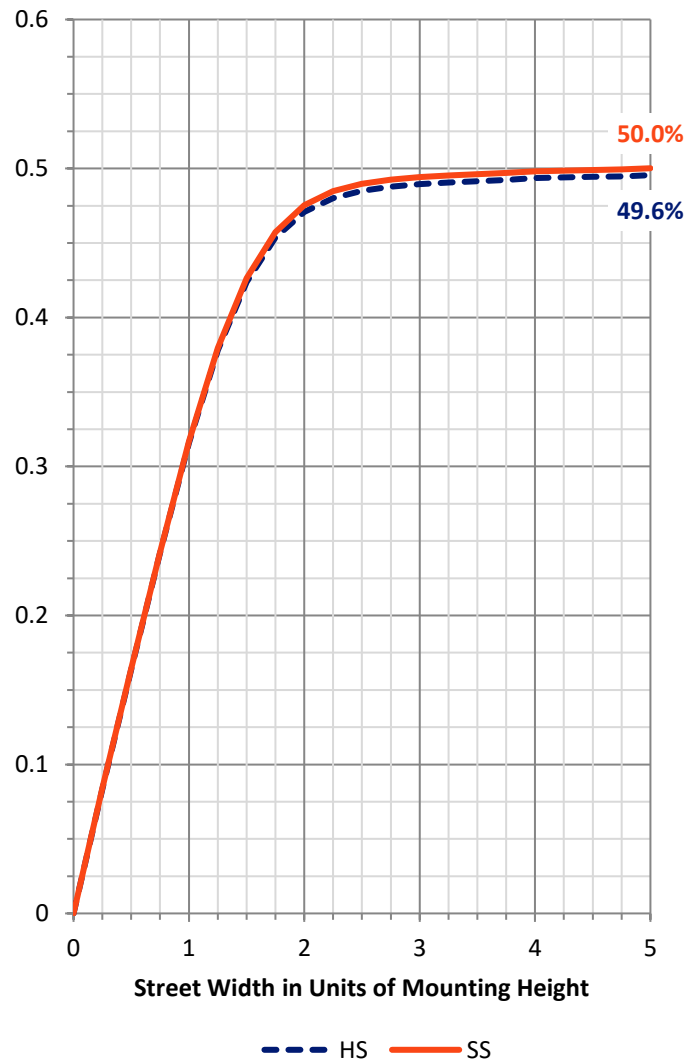
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6849.0	0.0	6849.0
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	6900.0	0.0	6900.0
	% Fixture	50.2	0.0	50.2
Total	Lumens	13749.0	0.0	13749.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	0.5
10°-20°	333.6	2.4
20°-30°	721.4	5.2
30°-40°	1376.3	10.0
40°-50°	2500.3	18.2
50°-60°	3512.3	25.5
60°-70°	3353.5	24.4
70°-80°	1721.1	12.5
80°-90°	157.8	1.1
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°	13749.0	100.0
0°-180°	13749.0	100.0



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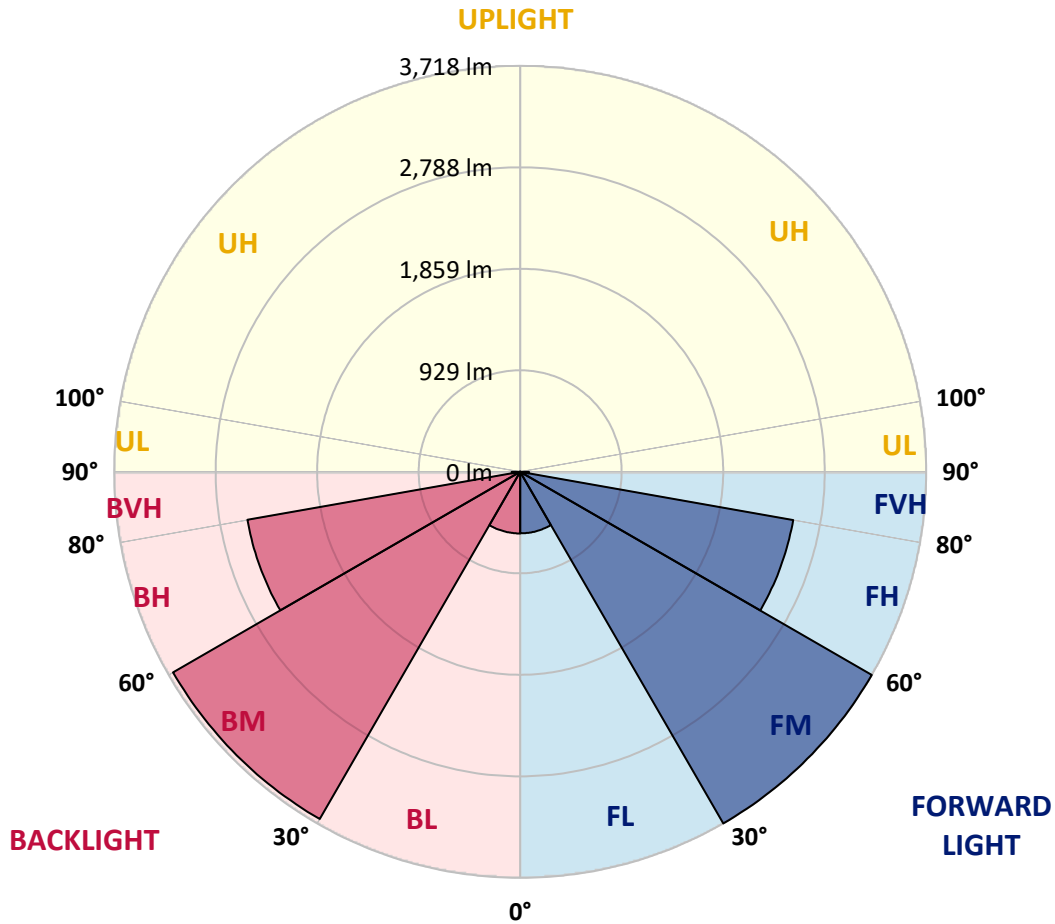
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	563.3	4.1			
FM (30°-60°)	3717.9	27.0			
FH (60°-80°)	2538.7	18.5			G2/5000
FVH (80°-90°)	80.1	0.6			G1/100
BL (0°-30°)	564.4	4.1	B2/1000		
BM (30°-60°)	3671.0	26.7	B3/5000		
BH (60°-80°)	2535.9	18.4	B4/5000		G4/5000
BVH (80°-90°)	77.7	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	482.6	482.6	482.6	482.6	482.6	482.6	482.6	482.6	482.6	482.6	482.6
2.5°	584.5	562.8	535.5	551.7	558.3	570.0	568.4	562.8	538.8	579.0	583.4
5°	731.6	697.1	684.3	682.0	685.4	674.2	710.5	699.9	719.4	755.6	764.0
7.5°	833.1	807.4	780.1	788.5	753.9	748.9	795.7	837.5	848.1	914.4	918.9
10°	881.0	855.9	863.1	858.1	854.2	886.5	908.3	938.9	982.9	989.1	998.6
12.5°	921.7	931.7	963.4	962.3	1014.7	1072.1	1063.7	1095.5	1102.8	1179.7	1156.2
15°	1024.7	1045.4	1043.1	1062.6	1085.5	1179.7	1180.2	1234.3	1283.9	1313.9	1306.1
17.5°	1175.7	1183.0	1152.9	1154.0	1220.3	1258.8	1301.7	1292.2	1421.5	1480.6	1484.5
20°	1266.0	1284.4	1249.9	1204.2	1321.7	1374.7	1398.6	1343.5	1481.7	1561.4	1561.4
22.5°	1423.7	1376.4	1324.0	1293.3	1397.0	1453.2	1450.5	1434.9	1508.4	1649.4	1636.0
25°	1510.6	1483.9	1457.7	1465.5	1517.9	1546.9	1585.3	1549.1	1618.2	1722.9	1678.9
27.5°	1675.6	1626.0	1497.3	1599.8	1599.8	1578.1	1659.4	1676.7	1631.6	1802.1	1834.9
30°	1862.3	1845.0	1662.8	1771.4	1738.0	1676.7	1832.7	1821.6	1745.8	1919.6	1904.6
32.5°	2038.9	2095.7	1923.0	1863.4	1913.5	1936.9	1855.0	1888.4	1902.9	2070.7	2063.4
35°	2309.7	2357.6	2128.6	2113.6	2030.0	2008.2	2070.7	2081.8	2082.9	2259.6	2227.2
37.5°	2778.3	2709.2	2483.0	2376.6	2386.0	2359.9	2372.1	2284.1	2296.3	2552.7	2568.8
40°	3121.0	3043.0	2791.2	2714.8	2527.6	2639.6	2540.4	2531.5	2507.0	2839.1	2830.2
42.5°	3499.4	3392.4	3113.8	3011.8	2812.9	2767.2	2721.5	2824.6	2817.9	3125.5	3193.5
45°	3785.2	3569.0	3423.6	3360.1	3240.8	3128.8	3085.4	3131.6	3110.4	3338.9	3457.6
47.5°	3965.8	3778.0	3610.8	3477.1	3362.9	3637.6	3417.5	3355.6	3312.7	3568.5	3682.7
50°	4109.6	3892.8	3695.5	3651.0	3741.2	3984.2	3637.0	3500.5	3552.9	3741.2	3896.7
52.5°	4148.6	3919.0	3741.8	3713.4	3957.4	4001.4	3945.2	3715.6	3701.7	3948.5	4136.3
55°	4029.3	3809.2	3725.1	3880.5	4150.2	4113.5	4199.3	4052.7	3954.1	4160.3	4396.5
57.5°	3722.3	3503.8	3483.8	3707.8	4047.7	4360.9	4403.2	4287.3	4158.0	4376.5	4655.1
60°	3218.0	3018.5	3069.2	3316.6	3829.3	4275.0	4500.2	4394.3	4354.2	4571.5	4894.7
62.5°	2432.9	2277.4	2412.8	2757.7	3430.3	4164.2	4633.9	4617.2	4559.2	4778.8	5106.4
65°	1551.3	1469.4	1607.6	1958.1	2811.2	3962.4	4698.0	4720.3	4773.8	4938.7	5270.3
67.5°	901.6	858.1	942.3	1229.2	2002.1	3253.6	4578.7	4898.6	4926.4	5021.2	5377.8
70°	533.3	504.8	539.4	690.4	1133.4	2216.6	3905.6	4820.6	5031.2	5097.0	5486.5
72.5°	406.8	380.0	365.0	408.4	591.8	1145.1	2640.7	4086.1	4947.1	5046.8	5440.8
75°	351.6	326.0	308.1	312.0	352.2	543.9	1431.5	2922.7	4215.4	4595.5	5025.6
77.5°	302.0	279.2	266.4	265.2	270.3	298.7	598.5	1584.8	2640.1	3303.2	3623.1
80°	241.8	224.0	221.2	221.2	214.0	211.7	297.6	602.9	1004.7	1191.4	1142.3
82.5°	176.6	158.8	176.6	174.4	163.3	154.4	189.5	260.8	309.8	244.6	193.4
85°	119.2	103.1	116.5	118.7	108.1	80.2	113.7	130.4	133.7	83.6	69.1
87.5°	41.8	40.7	65.8	57.4	46.8	27.3	41.8	45.1	47.4	29.5	20.1
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	482.6	482.6	482.6	482.6	482.6	482.6	482.6	482.6	482.6	482.6	482.6
2.5°	585.1	578.4	545.0	550.0	562.8	568.9	575.1	550.0	537.7	576.7	572.8
5°	766.2	741.7	714.4	710.5	712.1	688.2	702.1	696.0	698.8	723.8	728.9
7.5°	917.8	888.2	852.0	823.6	774.5	735.5	768.4	785.1	790.1	834.7	851.4
10°	999.7	974.6	964.0	910.5	894.3	889.3	881.5	854.8	884.3	873.7	882.1
12.5°	1160.1	1155.1	1100.0	1064.9	1068.2	1077.7	1028.6	1001.9	963.4	1023.6	1001.9
15°	1296.7	1318.4	1263.2	1199.2	1167.4	1183.6	1146.2	1107.2	1072.7	1091.1	1067.6
17.5°	1471.1	1470.5	1363.0	1294.4	1291.7	1290.5	1235.4	1149.6	1190.8	1178.0	1179.1
20°	1563.6	1548.5	1414.8	1335.7	1403.1	1379.1	1329.5	1219.2	1267.1	1282.7	1292.8
22.5°	1641.0	1632.7	1470.5	1412.6	1456.0	1456.6	1407.0	1349.0	1342.9	1391.4	1365.2
25°	1695.1	1728.5	1575.8	1561.9	1580.9	1561.9	1513.4	1475.5	1451.0	1523.5	1451.0
27.5°	1823.2	1775.9	1592.0	1671.1	1682.8	1587.5	1648.3	1603.7	1535.7	1625.4	1655.0
30°	1914.6	1942.5	1705.7	1824.9	1811.0	1722.9	1748.0	1746.4	1665.0	1840.0	1819.3
32.5°	2071.8	2038.3	1891.2	1881.8	1915.2	1911.3	1868.9	1889.6	1909.6	2036.7	2067.3
35°	2232.8	2268.5	2009.9	2074.0	2064.5	2004.3	2115.2	2102.4	2162.0	2422.8	2336.5
37.5°	2596.1	2426.2	2276.3	2267.9	2331.4	2340.9	2305.2	2361.5	2490.2	2690.9	2783.3
40°	2834.1	2756.6	2502.0	2512.0	2423.9	2575.5	2475.2	2656.3	2754.4	3092.6	3059.7
42.5°	3194.0	3005.1	2760.5	2793.9	2776.1	2703.1	2835.2	2928.2	3068.7	3326.6	3493.3
45°	3462.1	3202.9	3087.0	3066.4	3064.2	3191.2	3174.5	3323.3	3373.5	3567.4	3705.6
47.5°	3665.4	3445.3	3273.7	3297.1	3229.1	3591.9	3398.5	3444.8	3546.2	3729.0	3890.0
50°	3906.7	3661.5	3466.5	3524.5	3690.0	3829.3	3654.3	3575.2	3624.8	3840.4	4019.8
52.5°	4130.2	3872.2	3657.6	3706.1	3976.4	3912.8	3893.9	3693.9	3687.7	3861.0	4065.0
55°	4391.5	4100.6	3911.2	4065.0	4160.8	4082.2	4052.2	3808.6	3658.2	3754.6	3946.8
57.5°	4647.8	4326.9	4138.5	4170.3	4291.8	4213.8	3988.1	3613.1	3425.3	3444.2	3638.7
60°	4888.0	4534.7	4379.2	4348.6	4445.6	4139.6	3744.6	3254.8	3005.7	2960.0	3128.3
62.5°	5093.6	4708.6	4561.5	4477.9	4570.4	4142.4	3365.1	2679.7	2406.1	2251.2	2382.1
65°	5256.9	4852.9	4748.1	4704.7	4738.1	3890.6	2773.9	1967.6	1632.1	1460.5	1536.8
67.5°	5365.5	4933.7	4885.8	4942.6	4496.8	3240.3	2055.1	1259.3	949.0	855.3	903.3
70°	5478.1	5005.0	5003.3	4810.0	3813.1	2233.9	1200.3	726.1	552.2	516.0	546.1
72.5°	5440.2	4920.3	4945.4	4206.5	2642.4	1194.1	633.6	410.7	373.9	386.7	413.5
75°	5037.9	4473.4	4352.5	3024.1	1498.9	555.0	365.0	310.9	308.7	328.2	354.4
77.5°	3654.3	3115.5	2795.6	1714.0	642.5	300.3	268.6	259.7	259.7	275.3	298.7
80°	1204.7	1042.6	1086.6	663.1	303.7	207.3	209.5	213.4	212.3	216.2	235.7
82.5°	197.8	205.1	317.1	270.8	183.3	141.5	158.3	166.1	168.3	150.5	171.1
85°	70.2	79.1	134.8	125.4	105.9	71.3	104.2	116.5	114.8	100.3	110.9
87.5°	21.7	27.9	49.0	37.9	31.8	19.5	39.0	45.7	57.4	23.4	21.2
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)