

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: P596592

Luminaire Tested: **MSA-SA2B-827-U-SL3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596592  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-827-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7185 lumens  
Efficiency: N/A  
Efficacy: 84.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

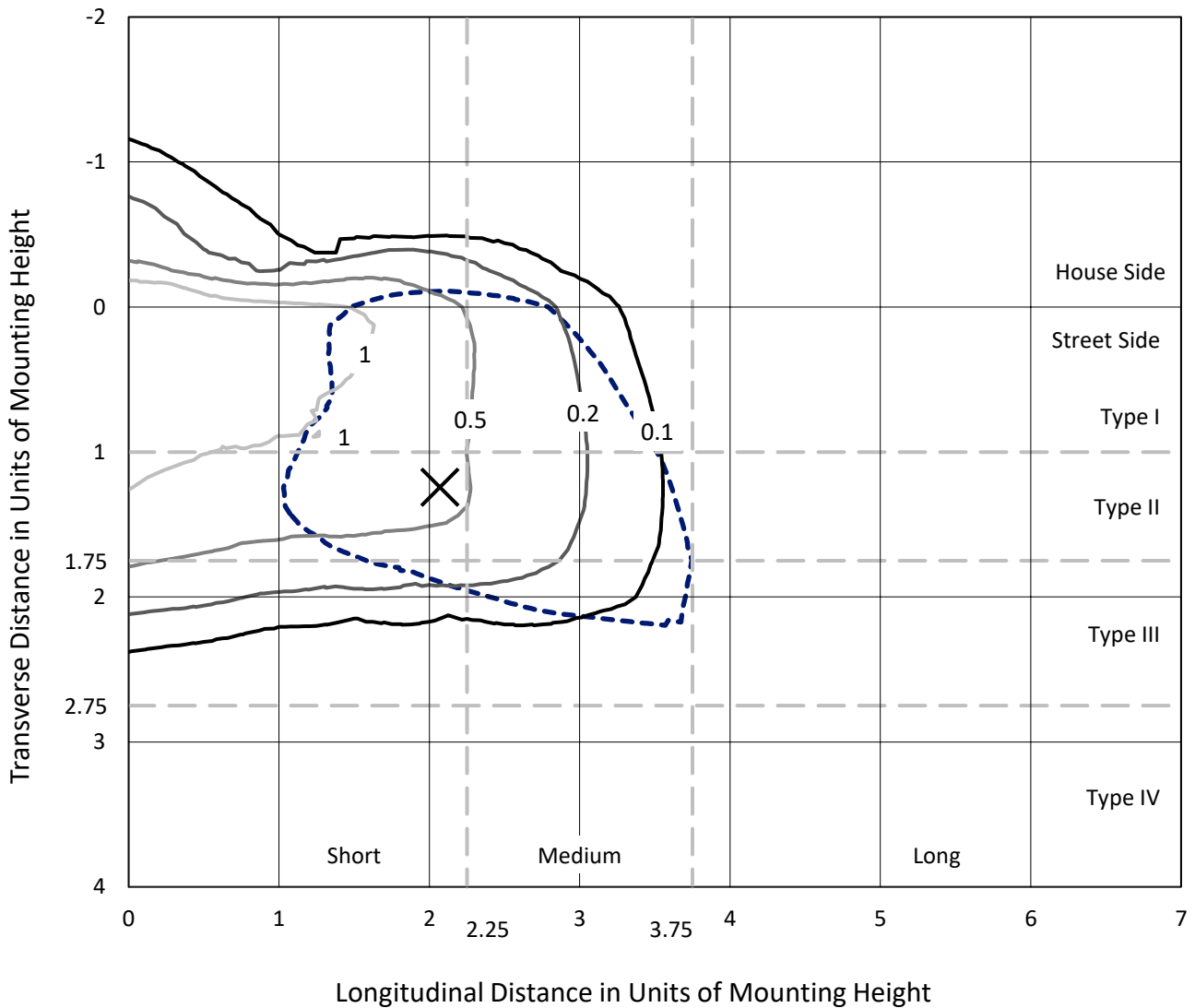
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

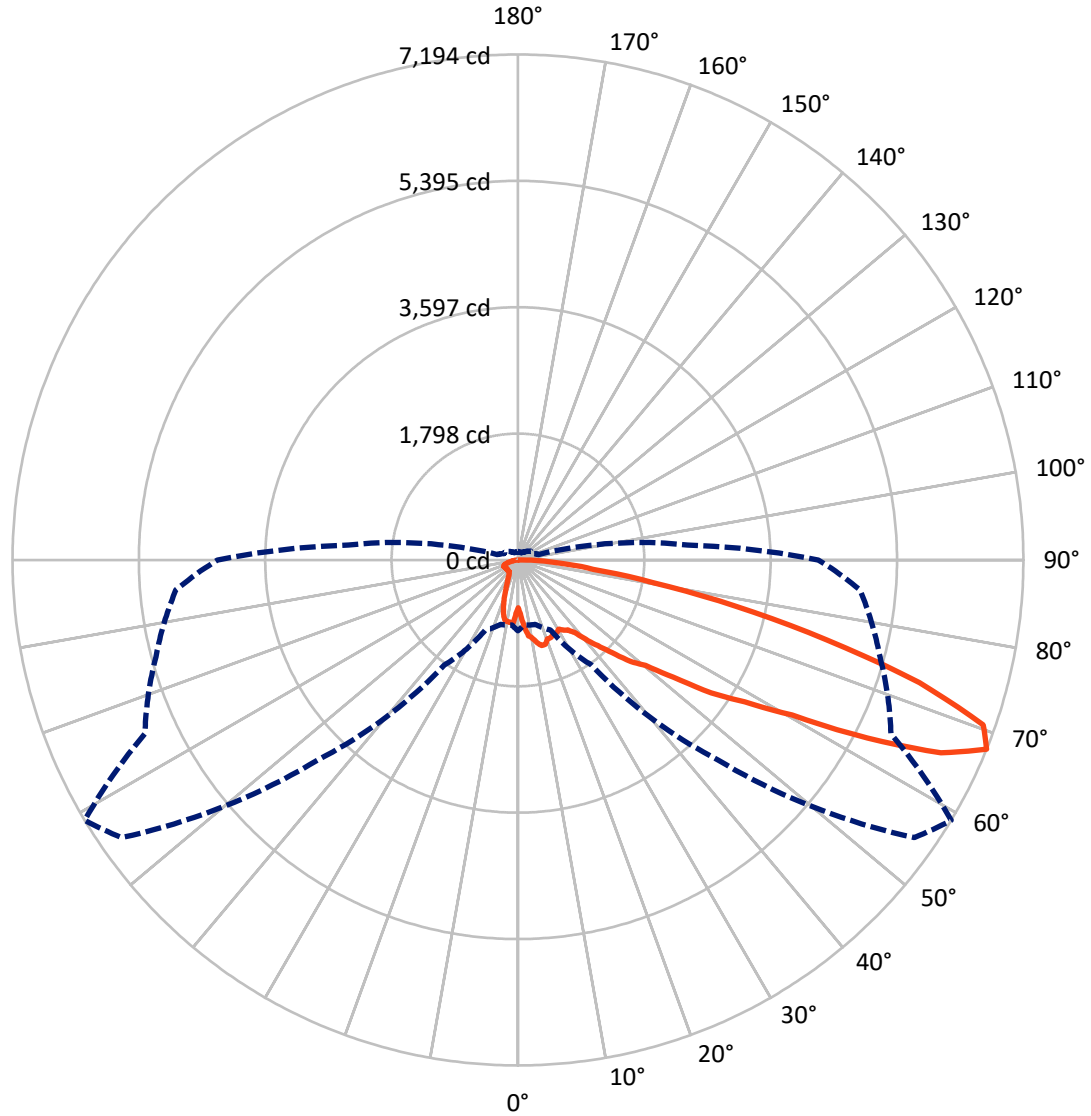
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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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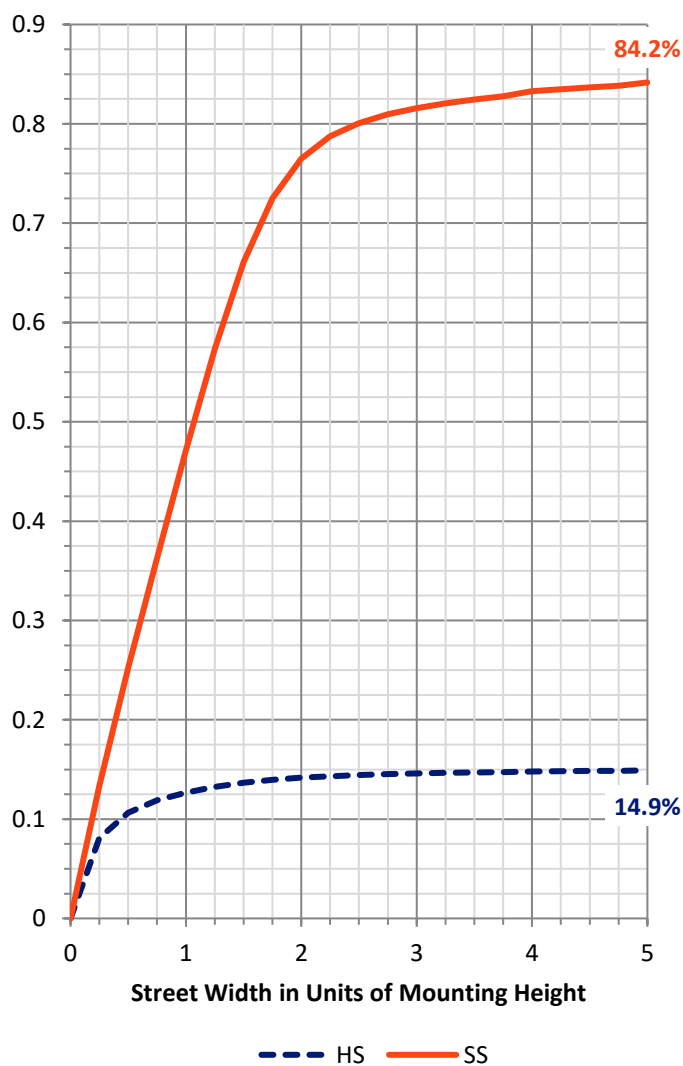
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1081.5	0.0	1081.5
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	6103.5	0.0	6103.5
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	7185.0	0.0	7185.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.8	1.2
10°-20°	262.8	3.7
20°-30°	375.3	5.2
30°-40°	553.0	7.7
40°-50°	934.2	13.0
50°-60°	1625.8	22.6
60°-70°	2071.7	28.8
70°-80°	1097.0	15.3
80°-90°	176.5	2.5
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°	7185.0	100.0
0°-180°	7185.0	100.0

**Coefficient of Utilization**



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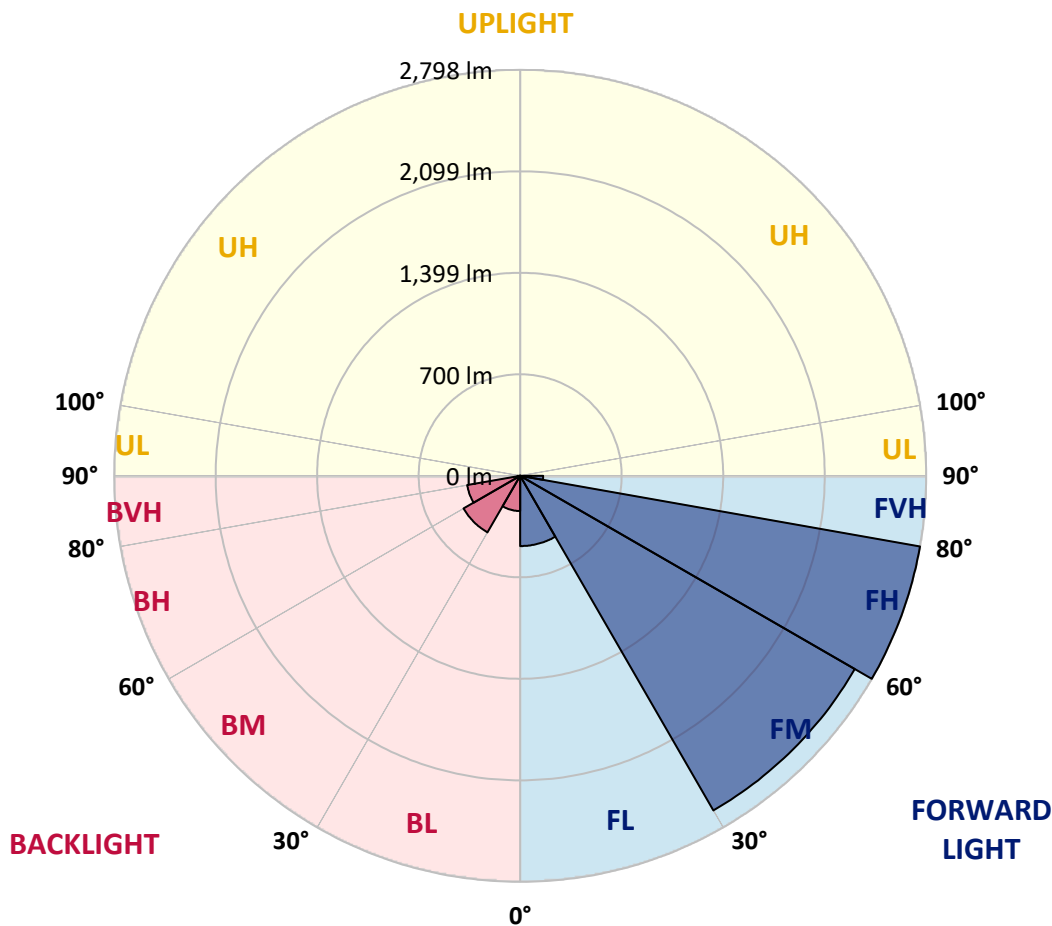
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	484.3	6.7			
FM (30°-60°)	2662.7	37.1			
FH (60°-80°)	2798.1	38.9			G2/5000
FVH (80°-90°)	158.5	2.2			G2/225
BL (0°-30°)	242.5	3.4	B1/500		
BM (30°-60°)	450.3	6.3	B1/1000		
BH (60°-80°)	370.7	5.2	B1/500		G1/500
BVH (80°-90°)	18.0	0.3			G1/100
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°	679.9	679.9	679.9	679.9	679.9	679.9	679.9	679.9	679.9	679.9	679.9
2.5°	848.9	809.3	767.3	779.1	803.2	814.2	802.3	790.7	775.8	758.1	818.4
5°	1029.4	970.7	962.1	961.8	953.3	919.2	963.1	960.0	977.7	995.9	1042.8
7.5°	1080.9	1059.0	1035.2	1046.5	1003.5	1001.7	1069.9	1089.4	1123.5	1112.2	1175.3
10°	1054.4	1029.7	1042.2	1037.6	1041.6	1086.7	1128.4	1129.6	1166.1	1202.1	1161.6
12.5°	1007.8	1009.6	1059.3	1057.4	1121.4	1205.1	1217.6	1207.8	1267.5	1243.2	1277.9
15°	1041.0	1063.2	1050.7	1061.4	1086.7	1193.2	1227.9	1263.3	1319.9	1341.8	1307.1
17.5°	1094.0	1105.8	1049.8	1044.0	1096.1	1146.6	1232.8	1263.0	1271.8	1428.0	1379.0
20°	1071.4	1095.5	1040.7	970.4	1056.8	1123.8	1208.8	1199.6	1242.6	1434.7	1393.9
22.5°	1135.4	1095.5	1025.8	975.8	1006.3	1067.8	1140.0	1199.9	1250.8	1395.4	1415.5
25°	1147.6	1128.7	1063.5	1013.9	1003.5	1025.5	1128.4	1167.7	1253.5	1449.0	1403.9
27.5°	1221.9	1193.5	1060.8	1062.3	1010.9	972.2	1091.8	1174.4	1284.6	1415.8	1432.2
30°	1314.1	1292.5	1125.9	1132.0	1060.8	989.5	1116.8	1141.8	1302.5	1467.6	1467.9
32.5°	1383.2	1421.3	1254.1	1171.3	1146.0	1092.8	1078.4	1190.8	1281.5	1561.3	1528.8
35°	1507.8	1537.3	1352.8	1286.4	1200.8	1140.9	1182.6	1223.1	1368.9	1684.7	1619.2
37.5°	1738.2	1704.1	1536.1	1431.6	1399.7	1313.2	1336.3	1308.0	1463.9	1823.2	1796.4
40°	1871.6	1842.1	1665.2	1607.3	1480.7	1491.6	1462.7	1483.4	1590.9	1970.6	1962.0
42.5°	2003.1	1963.6	1814.1	1773.9	1647.5	1593.9	1599.1	1666.1	1786.7	2208.7	2180.3
45°	2133.1	2031.8	1966.3	1976.9	1916.1	1806.1	1813.8	1876.8	2000.4	2480.9	2415.7
47.5°	2232.7	2149.0	2097.8	2084.7	2054.6	2201.7	2135.9	2161.5	2216.0	2723.2	2698.6
50°	2421.2	2323.4	2256.8	2237.9	2340.2	2544.8	2410.8	2355.7	2471.7	3036.5	3023.7
52.5°	2722.9	2601.1	2490.0	2488.8	2636.7	2769.5	2863.9	2768.9	2811.5	3357.4	3394.0
55°	2986.3	2845.3	2745.4	2800.6	3011.2	3092.5	3413.2	3338.9	3302.9	3681.4	3785.8
57.5°	3084.6	2919.9	2854.7	2936.0	3246.6	3664.3	4003.2	3807.8	3772.7	4048.0	4266.9
60°	2868.8	2694.6	2698.6	2851.7	3389.7	4084.2	4648.4	4482.5	4277.3	4504.4	4718.1
62.5°	2253.7	2096.3	2198.9	2431.8	3269.7	4492.2	5513.1	5583.1	4853.6	4882.8	4968.4
65°	1531.8	1422.8	1515.4	1743.4	2652.0	4714.8	6336.7	6617.4	5378.5	5130.7	5076.5
67.5°	1008.1	931.1	949.0	1100.7	1825.6	4019.4	6887.5	7193.5	5858.4	5334.1	4885.9
70°	780.7	718.6	710.6	790.1	1082.7	2792.3	6561.1	7026.3	6150.7	5143.5	4258.7
72.5°	612.6	565.4	569.7	646.1	838.5	1549.2	5077.1	5975.0	5710.4	4435.9	3271.9
75°	477.7	439.1	460.7	548.1	775.5	962.7	3503.0	4534.8	4414.9	3284.7	1866.1
77.5°	346.8	321.8	352.6	466.8	728.9	826.0	2180.6	3163.8	2828.3	1686.5	640.3
80°	227.4	213.4	238.7	380.6	661.0	795.0	1347.6	1938.6	1397.5	473.8	242.4
82.5°	134.0	127.9	148.9	257.6	531.3	745.0	898.8	1077.2	571.8	200.3	128.8
85°	70.3	65.8	88.3	148.0	366.3	680.2	707.6	644.9	276.2	87.1	61.5
87.5°	23.4	22.8	37.5	57.2	138.5	361.1	377.5	306.3	113.9	25.3	13.4
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°	679.9	679.9	679.9	679.9	679.9	679.9	679.9	679.9	679.9	679.9	679.9
2.5°	826.6	814.5	744.4	754.2	763.3	758.7	756.0	724.3	721.3	766.4	762.7
5°	1041.6	991.1	931.4	928.6	889.4	849.2	857.1	844.3	848.0	866.5	868.4
7.5°	1155.2	1092.1	1035.2	942.7	864.1	800.5	810.5	807.5	799.2	841.3	852.5
10°	1153.0	1097.0	1032.8	920.7	867.8	816.0	753.9	695.1	677.8	657.1	658.9
12.5°	1229.2	1179.5	1039.5	925.3	853.4	764.2	647.9	583.7	522.2	521.0	505.4
15°	1252.9	1216.4	1053.8	899.1	753.3	625.4	505.1	435.4	390.9	382.1	369.0
17.5°	1312.9	1255.7	1010.2	814.5	637.0	489.0	379.7	331.0	327.3	333.4	326.7
20°	1316.8	1224.0	931.7	689.3	511.8	370.5	309.7	285.3	298.4	313.3	312.7
22.5°	1313.5	1184.1	863.8	582.8	384.6	297.8	271.3	265.8	278.0	300.2	303.0
25°	1279.4	1171.0	778.8	478.6	312.1	255.1	247.8	251.2	266.4	292.6	292.6
27.5°	1315.0	1117.7	672.3	389.4	262.5	227.1	232.3	240.8	252.1	281.9	287.4
30°	1303.5	1135.4	586.4	313.6	231.4	207.7	219.2	227.7	240.5	271.6	274.3
32.5°	1334.5	1088.2	514.3	263.7	211.0	200.0	202.8	214.3	231.1	255.5	260.3
35°	1382.0	1105.5	431.4	237.2	201.0	191.2	196.4	205.5	222.3	246.0	250.0
37.5°	1533.6	1104.6	374.2	222.6	199.1	189.4	191.8	198.2	217.7	239.3	248.5
40°	1631.1	1168.0	322.1	219.2	197.0	188.5	186.3	193.3	208.9	234.4	240.8
42.5°	1814.1	1206.6	299.6	218.0	196.7	183.3	181.2	189.4	204.6	228.4	238.1
45°	2007.4	1261.7	281.6	217.4	195.8	182.4	176.0	186.3	199.1	222.0	233.2
47.5°	2234.8	1378.4	271.6	215.3	193.9	183.6	174.2	179.3	193.6	216.5	227.7
50°	2532.6	1532.7	273.7	212.2	196.7	183.9	171.4	173.9	186.9	209.2	220.7
52.5°	2894.6	1771.7	287.4	213.4	198.5	182.4	170.2	169.0	180.2	199.7	211.3
55°	3330.9	2110.9	328.5	219.2	198.5	182.1	168.4	162.9	171.4	187.3	198.5
57.5°	3857.4	2503.7	408.9	222.0	197.0	180.2	164.4	154.7	159.8	172.9	183.6
60°	4309.5	2820.6	491.7	223.8	200.0	176.0	156.5	144.3	147.7	157.7	167.2
62.5°	4540.0	2909.6	516.7	222.3	208.3	173.2	147.1	133.4	133.7	142.2	150.7
65°	4583.2	2791.1	416.5	220.7	218.9	172.9	140.4	123.9	121.8	127.9	135.2
67.5°	4275.1	2422.7	300.5	217.4	220.1	171.1	135.8	116.3	110.8	115.1	121.2
70°	3629.9	1951.1	252.4	210.7	205.5	162.0	127.9	108.4	101.1	104.1	108.7
72.5°	2706.2	1443.5	220.1	196.4	179.0	138.5	115.7	99.6	92.0	94.1	97.4
75°	1503.5	770.0	184.2	170.8	146.1	112.0	98.6	88.3	81.6	82.5	86.2
77.5°	499.3	284.1	135.2	135.5	110.5	86.5	81.3	75.5	70.3	70.6	73.7
80°	226.2	157.1	96.8	97.4	77.0	62.7	62.4	60.6	57.2	56.3	58.5
82.5°	131.2	95.3	66.4	63.3	49.6	40.8	45.4	44.5	43.5	40.2	40.8
85°	64.5	51.2	34.7	32.9	27.4	20.4	24.4	25.3	24.4	20.7	20.4
87.5°	15.8	16.7	8.5	7.9	4.6	2.1	3.7	3.7	4.6	3.0	1.5
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)