

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: P367771

Luminaire Tested: **MSA-SA3A-830-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367771
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-830-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7654 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

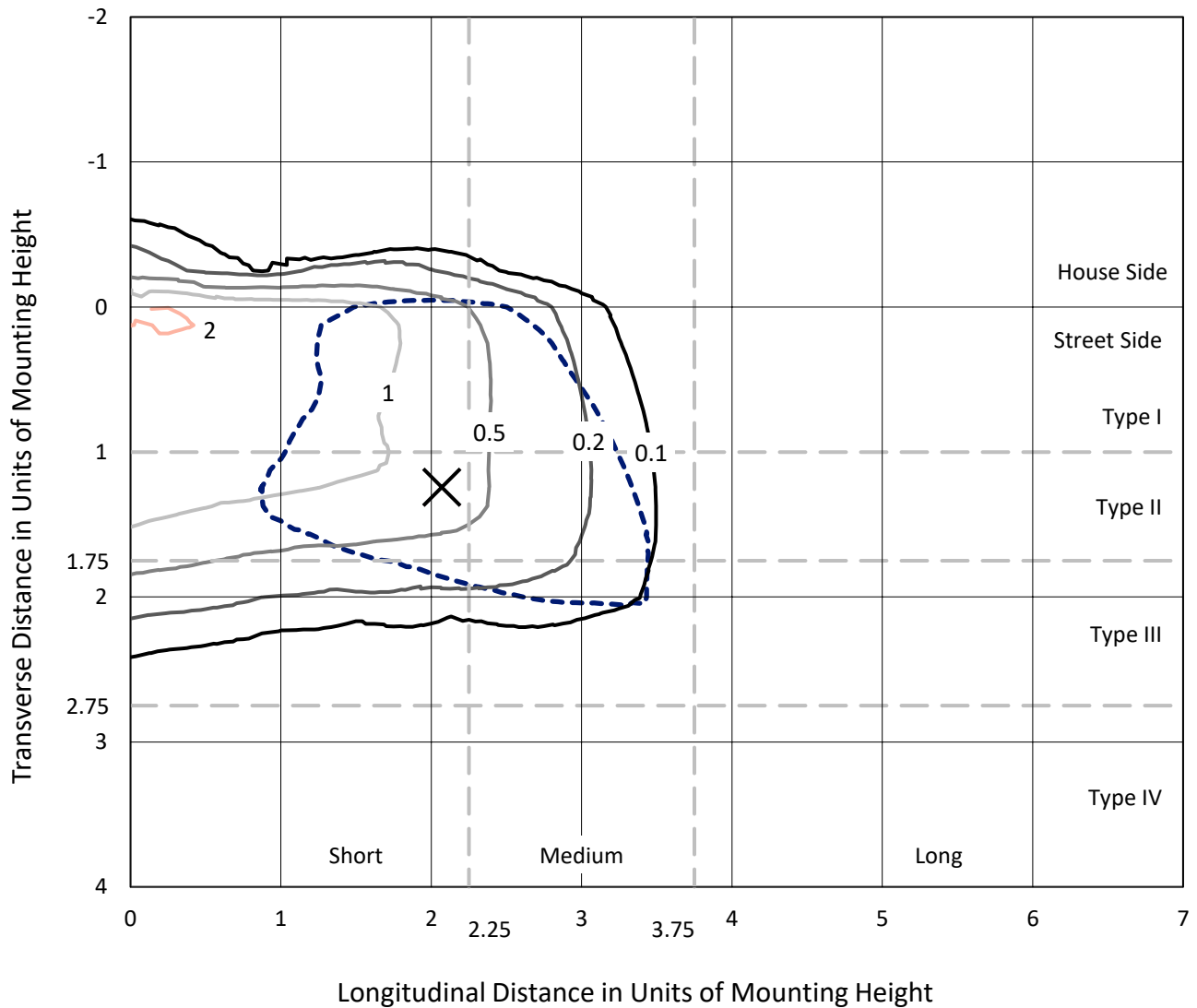
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

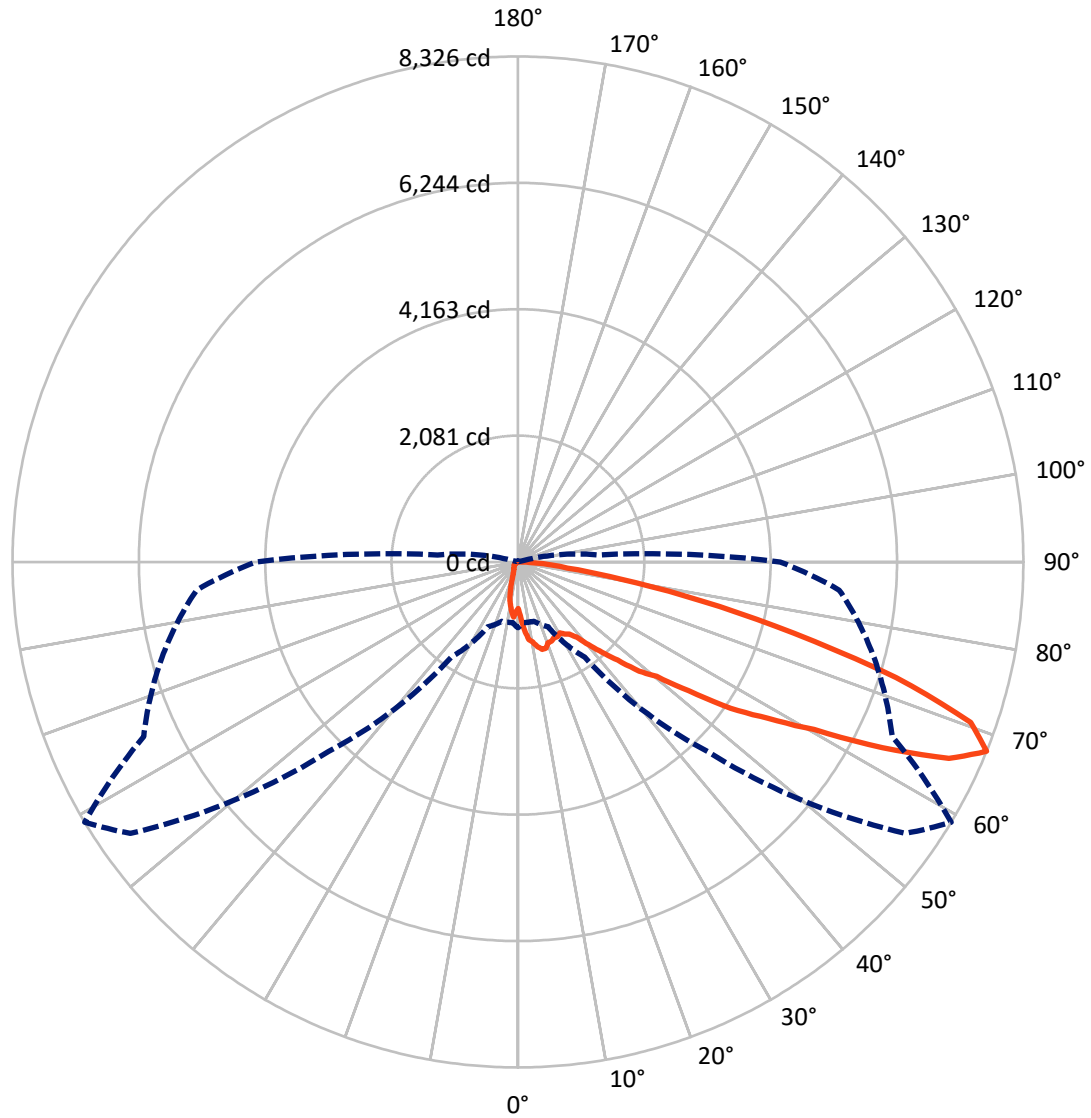
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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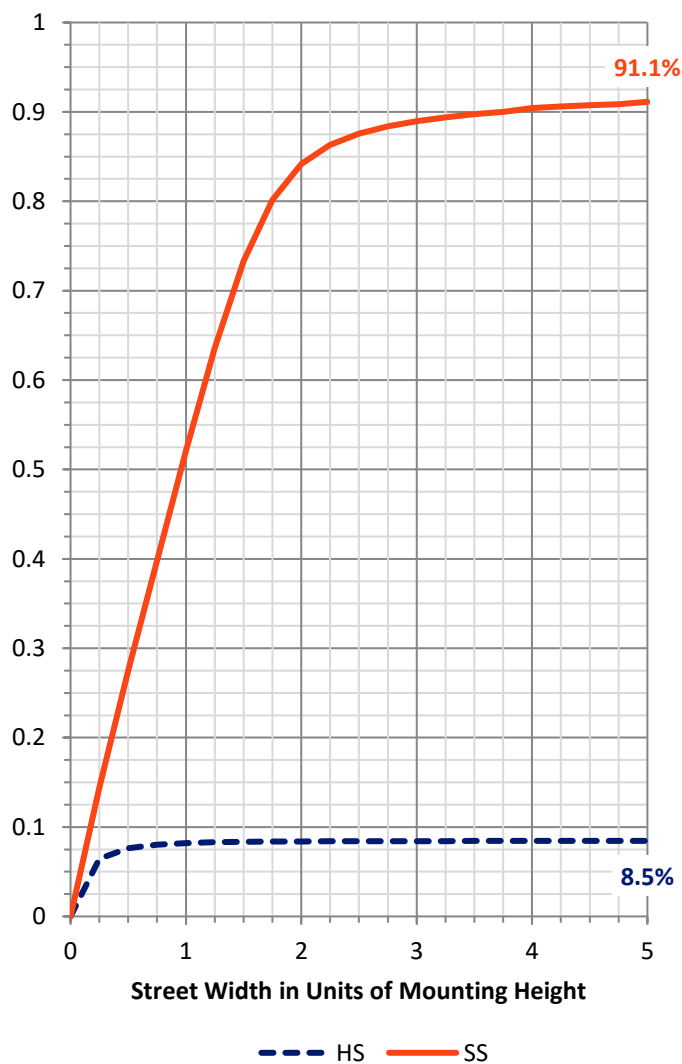
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	650.9	0.0	650.9
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	7003.1	0.0	7003.1
	% Fixture	91.5	0.0	91.5
Total	Lumens	7654.0	0.0	7654.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.1	1.2
10°-20°	262.2	3.4
20°-30°	390.0	5.1
30°-40°	601.7	7.9
40°-50°	1073.8	14.0
50°-60°	1910.8	25.0
60°-70°	2225.4	29.1
70°-80°	989.7	12.9
80°-90°	107.5	1.4
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°	7654.0	100.0
0°-180°	7654.0	100.0

Coefficient of Utilization



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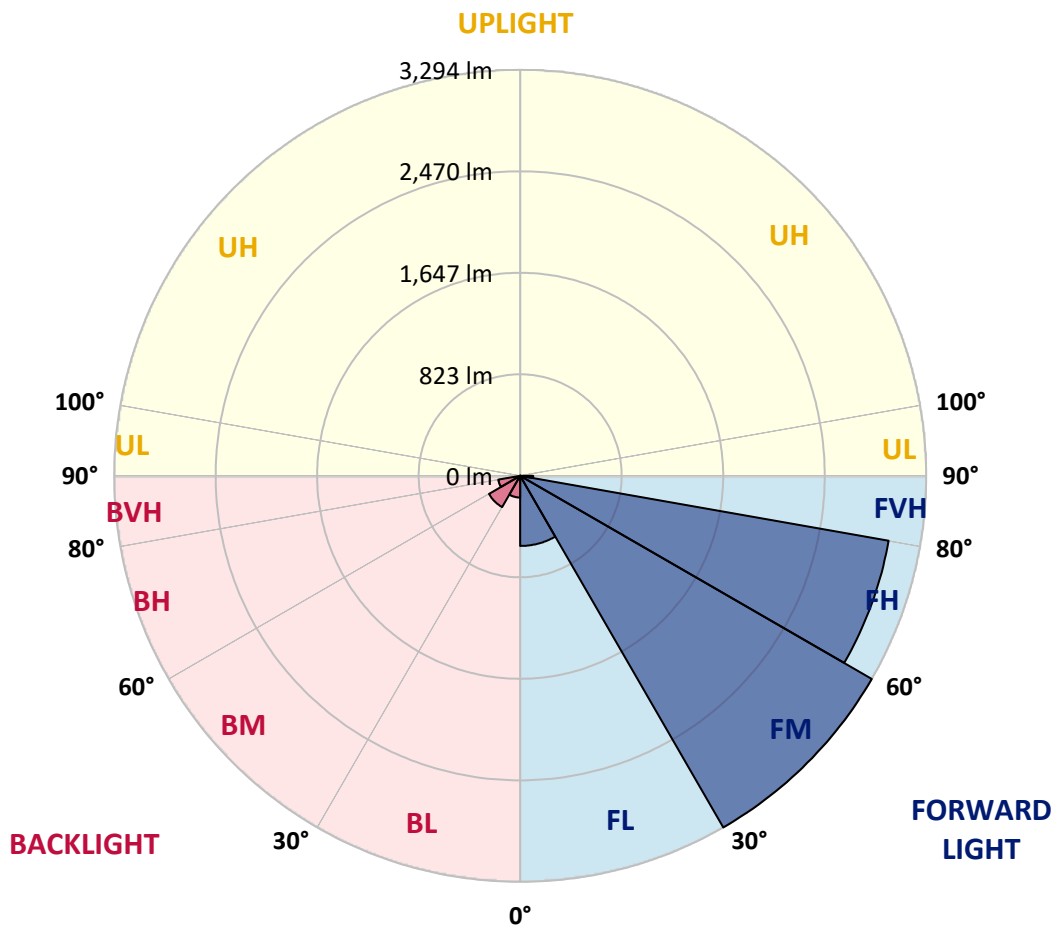
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	569.2	7.4			
FM (30°-60°)	3293.5	43.0			
FH (60°-80°)	3034.7	39.6			G2/5000
FVH (80°-90°)	105.6	1.4			G2/225
BL (0°-30°)	176.0	2.3	B1/500		
BM (30°-60°)	292.7	3.8	B1/1000		
BH (60°-80°)	180.3	2.4	B1/500		G1/500
BVH (80°-90°)	1.9	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8
2.5°	998.3	960.7	907.3	923.2	937.5	951.1	928.6	915.8	909.6	854.6	923.5
5°	1225.8	1178.9	1154.5	1148.3	1132.8	1098.3	1155.7	1130.1	1138.6	1149.5	1172.0
7.5°	1295.2	1273.9	1238.6	1251.8	1192.9	1187.9	1267.3	1289.4	1318.5	1298.7	1325.8
10°	1259.6	1222.7	1239.4	1234.7	1232.4	1284.4	1340.2	1341.3	1384.7	1405.7	1313.8
12.5°	1189.0	1193.3	1253.0	1248.3	1325.8	1429.7	1442.5	1428.9	1499.8	1463.4	1449.5
15°	1235.9	1270.8	1237.8	1249.1	1276.6	1406.4	1451.8	1493.6	1560.7	1582.4	1488.2
17.5°	1292.5	1296.0	1235.9	1222.0	1291.3	1351.8	1458.8	1493.2	1499.8	1690.1	1575.4
20°	1261.9	1291.7	1220.0	1132.0	1239.8	1321.9	1430.5	1419.6	1463.8	1721.9	1595.2
22.5°	1343.3	1300.6	1208.8	1142.5	1178.9	1253.7	1345.6	1416.5	1482.8	1645.9	1620.8
25°	1351.0	1335.5	1253.7	1194.8	1188.6	1207.6	1335.5	1381.2	1485.1	1714.2	1599.0
27.5°	1438.2	1420.4	1253.0	1258.8	1200.6	1142.1	1286.7	1394.0	1527.4	1672.7	1645.2
30°	1550.6	1552.2	1336.3	1354.5	1271.6	1177.4	1326.6	1356.1	1556.0	1739.0	1679.3
32.5°	1664.5	1711.4	1501.0	1404.5	1378.5	1311.1	1277.0	1413.0	1524.6	1852.1	1764.5
35°	1837.8	1869.6	1636.6	1550.2	1448.3	1371.6	1411.9	1460.7	1637.4	2002.1	1876.5
37.5°	2131.2	2073.8	1880.0	1729.7	1705.2	1592.1	1612.2	1568.4	1752.5	2178.8	2098.2
40°	2296.3	2244.3	2042.8	1969.6	1813.8	1831.2	1767.6	1793.2	1919.6	2362.9	2300.1
42.5°	2468.3	2418.7	2242.0	2190.1	2041.6	1969.6	1940.9	2032.7	2175.7	2669.5	2589.6
45°	2641.2	2515.2	2440.4	2466.4	2399.7	2257.1	2223.8	2305.6	2455.5	3046.2	2895.0
47.5°	2786.9	2680.7	2624.5	2612.5	2586.5	2784.6	2648.9	2685.0	2751.2	3379.5	3275.6
50°	3049.7	2945.0	2857.1	2832.6	2959.0	3240.0	3030.7	2960.9	3093.5	3782.1	3716.6
52.5°	3429.1	3295.8	3155.9	3156.2	3394.6	3548.8	3648.0	3525.6	3550.4	4225.1	4196.1
55°	3734.1	3564.7	3448.8	3540.3	3895.7	3982.1	4360.8	4253.4	4221.2	4635.9	4600.3
57.5°	3775.9	3572.9	3517.8	3678.3	4164.7	4716.5	5123.9	4855.7	4806.4	4979.7	5050.6
60°	3385.3	3169.8	3211.3	3469.4	4252.2	5164.2	5824.6	5605.6	5292.8	5382.4	5431.2
62.5°	2524.9	2352.8	2469.1	2810.9	3914.7	5464.1	6635.7	6737.2	5857.1	5684.6	5674.2
65°	1638.2	1530.5	1606.8	1887.0	2962.5	5430.0	7360.4	7800.7	6301.6	5931.1	5750.5
67.5°	1083.6	1001.8	1012.7	1178.6	1915.7	4416.2	7793.7	8325.8	6801.6	6071.0	5313.0
70°	807.7	743.3	747.2	837.1	1137.1	2912.5	7189.5	7911.5	6984.1	5586.2	4288.3
72.5°	582.5	539.5	575.5	675.5	906.1	1540.1	5358.7	6515.6	6090.0	4406.1	2889.2
75°	403.4	375.2	434.1	565.1	827.0	956.1	3541.1	4690.2	4268.5	2764.4	1306.1
77.5°	223.6	215.1	300.0	460.4	750.7	783.6	2169.1	3081.8	2367.6	991.0	310.8
80°	97.7	94.6	145.3	345.7	630.9	708.1	1221.2	1708.7	931.3	176.7	100.4
82.5°	41.9	40.3	62.0	208.1	458.5	592.2	753.0	822.4	320.5	54.6	57.0
85°	7.4	8.1	24.8	109.7	279.0	300.7	545.3	486.8	161.2	26.0	40.7
87.5°	0.0	0.0	3.9	21.3	52.3	86.0	236.4	170.5	30.6	8.5	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°	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8
2.5°	933.2	911.5	829.0	818.5	807.3	790.6	784.4	748.8	744.1	789.8	789.8
5°	1161.5	1084.0	1005.3	943.3	887.9	811.2	789.4	767.0	748.8	744.1	758.4
7.5°	1282.0	1187.5	1063.8	906.1	778.2	667.0	620.5	587.9	551.5	562.3	568.2
10°	1275.4	1175.1	1017.3	814.6	672.8	549.9	431.7	362.8	324.4	305.4	303.1
12.5°	1340.2	1245.6	985.9	741.8	560.8	391.0	271.7	222.5	194.2	194.6	192.2
15°	1377.8	1274.7	949.5	649.5	394.9	251.5	188.4	177.5	173.6	177.9	175.6
17.5°	1444.0	1305.3	867.0	512.0	271.7	189.9	173.2	169.0	174.0	182.9	180.6
20°	1439.0	1252.2	749.5	360.8	200.8	170.9	163.9	157.3	167.8	177.1	175.6
22.5°	1434.3	1200.3	639.1	266.2	167.8	155.8	150.0	147.3	152.7	163.5	165.9
25°	1393.3	1174.7	527.1	200.0	151.9	141.5	138.7	136.4	138.4	147.3	146.9
27.5°	1443.6	1110.0	406.9	167.8	140.7	128.3	126.0	122.1	118.2	126.0	127.1
30°	1433.2	1118.9	319.0	147.7	129.4	112.8	113.6	105.4	98.4	105.4	105.4
32.5°	1471.2	1053.8	255.4	134.1	118.2	106.2	96.5	88.0	82.9	87.2	88.0
35°	1526.6	1056.5	200.0	125.6	108.5	94.6	82.9	74.4	69.8	71.7	72.9
37.5°	1712.2	1037.9	167.0	119.0	105.0	87.6	75.6	64.3	61.2	63.6	64.7
40°	1833.1	1087.5	147.3	115.5	96.1	80.6	64.7	56.6	53.9	55.0	57.0
42.5°	2061.0	1115.0	137.6	111.6	88.0	69.0	55.4	50.8	46.9	48.4	50.0
45°	2304.8	1161.9	130.2	107.4	81.8	60.5	48.8	45.0	39.9	40.3	41.9
47.5°	2604.4	1273.5	121.7	100.0	73.2	55.0	43.4	37.6	32.9	32.6	34.5
50°	3006.6	1422.7	113.9	90.7	67.8	50.4	38.0	30.6	26.7	25.6	27.1
52.5°	3436.1	1615.7	105.8	84.1	61.2	44.2	32.6	24.8	21.3	20.5	21.7
55°	3861.6	1801.0	98.1	79.8	54.3	38.0	27.5	20.5	17.4	16.7	17.4
57.5°	4346.4	2001.3	88.0	71.3	47.7	32.9	22.9	17.1	14.3	13.6	14.0
60°	4711.5	2071.9	79.4	62.0	41.5	29.1	19.4	13.6	11.6	10.9	11.2
62.5°	4884.7	1956.8	71.3	53.9	36.4	25.2	16.3	11.2	9.7	8.9	8.9
65°	4839.8	1701.8	63.2	46.1	31.4	20.9	12.8	9.7	8.5	7.4	7.0
67.5°	4320.5	1331.6	53.9	38.8	26.4	17.1	10.9	9.3	7.8	7.0	5.8
70°	3426.4	964.2	43.8	32.2	22.1	14.0	8.5	8.5	7.4	7.0	5.4
72.5°	2245.9	606.9	35.7	26.0	18.2	10.9	6.6	7.8	7.0	7.0	5.0
75°	973.1	217.0	28.7	20.9	15.1	7.4	5.8	7.0	7.4	7.0	5.8
77.5°	227.9	67.4	22.5	16.7	12.4	5.0	5.8	7.0	7.4	6.6	5.0
80°	85.6	28.7	14.7	10.9	9.7	3.1	5.0	4.3	3.9	2.7	0.8
82.5°	51.9	12.0	7.8	5.4	4.7	0.8	2.3	1.6	0.8	0.8	0.0
85°	36.8	5.8	4.3	3.9	2.3	0.0	0.4	0.0	0.0	0.4	0.0
87.5°	5.0	1.6	1.9	1.9	1.6	0.0	0.0	0.0	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)