

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: P596743

Luminaire Tested: **MSA-SA4A-827-U-SL2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596743  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-827-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

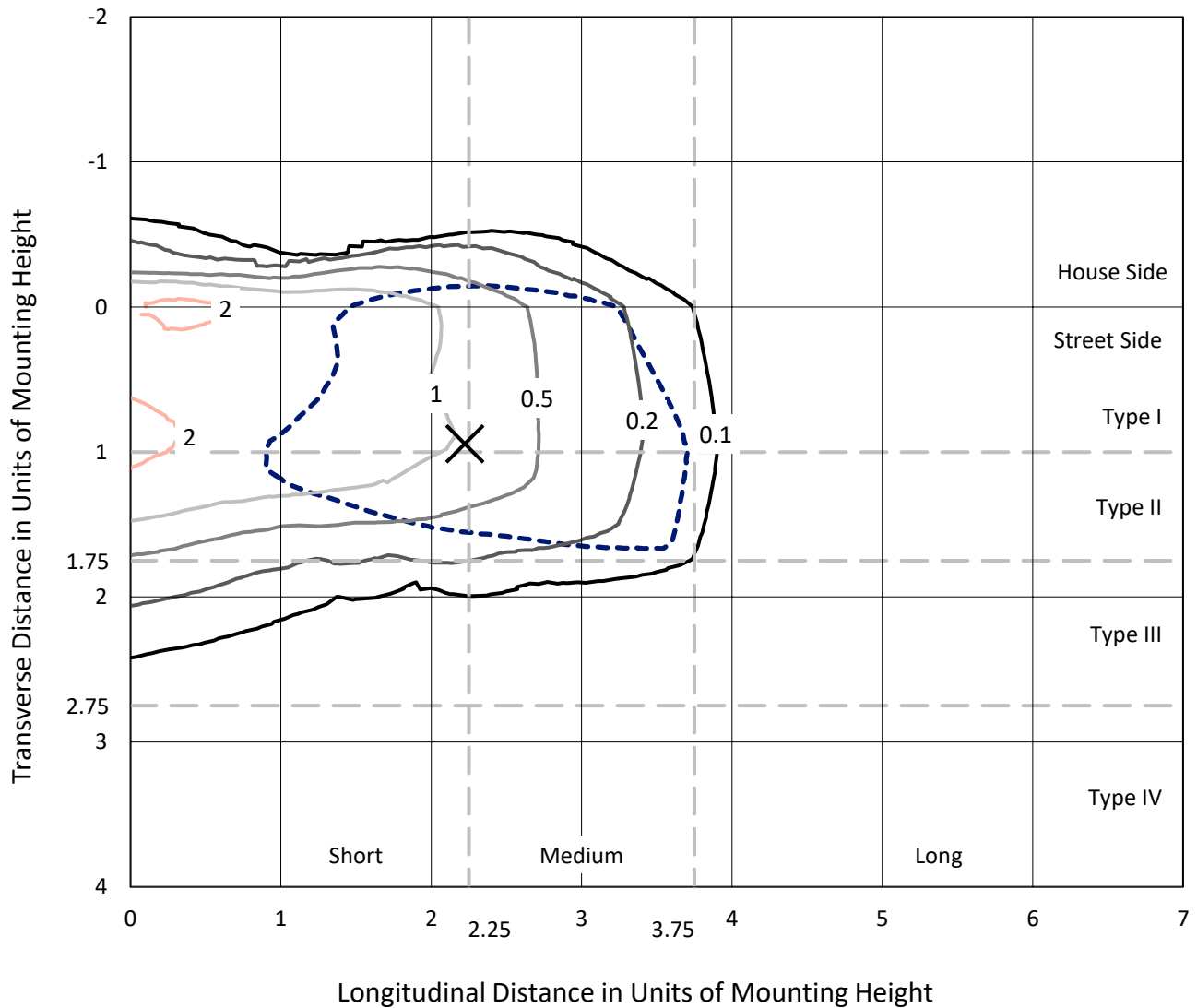
Lumens per Lamp: N/A  
Luminaire Lumens: 9341 lumens  
Efficiency: N/A  
Efficacy: 72.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

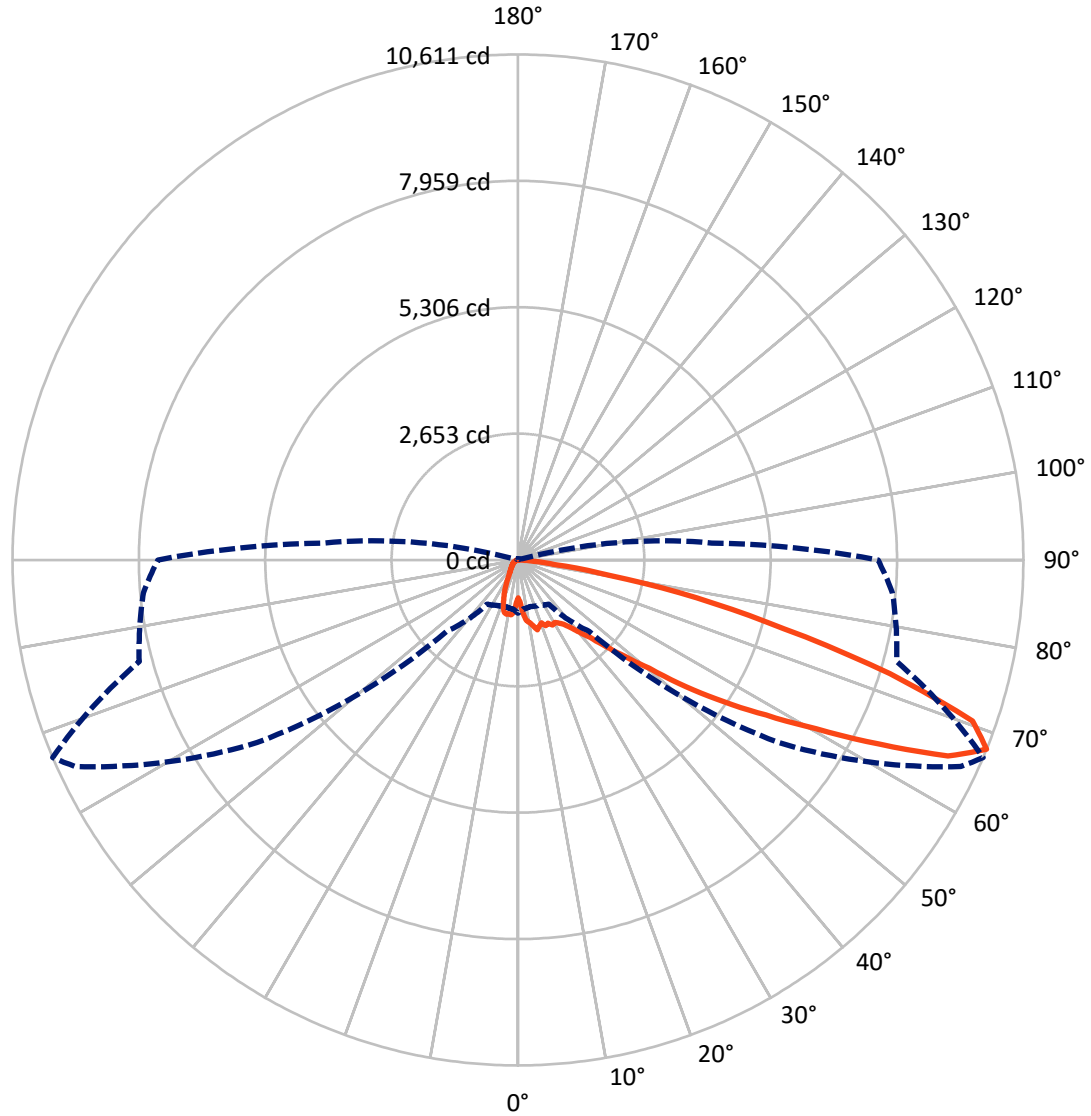
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 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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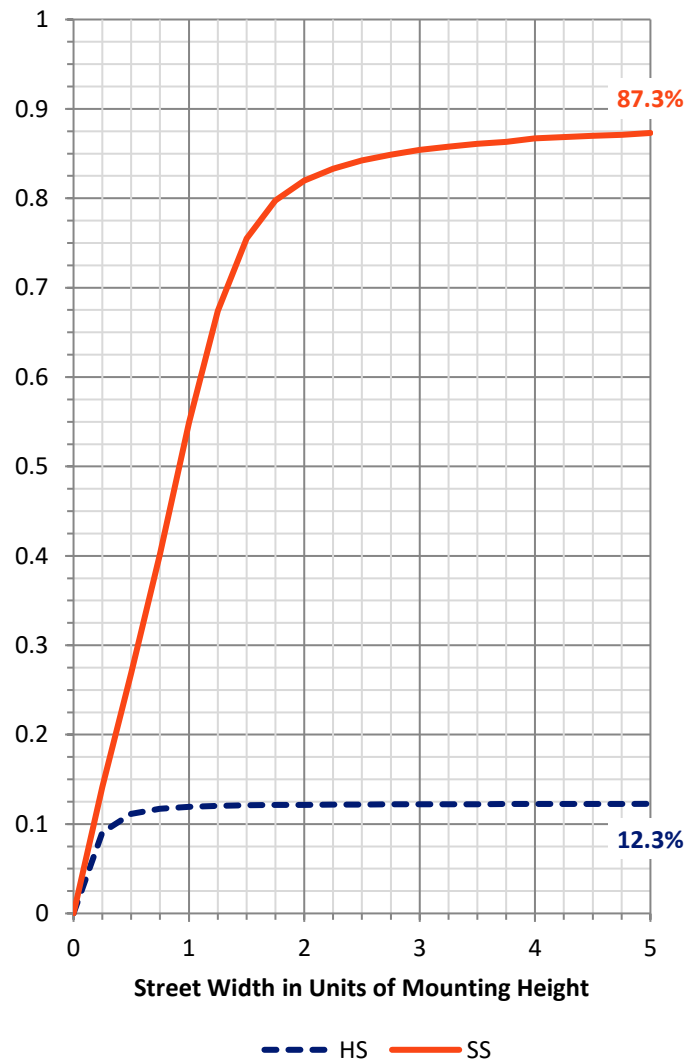
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1155.2	0.0	1155.2
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	8185.8	0.0	8185.8
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	9341.0	0.0	9341.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.9	1.1
10°-20°	295.5	3.2
20°-30°	463.1	5.0
30°-40°	746.7	8.0
40°-50°	1372.1	14.7
50°-60°	2317.2	24.8
60°-70°	2561.8	27.4
70°-80°	1340.8	14.4
80°-90°	144.0	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°	9341.0	100.0
0°-180°	9341.0	100.0

**Coefficient of Utilization**

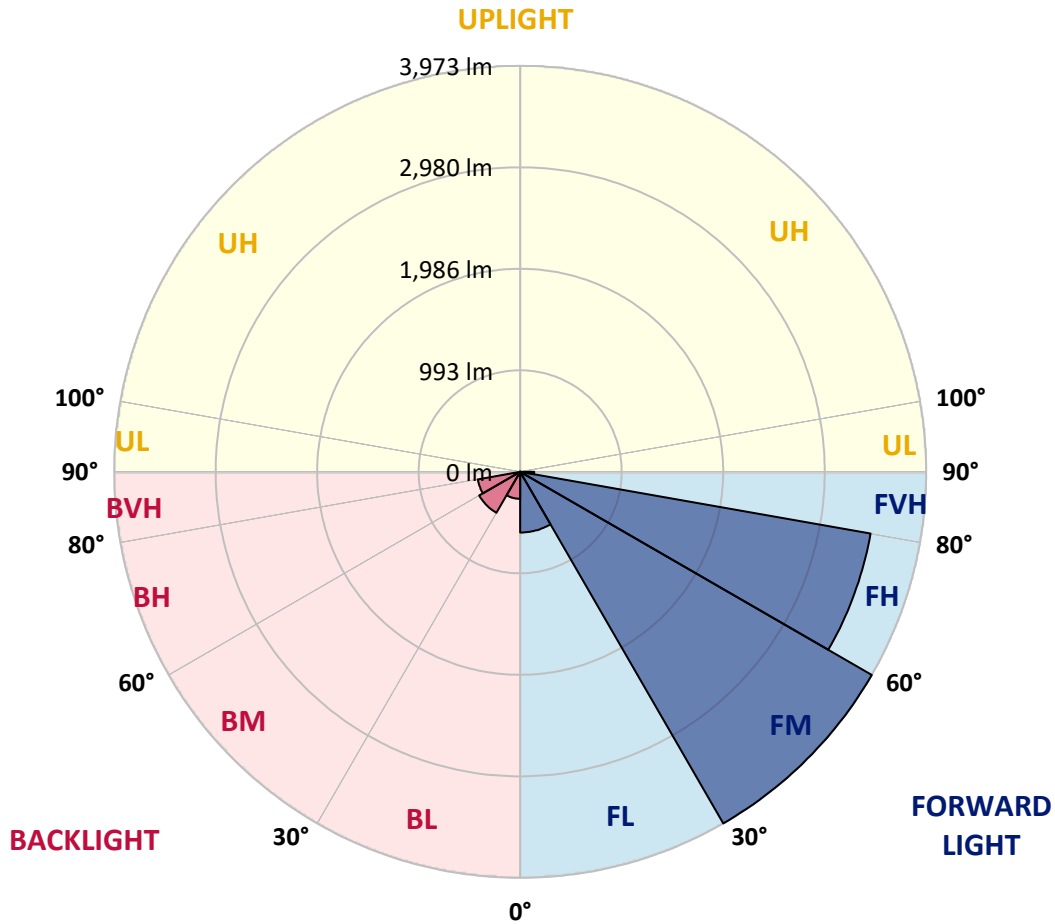


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	593.9	6.4			
FM (30°-60°)	3972.8	42.5			
FH (60°-80°)	3481.2	37.3			G2/5000
FVH (80°-90°)	137.9	1.5			G2/225
BL (0°-30°)	264.5	2.8	B1/500		
BM (30°-60°)	463.2	5.0	B1/1000		
BH (60°-80°)	421.4	4.5	B1/500		G1/500
BVH (80°-90°)	6.1	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°	795.6	795.6	795.6	795.6	795.6	795.6	795.6	795.6	795.6	795.6	795.6
2.5°	939.2	907.4	853.4	869.0	900.3	926.4	914.1	889.9	890.4	865.7	954.3
5°	1092.7	1050.0	1018.8	1029.7	1028.3	1027.3	1085.6	1107.9	1117.3	1158.1	1218.3
7.5°	1136.8	1121.6	1088.9	1098.9	1066.2	1068.5	1170.9	1267.5	1282.7	1307.8	1414.9
10°	1119.7	1090.3	1102.2	1102.2	1102.6	1155.7	1224.4	1316.8	1335.3	1432.0	1443.3
12.5°	1101.2	1102.6	1149.6	1141.0	1205.5	1300.7	1323.9	1427.7	1418.7	1502.6	1627.2
15°	1169.9	1205.9	1175.6	1187.5	1193.6	1305.5	1342.9	1480.8	1520.6	1626.7	1707.7
17.5°	1287.9	1292.7	1229.6	1212.6	1257.1	1288.9	1364.2	1430.5	1457.1	1735.7	1850.4
20°	1309.2	1339.6	1275.6	1177.0	1271.3	1314.9	1367.5	1399.3	1410.6	1769.3	1930.9
22.5°	1437.7	1404.0	1301.7	1226.8	1253.8	1301.2	1333.9	1429.6	1497.8	1705.9	2008.2
25°	1503.5	1494.5	1396.9	1332.9	1305.5	1301.7	1376.5	1449.0	1470.8	1771.7	2027.1
27.5°	1661.3	1640.9	1451.9	1443.8	1353.3	1273.7	1378.0	1508.3	1549.0	1709.6	2098.2
30°	1876.0	1868.4	1616.8	1611.6	1467.5	1324.4	1454.7	1544.7	1520.1	1741.4	2145.6
32.5°	2092.0	2153.6	1896.3	1749.4	1641.4	1510.6	1432.9	1533.4	1577.4	1818.6	2232.8
35°	2353.1	2397.7	2135.6	2029.0	1788.8	1597.8	1577.4	1641.9	1660.8	1910.6	2331.8
37.5°	2809.9	2742.6	2519.5	2338.0	2211.9	1909.1	1808.7	1757.5	1801.6	2035.2	2534.1
40°	3147.3	3104.7	2829.8	2721.3	2431.3	2254.1	1991.6	1943.7	1993.0	2163.1	2674.9
42.5°	3554.3	3465.7	3207.0	3133.6	2835.0	2493.4	2227.1	2243.7	2212.9	2415.7	2921.7
45°	3922.5	3722.6	3578.5	3595.1	3435.9	2974.3	2619.9	2611.9	2586.3	2781.5	3181.4
47.5°	4170.3	3995.5	3855.2	3809.3	3790.3	3820.2	3187.6	3044.5	3025.5	3165.8	3590.3
50°	4303.5	4112.1	3938.6	3948.1	4332.9	4622.4	3773.3	3570.0	3577.1	3723.5	4149.5
52.5°	4213.9	3997.4	3814.5	3992.2	4753.6	5157.4	4742.7	4256.6	4421.5	4384.0	4899.6
55°	3800.3	3612.1	3482.3	3800.3	4799.6	5733.1	5936.4	5290.0	5253.1	5167.8	5664.4
57.5°	3104.2	2942.1	2862.0	3197.5	4296.9	6197.0	7135.2	6458.1	6143.0	5785.7	6299.3
60°	2312.9	2193.4	2110.0	2287.3	3385.6	5746.4	7920.4	7558.8	7194.0	6381.3	6869.9
62.5°	1713.0	1615.8	1527.2	1543.3	2331.3	4942.2	8221.7	8725.0	8515.5	7010.1	7408.1
65°	1367.1	1278.4	1216.4	1180.8	1443.8	3718.3	7802.4	9680.7	9922.4	7602.4	7796.7
67.5°	1116.4	1041.5	1010.7	1051.5	1132.5	2119.5	6682.2	10260.7	10611.4	8230.7	7892.4
70°	908.4	846.8	843.4	953.4	1042.9	1292.2	4915.2	9860.3	10124.2	8337.8	7318.6
72.5°	633.1	606.1	649.2	805.1	1033.5	1076.1	2822.7	8159.7	8169.1	7364.1	6019.8
75°	358.2	354.0	422.2	642.1	1006.5	1065.2	1573.6	5766.3	5770.5	5569.6	4170.3
77.5°	197.1	184.3	245.9	434.0	864.3	1040.6	1015.0	3937.2	3836.3	3099.4	1904.9
80°	91.0	85.8	133.2	278.1	632.1	984.2	813.6	2164.1	1951.3	1009.8	464.8
82.5°	37.4	35.5	61.1	178.6	399.5	792.7	685.7	960.0	770.5	191.9	143.6
85°	6.6	7.1	25.1	108.0	223.7	365.3	555.8	455.8	335.0	53.1	78.7
87.5°	0.0	0.0	5.2	26.1	54.0	100.0	225.6	127.5	87.7	15.6	23.2
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°	795.6	795.6	795.6	795.6	795.6	795.6	795.6	795.6	795.6	795.6	795.6
2.5°	971.9	963.8	882.3	886.1	891.8	886.6	885.6	862.9	842.0	910.7	909.8
5°	1229.2	1171.8	1115.4	1093.6	1046.7	985.1	985.6	966.2	946.3	974.2	974.2
7.5°	1412.5	1333.4	1261.9	1134.4	1010.2	897.9	888.0	861.5	831.1	867.6	874.7
10°	1455.2	1386.5	1294.1	1106.9	989.4	879.9	759.6	660.5	614.6	593.3	589.5
12.5°	1586.4	1535.3	1328.7	1121.6	952.4	767.2	570.0	452.5	372.4	366.3	357.8
15°	1674.1	1638.1	1362.8	1085.1	796.1	551.6	358.2	274.8	242.6	239.8	235.5
17.5°	1810.1	1747.6	1330.1	969.0	622.6	363.9	240.7	217.0	220.8	229.3	222.7
20°	1865.5	1743.3	1259.0	800.8	437.4	244.0	209.0	196.2	206.1	214.2	210.4
22.5°	1922.4	1755.6	1196.0	660.1	285.7	201.9	186.2	179.6	180.5	188.6	189.1
25°	1921.9	1789.7	1123.0	514.1	212.8	179.6	168.2	159.7	156.4	162.1	160.6
27.5°	2015.3	1750.4	989.9	381.4	187.2	160.6	149.7	139.3	127.5	133.2	133.2
30°	2015.8	1814.4	897.0	273.9	171.5	143.1	133.6	117.5	103.8	108.5	109.0
32.5°	2069.3	1758.9	811.2	209.4	159.2	132.7	111.8	97.1	89.1	91.9	91.9
35°	2130.4	1806.3	679.5	184.8	146.9	118.0	95.7	83.9	77.7	80.1	80.1
37.5°	2332.3	1796.4	588.0	172.0	138.8	106.6	87.2	73.9	71.1	72.5	74.4
40°	2405.3	1867.0	463.9	164.4	125.6	96.2	76.8	66.8	63.0	64.0	64.4
42.5°	2591.0	1882.6	370.5	158.3	113.7	83.4	68.2	61.1	56.4	56.4	57.8
45°	2796.2	1921.9	294.7	153.1	103.8	74.9	61.6	55.9	48.8	47.9	49.8
47.5°	3093.3	2072.6	240.2	142.6	91.9	69.7	56.9	48.3	42.6	40.8	42.6
50°	3590.3	2328.5	212.3	129.8	83.4	65.4	50.2	41.2	37.0	34.6	36.0
52.5°	4291.6	2770.6	197.6	118.0	75.8	58.8	45.0	36.0	31.7	29.9	30.8
55°	5070.6	3277.6	190.5	106.1	69.2	51.6	39.3	31.7	28.0	25.6	26.1
57.5°	5790.9	3754.3	183.4	94.8	62.5	46.0	34.6	28.0	24.2	21.8	22.3
60°	6500.7	4134.8	166.3	81.5	56.4	41.2	30.3	24.2	21.8	19.0	19.0
62.5°	7128.6	4362.2	141.7	70.6	50.7	36.5	27.0	21.8	19.9	17.1	17.1
65°	7556.0	4372.7	114.2	60.7	44.5	31.3	23.7	20.4	18.5	15.2	14.7
67.5°	7562.1	4088.4	91.5	54.0	39.3	27.5	21.3	19.4	17.1	14.2	13.3
70°	6768.4	3377.6	76.3	47.4	34.1	24.2	18.5	18.5	16.6	13.7	12.3
72.5°	5414.2	2581.1	64.0	41.2	30.3	20.8	17.1	17.5	16.1	13.7	12.3
75°	3639.2	1480.3	53.1	35.1	26.5	17.5	16.6	17.1	16.6	13.7	11.8
77.5°	1676.0	471.5	41.2	28.9	22.7	14.7	16.1	16.1	15.2	12.3	10.4
80°	377.7	116.1	29.9	21.3	18.5	10.9	14.7	13.3	11.8	8.5	6.2
82.5°	137.4	35.5	18.0	13.3	11.4	4.3	9.5	9.5	8.5	6.2	3.8
85°	78.7	18.5	10.0	8.5	6.2	1.9	5.2	5.7	4.7	4.3	1.9
87.5°	25.6	4.3	4.7	5.2	4.7	0.9	1.9	1.9	1.4	0.9	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)