

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: P596742

Luminaire Tested: **MSA-SA4A-827-U-RW**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596742
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-SA4A-827-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11704 lumens
Efficiency: N/A
Efficacy: 90.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

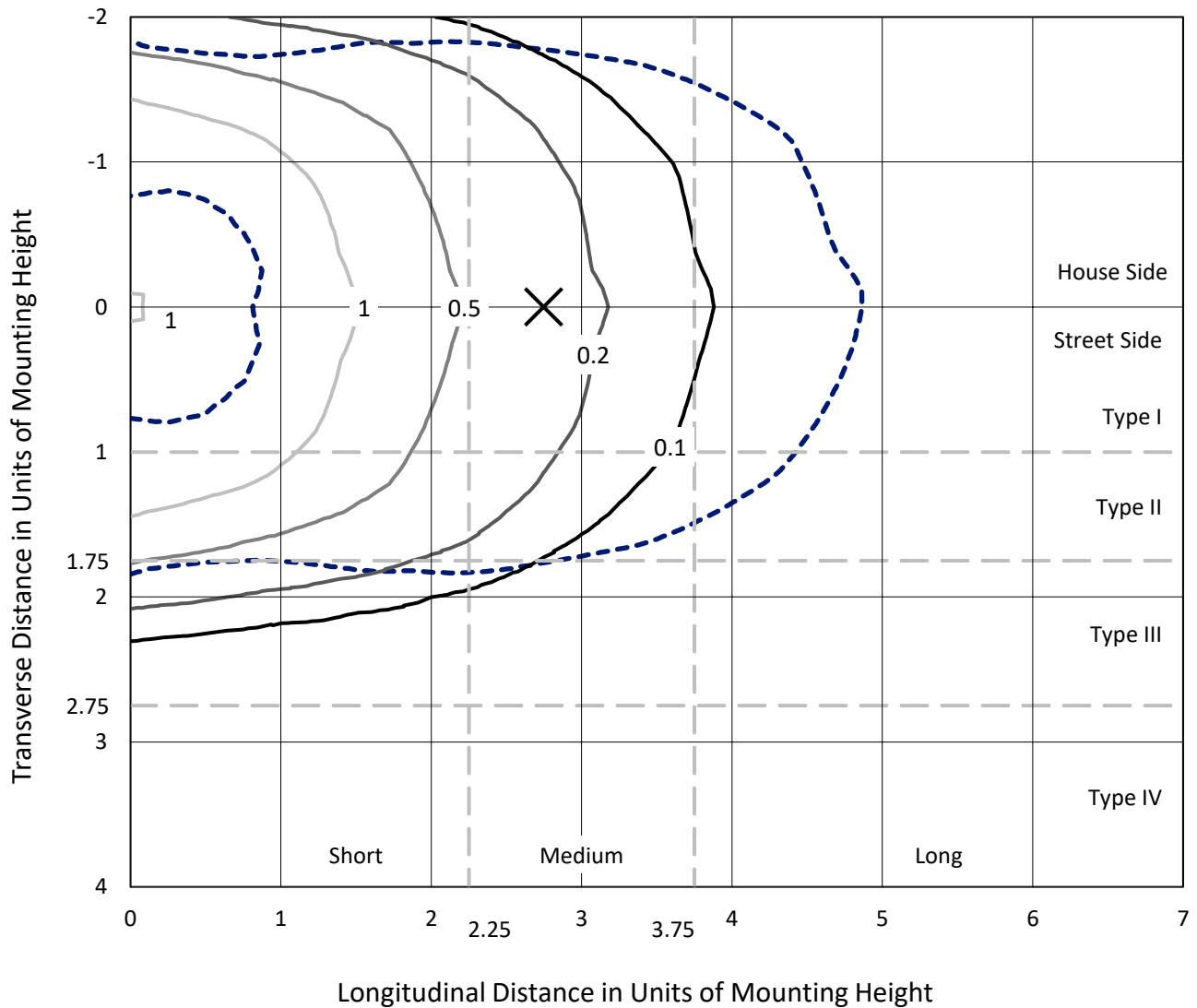
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

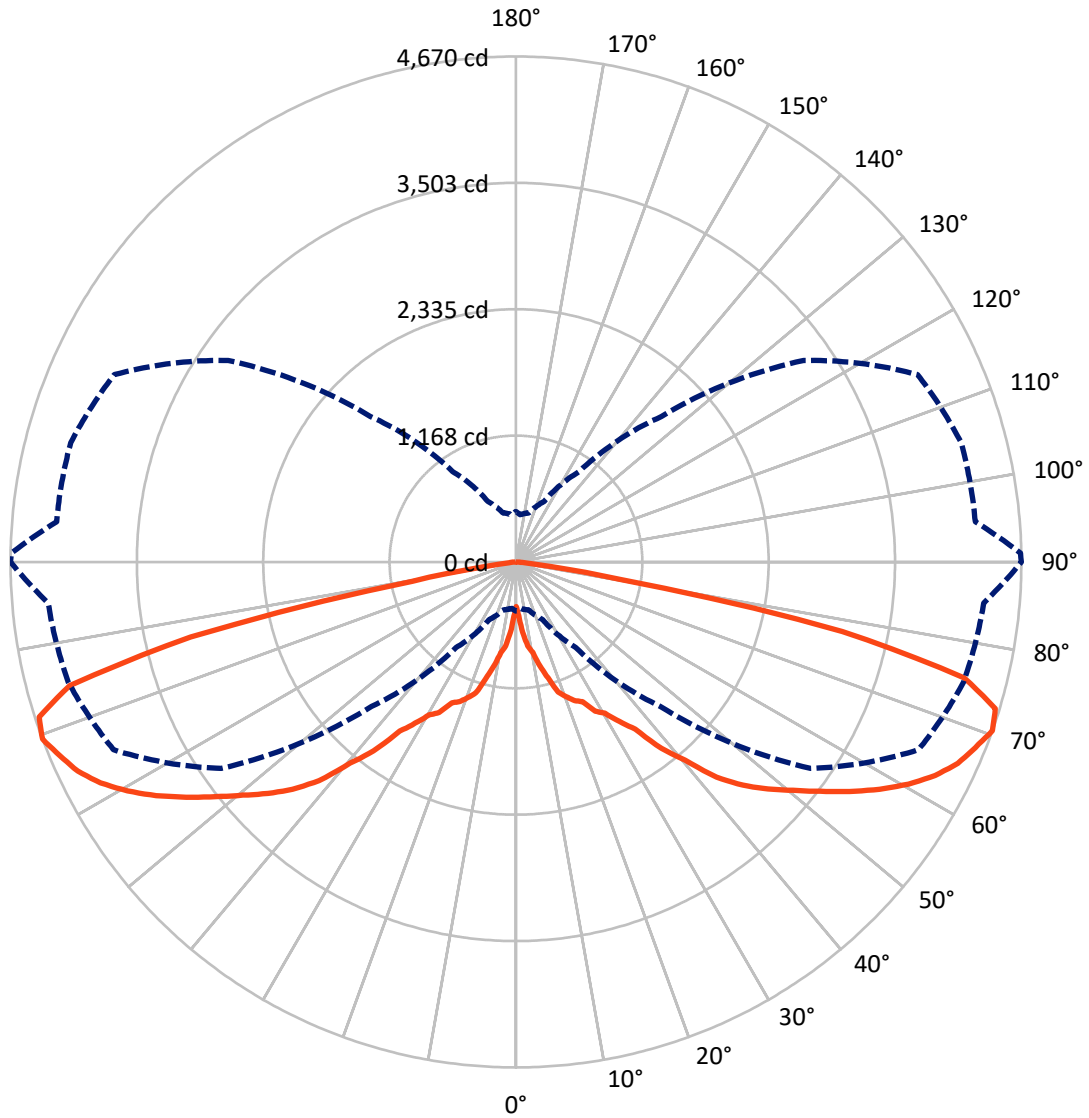
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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	5830.3	0.0	5830.3
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	5873.7	0.0	5873.7
	% Fixture	50.2	0.0	50.2
Total	Lumens	11704.0	0.0	11704.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.0	0.5
10°-20°	284.0	2.4
20°-30°	614.1	5.2
30°-40°	1171.6	10.0
40°-50°	2128.4	18.2
50°-60°	2989.9	25.5
60°-70°	2854.7	24.4
70°-80°	1465.1	12.5
80°-90°	134.3	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°	11704.0	100.0
0°-180°	11704.0	100.0

Coefficient of Utilization



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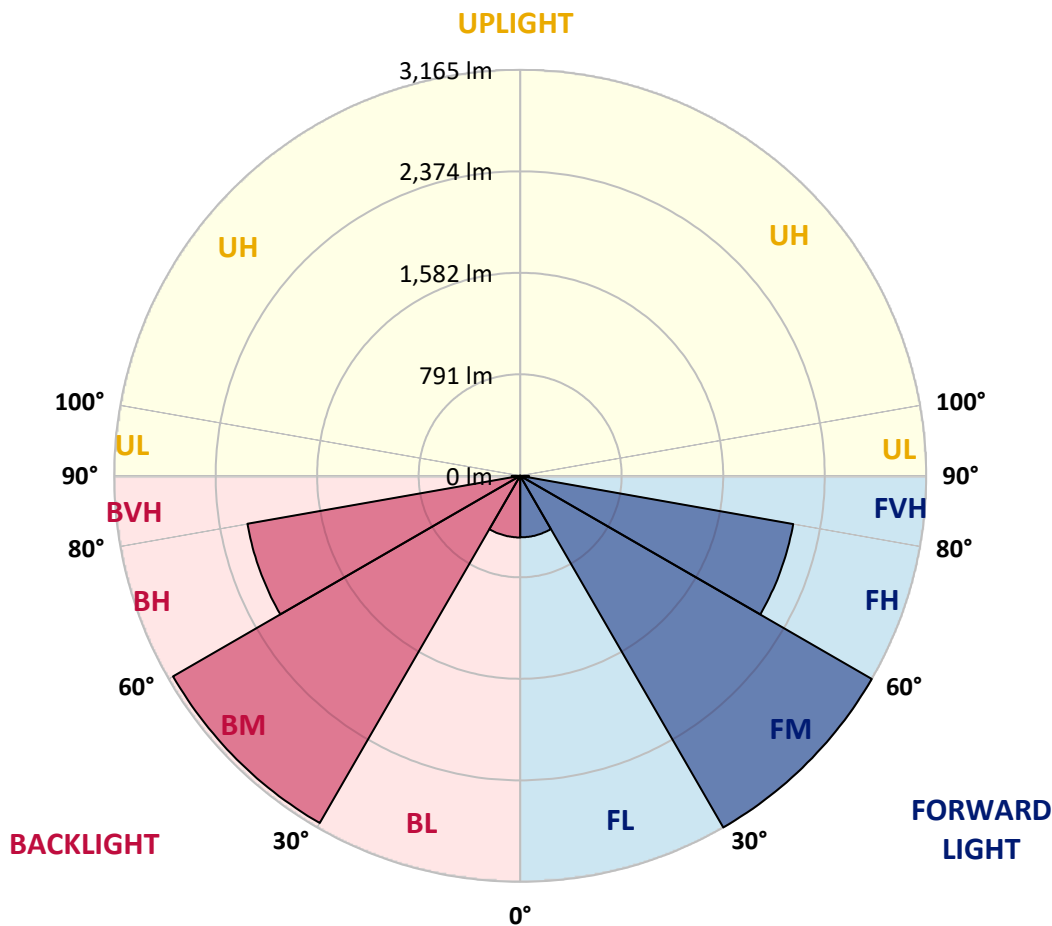
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	479.5	4.1			
FM (30°-60°)	3164.9	27.0			
FH (60°-80°)	2161.1	18.5			G2/5000
FVH (80°-90°)	68.2	0.6			G1/100
BL (0°-30°)	480.5	4.1	B1/500		
BM (30°-60°)	3124.9	26.7	B3/5000		
BH (60°-80°)	2158.7	18.4	B3/2500		G3/2500
BVH (80°-90°)	66.2	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°	410.8	410.8	410.8	410.8	410.8	410.8	410.8	410.8	410.8	410.8	410.8
2.5°	497.6	479.1	455.8	469.6	475.3	485.3	483.8	479.1	458.7	492.8	496.6
5°	622.8	593.4	582.5	580.6	583.4	574.0	604.8	595.8	612.4	643.2	650.3
7.5°	709.1	687.3	664.1	671.2	641.8	637.5	677.4	712.9	722.0	778.4	782.2
10°	749.9	728.6	734.8	730.5	727.2	754.7	773.2	799.3	836.7	842.0	850.0
12.5°	784.6	793.1	820.1	819.2	863.8	912.6	905.5	932.6	938.7	1004.2	984.3
15°	872.3	889.9	888.0	904.6	924.0	1004.2	1004.7	1050.7	1092.9	1118.5	1111.9
17.5°	1000.9	1007.0	981.4	982.4	1038.8	1071.5	1108.1	1100.0	1210.1	1260.3	1263.7
20°	1077.7	1093.4	1064.0	1025.1	1125.1	1170.2	1190.6	1143.6	1261.3	1329.1	1329.1
22.5°	1212.0	1171.6	1127.0	1101.0	1189.2	1237.1	1234.7	1221.4	1284.1	1404.1	1392.7
25°	1286.0	1263.2	1240.9	1247.5	1292.1	1316.8	1349.5	1318.7	1377.5	1466.7	1429.2
27.5°	1426.4	1384.1	1274.6	1361.8	1361.8	1343.3	1412.6	1427.3	1388.9	1534.0	1562.0
30°	1585.3	1570.6	1415.4	1507.9	1479.5	1427.3	1560.1	1550.6	1486.1	1634.1	1621.3
32.5°	1735.6	1784.0	1637.0	1586.2	1628.9	1648.8	1579.1	1607.6	1619.9	1762.7	1756.5
35°	1966.2	2007.0	1812.0	1799.2	1728.0	1709.5	1762.7	1772.2	1773.1	1923.5	1896.0
37.5°	2365.1	2306.3	2113.7	2023.1	2031.2	2008.9	2019.3	1944.3	1954.8	2173.0	2186.7
40°	2656.8	2590.4	2376.0	2311.0	2151.6	2247.0	2162.5	2155.0	2134.1	2416.8	2409.2
42.5°	2978.9	2887.8	2650.6	2563.8	2394.5	2355.6	2316.7	2404.5	2398.8	2660.6	2718.5
45°	3222.2	3038.2	2914.4	2860.3	2758.8	2663.5	2626.5	2665.8	2647.8	2842.3	2943.3
47.5°	3375.9	3216.1	3073.8	2959.9	2862.7	3096.5	2909.2	2856.5	2820.0	3037.7	3135.0
50°	3498.3	3313.8	3145.9	3107.9	3184.8	3391.6	3096.1	2979.8	3024.4	3184.8	3317.1
52.5°	3531.5	3336.1	3185.2	3161.0	3368.8	3406.3	3358.4	3162.9	3151.1	3361.2	3521.1
55°	3430.0	3242.6	3171.0	3303.3	3532.9	3501.6	3574.7	3449.9	3366.0	3541.5	3742.6
57.5°	3168.6	2982.7	2965.6	3156.3	3445.7	3712.2	3748.3	3649.6	3539.6	3725.5	3962.7
60°	2739.3	2569.5	2612.7	2823.3	3259.7	3639.2	3830.8	3740.7	3706.5	3891.5	4166.7
62.5°	2071.0	1938.7	2053.9	2347.5	2920.1	3544.8	3944.7	3930.4	3881.1	4068.0	4346.9
65°	1320.6	1250.9	1368.5	1666.9	2393.1	3373.1	3999.2	4018.2	4063.7	4204.1	4486.4
67.5°	767.5	730.5	802.1	1046.4	1704.3	2769.7	3897.7	4170.0	4193.7	4274.3	4577.9
70°	453.9	429.8	459.2	587.7	964.8	1886.9	3324.7	4103.6	4282.9	4338.8	4670.4
72.5°	346.3	323.5	310.7	347.7	503.8	974.8	2247.9	3478.4	4211.2	4296.2	4631.5
75°	299.3	277.5	262.3	265.6	299.8	463.0	1218.6	2487.9	3588.4	3911.9	4278.1
77.5°	257.1	237.6	226.7	225.8	230.1	254.2	509.4	1349.0	2247.5	2811.9	3084.2
80°	205.9	190.7	188.3	188.3	182.1	180.3	253.3	513.2	855.2	1014.2	972.4
82.5°	150.4	135.2	150.4	148.5	139.0	131.4	161.3	222.0	263.7	208.2	164.6
85°	101.5	87.8	99.1	101.0	92.0	68.3	96.8	111.0	113.8	71.2	58.8
87.5°	35.6	34.6	56.0	48.9	39.8	23.2	35.6	38.4	40.3	25.1	17.1
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°	410.8	410.8	410.8	410.8	410.8	410.8	410.8	410.8	410.8	410.8	410.8
2.5°	498.1	492.4	463.9	468.2	479.1	484.3	489.5	468.2	457.7	490.9	487.6
5°	652.2	631.4	608.1	604.8	606.2	585.8	597.7	592.5	594.8	616.2	620.4
7.5°	781.2	756.1	725.3	701.1	659.3	626.1	654.1	668.4	672.6	710.6	724.8
10°	851.0	829.6	820.6	775.1	761.3	757.1	750.4	727.6	752.8	743.8	750.9
12.5°	987.6	983.3	936.4	906.5	909.3	917.4	875.6	852.9	820.1	871.4	852.9
15°	1103.8	1122.3	1075.3	1020.8	993.8	1007.5	975.7	942.5	913.1	928.8	908.8
17.5°	1252.3	1251.8	1160.3	1101.9	1099.5	1098.6	1051.6	978.6	1013.7	1002.8	1003.7
20°	1331.0	1318.2	1204.4	1137.0	1194.4	1174.0	1131.8	1037.9	1078.7	1091.9	1100.5
22.5°	1396.9	1389.8	1251.8	1202.5	1239.5	1239.9	1197.7	1148.4	1143.2	1184.4	1162.1
25°	1443.0	1471.4	1341.5	1329.6	1345.7	1329.6	1288.3	1256.1	1235.2	1296.9	1235.2
27.5°	1552.1	1511.7	1355.2	1422.6	1432.5	1351.4	1403.1	1365.2	1307.3	1383.7	1408.8
30°	1629.9	1653.6	1452.0	1553.5	1541.6	1466.7	1488.0	1486.6	1417.3	1566.3	1548.7
32.5°	1763.6	1735.2	1609.9	1601.9	1630.3	1627.0	1591.0	1608.5	1625.6	1733.7	1759.8
35°	1900.7	1931.1	1711.0	1765.5	1757.5	1706.2	1800.6	1789.7	1840.5	2062.5	1988.9
37.5°	2210.0	2065.3	1937.7	1930.6	1984.7	1992.7	1962.4	2010.3	2119.9	2290.6	2369.4
40°	2412.5	2346.6	2129.8	2138.4	2063.4	2192.4	2107.0	2261.2	2344.7	2632.6	2604.6
42.5°	2719.0	2558.1	2349.9	2378.4	2363.2	2301.1	2413.5	2492.7	2612.2	2831.8	2973.7
45°	2947.1	2726.5	2627.9	2610.3	2608.4	2716.6	2702.4	2829.0	2871.7	3036.8	3154.4
47.5°	3120.2	2932.9	2786.8	2806.7	2748.8	3057.6	2893.0	2932.4	3018.7	3174.3	3311.4
50°	3325.6	3116.9	2950.9	3000.2	3141.1	3259.7	3110.8	3043.4	3085.6	3269.2	3421.9
52.5°	3515.9	3296.2	3113.6	3154.9	3384.9	3330.9	3314.7	3144.4	3139.2	3286.7	3460.4
55°	3738.3	3490.7	3329.4	3460.4	3541.9	3475.1	3449.4	3242.2	3114.1	3196.1	3359.8
57.5°	3956.5	3683.3	3523.0	3550.0	3653.4	3587.0	3394.9	3075.7	2915.8	2931.9	3097.5
60°	4161.0	3860.2	3727.9	3701.8	3784.3	3523.9	3187.6	2770.7	2558.6	2519.7	2663.0
62.5°	4336.0	4008.2	3883.0	3811.8	3890.6	3526.3	2864.6	2281.1	2048.2	1916.4	2027.8
65°	4475.0	4131.1	4041.9	4004.9	4033.4	3311.9	2361.3	1674.9	1389.4	1243.3	1308.2
67.5°	4567.5	4199.9	4159.1	4207.5	3828.0	2758.3	1749.4	1072.0	807.8	728.1	768.9
70°	4663.3	4260.6	4259.2	4094.6	3246.0	1901.7	1021.7	618.1	470.1	439.2	464.9
72.5°	4631.0	4188.5	4209.8	3580.8	2249.4	1016.5	539.3	349.6	318.3	329.2	352.0
75°	4288.6	3808.1	3705.1	2574.3	1276.0	472.4	310.7	264.7	262.8	279.4	301.7
77.5°	3110.8	2652.1	2379.8	1459.1	546.9	255.7	228.6	221.0	221.0	234.3	254.2
80°	1025.5	887.5	925.0	564.5	258.5	176.5	178.4	181.7	180.7	184.0	200.6
82.5°	168.4	174.6	269.9	230.5	156.1	120.5	134.7	141.4	143.3	128.1	145.6
85°	59.8	67.4	114.8	106.7	90.1	60.7	88.7	99.1	97.7	85.4	94.4
87.5°	18.5	23.7	41.7	32.3	27.0	16.6	33.2	38.9	48.9	19.9	18.0
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)