

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: P596924

Luminaire Tested: **MSA-SA2A-835-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596924
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-835-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6383 lumens
Efficiency: N/A
Efficacy: 96.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

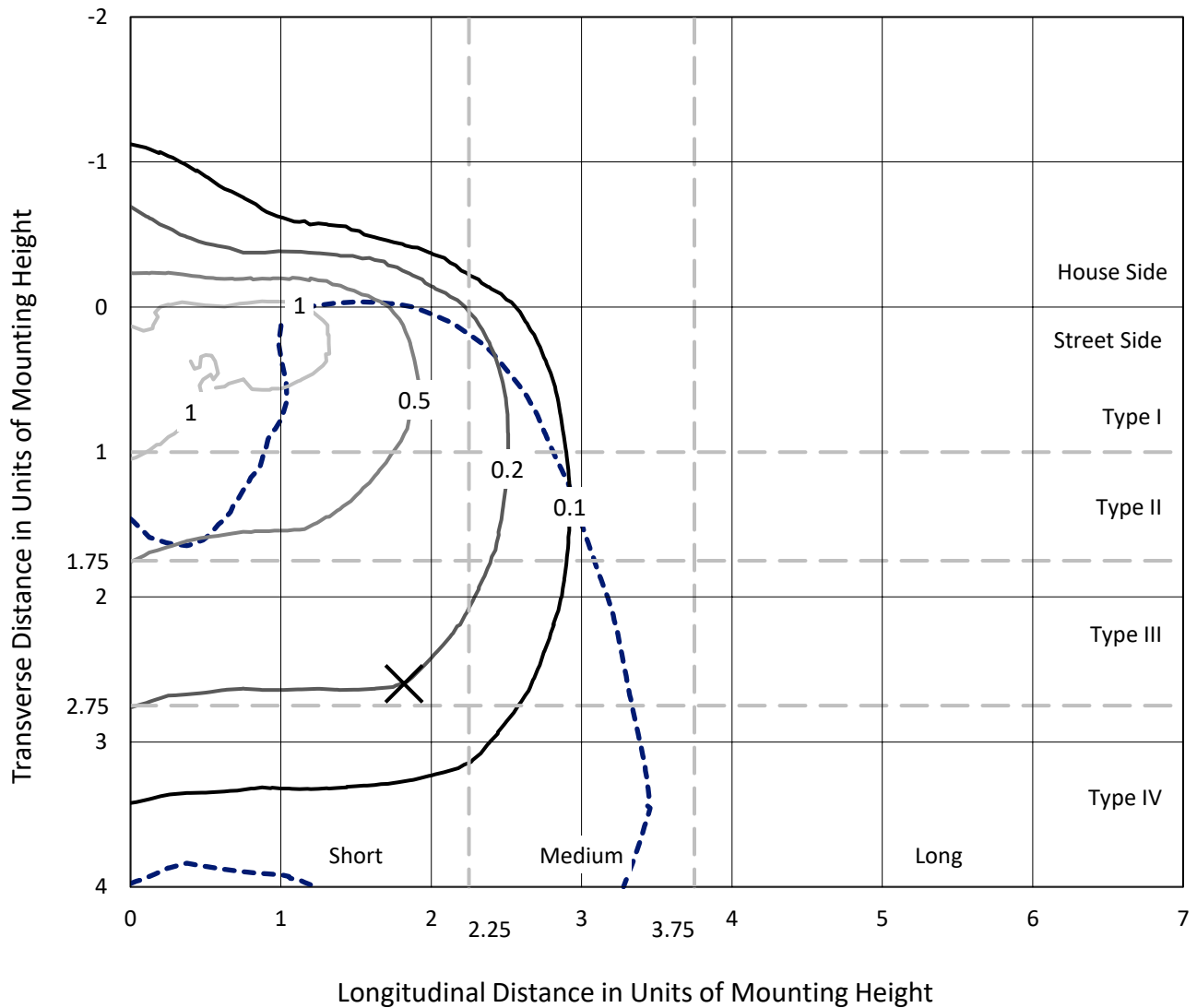
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

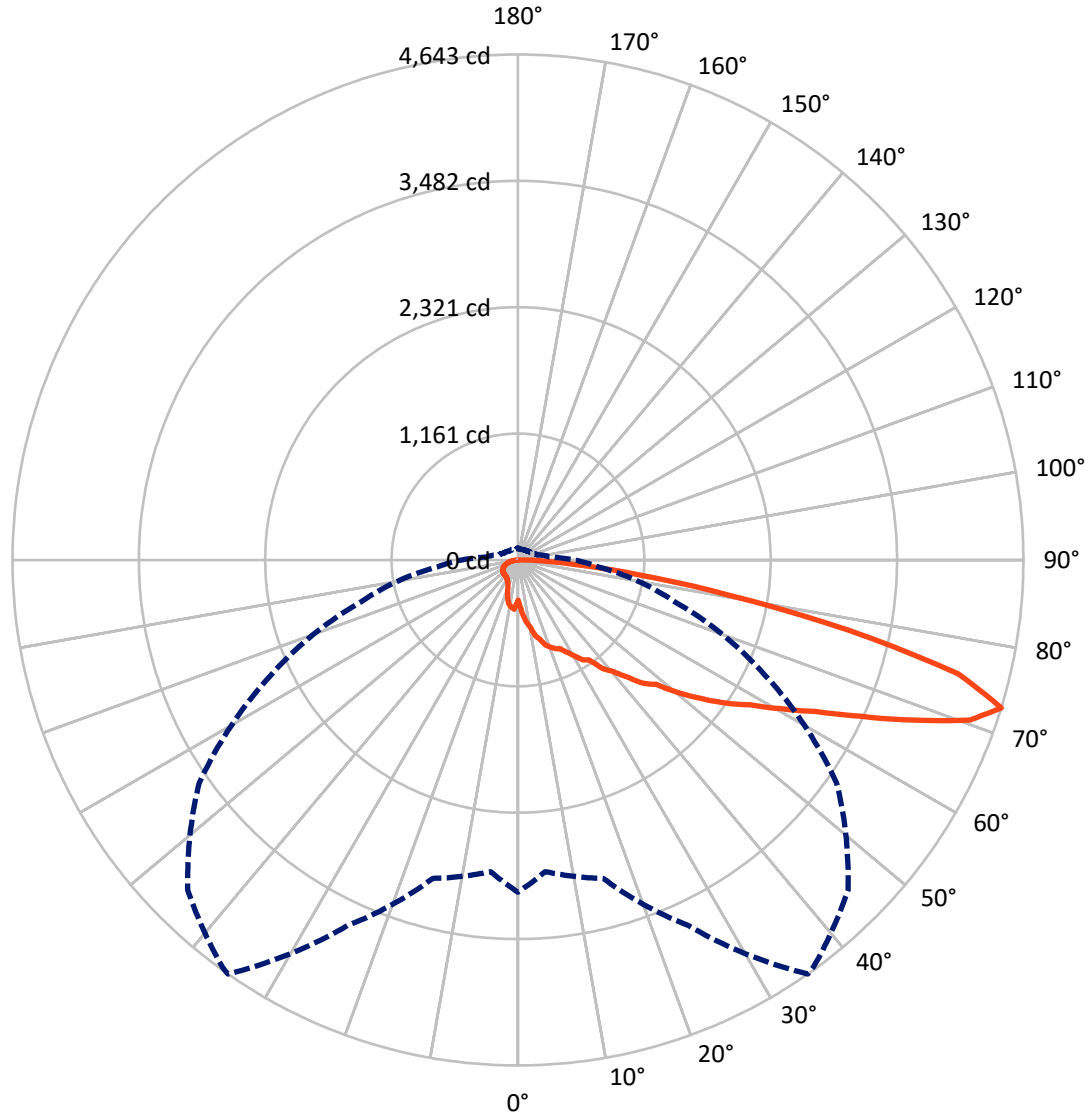
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 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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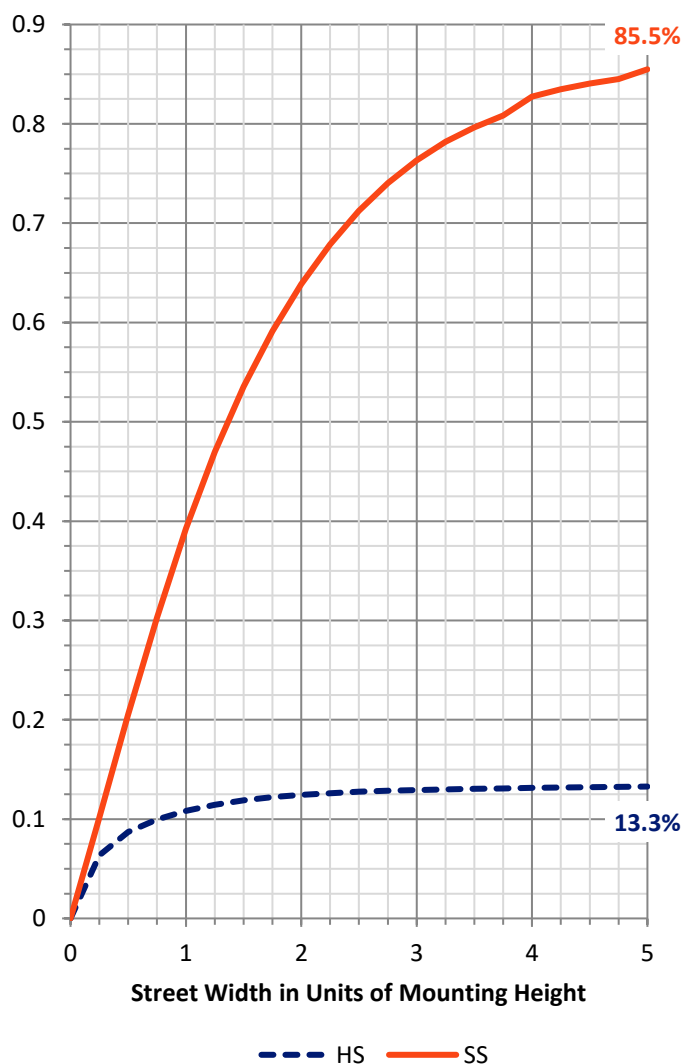
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	856.6	0.0	856.6
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	5526.4	0.0	5526.4
	% Fixture	86.6	0.0	86.6
Total	Lumens	6383.0	0.0	6383.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.0	0.8
10°-20°	172.7	2.7
20°-30°	300.1	4.7
30°-40°	501.5	7.9
40°-50°	870.4	13.6
50°-60°	1315.9	20.6
60°-70°	1704.7	26.7
70°-80°	1257.9	19.7
80°-90°	210.8	3.3
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°	6383.0	100.0
0°-180°	6383.0	100.0

Coefficient of Utilization



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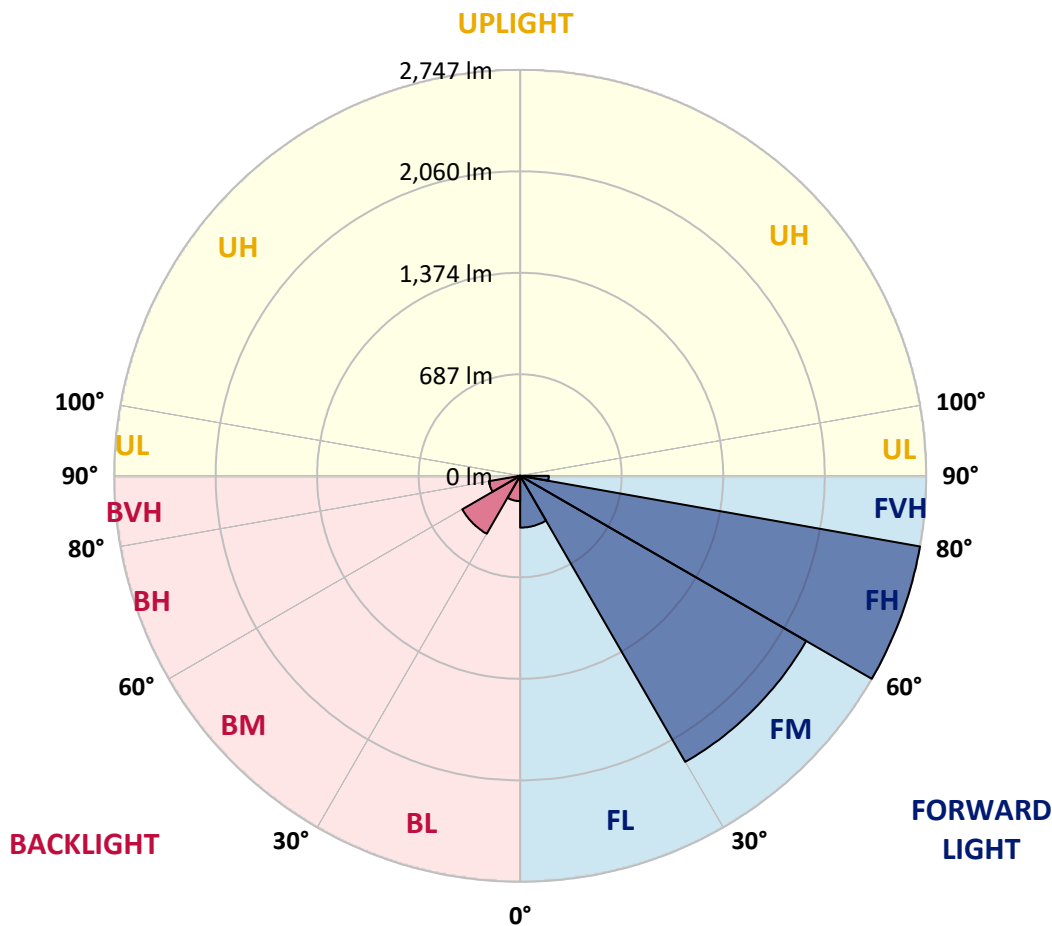
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	350.6	5.5			
FM (30°-60°)	2235.1	35.0			
FH (60°-80°)	2747.2	43.0			G2/5000
FVH (80°-90°)	193.6	3.0			G2/225
BL (0°-30°)	171.2	2.7	B1/500		
BM (30°-60°)	452.7	7.1	B1/1000		
BH (60°-80°)	215.4	3.4	B1/500		G1/500
BVH (80°-90°)	17.3	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	368.9	368.9	368.9	368.9	368.9	368.9	368.9	368.9	368.9	368.9	368.9
2.5°	460.1	438.1	419.0	418.2	435.9	442.7	440.0	434.0	426.9	411.9	444.6
5°	576.5	544.9	538.9	531.8	515.7	520.1	493.9	513.8	520.1	534.5	556.3
7.5°	645.1	626.6	612.2	606.2	578.4	575.1	555.8	584.1	596.1	594.2	626.6
10°	672.1	655.2	656.3	636.7	627.7	631.5	633.7	634.2	641.6	647.6	631.2
12.5°	686.0	692.5	716.5	703.2	714.6	719.2	742.1	718.7	719.5	688.7	705.6
15°	756.0	772.4	758.5	757.9	754.4	762.0	781.6	765.8	778.1	768.3	746.5
17.5°	840.5	845.4	818.7	807.8	821.9	819.5	814.6	817.0	786.5	843.2	816.5
20°	866.3	885.7	850.5	807.8	854.6	860.9	859.8	849.2	796.9	878.6	852.7
22.5°	941.5	915.4	887.6	860.3	884.3	887.9	881.9	856.5	839.1	870.2	890.6
25°	975.6	969.3	933.9	930.6	904.2	891.7	902.0	894.7	877.5	932.8	910.2
27.5°	1053.5	1046.1	964.7	998.2	959.8	956.5	901.8	926.3	943.4	939.4	973.1
30°	1141.8	1150.2	1031.2	1064.7	1020.3	1014.3	959.2	990.3	1002.0	1005.8	1048.1
32.5°	1239.8	1263.0	1144.8	1117.3	1093.6	1097.6	1051.1	994.4	1039.9	1129.0	1147.2
35°	1346.1	1355.6	1231.7	1190.3	1128.4	1124.1	1124.9	1132.0	1178.0	1279.6	1293.8
37.5°	1542.5	1498.4	1389.7	1284.8	1264.1	1223.5	1251.0	1272.8	1318.9	1474.7	1534.1
40°	1663.5	1630.8	1465.2	1404.4	1347.2	1351.0	1402.5	1402.2	1510.9	1671.7	1762.4
42.5°	1775.5	1739.8	1583.7	1522.6	1468.4	1481.8	1496.5	1522.4	1730.8	1989.9	2031.3
45°	1865.6	1787.4	1675.2	1661.6	1616.9	1599.2	1661.6	1703.0	1993.7	2247.3	2271.3
47.5°	1926.9	1862.6	1752.8	1740.9	1707.9	1751.2	1921.5	1948.2	2197.5	2505.9	2503.9
50°	2020.1	1932.1	1832.9	1826.7	1919.6	1942.7	2150.3	2147.6	2395.8	2720.5	2675.6
52.5°	2127.4	2016.6	1908.9	1976.2	2117.9	2129.3	2309.4	2382.7	2612.4	2927.6	2810.2
55°	2250.9	2126.9	2022.8	2112.7	2323.6	2289.8	2472.1	2651.1	2883.4	3145.8	2907.4
57.5°	2403.7	2253.3	2169.1	2305.9	2511.3	2541.3	2705.0	2930.3	3101.7	3281.5	2978.3
60°	2565.0	2388.4	2311.3	2441.6	2774.2	2808.5	2968.7	3162.4	3346.3	3409.2	2964.9
62.5°	2718.9	2527.9	2458.2	2618.9	3065.7	3150.7	3268.9	3392.4	3549.8	3440.3	2803.4
65°	2890.3	2699.0	2655.1	2896.3	3461.0	3545.5	3699.9	3662.9	3619.6	3330.2	2536.1
67.5°	3071.7	2877.5	2885.6	3218.0	3927.1	3941.6	4178.9	3932.6	3537.6	3038.7	2087.4
70°	3169.2	2970.4	3054.5	3561.0	4401.5	4380.7	4429.2	4005.1	3203.3	2402.1	1438.7
72.5°	3051.0	2873.6	3027.8	3705.4	4642.8	4620.5	4288.7	3574.9	2504.5	1493.8	745.9
75°	2583.2	2412.1	2648.1	3303.0	4179.7	4200.4	3649.8	2658.4	1433.8	600.7	309.8
77.5°	1755.3	1667.0	1869.2	2462.0	3104.7	3176.3	2708.0	1554.5	602.1	248.7	187.4
80°	927.6	885.7	1035.0	1418.3	1965.9	2019.3	1592.4	774.3	308.4	161.0	133.8
82.5°	504.0	486.3	566.4	729.3	1117.0	1163.6	825.7	514.4	207.9	100.8	81.7
85°	338.6	331.8	384.9	391.8	528.3	543.5	432.6	396.1	124.8	49.3	53.9
87.5°	169.5	162.6	202.7	179.0	201.6	201.9	198.3	252.8	31.6	16.3	9.8
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°	368.9	368.9	368.9	368.9	368.9	368.9	368.9	368.9	368.9	368.9	368.9
2.5°	445.2	435.6	402.7	402.4	407.3	404.0	406.5	393.1	387.4	413.6	412.2
5°	553.3	524.7	497.2	487.7	476.5	452.2	453.6	453.9	449.8	465.3	466.4
7.5°	616.8	582.5	557.1	506.5	466.7	435.6	439.7	444.3	439.7	460.4	468.0
10°	626.1	598.8	568.6	512.2	485.8	457.7	429.4	404.3	401.3	391.8	394.8
12.5°	681.1	658.5	595.3	533.4	502.6	459.6	407.8	379.2	355.3	359.3	351.7
15°	726.3	710.2	634.5	553.6	480.0	426.6	371.6	332.4	310.8	308.4	300.8
17.5°	787.6	764.7	638.0	539.7	450.9	386.9	324.7	280.3	271.1	267.3	263.4
20°	817.0	775.9	625.2	496.1	416.8	339.5	278.4	240.3	237.6	244.4	243.0
22.5°	842.6	785.2	613.8	469.7	363.7	291.5	246.8	221.8	218.8	227.5	229.1
25°	857.6	811.6	601.3	442.7	330.7	255.8	223.1	209.0	209.5	220.9	219.6
27.5°	925.2	820.8	569.7	410.8	292.9	229.4	211.7	204.3	201.3	217.1	218.5
30°	967.7	881.3	562.6	377.0	264.8	210.0	201.3	198.3	197.8	216.9	218.2
32.5°	1046.7	901.5	565.8	340.3	239.5	204.1	193.7	193.4	198.9	217.1	219.3
35°	1156.2	986.5	550.0	319.3	225.6	194.8	187.7	189.9	199.1	219.0	222.0
37.5°	1369.8	1066.6	554.9	299.7	220.9	191.8	186.1	187.4	202.4	223.9	232.1
40°	1539.0	1211.8	547.3	289.9	214.7	191.2	182.5	188.0	202.1	226.7	234.0
42.5°	1784.2	1327.6	548.1	280.1	214.4	189.1	182.0	188.5	201.6	224.2	234.3
45°	1994.5	1431.4	559.9	274.3	211.7	192.6	181.2	189.3	198.1	215.5	226.7
47.5°	2166.9	1547.2	571.8	268.9	210.6	195.9	180.4	183.6	192.1	205.7	215.8
50°	2307.5	1628.6	587.1	267.8	210.6	194.2	178.2	177.9	185.0	195.9	205.4
52.5°	2417.0	1686.1	597.4	269.2	210.6	188.0	175.4	173.3	177.6	185.5	195.1
55°	2496.3	1703.8	589.0	272.7	210.3	182.3	170.5	168.6	170.8	176.3	185.3
57.5°	2528.2	1657.2	538.6	266.4	210.3	178.2	164.6	162.4	164.6	168.6	177.6
60°	2448.4	1507.4	465.9	250.4	206.2	172.7	157.7	156.4	159.6	163.2	171.9
62.5°	2248.1	1308.2	388.2	231.3	197.8	168.1	151.2	151.5	156.6	161.6	170.3
65°	1937.0	1067.4	323.7	212.0	187.2	160.7	144.4	146.3	153.7	160.2	168.9
67.5°	1524.3	790.9	272.4	193.2	172.2	148.7	136.8	137.3	142.5	148.7	157.2
70°	1018.9	503.2	223.9	171.1	152.6	133.2	125.0	123.1	121.8	127.2	134.6
72.5°	516.8	297.2	183.9	146.3	131.3	116.3	110.1	105.2	101.3	104.6	110.3
75°	270.8	207.9	148.5	121.5	108.4	98.9	94.3	87.7	85.0	86.9	91.0
77.5°	191.5	162.6	120.1	96.2	88.3	78.5	79.3	72.5	70.3	71.4	75.7
80°	147.1	128.9	92.4	72.7	68.1	58.6	61.3	57.2	54.5	53.9	57.2
82.5°	100.3	97.0	65.7	50.9	47.7	40.9	44.7	43.0	39.5	37.3	39.0
85°	67.6	64.3	40.0	29.4	28.1	21.2	27.2	26.2	23.2	19.9	20.2
87.5°	11.7	21.5	11.4	7.4	6.8	2.5	6.3	6.0	5.4	2.7	2.2
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)