

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: P596902

Luminaire Tested: **MSA-SA1D-835-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596902
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-SA1D-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: 5507 lumens
Efficiency: N/A
Efficacy: 82.2 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

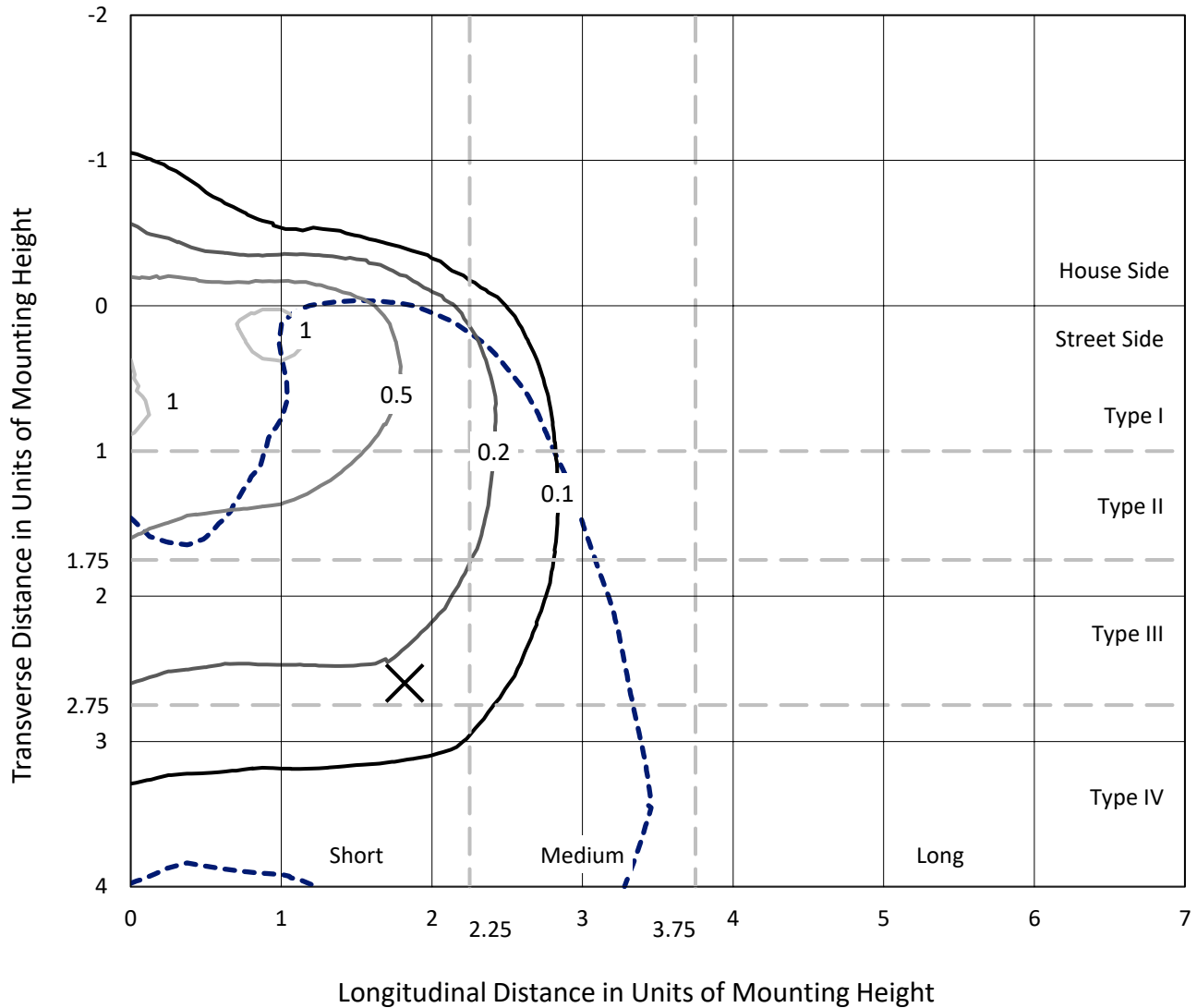
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

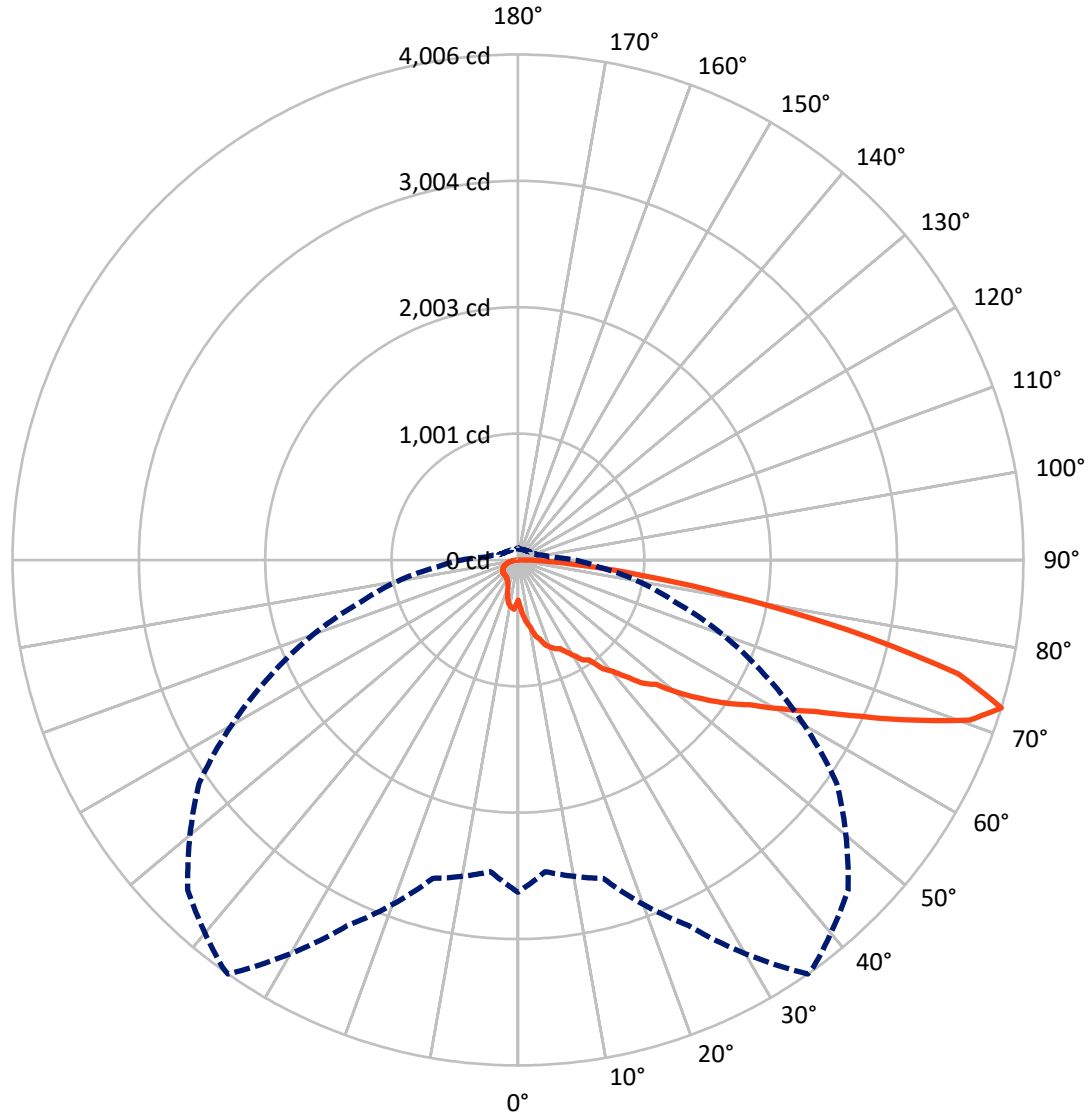
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 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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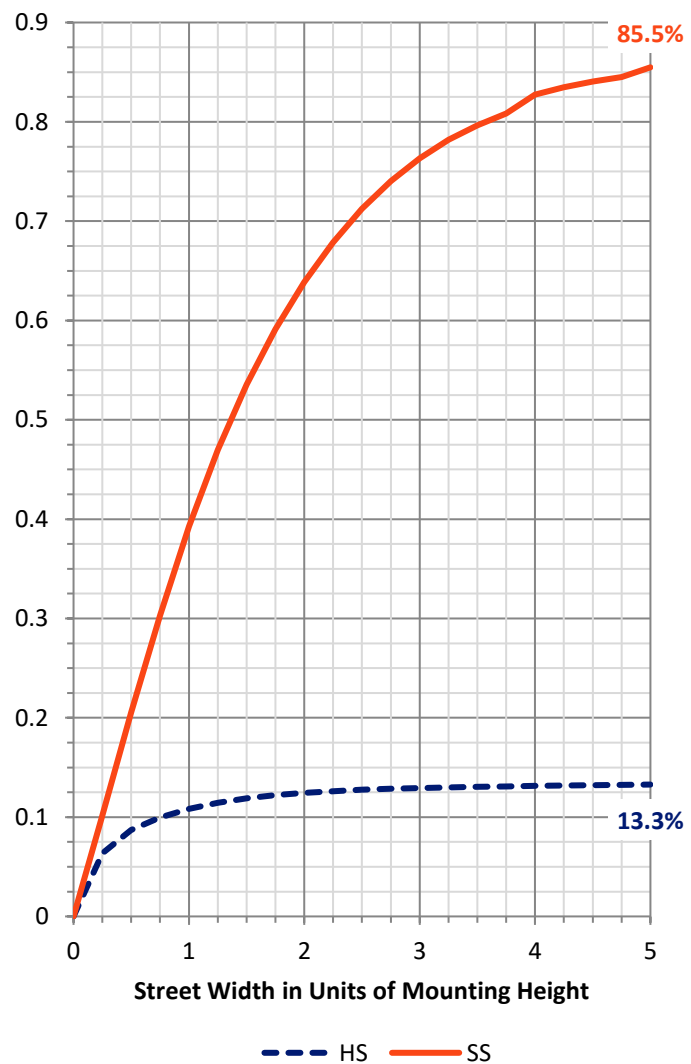
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	739.0	0.0	739.0
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	4768.0	0.0	4768.0
	% Fixture	86.6	0.0	86.6
Total	Lumens	5507.0	0.0	5507.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.3	0.8
10°-20°	149.0	2.7
20°-30°	258.9	4.7
30°-40°	432.7	7.9
40°-50°	751.0	13.6
50°-60°	1135.3	20.6
60°-70°	1470.7	26.7
70°-80°	1085.3	19.7
80°-90°	181.9	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°	5507.0	100.0
0°-180°	5507.0	100.0

Coefficient of Utilization



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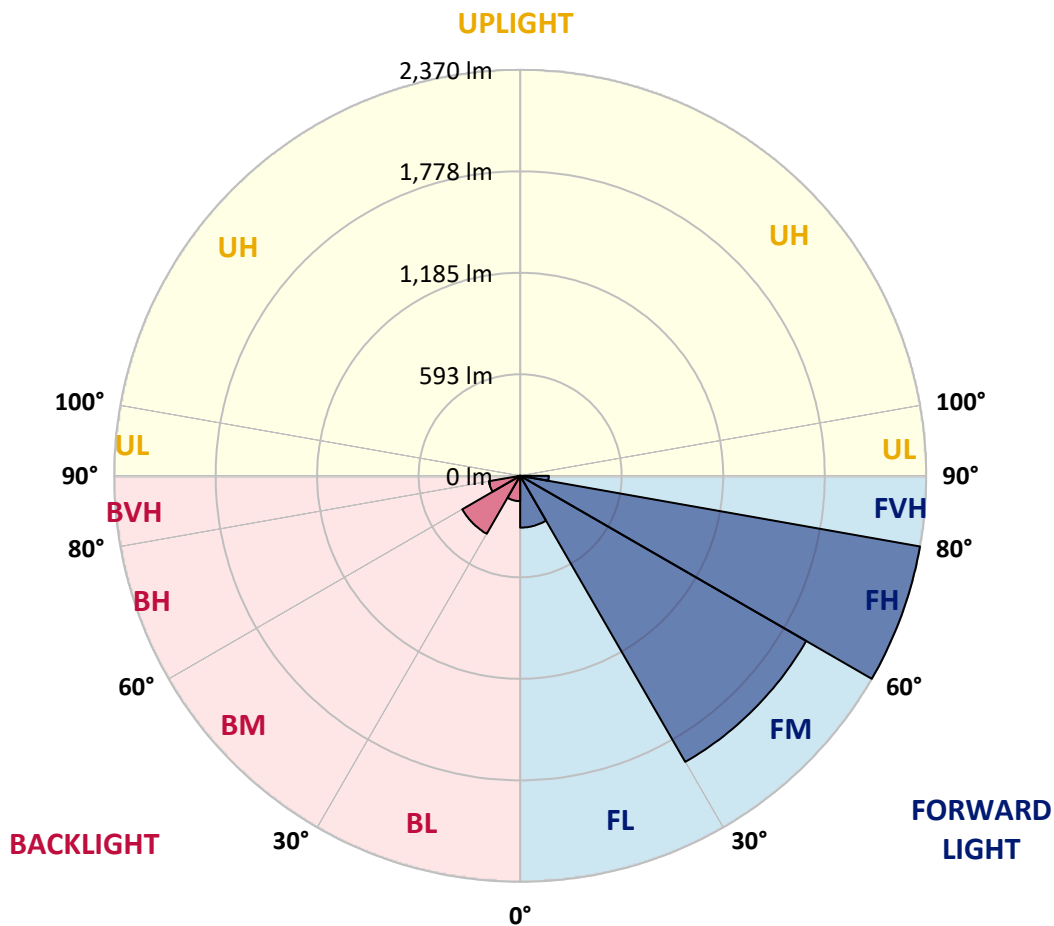
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	302.5	5.5			
FM (30°-60°)	1928.4	35.0			
FH (60°-80°)	2370.2	43.0			G2/5000
FVH (80°-90°)	167.0	3.0			G2/225
BL (0°-30°)	147.7	2.7	B1/500		
BM (30°-60°)	390.6	7.1	B1/1000		
BH (60°-80°)	185.8	3.4	B1/500		G1/500
BVH (80°-90°)	14.9	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°	318.3	318.3	318.3	318.3	318.3	318.3	318.3	318.3	318.3	318.3	318.3
2.5°	397.0	378.0	361.5	360.8	376.1	381.9	379.6	374.4	368.3	355.4	383.6
5°	497.4	470.1	464.9	458.8	444.9	448.7	426.1	443.3	448.7	461.2	480.0
7.5°	556.6	540.6	528.1	523.0	499.0	496.2	479.5	503.9	514.3	512.6	540.6
10°	579.9	565.3	566.2	549.3	541.5	544.8	546.7	547.2	553.5	558.7	544.6
12.5°	591.8	597.5	618.2	606.7	616.5	620.5	640.3	620.1	620.8	594.2	608.8
15°	652.3	666.4	654.4	653.9	650.8	657.4	674.3	660.7	671.3	662.8	644.0
17.5°	725.1	729.3	706.3	696.9	709.1	707.0	702.8	704.9	678.6	727.5	704.4
20°	747.4	764.1	733.8	696.9	737.3	742.7	741.8	732.6	687.5	758.0	735.7
22.5°	812.3	789.8	765.8	742.3	763.0	766.0	760.8	739.0	723.9	750.7	768.4
25°	841.7	836.3	805.7	802.9	780.1	769.3	778.2	771.9	757.1	804.8	785.3
27.5°	908.9	902.6	832.3	861.2	828.1	825.2	778.0	799.2	814.0	810.4	839.6
30°	985.1	992.4	889.6	918.6	880.2	875.1	827.6	854.4	864.5	867.8	904.2
32.5°	1069.7	1089.7	987.7	963.9	943.5	947.0	906.8	857.9	897.2	974.0	989.8
35°	1161.4	1169.6	1062.6	1026.9	973.6	969.8	970.5	976.6	1016.3	1104.0	1116.2
37.5°	1330.8	1292.8	1199.0	1108.5	1090.6	1055.6	1079.3	1098.1	1137.9	1272.3	1323.5
40°	1435.2	1407.0	1264.1	1211.7	1162.3	1165.6	1210.0	1209.8	1303.6	1442.2	1520.5
42.5°	1531.8	1501.0	1366.3	1313.7	1266.9	1278.4	1291.1	1313.4	1493.2	1716.8	1752.5
45°	1609.6	1542.1	1445.3	1433.5	1395.0	1379.7	1433.5	1469.3	1720.1	1938.9	1959.6
47.5°	1662.5	1607.0	1512.3	1501.9	1473.5	1510.9	1657.8	1680.8	1895.9	2162.0	2160.3
50°	1742.9	1666.9	1581.4	1576.0	1656.1	1676.1	1855.2	1852.9	2067.0	2347.2	2308.4
52.5°	1835.5	1739.8	1647.0	1705.0	1827.2	1837.1	1992.5	2055.7	2253.9	2525.8	2424.5
55°	1941.9	1835.0	1745.2	1822.8	2004.7	1975.6	2132.8	2287.2	2487.7	2714.1	2508.4
57.5°	2073.8	1944.1	1871.4	1989.4	2166.7	2192.5	2333.8	2528.2	2676.0	2831.1	2569.5
60°	2213.0	2060.6	1994.1	2106.5	2393.5	2423.1	2561.3	2728.4	2887.1	2941.4	2558.0
62.5°	2345.8	2181.0	2120.8	2259.5	2645.0	2718.3	2820.3	2926.8	3062.6	2968.2	2418.6
65°	2493.6	2328.6	2290.8	2498.8	2986.0	3058.9	3192.2	3160.2	3122.8	2873.2	2188.0
67.5°	2650.1	2482.6	2489.6	2776.4	3388.2	3400.6	3605.4	3392.9	3052.1	2621.7	1800.9
70°	2734.3	2562.7	2635.3	3072.3	3797.4	3779.5	3821.4	3455.4	2763.7	2072.4	1241.3
72.5°	2632.3	2479.3	2612.3	3196.9	4005.6	3986.4	3700.1	3084.3	2160.8	1288.8	643.6
75°	2228.7	2081.1	2284.6	2849.7	3606.1	3623.9	3148.9	2293.6	1237.0	518.3	267.2
77.5°	1514.4	1438.2	1612.6	2124.1	2678.6	2740.4	2336.4	1341.2	519.5	214.6	161.7
80°	800.3	764.1	892.9	1223.6	1696.1	1742.2	1373.8	668.0	266.1	138.9	115.4
82.5°	434.8	419.6	488.7	629.2	963.7	1003.9	712.4	443.8	179.3	87.0	70.5
85°	292.2	286.3	332.1	338.0	455.8	468.9	373.3	341.8	107.7	42.5	46.5
87.5°	146.2	140.3	174.9	154.4	173.9	174.2	171.1	218.1	27.3	14.1	8.5
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°	318.3	318.3	318.3	318.3	318.3	318.3	318.3	318.3	318.3	318.3	318.3
2.5°	384.1	375.8	347.4	347.2	351.4	348.6	350.7	339.2	334.2	356.8	355.6
5°	477.4	452.7	429.0	420.7	411.1	390.2	391.4	391.6	388.1	401.5	402.4
7.5°	532.1	502.5	480.7	437.0	402.6	375.8	379.4	383.4	379.4	397.2	403.8
10°	540.1	516.6	490.5	441.9	419.1	394.9	370.4	348.8	346.2	338.0	340.6
12.5°	587.6	568.1	513.6	460.2	433.7	396.5	351.9	327.2	306.5	310.0	303.4
15°	626.6	612.8	547.4	477.6	414.2	368.1	320.6	286.8	268.2	266.1	259.5
17.5°	679.5	659.8	550.5	465.6	389.0	333.8	280.2	241.9	233.9	230.6	227.3
20°	704.9	669.4	539.4	428.0	359.6	292.9	240.2	207.3	205.0	210.8	209.7
22.5°	727.0	677.4	529.6	405.2	313.8	251.5	213.0	191.3	188.7	196.3	197.7
25°	739.9	700.2	518.7	381.9	285.3	220.7	192.5	180.3	180.8	190.6	189.4
27.5°	798.2	708.2	491.5	354.4	252.7	197.9	182.6	176.3	173.7	187.3	188.5
30°	834.9	760.4	485.4	325.3	228.5	181.2	173.7	171.1	170.6	187.1	188.3
32.5°	903.0	777.8	488.2	293.6	206.6	176.0	167.1	166.9	171.6	187.3	189.2
35°	997.5	851.1	474.6	275.5	194.6	168.1	161.9	163.8	171.8	189.0	191.6
37.5°	1181.8	920.2	478.8	258.6	190.6	165.5	160.5	161.7	174.6	193.2	200.3
40°	1327.8	1045.5	472.2	250.1	185.2	165.0	157.5	162.2	174.4	195.6	201.9
42.5°	1539.3	1145.4	472.9	241.6	185.0	163.1	157.0	162.7	173.9	193.4	202.1
45°	1720.8	1234.9	483.0	236.7	182.6	166.2	156.3	163.4	170.9	185.9	195.6
47.5°	1869.6	1334.8	493.4	232.0	181.7	169.0	155.6	158.4	165.7	177.5	186.2
50°	1990.8	1405.1	506.5	231.0	181.7	167.6	153.7	153.5	159.6	169.0	177.2
52.5°	2085.3	1454.7	515.5	232.2	181.7	162.2	151.4	149.5	153.2	160.1	168.3
55°	2153.7	1470.0	508.2	235.3	181.5	157.2	147.1	145.5	147.4	152.1	159.8
57.5°	2181.2	1429.8	464.7	229.9	181.5	153.7	142.0	140.1	142.0	145.5	153.2
60°	2112.4	1300.5	401.9	216.0	177.9	149.0	136.1	134.9	137.7	140.8	148.3
62.5°	1939.6	1128.7	334.9	199.6	170.6	145.0	130.5	130.7	135.2	139.4	146.9
65°	1671.2	920.9	279.2	182.9	161.5	138.7	124.6	126.2	132.6	138.2	145.7
67.5°	1315.1	682.3	235.0	166.6	148.5	128.3	118.0	118.5	122.9	128.3	135.6
70°	879.1	434.1	193.2	147.6	131.6	114.9	107.9	106.2	105.1	109.8	116.1
72.5°	445.9	256.4	158.7	126.2	113.3	100.4	95.0	90.7	87.4	90.3	95.2
75°	233.6	179.3	128.1	104.8	93.5	85.3	81.3	75.7	73.3	75.0	78.5
77.5°	165.2	140.3	103.7	83.0	76.2	67.7	68.4	62.5	60.6	61.6	65.3
80°	126.9	111.2	79.7	62.8	58.8	50.5	52.9	49.4	47.0	46.5	49.4
82.5°	86.5	83.7	56.6	44.0	41.1	35.3	38.5	37.1	34.1	32.2	33.6
85°	58.3	55.5	34.6	25.4	24.2	18.3	23.5	22.6	20.0	17.2	17.4
87.5°	10.1	18.6	9.9	6.3	5.9	2.1	5.4	5.2	4.7	2.4	1.9
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)