

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: P367522

Luminaire Tested: **MSA-SA2C-830-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367522
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-830-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9939 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

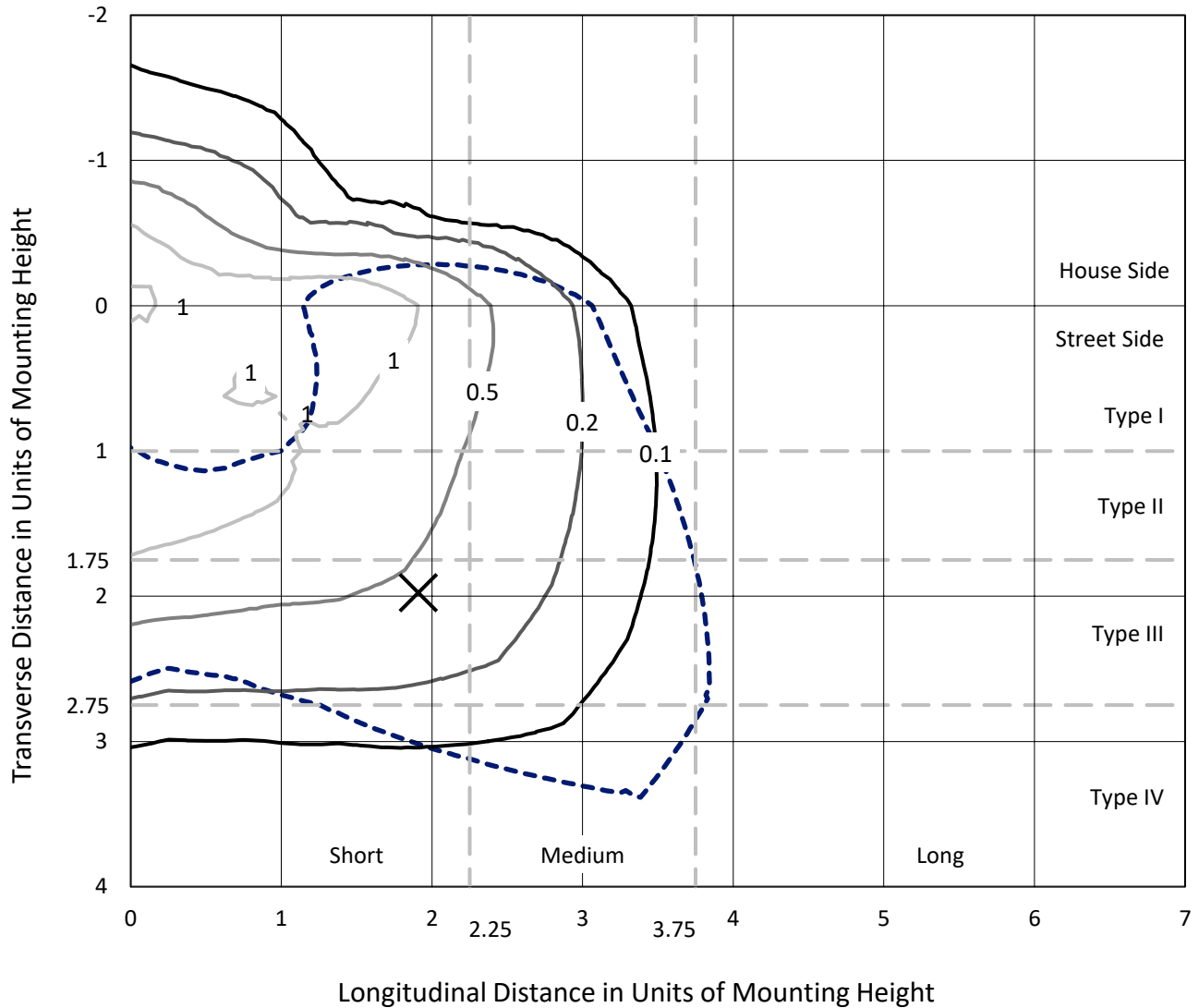
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

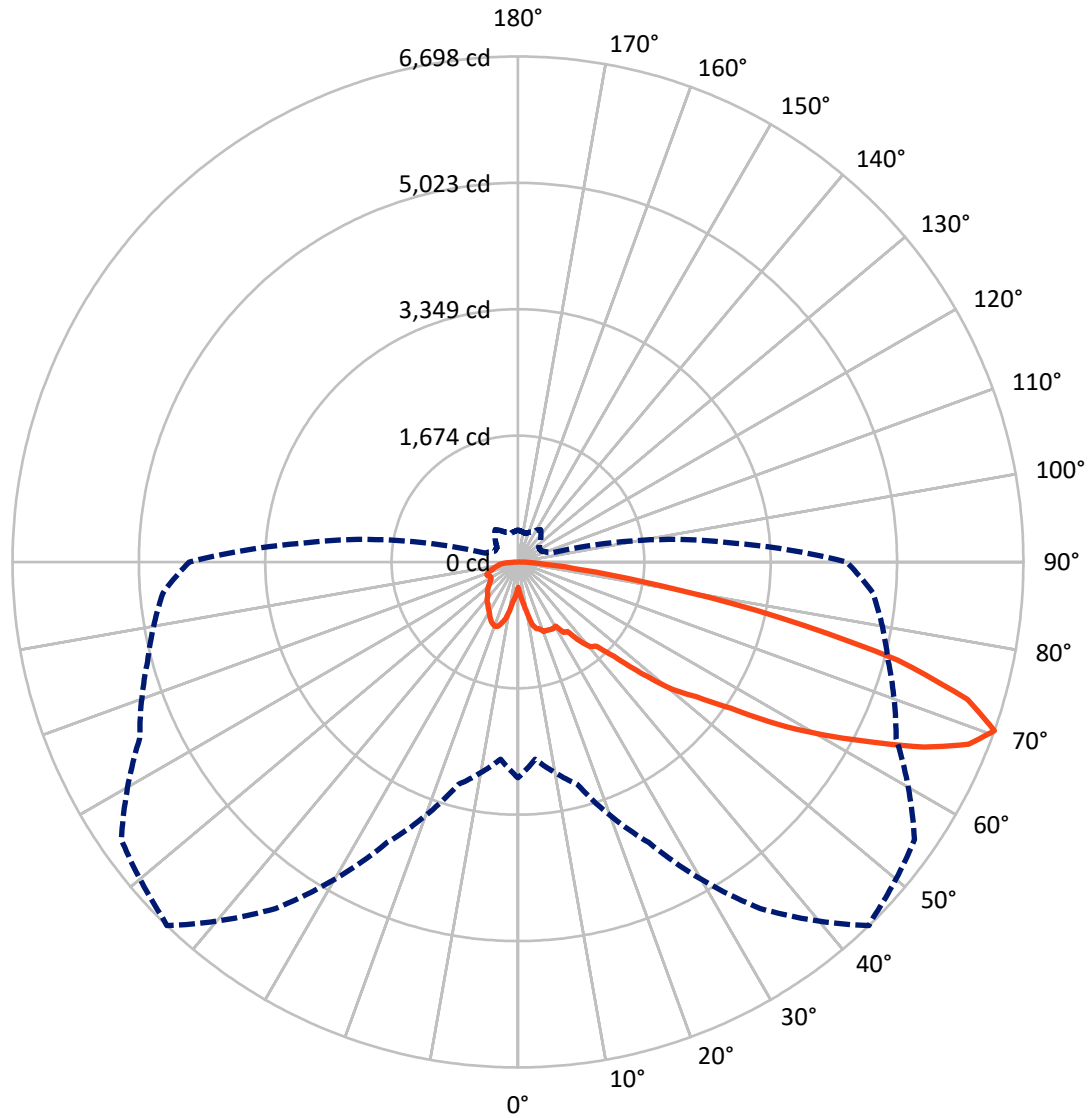
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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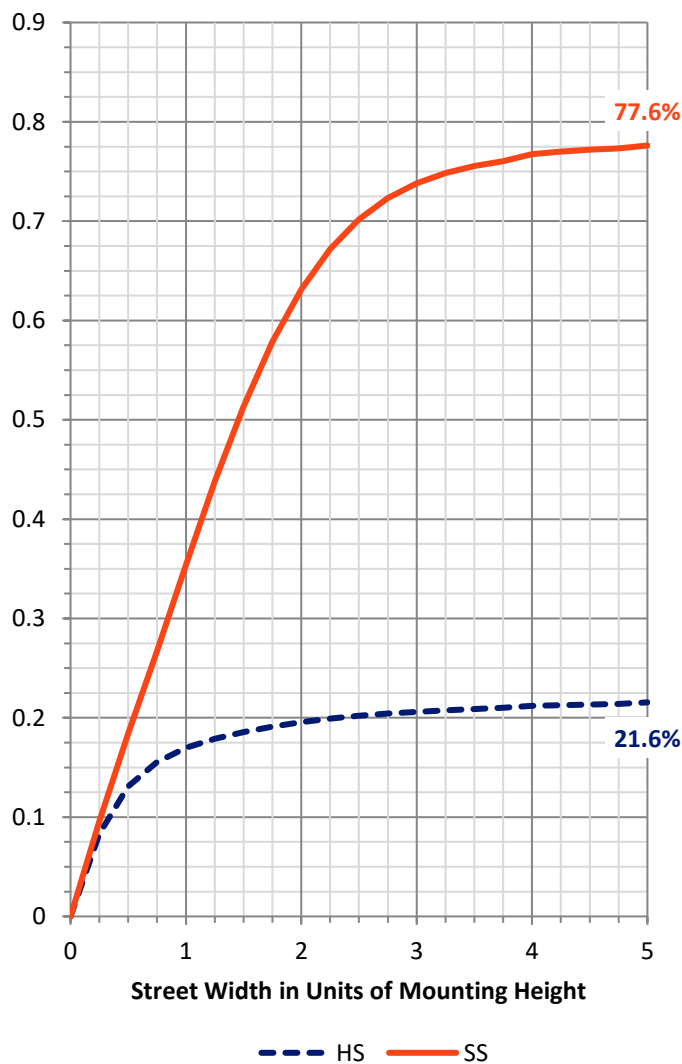
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2192.9	0.0	2192.9
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	7746.1	0.0	7746.1
	% Fixture	77.9	0.0	77.9
Total	Lumens	9939.0	0.0	9939.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.0	0.5
10°-20°	243.9	2.5
20°-30°	455.8	4.6
30°-40°	731.7	7.4
40°-50°	1235.0	12.4
50°-60°	2200.7	22.1
60°-70°	3010.3	30.3
70°-80°	1770.2	17.8
80°-90°	238.4	2.4
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°	9939.0	100.0
0°-180°	9939.0	100.0

Coefficient of Utilization



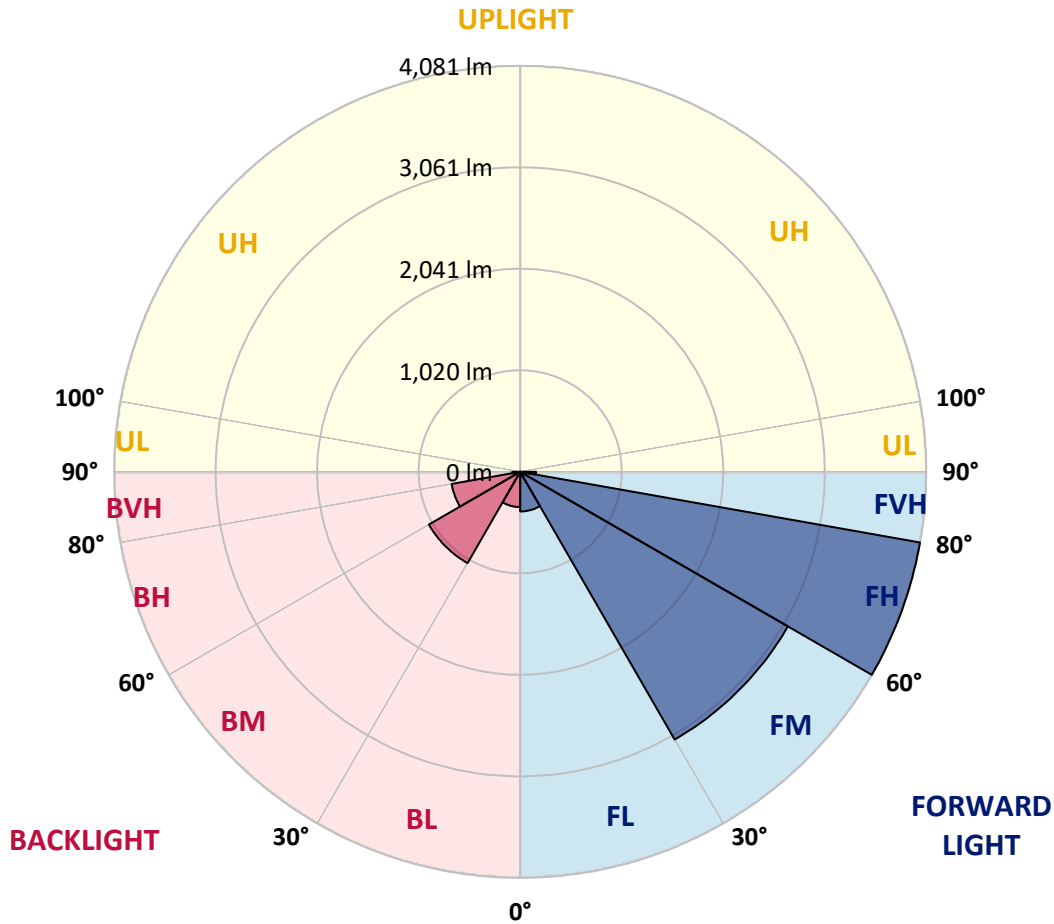
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	398.3	4.0			
FM (30°-60°)	3107.7	31.3			
FH (60°-80°)	4081.3	41.1			G2/5000
FVH (80°-90°)	158.9	1.6			G2/225
BL (0°-30°)	354.4	3.6	B1/500		
BM (30°-60°)	1059.7	10.7	B2/2500		
BH (60°-80°)	699.3	7.0	B2/1000		G2/1000
BVH (80°-90°)	79.5	0.8			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	337.8	337.8	337.8	337.8	337.8	337.8	337.8	337.8	337.8	337.8	337.8
2.5°	410.0	401.8	382.3	388.8	396.9	400.2	399.4	398.6	385.9	381.4	403.9
5°	557.1	539.2	524.9	519.2	500.4	485.8	476.8	500.4	496.8	502.9	518.4
7.5°	695.6	684.2	652.0	640.6	602.3	577.1	574.2	593.0	597.8	588.1	614.6
10°	784.9	765.3	758.8	731.5	705.0	700.9	698.5	689.9	678.1	677.3	653.7
12.5°	854.2	864.4	869.7	838.3	839.1	853.8	846.0	811.4	791.4	756.4	759.2
15°	978.5	993.1	951.2	931.2	892.9	914.9	912.0	883.1	880.3	857.4	830.9
17.5°	1086.9	1093.4	1023.3	977.7	964.6	932.8	941.4	942.2	904.7	945.5	921.8
20°	1095.8	1119.1	1038.4	947.5	986.6	982.5	983.8	975.6	926.3	993.6	984.6
22.5°	1139.9	1104.4	1031.9	965.4	975.6	981.7	987.4	977.7	974.8	1012.3	1039.6
25°	1131.7	1120.3	1046.9	990.7	991.9	993.1	996.0	1025.3	1022.1	1073.0	1087.3
27.5°	1207.9	1190.4	1051.4	1037.6	1005.8	998.8	979.3	1040.4	1088.1	1086.9	1165.5
30°	1353.0	1335.1	1155.7	1115.4	1057.9	987.0	1024.5	1106.0	1143.5	1156.2	1256.0
32.5°	1579.6	1608.9	1361.1	1198.5	1127.2	1111.7	1107.7	1099.5	1192.4	1254.8	1345.7
35°	1904.8	1881.6	1603.2	1376.6	1200.2	1133.7	1142.7	1192.4	1302.9	1343.2	1427.2
37.5°	2277.3	2229.2	1913.3	1578.4	1410.5	1327.3	1297.6	1345.7	1370.1	1401.9	1573.5
40°	2655.9	2538.5	2217.8	1843.7	1536.8	1474.0	1447.9	1388.9	1446.3	1510.7	1728.7
42.5°	3021.4	2930.5	2549.1	2160.3	1749.5	1525.8	1511.5	1453.6	1631.7	1699.8	1952.9
45°	3404.5	3193.8	2888.5	2517.7	2060.5	1779.7	1758.5	1654.6	1882.8	2024.6	2269.1
47.5°	3662.0	3466.8	3199.5	2807.9	2320.9	2204.3	2164.0	1986.3	2193.3	2377.5	2757.7
50°	3905.7	3704.8	3424.0	3125.3	2792.4	2658.3	2572.3	2276.4	2580.1	2880.0	3384.1
52.5°	4254.6	4074.9	3684.9	3445.2	3298.9	2969.2	2905.3	2742.7	3032.4	3437.1	4068.7
55°	4627.5	4382.5	4029.2	3896.4	3837.3	3415.1	3362.9	3259.4	3634.7	4007.2	4734.2
57.5°	4792.1	4536.6	4341.8	4262.3	4257.4	4063.0	4003.1	3931.0	4250.5	4496.2	5360.6
60°	4922.9	4648.7	4570.8	4615.2	4776.6	4648.7	4570.8	4507.2	4751.8	4979.6	5871.6
62.5°	4898.9	4623.8	4663.7	4799.0	5211.0	5248.5	5188.6	5034.6	5248.5	5375.7	6164.7
65°	4510.9	4256.6	4489.3	4810.4	5614.9	5914.4	5911.2	5508.1	5582.3	5582.3	6133.7
67.5°	3831.2	3567.9	3948.9	4709.8	5894.1	6442.2	6443.0	6010.2	5612.9	5561.5	5654.4
70°	2860.8	2622.4	3050.7	4101.8	5605.9	6697.7	6660.6	6415.3	5528.9	5080.2	4723.2
72.5°	1708.8	1554.7	1948.8	2985.9	4781.9	6227.8	6326.4	5948.7	5061.5	4224.8	3376.4
75°	775.9	709.1	915.7	1715.3	3413.9	5194.7	5301.9	5020.3	4020.3	3038.5	1951.2
77.5°	332.1	314.2	399.8	760.9	1882.4	3552.4	3772.1	3587.9	2723.9	1765.8	863.1
80°	213.5	202.1	245.7	366.0	874.1	1919.5	2108.5	2039.7	1387.6	686.7	304.0
82.5°	127.6	123.9	164.2	229.8	476.8	844.8	952.0	977.2	576.2	308.1	174.0
85°	69.7	70.5	90.1	139.4	286.1	328.9	352.1	383.1	271.4	178.5	84.4
87.5°	23.2	26.9	36.3	56.6	101.9	92.9	93.3	108.4	114.5	74.2	26.9
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	337.8	337.8	337.8	337.8	337.8	337.8	337.8	337.8	337.8	337.8	337.8
2.5°	407.5	400.2	381.4	382.7	389.6	391.2	393.3	381.4	379.0	401.4	403.5
5°	520.8	496.8	485.8	482.1	471.5	467.8	487.4	496.4	505.3	522.9	531.4
7.5°	611.7	584.8	564.8	546.5	531.0	522.0	555.1	580.3	595.8	631.7	648.0
10°	653.3	630.0	622.7	608.0	619.8	646.7	652.9	653.7	687.9	687.1	694.0
12.5°	736.0	720.9	696.9	702.2	733.1	760.9	753.1	764.9	777.2	806.5	793.0
15°	811.4	807.3	784.9	788.6	794.7	829.3	833.8	845.6	864.4	887.6	871.7
17.5°	904.3	902.7	848.1	843.2	857.4	891.3	880.7	859.9	921.8	946.7	940.2
20°	967.5	955.2	885.1	864.4	900.6	905.1	892.9	859.9	913.7	967.9	982.5
22.5°	1020.0	1005.8	933.6	892.9	885.6	887.6	887.6	881.5	908.0	952.4	952.0
25°	1062.4	1075.9	984.2	945.1	905.9	857.0	850.9	856.2	871.3	956.9	954.0
27.5°	1168.8	1131.7	1001.3	972.0	891.7	814.6	831.4	839.5	844.4	938.1	953.6
30°	1238.1	1249.5	1062.4	987.8	870.9	767.4	773.1	796.7	825.2	936.1	940.6
32.5°	1331.4	1306.9	1157.8	961.4	815.5	738.8	728.3	760.0	802.4	903.1	915.3
35°	1418.2	1447.1	1198.1	956.5	776.7	696.1	707.5	718.5	762.5	866.4	880.7
37.5°	1622.0	1555.9	1311.4	932.8	744.6	674.5	662.2	678.9	716.4	796.7	829.7
40°	1776.8	1780.9	1335.9	903.1	683.0	643.5	617.4	634.1	650.0	714.0	728.3
42.5°	2067.4	1978.5	1395.8	837.9	644.3	597.0	582.4	589.7	592.1	619.0	642.7
45°	2437.0	2228.8	1419.4	750.3	593.4	577.9	548.1	544.5	531.0	534.7	555.5
47.5°	2948.5	2619.2	1402.3	656.9	548.1	553.0	510.2	493.5	474.8	479.3	498.8
50°	3609.9	3118.0	1401.1	577.9	517.2	520.4	485.4	455.2	436.5	445.8	463.0
52.5°	4352.0	3618.4	1406.8	523.7	483.3	481.7	469.1	432.4	417.3	427.1	446.6
55°	5061.9	4048.8	1449.2	489.4	448.3	451.1	456.0	425.1	408.3	417.3	437.7
57.5°	5679.7	4388.7	1433.3	453.2	415.7	428.7	441.8	414.9	402.2	415.3	435.6
60°	6111.7	4546.4	1307.8	418.5	391.6	409.6	434.8	413.6	412.0	440.1	464.6
62.5°	6269.4	4488.1	1063.2	391.2	377.4	407.1	450.7	440.5	442.2	476.8	510.6
65°	6039.1	4181.6	793.0	373.7	366.4	418.9	487.4	456.4	434.0	462.5	493.5
67.5°	5384.2	3636.8	579.5	358.6	353.7	437.7	521.2	454.8	413.2	442.2	467.4
70°	4356.1	2870.6	448.7	339.5	337.0	425.1	524.5	442.6	390.8	409.6	423.8
72.5°	2984.7	1965.5	371.7	321.1	308.1	376.6	498.0	415.3	363.9	374.9	386.7
75°	1668.0	1103.2	312.6	298.3	269.8	335.4	467.0	399.0	344.0	347.2	363.5
77.5°	748.6	477.2	265.3	268.2	235.1	296.7	426.7	372.9	313.4	306.1	322.4
80°	283.2	232.7	215.2	226.6	197.7	257.1	384.7	349.3	281.2	271.8	281.2
82.5°	164.2	141.0	159.8	174.4	156.9	236.4	367.2	327.7	247.8	224.1	232.3
85°	76.2	72.9	95.8	113.3	109.6	184.2	314.2	246.6	176.5	149.2	165.0
87.5°	20.0	22.4	33.8	39.9	40.8	63.2	121.0	91.7	68.9	52.2	50.1
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)