

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: P596858

Luminaire Tested: **MSA-SA1B-835-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596858
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-835-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: 4067 lumens
Efficiency: N/A
Efficacy: 92.4 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

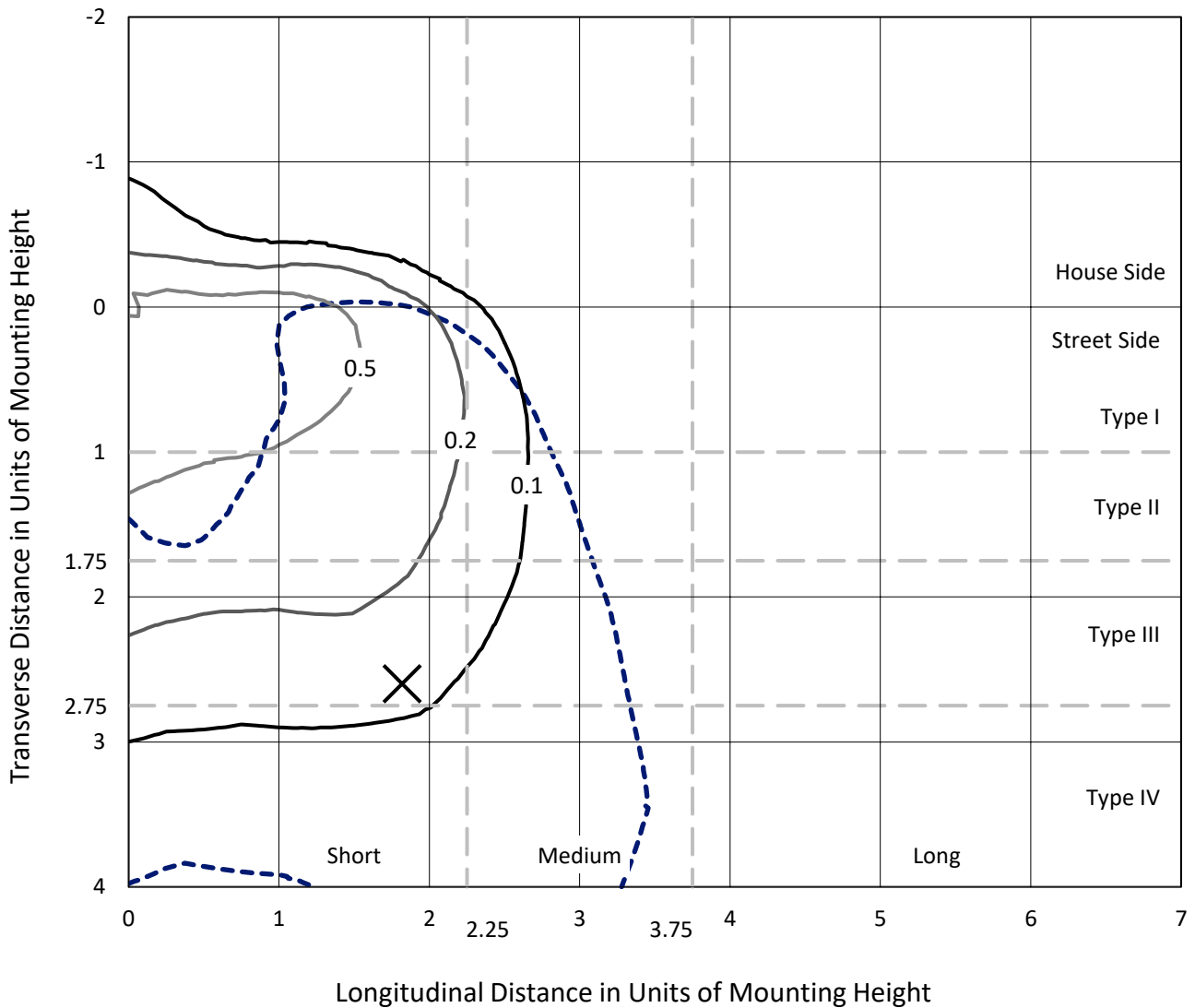
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

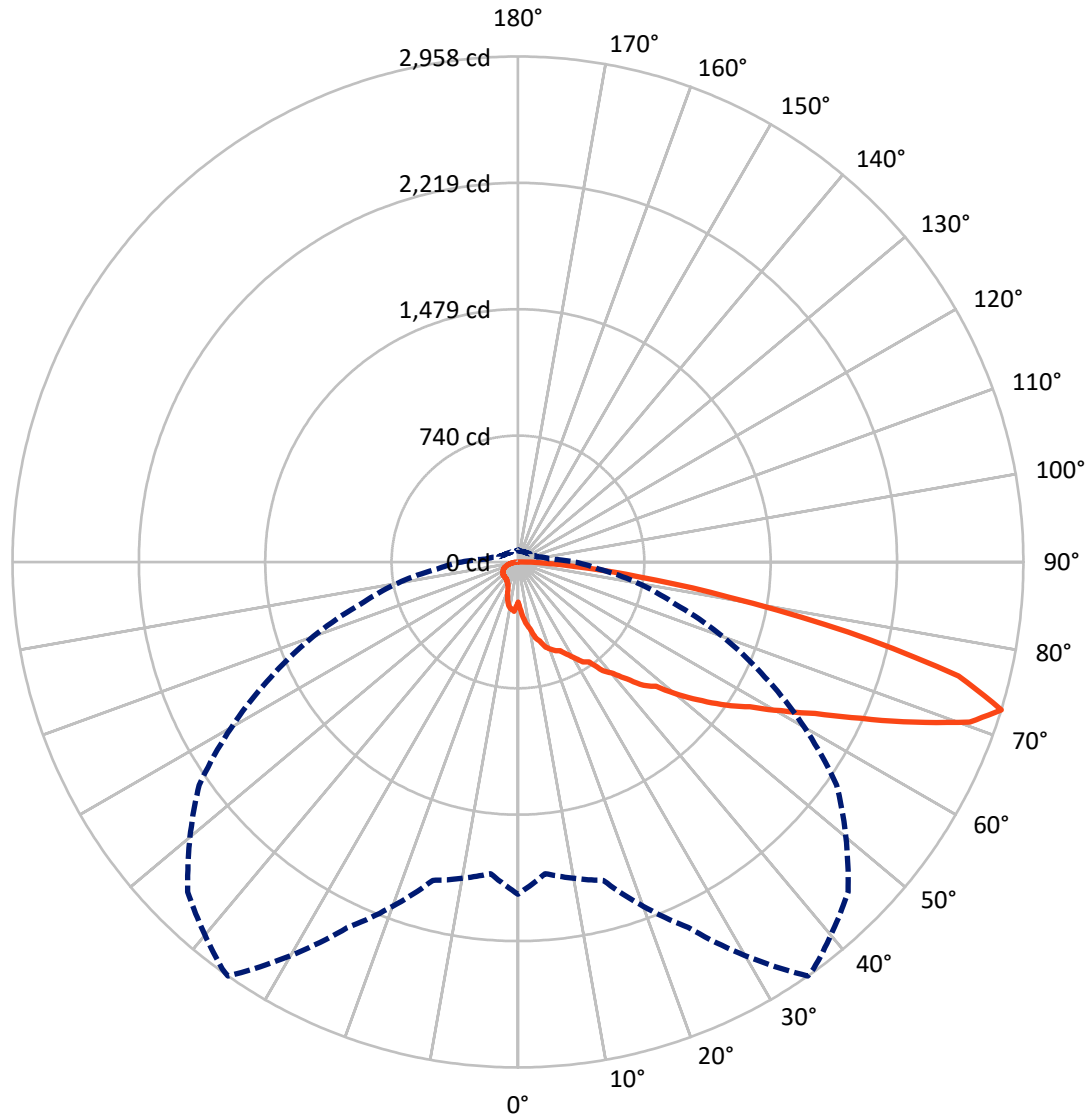
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 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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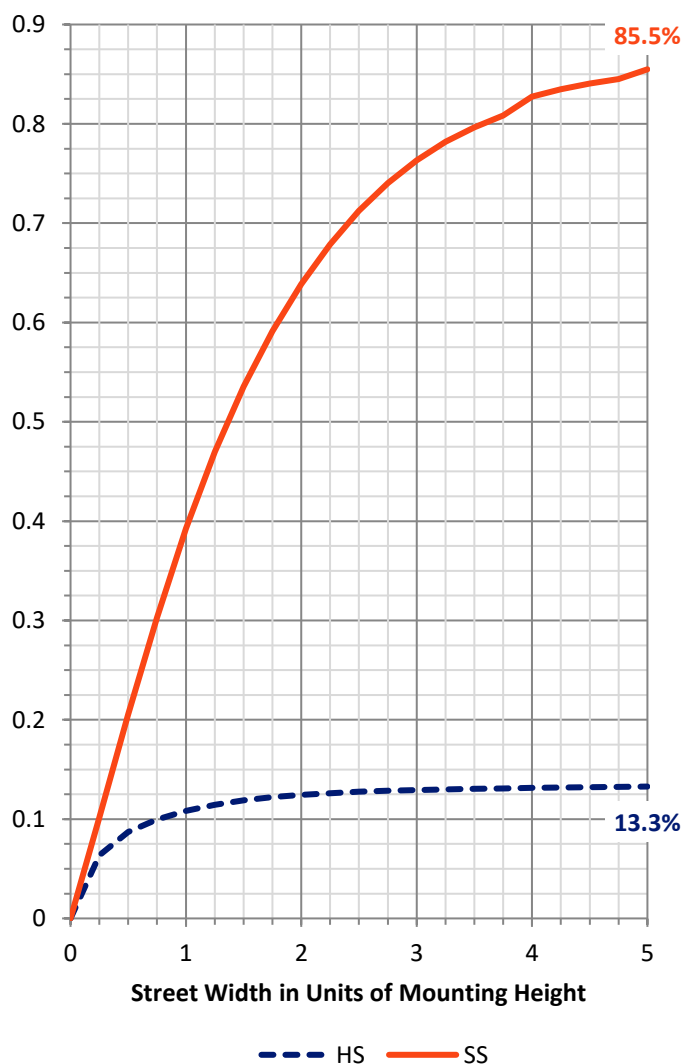
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	545.8	0.0	545.8
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	3521.2	0.0	3521.2
	% Fixture	86.6	0.0	86.6
Total	Lumens	4067.0	0.0	4067.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.2	0.8
10°-20°	110.0	2.7
20°-30°	191.2	4.7
30°-40°	319.5	7.9
40°-50°	554.6	13.6
50°-60°	838.4	20.6
60°-70°	1086.2	26.7
70°-80°	801.5	19.7
80°-90°	134.3	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°	4067.0	100.0
0°-180°	4067.0	100.0

Coefficient of Utilization



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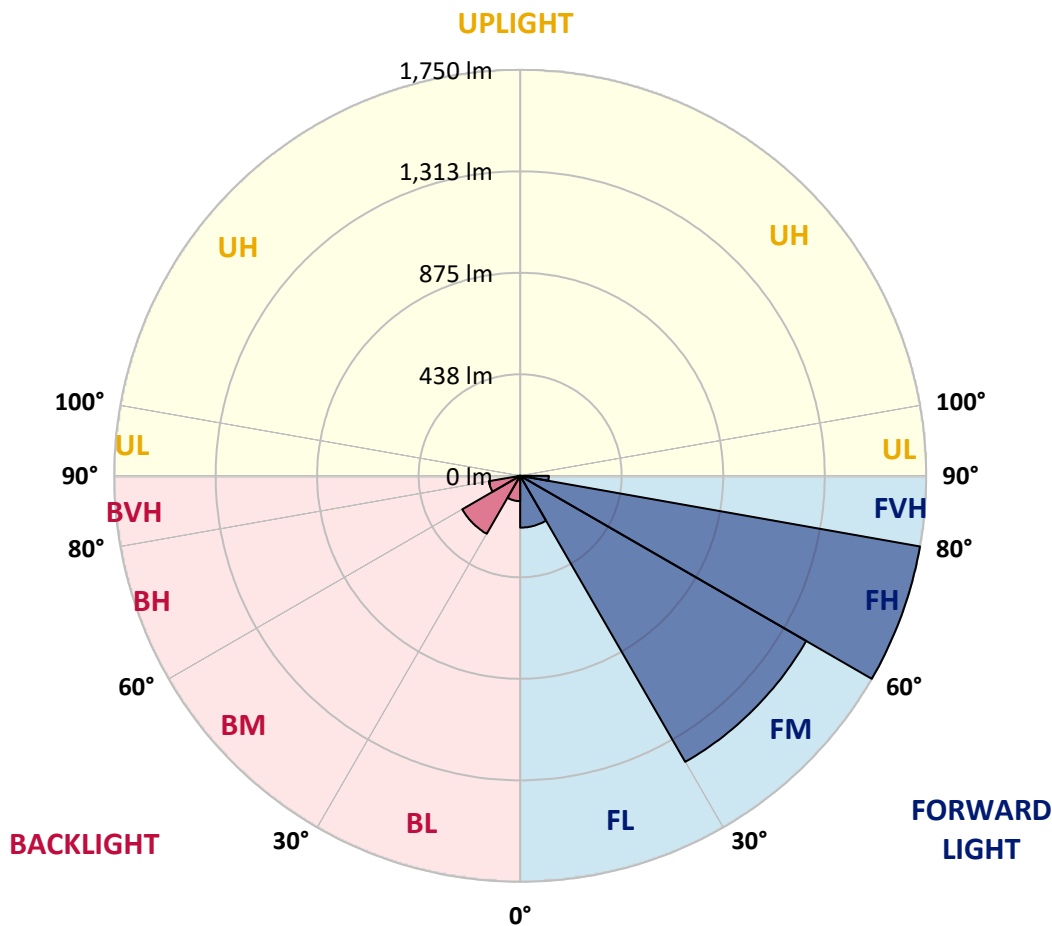
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	223.4	5.5			
FM (30°-60°)	1424.1	35.0			
FH (60°-80°)	1750.4	43.0			G1/1800
FVH (80°-90°)	123.3	3.0			G2/225
BL (0°-30°)	109.1	2.7	B0/110		
BM (30°-60°)	288.5	7.1	B1/1000		
BH (60°-80°)	137.2	3.4	B1/500		G1/500
BVH (80°-90°)	11.0	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°	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0
2.5°	293.2	279.1	267.0	266.5	277.7	282.1	280.3	276.5	272.0	262.5	283.3
5°	367.3	347.2	343.4	338.8	328.6	331.4	314.7	327.4	331.4	340.6	354.5
7.5°	411.0	399.2	390.0	386.2	368.5	366.4	354.1	372.2	379.8	378.6	399.2
10°	428.2	417.5	418.2	405.7	399.9	402.4	403.8	404.1	408.8	412.6	402.2
12.5°	437.1	441.3	456.5	448.0	455.3	458.3	472.8	457.9	458.4	438.8	449.6
15°	481.7	492.1	483.3	482.9	480.7	485.5	498.0	487.9	495.8	489.5	475.6
17.5°	535.5	538.6	521.6	514.7	523.7	522.1	519.0	520.6	501.1	537.2	520.2
20°	552.0	564.3	541.9	514.7	544.5	548.5	547.8	541.1	507.7	559.8	543.3
22.5°	599.9	583.2	565.5	548.2	563.5	565.7	561.9	545.8	534.6	554.4	567.4
25°	621.6	617.6	595.0	593.0	576.1	568.1	574.7	570.1	559.1	594.4	579.9
27.5°	671.3	666.6	614.7	636.0	611.5	609.5	574.6	590.2	601.1	598.5	620.0
30°	727.5	732.9	657.0	678.4	650.1	646.3	611.2	631.0	638.4	640.9	667.8
32.5°	790.0	804.7	729.4	711.9	696.8	699.4	669.7	633.6	662.6	719.3	731.0
35°	857.7	863.8	784.8	758.4	719.0	716.2	716.7	721.2	750.6	815.3	824.4
37.5°	982.8	954.7	885.5	818.6	805.4	779.6	797.1	811.0	840.3	939.6	977.5
40°	1059.9	1039.1	933.5	894.8	858.4	860.8	893.6	893.4	962.7	1065.1	1122.9
42.5°	1131.3	1108.5	1009.0	970.2	935.6	944.1	953.5	970.0	1102.8	1267.9	1294.2
45°	1188.7	1138.9	1067.4	1058.7	1030.2	1018.9	1058.7	1085.1	1270.3	1431.9	1447.2
47.5°	1227.8	1186.8	1116.8	1109.2	1088.2	1115.8	1224.3	1241.3	1400.1	1596.6	1595.4
50°	1287.1	1231.1	1167.9	1163.9	1223.1	1237.8	1370.1	1368.4	1526.5	1733.4	1704.8
52.5°	1355.5	1284.9	1216.3	1259.2	1349.4	1356.7	1471.5	1518.2	1664.5	1865.3	1790.5
55°	1434.2	1355.2	1288.9	1346.1	1480.5	1459.0	1575.1	1689.2	1837.2	2004.4	1852.5
57.5°	1531.5	1435.7	1382.1	1469.2	1600.1	1619.2	1723.5	1867.1	1976.3	2090.8	1897.6
60°	1634.3	1521.8	1472.7	1555.7	1767.6	1789.5	1891.6	2015.0	2132.1	2172.2	1889.1
62.5°	1732.4	1610.7	1566.3	1668.7	1953.3	2007.5	2082.8	2161.5	2261.8	2192.0	1786.2
65°	1841.6	1719.7	1691.8	1845.4	2205.2	2259.0	2357.5	2333.8	2306.2	2121.9	1615.9
67.5°	1957.2	1833.4	1838.6	2050.4	2502.2	2511.4	2662.6	2505.7	2254.0	1936.2	1330.0
70°	2019.3	1892.6	1946.2	2268.9	2804.4	2791.2	2822.1	2551.9	2041.0	1530.5	916.7
72.5°	1944.0	1831.0	1929.2	2360.9	2958.2	2944.0	2732.6	2277.8	1595.8	951.8	475.3
75°	1645.9	1536.9	1687.2	2104.5	2663.1	2676.3	2325.5	1693.8	913.6	382.8	197.4
77.5°	1118.4	1062.2	1191.0	1568.7	1978.2	2023.8	1725.4	990.5	383.6	158.5	119.4
80°	591.1	564.3	659.4	903.7	1252.6	1286.6	1014.6	493.3	196.5	102.6	85.2
82.5°	321.1	309.8	360.9	464.7	711.7	741.4	526.1	327.7	132.4	64.2	52.1
85°	215.8	211.4	245.3	249.6	336.6	346.3	275.7	252.4	79.5	31.4	34.4
87.5°	108.0	103.6	129.1	114.0	128.5	128.6	126.4	161.1	20.1	10.4	6.2
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°	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0
2.5°	283.6	277.6	256.6	256.4	259.5	257.4	259.0	250.5	246.8	263.5	262.6
5°	352.6	334.3	316.8	310.7	303.6	288.2	289.0	289.2	286.6	296.5	297.2
7.5°	393.0	371.1	355.0	322.7	297.4	277.6	280.2	283.1	280.2	293.4	298.2
10°	398.9	381.5	362.3	326.3	309.5	291.6	273.6	257.6	255.7	249.6	251.5
12.5°	434.0	419.6	379.3	339.9	320.3	292.8	259.9	241.6	226.4	229.0	224.1
15°	462.8	452.5	404.3	352.7	305.9	271.8	236.8	211.8	198.1	196.5	191.6
17.5°	501.8	487.3	406.5	343.9	287.3	246.5	206.9	178.6	172.7	170.3	167.9
20°	520.6	494.4	398.4	316.1	265.6	216.3	177.4	153.1	151.4	155.7	154.8
22.5°	536.9	500.3	391.1	299.3	231.7	185.7	157.3	141.3	139.4	144.9	146.0
25°	546.4	517.1	383.1	282.1	210.7	163.0	142.2	133.1	133.5	140.8	139.9
27.5°	589.5	523.0	363.0	261.8	186.6	146.2	134.9	130.2	128.3	138.3	139.2
30°	616.6	561.5	358.5	240.2	168.7	133.8	128.3	126.4	126.0	138.2	139.0
32.5°	666.9	574.4	360.5	216.8	152.6	130.0	123.4	123.2	126.7	138.3	139.7
35°	736.7	628.6	350.5	203.4	143.7	124.1	119.6	121.0	126.9	139.6	141.5
37.5°	872.8	679.6	353.6	190.9	140.8	122.2	118.6	119.4	129.0	142.7	147.9
40°	980.6	772.1	348.7	184.7	136.8	121.9	116.3	119.8	128.8	144.4	149.1
42.5°	1136.8	845.9	349.3	178.4	136.6	120.5	116.0	120.1	128.5	142.9	149.3
45°	1270.8	912.0	356.7	174.8	134.9	122.7	115.4	120.6	126.2	137.3	144.4
47.5°	1380.7	985.8	364.4	171.3	134.2	124.8	114.9	117.0	122.4	131.1	137.5
50°	1470.3	1037.7	374.1	170.6	134.2	123.8	113.5	113.4	117.9	124.8	130.9
52.5°	1540.0	1074.3	380.7	171.5	134.2	119.8	111.8	110.4	113.2	118.2	124.3
55°	1590.6	1085.6	375.3	173.8	134.0	116.1	108.7	107.4	108.8	112.3	118.0
57.5°	1610.9	1055.9	343.2	169.8	134.0	113.5	104.8	103.5	104.8	107.4	113.2
60°	1560.0	960.4	296.8	159.5	131.4	110.1	100.5	99.6	101.7	104.0	109.5
62.5°	1432.4	833.6	247.4	147.4	126.0	107.1	96.3	96.5	99.8	102.9	108.5
65°	1234.2	680.1	206.2	135.0	119.3	102.4	92.0	93.2	97.9	102.1	107.6
67.5°	971.2	503.9	173.6	123.1	109.7	94.8	87.1	87.5	90.8	94.8	100.2
70°	649.2	320.6	142.7	109.0	97.2	84.9	79.7	78.5	77.6	81.1	85.8
72.5°	329.3	189.4	117.2	93.2	83.7	74.1	70.1	67.0	64.6	66.7	70.3
75°	172.5	132.4	94.6	77.4	69.1	63.0	60.1	55.9	54.2	55.4	58.0
77.5°	122.0	103.6	76.6	61.3	56.2	50.0	50.5	46.2	44.8	45.5	48.3
80°	93.7	82.1	58.8	46.3	43.4	37.3	39.1	36.5	34.7	34.4	36.5
82.5°	63.9	61.8	41.8	32.5	30.4	26.0	28.5	27.4	25.2	23.8	24.8
85°	43.0	41.0	25.5	18.7	17.9	13.5	17.4	16.7	14.8	12.7	12.8
87.5°	7.5	13.7	7.3	4.7	4.3	1.6	4.0	3.8	3.5	1.7	1.4
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)