

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: P366762

Luminaire Tested: **MSA-SA1B-730-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366762
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-730-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4493 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

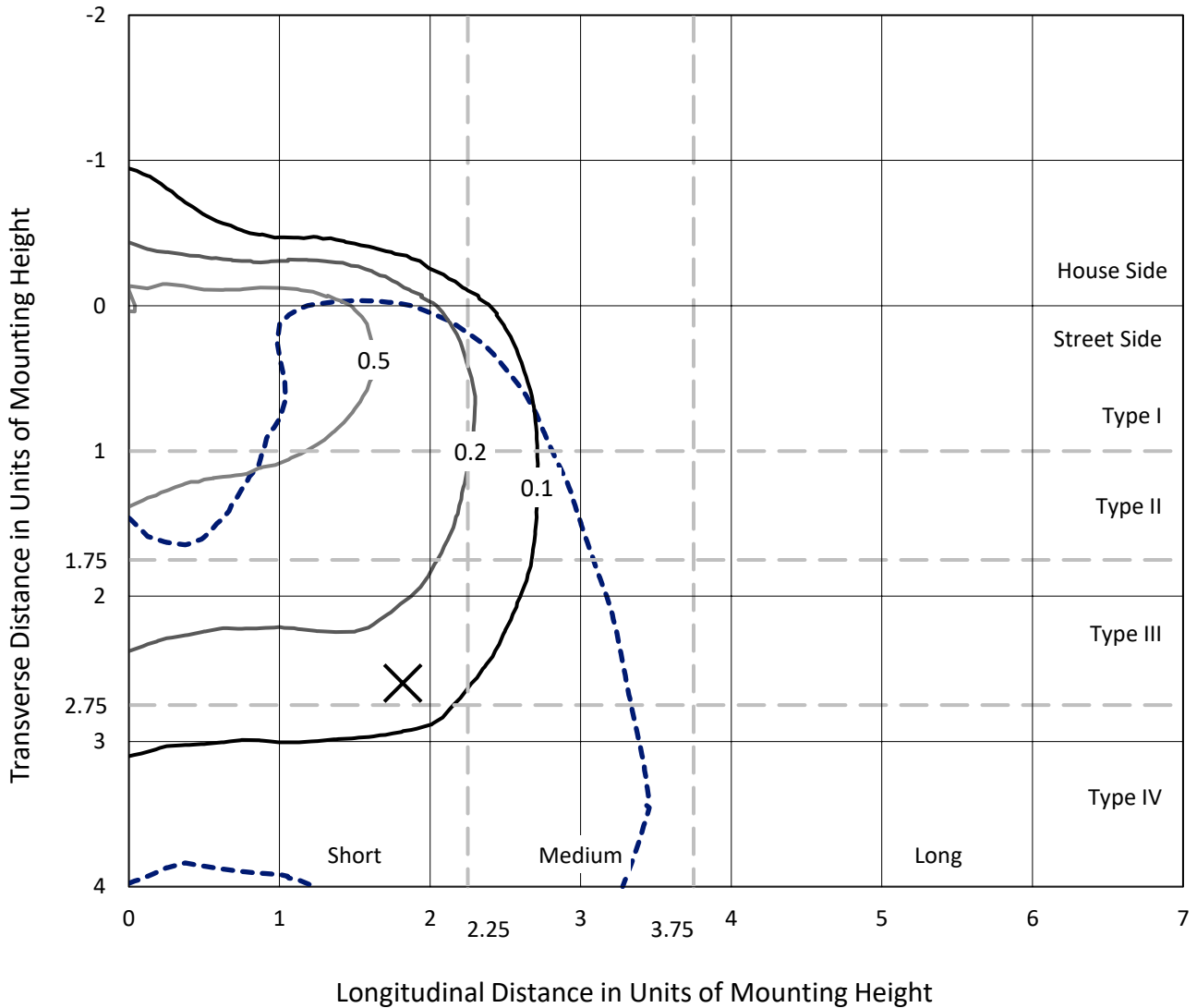
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

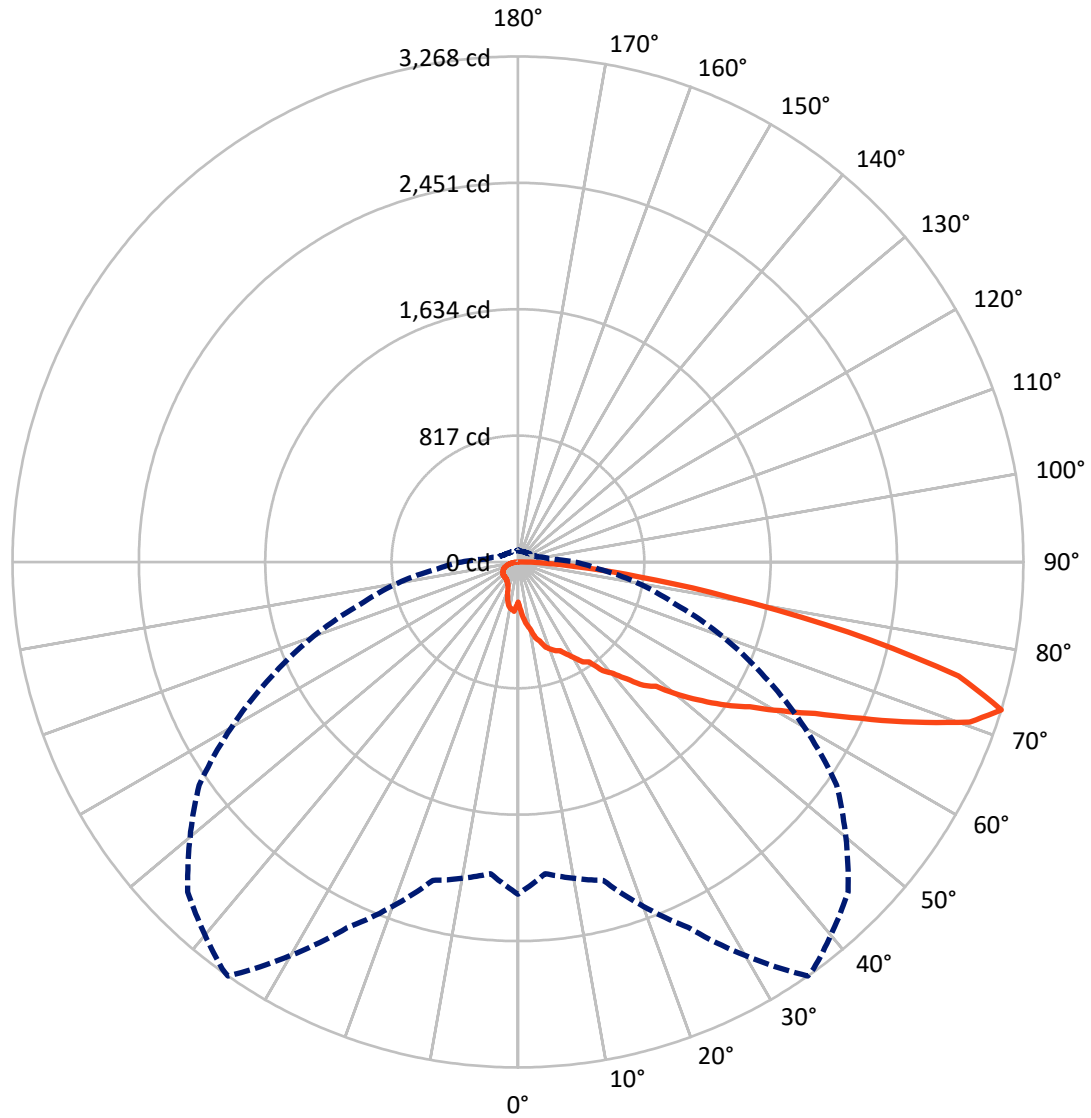
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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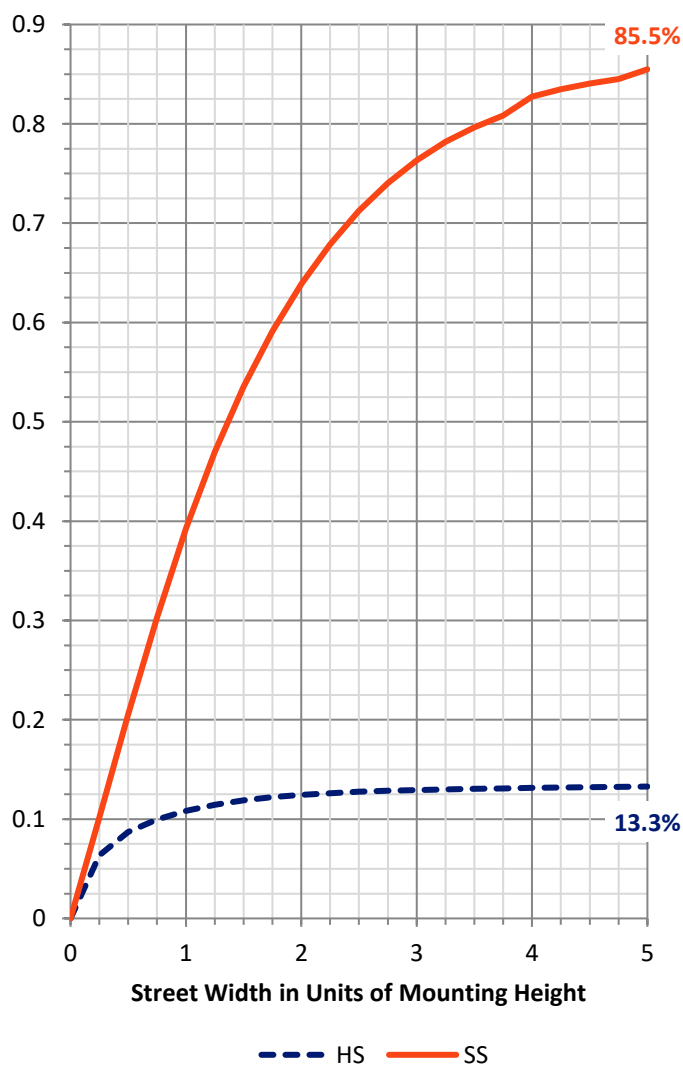
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	602.9	0.0	602.9
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	3890.1	0.0	3890.1
	% Fixture	86.6	0.0	86.6
Total	Lumens	4493.0	0.0	4493.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	0.8
10°-20°	121.6	2.7
20°-30°	211.2	4.7
30°-40°	353.0	7.9
40°-50°	612.7	13.6
50°-60°	926.2	20.6
60°-70°	1199.9	26.7
70°-80°	885.4	19.7
80°-90°	148.4	3.3
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°	4493.0	100.0
0°-180°	4493.0	100.0

Coefficient of Utilization



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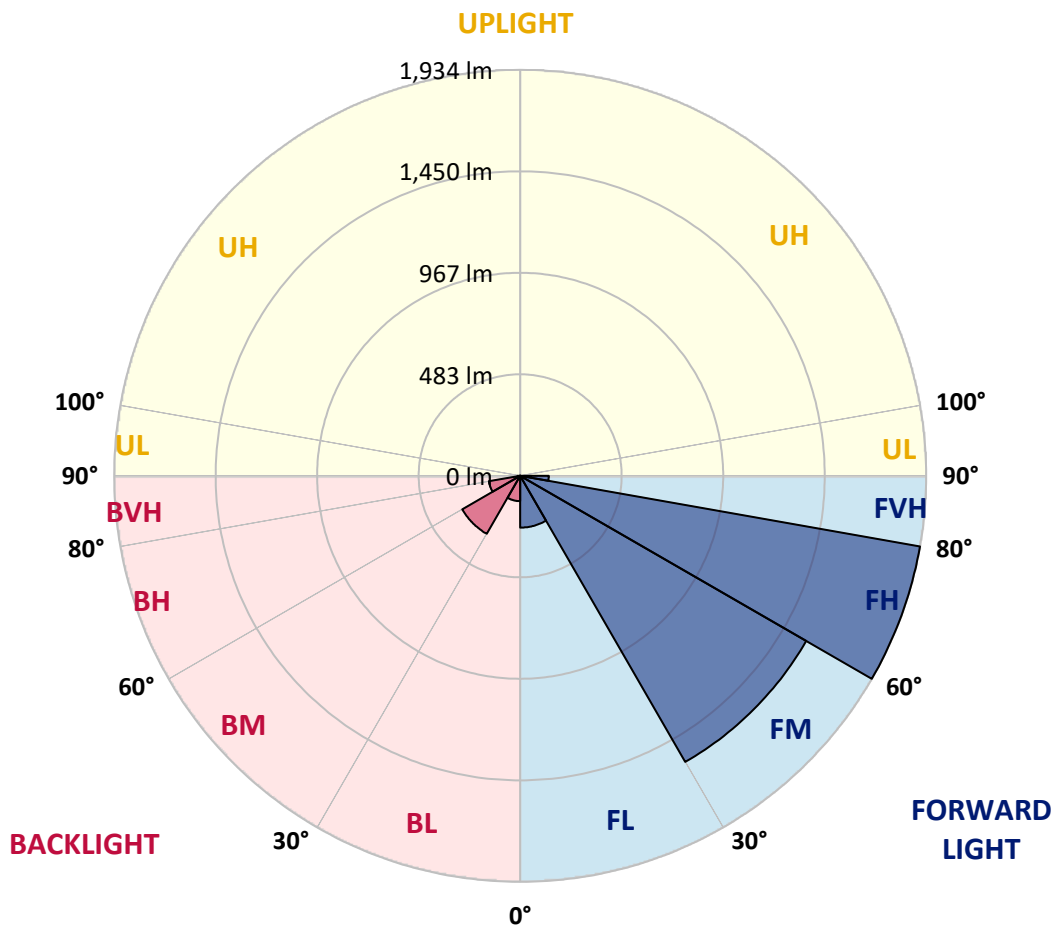
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	246.8	5.5			
FM (30°-60°)	1573.3	35.0			
FH (60°-80°)	1933.8	43.0			G2/5000
FVH (80°-90°)	136.3	3.0			G2/225
BL (0°-30°)	120.5	2.7	B1/500		
BM (30°-60°)	318.7	7.1	B1/1000		
BH (60°-80°)	151.6	3.4	B1/500		G1/500
BVH (80°-90°)	12.1	0.3			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°	36°	45°	55°	65°	75°	85°
0°	259.7	259.7	259.7	259.7	259.7	259.7	259.7	259.7	259.7	259.7	259.7
2.5°	323.9	308.4	294.9	294.4	306.8	311.6	309.7	305.5	300.5	290.0	313.0
5°	405.8	383.5	379.3	374.3	363.0	366.1	347.7	361.7	366.1	376.2	391.6
7.5°	454.1	441.1	430.9	426.7	407.1	404.8	391.2	411.1	419.6	418.2	441.1
10°	473.1	461.2	462.0	448.2	441.8	444.5	446.0	446.4	451.6	455.8	444.3
12.5°	482.9	487.5	504.3	495.0	503.0	506.3	522.4	505.9	506.5	484.8	496.7
15°	532.2	543.7	533.9	533.5	531.0	536.4	550.2	539.1	547.7	540.8	525.4
17.5°	591.6	595.1	576.3	568.6	578.6	576.8	573.4	575.1	553.6	593.5	574.7
20°	609.8	623.4	598.7	568.6	601.6	606.0	605.2	597.7	560.9	618.4	600.2
22.5°	662.7	644.3	624.8	605.6	622.5	625.0	620.7	602.9	590.6	612.5	626.9
25°	686.7	682.3	657.4	655.1	636.5	627.7	634.9	629.8	617.7	656.6	640.7
27.5°	741.6	736.4	679.0	702.6	675.6	673.3	634.7	652.0	664.1	661.2	685.0
30°	803.7	809.6	725.8	749.4	718.2	713.9	675.2	697.1	705.3	708.0	737.7
32.5°	872.7	889.0	805.8	786.4	769.8	772.6	739.8	699.9	732.0	794.7	807.5
35°	947.5	954.2	867.0	837.8	794.3	791.2	791.8	796.8	829.2	900.7	910.7
37.5°	1085.8	1054.7	978.2	904.4	889.8	861.2	880.6	895.9	928.3	1038.0	1079.8
40°	1170.9	1147.9	1031.3	988.6	948.3	951.0	987.2	987.0	1063.5	1176.7	1240.5
42.5°	1249.7	1224.6	1114.7	1071.8	1033.6	1043.0	1053.4	1071.6	1218.3	1400.7	1429.8
45°	1313.2	1258.2	1179.2	1169.6	1138.1	1125.7	1169.6	1198.7	1403.4	1581.9	1598.8
47.5°	1356.4	1311.1	1233.8	1225.4	1202.2	1232.7	1352.5	1371.3	1546.8	1763.9	1762.5
50°	1422.0	1360.0	1290.2	1285.8	1351.2	1367.5	1513.6	1511.7	1686.4	1915.0	1883.3
52.5°	1497.5	1419.5	1343.7	1391.1	1490.8	1498.9	1625.6	1677.2	1838.9	2060.7	1978.1
55°	1584.4	1497.1	1423.9	1487.2	1635.6	1611.8	1740.1	1866.1	2029.7	2214.3	2046.5
57.5°	1692.0	1586.1	1526.8	1623.1	1767.7	1788.8	1904.1	2062.6	2183.3	2309.8	2096.4
60°	1805.5	1681.2	1627.0	1718.6	1952.8	1976.9	2089.7	2226.0	2355.5	2399.8	2087.0
62.5°	1913.8	1779.4	1730.3	1843.5	2158.0	2217.8	2301.0	2387.9	2498.7	2421.6	1973.3
65°	2034.5	1899.8	1869.0	2038.7	2436.2	2495.7	2604.4	2578.3	2547.8	2344.2	1785.2
67.5°	2162.2	2025.4	2031.2	2265.2	2764.3	2774.5	2941.5	2768.2	2490.1	2139.0	1469.3
70°	2230.8	2090.8	2150.1	2506.6	3098.2	3083.6	3117.7	2819.2	2254.8	1690.8	1012.7
72.5°	2147.6	2022.8	2131.3	2608.2	3268.1	3252.4	3018.8	2516.4	1762.9	1051.5	525.1
75°	1818.3	1697.9	1864.0	2325.0	2942.1	2956.7	2569.1	1871.3	1009.3	422.8	218.0
77.5°	1235.6	1173.4	1315.7	1733.0	2185.4	2235.8	1906.2	1094.2	423.8	175.1	131.9
80°	653.0	623.4	728.5	998.3	1383.8	1421.4	1120.9	545.0	217.1	113.3	94.2
82.5°	354.8	342.3	398.7	513.4	786.2	819.0	581.2	362.1	146.3	71.0	57.5
85°	238.4	233.6	271.0	275.8	371.8	382.6	304.5	278.8	87.8	34.7	38.0
87.5°	119.3	114.5	142.7	126.0	141.9	142.1	139.6	178.0	22.2	11.5	6.9
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°	259.7	259.7	259.7	259.7	259.7	259.7	259.7	259.7	259.7	259.7	259.7
2.5°	313.3	306.6	283.4	283.2	286.7	284.4	286.1	276.7	272.7	291.1	290.1
5°	389.5	369.3	350.0	343.3	335.4	318.3	319.3	319.5	316.6	327.5	328.3
7.5°	434.2	410.0	392.2	356.5	328.5	306.6	309.5	312.8	309.5	324.1	329.5
10°	440.7	421.5	400.2	360.5	341.9	322.2	302.2	284.6	282.5	275.8	277.9
12.5°	479.4	463.5	419.0	375.5	353.8	323.5	287.1	266.9	250.1	252.9	247.6
15°	511.3	499.9	446.6	389.7	337.9	300.3	261.6	234.0	218.8	217.1	211.7
17.5°	554.4	538.3	449.1	379.9	317.4	272.3	228.6	197.3	190.8	188.1	185.4
20°	575.1	546.2	440.1	349.2	293.4	238.9	196.0	169.1	167.2	172.0	171.1
22.5°	593.1	552.7	432.1	330.6	256.0	205.2	173.7	156.1	154.0	160.1	161.3
25°	603.7	571.3	423.2	311.6	232.8	180.1	157.1	147.1	147.5	155.5	154.6
27.5°	651.2	577.8	401.0	289.2	206.1	161.5	149.0	143.8	141.7	152.8	153.8
30°	681.2	620.4	396.0	265.4	186.4	147.9	141.7	139.6	139.2	152.6	153.6
32.5°	736.8	634.6	398.3	239.5	168.6	143.6	136.3	136.2	140.0	152.8	154.4
35°	813.9	694.4	387.2	224.8	158.8	137.1	132.1	133.7	140.2	154.2	156.3
37.5°	964.2	750.8	390.6	210.9	155.5	135.0	131.0	131.9	142.5	157.6	163.4
40°	1083.3	853.0	385.3	204.0	151.1	134.6	128.5	132.3	142.3	159.6	164.7
42.5°	1255.9	934.5	385.8	197.1	150.9	133.1	128.1	132.7	141.9	157.8	164.9
45°	1403.9	1007.5	394.1	193.1	149.0	135.6	127.5	133.3	139.4	151.7	159.6
47.5°	1525.3	1089.0	402.5	189.3	148.2	137.9	126.9	129.3	135.2	144.8	151.9
50°	1624.3	1146.4	413.3	188.5	148.2	136.7	125.4	125.2	130.2	137.9	144.6
52.5°	1701.4	1186.8	420.5	189.5	148.2	132.3	123.5	122.0	125.0	130.6	137.3
55°	1757.2	1199.3	414.6	192.0	148.0	128.3	120.0	118.7	120.2	124.1	130.4
57.5°	1779.6	1166.5	379.1	187.5	148.0	125.4	115.8	114.3	115.8	118.7	125.0
60°	1723.4	1061.0	327.9	176.2	145.2	121.6	111.0	110.1	112.4	114.9	121.0
62.5°	1582.5	920.9	273.3	162.8	139.2	118.3	106.4	106.6	110.3	113.7	119.9
65°	1363.5	751.3	227.8	149.2	131.7	113.1	101.6	103.0	108.2	112.8	118.9
67.5°	1072.9	556.7	191.8	136.0	121.2	104.7	96.3	96.7	100.3	104.7	110.6
70°	717.2	354.2	157.6	120.4	107.4	93.8	88.0	86.7	85.7	89.6	94.7
72.5°	363.8	209.2	129.4	103.0	92.4	81.9	77.5	74.0	71.3	73.6	77.7
75°	190.6	146.3	104.5	85.5	76.3	69.6	66.4	61.7	59.8	61.2	64.1
77.5°	134.8	114.5	84.6	67.7	62.1	55.2	55.8	51.0	49.5	50.2	53.3
80°	103.6	90.7	65.0	51.2	47.9	41.2	43.1	40.3	38.4	38.0	40.3
82.5°	70.6	68.3	46.2	35.9	33.6	28.8	31.4	30.3	27.8	26.3	27.4
85°	47.6	45.3	28.2	20.7	19.8	15.0	19.2	18.4	16.3	14.0	14.2
87.5°	8.2	15.1	8.1	5.2	4.8	1.7	4.4	4.2	3.8	1.9	1.5
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)