

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: P596632

Luminaire Tested: **MSA-SA2D-827-U-RW**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596632
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-827-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10182 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

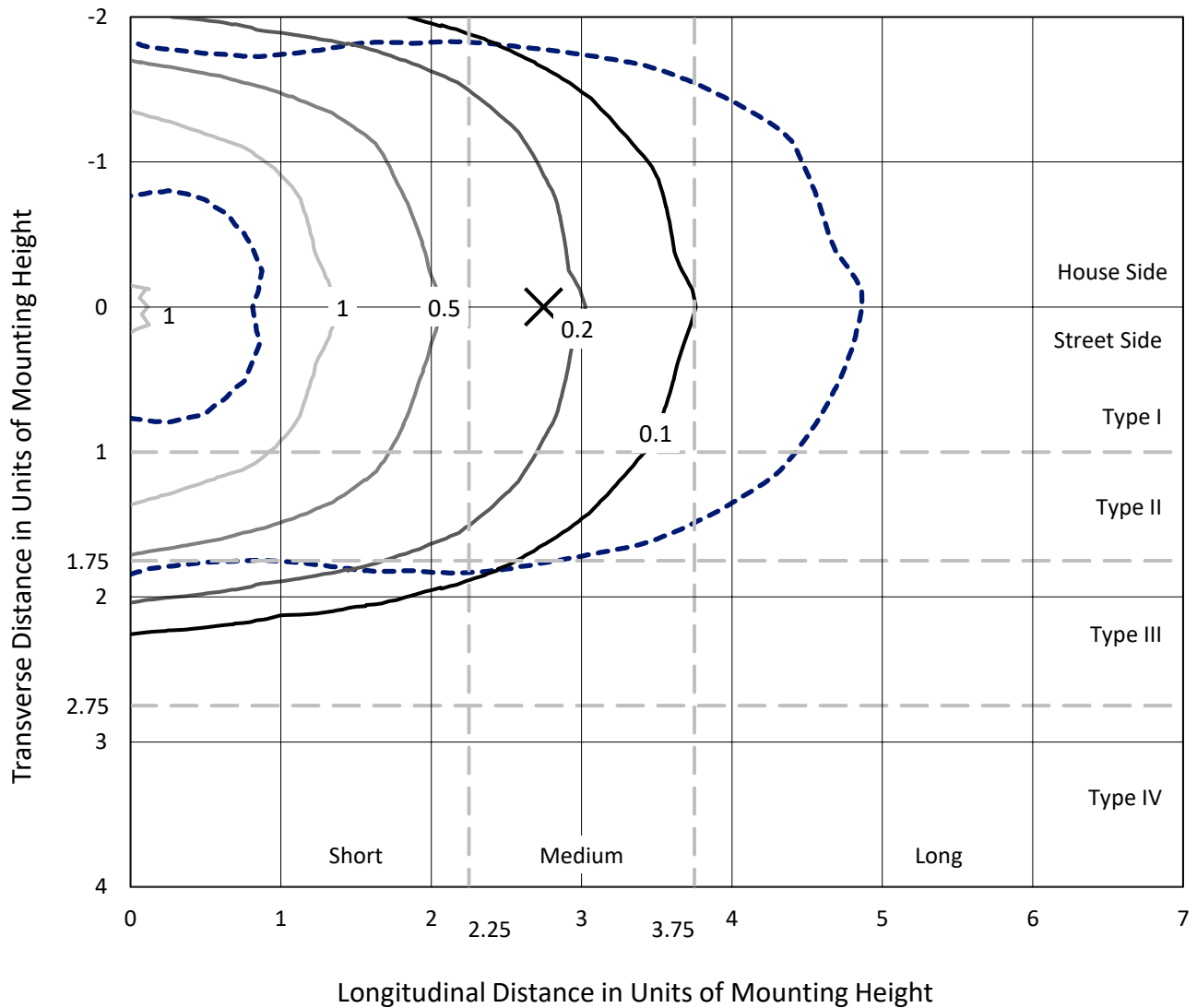
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

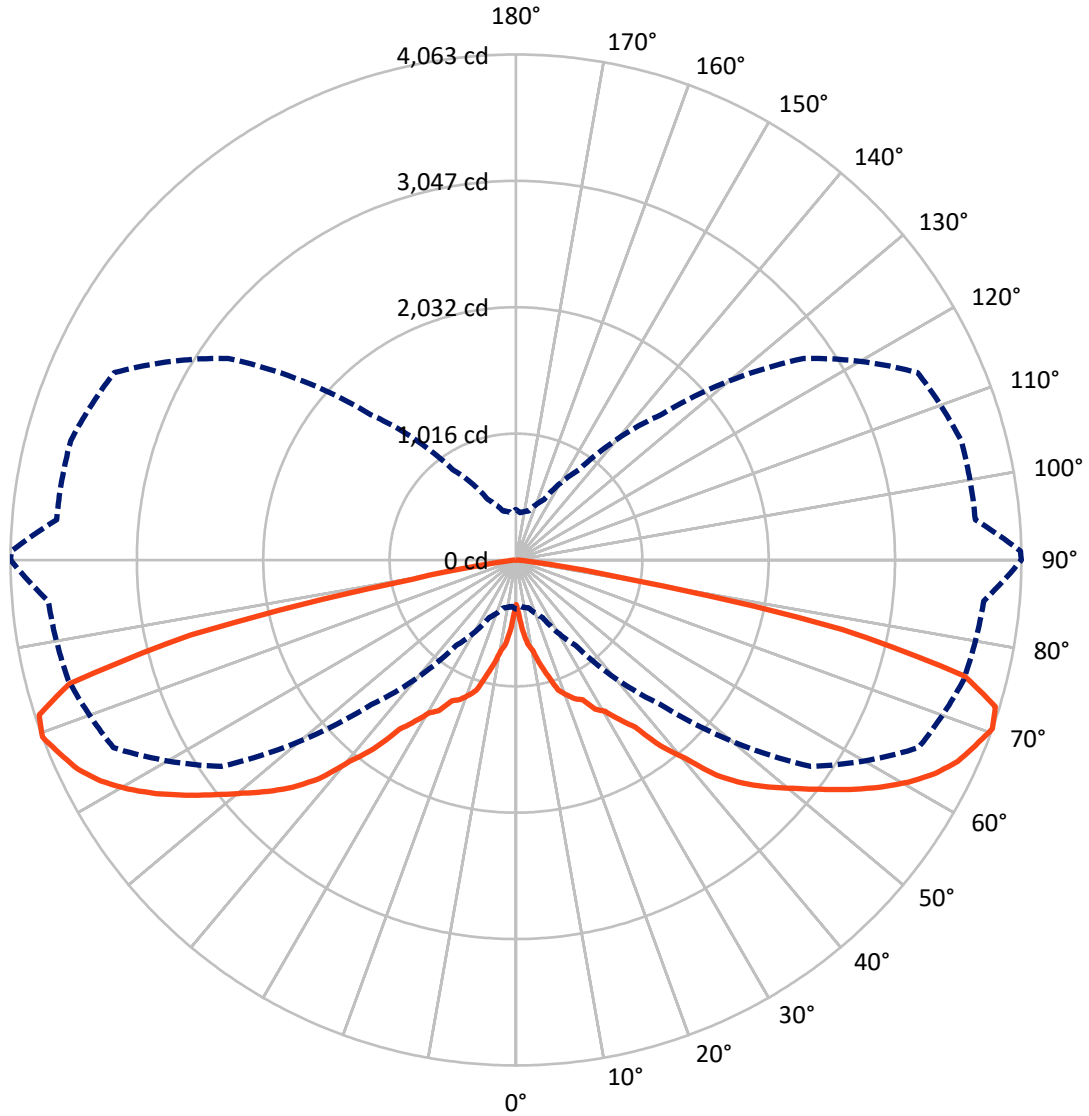
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 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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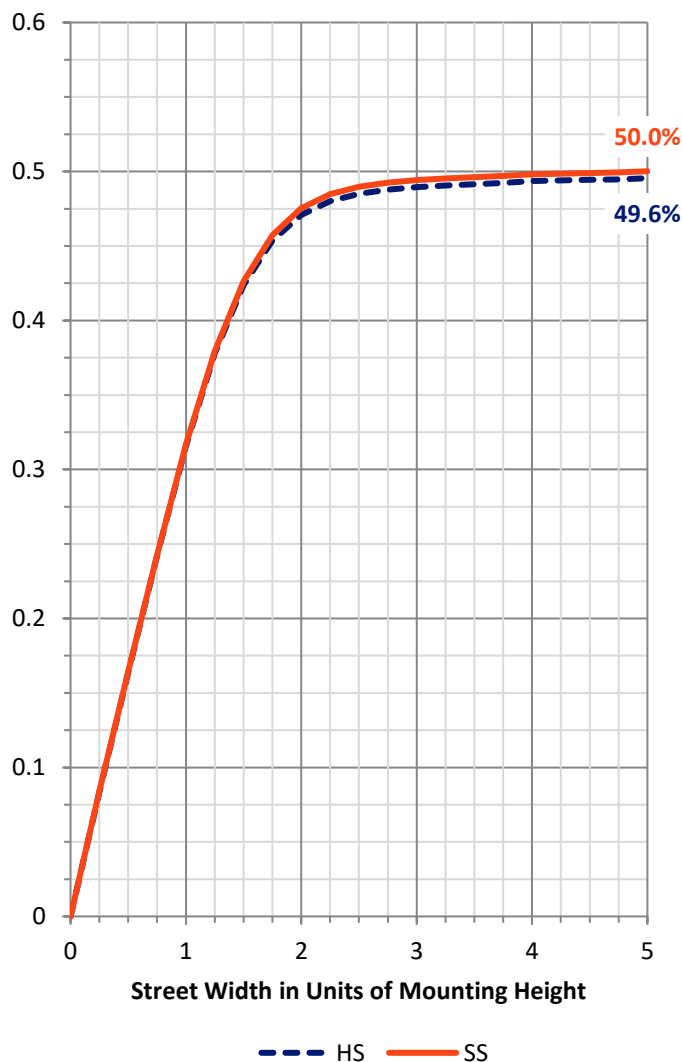
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5072.1	0.0	5072.1
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	5109.9	0.0	5109.9
	% Fixture	50.2	0.0	50.2
Total	Lumens	10182.0	0.0	10182.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.9	0.5
10°-20°	247.1	2.4
20°-30°	534.2	5.2
30°-40°	1019.2	10.0
40°-50°	1851.6	18.2
50°-60°	2601.1	25.5
60°-70°	2483.5	24.4
70°-80°	1274.5	12.5
80°-90°	116.9	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°	10182.0	100.0
0°-180°	10182.0	100.0

Coefficient of Utilization



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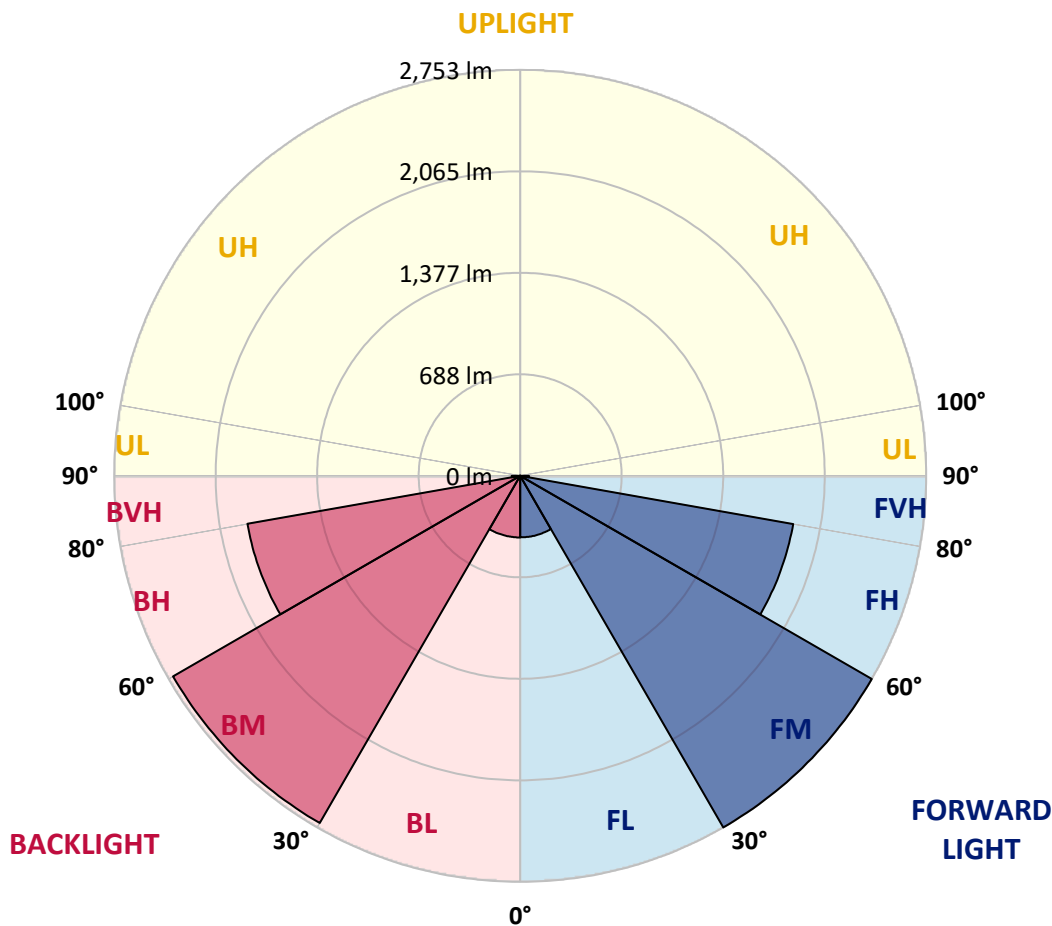
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	417.2	4.1			
FM (30°-60°)	2753.3	27.0			
FH (60°-80°)	1880.0	18.5			G2/5000
FVH (80°-90°)	59.3	0.6			G1/100
BL (0°-30°)	418.0	4.1	B1/500		
BM (30°-60°)	2718.6	26.7	B3/5000		
BH (60°-80°)	1878.0	18.4	B3/2500		G3/2500
BVH (80°-90°)	57.6	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°	357.4	357.4	357.4	357.4	357.4	357.4	357.4	357.4	357.4	357.4	357.4
2.5°	432.9	416.8	396.6	408.5	413.5	422.2	420.9	416.8	399.0	428.8	432.1
5°	541.8	516.2	506.7	505.1	507.6	499.3	526.1	518.3	532.7	559.6	565.8
7.5°	616.9	597.9	577.7	583.9	558.3	554.6	589.3	620.2	628.1	677.2	680.5
10°	652.4	633.8	639.2	635.5	632.6	656.5	672.6	695.3	727.9	732.5	739.5
12.5°	682.5	690.0	713.5	712.7	751.5	794.0	787.8	811.3	816.7	873.6	856.3
15°	758.9	774.2	772.5	786.9	803.9	873.6	874.0	914.0	950.8	973.1	967.3
17.5°	870.7	876.1	853.8	854.6	903.7	932.2	964.0	957.0	1052.7	1096.4	1099.3
20°	937.6	951.2	925.6	891.8	978.8	1018.0	1035.8	994.9	1097.3	1156.3	1156.3
22.5°	1054.4	1019.3	980.5	957.8	1034.5	1076.2	1074.2	1062.6	1117.1	1221.5	1211.6
25°	1118.7	1098.9	1079.5	1085.3	1124.1	1145.5	1174.0	1147.2	1198.4	1276.0	1243.4
27.5°	1240.9	1204.1	1108.8	1184.8	1184.8	1168.7	1228.9	1241.7	1208.3	1334.5	1358.9
30°	1379.1	1366.3	1231.4	1311.9	1287.1	1241.7	1357.2	1349.0	1292.9	1421.6	1410.5
32.5°	1509.9	1552.0	1424.1	1379.9	1417.1	1434.4	1373.8	1398.5	1409.2	1533.5	1528.1
35°	1710.5	1746.0	1576.4	1565.2	1503.3	1487.2	1533.5	1541.7	1542.5	1673.3	1649.4
37.5°	2057.5	2006.4	1838.8	1760.0	1767.0	1747.6	1756.7	1691.5	1700.6	1890.4	1902.4
40°	2311.3	2253.5	2067.0	2010.5	1871.8	1954.8	1881.3	1874.7	1856.6	2102.5	2095.9
42.5°	2591.5	2512.3	2306.0	2230.4	2083.1	2049.3	2015.4	2091.8	2086.8	2314.6	2365.0
45°	2803.2	2643.1	2535.4	2488.4	2400.0	2317.1	2284.9	2319.2	2303.5	2472.7	2560.6
47.5°	2936.9	2797.8	2674.0	2575.0	2490.4	2693.9	2530.9	2485.0	2453.3	2642.7	2727.3
50°	3043.4	2882.9	2736.8	2703.8	2770.6	2950.5	2693.4	2592.3	2631.1	2770.6	2885.7
52.5°	3072.3	2902.3	2771.0	2750.0	2930.7	2963.3	2921.6	2751.6	2741.3	2924.1	3063.2
55°	2984.0	2821.0	2758.6	2873.8	3073.5	3046.3	3109.8	3001.3	2928.2	3080.9	3255.9
57.5°	2756.6	2594.8	2580.0	2745.9	2997.6	3229.5	3260.9	3175.0	3079.3	3241.0	3447.4
60°	2383.1	2235.4	2272.9	2456.2	2835.8	3165.9	3332.7	3254.3	3224.5	3385.5	3624.8
62.5°	1801.7	1686.5	1786.8	2042.3	2540.3	3083.8	3431.7	3419.3	3376.4	3539.0	3781.6
65°	1148.9	1088.2	1190.5	1450.1	2081.9	2934.4	3479.2	3495.7	3535.3	3657.4	3903.0
67.5°	667.7	635.5	697.8	910.3	1482.7	2409.5	3390.8	3627.7	3648.3	3718.5	3982.6
70°	394.9	373.9	399.5	511.3	839.4	1641.6	2892.3	3569.9	3725.9	3774.6	4063.1
72.5°	301.2	281.4	270.3	302.5	438.2	848.0	1955.6	3026.0	3663.6	3737.5	4029.2
75°	260.4	241.4	228.2	231.1	260.8	402.8	1060.1	2164.4	3121.8	3403.2	3721.8
77.5°	223.7	206.7	197.3	196.4	200.1	221.2	443.2	1173.6	1955.2	2446.3	2683.1
80°	179.1	165.9	163.8	163.8	158.5	156.8	220.4	446.5	744.0	882.3	846.0
82.5°	130.8	117.6	130.8	129.2	120.9	114.3	140.3	193.1	229.4	181.2	143.2
85°	88.3	76.3	86.2	87.9	80.1	59.4	84.2	96.6	99.0	61.9	51.2
87.5°	30.9	30.1	48.7	42.5	34.7	20.2	30.9	33.4	35.1	21.9	14.9
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°	357.4	357.4	357.4	357.4	357.4	357.4	357.4	357.4	357.4	357.4	357.4
2.5°	433.3	428.3	403.6	407.3	416.8	421.3	425.9	407.3	398.2	427.1	424.2
5°	567.4	549.3	529.0	526.1	527.4	509.6	520.0	515.4	517.5	536.0	539.8
7.5°	679.7	657.8	631.0	609.9	573.6	544.7	569.1	581.4	585.2	618.2	630.5
10°	740.3	721.7	713.9	674.3	662.3	658.6	652.8	633.0	654.9	647.1	653.2
12.5°	859.2	855.4	814.6	788.6	791.1	798.1	761.8	742.0	713.5	758.1	742.0
15°	960.3	976.4	935.5	888.0	864.5	876.5	848.8	820.0	794.4	808.0	790.7
17.5°	1089.4	1089.0	1009.4	958.6	956.6	955.7	914.9	851.3	881.9	872.4	873.2
20°	1157.9	1146.8	1047.7	989.2	1039.1	1021.3	984.6	902.9	938.4	949.9	957.4
22.5°	1215.3	1209.1	1089.0	1046.1	1078.3	1078.7	1042.0	999.1	994.5	1030.4	1011.0
25°	1255.3	1280.1	1167.0	1156.7	1170.7	1156.7	1120.8	1092.7	1074.6	1128.2	1074.6
27.5°	1350.2	1315.2	1179.0	1237.6	1246.2	1175.7	1220.7	1187.6	1137.3	1203.7	1225.6
30°	1417.9	1438.5	1263.2	1351.5	1341.2	1276.0	1294.5	1293.3	1233.0	1362.6	1347.3
32.5°	1534.3	1509.5	1400.6	1393.6	1418.3	1415.4	1384.1	1399.3	1414.2	1508.3	1531.0
35°	1653.5	1679.9	1488.5	1535.9	1528.9	1484.3	1566.5	1557.0	1601.1	1794.3	1730.3
37.5°	1922.6	1796.7	1685.7	1679.5	1726.6	1733.6	1707.2	1748.9	1844.2	1992.7	2061.2
40°	2098.8	2041.4	1852.9	1860.3	1795.1	1907.3	1833.0	1967.2	2039.8	2290.3	2265.9
42.5°	2365.4	2225.5	2044.3	2069.1	2055.9	2001.8	2099.6	2168.5	2272.5	2463.6	2587.0
45°	2563.9	2372.0	2286.1	2270.9	2269.2	2363.3	2350.9	2461.1	2498.3	2641.9	2744.2
47.5°	2714.5	2551.5	2424.4	2441.7	2391.4	2660.0	2516.8	2551.1	2626.2	2761.5	2880.8
50°	2893.2	2711.6	2567.2	2610.1	2732.6	2835.8	2706.2	2647.6	2684.4	2844.1	2976.9
52.5°	3058.6	2867.6	2708.7	2744.6	2944.8	2897.7	2883.7	2735.5	2731.0	2859.3	3010.4
55°	3252.2	3036.8	2896.5	3010.4	3081.3	3023.2	3000.9	2820.5	2709.1	2780.5	2922.9
57.5°	3442.0	3204.3	3064.8	3088.4	3178.3	3120.5	2953.4	2675.7	2536.6	2550.7	2694.7
60°	3619.9	3358.2	3243.1	3220.4	3292.2	3065.7	2773.1	2410.4	2225.9	2192.1	2316.7
62.5°	3772.1	3487.0	3378.0	3316.2	3384.7	3067.7	2492.1	1984.5	1781.9	1667.2	1764.1
65°	3893.1	3593.9	3516.3	3484.1	3508.9	2881.2	2054.2	1457.1	1208.7	1081.6	1138.1
67.5°	3973.5	3653.7	3618.2	3660.3	3330.2	2399.6	1521.9	932.6	702.8	633.4	668.9
70°	4056.9	3706.5	3705.3	3562.1	2823.8	1654.4	888.9	537.7	408.9	382.1	404.4
72.5°	4028.8	3643.8	3662.4	3115.2	1956.8	884.3	469.2	304.1	276.9	286.4	306.2
75°	3730.9	3312.8	3223.3	2239.5	1110.1	411.0	270.3	230.3	228.6	243.1	262.5
77.5°	2706.2	2307.2	2070.3	1269.3	475.8	222.4	198.9	192.3	192.3	203.9	221.2
80°	892.2	772.1	804.7	491.1	224.9	153.5	155.2	158.0	157.2	160.1	174.6
82.5°	146.5	151.9	234.8	200.6	135.8	104.8	117.2	123.0	124.6	111.4	126.7
85°	52.0	58.6	99.9	92.8	78.4	52.8	77.2	86.2	85.0	74.3	82.1
87.5°	16.1	20.6	36.3	28.1	23.5	14.4	28.9	33.8	42.5	17.3	15.7
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)