

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: P367660

Luminaire Tested: **MSA-SA3A-727-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367660
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-SA3A-727-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 9745 lumens
Efficiency: N/A
Efficacy: 101.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

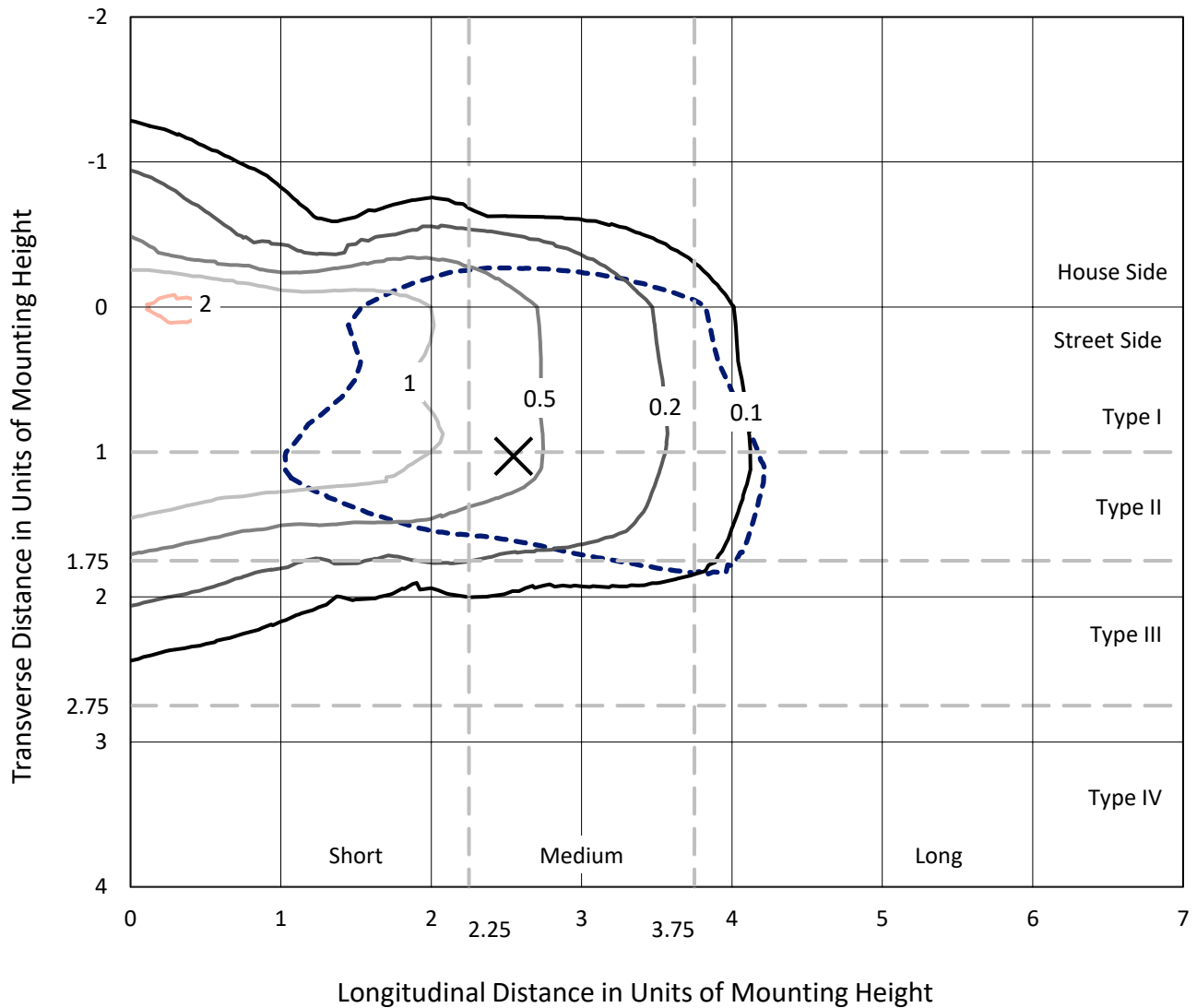
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

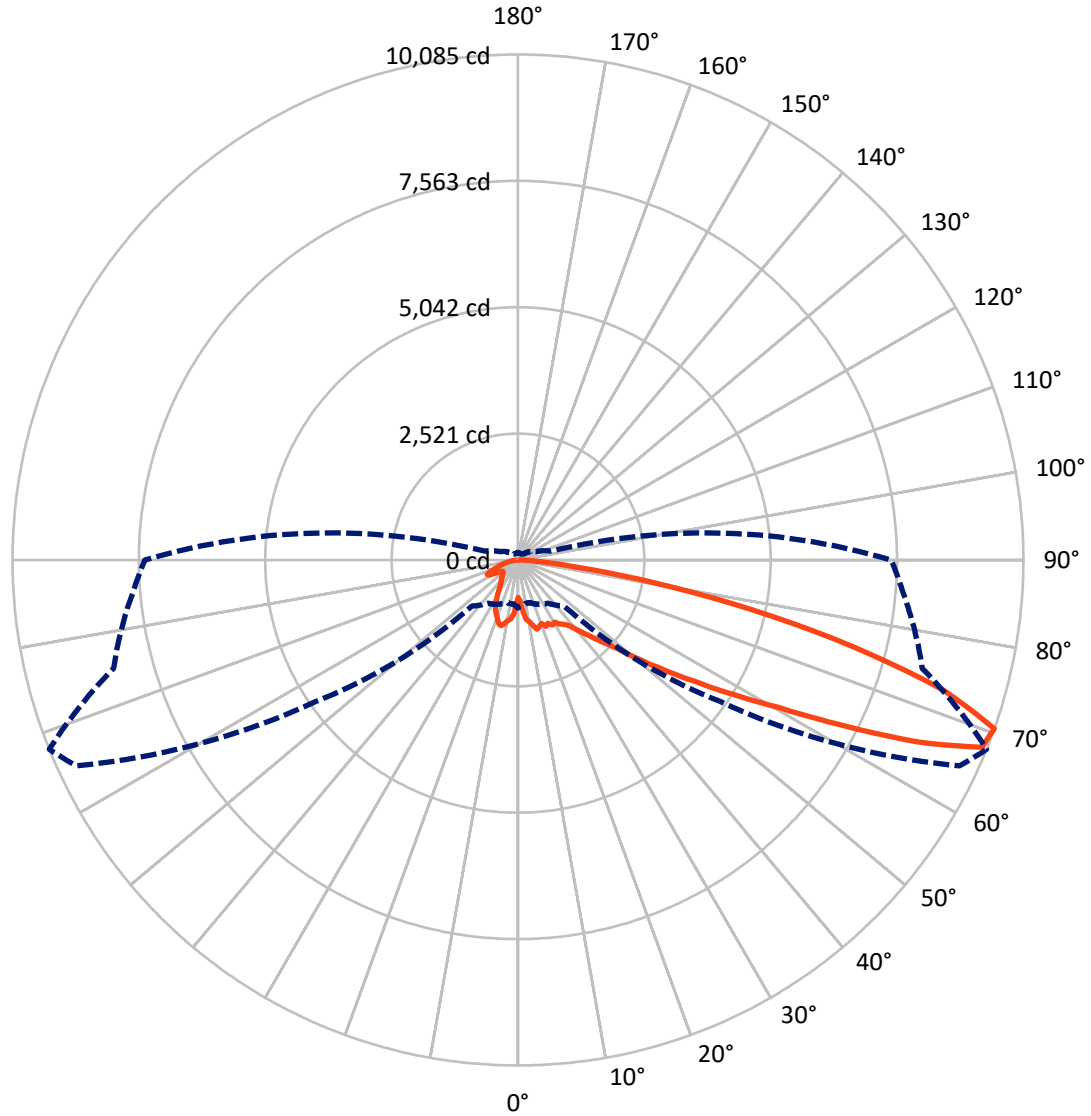
✕ Max cd
 - - - 1/2 Max cd



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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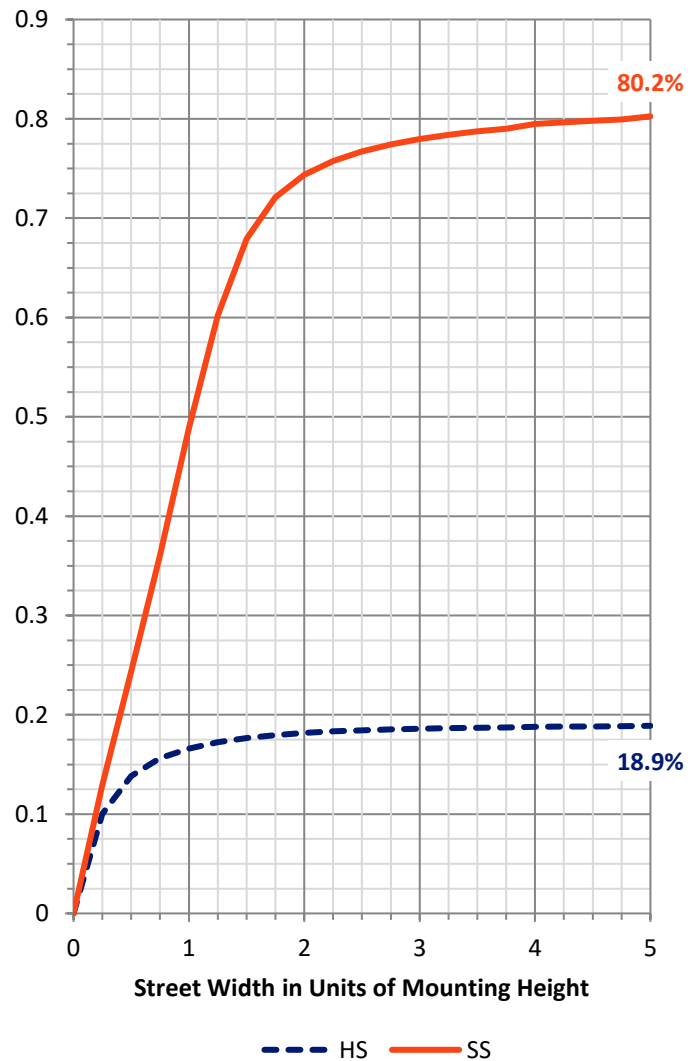
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1860.5	0.0	1860.5
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	7884.4	0.0	7884.4
	% Fixture	80.9	0.0	80.9
Total	Lumens	9745.0	0.0	9745.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.8	1.0
10°-20°	325.2	3.3
20°-30°	494.8	5.1
30°-40°	755.7	7.8
40°-50°	1299.4	13.3
50°-60°	2150.8	22.1
60°-70°	2651.7	27.2
70°-80°	1703.4	17.5
80°-90°	264.2	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°	9745.0	100.0
0°-180°	9745.0	100.0



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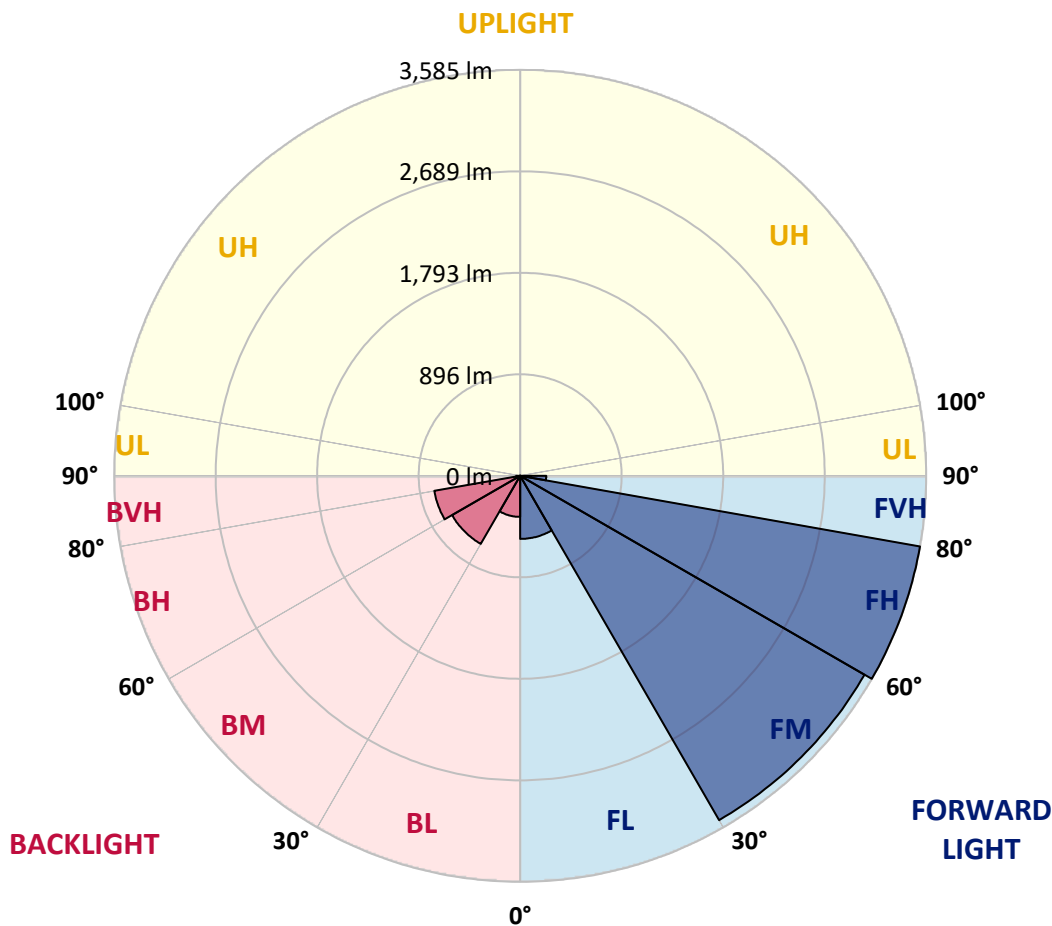
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	557.2	5.7			
FM (30°-60°)	3511.5	36.0			
FH (60°-80°)	3585.4	36.8			G2/5000
FVH (80°-90°)	230.3	2.4			G3/500
BL (0°-30°)	362.5	3.7	B1/500		
BM (30°-60°)	694.5	7.1	B1/1000		
BH (60°-80°)	769.6	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°	747.2	747.2	747.2	747.2	747.2	747.2	747.2	747.2	747.2	747.2	747.2
2.5°	858.5	823.9	788.8	805.9	833.2	857.3	852.4	855.3	822.2	817.7	904.6
5°	1011.5	951.9	950.7	951.5	954.0	926.2	993.9	1029.0	1036.8	1072.6	1157.9
7.5°	1064.5	1040.4	1016.0	1028.2	997.2	1000.1	1083.3	1174.6	1196.2	1222.3	1339.0
10°	1053.5	1030.6	1038.0	1040.0	1045.7	1091.8	1145.2	1232.9	1251.3	1334.5	1364.7
12.5°	1055.1	1051.0	1085.3	1086.5	1147.7	1230.5	1251.7	1332.5	1339.8	1401.0	1527.0
15°	1111.0	1139.1	1120.0	1130.2	1142.0	1241.1	1271.7	1387.5	1431.6	1510.3	1604.9
17.5°	1219.9	1228.0	1170.5	1155.4	1194.2	1224.4	1294.1	1344.3	1390.4	1610.2	1740.7
20°	1245.2	1267.2	1198.7	1120.8	1202.8	1244.8	1293.3	1316.1	1352.0	1624.9	1810.0
22.5°	1353.7	1308.0	1225.2	1157.5	1184.4	1225.2	1260.3	1346.3	1440.5	1582.9	1879.4
25°	1415.2	1388.7	1314.9	1242.3	1219.5	1220.7	1288.4	1365.5	1398.1	1644.5	1893.2
27.5°	1564.1	1521.7	1355.7	1341.8	1255.8	1188.9	1292.9	1412.8	1469.9	1596.3	1960.9
30°	1750.5	1718.3	1500.5	1482.1	1350.8	1234.2	1350.0	1447.9	1439.7	1627.7	2007.9
32.5°	1901.4	1955.2	1735.4	1590.6	1497.2	1385.5	1332.0	1441.8	1522.9	1700.7	2087.4
35°	2116.7	2167.3	1918.5	1820.6	1617.9	1455.6	1457.3	1525.8	1575.9	1786.0	2176.3
37.5°	2489.5	2445.1	2244.8	2090.2	1960.5	1718.3	1645.7	1621.6	1662.0	1890.4	2350.4
40°	2758.3	2720.8	2485.0	2396.9	2144.5	2003.8	1804.7	1781.9	1853.3	1998.1	2492.8
42.5°	3076.8	3009.9	2790.5	2717.9	2454.0	2200.4	1999.7	2012.7	2047.4	2201.2	2685.3
45°	3401.1	3238.7	3114.4	3108.6	2932.5	2582.1	2312.5	2301.9	2303.1	2500.1	2901.5
47.5°	3658.4	3512.4	3370.1	3302.4	3213.5	3242.4	2766.9	2642.5	2604.9	2801.1	3225.7
50°	3832.6	3664.5	3503.4	3487.5	3724.9	3881.1	3193.5	3060.5	3083.8	3231.8	3658.0
52.5°	3836.2	3636.8	3468.8	3580.1	4139.3	4362.8	3928.4	3556.9	3631.1	3731.8	4222.1
55°	3569.5	3362.7	3253.4	3507.1	4301.2	4934.2	4961.1	4352.2	4266.5	4303.6	4896.3
57.5°	3007.1	2798.3	2734.6	3038.5	3994.1	5485.2	6208.3	5302.5	5051.2	4896.3	5587.2
60°	2263.6	2082.9	2043.3	2237.1	3311.3	5323.3	7218.2	6485.2	5973.4	5558.2	6280.1
62.5°	1697.5	1567.8	1508.2	1536.0	2291.3	4796.7	7881.3	7979.6	7254.9	6280.9	6957.1
65°	1379.4	1274.5	1221.5	1185.6	1425.0	3709.0	7761.4	9237.4	8751.7	7039.9	7484.1
67.5°	1152.2	1059.2	1034.7	1069.8	1126.5	2151.8	6823.4	9941.0	9974.0	7788.7	7792.0
70°	956.4	887.5	878.5	978.0	1052.7	1298.6	4928.5	9719.9	10084.5	8350.3	7719.8
72.5°	739.0	701.9	700.7	856.9	1045.7	1106.9	2934.9	8396.8	8886.7	8170.9	7013.4
75°	512.7	487.0	506.6	704.4	1021.7	1122.8	1675.0	6540.3	6907.0	6953.0	5618.2
77.5°	352.8	331.2	352.4	509.4	912.4	1149.7	1171.8	4729.0	4769.8	4662.6	3217.9
80°	245.5	230.4	246.8	360.5	710.1	1137.9	997.6	2977.3	2731.8	2080.9	1030.2
82.5°	152.1	147.6	165.6	256.9	500.0	1035.1	945.4	1536.4	1173.0	574.3	367.9
85°	79.9	73.4	96.3	167.6	312.8	812.4	885.9	701.1	452.7	203.9	147.6
87.5°	23.7	21.2	37.1	67.7	132.6	364.2	507.0	297.3	168.9	60.0	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°	747.2	747.2	747.2	747.2	747.2	747.2	747.2	747.2	747.2	747.2	747.2
2.5°	910.7	906.2	845.9	853.6	866.7	869.9	869.5	847.5	824.3	889.1	887.1
5°	1159.9	1119.6	1089.4	1082.8	1045.7	1008.6	1021.7	1017.2	1011.5	1040.8	1044.5
7.5°	1339.4	1283.5	1248.4	1158.3	1072.6	998.4	1022.1	1029.4	1014.7	1067.8	1083.7
10°	1386.7	1342.6	1304.7	1188.9	1141.6	1098.3	1034.3	961.3	951.5	920.9	924.6
12.5°	1508.6	1502.5	1373.2	1271.3	1209.7	1123.6	985.4	896.9	821.0	824.7	802.7
15°	1604.9	1608.2	1452.8	1310.0	1144.8	1013.5	850.8	740.7	662.8	647.3	631.4
17.5°	1734.2	1727.7	1459.3	1263.5	1054.3	861.8	662.4	553.0	540.0	549.0	535.1
20°	1790.5	1733.0	1417.7	1148.1	912.8	654.6	500.4	442.5	467.8	503.7	504.5
22.5°	1841.0	1742.7	1396.1	1055.1	724.3	476.0	401.7	391.1	420.9	469.4	473.5
25°	1839.0	1788.0	1357.3	961.3	561.6	371.6	349.1	356.9	392.4	442.9	445.8
27.5°	1931.6	1753.4	1256.6	838.1	422.9	318.1	323.8	338.1	354.8	403.0	412.3
30°	1930.8	1817.8	1206.0	688.5	339.7	291.6	306.3	318.5	332.4	376.4	381.7
32.5°	1976.4	1775.8	1175.4	535.5	304.7	285.1	288.8	301.0	321.0	350.8	354.4
35°	2031.5	1823.5	1077.5	425.4	291.6	279.4	282.2	289.2	307.5	334.8	338.5
37.5°	2208.1	1832.5	1038.8	358.5	290.8	276.9	276.5	280.2	301.0	325.9	336.9
40°	2277.0	1914.5	925.8	334.8	287.9	276.9	271.2	273.3	290.4	322.2	330.8
42.5°	2442.2	1941.8	842.2	326.7	287.9	272.0	263.1	266.3	286.3	314.5	327.9
45°	2612.3	1980.5	742.7	325.1	287.5	271.6	254.5	261.8	278.2	301.8	316.5
47.5°	2854.6	2120.0	643.2	320.2	284.3	273.7	252.5	252.1	266.3	286.7	300.6
50°	3249.8	2337.8	566.1	314.0	284.7	272.0	248.4	242.7	252.1	270.0	283.5
52.5°	3800.0	2708.9	535.9	310.8	281.4	265.5	241.4	232.5	237.8	252.1	265.1
55°	4438.6	3210.2	565.7	310.8	274.9	255.3	231.7	221.1	223.9	233.7	246.3
57.5°	5185.0	3833.0	709.7	306.3	266.7	243.1	219.8	207.6	208.4	217.0	228.4
60°	5964.4	4528.8	1032.3	302.6	261.0	229.6	206.0	193.3	192.1	200.3	210.5
62.5°	6745.0	5170.7	1371.6	311.2	259.4	218.2	191.3	178.6	178.2	185.6	194.1
65°	7365.8	5609.6	1456.0	345.9	270.0	205.1	176.2	164.4	163.5	169.7	179.0
67.5°	7670.5	5673.2	1106.1	389.1	292.4	192.9	161.5	150.5	149.7	156.2	164.4
70°	7444.9	5238.4	682.7	393.6	291.2	178.6	146.4	137.0	135.4	142.3	148.5
72.5°	6610.5	4582.2	518.8	348.3	252.1	158.2	131.3	123.2	120.7	126.8	132.6
75°	5305.7	3638.0	415.6	281.0	198.6	133.4	116.2	108.5	105.6	111.3	116.2
77.5°	3090.7	2046.6	303.8	219.4	150.1	108.9	99.1	92.2	88.9	95.0	98.7
80°	1004.9	681.9	190.9	157.4	109.7	85.2	80.3	75.5	72.2	76.3	77.5
82.5°	360.9	253.7	105.6	96.7	73.0	61.2	60.8	57.9	53.8	55.5	55.5
85°	159.9	115.8	62.8	51.8	43.6	32.6	38.3	36.3	32.2	31.4	30.2
87.5°	44.9	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)