

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: P367506

Luminaire Tested: **MSA-SA2C-830-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367506
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-SA2C-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: 9738 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

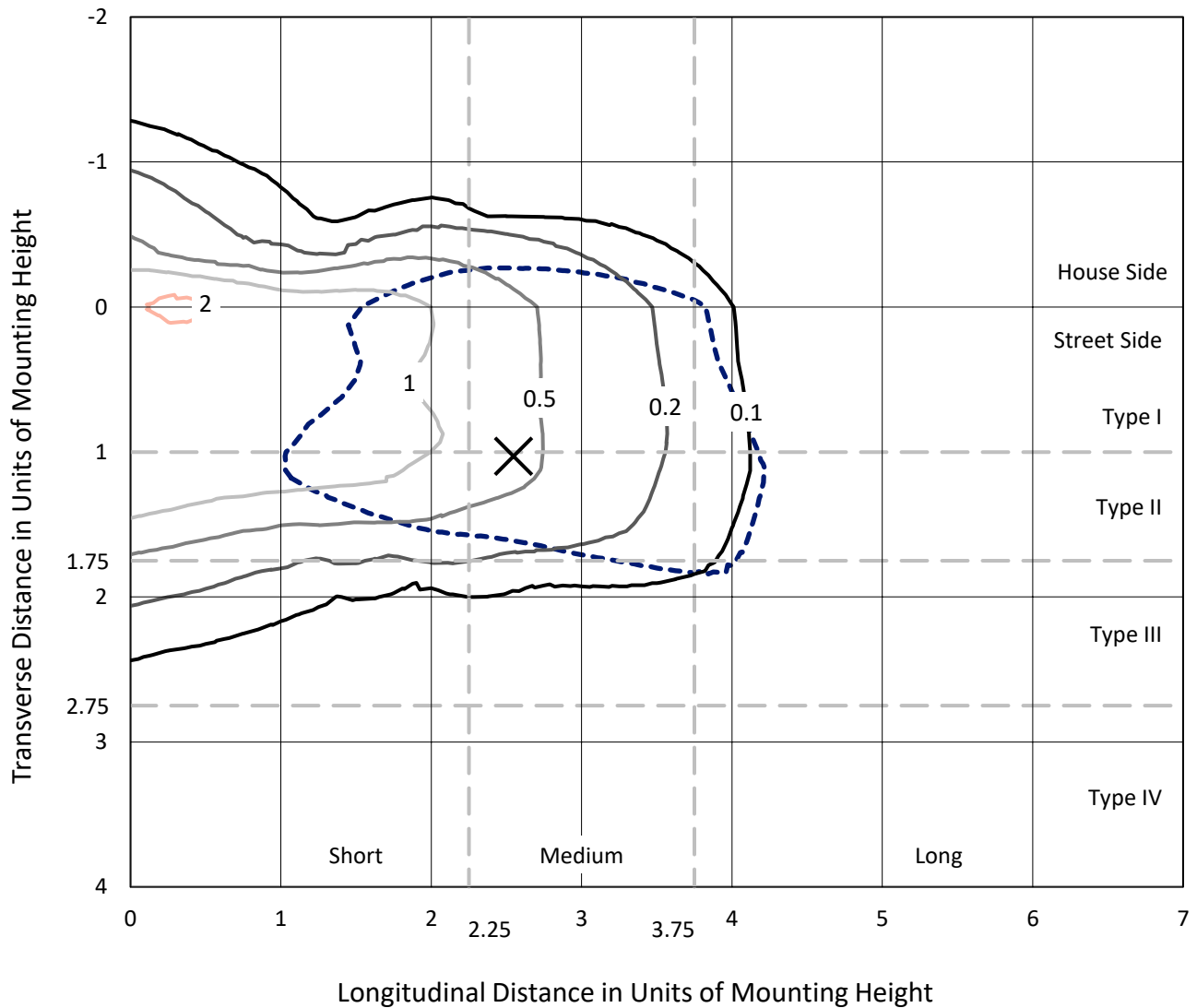
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

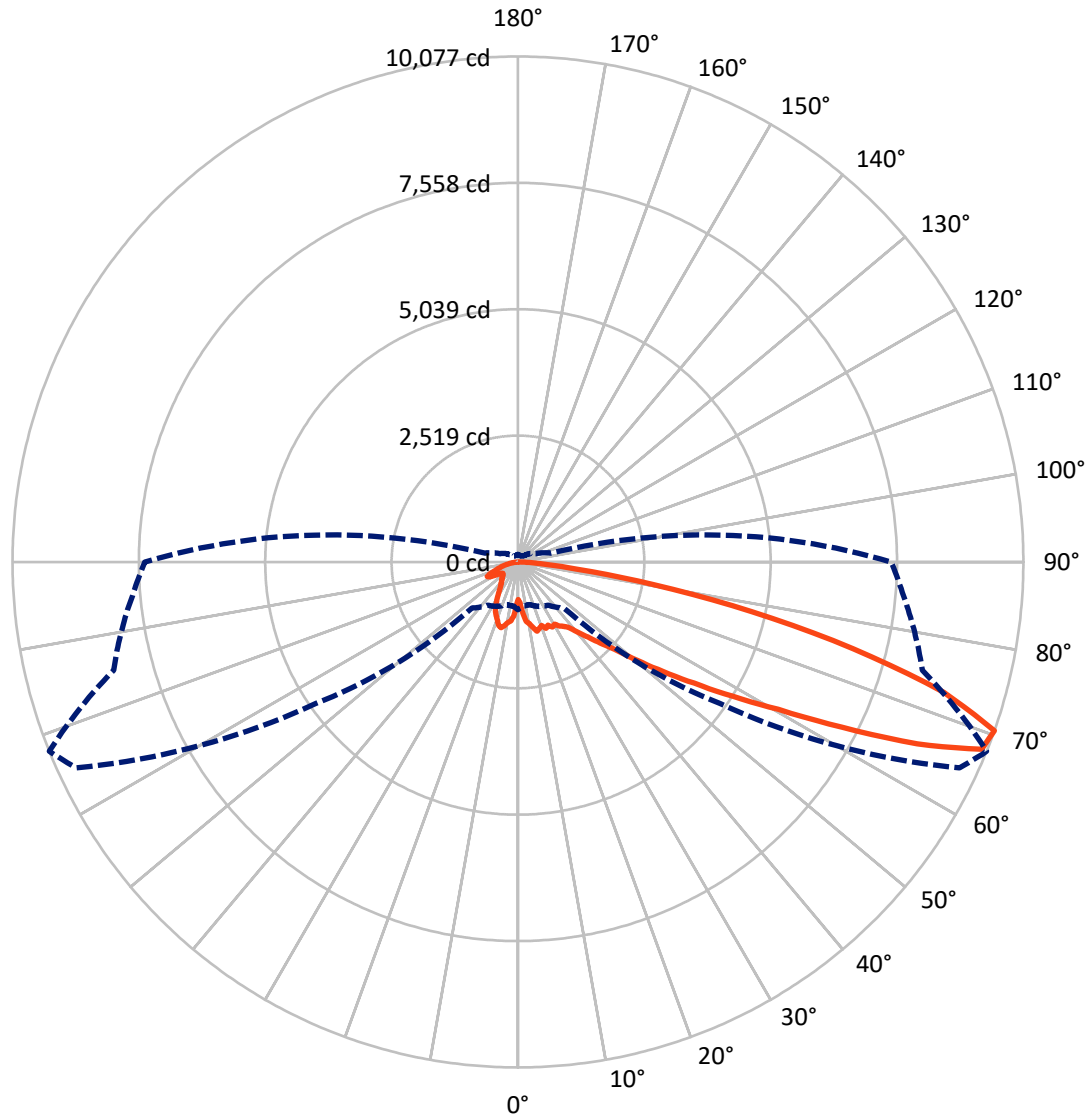
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 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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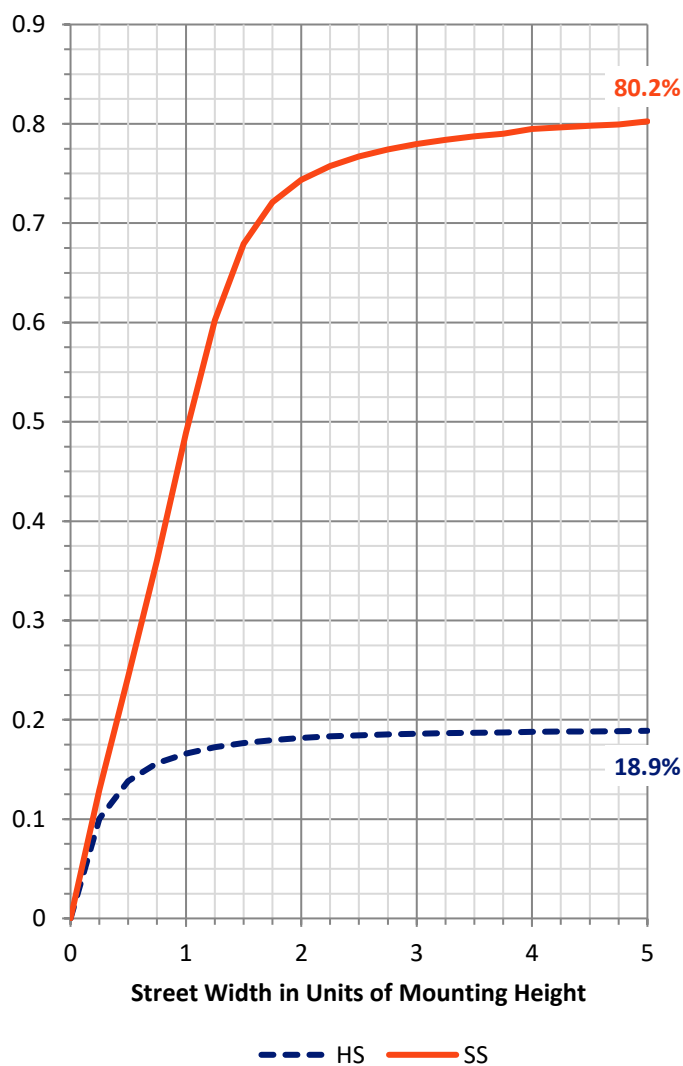
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1859.2	0.0	1859.2
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	7878.8	0.0	7878.8
	% Fixture	80.9	0.0	80.9
Total	Lumens	9738.0	0.0	9738.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.7	1.0
10°-20°	325.0	3.3
20°-30°	494.4	5.1
30°-40°	755.2	7.8
40°-50°	1298.5	13.3
50°-60°	2149.3	22.1
60°-70°	2649.8	27.2
70°-80°	1702.1	17.5
80°-90°	264.0	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°	9738.0	100.0
0°-180°	9738.0	100.0

Coefficient of Utilization



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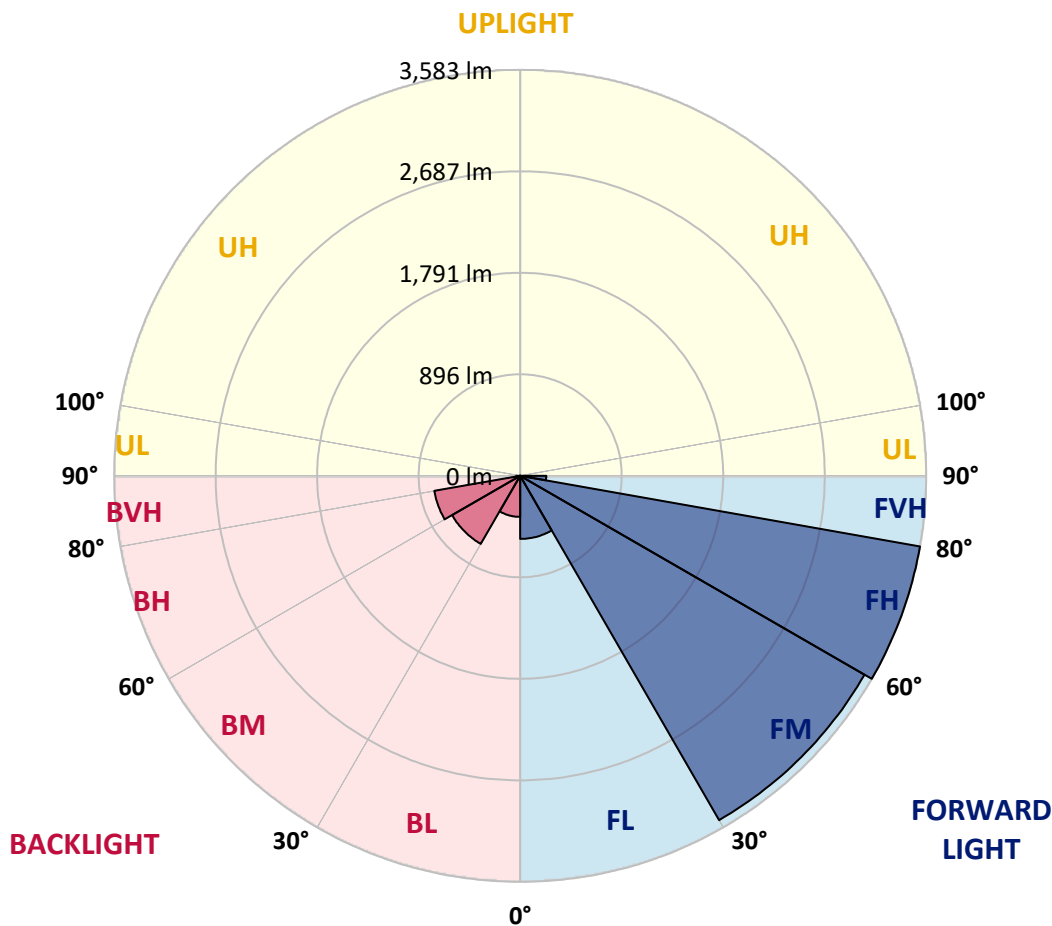
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	556.8	5.7			
FM (30°-60°)	3509.0	36.0			
FH (60°-80°)	3582.8	36.8			G2/5000
FVH (80°-90°)	230.1	2.4			G3/500
BL (0°-30°)	362.3	3.7	B1/500		
BM (30°-60°)	694.0	7.1	B1/1000		
BH (60°-80°)	769.1	7.9	B2/1000		G2/1000
BVH (80°-90°)	33.9	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	746.6	746.6	746.6	746.6	746.6	746.6	746.6	746.6	746.6	746.6	746.6
2.5°	857.9	823.3	788.2	805.3	832.6	856.7	851.8	854.6	821.6	817.2	904.0
5°	1010.7	951.2	950.0	950.8	953.3	925.6	993.2	1028.3	1036.0	1071.9	1157.1
7.5°	1063.7	1039.7	1015.2	1027.5	996.5	999.3	1082.5	1173.8	1195.4	1221.5	1338.0
10°	1052.7	1029.9	1037.2	1039.3	1045.0	1091.0	1144.4	1232.0	1250.4	1333.5	1363.7
12.5°	1054.4	1050.3	1084.5	1085.7	1146.9	1229.6	1250.8	1331.5	1338.8	1400.0	1525.9
15°	1110.2	1138.3	1119.2	1129.3	1141.2	1240.2	1270.8	1386.5	1430.5	1509.2	1603.7
17.5°	1219.0	1227.2	1169.7	1154.6	1193.3	1223.5	1293.2	1343.3	1389.4	1609.0	1739.5
20°	1244.3	1266.3	1197.8	1120.0	1201.9	1243.9	1292.4	1315.2	1351.1	1623.7	1808.7
22.5°	1352.7	1307.0	1224.3	1156.7	1183.5	1224.3	1259.4	1345.4	1439.5	1581.7	1878.0
25°	1414.2	1387.7	1314.0	1241.4	1218.6	1219.8	1287.5	1364.5	1397.1	1643.3	1891.9
27.5°	1563.0	1520.6	1354.7	1340.9	1254.9	1188.0	1292.0	1411.8	1468.8	1595.2	1959.5
30°	1749.2	1717.0	1499.4	1481.1	1349.8	1233.3	1349.0	1446.8	1438.7	1626.6	2006.4
32.5°	1900.0	1953.8	1734.2	1589.5	1496.1	1384.5	1331.1	1440.7	1521.8	1699.5	2085.9
35°	2115.2	2165.8	1917.2	1819.3	1616.8	1454.6	1456.2	1524.7	1574.8	1784.7	2174.7
37.5°	2487.7	2443.3	2243.2	2088.7	1959.1	1717.0	1644.5	1620.5	1660.8	1889.0	2348.8
40°	2756.3	2718.8	2483.3	2395.2	2142.9	2002.3	1803.4	1780.6	1851.9	1996.6	2491.0
42.5°	3074.6	3007.8	2788.5	2716.0	2452.3	2198.8	1998.3	2011.3	2045.9	2199.6	2683.4
45°	3398.6	3236.4	3112.1	3106.4	2930.3	2580.3	2310.9	2300.3	2301.5	2498.3	2899.4
47.5°	3655.8	3509.9	3367.7	3300.0	3211.2	3240.1	2764.9	2640.6	2603.1	2799.1	3223.4
50°	3829.8	3661.9	3500.9	3485.0	3722.2	3878.3	3191.2	3058.3	3081.5	3229.5	3655.4
52.5°	3833.5	3634.2	3466.3	3577.5	4136.3	4359.7	3925.6	3554.3	3628.5	3729.2	4219.0
55°	3567.0	3360.3	3251.1	3504.6	4298.1	4930.6	4957.5	4349.1	4263.5	4300.6	4892.7
57.5°	3004.9	2796.3	2732.7	3036.3	3991.2	5481.3	6203.9	5298.7	5047.6	4892.7	5583.1
60°	2261.9	2081.4	2041.9	2235.5	3309.0	5319.5	7213.0	6480.6	5969.1	5554.2	6275.6
62.5°	1696.3	1566.7	1507.2	1534.9	2289.7	4793.3	7875.7	7973.9	7249.6	6276.4	6952.1
65°	1378.4	1273.6	1220.6	1184.8	1424.0	3706.3	7755.8	9230.8	8745.4	7034.9	7478.7
67.5°	1151.4	1058.4	1034.0	1069.0	1125.7	2150.3	6818.5	9933.8	9966.8	7783.1	7786.4
70°	955.7	886.8	877.9	977.3	1051.9	1297.7	4924.9	9712.9	10077.3	8344.4	7714.3
72.5°	738.5	701.4	700.2	856.3	1045.0	1106.1	2932.8	8390.8	8880.3	8165.0	7008.4
75°	512.3	486.6	506.2	703.9	1020.9	1122.0	1673.8	6535.6	6902.0	6948.1	5614.1
77.5°	352.5	330.9	352.1	509.0	911.7	1148.9	1170.9	4725.6	4766.4	4659.2	3215.6
80°	245.4	230.3	246.6	360.3	709.6	1137.1	996.9	2975.2	2729.8	2079.4	1029.5
82.5°	152.0	147.5	165.5	256.8	499.7	1034.4	944.7	1535.3	1172.1	573.8	367.6
85°	79.9	73.4	96.2	167.5	312.6	811.9	885.2	700.6	452.4	203.8	147.5
87.5°	23.6	21.2	37.1	67.7	132.5	363.9	506.6	297.1	168.7	59.9	46.1
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°	746.6	746.6	746.6	746.6	746.6	746.6	746.6	746.6	746.6	746.6	746.6
2.5°	910.1	905.6	845.3	853.0	866.1	869.3	868.9	846.9	823.7	888.5	886.4
5°	1159.1	1118.7	1088.6	1082.1	1045.0	1007.9	1020.9	1016.5	1010.7	1040.1	1043.8
7.5°	1338.4	1282.6	1247.5	1157.5	1071.9	997.7	1021.3	1028.7	1014.0	1067.0	1082.9
10°	1385.7	1341.7	1303.8	1188.0	1140.8	1097.6	1033.6	960.6	950.8	920.3	923.9
12.5°	1507.6	1501.4	1372.2	1270.4	1208.8	1122.8	984.7	896.2	820.4	824.1	802.1
15°	1603.7	1607.0	1451.7	1309.1	1144.0	1012.8	850.2	740.1	662.3	646.8	630.9
17.5°	1732.9	1726.4	1458.2	1262.6	1053.5	861.2	661.9	552.6	539.6	548.6	534.7
20°	1789.2	1731.7	1416.7	1147.3	912.1	654.1	500.1	442.2	467.5	503.3	504.1
22.5°	1839.7	1741.5	1395.1	1054.4	723.8	475.6	401.4	390.8	420.6	469.1	473.2
25°	1837.7	1786.7	1356.4	960.6	561.2	371.3	348.9	356.6	392.1	442.6	445.5
27.5°	1930.2	1752.1	1255.7	837.5	422.6	317.9	323.6	337.9	354.6	402.7	412.0
30°	1929.4	1816.5	1205.2	688.0	339.5	291.4	306.1	318.3	332.2	376.2	381.5
32.5°	1975.0	1774.5	1174.6	535.1	304.4	284.9	288.6	300.8	320.7	350.5	354.2
35°	2030.0	1822.2	1076.8	425.1	291.4	279.2	282.0	289.0	307.3	334.6	338.3
37.5°	2206.5	1831.2	1038.1	358.2	290.6	276.7	276.3	280.0	300.8	325.6	336.6
40°	2275.4	1913.1	925.2	334.6	287.7	276.7	271.0	273.1	290.2	322.0	330.5
42.5°	2440.5	1940.4	841.6	326.5	287.7	271.8	262.9	266.1	286.1	314.2	327.7
45°	2610.4	1979.1	742.2	324.8	287.3	271.4	254.3	261.7	278.0	301.6	316.3
47.5°	2852.5	2118.5	642.7	319.9	284.1	273.5	252.3	251.9	266.1	286.5	300.4
50°	3247.4	2336.1	565.7	313.8	284.5	271.8	248.2	242.5	251.9	269.8	283.3
52.5°	3797.2	2707.0	535.5	310.6	281.2	265.3	241.3	232.3	237.6	251.9	264.9
55°	4435.5	3207.9	565.3	310.6	274.7	255.1	231.5	220.9	223.7	233.5	246.2
57.5°	5181.3	3830.2	709.2	306.1	266.5	242.9	219.7	207.4	208.3	216.8	228.2
60°	5960.1	4525.5	1031.5	302.4	260.8	229.5	205.8	193.2	192.0	200.1	210.3
62.5°	6740.2	5167.0	1370.6	311.0	259.2	218.0	191.1	178.5	178.1	185.4	194.0
65°	7360.5	5605.6	1455.0	345.6	269.8	205.0	176.1	164.2	163.4	169.5	178.9
67.5°	7665.0	5669.1	1105.3	388.8	292.2	192.8	161.4	150.4	149.6	156.1	164.2
70°	7439.6	5234.7	682.3	393.3	291.0	178.5	146.3	136.9	135.3	142.2	148.4
72.5°	6605.7	4578.9	518.4	348.1	251.9	158.1	131.2	123.1	120.6	126.8	132.5
75°	5301.9	3635.4	415.3	280.8	198.5	133.3	116.2	108.4	105.6	111.3	116.2
77.5°	3088.5	2045.1	303.6	219.3	150.0	108.8	99.0	92.1	88.8	95.0	98.6
80°	1004.2	681.4	190.7	157.3	109.6	85.2	80.3	75.4	72.1	76.2	77.4
82.5°	360.7	253.5	105.6	96.6	73.0	61.1	60.7	57.9	53.8	55.4	55.4
85°	159.8	115.7	62.8	51.8	43.6	32.6	38.3	36.3	32.2	31.4	30.2
87.5°	44.8	38.3	22.8	17.5	14.3	5.3	12.2	11.0	9.0	8.2	5.7
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)