

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: P367242

Luminaire Tested: **MSA-SA2A-830-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367242
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-830-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6274 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G2

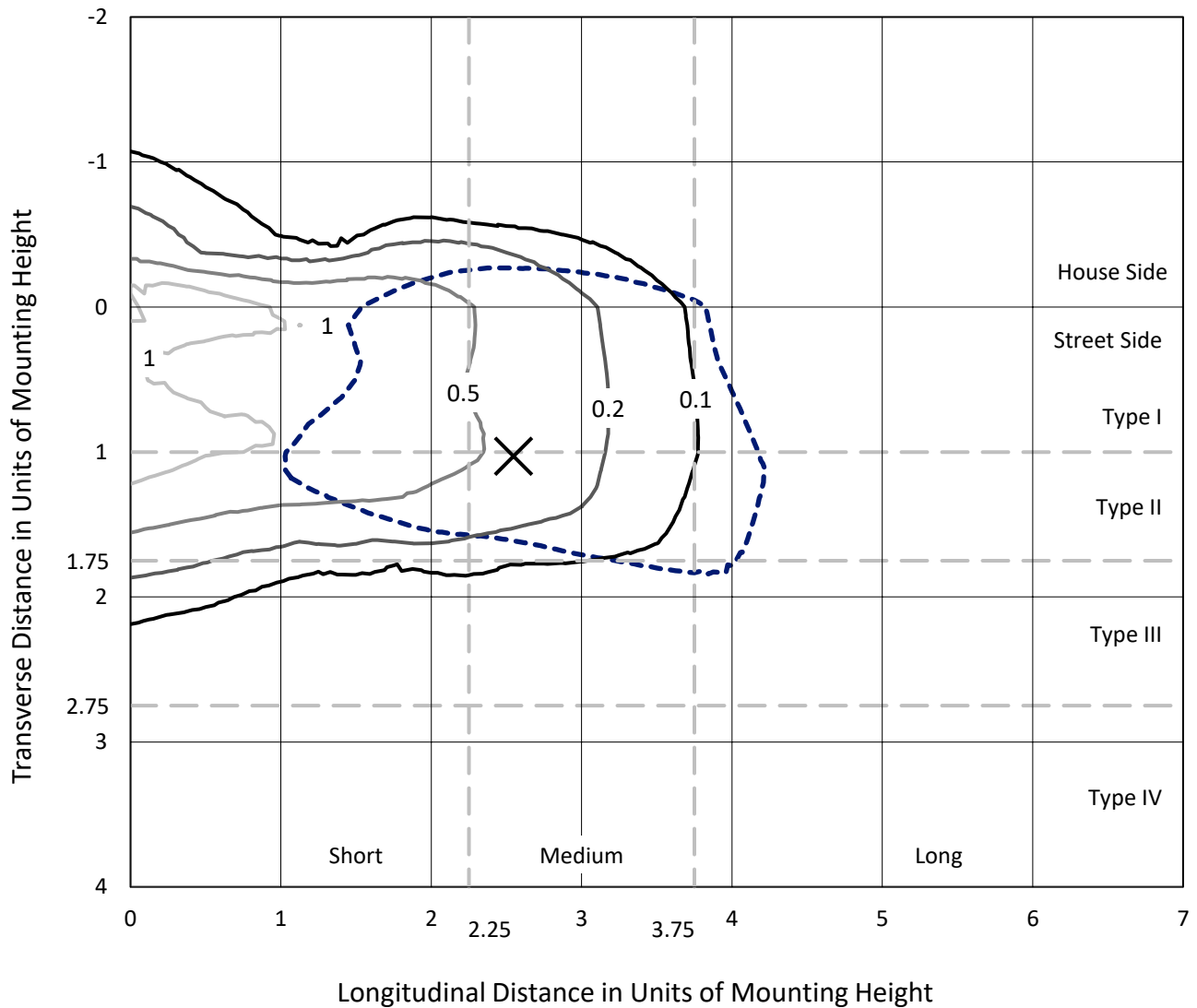
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

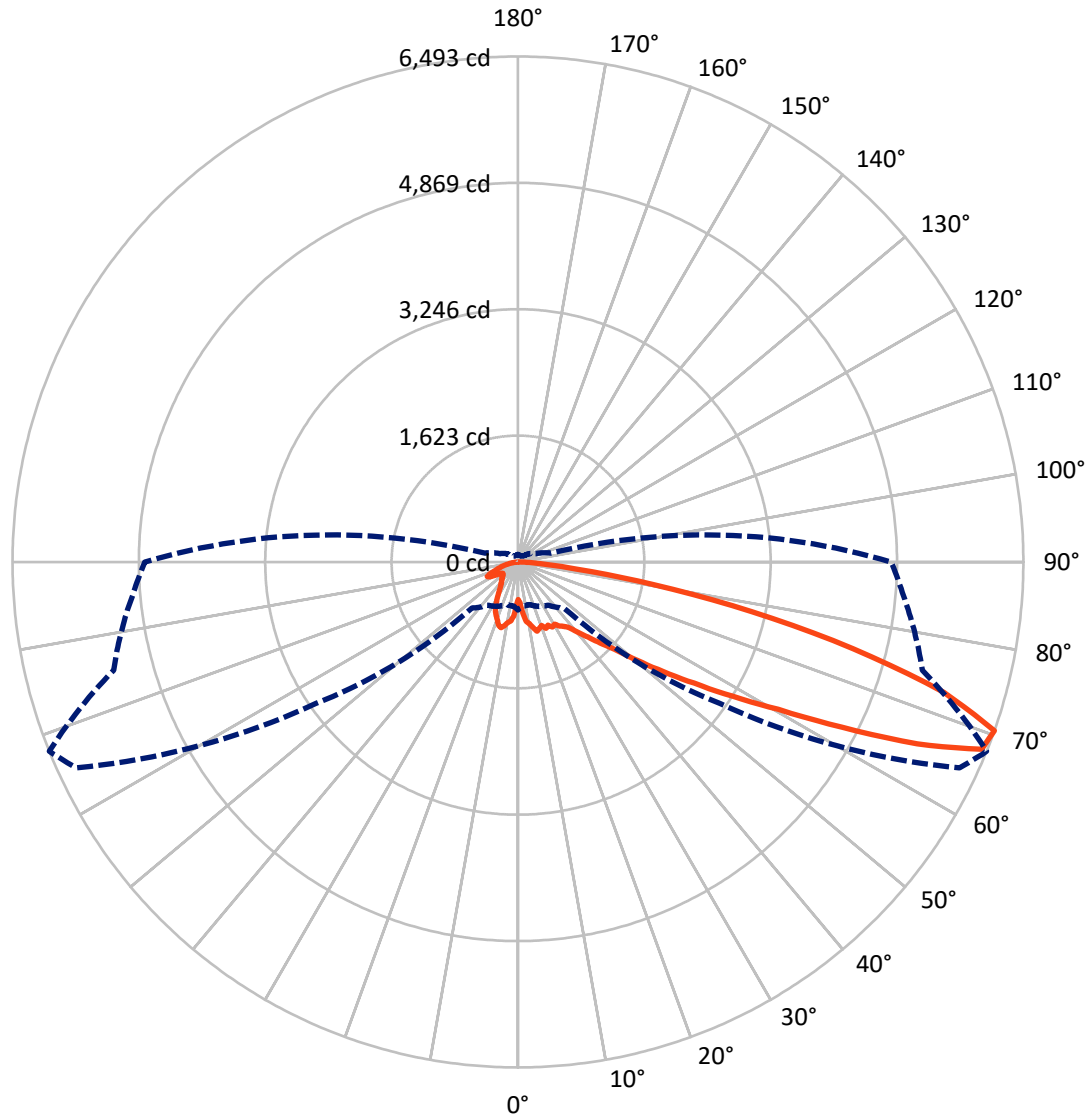
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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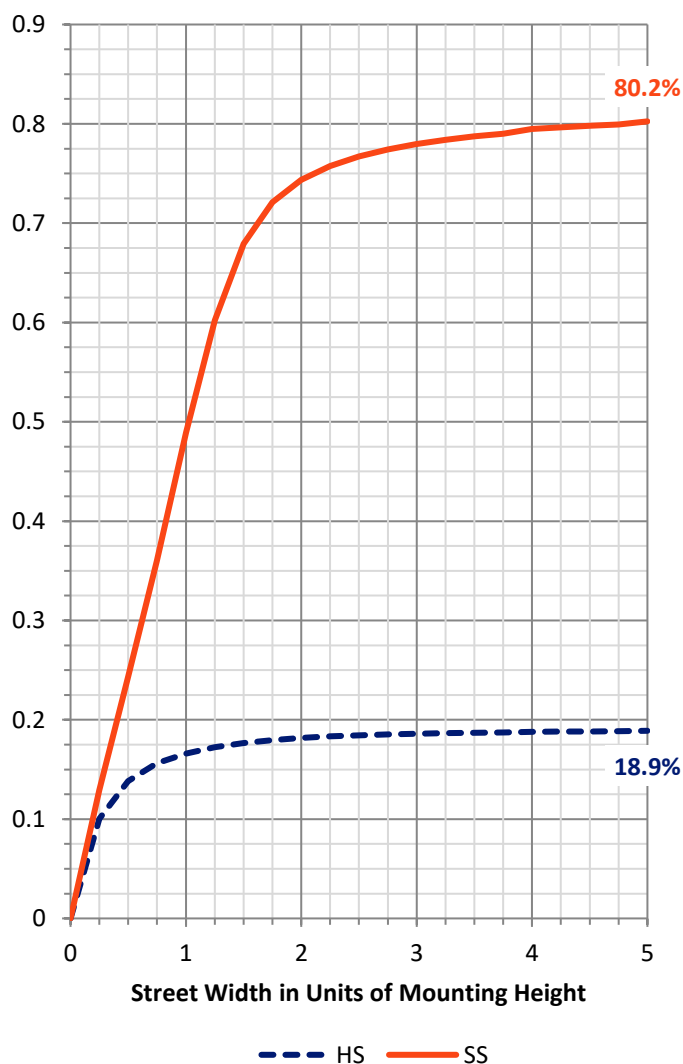
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1197.9	0.0	1197.9
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	5076.1	0.0	5076.1
	% Fixture	80.9	0.0	80.9
Total	Lumens	6274.0	0.0	6274.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.2	1.0
10°-20°	209.4	3.3
20°-30°	318.5	5.1
30°-40°	486.6	7.8
40°-50°	836.6	13.3
50°-60°	1384.7	22.1
60°-70°	1707.2	27.2
70°-80°	1096.7	17.5
80°-90°	170.1	2.7
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°	6274.0	100.0
0°-180°	6274.0	100.0

Coefficient of Utilization



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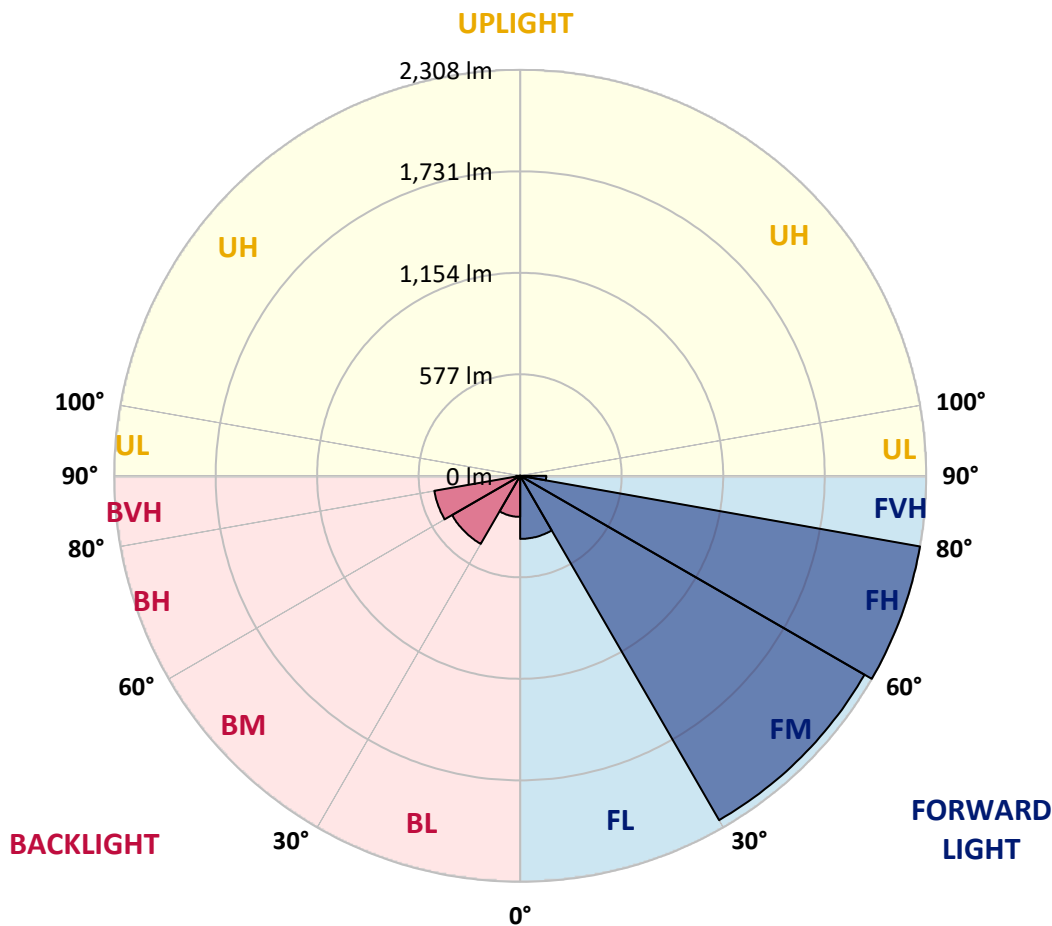
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	358.8	5.7			
FM (30°-60°)	2260.8	36.0			
FH (60°-80°)	2308.3	36.8			G2/5000
FVH (80°-90°)	148.3	2.4			G2/225
BL (0°-30°)	233.4	3.7	B1/500		
BM (30°-60°)	447.1	7.1	B1/1000		
BH (60°-80°)	495.5	7.9	B1/500		G1/500
BVH (80°-90°)	21.8	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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0
2.5°	552.7	530.4	507.8	518.9	536.5	551.9	548.8	550.6	529.4	526.5	582.4
5°	651.2	612.9	612.1	612.6	614.2	596.3	639.9	662.5	667.5	690.6	745.5
7.5°	685.3	669.8	654.1	662.0	642.0	643.9	697.4	756.2	770.2	787.0	862.1
10°	678.2	663.5	668.3	669.6	673.3	702.9	737.3	793.8	805.6	859.2	878.6
12.5°	679.3	676.7	698.7	699.5	738.9	792.2	805.9	857.9	862.6	902.0	983.1
15°	715.3	733.4	721.0	727.6	735.2	799.0	818.7	893.3	921.7	972.3	1033.3
17.5°	785.4	790.6	753.6	743.9	768.8	788.3	833.2	865.5	895.1	1036.7	1120.7
20°	801.7	815.8	771.7	721.6	774.4	801.4	832.6	847.4	870.5	1046.1	1165.3
22.5°	871.5	842.1	788.8	745.2	762.5	788.8	811.4	866.8	927.4	1019.1	1210.0
25°	911.2	894.1	846.6	799.8	785.1	785.9	829.5	879.1	900.1	1058.7	1218.9
27.5°	1007.0	979.7	872.8	863.9	808.5	765.4	832.4	909.6	946.3	1027.7	1262.5
30°	1127.0	1106.3	966.0	954.2	869.7	794.6	869.1	932.2	926.9	1048.0	1292.7
32.5°	1224.2	1258.8	1117.3	1024.1	963.9	892.0	857.6	928.2	980.5	1095.0	1343.9
35°	1362.8	1395.4	1235.2	1172.2	1041.7	937.2	938.2	982.3	1014.6	1149.8	1401.1
37.5°	1602.8	1574.2	1445.3	1345.7	1262.2	1106.3	1059.5	1044.0	1070.0	1217.1	1513.3
40°	1775.8	1751.7	1599.9	1543.2	1380.7	1290.1	1161.9	1147.2	1193.2	1286.4	1604.9
42.5°	1980.9	1937.9	1796.6	1749.8	1580.0	1416.6	1287.4	1295.8	1318.2	1417.2	1728.8
45°	2189.7	2085.2	2005.1	2001.4	1888.0	1662.4	1488.8	1482.0	1482.8	1609.6	1868.0
47.5°	2355.4	2261.4	2169.7	2126.1	2068.9	2087.5	1781.4	1701.3	1677.1	1803.4	2076.8
50°	2467.5	2359.3	2255.6	2245.3	2398.2	2498.7	2056.0	1970.4	1985.4	2080.7	2355.1
52.5°	2469.8	2341.4	2233.3	2304.9	2664.9	2808.8	2529.2	2290.0	2337.8	2402.6	2718.2
55°	2298.1	2165.0	2094.6	2257.9	2769.2	3176.7	3194.0	2802.0	2746.9	2770.8	3152.3
57.5°	1936.0	1801.6	1760.6	1956.2	2571.5	3531.5	3997.0	3413.8	3252.1	3152.3	3597.1
60°	1457.3	1341.0	1315.5	1440.3	2131.9	3427.2	4647.2	4175.3	3845.8	3578.5	4043.2
62.5°	1092.9	1009.4	971.0	988.9	1475.2	3088.2	5074.1	5137.4	4670.8	4043.8	4479.1
65°	888.1	820.6	786.4	763.3	917.5	2387.9	4996.9	5947.2	5634.5	4532.4	4818.4
67.5°	741.8	681.9	666.2	688.8	725.3	1385.4	4393.0	6400.2	6421.4	5014.5	5016.6
70°	615.8	571.4	565.6	629.7	677.7	836.1	3173.0	6257.8	6492.6	5376.1	4970.1
72.5°	475.8	451.9	451.1	551.7	673.3	712.6	1889.5	5406.0	5721.4	5260.6	4515.4
75°	330.1	313.5	326.1	453.5	657.8	722.9	1078.4	4210.8	4446.8	4476.5	3617.1
77.5°	227.1	213.2	226.9	328.0	587.4	740.2	754.4	3044.6	3070.9	3001.8	2071.8
80°	158.1	148.4	158.9	232.1	457.2	732.6	642.3	1916.8	1758.8	1339.7	663.3
82.5°	97.9	95.1	106.6	165.4	321.9	666.4	608.7	989.1	755.2	369.7	236.8
85°	51.5	47.3	62.0	107.9	201.4	523.1	570.3	451.4	291.5	131.3	95.1
87.5°	15.2	13.7	23.9	43.6	85.3	234.5	326.4	191.4	108.7	38.6	29.7
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°	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0
2.5°	586.3	583.5	544.6	549.6	558.0	560.1	559.8	545.6	530.7	572.4	571.1
5°	746.8	720.8	701.4	697.2	673.3	649.4	657.8	654.9	651.2	670.1	672.5
7.5°	862.3	826.3	803.8	745.7	690.6	642.8	658.0	662.8	653.3	687.4	697.7
10°	892.8	864.4	840.0	765.4	735.0	707.1	665.9	618.9	612.6	592.9	595.3
12.5°	971.3	967.4	884.1	818.5	778.8	723.4	634.4	577.4	528.6	530.9	516.8
15°	1033.3	1035.4	935.3	843.4	737.1	652.5	547.7	476.8	426.7	416.7	406.5
17.5°	1116.5	1112.3	939.5	813.5	678.8	554.8	426.4	356.1	347.7	353.4	344.5
20°	1152.7	1115.7	912.7	739.2	587.7	421.4	322.2	284.9	301.2	324.3	324.8
22.5°	1185.3	1122.0	898.8	679.3	466.3	306.4	258.6	251.8	271.0	302.2	304.9
25°	1184.0	1151.2	873.9	618.9	361.6	239.2	224.8	229.8	252.6	285.2	287.0
27.5°	1243.6	1128.8	809.0	539.6	272.3	204.8	208.5	217.7	228.4	259.4	265.5
30°	1243.1	1170.3	776.5	443.2	218.7	187.7	197.2	205.1	214.0	242.4	245.8
32.5°	1272.5	1143.3	756.8	344.8	196.1	183.5	185.9	193.8	206.7	225.8	228.2
35°	1307.9	1174.0	693.7	273.9	187.7	179.9	181.7	186.2	198.0	215.6	217.9
37.5°	1421.6	1179.8	668.8	230.8	187.2	178.3	178.0	180.4	193.8	209.8	216.9
40°	1466.0	1232.6	596.1	215.6	185.4	178.3	174.6	175.9	187.0	207.4	213.0
42.5°	1572.3	1250.2	542.2	210.3	185.4	175.1	169.4	171.5	184.3	202.5	211.1
45°	1681.8	1275.1	478.2	209.3	185.1	174.9	163.9	168.6	179.1	194.3	203.8
47.5°	1837.8	1364.9	414.1	206.1	183.0	176.2	162.5	162.3	171.5	184.6	193.5
50°	2092.3	1505.1	364.5	202.2	183.3	175.1	159.9	156.2	162.3	173.8	182.5
52.5°	2446.5	1744.1	345.0	200.1	181.2	170.9	155.4	149.7	153.1	162.3	170.7
55°	2857.7	2066.8	364.2	200.1	177.0	164.4	149.1	142.3	144.2	150.5	158.6
57.5°	3338.2	2467.7	456.9	197.2	171.7	156.5	141.5	133.7	134.2	139.7	147.0
60°	3840.0	2915.7	664.6	194.8	168.1	147.8	132.6	124.5	123.7	128.9	135.5
62.5°	4342.6	3329.0	883.1	200.3	167.0	140.5	123.2	115.0	114.7	119.5	125.0
65°	4742.2	3611.5	937.4	222.7	173.8	132.1	113.4	105.8	105.3	109.2	115.3
67.5°	4938.4	3652.5	712.1	250.5	188.3	124.2	104.0	96.9	96.4	100.6	105.8
70°	4793.2	3372.6	439.6	253.4	187.5	115.0	94.3	88.2	87.2	91.6	95.6
72.5°	4255.9	2950.1	334.0	224.2	162.3	101.9	84.6	79.3	77.7	81.7	85.3
75°	3415.9	2342.2	267.6	180.9	127.9	85.9	74.8	69.8	68.0	71.7	74.8
77.5°	1989.8	1317.6	195.6	141.3	96.6	70.1	63.8	59.3	57.2	61.2	63.5
80°	647.0	439.0	122.9	101.4	70.6	54.9	51.7	48.6	46.5	49.1	49.9
82.5°	232.4	163.3	68.0	62.2	47.0	39.4	39.1	37.3	34.7	35.7	35.7
85°	102.9	74.6	40.4	33.3	28.1	21.0	24.7	23.4	20.7	20.2	19.4
87.5°	28.9	24.7	14.7	11.3	9.2	3.4	7.9	7.1	5.8	5.3	3.7
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)