

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: P596584

Luminaire Tested: **MSA-SA2A-827-U-T4W**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596584
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-827-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: 5924 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

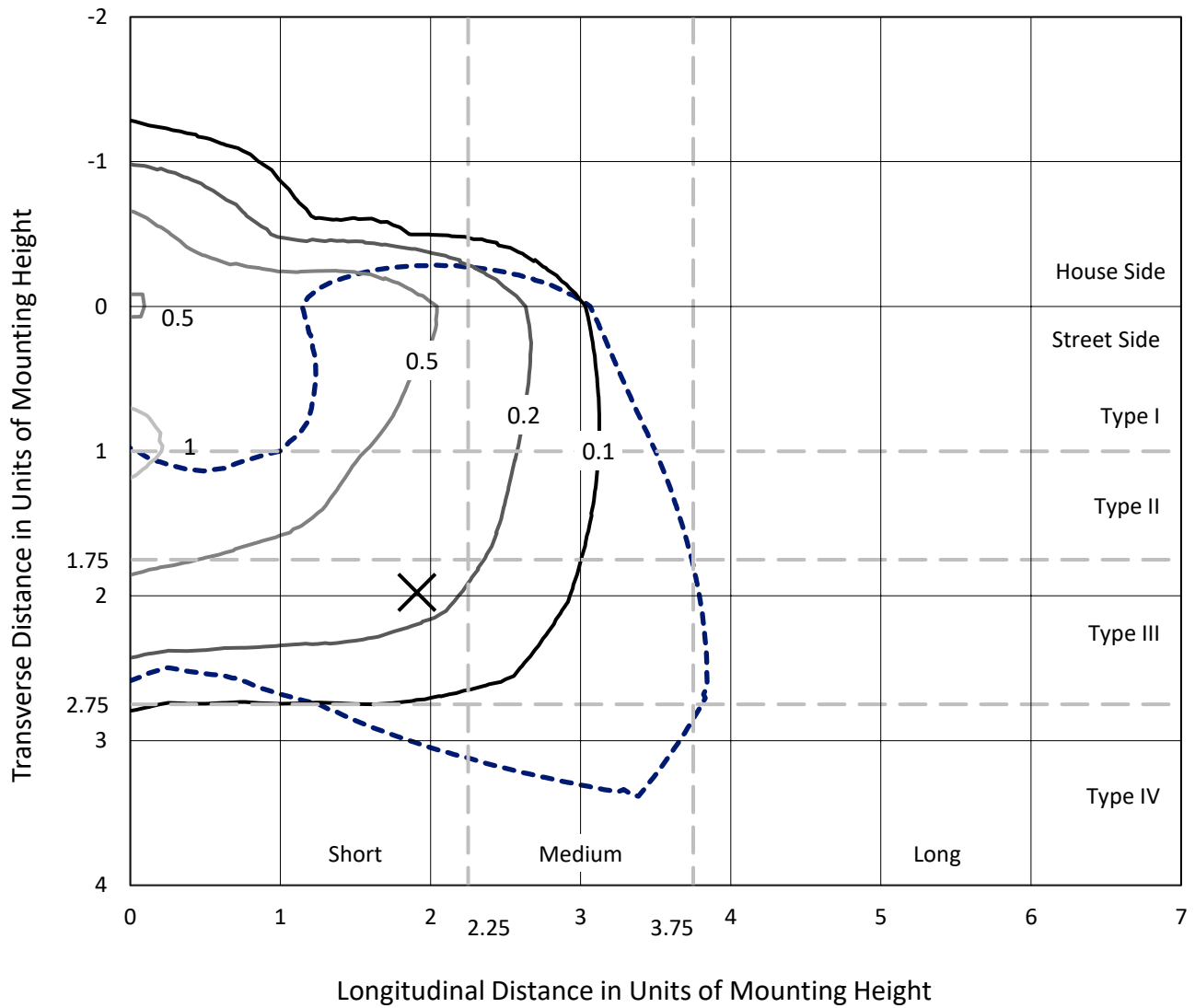
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

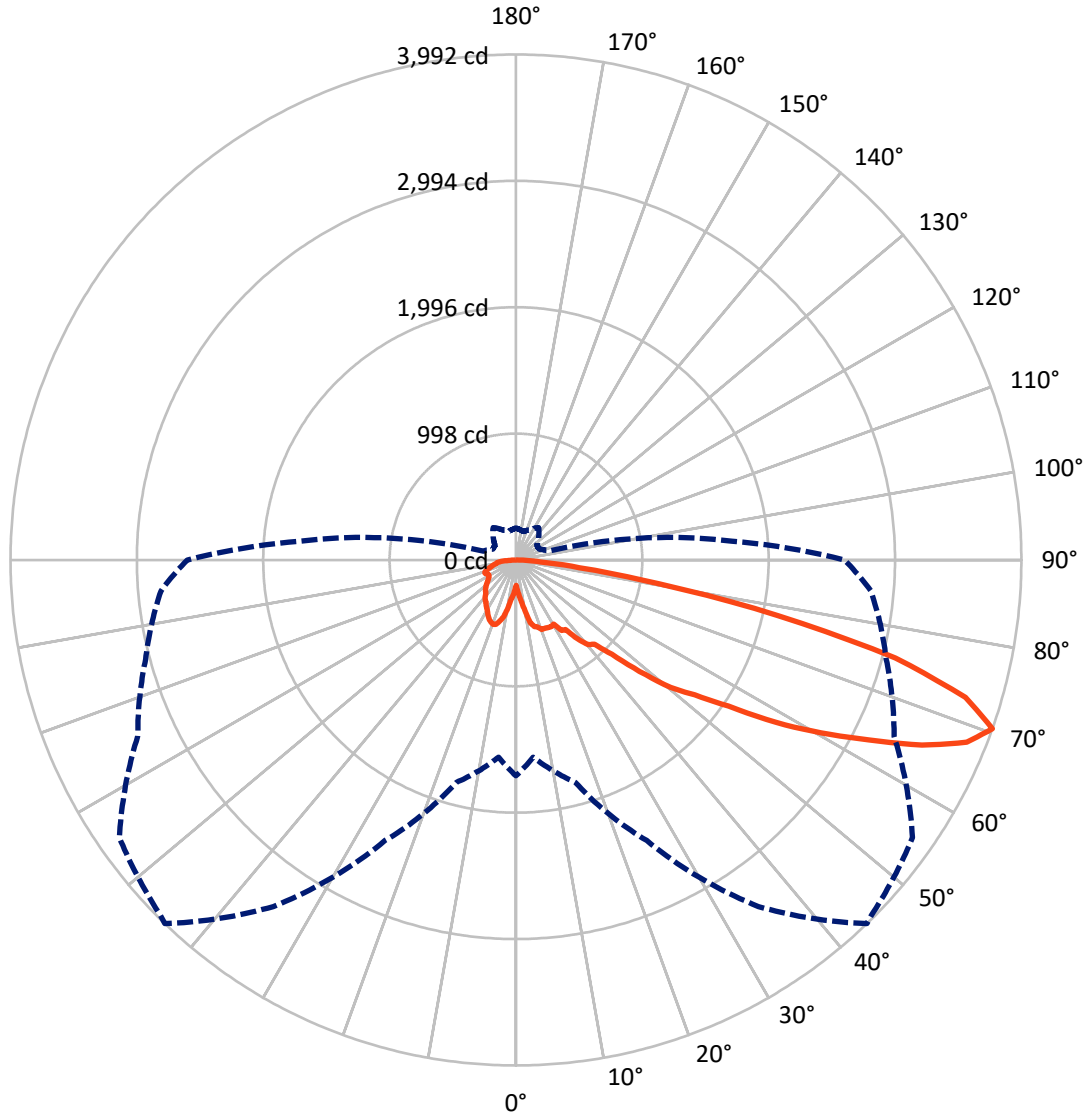
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 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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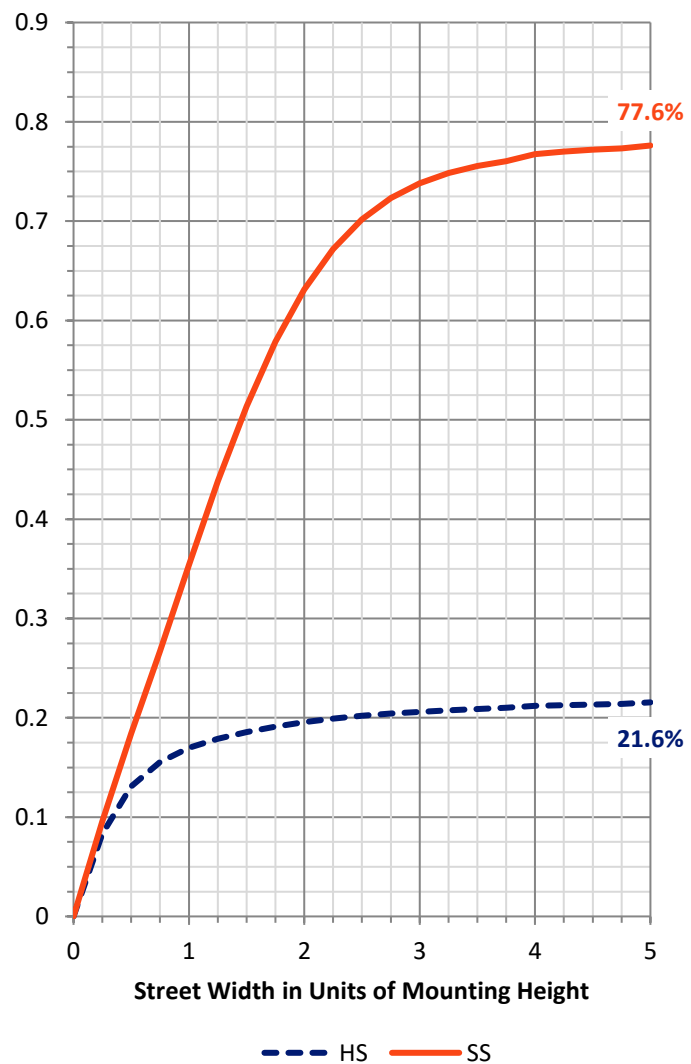
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1307.1	0.0	1307.1
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	4616.9	0.0	4616.9
	% Fixture	77.9	0.0	77.9
Total	Lumens	5924.0	0.0	5924.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.6	0.5
10°-20°	145.4	2.5
20°-30°	271.7	4.6
30°-40°	436.1	7.4
40°-50°	736.1	12.4
50°-60°	1311.7	22.1
60°-70°	1794.3	30.3
70°-80°	1055.1	17.8
80°-90°	142.1	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°	5924.0	100.0
0°-180°	5924.0	100.0



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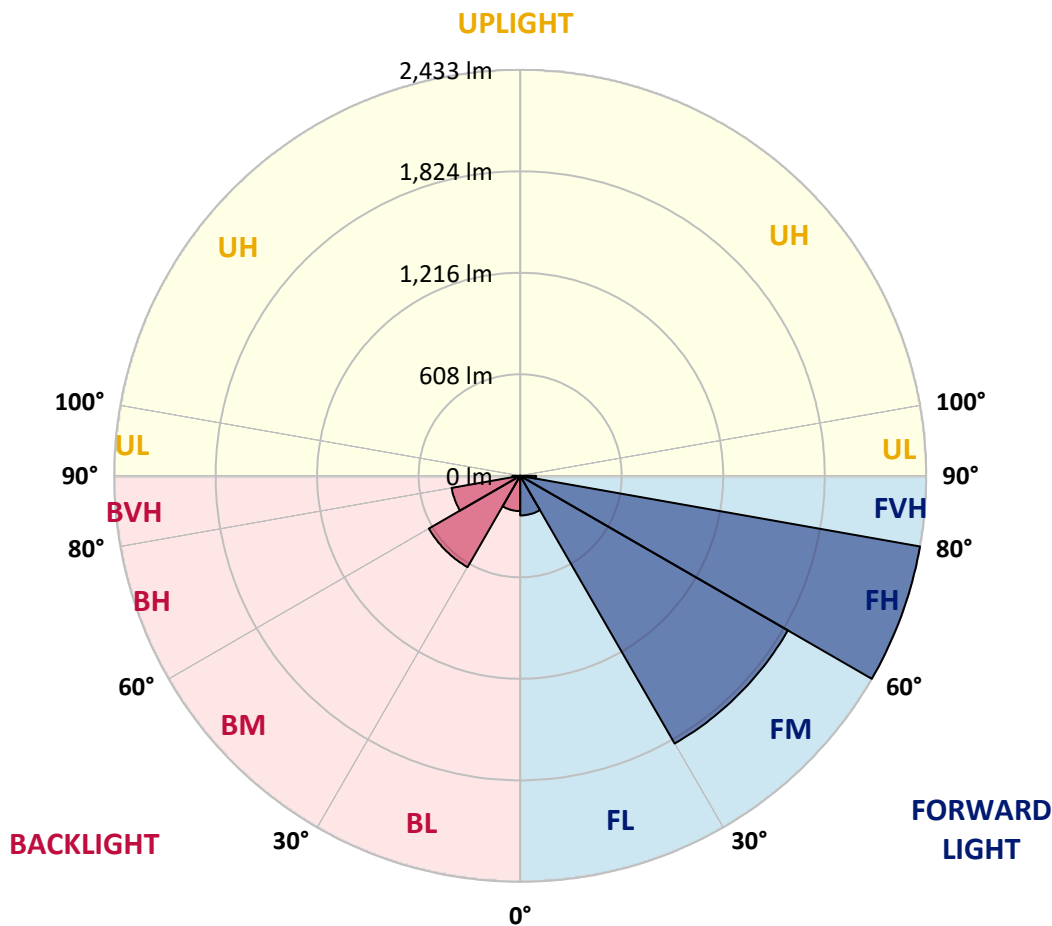
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	237.4	4.0			
FM (30°-60°)	1852.3	31.3			
FH (60°-80°)	2432.6	41.1			G2/5000
FVH (80°-90°)	94.7	1.6			G1/100
BL (0°-30°)	211.3	3.6	B1/500		
BM (30°-60°)	631.6	10.7	B1/1000		
BH (60°-80°)	416.8	7.0	B1/500		G1/500
BVH (80°-90°)	47.4	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	201.4	201.4	201.4	201.4	201.4	201.4	201.4	201.4	201.4	201.4	201.4
2.5°	244.4	239.5	227.8	231.7	236.6	238.5	238.0	237.6	230.0	227.4	240.7
5°	332.0	321.4	312.9	309.5	298.3	289.5	284.2	298.3	296.1	299.7	309.0
7.5°	414.6	407.8	388.6	381.8	359.0	343.9	342.2	353.4	356.3	350.5	366.3
10°	467.8	456.2	452.3	436.0	420.2	417.8	416.3	411.2	404.2	403.7	389.6
12.5°	509.1	515.2	518.3	499.6	500.1	508.9	504.3	483.6	471.7	450.8	452.5
15°	583.2	591.9	566.9	555.0	532.2	545.3	543.6	526.4	524.7	511.1	495.3
17.5°	647.8	651.7	609.9	582.7	574.9	556.0	561.1	561.6	539.2	563.5	549.4
20°	653.2	667.0	618.9	564.7	588.1	585.6	586.4	581.5	552.1	592.2	586.8
22.5°	679.4	658.3	615.0	575.4	581.5	585.1	588.5	582.7	581.0	603.4	619.6
25°	674.5	667.7	624.0	590.5	591.2	591.9	593.6	611.1	609.2	639.6	648.1
27.5°	720.0	709.5	626.7	618.4	599.5	595.3	583.7	620.1	648.5	647.8	694.7
30°	806.4	795.7	688.9	664.8	630.6	588.3	610.7	659.2	681.6	689.1	748.6
32.5°	941.5	959.0	811.3	714.4	671.9	662.6	660.2	655.3	710.7	747.9	802.1
35°	1135.3	1121.5	955.6	820.5	715.3	675.7	681.1	710.7	776.6	800.6	850.6
37.5°	1357.3	1328.7	1140.4	940.8	840.7	791.1	773.4	802.1	816.6	835.6	937.8
40°	1583.0	1513.0	1321.9	1098.9	916.0	878.6	863.0	827.8	862.1	900.4	1030.4
42.5°	1800.9	1746.7	1519.3	1287.6	1042.8	909.4	900.9	866.4	972.6	1013.1	1164.0
45°	2029.2	1903.6	1721.7	1500.6	1228.1	1060.7	1048.1	986.2	1122.2	1206.7	1352.5
47.5°	2182.7	2066.4	1907.0	1673.6	1383.3	1313.8	1289.8	1183.9	1307.3	1417.1	1643.7
50°	2328.0	2208.2	2040.9	1862.8	1664.4	1584.4	1533.2	1356.8	1537.8	1716.6	2017.0
52.5°	2535.9	2428.8	2196.3	2053.5	1966.3	1769.8	1731.6	1634.7	1807.4	2048.6	2425.1
55°	2758.1	2612.2	2401.6	2322.4	2287.2	2035.5	2004.4	1942.7	2166.4	2388.4	2821.8
57.5°	2856.3	2704.0	2587.9	2540.5	2537.6	2421.7	2386.0	2343.0	2533.5	2679.9	3195.1
60°	2934.2	2770.8	2724.4	2750.8	2847.0	2770.8	2724.4	2686.5	2832.2	2968.0	3499.7
62.5°	2919.9	2755.9	2779.8	2860.4	3106.0	3128.3	3092.6	3000.8	3128.3	3204.1	3674.4
65°	2688.7	2537.1	2675.8	2867.2	3346.7	3525.2	3523.3	3283.0	3327.3	3327.3	3655.9
67.5°	2283.5	2126.6	2353.7	2807.2	3513.1	3839.8	3840.3	3582.3	3345.5	3314.9	3370.2
70°	1705.2	1563.1	1818.4	2444.8	3341.3	3992.1	3970.0	3823.7	3295.4	3028.0	2815.2
72.5°	1018.5	926.7	1161.6	1779.7	2850.2	3712.0	3770.8	3545.6	3016.8	2518.2	2012.4
75°	462.5	422.6	545.8	1022.4	2034.8	3096.3	3160.1	2992.3	2396.2	1811.1	1163.0
77.5°	198.0	187.3	238.3	453.5	1122.0	2117.4	2248.3	2138.5	1623.5	1052.5	514.5
80°	127.3	120.5	146.5	218.1	521.0	1144.1	1256.8	1215.7	827.1	409.3	181.2
82.5°	76.0	73.8	97.9	137.0	284.2	503.5	567.4	582.5	343.5	183.6	103.7
85°	41.5	42.0	53.7	83.1	170.5	196.0	209.9	228.3	161.8	106.4	50.3
87.5°	13.8	16.0	21.6	33.8	60.7	55.4	55.6	64.6	68.3	44.2	16.0
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°	201.4	201.4	201.4	201.4	201.4	201.4	201.4	201.4	201.4	201.4	201.4
2.5°	242.9	238.5	227.4	228.1	232.2	233.2	234.4	227.4	225.9	239.3	240.5
5°	310.4	296.1	289.5	287.4	281.0	278.8	290.5	295.9	301.2	311.6	316.7
7.5°	364.6	348.6	336.7	325.7	316.5	311.2	330.8	345.9	355.1	376.5	386.2
10°	389.4	375.5	371.2	362.4	369.5	385.5	389.1	389.6	410.0	409.5	413.7
12.5°	438.7	429.7	415.4	418.5	437.0	453.5	448.9	455.9	463.2	480.7	472.7
15°	483.6	481.2	467.8	470.0	473.7	494.3	497.0	504.0	515.2	529.0	519.6
17.5°	539.0	538.0	505.5	502.6	511.1	531.2	524.9	512.5	549.4	564.3	560.4
20°	576.6	569.4	527.6	515.2	536.8	539.5	532.2	512.5	544.6	576.9	585.6
22.5°	608.0	599.5	556.5	532.2	527.8	529.0	529.0	525.4	541.2	567.7	567.4
25°	633.2	641.3	586.6	563.3	540.0	510.8	507.2	510.3	519.3	570.3	568.6
27.5°	696.6	674.5	596.8	579.3	531.5	485.6	495.5	500.4	503.3	559.2	568.4
30°	737.9	744.7	633.2	588.8	519.1	457.4	460.8	474.9	491.9	557.9	560.6
32.5°	793.6	779.0	690.1	573.0	486.0	440.4	434.1	453.0	478.3	538.3	545.6
35°	845.3	862.5	714.1	570.1	463.0	414.9	421.7	428.2	454.5	516.4	524.9
37.5°	966.7	927.4	781.7	556.0	443.8	402.0	394.7	404.7	427.0	474.9	494.5
40°	1059.0	1061.5	796.2	538.3	407.1	383.5	368.0	378.0	387.4	425.6	434.1
42.5°	1232.2	1179.3	831.9	499.4	384.0	355.8	347.1	351.5	352.9	369.0	383.1
45°	1452.5	1328.4	846.0	447.2	353.7	344.4	326.7	324.5	316.5	318.7	331.1
47.5°	1757.4	1561.1	835.8	391.6	326.7	329.6	304.1	294.2	283.0	285.7	297.3
50°	2151.6	1858.4	835.1	344.4	308.2	310.2	289.3	271.3	260.1	265.7	275.9
52.5°	2593.9	2156.7	838.5	312.1	288.1	287.1	279.6	257.7	248.7	254.6	266.2
55°	3017.1	2413.2	863.8	291.7	267.2	268.9	271.8	253.3	243.4	248.7	260.9
57.5°	3385.3	2615.8	854.3	270.1	247.8	255.5	263.3	247.3	239.7	247.5	259.7
60°	3642.8	2709.8	779.5	249.5	233.4	244.1	259.2	246.5	245.6	262.3	276.9
62.5°	3736.8	2675.1	633.7	233.2	224.9	242.7	268.6	262.6	263.5	284.2	304.4
65°	3599.5	2492.4	472.7	222.7	218.4	249.7	290.5	272.0	258.7	275.7	294.2
67.5°	3209.2	2167.6	345.4	213.8	210.8	260.9	310.7	271.1	246.3	263.5	278.6
70°	2596.4	1711.0	267.4	202.3	200.9	253.3	312.6	263.8	232.9	244.1	252.6
72.5°	1779.0	1171.5	221.5	191.4	183.6	224.4	296.8	247.5	216.9	223.5	230.5
75°	994.2	657.5	186.3	177.8	160.8	199.9	278.4	237.8	205.0	207.0	216.7
77.5°	446.2	284.4	158.1	159.8	140.2	176.8	254.3	222.3	186.8	182.4	192.1
80°	168.8	138.7	128.3	135.1	117.8	153.3	229.3	208.2	167.6	162.0	167.6
82.5°	97.9	84.0	95.2	104.0	93.5	140.9	218.9	195.3	147.7	133.6	138.5
85°	45.4	43.5	57.1	67.5	65.3	109.8	187.3	147.0	105.2	88.9	98.4
87.5°	11.9	13.4	20.2	23.8	24.3	37.6	72.1	54.7	41.1	31.1	29.9
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)