

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: P367790

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

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367790
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-727-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: 12625 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

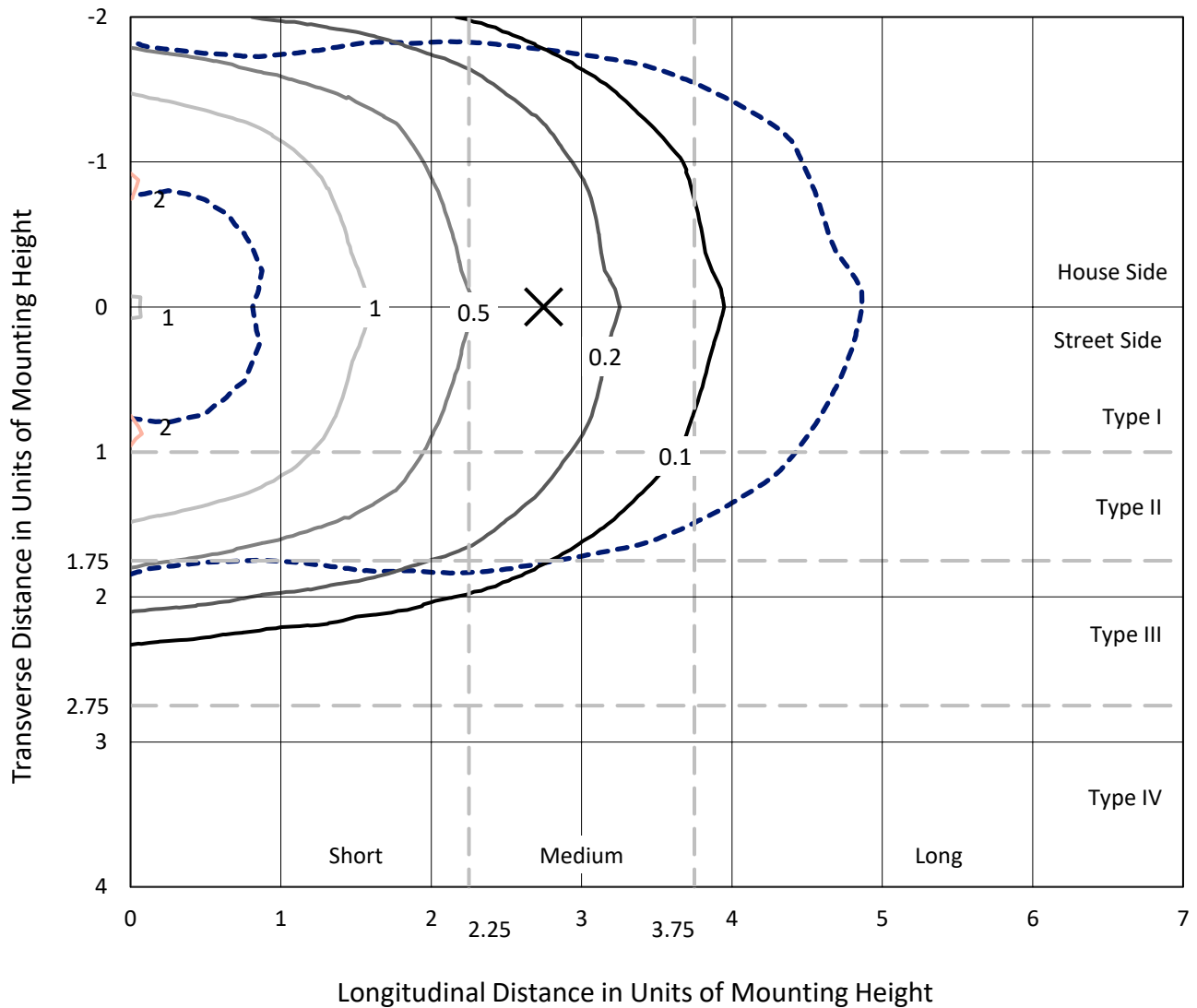
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

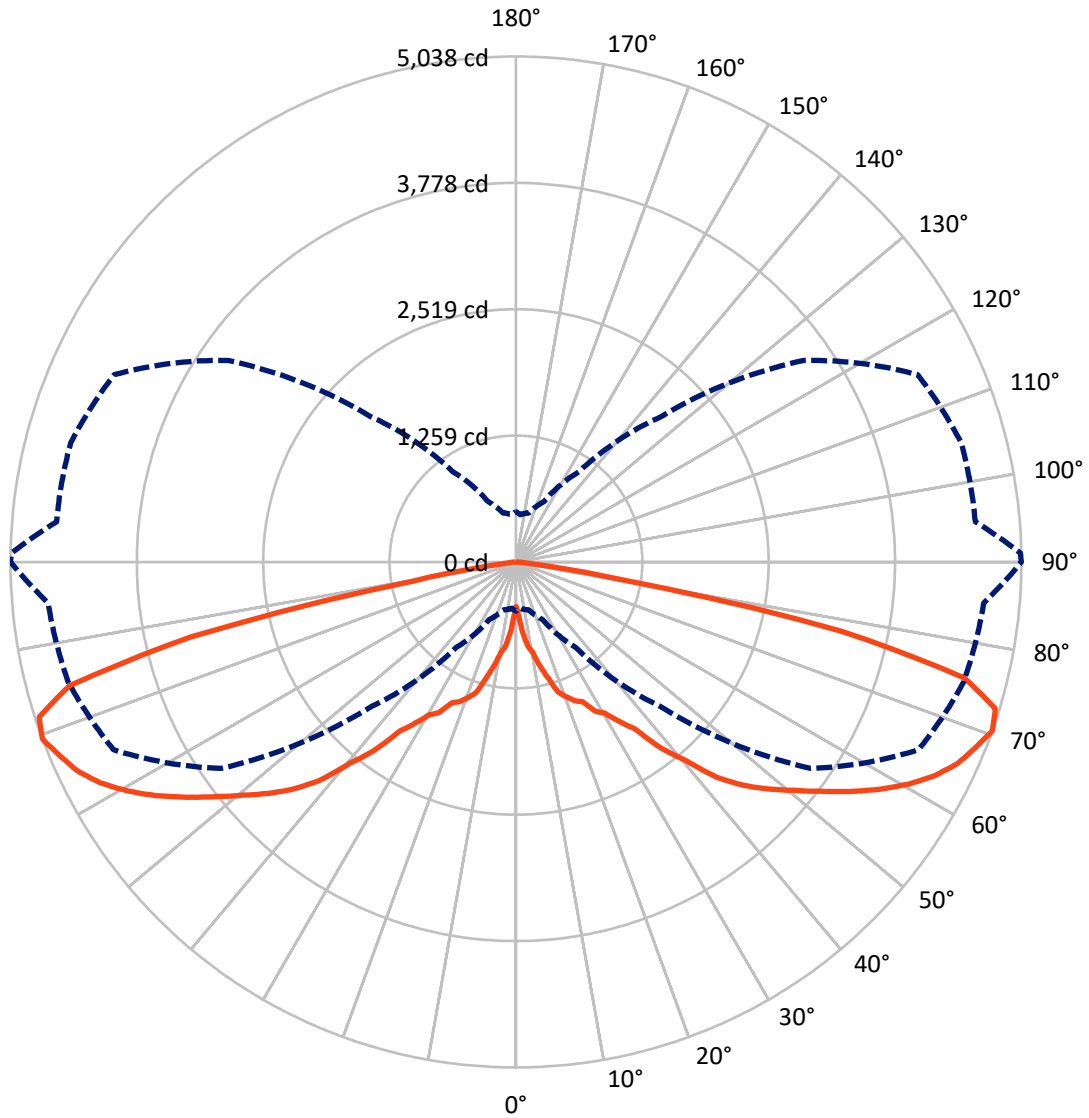
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 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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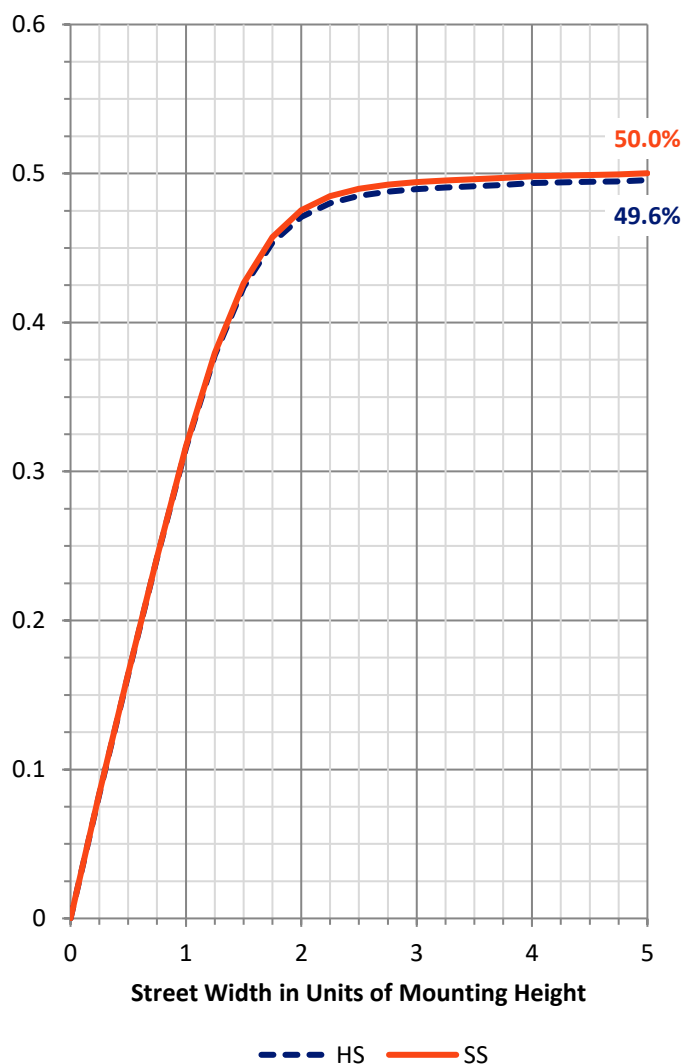
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6289.1	0.0	6289.1
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	6335.9	0.0	6335.9
	% Fixture	50.2	0.0	50.2
Total	Lumens	12625.0	0.0	12625.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	0.5
10°-20°	306.4	2.4
20°-30°	662.4	5.2
30°-40°	1263.8	10.0
40°-50°	2295.9	18.2
50°-60°	3225.1	25.5
60°-70°	3079.4	24.4
70°-80°	1580.4	12.5
80°-90°	144.9	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°	12625.0	100.0
0°-180°	12625.0	100.0

Coefficient of Utilization



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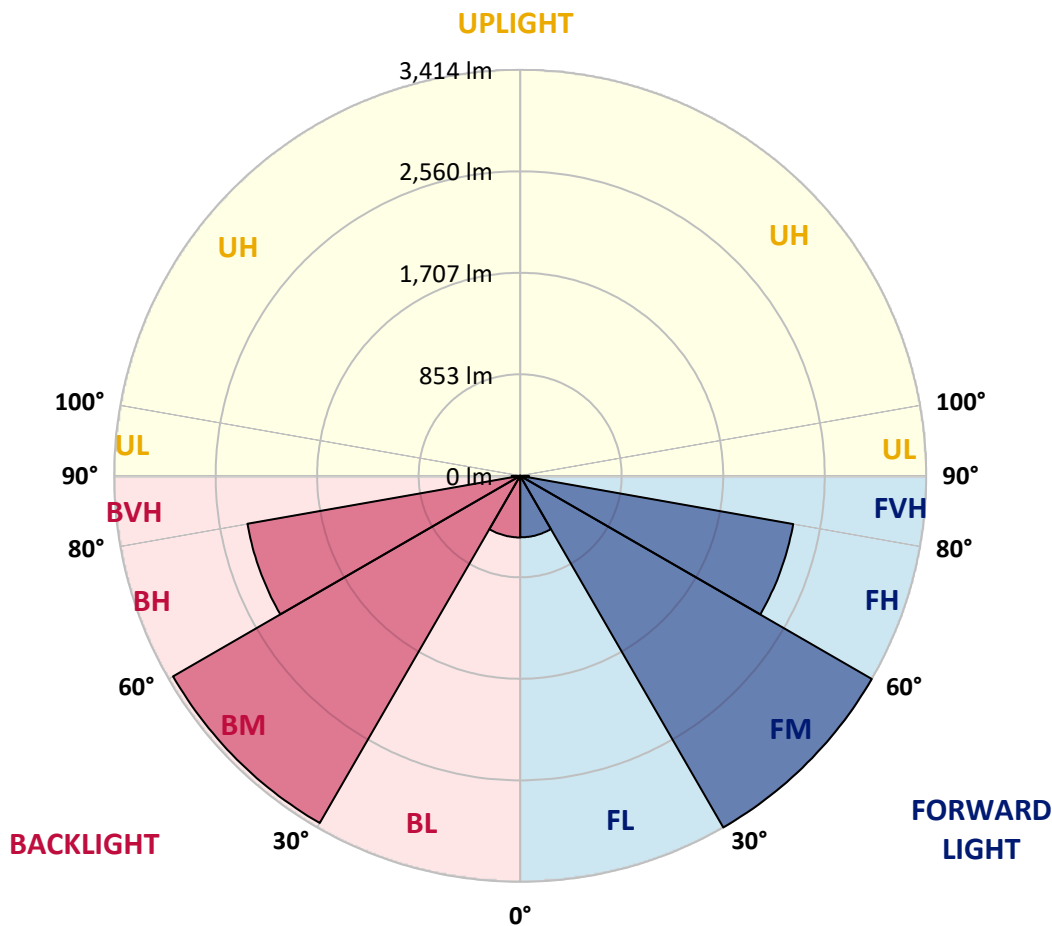
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	517.3	4.1			
FM (30°-60°)	3413.9	27.0			
FH (60°-80°)	2331.1	18.5			G2/5000
FVH (80°-90°)	73.5	0.6			G1/100
BL (0°-30°)	518.3	4.1	B2/1000		
BM (30°-60°)	3370.9	26.7	B3/5000		
BH (60°-80°)	2328.6	18.4	B3/2500		G3/2500
BVH (80°-90°)	71.4	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1
2.5°	536.7	516.8	491.7	506.6	512.7	523.4	521.9	516.8	494.8	531.6	535.7
5°	671.8	640.1	628.3	626.3	629.4	619.1	652.4	642.7	660.6	693.8	701.5
7.5°	765.0	741.4	716.3	724.0	692.3	687.7	730.7	769.0	778.8	839.7	843.7
10°	809.0	785.9	792.6	788.0	784.4	814.1	834.0	862.2	902.6	908.2	916.9
12.5°	846.3	855.5	884.7	883.7	931.8	984.5	976.8	1005.9	1012.6	1083.2	1061.7
15°	941.0	959.9	957.9	975.8	996.7	1083.2	1083.7	1133.4	1178.9	1206.5	1199.4
17.5°	1079.6	1086.3	1058.7	1059.7	1120.6	1155.9	1195.3	1186.6	1305.3	1359.5	1363.1
20°	1162.5	1179.4	1147.7	1105.7	1213.7	1262.3	1284.3	1233.6	1360.5	1433.7	1433.7
22.5°	1307.3	1263.8	1215.7	1187.6	1282.8	1334.4	1331.9	1317.6	1385.1	1514.6	1502.3
25°	1387.1	1362.6	1338.5	1345.7	1393.8	1420.4	1455.7	1422.5	1485.9	1582.1	1541.7
27.5°	1538.6	1493.1	1374.9	1469.0	1469.0	1449.1	1523.8	1539.6	1498.2	1654.8	1684.9
30°	1710.0	1694.1	1526.8	1626.6	1595.9	1539.6	1682.9	1672.7	1603.1	1762.7	1748.9
32.5°	1872.2	1924.4	1765.8	1711.0	1757.1	1778.6	1703.4	1734.1	1747.4	1901.4	1894.7
35°	2120.9	2164.9	1954.6	1940.8	1864.0	1844.1	1901.4	1911.6	1912.6	2074.8	2045.2
37.5°	2551.2	2487.8	2280.0	2182.3	2191.0	2166.9	2178.2	2097.3	2108.6	2344.0	2358.8
40°	2865.9	2794.2	2563.0	2492.9	2320.9	2423.8	2332.7	2324.5	2302.0	2607.0	2598.8
42.5°	3213.3	3115.1	2859.2	2765.6	2582.9	2541.0	2499.0	2593.7	2587.5	2870.0	2932.4
45°	3475.8	3277.3	3143.7	3085.4	2975.9	2873.0	2833.1	2875.6	2856.2	3065.9	3174.9
47.5°	3641.6	3469.1	3315.6	3192.8	3087.9	3340.2	3138.1	3081.3	3041.9	3276.8	3381.6
50°	3773.6	3574.5	3393.4	3352.5	3435.4	3658.5	3339.7	3214.3	3262.4	3435.4	3578.1
52.5°	3809.4	3598.6	3435.9	3409.8	3633.9	3674.3	3622.6	3411.8	3399.0	3625.7	3798.1
55°	3699.9	3497.8	3420.5	3563.3	3810.9	3777.2	3856.0	3721.4	3630.8	3820.2	4037.1
57.5°	3418.0	3217.4	3199.0	3404.7	3716.8	4004.4	4043.2	3936.8	3818.1	4018.7	4274.5
60°	2954.9	2771.7	2818.3	3045.5	3516.2	3925.6	4132.3	4035.1	3998.2	4197.8	4494.5
62.5°	2234.0	2091.2	2215.5	2532.3	3149.9	3823.7	4255.1	4239.7	4186.5	4388.1	4689.0
65°	1424.5	1349.3	1476.2	1798.0	2581.4	3638.5	4313.9	4334.4	4383.5	4535.0	4839.4
67.5°	827.9	788.0	865.2	1128.8	1838.4	2987.7	4204.4	4498.1	4523.7	4610.7	4938.2
70°	489.7	463.6	495.3	634.0	1040.7	2035.4	3586.3	4426.5	4619.9	4680.3	5037.9
72.5°	373.5	349.0	335.1	375.1	543.4	1051.5	2424.8	3752.1	4542.6	4634.2	4996.0
75°	322.9	299.3	283.0	286.5	323.4	499.4	1314.5	2683.7	3870.8	4219.8	4614.8
77.5°	277.3	256.3	244.6	243.6	248.2	274.3	549.5	1455.2	2424.3	3033.2	3326.9
80°	222.1	205.7	203.1	203.1	196.5	194.4	273.2	553.6	922.5	1094.0	1048.9
82.5°	162.2	145.8	162.2	160.2	149.9	141.7	174.0	239.5	284.5	224.6	177.6
85°	109.5	94.7	106.9	109.0	99.3	73.7	104.4	119.7	122.8	76.8	63.4
87.5°	38.4	37.4	60.4	52.7	43.0	25.1	38.4	41.4	43.5	27.1	18.4
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1
2.5°	537.3	531.1	500.4	505.0	516.8	522.4	528.0	505.0	493.8	529.6	526.0
5°	703.6	681.0	656.0	652.4	653.9	631.9	644.7	639.1	641.6	664.7	669.3
7.5°	842.7	815.6	782.3	756.3	711.2	675.4	705.6	720.9	725.6	766.5	781.8
10°	917.9	894.9	885.2	836.1	821.2	816.6	809.5	784.9	812.0	802.3	810.0
12.5°	1065.3	1060.7	1010.0	977.8	980.9	989.6	944.5	920.0	884.7	939.9	920.0
15°	1190.7	1210.6	1160.0	1101.1	1072.0	1086.8	1052.5	1016.7	985.0	1001.9	980.4
17.5°	1350.8	1350.3	1251.6	1188.6	1186.1	1185.0	1134.4	1055.6	1093.4	1081.7	1082.7
20°	1435.8	1421.9	1299.1	1226.5	1288.4	1266.4	1220.9	1119.5	1163.5	1177.9	1187.1
22.5°	1506.9	1499.2	1350.3	1297.1	1337.0	1337.5	1292.0	1238.8	1233.1	1277.6	1253.6
25°	1556.5	1587.2	1447.0	1434.2	1451.6	1434.2	1389.7	1354.9	1332.4	1398.9	1332.4
27.5°	1674.2	1630.7	1461.9	1534.5	1545.3	1457.8	1513.5	1472.6	1410.2	1492.6	1519.7
30°	1758.1	1783.7	1566.2	1675.7	1662.9	1582.1	1605.1	1603.6	1528.9	1689.5	1670.6
32.5°	1902.4	1871.7	1736.6	1727.9	1758.6	1755.0	1716.2	1735.1	1753.5	1870.2	1898.3
35°	2050.3	2083.0	1845.6	1904.4	1895.7	1840.5	1942.3	1930.5	1985.3	2224.8	2145.4
37.5°	2383.9	2227.8	2090.2	2082.5	2140.8	2149.5	2116.8	2168.5	2286.7	2470.9	2555.8
40°	2602.4	2531.2	2297.4	2306.6	2225.8	2365.0	2272.9	2439.1	2529.2	2839.8	2809.6
42.5°	2932.9	2759.5	2534.8	2565.5	2549.2	2482.1	2603.4	2688.8	2817.8	3054.7	3207.7
45°	3179.0	2941.1	2834.7	2815.7	2813.7	2930.4	2915.0	3051.6	3097.7	3275.7	3402.6
47.5°	3365.8	3163.7	3006.1	3027.6	2965.1	3298.2	3120.7	3163.2	3256.3	3424.1	3572.0
50°	3587.3	3362.2	3183.1	3236.3	3388.3	3516.2	3355.6	3282.9	3328.4	3526.5	3691.2
52.5°	3792.5	3555.6	3358.6	3403.1	3651.3	3593.0	3575.6	3391.9	3386.3	3545.4	3732.7
55°	4032.5	3765.4	3591.4	3732.7	3820.7	3748.5	3720.9	3497.3	3359.1	3447.7	3624.2
57.5°	4267.9	3973.1	3800.2	3829.4	3940.9	3869.3	3662.0	3317.7	3145.3	3162.7	3341.2
60°	4488.4	4164.0	4021.2	3993.1	4082.1	3801.2	3438.4	2988.7	2760.0	2718.0	2872.5
62.5°	4677.2	4323.6	4188.6	4111.8	4196.7	3803.8	3090.0	2460.6	2209.4	2067.2	2187.4
65°	4827.1	4456.2	4360.0	4320.1	4350.8	3572.5	2547.1	1806.7	1498.7	1341.1	1411.2
67.5°	4926.9	4530.4	4486.3	4538.5	4129.2	2975.4	1887.1	1156.4	871.4	785.4	829.4
70°	5030.3	4595.8	4594.3	4416.8	3501.4	2051.3	1102.1	666.7	507.1	473.8	501.4
72.5°	4995.5	4518.1	4541.1	3862.6	2426.4	1096.5	581.8	377.1	343.3	355.1	379.7
75°	4626.0	4107.7	3996.7	2776.8	1376.4	509.6	335.1	285.5	283.5	301.4	325.4
77.5°	3355.6	2860.8	2567.1	1573.9	590.0	275.8	246.6	238.4	238.4	252.8	274.3
80°	1106.2	957.3	997.8	608.9	278.9	190.3	192.4	196.0	194.9	198.5	216.4
82.5°	181.6	188.3	291.1	248.7	168.3	130.0	145.3	152.5	154.5	138.2	157.1
85°	64.5	72.7	123.8	115.1	97.2	65.5	95.7	106.9	105.4	92.1	101.8
87.5°	20.0	25.6	45.0	34.8	29.2	17.9	35.8	42.0	52.7	21.5	19.4
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)