

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: P596836

Luminaire Tested: **MSA-SA1A-835-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596836
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-SA1A-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: 3245 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

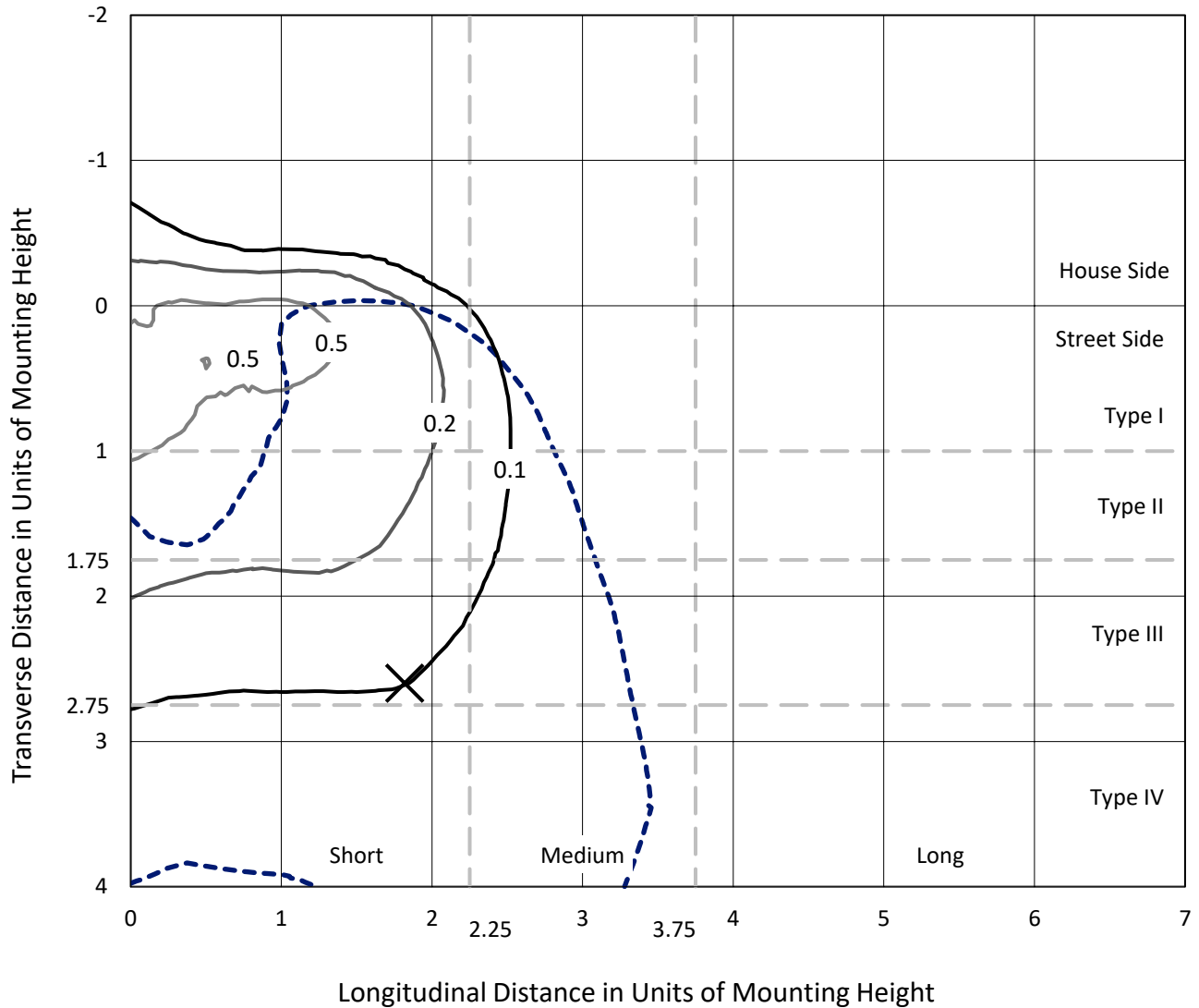
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596836
 CATALOG NUMBER: MSA-SA1A-835-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

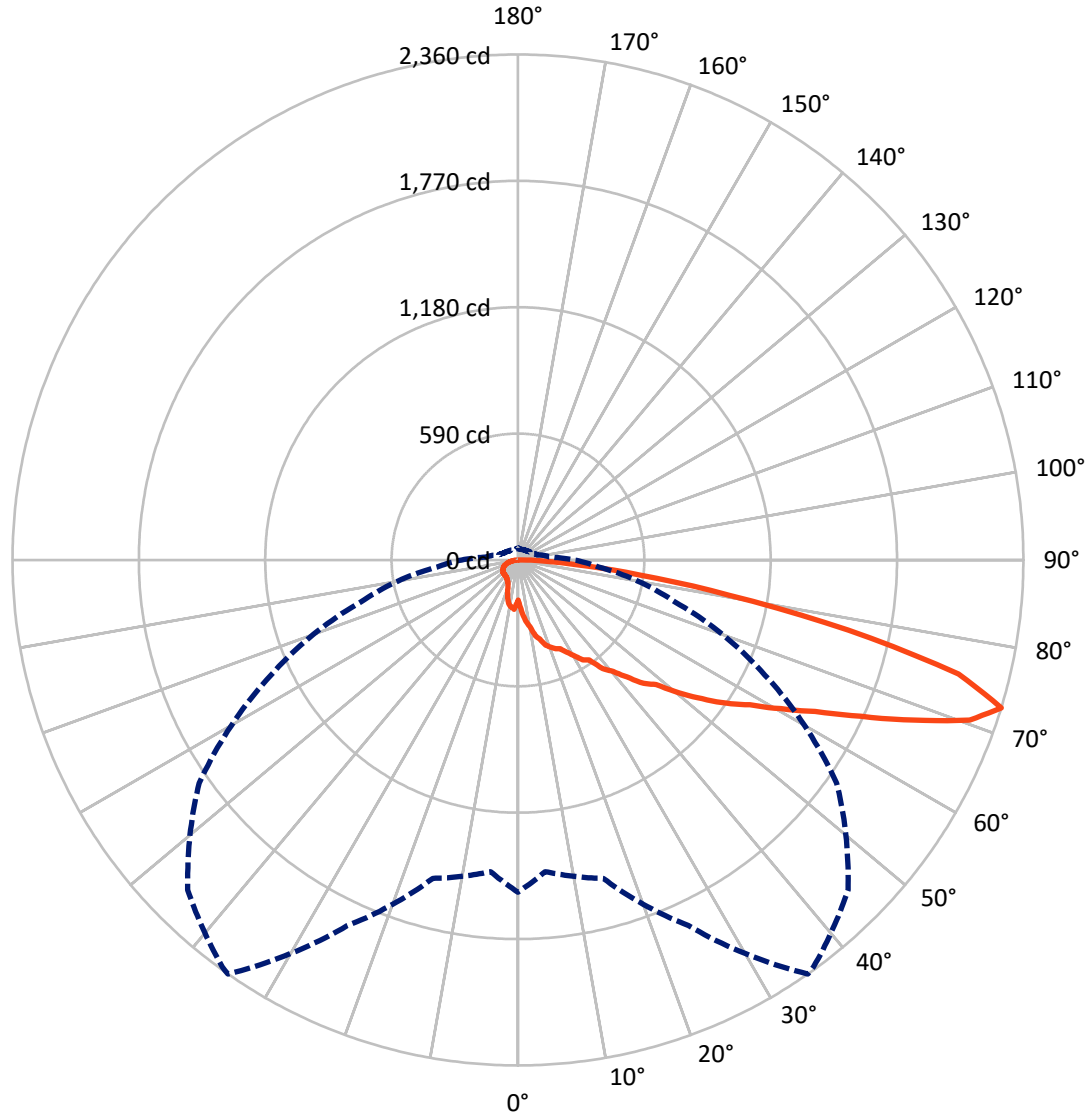
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P596836
CATALOG NUMBER: MSA-SA1A-835-U-SL4

Luminous Intensity Polar Plot



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

REPORT NUMBER: P596836

CATALOG NUMBER: MSA-SA1A-835-U-SL4

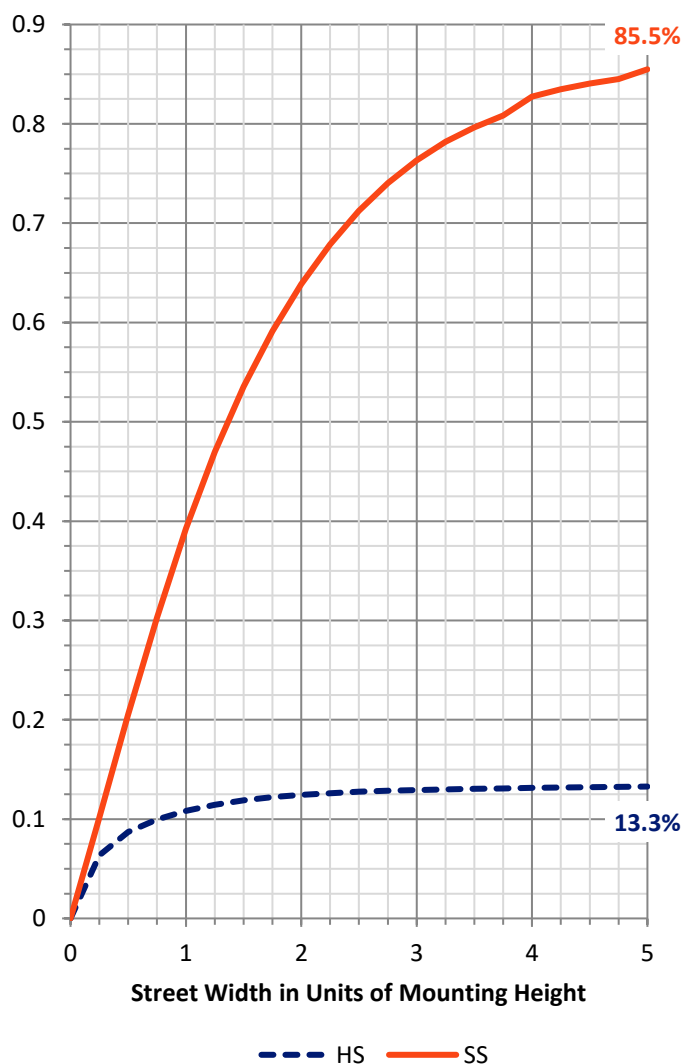
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	435.5	0.0	435.5
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	2809.5	0.0	2809.5
	% Fixture	86.6	0.0	86.6
Total	Lumens	3245.0	0.0	3245.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.9	0.8
10°-20°	87.8	2.7
20°-30°	152.5	4.7
30°-40°	255.0	7.9
40°-50°	442.5	13.6
50°-60°	669.0	20.6
60°-70°	866.6	26.7
70°-80°	639.5	19.7
80°-90°	107.2	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°	3245.0	100.0
0°-180°	3245.0	100.0

Coefficient of Utilization



REPORT NUMBER: P596836

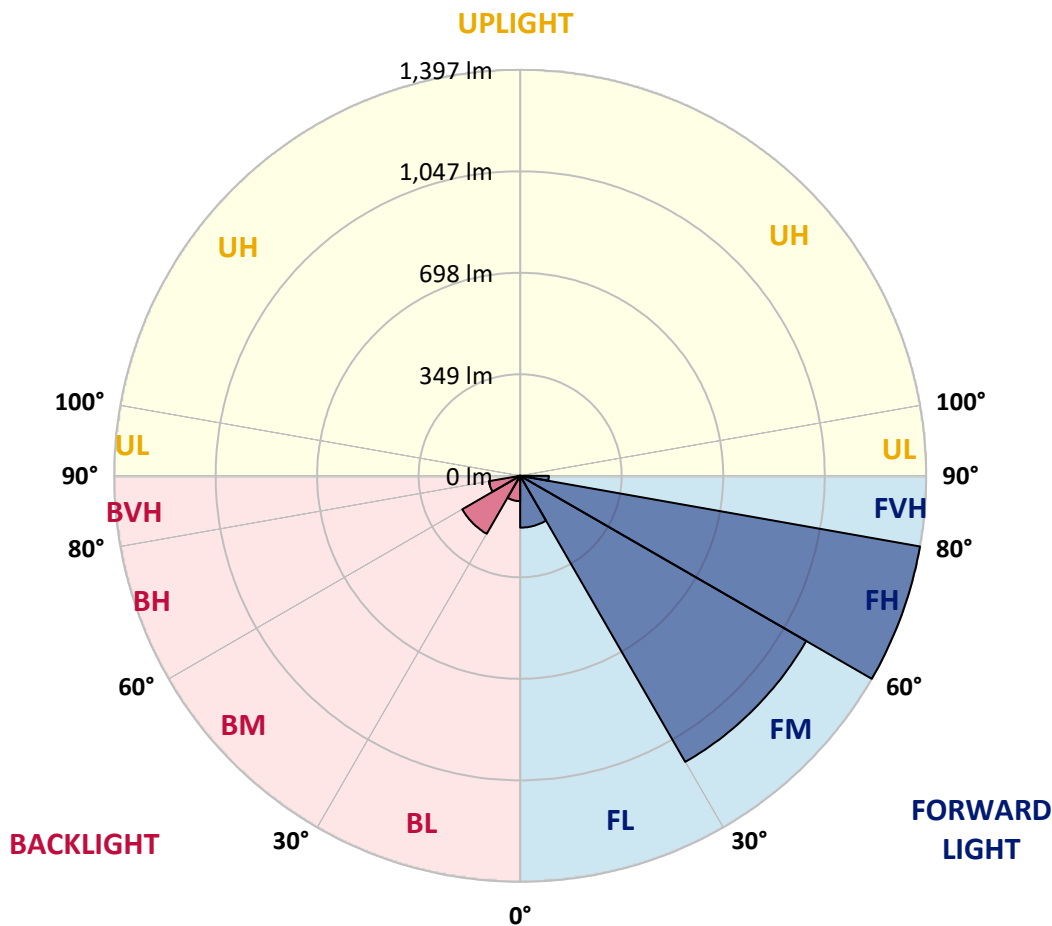
CATALOG NUMBER: MSA-SA1A-835-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	178.2	5.5			
FM (30°-60°)	1136.3	35.0			
FH (60°-80°)	1396.6	43.0			G1/1800
FVH (80°-90°)	98.4	3.0			G1/100
BL (0°-30°)	87.0	2.7	B0/110		
BM (30°-60°)	230.2	7.1	B1/1000		
BH (60°-80°)	109.5	3.4	B0/110		G0/110
BVH (80°-90°)	8.8	0.3			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





REPORT NUMBER: P596836

CATALOG NUMBER: MSA-SA1A-835-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5
2.5°	233.9	222.7	213.0	212.6	221.6	225.1	223.7	220.6	217.0	209.4	226.0
5°	293.1	277.0	274.0	270.4	262.2	264.4	251.1	261.2	264.4	271.7	282.8
7.5°	328.0	318.6	311.2	308.2	294.0	292.4	282.5	296.9	303.0	302.1	318.6
10°	341.7	333.1	333.6	323.7	319.1	321.0	322.2	322.4	326.2	329.2	320.9
12.5°	348.7	352.1	364.3	357.5	363.3	365.6	377.3	365.4	365.8	350.1	358.7
15°	384.3	392.6	385.6	385.3	383.5	387.4	397.4	389.3	395.6	390.6	379.5
17.5°	427.3	429.8	416.2	410.7	417.9	416.6	414.1	415.4	399.9	428.7	415.1
20°	440.4	450.3	432.4	410.7	434.5	437.7	437.1	431.7	405.1	446.7	433.5
22.5°	478.7	465.4	451.2	437.4	449.6	451.4	448.3	435.4	426.6	442.4	452.8
25°	496.0	492.8	474.8	473.1	459.7	453.3	458.6	454.8	446.1	474.2	462.7
27.5°	535.6	531.8	490.4	507.5	487.9	486.3	458.4	470.9	479.6	477.6	494.7
30°	580.5	584.7	524.2	541.3	518.7	515.6	487.7	503.5	509.4	511.3	532.8
32.5°	630.3	642.1	582.0	568.0	555.9	558.0	534.3	505.5	528.7	573.9	583.2
35°	684.3	689.2	626.2	605.1	573.7	571.5	571.9	575.5	598.9	650.5	657.7
37.5°	784.2	761.8	706.5	653.2	642.6	622.0	636.0	647.1	670.5	749.7	779.9
40°	845.7	829.1	744.9	714.0	684.9	686.8	713.0	712.9	768.1	849.8	896.0
42.5°	902.6	884.5	805.1	774.1	746.5	753.3	760.8	773.9	879.9	1011.6	1032.7
45°	948.5	908.7	851.6	844.7	822.0	813.0	844.7	865.8	1013.5	1142.5	1154.7
47.5°	979.6	946.9	891.1	885.0	868.3	890.3	976.8	990.4	1117.1	1273.9	1273.0
50°	1027.0	982.2	931.8	928.6	975.9	987.6	1093.2	1091.8	1218.0	1383.1	1360.2
52.5°	1081.6	1025.2	970.5	1004.7	1076.7	1082.5	1174.1	1211.3	1328.1	1488.3	1428.6
55°	1144.3	1081.3	1028.4	1074.1	1181.3	1164.1	1256.8	1347.8	1465.9	1599.3	1478.1
57.5°	1222.0	1145.5	1102.7	1172.3	1276.7	1291.9	1375.2	1489.7	1576.8	1668.2	1514.1
60°	1304.0	1214.2	1175.0	1241.2	1410.4	1427.8	1509.2	1607.7	1701.2	1733.2	1507.3
62.5°	1382.2	1285.1	1249.7	1331.4	1558.5	1601.8	1661.9	1724.6	1804.7	1749.0	1425.2
65°	1469.4	1372.1	1349.8	1472.4	1759.5	1802.4	1881.0	1862.1	1840.1	1693.0	1289.3
67.5°	1561.6	1462.8	1467.0	1636.0	1996.5	2003.8	2124.5	1999.3	1798.4	1544.8	1061.2
70°	1611.2	1510.1	1552.9	1810.3	2237.6	2227.1	2251.7	2036.1	1628.5	1221.2	731.4
72.5°	1551.1	1460.9	1539.3	1883.7	2360.3	2349.0	2180.3	1817.4	1273.2	759.4	379.2
75°	1313.3	1226.3	1346.2	1679.2	2124.9	2135.4	1855.5	1351.5	728.9	305.4	157.5
77.5°	892.4	847.5	950.3	1251.6	1578.4	1614.8	1376.7	790.3	306.1	126.5	95.3
80°	471.6	450.3	526.2	721.0	999.4	1026.6	809.5	393.6	156.8	81.9	68.0
82.5°	256.2	247.2	287.9	370.8	567.9	591.5	419.8	261.5	105.7	51.2	41.6
85°	172.2	168.7	195.7	199.2	268.6	276.3	219.9	201.4	63.4	25.1	27.4
87.5°	86.1	82.7	103.0	91.0	102.5	102.6	100.8	128.5	16.1	8.3	5.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P596836
 CATALOG NUMBER: MSA-SA1A-835-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5
2.5°	226.3	221.5	204.7	204.6	207.1	205.4	206.6	199.9	196.9	210.2	209.6
5°	281.3	266.8	252.8	247.9	242.2	229.9	230.6	230.7	228.7	236.6	237.1
7.5°	313.6	296.1	283.2	257.5	237.3	221.5	223.5	225.9	223.5	234.1	237.9
10°	318.3	304.4	289.1	260.4	246.9	232.7	218.3	205.5	204.0	199.2	200.7
12.5°	346.3	334.8	302.6	271.2	255.5	233.7	207.3	192.8	180.6	182.7	178.8
15°	369.2	361.1	322.6	281.4	244.0	216.9	188.9	169.0	158.0	156.8	152.9
17.5°	400.4	388.8	324.4	274.4	229.2	196.7	165.1	142.5	137.8	135.9	133.9
20°	415.4	394.5	317.9	252.2	211.9	172.6	141.5	122.2	120.8	124.2	123.5
22.5°	428.4	399.2	312.0	238.8	184.9	148.2	125.5	112.7	111.2	115.6	116.5
25°	436.0	412.6	305.7	225.1	168.1	130.1	113.4	106.2	106.5	112.3	111.6
27.5°	470.3	417.3	289.6	208.9	148.9	116.6	107.6	103.9	102.4	110.4	111.1
30°	492.0	448.0	286.0	191.7	134.6	106.8	102.4	100.8	100.6	110.2	110.9
32.5°	532.1	458.3	287.7	173.0	121.7	103.7	98.5	98.3	101.1	110.4	111.5
35°	587.8	501.5	279.6	162.3	114.7	99.0	95.4	96.5	101.2	111.4	112.9
37.5°	696.4	542.2	282.1	152.4	112.3	97.5	94.6	95.3	102.9	113.8	118.0
40°	782.4	616.1	278.2	147.4	109.1	97.2	92.8	95.6	102.8	115.2	119.0
42.5°	907.0	674.9	278.7	142.4	109.0	96.1	92.5	95.8	102.5	114.0	119.1
45°	1014.0	727.7	284.6	139.5	107.6	97.9	92.1	96.3	100.7	109.6	115.2
47.5°	1101.6	786.5	290.7	136.7	107.1	99.6	91.7	93.3	97.6	104.6	109.7
50°	1173.1	828.0	298.5	136.1	107.1	98.8	90.6	90.4	94.0	99.6	104.4
52.5°	1228.8	857.2	303.7	136.8	107.1	95.6	89.2	88.1	90.3	94.3	99.2
55°	1269.1	866.2	299.4	138.6	106.9	92.7	86.7	85.7	86.8	89.6	94.2
57.5°	1285.3	842.5	273.8	135.5	106.9	90.6	83.7	82.5	83.7	85.7	90.3
60°	1244.7	766.3	236.8	127.3	104.8	87.8	80.2	79.5	81.2	83.0	87.4
62.5°	1142.9	665.1	197.4	117.6	100.6	85.5	76.9	77.0	79.6	82.1	86.6
65°	984.7	542.6	164.5	107.8	95.1	81.7	73.4	74.4	78.1	81.4	85.9
67.5°	774.9	402.1	138.5	98.2	87.5	75.6	69.5	69.8	72.4	75.6	79.9
70°	518.0	255.8	113.8	87.0	77.6	67.7	63.6	62.6	61.9	64.7	68.4
72.5°	262.7	151.1	93.5	74.4	66.8	59.1	56.0	53.5	51.5	53.2	56.1
75°	137.7	105.7	75.5	61.8	55.1	50.3	47.9	44.6	43.2	44.2	46.3
77.5°	97.4	82.7	61.1	48.9	44.9	39.9	40.3	36.8	35.7	36.3	38.5
80°	74.8	65.5	47.0	37.0	34.6	29.8	31.2	29.1	27.7	27.4	29.1
82.5°	51.0	49.3	33.4	25.9	24.2	20.8	22.7	21.9	20.1	19.0	19.8
85°	34.3	32.7	20.4	15.0	14.3	10.8	13.9	13.3	11.8	10.1	10.2
87.5°	6.0	10.9	5.8	3.7	3.5	1.2	3.2	3.0	2.8	1.4	1.1
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)