

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: P367791

Luminaire Tested: **MSA-SA3B-727-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367791  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3B-727-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10076 lumens  
Efficiency: N/A  
Efficacy: 80.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

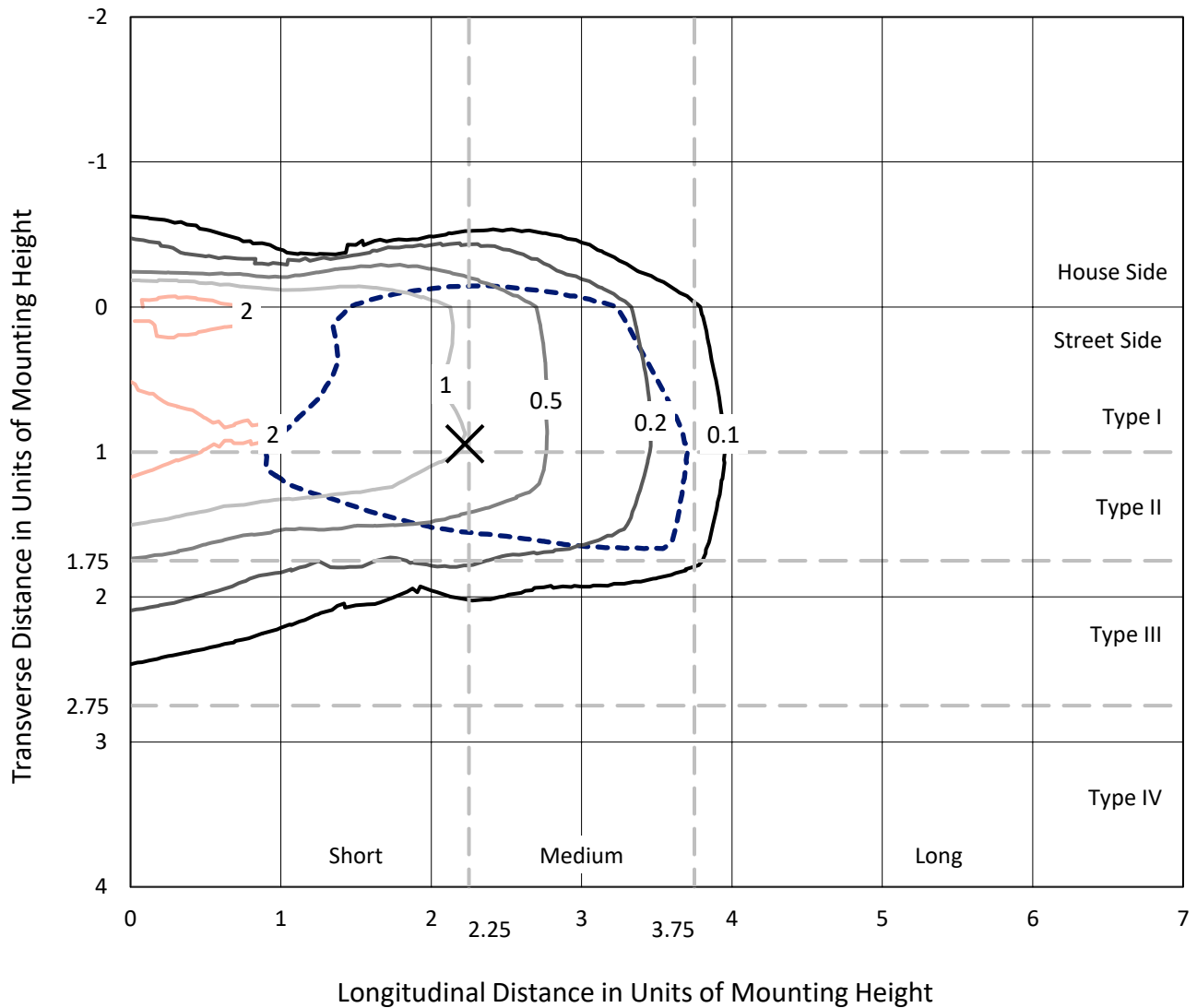
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

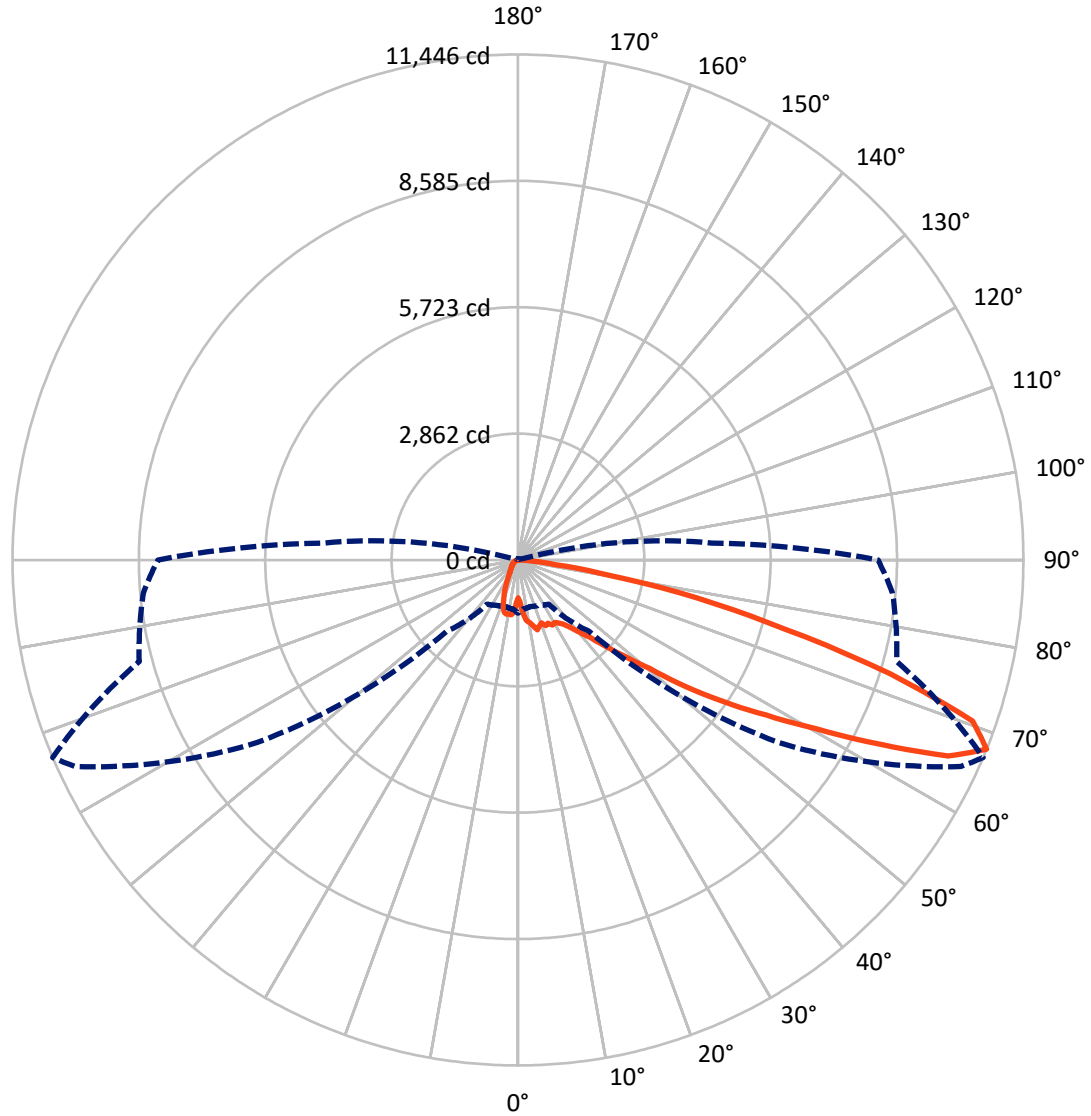
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical



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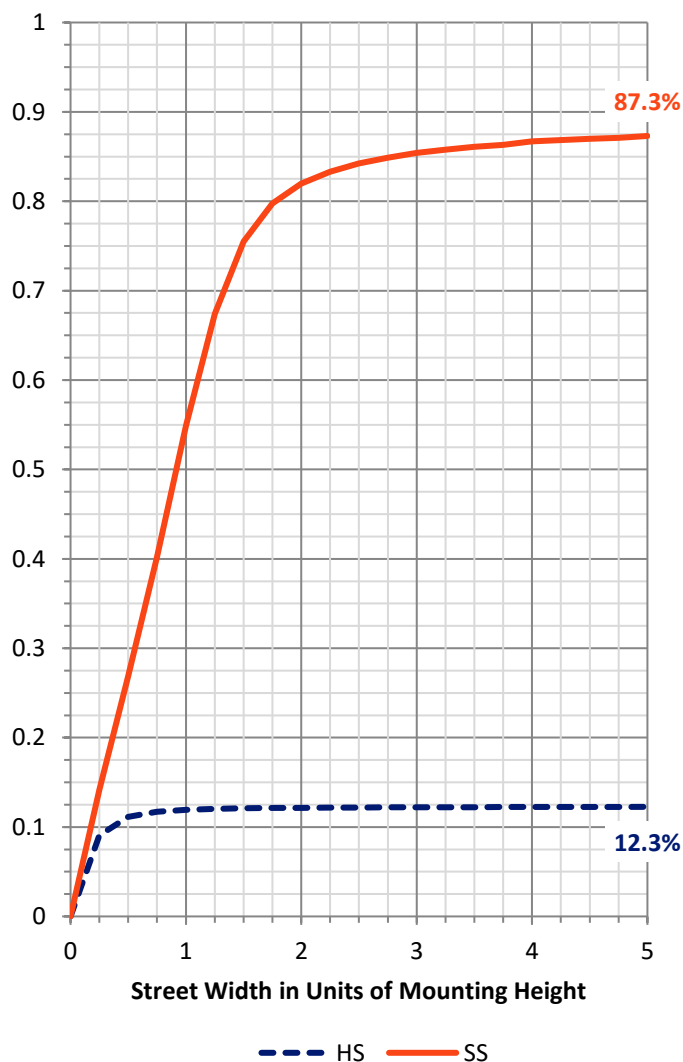
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1246.1	0.0	1246.1
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	8829.9	0.0	8829.9
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	10076.0	0.0	10076.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.7	1.1
10°-20°	318.7	3.2
20°-30°	499.5	5.0
30°-40°	805.4	8.0
40°-50°	1480.0	14.7
50°-60°	2499.6	24.8
60°-70°	2763.4	27.4
70°-80°	1446.3	14.4
80°-90°	155.3	1.5
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°	10076.0	100.0
0°-180°	10076.0	100.0

**Coefficient of Utilization**



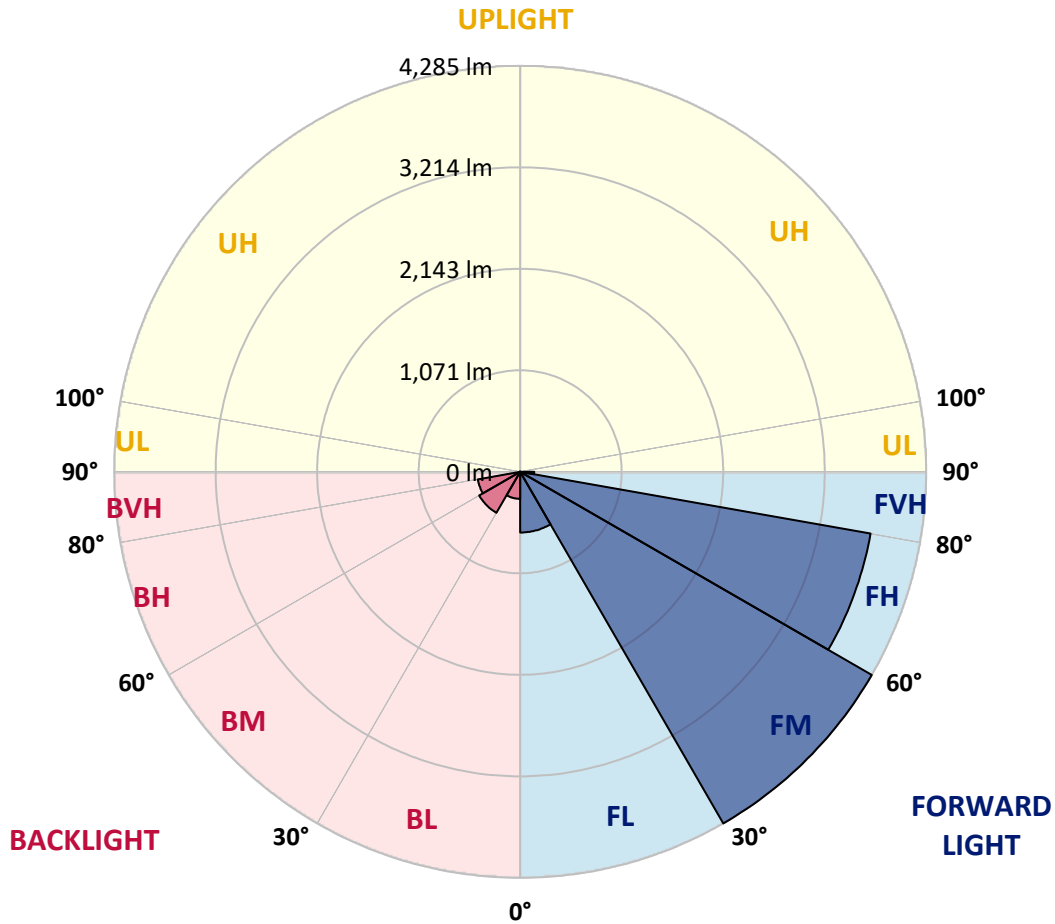
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	640.7	6.4			
FM (30°-60°)	4285.4	42.5			
FH (60°-80°)	3755.1	37.3			G2/5000
FVH (80°-90°)	148.7	1.5			G2/225
BL (0°-30°)	285.3	2.8	B1/500		
BM (30°-60°)	499.6	5.0	B1/1000		
BH (60°-80°)	454.5	4.5	B1/500		G1/500
BVH (80°-90°)	6.6	0.1			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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	858.2	858.2	858.2	858.2	858.2	858.2	858.2	858.2	858.2	858.2	858.2
2.5°	1013.1	978.8	920.6	937.4	971.2	999.3	986.0	959.9	960.4	933.8	1029.4
5°	1178.7	1132.7	1098.9	1110.7	1109.2	1108.1	1171.0	1195.0	1205.3	1249.2	1314.1
7.5°	1226.2	1209.9	1174.6	1185.3	1150.0	1152.6	1263.0	1367.3	1383.6	1410.7	1526.2
10°	1207.8	1176.1	1188.9	1188.9	1189.4	1246.7	1320.8	1420.4	1440.4	1544.6	1556.9
12.5°	1187.9	1189.4	1240.0	1230.8	1300.3	1403.1	1428.1	1540.0	1530.3	1620.8	1755.2
15°	1262.0	1300.8	1268.1	1280.9	1287.5	1408.2	1448.6	1597.3	1640.2	1754.7	1842.1
17.5°	1389.3	1394.4	1326.4	1308.0	1356.0	1390.3	1471.6	1543.1	1571.7	1872.3	1996.0
20°	1412.3	1445.0	1376.0	1269.7	1371.4	1418.4	1475.1	1509.4	1521.6	1908.6	2082.9
22.5°	1550.8	1514.5	1404.1	1323.3	1352.5	1403.6	1438.8	1542.1	1615.7	1840.1	2166.2
25°	1621.8	1612.1	1506.8	1437.8	1408.2	1404.1	1484.8	1563.0	1586.6	1911.1	2186.6
27.5°	1792.0	1770.1	1566.1	1557.4	1459.8	1373.9	1486.4	1626.9	1670.9	1844.2	2263.3
30°	2023.6	2015.4	1744.0	1738.4	1583.0	1428.6	1569.2	1666.3	1639.7	1878.4	2314.4
32.5°	2256.7	2323.1	2045.6	1887.1	1770.6	1629.5	1545.7	1654.0	1701.6	1961.7	2408.5
35°	2538.3	2586.3	2303.7	2188.7	1929.5	1723.5	1701.6	1771.1	1791.5	2060.9	2515.3
37.5°	3031.0	2958.4	2717.7	2521.9	2386.0	2059.4	1951.0	1895.8	1943.3	2195.3	2733.5
40°	3394.9	3348.9	3052.5	2935.4	2622.6	2431.5	2148.3	2096.7	2149.8	2333.3	2885.3
42.5°	3834.0	3738.4	3459.3	3380.1	3058.1	2689.6	2402.3	2420.2	2387.0	2605.8	3151.6
45°	4231.2	4015.5	3860.1	3878.0	3706.2	3208.4	2826.1	2817.4	2789.8	3000.4	3431.7
47.5°	4498.5	4309.9	4158.6	4109.0	4088.6	4120.8	3438.4	3284.0	3263.6	3414.9	3872.9
50°	4642.1	4435.6	4248.5	4258.8	4673.8	4986.1	4070.2	3850.9	3858.5	4016.5	4476.0
52.5°	4545.5	4311.9	4114.6	4306.3	5127.7	5563.2	5115.9	4591.5	4769.4	4729.0	5285.1
55°	4099.3	3896.4	3756.3	4099.3	5177.3	6184.2	6403.5	5706.3	5666.4	5574.4	6110.1
57.5°	3348.4	3173.6	3087.2	3449.1	4635.0	6684.6	7696.6	6966.2	6626.3	6240.9	6795.0
60°	2494.8	2366.0	2276.1	2467.2	3652.0	6198.5	8543.6	8153.6	7760.0	6883.4	7410.4
62.5°	1847.7	1743.0	1647.4	1664.8	2514.8	5331.1	8868.7	9411.5	9185.6	7561.7	7991.1
65°	1474.6	1379.0	1312.1	1273.7	1557.4	4010.9	8416.3	10442.4	10703.1	8200.6	8410.2
67.5°	1204.2	1123.5	1090.2	1134.2	1221.6	2286.3	7208.0	11068.1	11446.3	8878.4	8513.4
70°	979.8	913.4	909.8	1028.4	1125.0	1393.9	5302.0	10636.2	10920.9	8993.9	7894.5
72.5°	682.9	653.7	700.3	868.4	1114.8	1160.8	3044.8	8801.7	8811.9	7943.5	6493.4
75°	386.4	381.8	455.4	692.6	1085.6	1149.0	1697.5	6220.0	6224.6	6007.9	4498.5
77.5°	212.6	198.8	265.3	468.2	932.3	1122.4	1094.8	4247.0	4138.1	3343.3	2054.8
80°	98.1	92.5	143.6	300.0	681.9	1061.6	877.6	2334.3	2104.8	1089.2	501.4
82.5°	40.4	38.3	65.9	192.7	430.9	855.1	739.6	1035.6	831.1	207.0	154.9
85°	7.2	7.7	27.1	116.5	241.3	394.1	599.6	491.7	361.4	57.2	84.8
87.5°	0.0	0.0	5.6	28.1	58.3	107.8	243.3	137.5	94.6	16.9	25.0
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°	858.2	858.2	858.2	858.2	858.2	858.2	858.2	858.2	858.2	858.2	858.2
2.5°	1048.3	1039.6	951.7	955.8	962.0	956.3	955.3	930.8	908.3	982.4	981.4
5°	1325.9	1264.0	1203.2	1179.7	1129.1	1062.6	1063.2	1042.2	1020.7	1050.9	1050.9
7.5°	1523.7	1438.3	1361.1	1223.7	1089.7	968.6	957.9	929.2	896.5	935.9	943.6
10°	1569.7	1495.6	1395.9	1194.0	1067.2	949.2	819.3	712.5	662.9	639.9	635.8
12.5°	1711.3	1656.1	1433.2	1209.9	1027.4	827.5	614.9	488.1	401.8	395.1	385.9
15°	1805.8	1767.0	1470.0	1170.5	858.7	595.0	386.4	296.5	261.7	258.6	254.0
17.5°	1952.5	1885.1	1434.8	1045.3	671.6	392.6	259.7	234.1	238.2	247.4	240.2
20°	2012.3	1880.5	1358.1	863.8	471.8	263.2	225.4	211.6	222.3	231.0	226.9
22.5°	2073.7	1893.7	1290.1	712.0	308.2	217.7	200.9	193.7	194.7	203.4	203.9
25°	2073.2	1930.5	1211.4	554.6	229.5	193.7	181.5	172.3	168.7	174.8	173.3
27.5°	2173.8	1888.1	1067.8	411.5	201.9	173.3	161.5	150.3	137.5	143.6	143.6
30°	2174.4	1957.1	967.6	295.4	185.0	154.4	144.1	126.8	111.9	117.0	117.6
32.5°	2232.1	1897.3	875.1	225.9	171.7	143.1	120.6	104.8	96.1	99.2	99.2
35°	2298.1	1948.4	733.0	199.3	158.5	127.3	103.2	90.5	83.8	86.4	86.4
37.5°	2515.8	1937.7	634.3	185.5	149.8	115.0	94.0	79.7	76.7	78.2	80.2
40°	2594.5	2013.9	500.4	177.4	135.5	103.8	82.8	72.1	68.0	69.0	69.5
42.5°	2794.9	2030.7	399.7	170.7	122.7	90.0	73.6	65.9	60.8	60.8	62.4
45°	3016.2	2073.2	317.9	165.1	111.9	80.8	66.4	60.3	52.6	51.6	53.7
47.5°	3336.7	2235.7	259.1	153.9	99.2	75.1	61.3	52.1	46.0	44.0	46.0
50°	3872.9	2511.7	229.0	140.1	90.0	70.5	54.2	44.5	39.9	37.3	38.8
52.5°	4629.3	2988.6	213.1	127.3	81.8	63.4	48.6	38.8	34.2	32.2	33.2
55°	5469.6	3535.5	205.5	114.5	74.6	55.7	42.4	34.2	30.2	27.6	28.1
57.5°	6246.6	4049.7	197.8	102.2	67.5	49.6	37.3	30.2	26.1	23.5	24.0
60°	7012.2	4460.1	179.4	87.9	60.8	44.5	32.7	26.1	23.5	20.4	20.4
62.5°	7689.5	4705.5	152.8	76.2	54.7	39.4	29.1	23.5	21.5	18.4	18.4
65°	8150.5	4716.7	123.2	65.4	48.0	33.7	25.6	22.0	19.9	16.4	15.8
67.5°	8157.2	4410.1	98.6	58.3	42.4	29.6	23.0	21.0	18.4	15.3	14.3
70°	7301.0	3643.4	82.3	51.1	36.8	26.1	19.9	19.9	17.9	14.8	13.3
72.5°	5840.2	2784.1	69.0	44.5	32.7	22.5	18.4	18.9	17.4	14.8	13.3
75°	3925.5	1596.8	57.2	37.8	28.6	18.9	17.9	18.4	17.9	14.8	12.8
77.5°	1807.9	508.6	44.5	31.2	24.5	15.8	17.4	17.4	16.4	13.3	11.2
80°	407.4	125.2	32.2	23.0	19.9	11.8	15.8	14.3	12.8	9.2	6.6
82.5°	148.2	38.3	19.4	14.3	12.3	4.6	10.2	10.2	9.2	6.6	4.1
85°	84.8	19.9	10.7	9.2	6.6	2.0	5.6	6.1	5.1	4.6	2.0
87.5°	27.6	4.6	5.1	5.6	5.1	1.0	2.0	2.0	1.5	1.0	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)