

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: P367351

Luminaire Tested: **MSA-SA2B-760-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367351  
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-SA2B-760-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 8164 lumens  
Efficiency: N/A  
Efficacy: 96.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

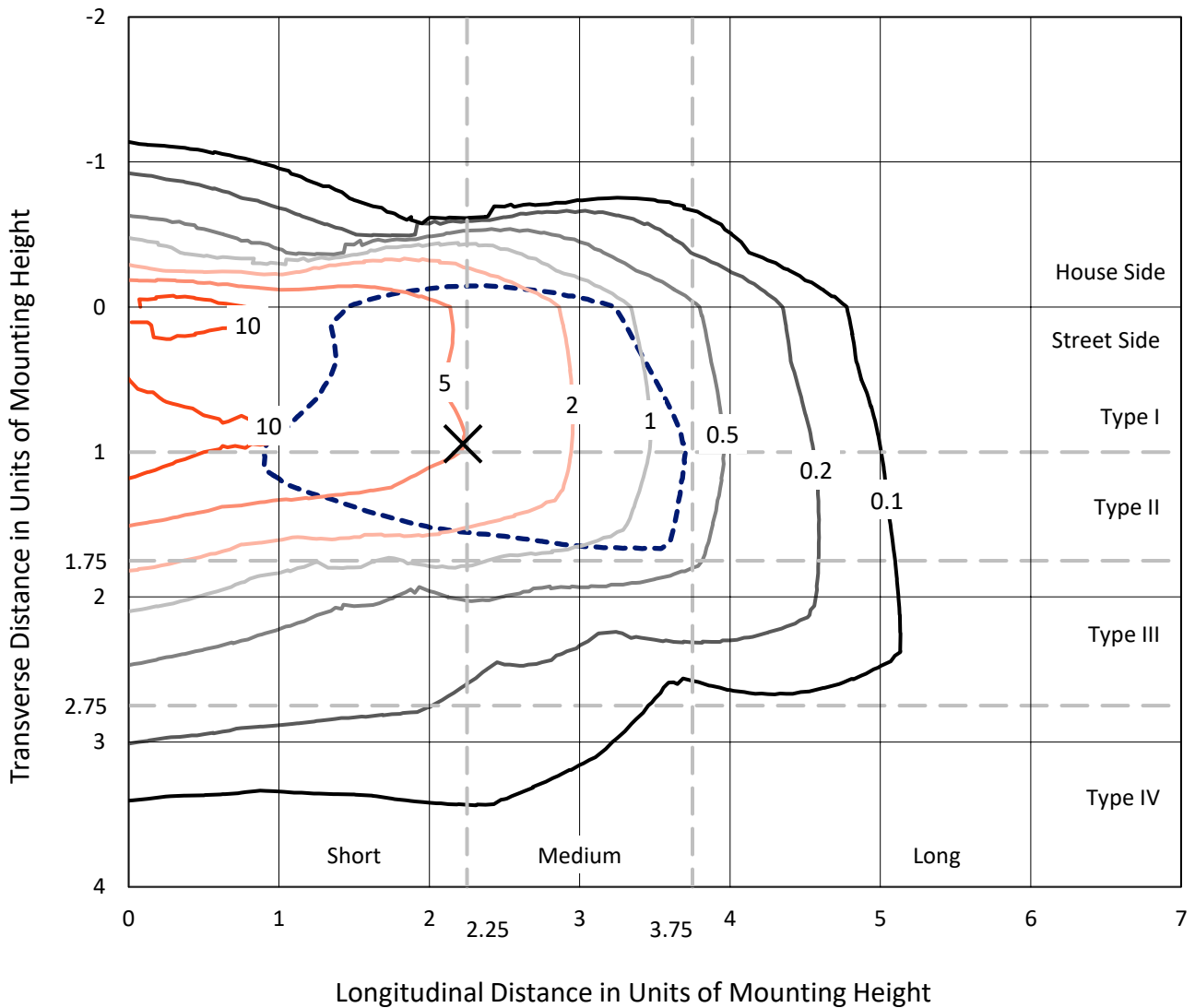
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

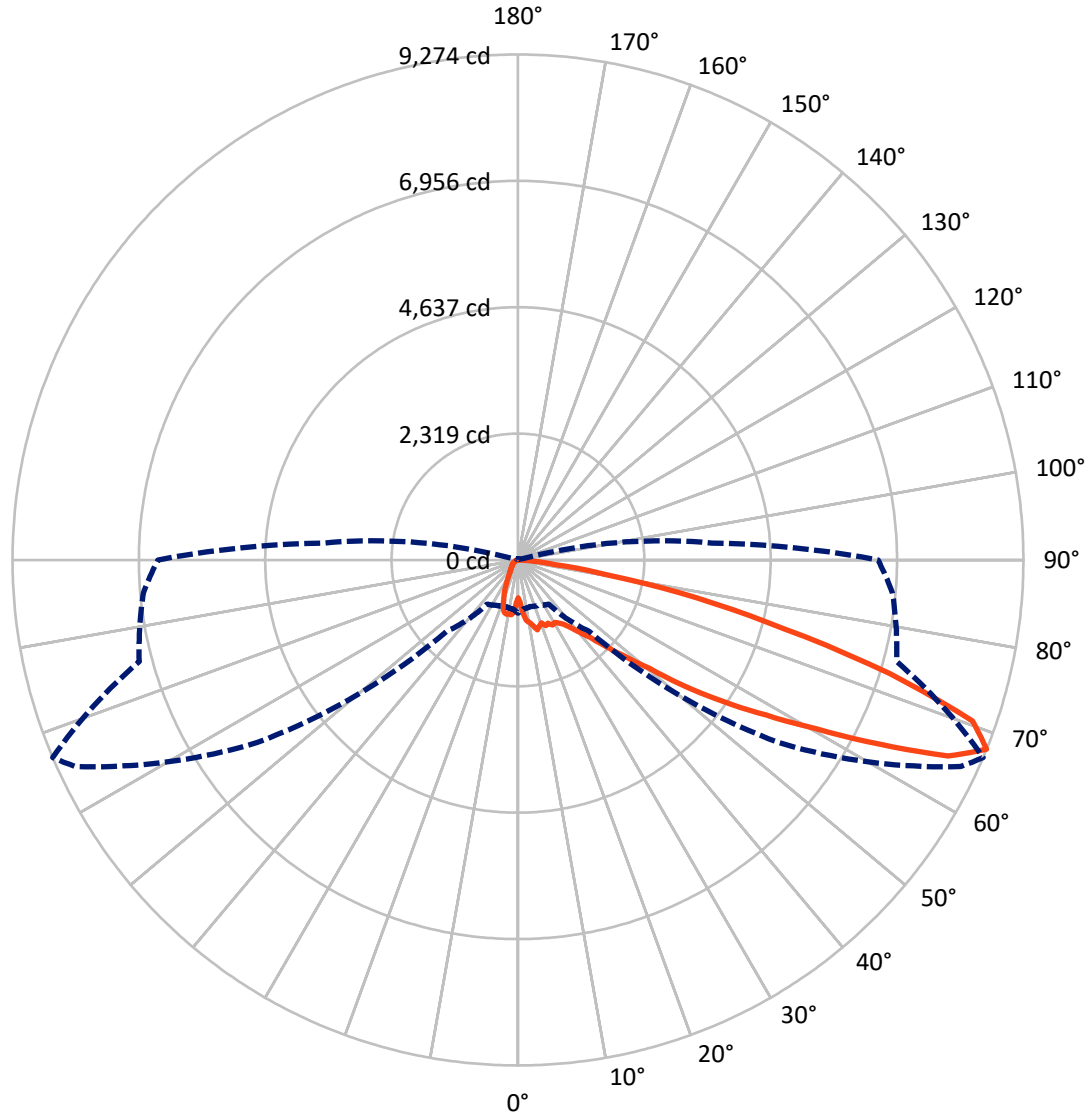
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.5 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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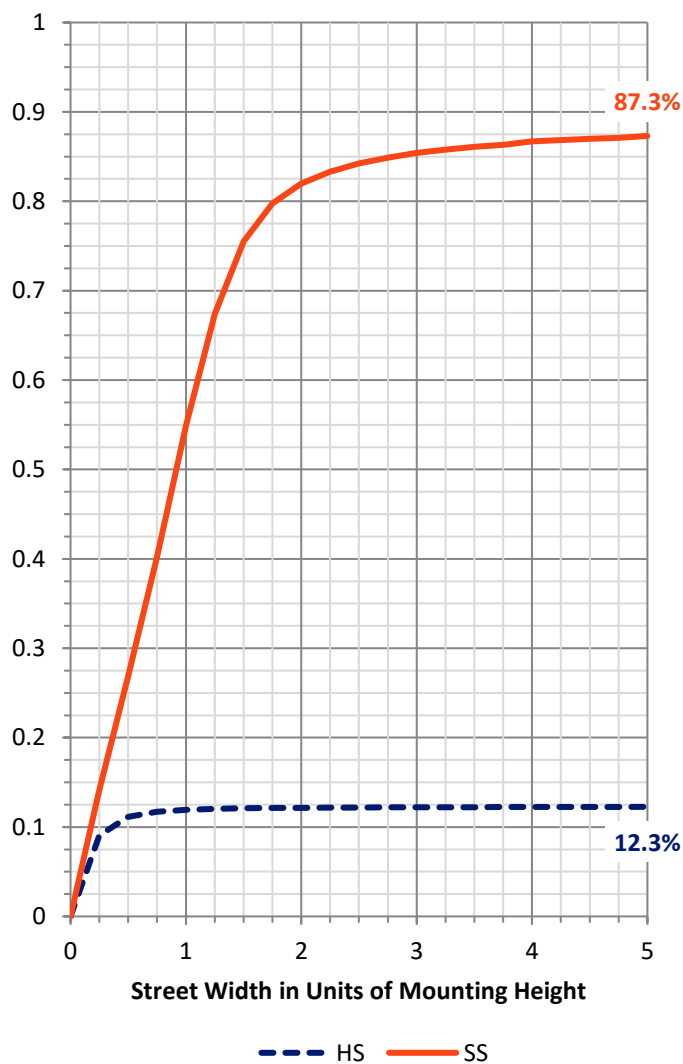
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1009.7	0.0	1009.7
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	7154.4	0.0	7154.4
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	8164.0	0.0	8164.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.3	1.1
10°-20°	258.3	3.2
20°-30°	404.7	5.0
30°-40°	652.6	8.0
40°-50°	1199.2	14.7
50°-60°	2025.2	24.8
60°-70°	2239.0	27.4
70°-80°	1171.9	14.4
80°-90°	125.9	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°	8164.0	100.0
0°-180°	8164.0	100.0

**Coefficient of Utilization**



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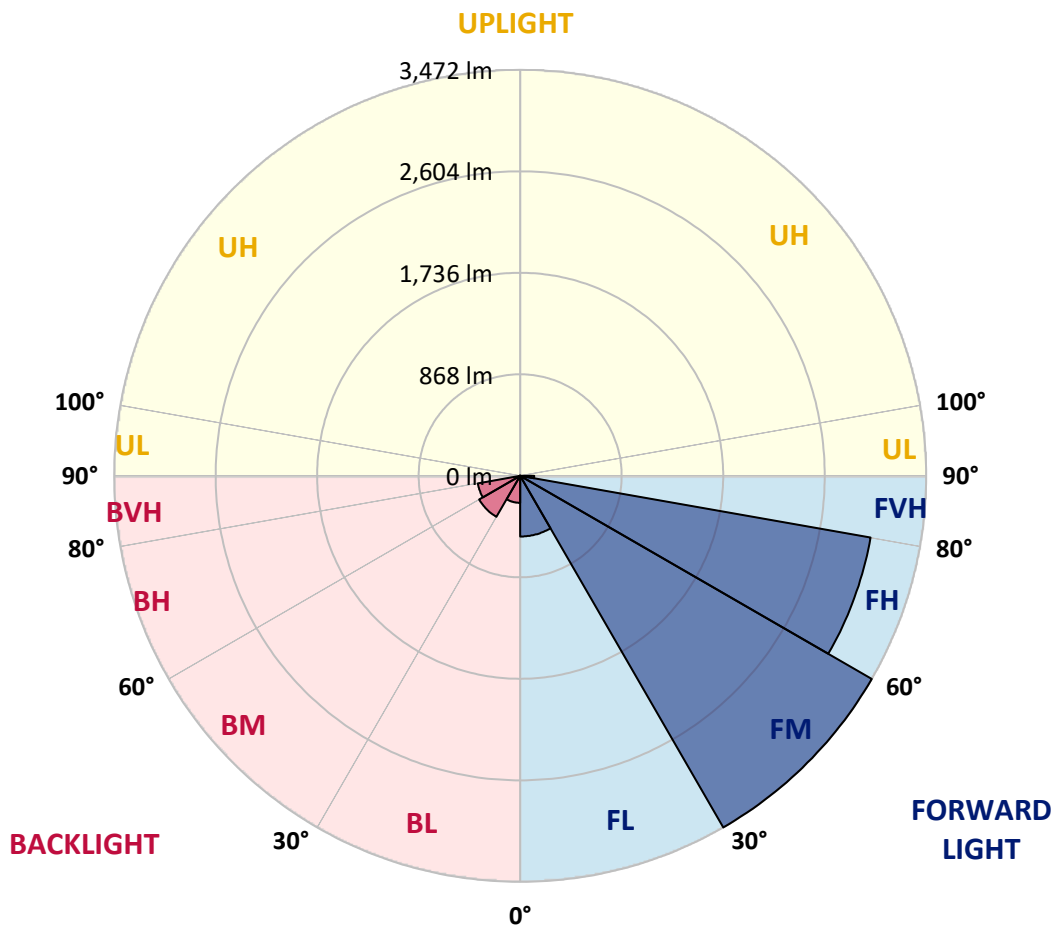
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	519.1	6.4			
FM (30°-60°)	3472.2	42.5			
FH (60°-80°)	3042.6	37.3			G2/5000
FVH (80°-90°)	120.5	1.5			G2/225
BL (0°-30°)	231.2	2.8	B1/500		
BM (30°-60°)	404.8	5.0	B1/1000		
BH (60°-80°)	368.3	4.5	B1/500		G1/500
BVH (80°-90°)	5.4	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°	695.3	695.3	695.3	695.3	695.3	695.3	695.3	695.3	695.3	695.3	695.3
2.5°	820.8	793.1	745.9	759.5	786.9	809.6	798.9	777.8	778.2	756.6	834.1
5°	955.0	917.7	890.4	899.9	898.7	897.9	948.8	968.3	976.5	1012.2	1064.8
7.5°	993.5	980.3	951.7	960.4	931.8	933.9	1023.3	1107.8	1121.1	1143.0	1236.6
10°	978.6	952.9	963.3	963.3	963.7	1010.1	1070.1	1150.9	1167.1	1251.5	1261.5
12.5°	962.5	963.7	1004.7	997.3	1053.6	1136.8	1157.1	1247.8	1239.9	1313.2	1422.2
15°	1022.5	1054.0	1027.5	1037.8	1043.2	1141.0	1173.7	1294.2	1329.0	1421.7	1492.6
17.5°	1125.6	1129.8	1074.7	1059.8	1098.7	1126.5	1192.3	1250.3	1273.5	1517.0	1617.2
20°	1144.3	1170.8	1114.9	1028.7	1111.1	1149.2	1195.2	1223.0	1232.9	1546.4	1687.6
22.5°	1256.5	1227.1	1137.6	1072.2	1095.8	1137.2	1165.8	1249.5	1309.1	1490.9	1755.1
25°	1314.1	1306.2	1220.9	1165.0	1141.0	1137.6	1203.1	1266.4	1285.5	1548.5	1771.7
27.5°	1452.0	1434.2	1268.9	1261.9	1182.8	1113.2	1204.3	1318.2	1353.8	1494.2	1833.8
30°	1639.6	1633.0	1413.1	1408.5	1282.6	1157.5	1271.4	1350.1	1328.6	1522.0	1875.2
32.5°	1828.4	1882.3	1657.4	1529.0	1434.6	1320.3	1252.4	1340.2	1378.7	1589.5	1951.4
35°	2056.6	2095.6	1866.5	1773.4	1563.4	1396.5	1378.7	1435.0	1451.6	1669.8	2038.0
37.5°	2455.9	2397.1	2202.0	2043.4	1933.2	1668.6	1580.8	1536.1	1574.6	1778.7	2214.8
40°	2750.7	2713.5	2473.3	2378.4	2125.0	1970.1	1740.6	1698.8	1741.9	1890.6	2337.8
42.5°	3106.5	3029.0	2802.9	2738.7	2477.8	2179.2	1946.5	1961.0	1934.0	2111.3	2553.6
45°	3428.3	3253.5	3127.6	3142.1	3002.9	2599.6	2289.8	2282.7	2260.4	2431.0	2780.5
47.5°	3644.9	3492.0	3369.5	3329.3	3312.7	3338.8	2785.9	2660.9	2644.3	2766.9	3138.0
50°	3761.2	3593.9	3442.3	3450.6	3786.9	4040.0	3297.8	3120.1	3126.4	3254.3	3626.6
52.5°	3683.0	3493.7	3333.8	3489.1	4154.7	4507.5	4145.1	3720.2	3864.4	3831.6	4282.2
55°	3321.4	3157.0	3043.5	3321.4	4194.8	5010.7	5188.4	4623.5	4591.2	4516.6	4950.6
57.5°	2713.0	2571.4	2501.4	2794.6	3755.4	5416.1	6236.1	5644.3	5368.9	5056.7	5505.6
60°	2021.4	1917.1	1844.2	1999.1	2959.0	5022.3	6922.4	6606.4	6287.5	5577.2	6004.2
62.5°	1497.1	1412.2	1334.8	1348.9	2037.6	4319.5	7185.8	7625.6	7442.5	6126.8	6474.7
65°	1194.8	1117.4	1063.1	1032.0	1261.9	3249.8	6819.3	8460.9	8672.1	6644.5	6814.3
67.5°	975.7	910.3	883.4	919.0	989.8	1852.5	5840.2	8967.8	9274.3	7193.6	6897.9
70°	793.9	740.1	737.2	833.3	911.5	1129.4	4295.9	8617.9	8848.5	7287.2	6396.4
72.5°	553.3	529.7	567.4	703.6	903.2	940.5	2467.0	7131.5	7139.8	6436.2	5261.3
75°	313.1	309.4	369.0	561.2	879.6	931.0	1375.4	5039.7	5043.4	4867.8	3644.9
77.5°	172.3	161.1	214.9	379.4	755.4	909.5	887.1	3441.1	3352.9	2708.9	1664.8
80°	79.5	75.0	116.4	243.1	552.5	860.2	711.1	1891.4	1705.4	882.5	406.3
82.5°	32.7	31.1	53.4	156.1	349.1	692.9	599.3	839.1	673.4	167.7	125.5
85°	5.8	6.2	21.9	94.4	195.5	319.3	485.8	398.4	292.8	46.4	68.7
87.5°	0.0	0.0	4.6	22.8	47.2	87.4	197.1	111.4	76.6	13.7	20.3
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°	695.3	695.3	695.3	695.3	695.3	695.3	695.3	695.3	695.3	695.3	695.3
2.5°	849.4	842.4	771.1	774.4	779.4	774.9	774.0	754.2	735.9	796.0	795.2
5°	1074.3	1024.2	974.9	955.8	914.8	861.0	861.4	844.4	827.0	851.5	851.5
7.5°	1234.6	1165.4	1102.9	991.5	882.9	784.8	776.1	752.9	726.4	758.3	764.5
10°	1271.8	1211.8	1131.0	967.4	864.7	769.1	663.9	577.3	537.1	518.5	515.2
12.5°	1386.5	1341.8	1161.3	980.3	832.4	670.5	498.2	395.5	325.5	320.1	312.7
15°	1463.2	1431.7	1191.1	948.4	695.8	482.1	313.1	240.2	212.0	209.6	205.8
17.5°	1582.0	1527.4	1162.5	846.9	544.2	318.1	210.4	189.7	193.0	200.4	194.6
20°	1630.5	1523.6	1100.4	699.9	382.3	213.3	182.6	171.5	180.2	187.2	183.9
22.5°	1680.2	1534.4	1045.3	576.9	249.7	176.4	162.8	157.0	157.8	164.8	165.2
25°	1679.8	1564.2	981.5	449.3	185.9	157.0	147.0	139.6	136.7	141.6	140.4
27.5°	1761.3	1529.8	865.1	333.4	163.6	140.4	130.9	121.8	111.4	116.4	116.4
30°	1761.8	1585.7	784.0	239.4	149.9	125.1	116.8	102.7	90.7	94.8	95.3
32.5°	1808.6	1537.3	709.0	183.1	139.2	116.0	97.7	84.9	77.9	80.3	80.3
35°	1862.0	1578.7	593.9	161.5	128.4	103.1	83.7	73.3	67.9	70.0	70.0
37.5°	2038.4	1570.0	513.9	150.3	121.3	93.2	76.2	64.6	62.1	63.4	65.0
40°	2102.2	1631.7	405.4	143.7	109.7	84.1	67.1	58.4	55.1	55.9	56.3
42.5°	2264.5	1645.4	323.9	138.3	99.4	72.9	59.6	53.4	49.3	49.3	50.5
45°	2443.8	1679.8	257.6	133.8	90.7	65.4	53.8	48.9	42.7	41.8	43.5
47.5°	2703.5	1811.5	210.0	124.7	80.3	60.9	49.7	42.2	37.3	35.6	37.3
50°	3138.0	2035.1	185.5	113.5	72.9	57.2	43.9	36.0	32.3	30.2	31.5
52.5°	3750.9	2421.5	172.7	103.1	66.3	51.4	39.3	31.5	27.7	26.1	26.9
55°	4431.7	2864.6	166.5	92.8	60.5	45.1	34.4	27.7	24.4	22.4	22.8
57.5°	5061.2	3281.2	160.3	82.8	54.7	40.2	30.2	24.4	21.1	19.1	19.5
60°	5681.6	3613.8	145.4	71.2	49.3	36.0	26.5	21.1	19.1	16.6	16.6
62.5°	6230.3	3812.6	123.8	61.7	44.3	31.9	23.6	19.1	17.4	14.9	14.9
65°	6603.9	3821.7	99.8	53.0	38.9	27.3	20.7	17.8	16.2	13.3	12.8
67.5°	6609.3	3573.2	79.9	47.2	34.4	24.0	18.6	17.0	14.9	12.4	11.6
70°	5915.6	2952.0	66.7	41.4	29.8	21.1	16.2	16.2	14.5	12.0	10.8
72.5°	4732.0	2255.8	55.9	36.0	26.5	18.2	14.9	15.3	14.1	12.0	10.8
75°	3180.6	1293.8	46.4	30.6	23.2	15.3	14.5	14.9	14.5	12.0	10.4
77.5°	1464.8	412.1	36.0	25.3	19.9	12.8	14.1	14.1	13.3	10.8	9.1
80°	330.1	101.5	26.1	18.6	16.2	9.5	12.8	11.6	10.4	7.5	5.4
82.5°	120.1	31.1	15.7	11.6	9.9	3.7	8.3	8.3	7.5	5.4	3.3
85°	68.7	16.2	8.7	7.5	5.4	1.7	4.6	5.0	4.1	3.7	1.7
87.5°	22.4	3.7	4.1	4.6	4.1	0.8	1.7	1.7	1.2	0.8	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)