

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: P367309

Luminaire Tested: **MSA-SA2B-740-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367309
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-SA2B-740-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 8180 lumens
Efficiency: N/A
Efficacy: 96.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

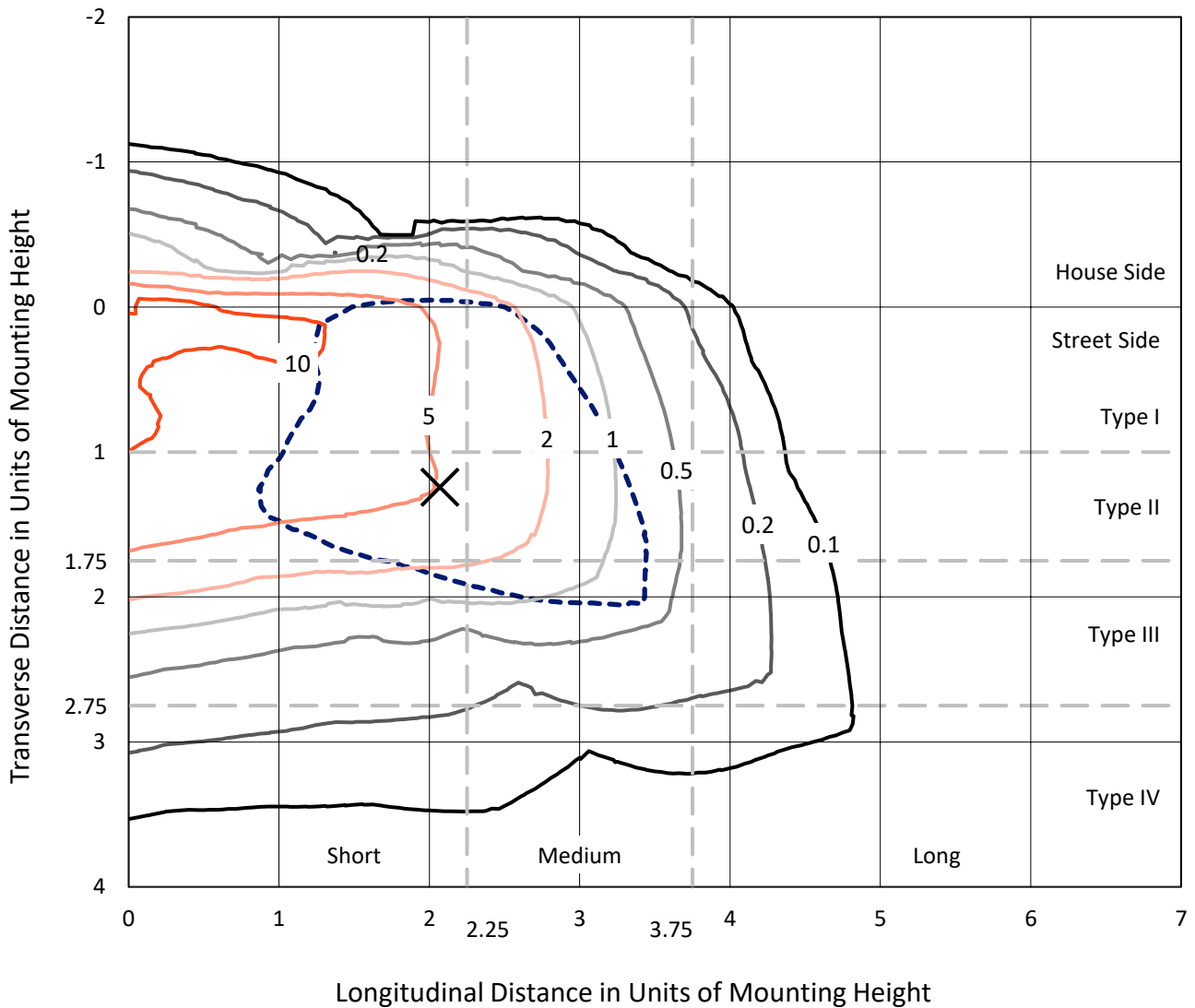
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

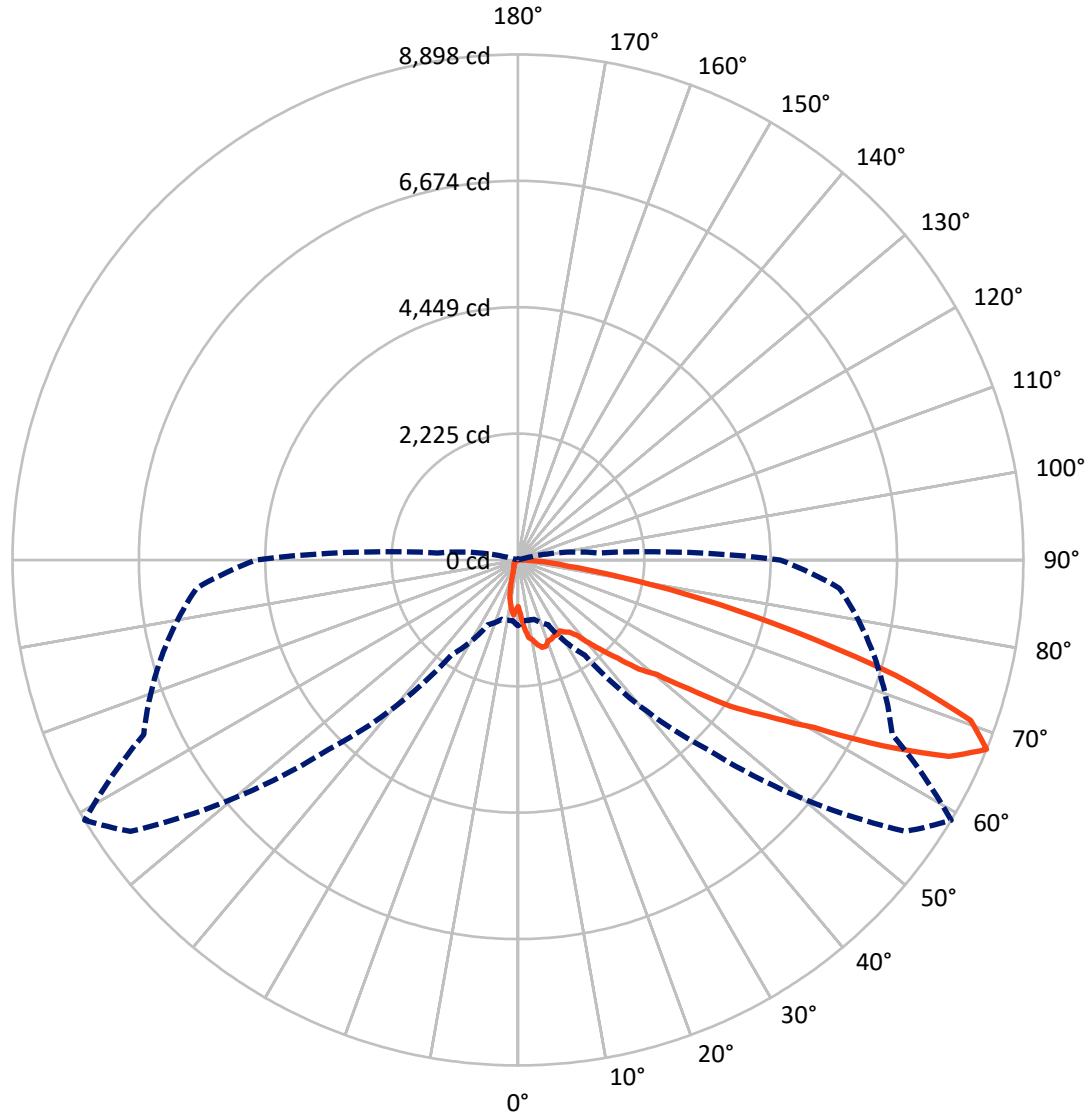
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.6 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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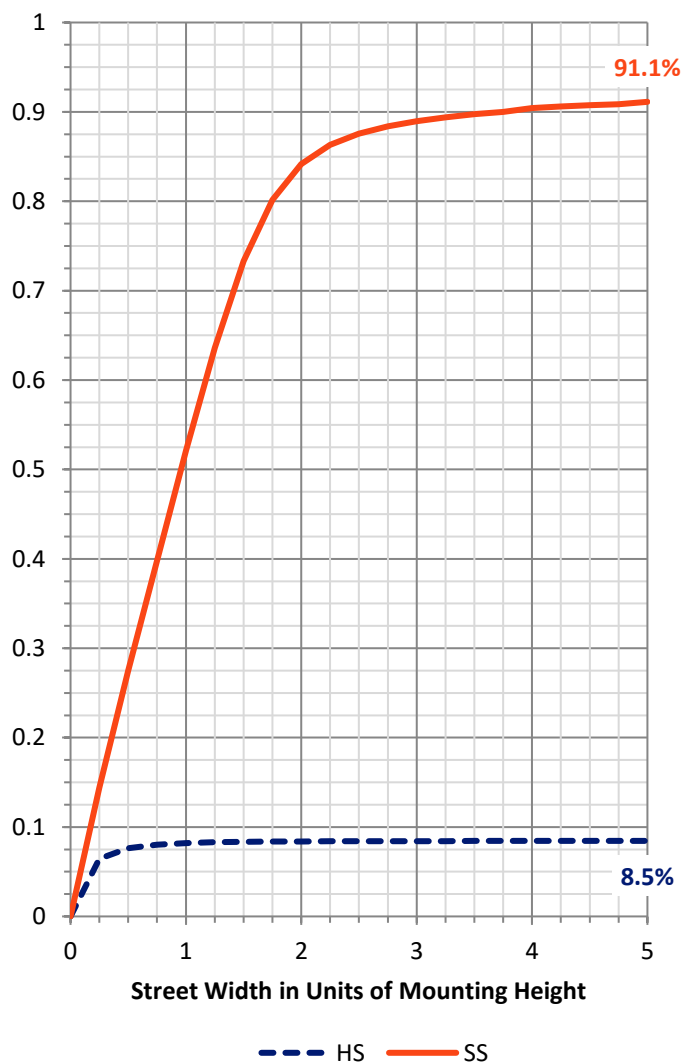
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	695.7	0.0	695.7
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	7484.3	0.0	7484.3
	% Fixture	91.5	0.0	91.5
Total	Lumens	8180.0	0.0	8180.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.5	1.2
10°-20°	280.2	3.4
20°-30°	416.8	5.1
30°-40°	643.0	7.9
40°-50°	1147.5	14.0
50°-60°	2042.1	25.0
60°-70°	2378.3	29.1
70°-80°	1057.7	12.9
80°-90°	114.9	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°	8180.0	100.0
0°-180°	8180.0	100.0

Coefficient of Utilization

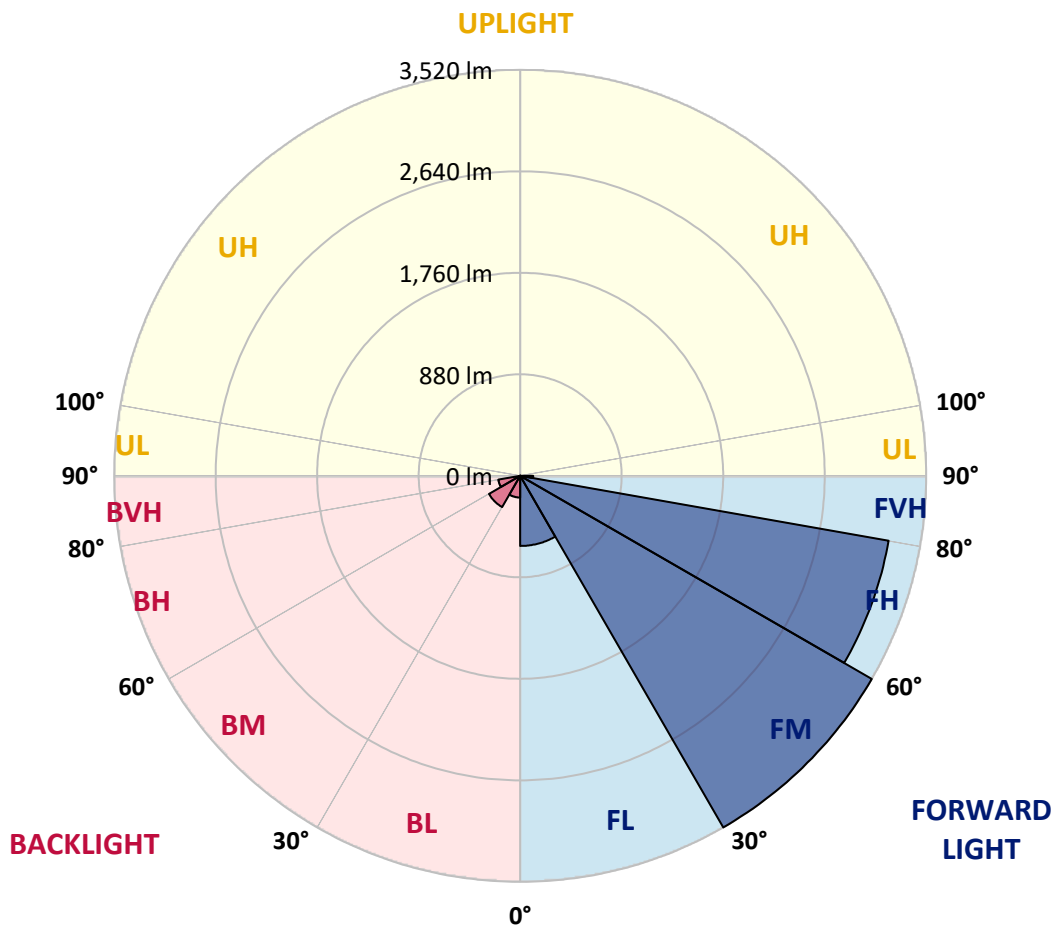


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	608.4	7.4			
FM (30°-60°)	3519.9	43.0			
FH (60°-80°)	3243.3	39.6			G2/5000
FVH (80°-90°)	112.8	1.4			G2/225
BL (0°-30°)	188.1	2.3	B1/500		
BM (30°-60°)	312.8	3.8	B1/1000		
BH (60°-80°)	192.7	2.4	B1/500		G1/500
BVH (80°-90°)	2.0	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°	818.4	818.4	818.4	818.4	818.4	818.4	818.4	818.4	818.4	818.4	818.4
2.5°	1066.9	1026.8	969.6	986.6	1001.9	1016.4	992.4	978.7	972.1	913.3	987.0
5°	1310.1	1260.0	1233.9	1227.2	1210.7	1173.8	1235.1	1207.8	1216.9	1228.5	1252.5
7.5°	1384.2	1361.4	1323.7	1337.8	1274.9	1269.5	1354.4	1378.0	1409.1	1387.9	1416.9
10°	1346.1	1306.8	1324.6	1319.6	1317.1	1372.6	1432.3	1433.5	1479.9	1502.3	1404.1
12.5°	1270.7	1275.3	1339.1	1334.1	1416.9	1527.9	1541.6	1527.1	1602.9	1564.0	1549.1
15°	1320.8	1358.1	1322.9	1334.9	1364.3	1503.1	1551.5	1596.3	1667.9	1691.1	1590.5
17.5°	1381.3	1385.0	1320.8	1305.9	1380.1	1444.7	1559.0	1595.9	1602.9	1806.3	1683.7
20°	1348.6	1380.5	1303.9	1209.8	1325.0	1412.8	1528.8	1517.2	1564.4	1840.2	1704.8
22.5°	1435.6	1390.0	1291.9	1221.0	1260.0	1339.9	1438.1	1513.9	1584.7	1759.1	1732.1
25°	1443.9	1427.3	1339.9	1276.9	1270.3	1290.6	1427.3	1476.2	1587.2	1832.0	1708.9
27.5°	1537.1	1518.0	1339.1	1345.3	1283.2	1220.6	1375.1	1489.8	1632.3	1787.6	1758.2
30°	1657.2	1658.8	1428.1	1447.6	1359.0	1258.3	1417.8	1449.2	1663.0	1858.5	1794.7
32.5°	1778.9	1829.1	1604.1	1501.0	1473.3	1401.2	1364.7	1510.1	1629.4	1979.4	1885.8
35°	1964.1	1998.0	1749.1	1656.8	1547.8	1465.8	1508.9	1561.1	1749.9	2139.7	2005.5
37.5°	2277.6	2216.3	2009.2	1848.5	1822.4	1701.5	1723.0	1676.2	1873.0	2328.6	2242.4
40°	2454.1	2398.6	2183.2	2104.9	1938.4	1957.0	1889.1	1916.4	2051.5	2525.3	2458.2
42.5°	2638.0	2584.9	2396.1	2340.6	2181.9	2104.9	2074.3	2172.4	2325.3	2852.9	2767.6
45°	2822.7	2688.1	2608.1	2635.9	2564.7	2412.2	2376.6	2464.0	2624.3	3255.5	3094.0
47.5°	2978.4	2864.9	2804.9	2792.0	2764.3	2975.9	2831.0	2869.5	2940.3	3611.7	3500.7
50°	3259.2	3147.4	3053.4	3027.3	3162.3	3462.6	3238.9	3164.4	3306.0	4042.1	3972.1
52.5°	3664.7	3522.3	3372.7	3373.1	3627.9	3792.7	3898.8	3767.9	3794.4	4515.5	4484.4
55°	3990.7	3809.7	3685.9	3783.6	4163.4	4255.8	4660.4	4545.7	4511.3	4954.5	4916.4
57.5°	4035.4	3818.4	3759.6	3931.1	4450.9	5040.7	5476.0	5189.4	5136.8	5321.9	5397.7
60°	3617.9	3387.6	3432.0	3707.8	4544.5	5519.1	6224.8	5990.8	5656.6	5752.2	5804.4
62.5°	2698.4	2514.5	2638.8	3004.1	4183.7	5839.6	7091.7	7200.2	6259.6	6075.3	6064.1
65°	1750.8	1635.6	1717.2	2016.7	3166.1	5803.2	7866.3	8336.8	6734.7	6338.7	6145.7
67.5°	1158.1	1070.7	1082.3	1259.5	2047.3	4719.7	8329.3	8898.0	7269.0	6488.3	5678.1
70°	863.2	794.4	798.6	894.6	1215.2	3112.6	7683.6	8455.2	7464.1	5970.1	4583.0
72.5°	622.5	576.5	615.1	721.9	968.4	1646.0	5727.0	6963.3	6508.5	4708.9	3087.8
75°	431.2	400.9	463.9	603.9	883.9	1021.8	3784.4	5012.5	4561.9	2954.4	1395.8
77.5°	239.0	229.9	320.6	492.1	802.3	837.5	2318.2	3293.6	2530.3	1059.1	332.2
80°	104.4	101.1	155.3	369.5	674.3	756.7	1305.1	1826.2	995.3	188.9	107.3
82.5°	44.7	43.1	66.3	222.4	490.0	632.9	804.8	878.9	342.5	58.4	60.9
85°	7.9	8.7	26.5	117.2	298.2	321.4	582.8	520.2	172.3	27.8	43.5
87.5°	0.0	0.0	4.1	22.8	55.9	91.9	252.7	182.2	32.7	9.1	7.5
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°	818.4	818.4	818.4	818.4	818.4	818.4	818.4	818.4	818.4	818.4	818.4
2.5°	997.4	974.2	885.9	874.8	862.8	844.9	838.3	800.2	795.2	844.1	844.1
5°	1241.3	1158.5	1074.4	1008.1	948.9	866.9	843.7	819.7	800.2	795.2	810.6
7.5°	1370.1	1269.1	1136.9	968.4	831.7	712.8	663.1	628.3	589.4	601.0	607.2
10°	1363.1	1255.8	1087.2	870.6	719.0	587.7	461.4	387.7	346.7	326.4	323.9
12.5°	1432.3	1331.2	1053.7	792.8	599.3	417.9	290.3	237.7	207.5	207.9	205.4
15°	1472.4	1362.3	1014.8	694.2	422.1	268.8	201.3	189.7	185.6	190.1	187.6
17.5°	1543.3	1395.0	926.5	547.1	290.3	203.0	185.1	180.6	186.0	195.5	193.0
20°	1537.9	1338.2	801.0	385.6	214.5	182.7	175.2	168.2	179.3	189.3	187.6
22.5°	1532.9	1282.7	683.0	284.5	179.3	166.5	160.3	157.4	163.2	174.8	177.3
25°	1489.0	1255.4	563.3	213.7	162.4	151.2	148.3	145.8	147.9	157.4	157.0
27.5°	1542.8	1186.2	434.9	179.3	150.4	137.1	134.6	130.5	126.3	134.6	135.9
30°	1531.7	1195.8	340.9	157.8	138.3	120.5	121.4	112.7	105.2	112.7	112.7
32.5°	1572.3	1126.2	272.9	143.3	126.3	113.5	103.1	94.0	88.6	93.2	94.0
35°	1631.5	1129.1	213.7	134.2	116.0	101.1	88.6	79.5	74.6	76.6	77.9
37.5°	1829.9	1109.2	178.5	127.2	112.2	93.6	80.8	68.8	65.4	67.9	69.2
40°	1959.1	1162.2	157.4	123.4	102.7	86.2	69.2	60.5	57.6	58.8	60.9
42.5°	2202.7	1191.6	147.0	119.3	94.0	73.7	59.2	54.3	50.1	51.8	53.4
45°	2463.2	1241.7	139.2	114.7	87.4	64.6	52.2	48.0	42.7	43.1	44.7
47.5°	2783.3	1361.0	130.1	106.9	78.3	58.8	46.4	40.2	35.2	34.8	36.9
50°	3213.3	1520.5	121.8	96.9	72.5	53.8	40.6	32.7	28.6	27.3	29.0
52.5°	3672.2	1726.7	113.1	89.9	65.4	47.2	34.8	26.5	22.8	22.0	23.2
55°	4127.0	1924.7	104.8	85.3	58.0	40.6	29.4	22.0	18.6	17.8	18.6
57.5°	4645.1	2138.9	94.0	76.2	50.9	35.2	24.4	18.2	15.3	14.5	14.9
60°	5035.3	2214.2	84.9	66.3	44.3	31.1	20.7	14.5	12.4	11.6	12.0
62.5°	5220.4	2091.2	76.2	57.6	38.9	26.9	17.4	12.0	10.4	9.5	9.5
65°	5172.4	1818.7	67.5	49.3	33.5	22.4	13.7	10.4	9.1	7.9	7.5
67.5°	4617.4	1423.1	57.6	41.4	28.2	18.2	11.6	9.9	8.3	7.5	6.2
70°	3661.8	1030.5	46.8	34.4	23.6	14.9	9.1	9.1	7.9	7.5	5.8
72.5°	2400.2	648.6	38.1	27.8	19.5	11.6	7.0	8.3	7.5	7.5	5.4
75°	1040.0	231.9	30.6	22.4	16.2	7.9	6.2	7.5	7.9	7.5	6.2
77.5°	243.5	72.1	24.0	17.8	13.3	5.4	6.2	7.5	7.9	7.0	5.4
80°	91.5	30.6	15.7	11.6	10.4	3.3	5.4	4.6	4.1	2.9	0.8
82.5°	55.5	12.8	8.3	5.8	5.0	0.8	2.5	1.7	0.8	0.8	0.0
85°	39.3	6.2	4.6	4.1	2.5	0.0	0.4	0.0	0.0	0.4	0.0
87.5°	5.4	1.7	2.1	2.1	1.7	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)