

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: P368191

Luminaire Tested: **MSA-SA4A-727-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368191
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-727-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10723 lumens
Efficiency: N/A
Efficacy: 83.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

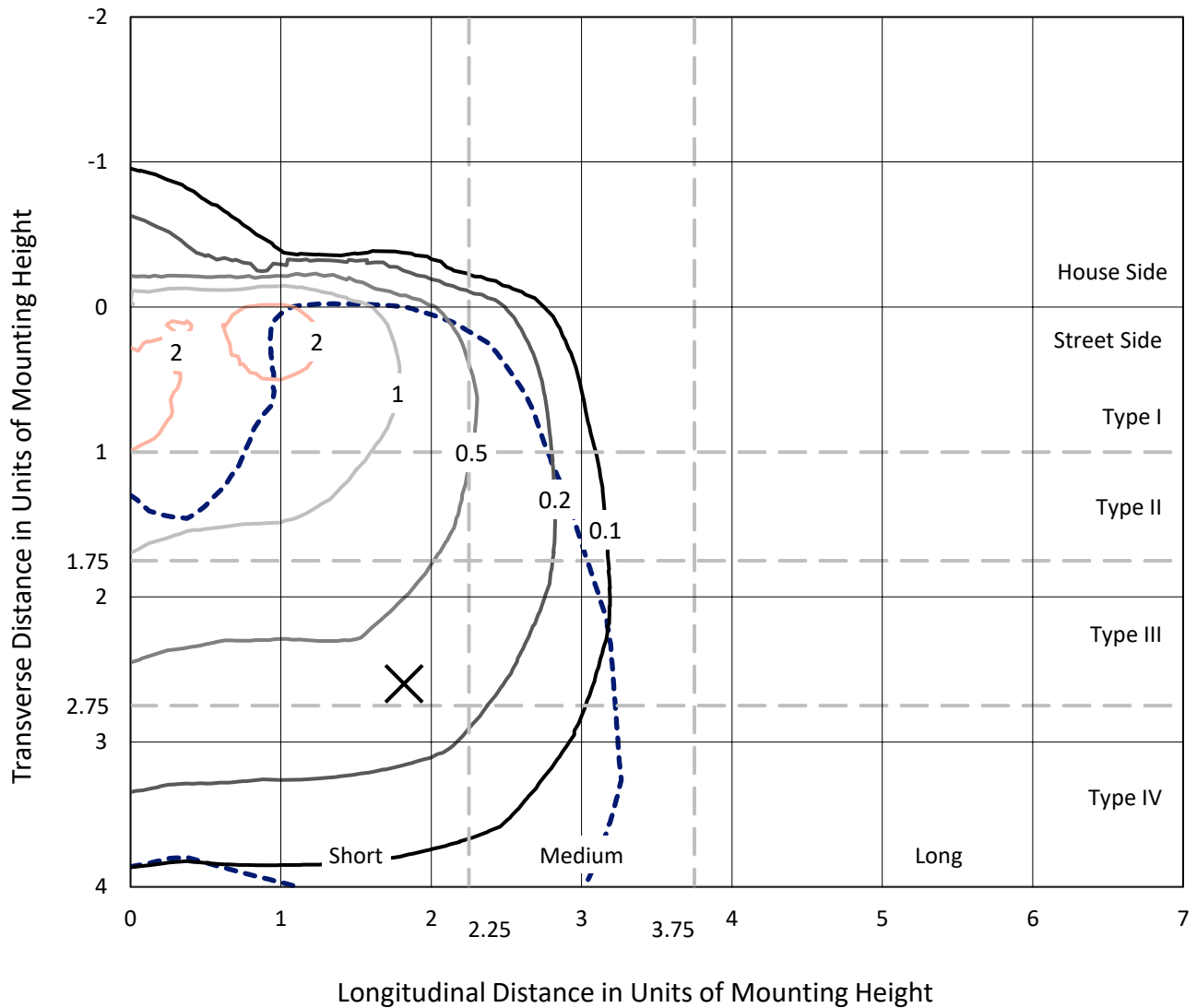
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

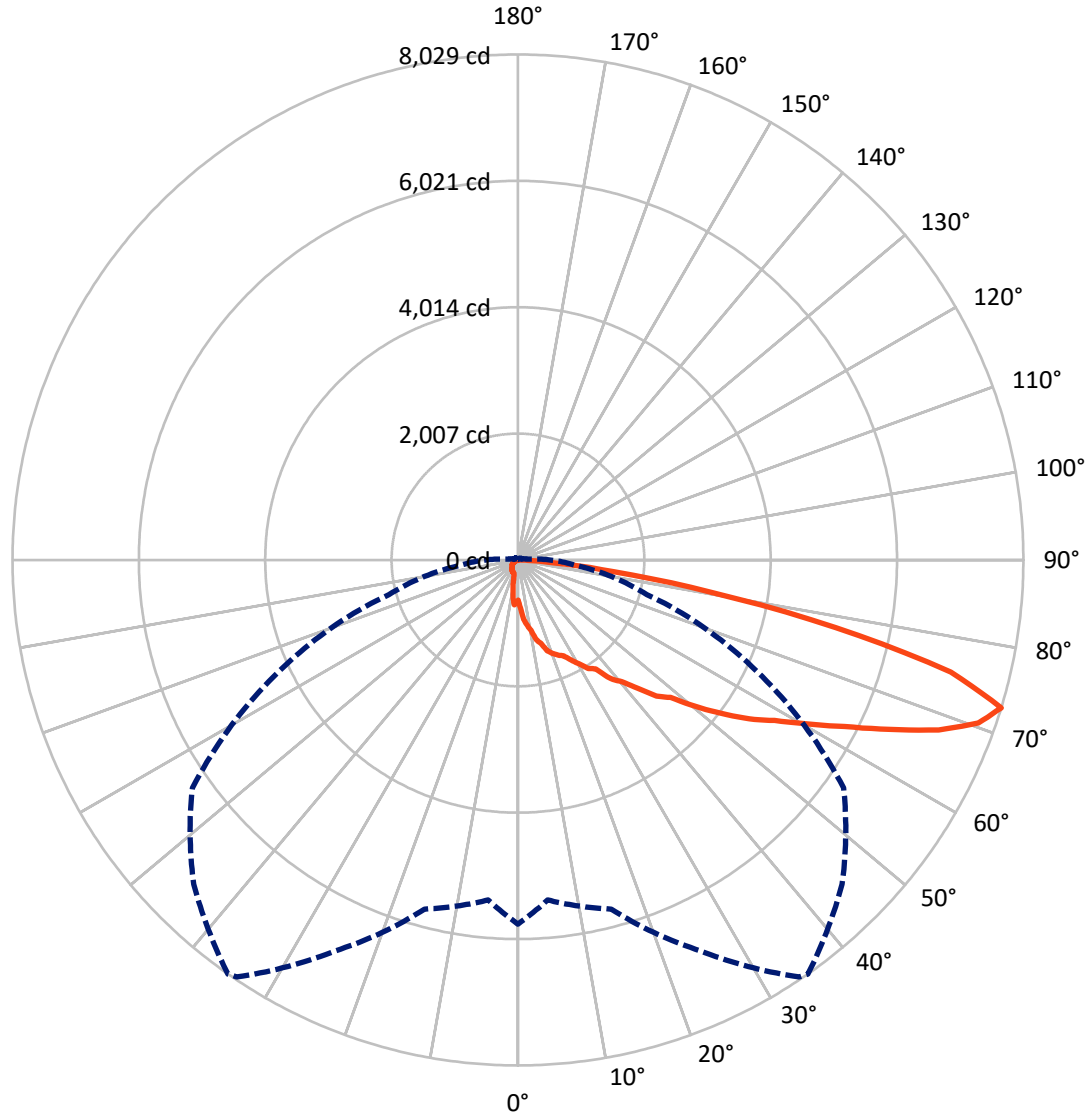
× Max cd
 - - - 1/2 Max cd



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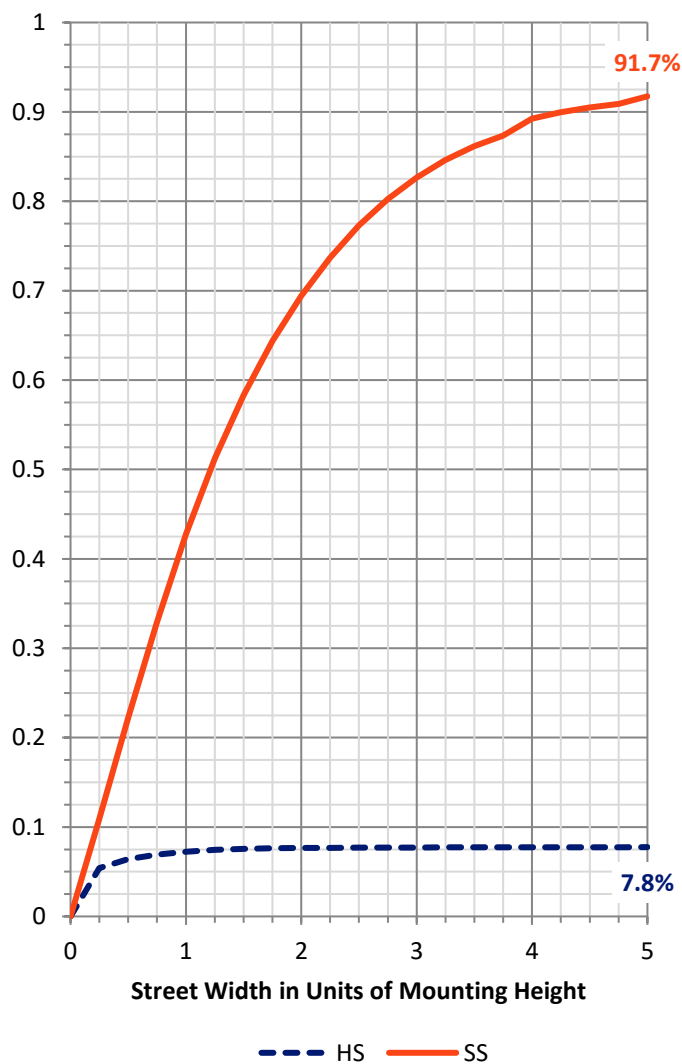
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	836.4	0.0	836.4
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	9886.6	0.0	9886.6
	% Fixture	92.2	0.0	92.2
Total	Lumens	10723.0	0.0	10723.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	0.8
10°-20°	274.4	2.6
20°-30°	499.7	4.7
30°-40°	862.0	8.0
40°-50°	1532.3	14.3
50°-60°	2286.6	21.3
60°-70°	2921.4	27.2
70°-80°	2032.5	19.0
80°-90°	232.5	2.2
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°	10723.0	100.0
0°-180°	10723.0	100.0

Coefficient of Utilization



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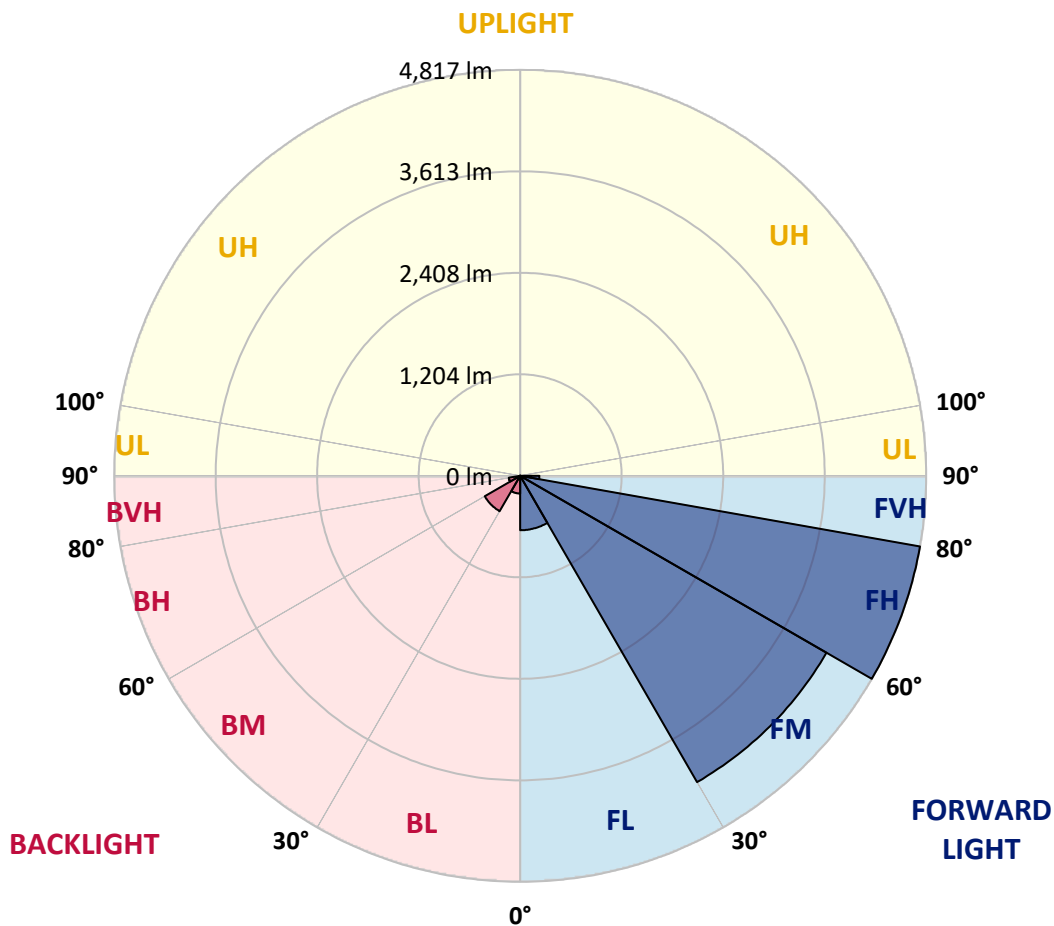
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	645.3	6.0			
FM (30°-60°)	4196.0	39.1			
FH (60°-80°)	4816.8	44.9			G2/5000
FVH (80°-90°)	228.6	2.1			G3/500
BL (0°-30°)	210.4	2.0	B1/500		
BM (30°-60°)	485.0	4.5	B1/1000		
BH (60°-80°)	137.1	1.3	B1/500		G1/500
BVH (80°-90°)	3.9	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	638.8	638.8	638.8	638.8	638.8	638.8	638.8	638.8	638.8	638.8	638.8
2.5°	812.9	781.1	729.3	733.1	756.3	761.1	768.1	749.8	733.6	705.1	760.6
5°	1041.4	995.6	966.5	957.3	943.9	944.9	912.1	923.9	920.7	941.7	967.0
7.5°	1170.3	1144.9	1108.3	1098.0	1048.4	1043.1	1002.6	1057.1	1062.5	1054.9	1096.4
10°	1221.5	1188.1	1192.4	1154.1	1129.3	1135.8	1142.2	1146.5	1153.6	1160.6	1109.9
12.5°	1251.7	1257.6	1316.3	1276.5	1301.3	1301.3	1344.9	1298.6	1300.2	1249.5	1258.1
15°	1387.5	1420.4	1394.0	1393.4	1366.5	1373.5	1424.2	1387.5	1406.4	1391.3	1333.1
17.5°	1557.8	1564.3	1514.2	1492.1	1516.3	1516.9	1495.3	1493.7	1427.9	1539.0	1468.4
20°	1612.3	1648.9	1577.8	1491.5	1592.3	1587.5	1585.9	1560.5	1451.1	1605.3	1547.1
22.5°	1760.5	1708.2	1659.7	1603.1	1642.5	1642.5	1636.5	1581.0	1538.4	1599.3	1624.1
25°	1806.9	1813.3	1750.3	1731.9	1733.0	1684.5	1680.2	1656.5	1615.5	1719.6	1670.0
27.5°	1966.4	1963.7	1812.3	1863.5	1798.3	1798.8	1679.7	1733.0	1740.0	1725.5	1781.0
30°	2123.3	2167.0	1938.4	2003.1	1934.6	1914.1	1797.7	1845.1	1857.5	1840.8	1910.9
32.5°	2323.3	2387.4	2165.3	2101.7	1997.2	2055.4	1975.1	1862.9	1924.4	2073.7	2113.1
35°	2535.1	2566.4	2329.8	2240.8	2122.8	2122.2	2119.5	2128.7	2196.6	2364.8	2398.2
37.5°	2915.7	2841.8	2627.8	2424.1	2450.5	2391.7	2350.8	2393.9	2464.5	2741.6	2884.4
40°	3128.1	3074.7	2773.4	2652.6	2521.6	2543.2	2654.3	2649.4	2837.5	3127.5	3341.5
42.5°	3334.5	3283.9	2987.4	2889.8	2721.6	2780.4	2828.9	2890.4	3275.8	3743.7	3861.2
45°	3518.3	3369.6	3160.4	3164.2	3076.9	3083.9	3169.6	3226.2	3783.6	4263.3	4345.8
47.5°	3629.4	3507.0	3306.5	3302.7	3297.3	3264.5	3668.2	3719.9	4188.4	4758.1	4765.7
50°	3785.7	3632.6	3456.9	3460.1	3584.6	3654.2	4136.1	4130.7	4579.2	5171.1	4996.9
52.5°	3980.3	3793.3	3599.7	3743.7	3936.1	4049.3	4440.6	4600.2	4999.1	5430.3	5087.5
55°	4229.3	3995.4	3808.9	3993.2	4413.2	4456.8	4738.7	5075.6	5456.7	5695.0	5116.6
57.5°	4521.5	4242.3	4091.3	4388.4	4807.2	4808.3	5172.7	5582.3	5737.6	5802.8	5083.7
60°	4836.3	4510.7	4358.7	4626.1	5241.7	5285.9	5655.1	5862.1	6022.7	5857.3	5025.0
62.5°	5113.4	4753.8	4635.8	4950.0	5718.2	5822.8	6075.6	6045.9	6228.7	5925.7	4875.7
65°	5443.3	5068.6	4991.0	5455.1	6340.2	6484.2	6547.8	6372.0	6297.7	5872.9	4487.0
67.5°	5769.9	5419.6	5417.4	6015.2	7155.8	7205.4	7138.6	6831.8	6217.3	5407.2	3774.9
70°	6000.1	5623.9	5765.6	6628.6	7897.0	7757.9	7476.5	7049.1	5637.3	4144.2	2466.1
72.5°	5783.9	5421.2	5740.8	6846.9	7988.6	8028.5	7280.9	6314.4	4188.4	2119.5	892.7
75°	4395.4	4173.3	4984.5	6074.5	7092.7	7101.9	6077.2	4453.6	2062.4	575.7	246.9
77.5°	2213.9	2143.2	3155.0	4312.4	5174.8	5159.7	4175.4	2385.8	663.6	191.4	124.5
80°	1120.7	1064.1	1342.8	2326.5	3073.1	3095.7	2384.2	1068.4	334.7	104.0	86.2
82.5°	688.4	653.3	734.7	1052.8	1491.5	1527.7	904.5	676.5	207.5	61.5	78.7
85°	133.1	140.2	422.1	527.2	595.6	581.6	267.9	556.8	62.5	36.7	57.1
87.5°	0.0	2.2	97.6	172.0	172.5	153.1	60.9	123.4	8.6	10.2	7.0
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°	638.8	638.8	638.8	638.8	638.8	638.8	638.8	638.8	638.8	638.8	638.8
2.5°	769.8	761.7	694.3	686.7	688.4	677.0	673.3	649.5	643.6	680.3	686.7
5°	956.3	902.4	839.8	817.2	782.2	722.9	714.2	699.1	682.4	688.9	684.0
7.5°	1070.5	998.8	932.0	812.9	714.2	628.0	614.0	588.1	562.2	562.8	579.5
10°	1088.9	1028.5	936.3	791.3	678.7	570.8	477.1	409.1	378.4	350.9	359.0
12.5°	1195.1	1139.0	969.2	784.8	626.9	458.7	335.8	269.5	240.4	230.7	229.6
15°	1280.2	1236.0	1025.3	764.9	512.1	322.9	240.4	221.0	215.6	224.8	222.1
17.5°	1406.9	1327.1	1019.3	682.4	390.3	245.3	221.5	218.9	225.3	230.7	232.3
20°	1462.4	1347.6	978.9	553.1	292.2	224.8	216.2	210.8	222.6	238.8	235.6
22.5°	1518.5	1382.6	931.5	452.8	235.0	215.1	210.2	205.9	215.1	230.7	234.5
25°	1543.8	1438.7	878.6	353.6	218.3	203.8	200.5	202.1	209.7	223.7	222.1
27.5°	1671.6	1445.2	777.8	279.2	211.3	195.7	195.7	199.4	199.4	218.3	216.7
30°	1751.4	1554.6	695.9	235.0	203.2	184.4	190.8	192.4	189.7	210.2	211.8
32.5°	1891.5	1584.8	616.1	215.6	190.3	182.7	181.7	182.7	184.9	204.8	205.4
35°	2107.1	1733.6	507.2	208.1	183.8	174.7	167.1	173.0	178.4	193.0	195.7
37.5°	2528.7	1886.1	413.4	202.1	180.6	167.1	164.4	163.3	173.0	189.7	195.1
40°	2869.9	2156.2	336.4	197.3	174.1	162.8	155.8	156.3	164.9	177.3	185.4
42.5°	3352.9	2351.3	285.2	189.7	164.9	153.6	145.5	150.4	154.2	167.1	172.5
45°	3756.1	2502.8	251.2	184.9	155.8	145.0	138.5	143.9	140.2	146.6	154.2
47.5°	4076.8	2634.8	225.9	173.0	149.9	140.2	132.1	130.4	124.0	125.6	132.6
50°	4253.1	2612.7	204.8	161.2	142.3	135.3	124.0	112.7	104.0	103.5	107.8
52.5°	4315.6	2494.7	187.6	150.9	133.1	124.5	111.6	95.9	87.3	84.6	88.4
55°	4332.8	2324.9	172.0	139.6	124.5	111.0	97.6	80.9	71.7	67.4	71.2
57.5°	4276.8	2063.5	156.9	128.8	114.3	98.1	83.6	66.3	57.7	52.3	55.5
60°	4138.2	1731.4	143.4	115.4	103.5	86.8	70.6	53.4	44.2	39.4	41.0
62.5°	3831.5	1357.3	128.8	103.0	92.2	76.0	59.3	42.0	33.4	29.1	29.6
65°	3364.7	1011.8	112.1	91.1	81.9	65.8	47.4	32.3	25.3	21.6	21.0
67.5°	2680.7	685.7	95.4	78.7	72.8	55.5	37.7	25.3	19.9	17.2	16.2
70°	1575.6	345.5	79.2	67.9	62.5	46.4	29.6	20.5	18.3	16.2	15.1
72.5°	519.6	149.3	62.0	56.1	51.7	37.2	23.2	18.9	17.8	15.6	14.6
75°	181.1	86.2	45.8	43.1	41.0	28.0	19.4	17.2	17.2	15.1	13.5
77.5°	118.6	66.8	34.0	31.3	30.7	20.5	16.7	16.2	15.1	12.4	10.2
80°	98.6	37.7	23.7	22.1	21.6	12.9	13.5	11.9	9.2	5.4	2.2
82.5°	91.1	22.6	12.4	13.5	12.4	4.9	7.5	6.5	4.9	2.2	0.0
85°	53.4	10.2	7.0	7.0	5.4	1.1	3.8	3.8	2.2	0.5	0.0
87.5°	5.9	4.9	3.8	3.8	2.7	0.0	1.6	1.1	0.0	0.0	0.0
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)