

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: P596967

Luminaire Tested: **MSA-SA2C-835-U-SL4-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596967  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-835-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8411 lumens  
Efficiency: N/A  
Efficacy: 74.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

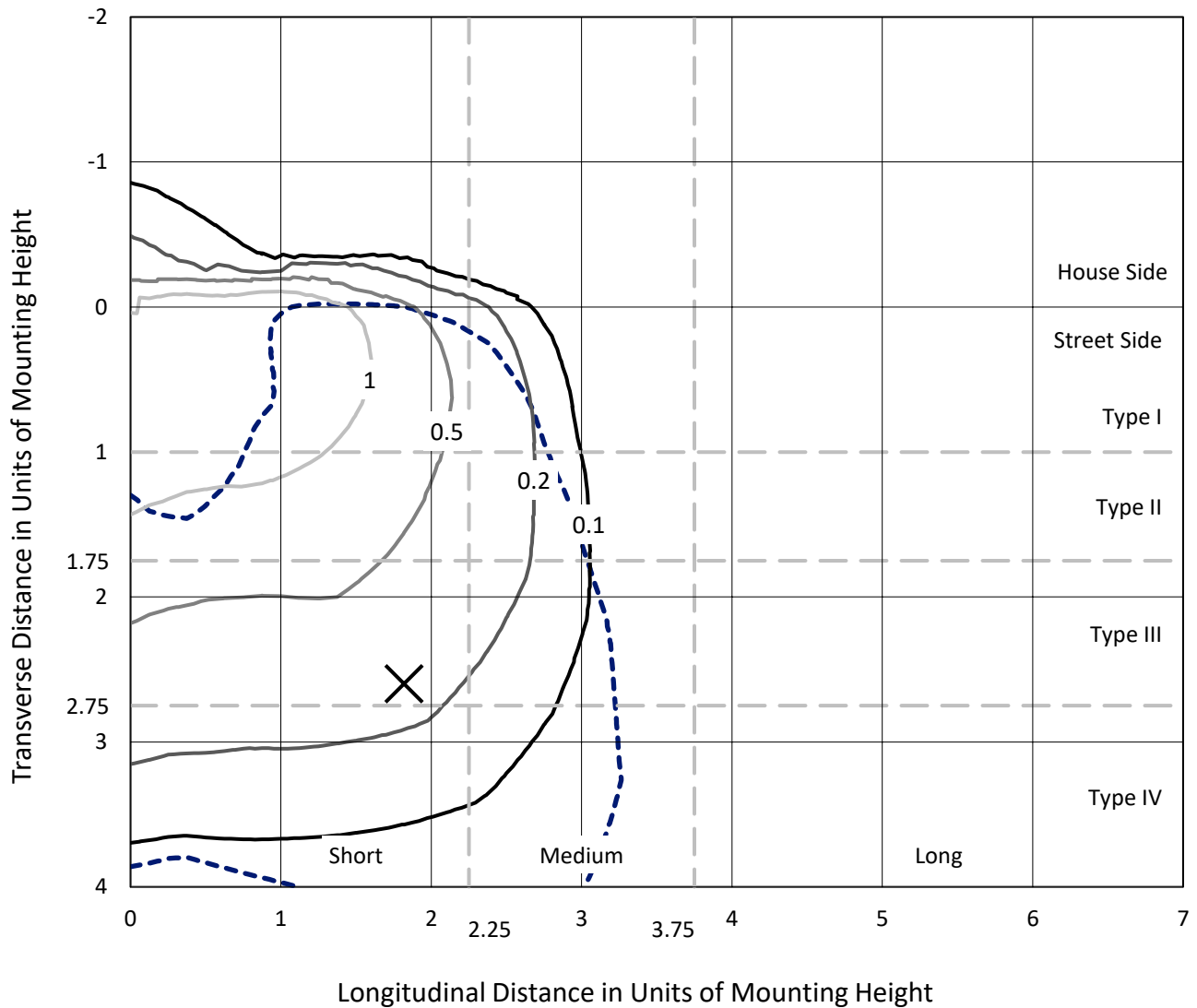
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

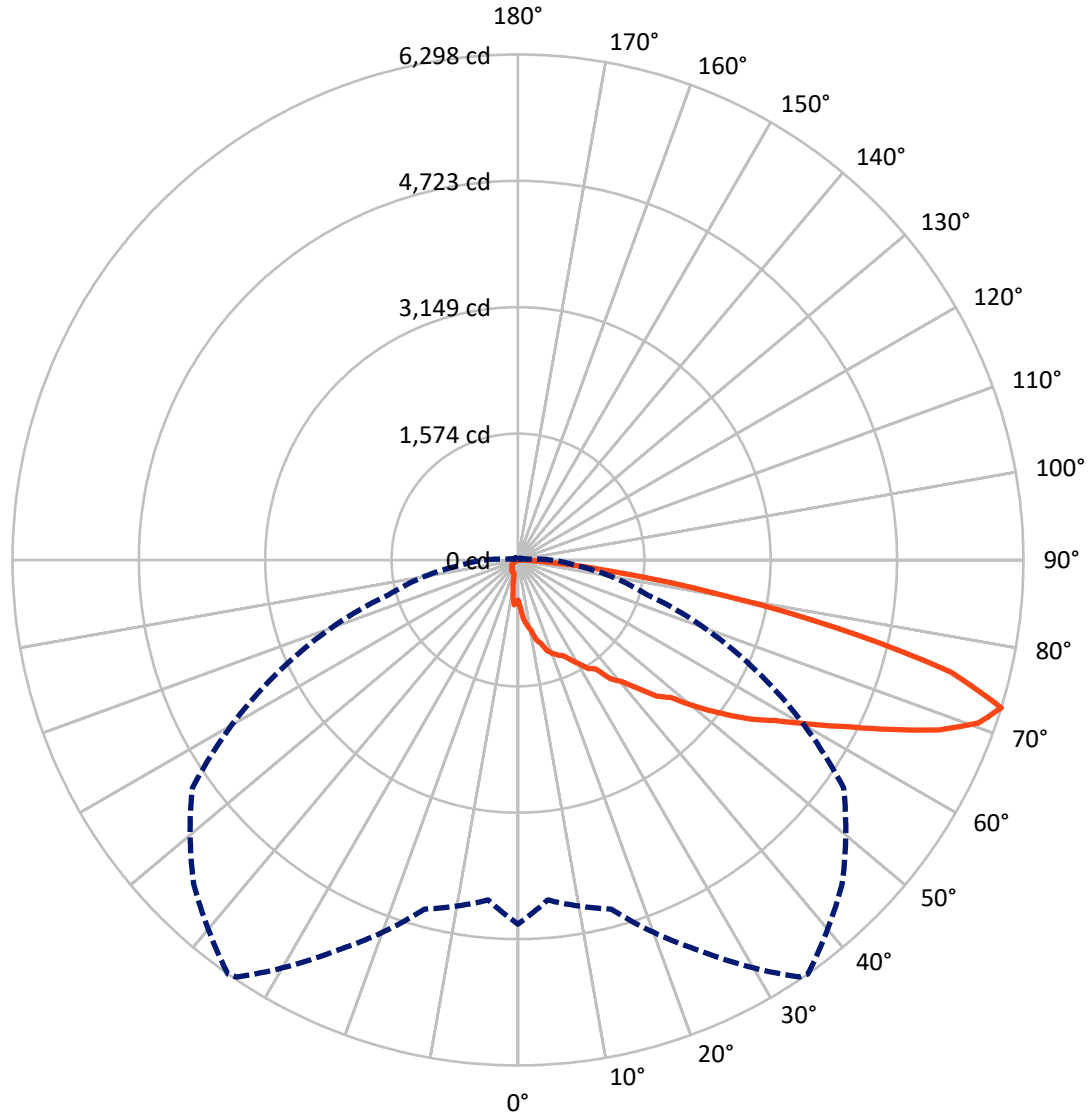
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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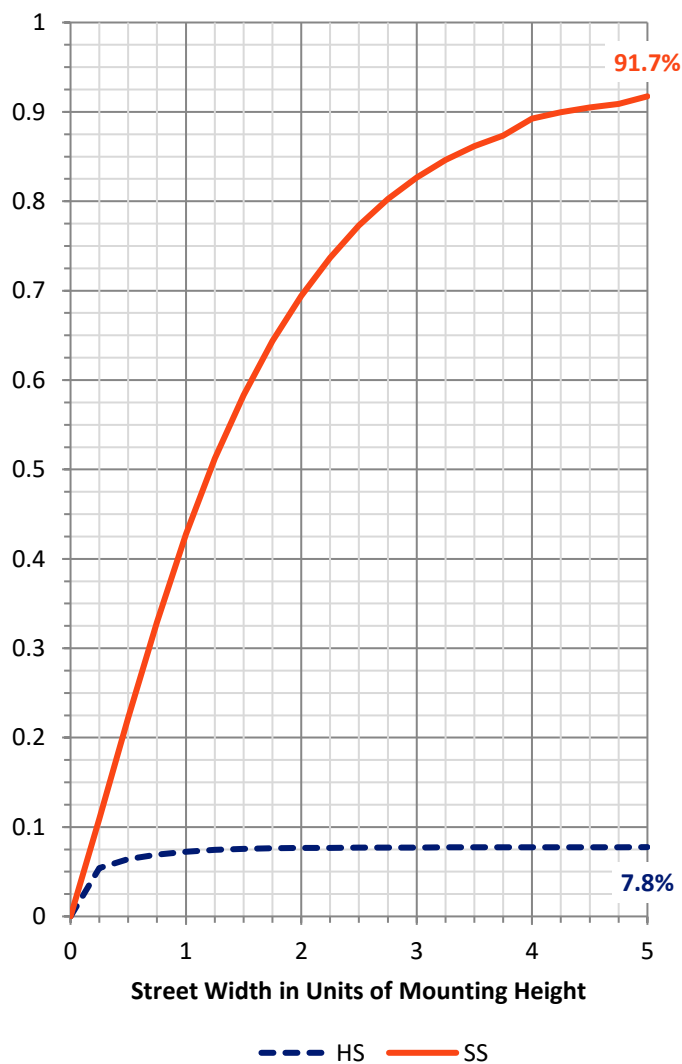
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	656.0	0.0	656.0
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	7755.0	0.0	7755.0
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	8411.0	0.0	8411.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.9	0.8
10°-20°	215.3	2.6
20°-30°	392.0	4.7
30°-40°	676.1	8.0
40°-50°	1201.9	14.3
50°-60°	1793.6	21.3
60°-70°	2291.5	27.2
70°-80°	1594.3	19.0
80°-90°	182.4	2.2
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°	8411.0	100.0
0°-180°	8411.0	100.0

**Coefficient of Utilization**



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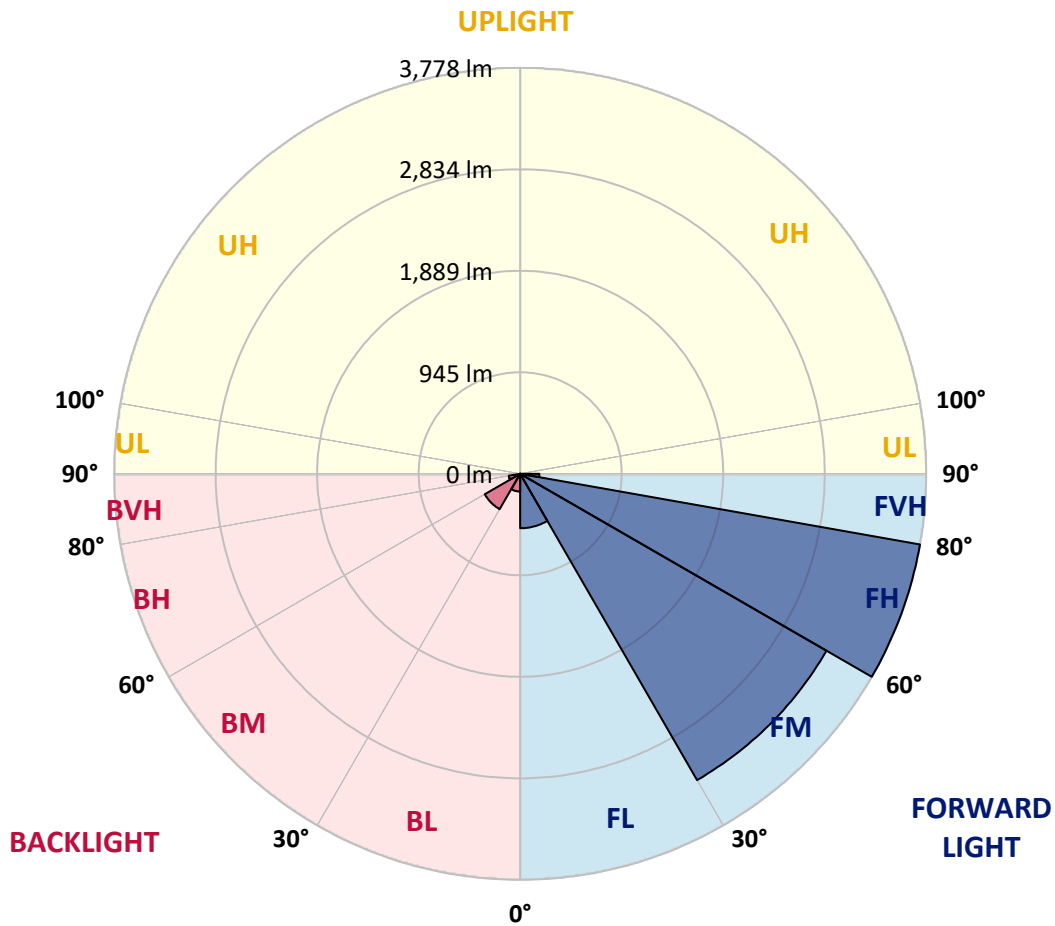
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	506.1	6.0			
FM (30°-60°)	3291.3	39.1			
FH (60°-80°)	3778.2	44.9			G2/5000
FVH (80°-90°)	179.3	2.1			G2/225
BL (0°-30°)	165.0	2.0	B1/500		
BM (30°-60°)	380.4	4.5	B1/1000		
BH (60°-80°)	107.6	1.3	B0/110		G0/110
BVH (80°-90°)	3.1	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	501.0	501.0	501.0	501.0	501.0	501.0	501.0	501.0	501.0	501.0	501.0
2.5°	637.6	612.7	572.1	575.0	593.2	597.0	602.5	588.1	575.5	553.0	596.6
5°	816.9	780.9	758.1	750.9	740.4	741.2	715.4	724.7	722.2	738.7	758.5
7.5°	917.9	898.1	869.3	861.3	822.4	818.2	786.4	829.2	833.4	827.5	860.0
10°	958.1	931.9	935.3	905.3	885.8	890.9	896.0	899.3	904.8	910.3	870.6
12.5°	981.8	986.4	1032.5	1001.2	1020.7	1020.7	1054.9	1018.6	1019.8	980.1	986.9
15°	1088.3	1114.1	1093.4	1093.0	1071.8	1077.3	1117.1	1088.3	1103.1	1091.3	1045.6
17.5°	1222.0	1227.0	1187.7	1170.4	1189.4	1189.8	1172.9	1171.6	1120.1	1207.2	1151.8
20°	1264.7	1293.4	1237.6	1169.9	1249.0	1245.2	1243.9	1224.1	1138.2	1259.2	1213.5
22.5°	1380.9	1339.9	1301.9	1257.5	1288.3	1288.3	1283.7	1240.1	1206.7	1254.5	1274.0
25°	1417.3	1422.4	1372.9	1358.5	1359.4	1321.3	1317.9	1299.3	1267.2	1348.8	1309.9
27.5°	1542.4	1540.3	1421.5	1461.7	1410.5	1411.0	1317.5	1359.4	1364.9	1353.4	1397.0
30°	1665.5	1699.7	1520.5	1571.2	1517.5	1501.4	1410.1	1447.3	1457.0	1443.9	1498.9
32.5°	1822.4	1872.7	1698.5	1648.6	1566.5	1612.2	1549.2	1461.3	1509.5	1626.6	1657.5
35°	1988.5	2013.0	1827.4	1757.7	1665.1	1664.6	1662.5	1669.7	1723.0	1854.9	1881.1
37.5°	2287.0	2229.1	2061.2	1901.4	1922.1	1876.1	1843.9	1877.7	1933.1	2150.5	2262.5
40°	2453.6	2411.8	2175.4	2080.7	1978.0	1994.9	2082.0	2078.2	2225.7	2453.2	2621.1
42.5°	2615.6	2575.8	2343.3	2266.7	2134.8	2180.9	2219.0	2267.2	2569.5	2936.5	3028.7
45°	2759.7	2643.1	2479.0	2482.0	2413.5	2419.0	2486.2	2530.6	2967.8	3344.1	3408.8
47.5°	2846.8	2750.9	2593.6	2590.6	2586.4	2560.6	2877.3	2917.9	3285.3	3732.2	3738.2
50°	2969.5	2849.4	2711.5	2714.1	2811.8	2866.3	3244.3	3240.1	3591.9	4056.1	3919.5
52.5°	3122.1	2975.4	2823.6	2936.5	3087.4	3176.2	3483.2	3608.3	3921.2	4259.5	3990.6
55°	3317.4	3133.9	2987.6	3132.3	3461.6	3495.9	3717.0	3981.3	4280.2	4467.1	4013.4
57.5°	3546.6	3327.6	3209.2	3442.2	3770.7	3771.6	4057.4	4378.7	4500.5	4551.7	3987.6
60°	3793.5	3538.2	3418.9	3628.6	4111.5	4146.2	4435.8	4598.2	4724.2	4594.4	3941.5
62.5°	4010.9	3728.9	3636.3	3882.8	4485.3	4567.3	4765.6	4742.4	4885.7	4648.1	3824.4
65°	4269.6	3975.8	3914.9	4278.9	4973.2	5086.1	5136.0	4998.2	4939.8	4606.6	3519.6
67.5°	4525.9	4251.0	4249.3	4718.3	5612.9	5651.8	5599.4	5358.8	4876.8	4241.3	2961.0
70°	4706.4	4411.3	4522.5	5199.4	6194.3	6085.2	5864.5	5529.2	4421.9	3250.6	1934.4
72.5°	4536.9	4252.3	4503.0	5370.7	6266.2	6297.5	5711.0	4952.9	3285.3	1662.5	700.2
75°	3447.7	3273.5	3909.8	4764.8	5563.5	5570.7	4766.9	3493.3	1617.7	451.6	193.7
77.5°	1736.5	1681.1	2474.8	3382.6	4059.1	4047.2	3275.2	1871.4	520.5	150.1	97.7
80°	879.0	834.6	1053.2	1824.9	2410.5	2428.3	1870.1	838.0	262.6	81.6	67.7
82.5°	539.9	512.5	576.3	825.8	1169.9	1198.3	709.5	530.6	162.8	48.2	61.7
85°	104.4	109.9	331.1	413.5	467.2	456.2	210.1	436.8	49.0	28.8	44.8
87.5°	0.0	1.7	76.5	134.9	135.3	120.1	47.8	96.8	6.8	8.0	5.5
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°	501.0	501.0	501.0	501.0	501.0	501.0	501.0	501.0	501.0	501.0	501.0
2.5°	603.8	597.4	544.6	538.7	539.9	531.1	528.1	509.5	504.8	533.6	538.7
5°	750.1	707.8	658.8	641.0	613.5	567.0	560.2	548.4	535.3	540.4	536.6
7.5°	839.7	783.5	731.1	637.6	560.2	492.6	481.6	461.3	441.0	441.4	454.5
10°	854.1	806.7	734.4	620.7	532.3	447.8	374.2	320.9	296.8	275.3	281.6
12.5°	937.4	893.4	760.2	615.6	491.7	359.8	263.4	211.4	188.6	181.0	180.1
15°	1004.2	969.5	804.2	600.0	401.7	253.3	188.6	173.4	169.1	176.3	174.2
17.5°	1103.6	1041.0	799.6	535.3	306.1	192.4	173.8	171.7	176.7	181.0	182.2
20°	1147.1	1057.1	767.8	433.8	229.2	176.3	169.6	165.3	174.6	187.3	184.8
22.5°	1191.1	1084.5	730.6	355.2	184.3	168.7	164.9	161.5	168.7	181.0	183.9
25°	1211.0	1128.5	689.2	277.4	171.2	159.8	157.3	158.6	164.5	175.5	174.2
27.5°	1311.2	1133.6	610.1	219.0	165.7	153.5	153.5	156.4	156.4	171.2	170.0
30°	1373.7	1219.4	545.9	184.3	159.4	144.6	149.7	150.9	148.8	164.9	166.2
32.5°	1483.7	1243.1	483.3	169.1	149.3	143.3	142.5	143.3	145.0	160.7	161.1
35°	1652.8	1359.8	397.9	163.2	144.2	137.0	131.1	135.7	140.0	151.4	153.5
37.5°	1983.5	1479.4	324.3	158.6	141.6	131.1	129.0	128.1	135.7	148.8	153.1
40°	2251.1	1691.3	263.8	154.8	136.6	127.7	122.2	122.6	129.4	139.1	145.5
42.5°	2629.9	1844.3	223.7	148.8	129.4	120.5	114.2	118.0	120.9	131.1	135.3
45°	2946.2	1963.2	197.0	145.0	122.2	113.7	108.7	112.9	109.9	115.0	120.9
47.5°	3197.8	2066.7	177.2	135.7	117.5	109.9	103.6	102.3	97.2	98.5	104.0
50°	3336.1	2049.4	160.7	126.4	111.6	106.1	97.2	88.4	81.6	81.2	84.6
52.5°	3385.1	1956.8	147.1	118.4	104.4	97.7	87.5	75.3	68.5	66.4	69.3
55°	3398.6	1823.6	134.9	109.5	97.7	87.1	76.5	63.4	56.2	52.9	55.8
57.5°	3354.7	1618.6	123.0	101.1	89.6	77.0	65.5	52.0	45.2	41.0	43.6
60°	3246.0	1358.1	112.5	90.5	81.2	68.1	55.4	41.9	34.7	30.9	32.1
62.5°	3005.4	1064.7	101.1	80.8	72.3	59.6	46.5	33.0	26.2	22.8	23.3
65°	2639.2	793.6	87.9	71.5	64.3	51.6	37.2	25.4	19.9	16.9	16.5
67.5°	2102.7	537.8	74.8	61.7	57.1	43.6	29.6	19.9	15.6	13.5	12.7
70°	1235.9	271.0	62.2	53.3	49.0	36.4	23.3	16.1	14.4	12.7	11.8
72.5°	407.6	117.1	48.6	44.0	40.6	29.2	18.2	14.8	14.0	12.3	11.4
75°	142.1	67.7	35.9	33.8	32.1	22.0	15.2	13.5	13.5	11.8	10.6
77.5°	93.0	52.4	26.6	24.5	24.1	16.1	13.1	12.7	11.8	9.7	8.0
80°	77.4	29.6	18.6	17.3	16.9	10.1	10.6	9.3	7.2	4.2	1.7
82.5°	71.5	17.8	9.7	10.6	9.7	3.8	5.9	5.1	3.8	1.7	0.0
85°	41.9	8.0	5.5	5.5	4.2	0.8	3.0	3.0	1.7	0.4	0.0
87.5°	4.7	3.8	3.0	3.0	2.1	0.0	1.3	0.8	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)