

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: P596514

Luminaire Tested: **MSA-SA1B-827-U-T3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596514
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-827-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3718 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

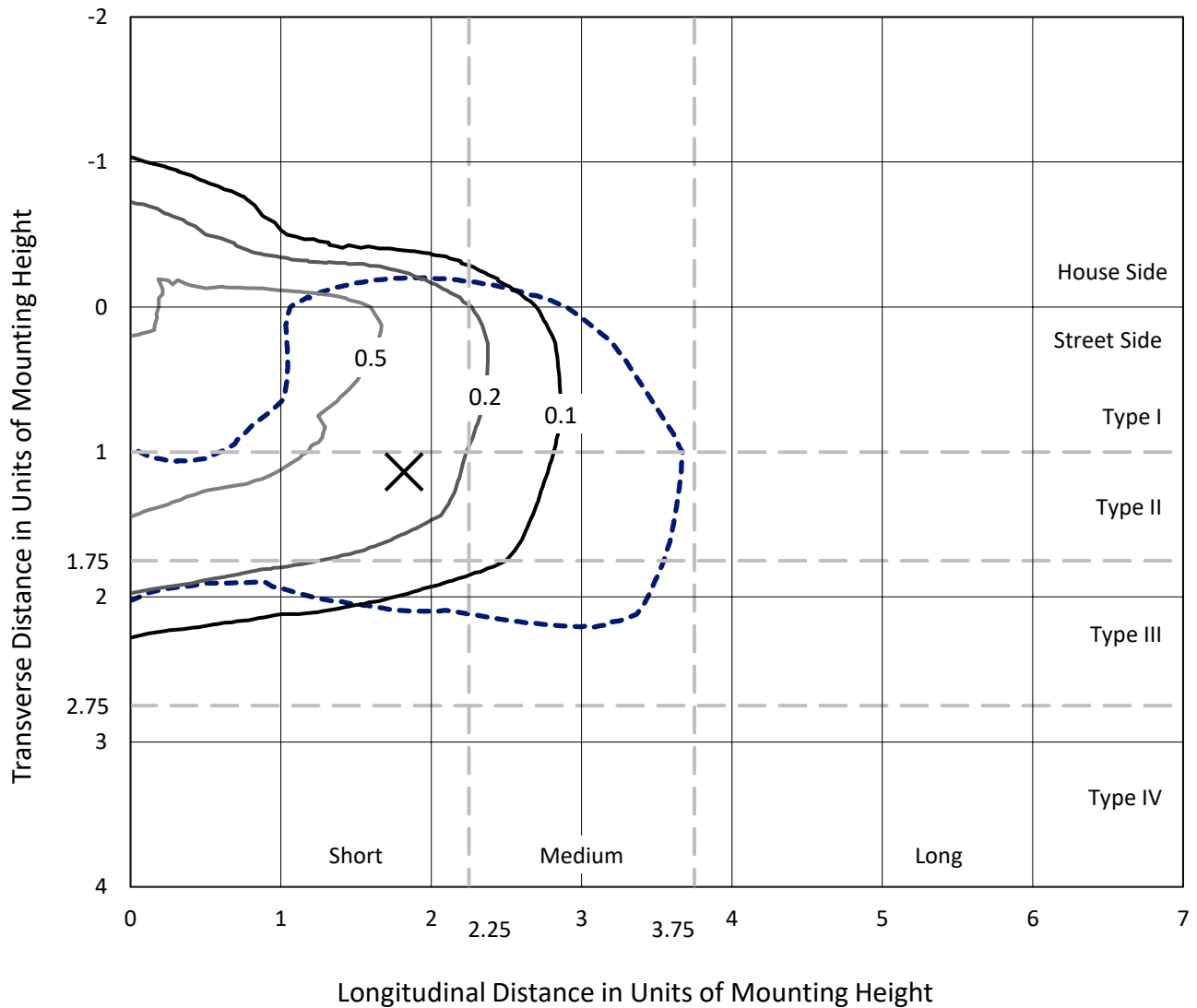
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

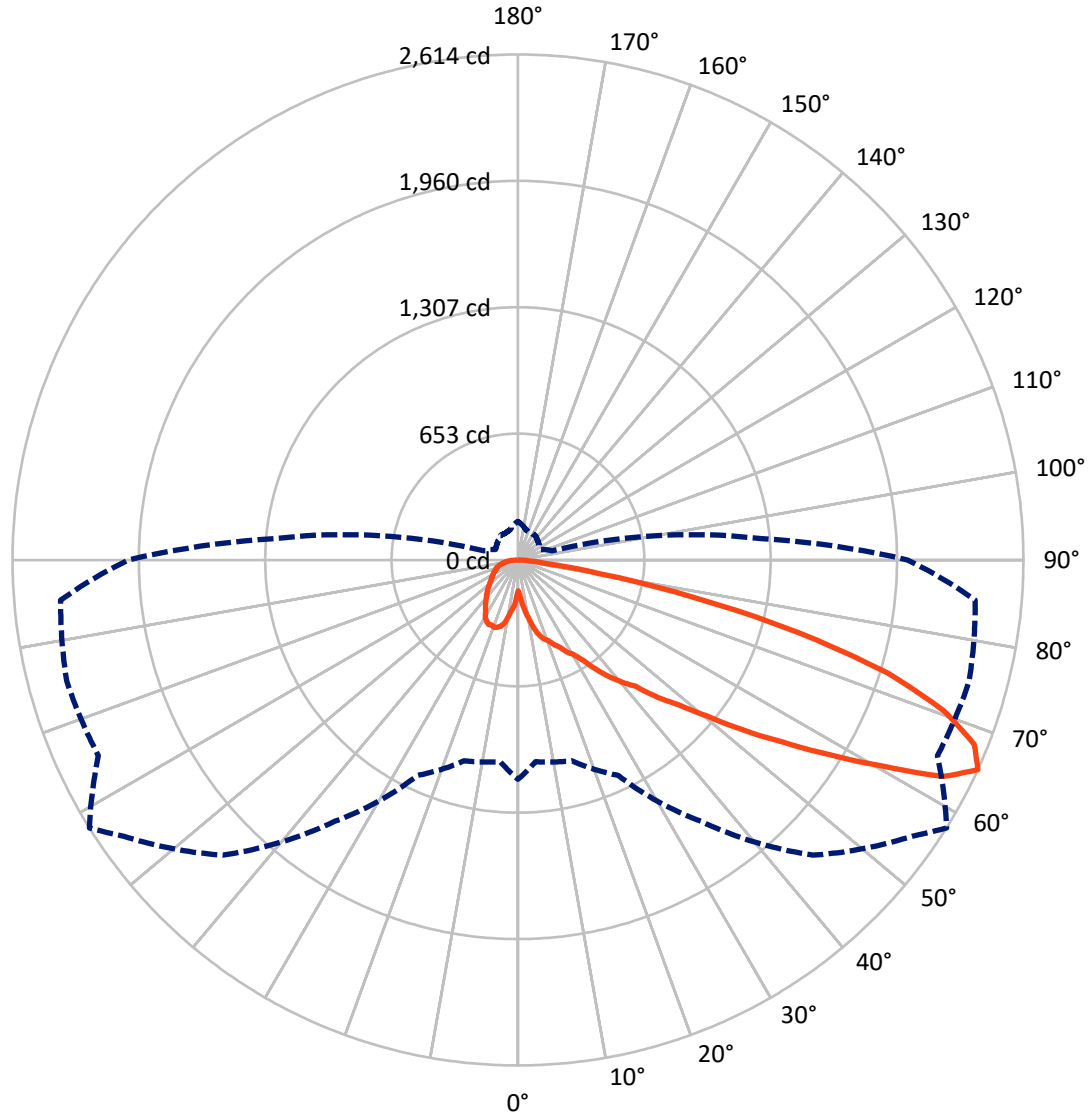
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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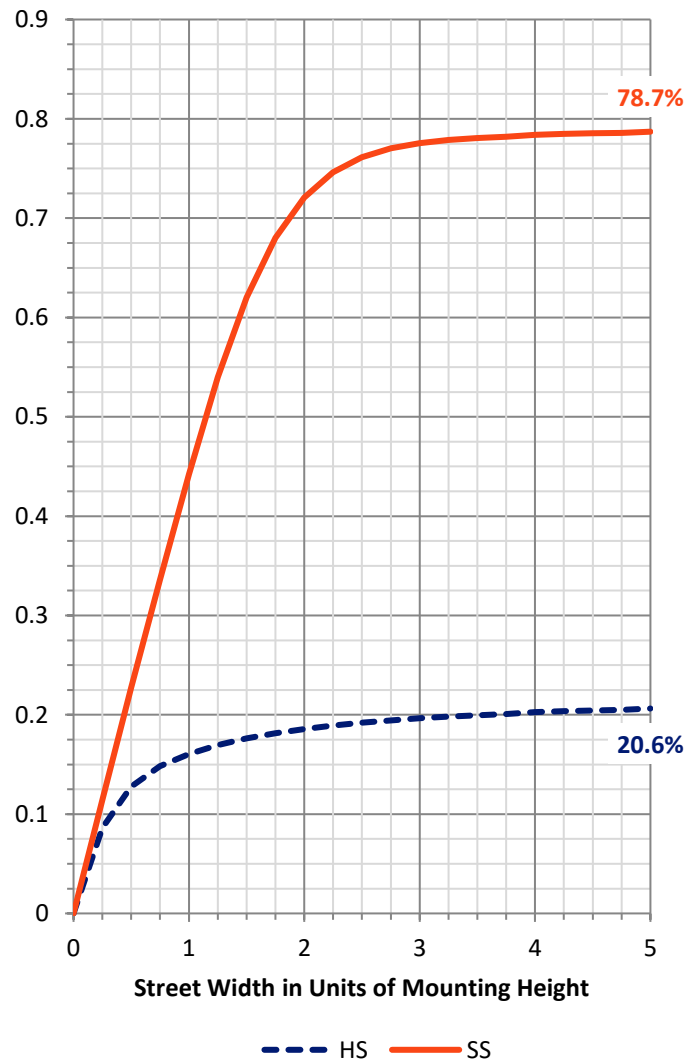
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	783.1	0.0	783.1
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	2934.9	0.0	2934.9
	% Fixture	78.9	0.0	78.9
Total	Lumens	3718.0	0.0	3718.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.3	0.7
10°-20°	106.1	2.9
20°-30°	203.6	5.5
30°-40°	336.1	9.0
40°-50°	558.7	15.0
50°-60°	922.7	24.8
60°-70°	1035.1	27.8
70°-80°	470.6	12.7
80°-90°	60.7	1.6
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°	3718.0	100.0
0°-180°	3718.0	100.0



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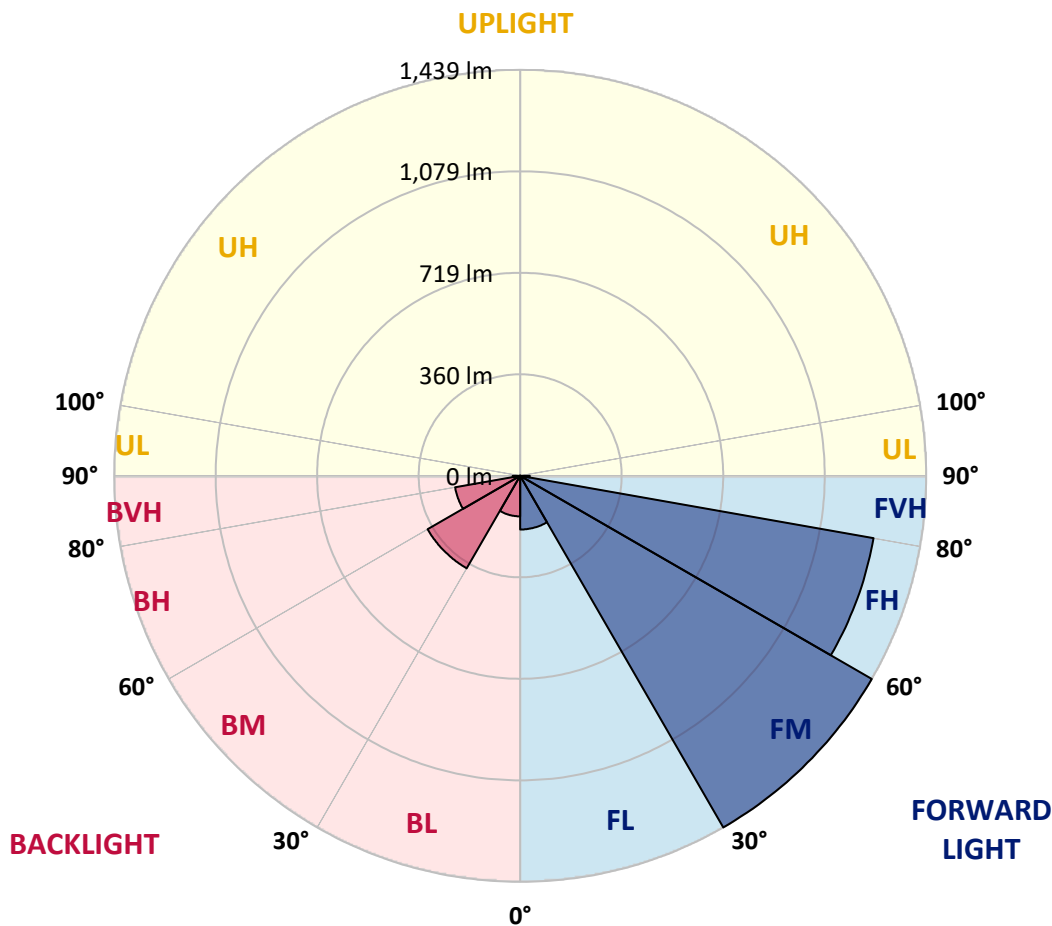
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	190.3	5.1			
FM (30°-60°)	1438.8	38.7			
FH (60°-80°)	1271.6	34.2			G1/1800
FVH (80°-90°)	34.2	0.9			G1/100
BL (0°-30°)	143.8	3.9	B1/500		
BM (30°-60°)	378.7	10.2	B1/1000		
BH (60°-80°)	234.1	6.3	B1/500		G1/500
BVH (80°-90°)	26.5	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	159.6	159.6	159.6	159.6	159.6	159.6	159.6	159.6	159.6	159.6	159.6
2.5°	190.6	184.9	175.3	177.6	183.2	186.3	184.4	181.9	178.7	178.1	192.3
5°	246.8	235.8	231.3	229.5	222.7	218.6	225.6	224.7	228.4	235.2	249.1
7.5°	287.8	280.1	272.7	271.9	258.7	254.1	263.4	268.3	275.0	275.1	294.0
10°	309.8	303.2	303.0	296.0	295.0	303.8	303.9	307.7	308.4	316.3	312.6
12.5°	333.7	333.2	341.7	341.6	351.5	366.0	358.8	358.8	360.9	351.3	363.1
15°	390.5	395.4	379.5	382.1	382.1	396.4	395.9	398.7	405.4	402.9	397.6
17.5°	449.6	452.7	435.1	418.7	419.9	416.8	428.0	429.0	422.7	451.5	445.1
20°	487.7	499.8	462.6	442.1	446.1	449.6	450.1	443.4	440.2	484.5	475.8
22.5°	534.8	524.6	490.5	467.8	473.8	469.0	468.1	473.2	477.7	494.4	508.5
25°	566.2	565.5	524.6	499.6	493.0	491.6	501.0	499.0	509.7	540.1	531.2
27.5°	611.9	626.1	553.7	559.9	530.6	499.8	530.2	539.3	558.5	553.5	573.2
30°	700.5	689.8	614.1	612.4	579.2	553.4	574.4	566.7	601.2	600.1	614.7
32.5°	772.8	780.2	685.0	667.2	642.6	611.4	597.5	619.0	637.6	668.1	676.3
35°	849.3	847.6	757.6	721.7	681.0	668.1	685.3	694.3	733.8	761.8	742.3
37.5°	968.2	954.7	851.7	783.8	753.3	748.6	778.0	765.0	807.8	814.4	825.4
40°	1078.7	1038.2	937.8	859.9	811.5	828.8	829.8	831.5	854.4	872.5	926.8
42.5°	1183.9	1155.4	1025.3	966.8	895.4	878.5	889.1	892.6	950.5	987.5	1062.8
45°	1327.5	1251.2	1151.0	1091.0	1011.1	989.5	982.1	1012.8	1068.7	1152.9	1217.5
47.5°	1449.1	1380.2	1284.7	1205.5	1116.2	1177.7	1135.6	1118.4	1193.5	1297.8	1400.6
50°	1549.9	1474.0	1380.3	1334.7	1320.4	1375.2	1265.9	1267.9	1336.7	1483.9	1601.8
52.5°	1627.9	1546.9	1464.0	1440.7	1520.3	1551.9	1472.9	1461.0	1511.2	1685.2	1826.7
55°	1700.9	1614.9	1550.8	1598.2	1732.3	1735.8	1730.3	1664.2	1724.5	1900.9	2059.6
57.5°	1719.6	1627.0	1584.4	1652.4	1833.7	1974.8	2030.2	1900.4	1961.9	2097.1	2259.0
60°	1623.1	1543.9	1526.8	1619.1	1888.5	2094.8	2239.5	2161.9	2138.9	2254.5	2398.7
62.5°	1425.6	1333.6	1347.4	1475.6	1830.8	2142.3	2404.9	2465.4	2325.8	2379.8	2459.7
65°	1134.6	1046.8	1074.7	1228.9	1649.4	2158.1	2489.4	2613.6	2393.3	2415.3	2373.3
67.5°	800.2	720.4	755.6	955.0	1372.1	1955.9	2504.0	2544.5	2321.4	2314.2	2137.3
70°	453.4	403.3	441.4	607.7	968.5	1558.1	2389.9	2336.4	2192.6	2089.5	1788.3
72.5°	207.9	190.8	209.0	309.4	557.6	1036.8	1951.1	1999.5	1889.3	1760.3	1360.5
75°	110.6	104.5	112.3	154.5	260.9	564.1	1386.2	1495.2	1436.6	1335.1	887.5
77.5°	82.2	77.6	81.3	100.2	139.4	220.6	787.6	925.1	947.4	854.1	492.8
80°	63.0	59.3	63.0	75.7	96.5	104.8	336.8	431.2	491.1	396.8	195.9
82.5°	46.8	44.3	50.0	56.8	67.8	65.5	119.5	148.8	191.8	131.1	76.3
85°	37.2	34.1	36.2	38.6	43.4	35.9	54.7	61.2	64.7	54.2	28.2
87.5°	14.6	13.5	26.3	20.7	17.7	10.8	16.4	18.6	19.0	18.3	8.2
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°	159.6	159.6	159.6	159.6	159.6	159.6	159.6	159.6	159.6	159.6	159.6
2.5°	193.9	192.3	183.2	186.1	190.9	191.8	193.9	188.3	185.5	195.7	196.2
5°	250.4	242.0	237.7	238.1	235.0	230.2	237.5	242.3	244.2	251.8	254.5
7.5°	294.2	284.1	276.8	268.5	256.7	249.1	261.8	271.1	276.1	291.9	298.1
10°	313.7	305.6	304.1	293.6	293.3	293.1	292.5	289.2	299.9	298.4	302.7
12.5°	354.0	352.2	337.5	333.4	333.8	333.4	320.4	319.7	319.9	334.1	329.0
15°	391.4	391.7	378.3	363.1	349.5	345.3	340.2	337.8	341.3	349.3	344.4
17.5°	437.7	439.3	400.7	376.7	358.8	358.3	346.1	331.7	352.4	357.4	351.9
20°	467.6	461.1	413.7	373.5	368.4	354.4	339.2	319.4	337.4	349.5	352.9
22.5°	495.9	484.6	425.8	379.2	354.7	338.2	323.4	310.6	316.3	329.8	327.6
25°	515.1	512.0	442.5	393.0	354.3	317.4	297.6	289.4	292.3	313.2	311.2
27.5°	561.0	527.5	439.6	396.5	339.4	289.1	279.2	270.3	267.4	290.0	296.2
30°	591.6	577.8	459.2	391.0	320.7	265.9	251.3	249.4	250.4	276.1	277.8
32.5°	643.6	607.9	491.4	369.6	293.4	248.7	231.9	232.7	236.9	255.6	259.5
35°	697.8	676.5	495.8	354.3	271.3	230.4	223.6	218.2	220.5	236.9	237.7
37.5°	798.5	724.6	522.4	330.6	255.0	223.4	210.4	205.6	206.9	216.1	222.8
40°	887.0	821.4	510.0	307.7	234.9	214.1	197.9	194.3	190.6	199.7	203.9
42.5°	1029.0	890.5	505.8	282.4	225.4	201.6	190.4	181.0	177.4	185.2	192.8
45°	1171.0	963.7	483.1	256.9	212.1	200.7	179.6	170.6	171.6	178.5	186.3
47.5°	1329.3	1062.0	444.5	232.1	197.6	196.2	168.8	164.9	167.7	175.4	183.2
50°	1516.3	1166.4	412.6	209.8	187.2	182.7	167.4	162.7	165.4	174.5	182.1
52.5°	1720.8	1280.8	389.4	189.2	175.4	172.0	169.2	164.7	167.8	175.7	183.6
55°	1924.1	1385.3	373.6	175.1	165.4	167.5	173.1	169.9	171.4	177.3	185.2
57.5°	2074.9	1440.4	341.9	160.1	157.2	164.9	173.6	168.1	169.1	177.3	185.8
60°	2162.6	1451.0	289.7	147.9	150.7	159.6	168.8	161.8	161.2	174.7	185.3
62.5°	2153.0	1389.8	229.8	136.7	143.2	151.7	161.5	154.8	156.5	175.0	186.3
65°	2015.5	1264.8	182.7	127.3	134.2	143.1	155.5	152.8	161.0	187.3	199.6
67.5°	1773.9	1082.3	146.8	118.4	125.9	137.2	159.6	166.6	170.2	200.0	212.6
70°	1437.6	840.9	122.3	110.7	119.2	140.0	171.7	170.3	167.4	194.0	203.9
72.5°	1038.6	576.4	107.6	103.1	111.0	131.6	172.0	164.6	160.9	177.1	184.3
75°	649.8	343.9	94.0	93.5	98.5	118.0	164.3	157.6	147.6	155.6	164.9
77.5°	371.1	176.0	79.1	83.3	86.2	102.3	147.1	141.1	132.1	135.5	144.6
80°	141.7	85.2	66.7	74.0	73.2	86.7	124.6	123.2	113.0	114.1	119.7
82.5°	66.7	47.7	55.4	63.6	59.5	69.1	101.3	100.8	91.8	83.1	87.6
85°	24.8	25.4	40.6	48.5	41.3	44.6	73.2	71.2	62.6	52.8	58.4
87.5°	5.6	9.1	20.0	25.2	14.4	13.8	29.6	25.7	24.8	14.7	15.5
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)